

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Dr. Tommy Knowles, Ph.D., P.E.
Deputy Executive Administrator
Texas Water Development Board
1700 North Congress Avenue
P.O. Box 13231
Austin, Texas 78711-3231

RECEIVED
MAY 1 2002
TWDB
GRANTS MANAGEMENT

**Re: Sabine County Regional Water and Wastewater Facilities Plan
Response to Comments to the Draft Report
TWDB Contract No. 2001-483-372**

Dear Dr. Knowles:

We have received your letter dated January 10, 2002 and offer the following responses to comments made in regard to the above reference document.

- 1) The basin cited as the Angelina-Neches River Basin (Page 3 of Draft Final Report) has been correctly identified as the Neches River Basin in the Final Report document.
- 2) Additional information regarding the water quality of the water supply for Sabine County has been added to the report text. See page 10 of Final Report. Also, three copies of the Environmental Information Document, corresponding to the Facilities Plan, were submitted under separate cover on October 26, 2001 to Jose Rodriguez, P.E. of the TWDB. Our understanding is that Mr. Danny Fox reviewed the documents.
- 3) The wastewater treatment plant proposed for the Shawnee Shores and Holiday Forest subdivisions has been removed from the facilities plan. Corresponding text, tables, and cost estimates have been revised to reflect such. Please see Sections 6.0 and 8.0.
- 4) Cost tables and financial assumptions have been revised to reflect the that the interest rate for debt service will be approximately 3.3%, rather than the 0 to 2% previously assumed.

Turner Collie & Braden Inc.

Mr. Tommy Knowles, Ph.D., P.E.

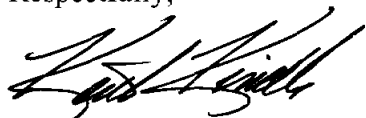
February 13, 2002

Page 2

With these revisions, and responses to other public comments received during public participation events, we respectfully submit these nine hard copies of the Final - *Sabine County Regional Water and Wastewater Facilities Plan* in addition to the electronic and camera-ready format versions of the Final Report per the scope of services outlined in the agreement between the TWDB and Sabine County.

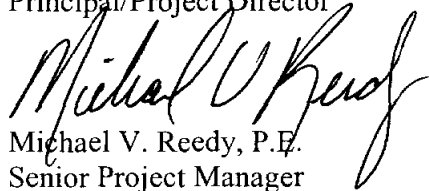
Should you or your staff have any additional concerns, please contact me at (956) 781-6991 or Mike Reedy at (713) 267-3127.

Respectfully,



Keith P. Kindle, P.E.

Principal/Project Director



Michael V. Reedy, P.E.

Senior Project Manager

Turner Collie & Braden Inc.

ENGINEERS•PLANNERS•PROJECT MANAGERS

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TRANSMITTAL

RECEIVED

MAR 1 2002
TADD HOFF
GRANTS MANAGEMENT

To: Ms. Phyllis Thomas
Texas water Development Board
1700 North Congress
Austin, Texas 78701

Date: February 28, 2002

Re: Final - Sabine County Regional Water and Wastewater Facilities Plan

Job No.: 48-06035-002; 2.0

Transmitted By: UPS

We are sending you the following:

Copies	Description
1	Original Report - Sabine County Regional Water and Wastewater Facilities Plan
9	Copies - Sabine County Regional Water and Wastewater Facilities Plan
1	Camera-ready copy - Sabine County Regional Water and Wastewater Facilities Plan
1	CD with text and graphic files

Remarks:

Box 1 and 2 each contain 3 copies of the final report. Box 3 contains 2 copies and the original signed copy. Box 4 contains the camera-ready copy and CD of electronic files. Each report consists of Volumes I, II, and III.

If you need additional information, please contact Jennifer Elms at 713-267-2942.

Copies To:

Michael V. Reedy, P.E.

By:


Keith P. Kiddle, P.E.

TABLE OF CONTENTS

VOLUME 1

SECTION 1 – INTRODUCTION AND BACKGROUND

Introduction.....	1-1
Purpose and Objective.....	1-1

SECTION 2 – DESCRIPTION OF PLANNING AREA

Physical Description of Sabine County	2-1
Water Supply Sources.....	2-1
Description of Planning Area Participants.....	2-2
Planning Area Description.....	2-3
County Government.....	2-4

SECTION 3 – SENATE BILL 1 REGION I PLANNING

Background.....	3-1
Region I Estimate of Population in Sabine County.....	3-1
Region I Estimate of Water Demand in Sabine County	3-2
Region I Water Supply	3-3
Region I Water Management Strategies.....	3-4
Additional Water Planning Needs for Sabine County.....	3-4
Wastewater Planning Needs for Sabine County.....	3-5
Water Quality Determinations.....	3-6

SECTION 4 – DESCRIPTION OF EXISTING WATER SYSTEMS

City of Hemphill.....	4-1
City of Pineland	4-1
G-M Water Supply Corporation	4-2
Beechwood Water Supply Corporation	4-3
South Sabine Water Supply Corporation.....	4-3
El Camino Bay Water Supply Corporation	4-4

SECTION 5 – DESCRIPTION OF EXISTING WASTEWATER SYSTEMS

City of Hemphill 5-1
 City of Pineland 5-2
 Other WWTPs 5-2

SECTION 6 – REGIONAL WATER AND WASTEWATER ANALYSIS AND PLANNING CRITERIA

Average Water Usage of Planning Participants 6-1
 Water Demand Used for Water System Modeling 6-1
 Water Modeling Development and Criteria 6-2
 Purpose and Objective of Wastewater Planning 6-4
 Description of Wastewater Study Areas 6-6
 Beechwood/South Sabine Planning Area 6-6
 Timberlane Planning Area 6-7
 El Camino Bay Planning Area 6-7
 Midlake Planning Area 6-8
 North Planning Area 6-9
 Wastewater Flow Estimation 6-9
 Wastewater Collection Systems Alternatives 6-10
 Conventional Gravity Sewers 6-11
 Septic Tank Effluent Pump (STEP) Sewers 6-11
 Grinder Pump Sewers 6-12
 Wastewater Treatment Systems Alternatives 6-13
 Conventional Wastewater Treatment (Package) Plants 6-13
 Sand Filters 6-14
 Aerobic Treatment Systems 6-16
 Description of Wastewater Planning Alternatives for Sabine County 6-19
 Centralized Conventional Wastewater Treatment System Alternative 6-21
 Beechwood/South Sabine Planning Area 6-22
 Timberlane Planning Area 6-23
 El Camino Bay Planning Area 6-24

Midlake Planning Area	6-26
North Planning Area	6-27
Natural Treatment Cluster Systems Alternative.....	6-28

SECTION 7 – RECOMMENDED REGIONAL WATER IMPROVEMENTS

City of Hemphill	7-2
Water Supply and Treatment Improvements	7-2
Water Distribution System Improvements.....	7-4
City of Pineland	7-9
Water Supply and Treatment Improvements	7-9
Water Distribution System Improvements.....	7-9
G-M Water Supply Corporation	7-12
Water Supply and Treatment Improvements	7-12
Water Storage Improvements.....	7-12
Water Distribution System Improvements.....	7-15
Beechwood Water Supply Corporation	7-20
Water Supply and Treatment Improvements	7-20
Water Distribution System Improvements.....	7-22
South Sabine Water Supply Corporation.....	7-25
Water Supply and Treatment Improvements	7-25
Water Distribution System Improvements.....	7-26
El Camino Bay Water Supply Corporation	7-28
Water Supply and Treatment Improvements	7-28
Water Distribution System Improvements.....	7-29

SECTION 8 – RECOMMENDED REGIONAL WASTEWATER IMPROVEMENTS

SECTION 9 – PROPOSED REGIONAL FACILITIES COST ANALYSIS

Proposed Water Improvements.....	9-1
Proposed Wastewater Improvements.....	9-3

SECTION 10 – PROPOSED REGIONAL FACILITIES RATE ANALYSIS

Current Water Rates for Existing Facilities..... 10-1
 Current Wastewater Rates for Existing Facilities..... 10-3
 Recommended Rates for Proposed Water System Improvements 10-4
 Recommended Rates for Proposed Wastewater System Improvements 10-7

SECTION 11 – REGIONAL MANAGEMENT AUTHORITY AND WATER CONSERVATION PLAN

Consensus Model Management Authority 11-1
 Petition Process 11-1
 Hearing Process 11-1
 Election Process..... 11-2
 Special Considerations..... 11-2
 Water Conservation Plan 11-3
 Water Conservation Plan..... 11-4
 Drought Contingency Plan 11-5

SECTION 12 – IMPLEMENTATION

Project Funding..... 12-1
 Water Improvements 12-2
 Wastewater 12-3
 Project Priority and Definition..... 12-4
 Preliminary Engineering Design..... 12-5
 Engineering Design and Specification..... 12-6
 Construction Bidding..... 12-6

SECTION 13 – PUBLIC INVOLVEMENT AND PARTICIPATION

APPENDICES

Appendix A	Planning Area Participant Water Usage Data
Appendix B	Wastewater Spreadsheet Model
Appendix C	PIPE2000 Water Model Input and Output Files
Appendix D	Water Improvements Estimate of Probable Cost
Appendix E	Wastewater Improvements Estimate of Probable Cost
Appendix F	Water Improvements Financial Model
Appendix G	Wastewater Improvements Financial Model
Appendix H	Public Participation

VOLUME II

EXHIBIT LIST

Exhibit 1-1	Regional Facilities Planning Area
Exhibit 2-1	Sabine County Commissioner Precincts
Exhibit 4-1	City of Hemphill Existing Water Facilities
Exhibit 4-2	City of Pineland Existing Water Facilities
Exhibit 4-3	G-M Water Supply Corporation Existing Water Facilities
Exhibit 4-4	Beechwood Water Supply Corporation Existing Water Facilities
Exhibit 4-5	South Sabine Water Supply Corporation Existing Water Facilities
Exhibit 4-6	El Camino Bay Water Supply Corporation Existing Water Facilities
Exhibit 6-1	General Soils Map of Sabine County
Exhibit 6-2	General Location Map of Wastewater Planning Areas
Exhibit 6-3	Existing Structures Map of Sabine County
Exhibit 6-4	Centralized Conventional Wastewater Treatment Alternative Beechwood/South Sabine Planning Area
Exhibit 6-5	Centralized Conventional Wastewater Treatment Alternative Timberlane Planning Area
Exhibit 6-6	Centralized Conventional Wastewater Treatment Alternative El Camino Bay Planning Area
Exhibit 6-7	Centralized Conventional Wastewater Treatment Alternative Midlake Planning Area

Exhibit 6-8	Centralized Conventional Wastewater Treatment Alternative North Planning Area
Exhibit 6-9	Natural Treatment Cluster System Wastewater Treatment Alternative Beechwood/South Sabine Planning Area
Exhibit 6-10	Natural Treatment Cluster System Wastewater Treatment Alternative Timberlane Planning Area
Exhibit 6-11	Natural Treatment Cluster System Wastewater Treatment Alternative El Camino Bay Planning Area
Exhibit 6-12	Natural Treatment Cluster System Wastewater Treatment Alternative Midlake Bay Planning Area
Exhibit 6-13	Natural Treatment Cluster System Wastewater Treatment Alternative North Bay Planning Area

VOLUME III

EXHIBIT LIST (continued)

Exhibit 7-1	Phase 1 Recommended Water Distribution System Improvements City of Hemphill (2005-2010)
Exhibit 7-2	Phase 2 Recommended Water Distribution System Improvements City of Hemphill (2025-2030)
Exhibit 7-3	Recommended Water Distribution System Improvements for Fire Flow City of Hemphill
Exhibit 7-4	Phase 1 Recommended Water Distribution System Improvements City of Pineland
Exhibit 7-5	Phase 2 Recommended Water Distribution System Improvements City of Pineland (2005-2010)
Exhibit 7-6	Recommended Water Distribution System Improvements for Fire Flow City of Pineland (2025-2030)
Exhibit 7-7	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-7(a)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-7(b)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-7(c)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)

Exhibit 7-7(d)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-7(e)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-7(f)	Phase 1 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2005-2010)
Exhibit 7-8	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(a)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(b)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(c)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(d)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(e)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-8(f)	Phase 2 Recommended Water Distribution System Improvements G-M Water Supply Corporation (2025-2030)
Exhibit 7-9	Phase 1 Recommended Water Distribution System Improvements Beechwood Water Supply Corporation (2005-2010)
Exhibit 7-10	Phase 2 Recommended Water Distribution System Improvements Beechwood Water Supply Corporation (2025-2030)
Exhibit 7-11	Phase 1 Recommended Water Distribution System Improvements South Sabine Water Supply Corporation (2005-2010)
Exhibit 7-12	Phase 2 Recommended Water Distribution System Improvements South Sabine Water Supply Corporation (2025-2030)
Exhibit 7-13	Phase 1 Recommended Water Distribution System Improvements El Camino Bay Water Supply Corporation (2005-2010)
Exhibit 7-14	Phase 2 Recommended Water Distribution System Improvements El Camino Bay Water Supply Corporation (2025-2030)

SECTION 1 – INTRODUCTION AND BACKGROUND

INTRODUCTION

Turner Collie & Braden Inc. (TC&B) was contracted by Sabine County to develop a Regional Facilities Plan for the Sabine County Regional Water and Wastewater Planning Group. An application for a research and planning fund grant for this study was prepared by TC&B, on behalf of Sabine County, and submitted to the Texas Water Development Board (TWDB) in May 2000 for review. The TWDB approved the application and entered into a contract with Sabine County in September 2000. Sabine County provided TC&B a notice to proceed for the project in December 2000. The following report summarizes the results of the Regional Water and Wastewater Facilities Plan for Sabine County.

PURPOSE AND OBJECTIVES

The purpose of the Regional Facilities Plan is to develop the planning framework for water and wastewater improvements for Sabine County for the next 50 years. The plan provides the description, analysis, and economics associated with implementing proposed improvements to the existing water and wastewater infrastructure in the planning area for this study. The boundaries of the planning area for this study include most of Sabine County (see *Exhibit 1-1*), excluding the jurisdictional boundary of the Brookeland Freshwater Supply District to the south, and include a small portion of San Augustine County to the northwest. Tasks completed as part of this study and discussed in greater detail in the following sections of this report include:

1. Develop water and wastewater projections for identified participants in the planning area for the 50-year planning period.
2. Gather data of existing utilities in the planning area.
3. Create existing water and wastewater facilities maps for the planning area.
4. Develop PIPE 2000 computer water models for existing water facilities in the planning area.
5. Recommend improvements to existing water facilities in the planning area to meet Texas Natural Resource Conservation Commission (TNRCC) minimum criteria for water systems.

6. Recommend alternatives for the regionalization of wastewater service in the planning area.
7. Create proposed water and wastewater facilities maps for the planning area.
8. Develop planning level costs for implementing the proposed water and wastewater improvements in the planning area.
9. Develop a user charge system for the funding of proposed improvements in the planning area.
10. Prepare an Environmental Information Document (EID) for the proposed water and wastewater facilities improvements.
11. Develop a consensus model management authority for the planning area.

SECTION 2 – DESCRIPTION OF PLANNING AREA

PHYSICAL DESCRIPTION OF SABINE COUNTY

Sabine County is located along the Louisiana/Texas border in deep East Texas. Adjacent counties include Shelby to the north, San Augustine to the west, and Jasper and Newton to the south. The Sabine River borders the county on the east and serves as a major water source for the area. The area lies in between the upper eastern Gulf Coast and eastern Carrizo-Wilcox Aquifers, which also supply water to the area. The terrain of the county is characterized by rolling hills and lush vegetation. Sabine County is home to the Sabine National Forest, and according to the Texas Almanac 1998-1999, 80 percent of the county is forested.

The two largest municipalities in the county are the City of Hemphill, located near the center of the county, and the City of Pineland, located near the southwestern corner of the county. The City of Hemphill serves as the county seat. The current population for the City of Hemphill, according to the Texas Water Development Board, is 1,345. The current population for the City of Pineland is 968. The remainder, and the most significant percentage, of the population in Sabine County is not located in an incorporated city limit, but is instead dispersed throughout the county. The majority of the county-wide population is located along Toledo Bend Reservoir.

Sabine County is within two major watershed boundaries. The southwestern corner of the county drains into the Neches River Basin and the uppermost reaches of Sam Rayburn Reservoir. The City of Pineland is in the Neches River Basin. The remainder and the majority of the county drains into the Sabine River Basin including the City of Hemphill.

WATER SUPPLY SOURCES

Major water sources in Sabine County include Toledo Bend Reservoir and Sam Rayburn Reservoir. Toledo Bend Reservoir is operated by the Sabine River Authority (SRA), Texas, and Sabine River Authority, Louisiana, and is utilized for municipal, industrial, irrigation, hydroelectric, and recreation purposes. Toledo Bend Reservoir is the largest reservoir in the State of Texas impounding 4,477,000 acre-feet of water with a firm yield of 1,838,000 acre-feet. SRA-Texas holds water rights to approximately 750,000 acre-feet; the remaining yield is owned and contracted by SRA-Louisiana.

Toledo Bend Reservoir currently has approximately 748,028 acre-feet of water available for contract use, making Toledo Bend Reservoir an abundant source of water to meet current and future needs for the county.

Sam Rayburn Reservoir is operated by the Angelina and Neches River Authority (ANRA) and is utilized for municipal, industrial, irrigational, hydro-electrical, and recreational purposes. Sam Rayburn Reservoir impounds 2,898,300 acre-feet of water with a firm yield of approximately 820,000 acre-feet. Approximately 438,000 acre-feet are currently available for contract.

Groundwater sources in Sabine County include major and minor aquifers, although the majority of groundwater used in Sabine County comes from minor aquifers. The two major aquifers in the area include Gulf Coast Aquifer and Carrizo-Wilcox Aquifer with the two minor aquifers being Queen City Aquifer and Sparta Aquifer. Carrizo-Wilcox Aquifer can be found in the northern portion of Sabine County with Gulf Coast Aquifer along the Newton County border to the south. Queen City Aquifer does not reach into the planning area, but a portion of the Sparta Aquifer extends through the middle of Sabine County.

DESCRIPTION OF PLANNING AREA PARTICIPANTS

Planning area participants who have provided information for this study include:

- City of Hemphill
- City of Pineland
- G-M Water Supply Corporation
- Beechwood Water Supply Corporation
- South Sabine Water Supply Corporation
- El Camino Bay Water Supply Corporation

These entities pledged support for this Regional Facilities Plan as well as provided information regarding current water demands, wastewater demands, existing treatment capacity, and existing water and wastewater infrastructure. Other entities are included within the boundaries of the

planning area. However, the majority of the entities not listed are private subdivisions that currently have water provided by one of the water supply entities listed or do not have water service from any public water supply. Two other entities, Pendleton Harbor Water Corporation and Frontier Park, have provided letters of support for this study. However, TC&B was not provided detailed information regarding their existing water and wastewater infrastructure. Pendleton Harbor Water Corporation and Frontier Park are therefore not discussed in detail in the following report. However, these entities represent a small fraction of the total water and wastewater demand in the county, and their exclusion should be insignificant to the results of this study.

The exclusion of these two entities from this study is not meant to infer that either Pendleton Harbor or Frontier Park could not be a participant in the regional water and wastewater planning process or any management authority created as a result of this study. Their exclusion was based only on a lack of information provided and the fact that the combined water and wastewater demands of these two entities represents only a small fraction of the total water and wastewater demands in the county.

PLANNING AREA DESCRIPTION

The boundaries of the planning area for this study include most of Sabine County (see *Exhibit 1-1*) and a small portion of San Augustine County to the northwest. This portion of San Augustine County is included to encompass all of the existing service area for G-M Water Supply Corporation. Some areas along the southern boundary of the county are currently in the jurisdiction of the Brookeland Freshwater Supply District and are therefore not included in the planning area for this study.

COUNTY GOVERNMENT

Sabine County is governed by a County Judge, the Honorable Jack H. Leath, and four County Commissioners. *Exhibit 2-1* provides a map showing the four precincts and the approximate jurisdictional boundaries in Sabine County. The County Commissioners as well as their respective precincts are listed below:

Keith Clark – Precinct 1

Lynn Smith – Precinct 2

Doyle Dickerson – Precinct 3

Gene Nethery – Precinct 4

SECTION 4 – SENATE BILL 1 REGION I PLANNING

BACKGROUND

The 1997 State Legislature, through Senate Bill 1, determined that the Texas State Water Plan for the 2000 through 2050 planning period would be developed through a regional planning approach. To accomplish this task the TWDB divided the state into 16 regional water planning areas and appointed representational Regional Water Planning Groups (RWPG) to guide the development of each region's plan. The results of the 16 regional water plans are combined to form the State Water Plan. The final plan is scheduled for delivery by the Texas Water Development Board on January 5, 2002.

Sabine County is located within the regional planning area for Region I (East Texas). Region I consists of all or portions of 20 counties located in the Neches, Sabine, and Trinity River Basins, and the Neches-Trinity Coastal Basin. The region extends from the southeastern corner of the state for over 150 miles north and northwest.

The Region I planning group studied the current and future projected water demands and supplies for user groups in each county in the Region I Planning Area. Based on the comparison of water demand and supply, the planning group then recommended strategies for meeting shortages for each identified user group. For Sabine County, the only entities identified separately as user groups were the City of Hemphill, City of Pineland, livestock, and manufacturing. Water demand and supply issues for all other entities (i.e., G-M WSC, Beechwood WSC, etc.) were lumped together and summarized as County-Other.

REGION I ESTIMATE OF POPULATION IN SABINE COUNTY

Region I developed population estimates based on TWDB consensus projections. This information was supplemented by information published by the Texas State Data Center and population studies commissioned by individual entities. Based on the results provided in Task 2 of the East Texas (Region I) Regional Water Plan, Region I is expected to grow from 1,042,411 residents in 2000 to an estimated 1,562,155 in the year 2050, a growth of 49.9 percent during the 50-year planning horizon.

Three population groups were identified by Region I for Sabine County, Hemphill, Pineland, and County-Other (which includes rural area as well as small towns with populations less than 500). *Table 3.1*, developed from results of the East Texas (Region I) Regional Water Plan, shows the expected growth for these three areas.

**Table 3.1
Population Projections for Sabine County**

Entity	2000	2010	2020	2030	2040	2050
Hemphill	1,345	1,512	1,683	1,966	2,235	2,527
Pineland	968	1,060	1,181	1,379	1,565	1,767
County – Other	9,052	10,537	11,972	13,300	14,563	15,888
Total	11,365	13,109	14,836	16,645	18,363	20,182

REGION I ESTIMATE OF WATER DEMAND IN SABINE COUNTY

The Region I Planning Group developed estimates for water demand in Sabine County based on population projections provided by the TWDB, as well as, projections for manufacturing and livestock water demands in the area. *Table 3.2* provides a summary of the projected total water demands included in the Region I report for Sabine County for the identified user groups.

**Table 3.2
Water Demands as Identified by Region I Planning Group**

User Group	Water Demand (acre-feet)					
	Year 2000	Year 2010	Year 2020	Year 2030	Year 2040	Year 2050
City of Hemphill	361	387	415	476	533	601
City of Pineland	223	236	250	286	319	358
County-Other	828	878	927	986	1,030	1,103
Manufacturing	1,837	1,958	2,078	2,196	2,313	2,427
Livestock	399	422	449	480	516	558
Total	3,648	3,881	4,119	4,424	4,711	5,047

REGION I WATER SUPPLY

The Region I Planning Group also developed estimates for water supply in Sabine County based on existing supply contracts, historical use records, and aquifer sustainable yield estimates. *Table 3.3* provides a summary of the projected total water supply included in the Region I report for Sabine County for the identified user groups.

Table 3.3
Available Water Supply as Identified by Region I Planning Group

User Group	Water Supply (acre-feet)					
	Year 2000	Year 2010	Year 2020	Year 2030	Year 2040	Year 2050
City of Hemphill	1,842	1,842	1,842	0	0	0
City of Pineland	524	524	524	524	524	524
County-Other	676	676	676	676	676	676
Manufacturing	1,849	1,849	1,849	1,849	1,849	1,849
Livestock	466	466	466	466	466	466
Total	5,357	5,357	5,357	3,515	3,515	3,515

Based on a review of *Table 3.2* and *Table 3.3*, it appears that Sabine County will experience a shortage of available water in the year 2030. However, further review indicates that the City of Hemphill's water contract with the SRA expires in the year 2020. The shortages predicted in 2030 through 2050 can be eliminated through an extension of the contract between Hemphill and the SRA.

Region I estimated that approximately two-thirds of the total County-Other water supply (450 acre-feet per year) was from Toledo Bend Reservoir. The remaining one-third is from Carrizo-Wilcox Aquifer, Sparta Aquifer, and other minor aquifers. In addition, manufacturing water supply was considered to be provided primarily from groundwater sources, and livestock water supply was considered as coming from both surface water and groundwater. Based on these considerations, of the total water supply currently being used in Sabine County, approximately 50 percent is currently

derived from surface water with the remainder being comprised of groundwater from the aquifers listed above.

REGION I WATER MANAGEMENT STRATEGIES

The Region I plan concluded that groundwater use from other minor and undifferentiated aquifers make up the majority of groundwater use in the county. The plan further concluded that because the long-term sustainability of these minor aquifers is not known, it was not recommended that this water supply be relied upon to meet future needs. Region I recommended that the majority of future water demands in Sabine County be met through additional water supply from Toledo Bend Reservoir. Additional groundwater sources were recommended to meet only existing and future manufacturing water demands.

ADDITIONAL WATER PLANNING NEEDS FOR SABINE COUNTY

While the approach used in Senate Bill 1 planning is sound for the development of water management strategies on a large scale, it does not adequately identify issues associated with individual water supply corporations. The Regional Facilities Plan summarized in the following sections of this report further refines the results from the Region I plan to better define and focus water management strategies for Sabine County to address individual water supply corporations. This greater level of detail is needed for this study in order to more accurately plan and manage the water needs for Sabine County.

It appears that adequate water supplies exist in Sabine County, primarily as a result of supply from Toledo Bend Reservoir, to meet current and projected water demands. However, the Region I report was not designed to address whether adequate facilities are in place to capture, treat, transmit, and distribute the water to end-users in the county. The purpose of this Regional Facilities Plan is to better define the infrastructure needs in Sabine County to address water supply and wastewater treatment needs for the county.

A significant portion of the backbone infrastructure, primarily from the City of Hemphill water treatment facilities, the G-M Water Supply Corporation distribution facilities, and the Beechwood and South Sabine systems is already in place to create a regional water supply system for the county. However, capacity issues associated with the existing infrastructure limit the ability to meet current water needs in the county as well as any growth in the area. As a result of the capacity limitations associated with existing infrastructure, two of the larger water supply corporations in the Planning area (G-M Water Supply Corporation and Beechwood Water Supply Corporation) are currently under TNRCC Agreed Orders to upgrade water treatment and distribution facilities in the near future.

WASTEWATER PLANNING NEEDS FOR SABINE COUNTY

Senate Bill 1 planning did not address wastewater needs for the area. The majority of Sabine County, with the exception of the City of Hemphill, City of Pineland, and small package plants along Toledo Bend Reservoir, is currently served by on-site septic systems. The vast majority of the population along Toledo Bend Reservoir is served by septic systems and drain fields. The soils along Toledo Bend Reservoir are often not suitable for on-site septic systems due to poor drainage and infiltration characteristics.

The TNRCC has issued several Notices of Violation (NOV) to individual septic tank owners in the county for improperly operating septic systems. Both the City of Hemphill and City of Pineland currently operate a central collection and treatment system to meet the wastewater needs of those municipalities. The City of Hemphill plant is relatively old and is currently operating at near capacity. Major upgrades to the City of Hemphill plant are currently planned for year 2002 at an estimated cost of \$1.4 million. The City of Pineland wastewater treatment plant underwent a major upgrade in 1991 and is currently operating with excess capacity. In order to protect the water quality of Toledo Bend Reservoir and the future water supply for Sabine County, as well as to provide the ability for growth in the county, further improvements and potential regionalization strategies for wastewater services in the county were explored here.

WATER QUALITY DETERMINATIONS

Based on information provided in the Region I plan, the primary source of surface water for Sabine County is Toledo Bend Reservoir. Water use designations for the reservoir include contact recreation, high aquatic life, and public water supply. Toledo Bend Reservoir is designated as stream Segment 0504 in the Sabine River Basin.

The Region I report list 10 stream segments from the Texas Clean Rivers Act Section 303(d), List of Impaired and Threatened Water Bodies. Segment 0504 is included in that list. Overall water quality with regard to water quality parameters, such as total suspended solids, dissolved oxygen, and others, are not specifically discussed within the Region I report. Additionally, there is no discussion of water quality with regard to groundwater from either the major or minor aquifers.

SECTION 4 – DESCRIPTION OF EXISTING WATER SYSTEMS

CITY OF HEMPHILL

The City of Hemphill (Hemphill) currently serves approximately 659 customers within the city limits and provides water to G-M Water Supply Corporation for its customers as well. Based on a review of the Hemphill monthly operating reports for 1999, the total average water demand in Hemphill is approximately 317,000 gallons per day (gpd) with a daily peak of approximately 832,000 gpd. The Hemphill water supply is obtained solely from Toledo Bend Reservoir and is treated at a surface water treatment plant, owned by the Sabine River Authority (SRA) and operated by Hemphill. The SRA water plant is located northeast of Hemphill on Toledo Bend Reservoir in the Midlake area. The total capacity of the SRA water treatment plant is approximately 2.3 million gallons per day (mgd).

The G-M Water Supply Corporation (WSC) currently has a contract with Hemphill for approximately 0.84 mgd. As a result of the relationship between G-M WSC and Hemphill, the SRA water treatment plant currently serves approximately 65 percent (3,403 connections out of the total 5,132 connections reviewed as part of this study) of the total water demand in Sabine County.

Treated water is pumped from the SRA water treatment plant to Hemphill in a 10-inch water main to a 429,000-gallon ground storage tank located near the center of town. Water is then pumped from ground storage to a 100,000-gallon elevated storage tank, which maintains pressures within Hemphill's water distribution system. In addition to the facilities described above, Hemphill currently has a total of approximately 2,000 gallons per minute (gpm) of service pump capacity. *Exhibit 4-1* illustrates existing water system facilities for the City of Hemphill.

CITY OF PINELAND

The City of Pineland (Pineland) currently serves approximately 377 customers within the city limits. Based on a review of the Pineland monthly operating reports, the total average water demand in Pineland is approximately 222,000 gallons per day (gpd) with a daily peak of approximately 437,000 gpd. The Pineland water supply is obtained solely from groundwater sources. Pineland currently has a single well with a production capacity of approximately 370 gpm. Pineland is currently

constructing a second water well with an estimated production capacity of approximately 400 gpm. This second water well is expected to be in service by the end of this year (2001).

Water from the well is pumped to a 200,000-gallon elevated storage tank near the center of town, which maintains pressures within Pineland's water distribution system. In addition to the facilities described above, Pineland currently has a total of approximately 770 gpm of service pump capacity. *Exhibit 4-2* illustrates existing water system facilities for the City of Pineland.

G-M WATER SUPPLY CORPORATION

G-M WSC is the single largest water purveyor in the county, serving approximated 2,771 customers throughout Sabine County and a small portion of San Augustine County. G-M WSC currently serves only as a central water distribution system only and contracts with the City of Hemphill for all of the treated water required to meet the demands of its customer base. This contract allows a maximum of 25 million gallons per month to be utilized by G-M WSC. Based on a review of the G-M WSC monthly operating reports for 1999, the total average water demand for the G-M system is 592,000 gpd, with a daily peak of approximately 1,051,000 gpd.

G-M WSC currently operates 5 ground storage tanks, 5 standpipes, and 1 elevated storage tank within their system. In addition, G-M WSC also operates a total of 22 pumps stations in their system. G-M WSC purchases treated water from the City of Hemphill for distribution in their system. Water is obtained from 2 primary locations in the county. G-M WSC obtains water directly from the SRA water treatment plant via pump stations at the plant. Water is then pumped from the plant to several individual tanks and other pumping facilities located primarily in the northern and northeastern portions of the county to serve G-M WSC customers in those areas. G-M WSC also obtains water directly from the City of Hemphill distribution facilities at the outer city limits along Highways 184 and 87. Water obtained from these locations is then re-pumped to storage and pumping facilities in the western and southeastern portions of the county to serve G-M WSC customers in those areas. *Exhibit 4-3* illustrates existing water system facilities for G-M WSC.

BEECHWOOD WATER SUPPLY CORPORATION

Beechwood WSC currently serves approximately 470 customers within the Beechwood and Springhill subdivisions located in the southern portion of the county. Raw water for Beechwood WSC is obtained from Toledo Bend reservoir and is treated at a surface water plant owned and operated by Beechwood WSC. Based on monthly operating reports for 1999, the total average water demand for the Beechwood system is 72,000 gpd with a daily peak of approximately 230,000 gpd.

The total design capacity of the Beechwood water treatment plant is approximately 324,000 gpd. However, due to structural deficiencies associated with the facilities, the current treatment capacity is limited to approximately 180,000 gpd. Treated water is pumped from the plant through a 6-inch pipe to the storage facility. Available storage consists of a 230,000-gallon ground storage tank and two additional 33,500-gallon ground storage tanks. Pressure within the distribution system is maintained by two 500-gpm pumps and two 5,000-gallon pressure tanks. *Exhibit 4-4* illustrates existing water system facilities for Beechwood WSC.

SOUTH SABINE WATER SUPPLY CORPORATION

South Sabine WSC currently serves approximately 770 customers in the southern portion of the county. South Sabine's water supply is obtained solely from groundwater sources. The total average water demand for the South Sabine service area is approximately 74,000 gpd with a daily peak of approximately 332,000 gpd, based on a review of monthly operating reports for 1999.

South Sabine currently has two wells, with a combined capacity of approximately 270 gpm, which pump to a ground storage tank with a capacity of 210,000 gallons. The ground storage tank is located at such an elevation that pressure throughout the system is maintained solely by gravity. *Exhibit 4-5* illustrates existing water system facilities for the South Sabine WSC.

EL CAMINO BAY WATER SUPPLY CORPORATION

The El Camino Bay system currently serves approximately 112 customers in the El Camino Bay subdivision. Based on a review of the 1999 monthly operating reports, the total average water demand for El Camino Bay is approximately 18,000 gpd with a daily peak of approximately 57,000 gpd. Raw water supply for El Camino Bay is obtained solely from Toledo Bend Reservoir and is treated at a surface water treatment plant owned and operated by El Camino Bay WSC.

Treated water is pumped via 3-inch pipe to the storage facility, which is made up of two 12,000-gallon tanks. In addition to these storage tanks, five 525-gallon pressure tanks are located within the facility. *Exhibit 4-6* illustrates existing water system facilities for the El Camino Bay WSC.

Combined, these six entities provide an average daily demand of approximately 1.89 million gallons per day and serve approximately 5,100 customers. *Table 4.1* provides a summary of the existing water supply facilities in Sabine County.

Table 4.1
Existing Facilities in Sabine County

	Existing Connections	Plant Capacity (gpm)	Service Pump Capacity (gpm)	Storage		Pressure Tank Capacity (gal)
				Ground (gal)	Elevated (gal)	
City of Hemphill	659	1,011	2,000	429,000	100,000	N/A
City of Pineland	377	325	770	0	200,000	N/A
G-M WSC	2,744	586 ⁽¹⁾	5,080	484,000	30,000	24,500
Beechwood WCS	470	150	1,000	296,000	N/A	10,000
South Sabine WSC	770	270	1,540	210,000	N/A	N/A
El Camino Bay WSC	112	70	200	24,000	N/A	2,625

⁽¹⁾ Amount available for contract from the City of Hemphill. G-M WSC currently does not have water treatment facilities.

SECTION 5 – DESCRIPTION OF EXISTING WASTEWATER SYSTEMS

The majority of the Sabine County's wastewater treatment needs are currently served using individual septic tanks. The use of on-site wastewater treatment (septic tanks) is especially prevalent in the densely populated areas along Toledo Bend Reservoir. The City of Hemphill and City of Pineland both operate their own wastewater treatment plants serving residents within their respective city limits. The remaining portion of the county has very little centralized wastewater collection and treatment. Three other small (less than 0.05 mgd) wastewater treatment plants exist along Toledo Bend Reservoir in the Beechwood, Pendleton Harbor, and Frontier Park areas.

CITY OF HEMPHILL

The City of Hemphill's existing wastewater treatment plant (WWTP) was constructed in 1955 and first permitted by Texas Water Commission in 1974. Currently, the WWTP is permitted for an average daily flow of 0.20 mgd with a 2-hour peak of 0.53 mgd under Texas Pollutant Discharge Elimination System (TPDES) Permit No. 10493-002.

The current treatment train consists of an Imhoff tank, trickling filter, settling basins, and chlorine contact chambers. Hemphill's WWTP discharges into Toledo Bend Reservoir (Segment 0504 of the Sabine River Basin). Discharge limits are 20 milligrams per liter (mg/l) biochemical oxygen demand 5-day (BOD5) and 20 mg/l total suspended solids (TSS) with a minimum of 4 mg/l dissolved oxygen (DO). Wastes classified as municipal waste are treated at the plant, as there are no generators of industrial or special need waste currently served by the plant; therefore no pretreatment requirements exist.

Existing infrastructure comprises approximately 150 feet of 10-inch, 19,000 feet of 8-inch, and 62,000 feet of 6-inch collection lines. Seven lift stations are used to pump sewage up to gravity lines for delivery to the WWTP. Four lift stations use submersible pumps and three lift stations use self-priming pumps for a total capacity of 850 gpm.

CITY OF PINELAND

The City of Pineland's WWTP operates in an extended aeration mode, having undergone a major upgrade in 1991. Currently, the WWTP is permitted for an average daily flow of 0.214 mgd with a 2-hour peak of 0.86 mgd under TPDES Permit No. 10249-001.

The plant discharges into Sam Rayburn Reservoir (Segment 0610 of the Neches River Basin). Discharge limits are 10 mg/l BOD5, 15 mg/l TSS, and nitrate-nitrogen 3 mg/l. with a minimum DO of 4 mg/l. The city is negotiating a contract with Temple Inland, a wood products company, to buy treated effluent for reuse within their facilities.

OTHER WWTPS

Beechwood WSC maintains their own wastewater plant. This plant currently serves the areas of Beechwood III and Beechwood IV. Currently, the WWTP is permitted for an average daily flow of 0.05 mgd with a 2-hour peak flow of 0.10 mgd under TPDES Permit No. 11423-001.

The plant discharges to Toledo Bend Reservoir (Segment 0504 of the Sabine River Basin). Discharge limits are 10 mg/l BOD5 and 15 mg/l TSS.

Two other wastewater treatment package plants exist along Toledo Bend Reservoir. These are small package plants operating at average flows of less than 10,000 gallons per day. These package plants generally serve their marina and other facilities within their encampments. These plants include Frontier Park and Pendleton Harbor.

SECTION 6 – REGIONAL WATER AND WASTEWATER ANALYSIS AND PLANNING CRITERIA

AVERAGE WATER USAGE OF PLANNING PARTICIPANTS

TC&B collected data from the planning area participants on three different occasions. Copies of monthly operating reports were obtained for portions of the years 1998, 1999, and 2000. The most complete data set for most participants was that of 1999. Therefore 1999 was used as the reference year in which average water usage was based for most participants, for purposes of this planning study. *Appendix A* summarizes the actual water usage by month and year for each planning participant studied as part of this study.

WATER DEMAND USED FOR WATER SYSTEM MODELING

In order to provide a reasonable degree of conservatism for the analysis, the month with the highest reported usage was used to calculate an average demand per connection for each planning participant for use in the model. *Table 6.1* summarizes the average demand per connection used in the water modeling for each planning participant.

**Table 6.1
Peaking Factors and Demands for Water Models**

Entity	Average Day Demand (gpm)	Peak Day		Peak Hour	
		Peak Factor	Demand (gpm)	Peaking Factor	Demand (gpm)
City of Hemphill	0.47	2.4	1.13	2	2.26
City of Pineland	0.54	2.4	1.30	2	2.60
G-M WSC	0.21	2.4	0.49	2	0.98
Beechwood WSC	0.11	3.5	0.40	2	0.80
South Sabine WSC	0.12	3.9	0.45	2	0.90
El Camino Bay WSC	0.11	3.9	0.43	2	0.86

In order to meet TNRCC criteria, distribution systems must be adequately sized to provide the peak hour demand in a system while maintaining system pressures of at least 35 pounds per square inch (psi). In addition, distribution systems must be capable of providing the peak day demand plus a fire

demand while maintaining system pressures of at least 20 psi. Water models were prepared for each planning participant system and were evaluated based on these criteria. In order to complete this analysis, however, peak day and peak hour demands had to be estimated for each planning participant. Peak day and peak hour demands were estimated by applying a peaking factor to the average day demands provided in *Table 6.1* above. The recommended peaking factors used for this study for peak day and peak hour were 2.4 and 2.0, respectively. These peaking factors were used for the Cities of Hemphill and Pineland and for the G-M WSC distribution system.

The City of Hemphill and City of Pineland are typical of most municipalities that consist mostly of residents who live and work in the area on a full time basis. The subdivisions along Toledo Bend Reservoir consist of a number of weekend residents who do not contribute as significantly to normal daily water use. Because the majority of the water demand associated with the other planning participants is derived from areas along Toledo Bend Reservoir where water usage patterns are different than typical municipalities, an alternative method for deriving peaking factors was utilized.

For these entities, the average weekend use was also calculated, based on monthly operating reports provided by each planning participant. The peak day demand factor was calculated by dividing the average weekend use by the average daily use for the month. This peak day demand factor was then applied to the average day demands in *Table 6.1* to estimate peak day demands for each entity. The peaking factor of 2 was then used to calculate peak hour demands for each entity. *Table 6.1* provides the average day demands, peak day demands, peak hour demands, and associated peaking factors for each planning participant used during the water modeling analysis. The water demands in *Table 6.1* are provided in terms of a rate (gpm) per connection for each entity.

WATER MODELING DEVELOPMENT AND CRITERIA

Water distribution system modeling was performed using the PIPE2000 computer-modeling program developed by the University of Kentucky and widely used and recognized within the engineering community. Each planning participant provided engineering drawings and pipe layout plans for their individual distribution systems. This information was then digitized and coded into a Geographical

Information System (GIS) database. PIPE2000 and the GIS system were designed to import and export files from one another, allowing the modeler to have a more accurate representation of pipe layouts and the ability to import database information from each system.

A system of nodes and pipes, constructed from the digital GIS database described above, was then imported into the PIPE2000 water system model and the applicable water demands provided in *Table 6.1* were applied to representative nodes. The above-described methodology was followed for all water models developed for this planning study with the exception of the G-M WSC water model.

As part of the “in-kind” services provided by the planning participants for this TWDB planning study grant, the G-M WSC water model was developed by the engineer for G-M WSC (Cross-Tex Engineers, Palestine, Texas). The G-M WSC water model was developed using the KYPIPE water system model. KYPIPE is an earlier version of the PIPE2000 water model used by TC&B to analyze existing water systems. The G-M WSC water model, developed by Cross-Tex Engineers, was imported into the PIPE2000 computer model for further refinement and execution.

These existing conditions water models were then executed to identify deficiencies in the existing distribution systems for each planning participant analyzed during this study. Recommended improvements were then based on TNRCC criteria as well as typical criteria used for sound engineering of distribution systems. The basic criteria used to make recommendations for improvements to existing distribution facilities include:

1. minimum system pressures of 35 psi under peak hour demand
2. minimum system pressures of 20 psi under peak day plus fire flow demand
3. headlosses less than 10 feet per 1,000 feet of length and velocities less than 10 feet per second (fps) under existing water demands
4. headlosses less than 5 feet per 1,000 feet of length and velocities less than 5 fps under projected water demands in 2050

The first two criteria above are those recommended by the TNRCC for water distribution facilities. The criteria for headloss and velocity are those criteria typically used by the engineering community in designing water facilities. Based on experience, it has been found that water distribution facilities

designed and operated under these criteria will provide longer useful lives and will also reduce operations and maintenance costs. Headlosses greater than 5 feet per 1,000 feet of length can result in higher operational costs associated with pumping. Likewise, velocities greater than 5 fps can result in problems associated with pipe scouring, a greater risk of pipe breaks, and potential water hammer issues.

Because these criteria are not necessarily TNRCC requirements, the headloss and velocity criteria used to recommend proposed improvements to existing systems under existing water demands were relaxed to 10 feet per 1,000 feet length and 10 fps, respectively. For purposes of this study, proposed improvements to existing systems under existing water demands will be implemented in the near term (between 2005 and 2010), while proposed improvements under projected 2050 water demands will be implemented further out in time (between 2025 and 2030).

It was recognized that due to financial constraints many of the proposed improvements that are based solely on the criteria for headloss and velocity may not be feasible in the short term. In addition, it was also recognized that problems associated with exceeding the headloss and velocity criteria summarized above are related to long-term operation and maintenance issues and may not impact significantly a short-term benefit/cost analysis. Therefore, the criteria for headloss and velocity were relaxed to evaluate proposed improvements under existing water demands. The more stringent criteria for headloss and velocity were used to evaluate improvements under projected 2050 water demands.

PURPOSE AND OBJECTIVE OF WASTEWATER PLANNING

As stated previously in this report, the majority of wastewater treatment in Sabine County is currently served through on-site treatment facilities (septic tanks) at individual residences. Centralized wastewater collection and treatment facilities are generally limited to the City of Hemphill, City of Pineland, and small facilities along Toledo Bend Reservoir serving a limited number of connections. The majority of dense population in Sabine County is along Toledo Bend Reservoir, and therefore a majority of the wastewater treatment along the reservoir is currently

provided by septic systems. Toledo Bend Reservoir is an important natural resource and water supply for Sabine County and should be protected. Because of this, the primary objective of wastewater planning, for purposes of this study, was to assess the feasibility and alternatives for implementing centralized type wastewater facilities along Toledo Bend Reservoir.

A previous Facility Engineering Plan, prepared by The Hogan Corporation, dated February 1998, and submitted to the TWDB Economically Distressed Areas Program (EDAP), indicates that certain soil types existing along Toledo Bend Reservoir are not recommended for on-site septic systems. The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) classifies soil types as to the “degree and kind of limitation of septic tank filter fields.” Based on the Facility Engineering Plan prepared by The Hogan Corporation, many of the soils along Toledo Bend Reservoir are classified as having moderate to severe limitations for septic tank filter fields. *Table 6.2* summarizes the soils types, degree and kind of limitations, and permeability issues associated with each soil type. *Exhibit 6-1* provides a general soils map of Sabine County illustrating the various soils types and location of soils types within the county.

Table 6.2
Soils Properties Along Toledo Bend Reservoir

Soil Type	Degree and Kind of Limitation for Septic Tank Filter Fields	Permeability
Woodtell	Severe-unfavorable	Percs slowly
Bernaldo	Moderate-not favorable	Wetness
Mantachie	Severe-unfavorable	Wetness floods
Sacul	Severe-unfavorable	Percs slowly
Rayburn	Severe-unfavorable	Percs slowly
Tehran	Severe-unfavorable	Poor filter

The primary focus of wastewater planning for Sabine County, for purposes of the study, was concentrated on the development along Toledo Bend Reservoir and based on the following:

1. the above-referenced findings associated with soil classifications
2. the degree of development along Toledo Bend Reservoir
3. the prevalence of on-site septic systems along Toledo Bend Reservoir
4. the inherent importance of protecting the water quality of Toledo Bend Reservoir, a valuable long-term source of surface water supply for the county

DESCRIPTION OF WASTEWATER STUDY AREAS

Based on the above-described objectives, the area along Toledo Bend Reservoir was divided into five separate areas for purposes of wastewater planning. The five areas are designated as:

1. Beechwood/South Sabine Planning Area
2. Timberlane Planning Area
3. El Camino Bay Planning Area
4. Midlake Planning Area
5. North Planning Area

See *Exhibit 6-2* for location of each wastewater planning area.

Beechwood/South Sabine Planning Area

The Beechwood/South Sabine Planning Area is located along Toledo Bend Reservoir in the southeastern corner of Sabine County. The area extends from approximately Highway 87 east to Toledo Bend Reservoir and includes the Holiday Forest, Shawnee Shores, Sandy Creek Estates, Laguna Shores, Shoreline, Dogwood Forest, McGee's Landing, Beechwood, Springhill, and Toledo Beach subdivisions as well as others.

The primary regional water suppliers in the area are the Beechwood WSC and South Sabine WSC. Some residents in the planning area may also have private water wells. One centralized wastewater

treatment plant currently exists in the Beechwood/South Sabine Planning Area serving residents of the Beechwood III and Beechwood IV subdivisions. It was assumed, based on information obtained from the planning participants, that the Beechwood wastewater treatment plant has adequate treatment capacity to serve existing and projected connections for the current service area.

The remainder of the residents within the planning area are currently utilizing on-site septic systems. Approximately 853 potential wastewater connections were estimated to currently exist within this planning area with a total wastewater demand of approximately 0.18 mgd. Based on growth projections for Sabine County, the number of connections would increase to approximately 1,142 by 2050 with a total wastewater demand of approximately 0.24 mgd.

Timberlane Planning Area

The Timberlane Planning Area is located just north of the Beechwood/South Sabine Planning Area. The area extends from approximately Highway 87 east to Toledo Bend Reservoir and includes the Dogwood Estates, Hammock Estates, Timberlane, Gilleys Point, Green Acres, Youpon Ridge, Toledo Village, and Woodland Estates subdivisions as well as others.

The primary regional water supplier in the area is the G-M WSC. Some residents in the planning area may also have private water wells. There are currently no centralized wastewater treatment plants in the Timberlane Planning Area. All residents within this planning area are currently utilizing on-site septic systems. Approximately 483 potential wastewater connections were estimated to exist within this planning area with a total wastewater demand of approximately 0.10 mgd. Based on growth projections for Sabine County, the number of connections would increase to approximately 646 by 2050 with a total wastewater demand of approximately 0.14 mgd.

El Camino Bay Planning Area

The El Camino Bay Planning Area is located just north of the Timberlane Planning Area. The area extends from approximately Highway 87 east along Highway 83 to Toledo Bend Reservoir and

includes the New Spring Hills, Sabinetown, Rebel Ridge, River Bend, El Camino Bay, Siesta Shores, Sunshine Valley Estates, and Harborlight subdivisions as well as others.

The primary water supplier in the area is the G-M WSC. Some residents in the planning area may also have private water wells. The El Camino Bay WSC provides treated surface water to residents of the El Camino Bay subdivision. There are currently no centralized wastewater treatment plants in the El Camino Bay Planning Area. All residents within this planning area are currently utilizing onsite septic systems. Approximately 662 potential wastewater connections were estimated to exist within this planning area with a total wastewater demand of approximately 0.13 mgd. Based on growth projections for Sabine County, the number of connections would increase to approximately 888 by 2050 with a total wastewater demand of approximately 0.18 mgd.

Midlake Planning Area

The Midlake Planning Area is located just north of the El Camino Bay Planning Area. The area extends from approximately Highway 87 east along Highway 21 to Toledo Bend Reservoir and includes the Alpine, Twin Cedars, Holly Bay, Midlake, Midlake Village, Pecan Estates, Frontier Park, and Pendleton Harbor subdivisions as well as others.

The primary water supplier in the area is the G-M WSC. Some residents in the planning area may also have private water wells. There are currently two centralized wastewater treatment plants in the Midlake Planning Area. The Pendleton Harbor and Frontier Park wastewater treatment plants currently serve residents from their respective subdivisions. It was assumed, based on information obtained from the planning participants, that the Pendleton Harbor and Frontier Park wastewater treatment plants have adequate treatment capacity to serve existing and projected connections for the current service area.

The remaining residents within this planning area are currently utilizing on-site septic systems. Approximately 279 potential wastewater connections were estimated to exist within this planning area with a total wastewater demand of approximately 0.06 mgd. Based on growth projections for

Sabine County, the number of connections would increase to approximately 371 by 2050 with a total wastewater demand of approximately 0.08 mgd.

North Planning Area

The North Planning Area is located just north of the Timberlane Planning Area. The area extends from approximately Highway 87 east to Toledo Bend Reservoir and includes the Shamrock Shores, Playcation, Piney Point, Waterwood, Hickory Point, and Rana Brian subdivisions as well as others.

The primary water supplier in the area is the G-M WSC. Some residents in the planning area may also have private water wells. There are currently no centralized wastewater treatment plants in the North Planning Area. All residents within this planning area are currently utilizing on-site septic systems. Approximately 444 potential wastewater connections were estimated to exist within this planning area with a total wastewater demand of approximately 0.09 mgd. Based on growth projections for Sabine County, the number of connections would increase to approximately 594 by 2050 with a total wastewater demand of approximately 0.12 mgd.

WASTEWATER FLOW ESTIMATION

Wastewater flows were calculated for each potential connection using the TNRCC standard criteria of 100 gallons per capita day (gpcd). The potential number of connections was estimated using information, provided by the Sabine County 911 management office, of existing structures in the county. *Exhibit 6-3* provides the existing structures map for Sabine County. For purposes of this study, each structure was assumed to represent a potential connection for wastewater service.

The 100 gpcd was then multiplied by the estimated average number of persons per connection. For Sabine County the average number of persons per connection was estimated at 2.08 for the five areas along Toledo Bend Reservoir. The estimated wastewater flows were used to develop estimates of treatment capacity for wastewater treatment plants proposed in each planning area for the existing and projected number of connections.

Wastewater collection lines, force mains, and lift stations proposed for each planning area to convey wastewater to individual wastewater treatment plants were sized to include capacity for infiltration and inflows to the system. For purposes of this regional study, a factor of 4.0 was applied to all estimated wastewater flows, calculated as described above, to estimate the total hydraulic capacity on the wastewater collection and transmission facilities.

Table 6.3 provides the number of connections, total estimated wastewater flows, and total estimated hydraulic loading for each planning area.

**Table 6.3
Estimated Wastewater Flows**

Planning Area	Number of Connections		Total Estimated Wastewater Flow (mgd)		Total Estimated Hydraulic Flow (mgd)	
	2001	2050	2001	2050	2001	2050
Beechwood/South Sabine	853	1142	0.18	0.24	0.72	0.96
Timberlane	483	646	0.10	0.14	0.40	0.56
El Camino	662	888	0.13	0.18	0.52	0.72
Midlake	279	371	0.06	0.08	0.24	0.32
North	444	594	0.09	0.12	0.36	0.48

WASTEWATER COLLECTION SYSTEMS ALTERNATIVES

The majority of residents in subdivisions along Toledo Bend Reservoir are not connected to centralized wastewater treatment facilities and instead utilize on-site septic systems to treat domestic wastewater. Therefore, planning the conversion from on-site sewer systems to centralized treatment facilities requires the consideration of wastewater collections systems. Currently, wastewater from individual residences is discharged to underground private septic tanks for primary treatment and solids removal and then discharged to drain fields located on individual lots. In order to centralize treatment, a system of collection lines and other infrastructure will need to be constructed to transport wastewater flows from individual residences within a geographic area to the central

treatment facilities serving that geographic area. For purposes of this study, three alternative methods of wastewater collection are considered.

Conventional Gravity Sewers

The first method, and by far the most common, is the use of conventional gravity sewers. Gravity sewers typically would be used to completely replace the need for and use of septic tanks in the wastewater treatment process. Gravity sewers utilize the natural force of gravity to move untreated wastewater from individual residences to the ultimate location of centralized treatment facilities. In certain instances, where the natural topography of an area does not lend itself to gravity flow, lift stations are required to pump wastewater up to a grade where it can again be collected and moved by gravity toward the treatment facility. Because conventional gravity sewers typically carry significant solids loading, design flow velocities should be on the order of 4 to 6 feet per second to prevent clogging. Conventional gravity sewers are most applicable to areas of dense population, low water tables, and slight to moderate terrain.

Septic Tank Effluent Pump (STEP) Sewers

An alternative method to conventional gravity sewers for wastewater collection is septic tank effluent pump (STEP) systems. The STEP system is a pressurized sewer collection system as opposed to the gravity system described above. The STEP system, while still serving as a central collection system, does not completely replace the need and use of septic tanks in the treatment process. The STEP system typically consists of collecting wastewater from individual residences in existing, or newly installed, septic tanks for primary removal of suspended solids, grease, and biological oxygen demand (BOD). This primary treatment is capable of removing 90 percent of the grease, 70 to 90 percent of the suspended solids, and 50 to 80 percent of the BOD from domestic wastewater flows. STEP systems require that solids from individual septic tanks be removed, via vacuum truck, and properly disposed of on some pre-determined regular interval.

This partially treated effluent then flows to a pump vault within the tank (or separate pump tank in older systems) where a submersible pump, typically one-half horsepower, conveys the wastewater to

the collection system where it may again be re-pumped to the central treatment facilities. The pumps are usually controlled by level sensors that cause the pumps to discharge at some pre-determined tank level. Because the STEP system is a pressurized sewer collection system, collection lines used to transport wastewater flows from STEP systems can generally be of smaller diameter (i.e., 2-inch to 4-inch) than gravity collection lines (i.e., 6-inch to 8-inch). In addition, because STEP systems typically have a much lower solids loading than conventional gravity sewers, design flow velocities can be reduced to 1 to 2 feet per second without concern for clogging. STEP systems are most applicable to areas of low-density population, high water tables, and moderate to severe terrain where gravity collections systems are not easily implemented. In addition, the removal of the majority of the solids prior to pumping allows the use of much less expensive effluent pumps and eliminates the need for grinder pumps for this application.

Grinder Pump Sewers

Grinder pump sewers are another alternative to conventional gravity sewers and, similar to STEP systems, are also pressurized sewer collection systems. The grinder pump sewers typically consist of collecting wastewater from individual residences in below ground holding tanks or wet wells. The holding tank contains a level-controlled sewage pump whose intake is fitted with a grinding mechanism similar to that of a household garbage disposal. When a pre-determined volume of wastewater accumulates in the holding tank, the grinder pump is activated.

The grinder pump then macerates the solids and pumps the resulting slurry into a central collection system where it may again be re-pumped to the central treatment facilities. Because the grinder pump system is a pressurized sewer collection system, collection lines used to transport wastewater flows from grinder pump systems can generally be of smaller diameter (i.e., 2-inch to 4-inch) than gravity collection lines (i.e., 6-inch to 8-inch). However, unlike STEP systems, solids in the grinder pump systems are transported as a slurry within the collection system. Therefore, design flow velocities, particularly for long pipe segments, should be on the order of 2 to 4 feet per second. Like STEP systems, grinder pump systems are most applicable to areas of low-density population, high

water tables, and moderate to severe terrain where gravity collections systems are not easily implemented.

WASTEWATER TREATMENT SYSTEMS ALTERNATIVES

Conventional wastewater treatment (package plants) and natural treatment alternatives (i.e., aerobic systems, sand filters, etc.) are potentially applicable to the wastewater treatment needs of the study area. The following sections describe the various treatment alternatives reviewed as part of this study and summarize some of the advantages, disadvantages, design parameters, and performance characteristics for each system.

Conventional Wastewater Treatment (Package) Plants

The extended aeration package plant version of the activated sludge process is one of the most widely used treatment options for smaller facilities. The extended aeration process is characterized by low loading rates and long hydraulic and solids retention times. In a well operated package plant, the 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) removal can be expected to range from 85 to 95 percent.

An extended aeration package plant generally consists of coarse screening, activated sludge aeration using mechanical air diffusers, secondary clarification using skimming and return sludge pumping, and a disinfection contact basin. Sludge is typically wasted to an aerobic holding or aerobic stabilization tank. Sludge disposal will be sent to a licensed facility that is permitted to accept domestic wastewater sludge. The aeration tank volume is typically designed based on an organic loading rate of approximately 15 pounds of BOD₅ per 1,000 cubic feet per day. Secondary clarifiers are generally sized to accommodate the larger of 1,000 gpd per square feet for peak flow or 500 gpd per square feet for design flow.

Advantages of the extended aeration process include the lowest sludge production of any activated sludge process, high quality effluent, relatively quick installation times with minimal site preparation, reliability with sufficient operator attention, minimal land requirements, and ability to

handle shock hydraulic loadings. Disadvantages include a relatively higher capital cost than other treatment alternatives (i.e., sand filters, aerobic treatment systems), and more operation and maintenance expenses than natural alternatives. Based on the degree of treatment typically achieved, the relative ease of implementation, as well as the degree of acceptance for this type of treatment, the extended aeration package plant was considered as a potential wastewater treatment alternative for Sabine County.

Sand Filters

Sand filters treat wastewater using naturally occurring physical, biological, and chemical processes. They are a good alternative for additional on-site treatment where septic tank and soil absorption systems have failed or are restricted due to poor soils, high groundwater, or other site conditions. They are also a good choice for small, residential communities in areas where conventional centralized treatment is infeasible or uneconomical to implement. Sand filters also generally cost less to construct and operate than centralized conventional treatment systems.

Sand filters usually require some form of pre-treatment (i.e., septic tank, aerobic unit, or sedimentation tank) to remove solids in the raw wastewater stream. Wastewater treated by sand filtration is usually colorless and odorless and, depending upon local and environmental conditions and regulations, can be disinfected and discharged directly to surface water. When discharged to a soil absorption field, sand filter effluent can receive further treatment, even at some sites where conventional septic tank/soil absorption fields are not operating efficiently.

Sand filters are constructed beds of sand or other suitable granular material usually 2 to 3 feet deep. The filter materials (media) are often contained in a liner made of concrete, plastic, or other impermeable material. Depending upon the design, the filter may be constructed above ground, partially below ground, or below ground, and may be covered or uncovered. Partially treated wastewater is applied to the filter surface in intermittent doses and receives treatment as it slowly trickles through the media. Wastewater then collects in an underdrain system and flows to further treatment and/or discharge. Depending on the system design, sand filters are capable of reducing

five-day biological oxygen demand (BOD₅) and total suspended solids (TSS) in wastewater to 10 milligrams per liter (mg/l) or less.

Due to problems sometimes associated with odors produced from sand filters, particularly for more developed areas, another alternative to buried or open sand filters is a recirculating sand filter. In a recirculating sand filter, wastewater flows by gravity from a septic tank to a recirculation tank, which is equipped with a pump, a timing mechanism, and float valves. The wastewater is pumped to the filter when the wastewater reaches a certain level in the tank or in timed doses.

After receiving treatment in the sand filter, the wastewater collects in underdrains and a portion is directed back to the recirculation tank, where it mixes again with septic tank effluent and is recirculated to the sand filter. The remaining sand filter effluent bypasses the recirculation tank and goes directly to disinfection or further treatment. The ratio of sand filter effluent that is recirculated to septic tank effluent ranges from 3:1 to 5:1 and is determined by individual system design. As a result of recirculation, the wastewater applied to the sand filter is weaker and contains more oxygen than straight septic tank effluent, which eliminates odors. Final sand filter effluent from a recirculating sand filter is also of higher quality and ranges from 2 to 5 mg/l BOD and from 3 to 5 mg/l TSS. *Table 6.4* provides a summary of typical design parameters for sand filters.

Table 6.4
Typical Design Parameters for Sand Filters

Design Factor Pretreatment	Buried Solids Removal	Open Solids Removal	Recirculating Solids Removal
Media			
Material	Washed, granular	Washed, granular	Washed, granular
Effective size	0.3-1 mm	0.3-1 mm	0.8-3 mm
Unif. Coeff.	<4.0	<4.0	<4.0
Depth	24-36 inches	24-36 inches	24-36 inches
Hydraulic loading	<1.5 gpd/square feet	2-5 gpd/square feet	3-5 gpd/square feet
Organic loading	<0.5 x 10 ⁻³ lbs BOD5/day/ft ²	<0.5 x 10 ⁻³ lbs BOD5/day/ft ²	<0.5 x 10 ⁻³ lbs BOD5/day/ft ²
Media temperature	>5 degree C	>5 degree C	>5 degree C
Dosing frequency	<2 per day	>2 per day	5-10 min/ 30 min
Recirculation ratio	NA	NA	3:1 to 5:1

Based on the degree of treatment sand filters can achieve and the relatively low cost associated with implementation, the recirculating sand filter was considered as a potential wastewater treatment alternative for Sabine County.

Aerobic Treatment Systems

Aerobic systems are similar to septic systems in that they both use natural processes to treat wastewater. But unlike septic treatment (anaerobic), the aerobic treatment process requires oxygen. Aerobic treatment units, therefore, use a mechanism to inject and circulate air inside the treatment tank. This mechanism requires electricity to operate. For this reason, aerobic systems generally cost more to operate and need more routine maintenance than most septic systems. However, when properly operated and maintained, aerobic systems can provide a high quality wastewater treatment alternative to septic systems.

Aerobic systems often require pre-treatment (i.e., septic tanks). Solids including grease, oils, and other materials should be removed prior to aerobic treatment to ensure effective treatment. In addition, the discharge from aerobic treatment systems is generally not of adequate quality to be discharged directly to the environment. Aerobic treatment systems will require post-treatment (i.e., sand filter, soil absorption field, or evapotranspiration bed) prior to discharge, although in some cases they may be allowed to discharge to a surface irrigation system. A variety of different designs exist for aerobic treatment systems. The most common designs are suspended growth units and attached growth units.

The process most aerobic units use to treat wastewater is referred to as suspended growth. These units include a main compartment called an aeration chamber in which air is mixed with the wastewater. This is generally accomplished by forcing air into the aeration chamber by an air blower or a compressor. The forced air mixes with wastewater in the aeration chamber, and the oxygen supports the growth of aerobic bacteria that digest the solids in the wastewater. This mixture of wastewater and oxygen is called the “mixed liquor.”

The treatment occurring in the mixed liquor is referred to as suspended growth because the bacteria grow as they are suspended in the liquid unattached to any surface. The bacteria cannot digest all of the solids in the mixed liquor, and these solids eventually settle out as sludge. Many aerobic units include a secondary chamber called a settling chamber or clarifier where excess solids can settle. In aerobic units designed with a separate settling compartment, the sludge returns to the aeration chamber (either by gravity or by pumping). The sludge contains bacteria that also aid in the treatment process. While these units greatly reduce the volume of sludge produced through the recirculation and endogenous respiration of the biological solids produced, there are suspended materials in wastewater that are not biodegradable, as well as materials that are much harder to degrade. As a result, all aerobic systems will produce some sludge that must be managed, and they must be pumped on a regular basis. This is particularly important for those units that discharge into subsurface fields, as the suspended solids will clog the field if they carry over into the effluent.

An alternative design for aerobic treatment is the attached growth system. These units treat wastewater by taking a surface made of material that the bacteria can attach to, and then exposing that surface alternately to wastewater and air. This is achieved either by rotating the surface in and out of the wastewater or by dosing the wastewater onto the surface. As with the suspended growth treatment, pre-treatment and post-treatment is required for the attached growth treatment as well. The air required for the attached growth treatment process is either naturally present or provided by mechanical means. Attached growth systems, such as trickling filters and rotating disks, are less common than suspended growth systems but have certain advantages. With attached growth systems, there is no need for mixing, and solids are less likely to be washed out of the system during periods of heavy household water use.

Aerobic systems are generally good options for small rural communities where the soil quality is not appropriate for septic systems, the groundwater is high, septic systems have failed, adequate land is not available for septic systems, or a higher degree of treatment is required. Advantages of aerobic treatment systems include:

- A higher level of treatment than with septic systems
- Extended life of existing septic systems
- Potential reduction in drainfield sizes

Disadvantages of aerobic treatment systems include:

- More expensive to operate than septic systems or sand filters
- Greater degree of mechanical parts than with septic systems or sand filters
- More routine maintenance than septic systems or sand filters
- Subject to upsets under sudden heavy loads or when neglected
- Post-treatment prior to discharge

The aerobic treatment system alternative was not included for further consideration for Sabine County based on these disadvantages.

**DESCRIPTION OF WASTEWATER PLANNING ALTERNATIVES FOR
SABINE COUNTY**

Two alternative methods for wastewater service were analyzed for each wastewater planning area described above as part of this planning study. The first alternative consisted of conventional wastewater treatment systems (i.e., package plants) centrally located in areas of dense population. The majority of these centralized wastewater treatment plants were located near communities or clusters of communities where the resulting number of connections would be 200 or greater. This centralized alternative for service requires some form of collection in each individual subdivision and usually an extensive network of force mains and lift stations to direct wastewater to the centralized treatment facilities.

The second alternative studied consists of natural treatment systems (i.e., sand filters) located in individual subdivisions or small clusters of communities. In general, the number of connections served by each individual natural wastewater treatment system was less than 200. With this alternative, the network of force mains and lift stations to direct wastewater to the treatment facilities was generally less extensive than with the centralized alternative described above. However, because treatment is not centralized, more individual natural wastewater treatment facilities are required.

For both alternatives for service, two alternative collection systems were assessed. Conventional gravity sewer systems and STEP systems were assessed for each alternative approach for service. The primary differences between the alternative collection systems (i.e., gravity and STEP) are the diameter of the collection lines and the solids handling measures. STEP collection systems are pressurized systems and solids are generally handled by existing septic tanks at individual residences. Therefore, line velocities can be lower and resulting line diameters can be smaller than with gravity sewers.

For the alternatives utilizing STEP collection systems, it was assumed that all STEP collection lines in individual subdivisions would be a minimum of 2-inch diameter lines. For the alternatives utilizing gravity sewer collection systems, it was assumed that all gravity collection lines in

individual subdivisions would be a minimum of 6-inch diameter lines. Line velocities in force mains and gravity mains directing wastewater from the individual subdivisions to the location of treatment facilities are sized according to line velocity criteria for each type of collection system.

STEP collection systems, for purposes of this planning study, will not be transporting significant solids with the wastewater flows, and therefore lower line velocities are allowed with these systems. Gravity sewer collection systems are designed to transport both the solids and the liquid fraction of wastewater flows and therefore require higher line velocities to reduce clogging. For purposes of this study, line velocities in force mains and gravity mains directing flows from individual subdivisions collected by STEP systems to treatment facilities are allowed to be as low as one foot per second. The minimum diameter of force mains and gravity mains for wastewater flows collected by STEP systems was established as 2-inch and 3-inch, respectively.

For alternatives utilizing gravity collection lines, force mains and gravity mains would be required to maintain line velocities of 4 to 6 fps. The minimum diameter of force mains and gravity mains for wastewater flows collected by gravity sewer systems was established as 4-inch and 6-inch, respectively. *Table 6.5* provides a summary of design parameters used to assess the various wastewater collection alternatives.

Table 6.5
Design Parameters for Wastewater Collection Systems

Design Parameter	STEP Collection System	Conventional Collection System
Minimum Collection Line Diameter	2-inch	6-inch
Minimum Force Main Diameter	2-inch	4-inch
Minimum Gravity Main Diameter	3-inch	6-inch
Minimum Line Velocity	1 foot per second	4 feet per second

Appendix B provides the summary of calculations used to size force mains and gravity mains for each wastewater planning area assuming STEP collection systems. Based on these results, force

mains are generally 2-inch to 3-inch diameter lines with lift stations varying from less than 20 gpm to approximately 200 gpm. Gravity mains are generally 3-inch to 6-inch diameter lines.

A detailed analysis, as provided in *Appendix B*, was not conducted for force mains and gravity mains directing wastewater flows from gravity collection systems. Due to the higher velocity requirements and the relatively small wastewater flows associated with this study, an analysis of the type provided in *Appendix B* was not applicable to systems utilizing gravity sewers. A wastewater system utilizing gravity sewer collection lines for Sabine County will require the ability to store wastewater at lift stations in sufficient volumes to achieve pumping at required velocities. However, based on the results of the STEP analysis in *Appendix B*, it was assumed that the minimum line diameters for force mains (4-inch) and gravity mains (6-inch) would be required for alternatives utilizing gravity sewers.

The relatively small wastewater flows, the minimum line diameters, and the sometimes significant length of force main and gravity main required to transport wastewater from individual subdivisions to central treatment facilities, will require lift stations to be constructed and operated differently when utilizing gravity sewer collection systems. Lift stations may also need to be equipped with blowers to reduce the septic conditions associated with sewage accumulated at lift stations for significant lengths of time.

Centralized Conventional Wastewater Treatment System Alternative

This approach consists of siting conventional (package) wastewater treatment plants to serve clusters of connections from multiple subdivisions in each planning area. In general, wastewater treatment plants were located in areas that would serve approximately 200 or more connections, would be accessible, and would be relatively near Toledo Bend Reservoir or tributary along the reservoir for discharge. Two alternative means of wastewater collection were assessed for this alternative, STEP collection systems and conventional gravity sewers. Costs associated with this alternative are provided in *Section 9* of this report. This alternative was prepared for each of the five wastewater planning areas described in the sections above.

Beechwood/South Sabine Planning Area

The centralized conventional treatment system alternative for the Beechwood/South Sabine Planning Area is shown on *Exhibit 6-4*. This approach would consist of two new wastewater treatment plants sited throughout the planning area.

One plant would be located near the center of the planning area between Toledo Beach and Sandy Creek Estates subdivisions. This plant would serve approximately 396 current existing connections and approximately 530 connections by 2050. This plant would be required to have a treatment capacity of 0.08 mgd to meet current wastewater demands and approximately 0.11 mgd to meet wastewater demands in 2050. This plant would serve the Toledo Beach, Arrowcrest, Sandy Creek Estates, Canfield Tracts, Laguna Shores, Shoreline, Lakewood Estates, Oakridge, and Pineridge subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of 15 lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities.

A second plant would be located in the eastern portion of the planning area near the Beechwood subdivision. This plant would serve approximately 321 current existing connections and approximately 430 connections by 2050. This plant would be required to have a treatment capacity of 0.07 mgd to meet current wastewater demands and approximately 0.09 mgd to meet wastewater demands in 2050. This plant would serve the Beechwood I, Beechwood II, Emerald Beach, and Springhill subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of six lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities. *Table 6.6* provides a summary of proposed wastewater infrastructure for the centralized conventional wastewater treatment alternative for the Beechwood/South Sabine Planning Area for planning year 2050.

Table 6.6
Summary of Wastewater Infrastructure
for Beechwood/South Sabine Planning Area

Facilities	2050 Wastewater Demand
Total Number of Connections	960
Total Number of Plants	2
Total Plant Capacity (mgd)	0.20
Total Collection Lines (Linear Foot)	141,220
Total Force Main (Linear Foot)	65,900
Total Gravity Main (Linear Foot)	14,585

Timberlane Planning Area

The centralized conventional treatment system alternative for the Timberlane Planning Area is shown on *Exhibit 6-5*. This approach for this planning area would consist of two new wastewater treatment plants sited throughout the planning area. One plant would be located in the western portion of the planning area near the Woodland Estates subdivision. This plant would serve approximately 319 current existing connections and approximately 427 connections by 2050. This plant would be required to have a treatment capacity of 0.07 mgd to meet current wastewater demands and approximately 0.09 mgd to meet wastewater demands in 2050. This plant would serve the Dogwood Estates, Woodland Estates, Toledo Village, Six Mile Marina, Six Mile Village, and Drake Estates subdivisions as well as miscellaneous connections to the north. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of seven lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities.

A second plant would be located in the eastern portion of the planning area near the Hammock Estates subdivision. This plant would serve approximately 164 current existing connections and approximately 219 connections by 2050. This plant would be required to have a treatment capacity of 0.03 mgd to meet current wastewater demands and approximately 0.05 mgd to meet wastewater

demands in 2050. This plant would serve the Hammock Estates, Timberlane, Youpon Ridge, Green Acres, and Rice subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of eight lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities. *Table 6.7* provides a summary of proposed wastewater infrastructure for the centralized conventional wastewater treatment alternative for the Timberlane Planning Area.

Table 6.7
Summary of Wastewater Infrastructure
for Timberlane Planning Area

Facilities	2050 Wastewater Demand
Total Number of Connections	646
Total Number of Plants	2
Total Plant Capacity (mgd)	0.14
Total Collection Lines (Linear Foot)	100,095
Total Force Main (Linear Foot)	67,610
Total Gravity Main (Linear Foot)	3,640

El Camino Bay Planning Area

The centralized conventional treatment system alternative for the El Camino Bay Planning Area is shown on *Exhibit 6-6*. This approach would consist of four new wastewater treatment plants sited throughout the planning area. One plant would be located in the western portion of the planning area near the Harbor light subdivision. This plant would serve approximately 168 current existing connections and approximately 227 connections by 2050. This plant would be required to have a treatment capacity of 0.03 mgd to meet current wastewater demands and approximately 0.05 mgd to meet wastewater demands in 2050. This plant would serve the Harbor light, Sunshine Valley Lake View, WD Barlow, Ellison Estates, and Sunshine Valley Estates subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total

of seven lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities.

A second plant would be located in the eastern portion of the planning area near the Lowes Creek subdivision. This plant would serve approximately 143 current existing connections and approximately 191 connections by 2050. This plant would be required to have a treatment capacity of 0.03 mgd to meet current wastewater demands and approximately 0.04 mgd to meet wastewater demands in 2050. This plant would serve the Lowes Creek subdivision and miscellaneous connections to the west. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, one lift station would then direct wastewater from the subdivisions to the central wastewater treatment facilities.

A third plant would be located in the eastern portion of the planning area near the River Bend subdivision. This plant would serve approximately 245 current existing connections and approximately 328 connections by 2050. This plant would be required to have a treatment capacity of 0.05 mgd to meet current wastewater demands and approximately 0.07 mgd to meet wastewater demands in 2050. This plant would serve the New Spring Hills, Sabinetown, River Bend, and Rebel Ridge subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of nine lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities.

A fourth plant would be located in the eastern portion of the planning area near the El Camino Bay subdivision. This plant would serve approximately 106 current existing connections and approximately 142 connections by 2050. This plant would be required to have a treatment capacity of 0.02 mgd to meet current wastewater demands and approximately 0.03 mgd to meet wastewater demands in 2050. This plant would serve the El Camino Bay subdivision. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total

of two lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities. *Table 6.8* provides a summary of proposed wastewater infrastructure for the centralized conventional wastewater treatment alternative for the El Camino Bay Planning Area.

Table 6.8
Summary of Wastewater Infrastructure
for El Camino Bay Planning Area

Facilities	2050 Wastewater Demand
Total Number of Connections	888
Total Number of Plants	4
Total Plant Capacity (mgd)	0.23
Total Collection Lines (Linear Foot)	108,075
Total Force Main (Linear Foot)	53,300
Total Gravity Main (Linear Foot)	27,620

Midlake Planning Area

The centralized conventional treatment system alternative for the Midlake Planning Area is shown on *Exhibit 6-7*. This approach would consist of one new wastewater treatment plant located in the eastern portion of the planning area near the Midlake Village subdivision. This plant would serve approximately 279 current existing connections and approximately 371 connections by 2050. This plant would be required to have a treatment capacity of 0.06 mgd to meet current wastewater demands and approximately 0.08 mgd to meet wastewater demands in 2050. This plant would serve the Hill Country, Pecan Estates, Powell, Alpine, Twin Cedars, Holly Bay, and Midlake Village subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of six lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities. *Table 6.9* provides a summary of proposed wastewater infrastructure for the centralized conventional wastewater treatment alternative for the Midlake Sabine Planning Area.

Table 6.9
Summary of Wastewater Infrastructure
for Midlake Planning Area

Facilities	2050 Wastewater Demand
Total Number of Connections	598
Total Number of Plants	1
Total Plant Capacity (mgd)	0.12
Total Collection Lines (Linear Foot)	77,785
Total Force Main (Linear Foot)	47,410
Total Gravity Main (Linear Foot)	10,040

North Planning Area

The centralized conventional treatment system alternative for the North Planning Area is shown on *Exhibit 6-8*. This approach for this planning area would consist of one new wastewater treatment plant located near the middle of the planning area near the Playcation subdivision. This plant would serve approximately 444 current existing connections and approximately 594 connections by 2050. This plant would be required to have a treatment capacity of 0.09 mgd to meet current wastewater demands and approximately 0.12 mgd to meet wastewater demands in 2050. This plant would serve the Shamrock Shores, Newell, Waterwood, Hickory Point, Piney Point, Wells Shady Rest, Rana Brian, Shoreline II, Holly Park, and Playcation subdivisions. A central collection system, consisting either of 2-inch STEP lines or 6-inch gravity lines, would be constructed in each subdivision in order to collect wastewater from individual residences. Following collection, a total of 17 lift stations would then direct wastewater from the subdivisions to the central wastewater treatment facilities. *Table 6.10* provides a summary of proposed wastewater infrastructure for the centralized conventional wastewater treatment alternative for the Beechwood/South Sabine Planning Area.

Table 6.10
Summary of Wastewater Infrastructure
for North Planning Area

Facilities	2050 Wastewater Demand
Total Number of Connections	594
Total Number of Plants	1
Total Plant Capacity (mgd)	0.12
Total Collection Lines (Linear Foot)	80,035
Total Force Main (Linear Foot)	61,120
Total Gravity Main (Linear Foot)	10,330

Natural Treatment Cluster Systems Alternative

This approach consists of siting numerous natural type treatment systems to serve smaller clusters of connections or individual subdivisions in each planning area. For purposes of this study, the recirculating sand filter treatment process was used to develop costs for this alternative. In general, wastewater treatment plants were located in areas that would serve fewer than 200 connections, would be accessible, and would be relatively near Toledo Bend Reservoir or tributary along the reservoir for discharge. Two alternative means of wastewater collection, STEP collection systems and conventional gravity sewers, were also assessed for this alternative. Costs associated with this alternative are provided in *Section 9* of this report. This alternative was prepared for each of the wastewater planning areas described in the sections above.

The natural treatment cluster systems alternative for the Beechwood/South Sabine, Timberlane, El Camino, Midlake, and North Planning Areas are shown on *Exhibits 6-9* through *6-13*, respectively. As seen from review of these exhibits, this alternative requires significantly more plant sites than the centralized treatment alternative described previously. However, the number of lift stations and the overall lengths of force mains and gravity mains required to direct wastewater out of individual subdivisions to the treatment facilities are significantly reduced.

A total of approximately 10 centralized conventional treatment plants are required to meet the total wastewater demand for all five planning areas in the centralized alternative described above. In comparison, the natural cluster system alternative will require approximately 47 treatment plants to meet the total wastewater demand for all five planning areas. The Beechwood/South Sabine, Timberlane, El Camino, Midlake, and North Planning Areas will require approximately 13, 12, 8, 5, and 9 treatment facilities, respectively, to meet projected wastewater demands using the natural treatment cluster system alternative.

Additionally, the total number of connections estimated for wastewater service using this alternative is somewhat less than the number of connections estimated with the centralized alternative. This is due primarily to the fact that with the centralized alternative an extensive system of force mains and gravity mains is required to deliver wastewater from individual subdivisions to the central treatment facilities. Because of this system, some areas of less dense population can potentially be served due to the presence of this delivery system near the area. This extensive delivery system is not present with the natural cluster system alternative and therefore those areas of less dense population were not included for service due to the practical limitations of connecting a very small number of connections to treatment facilities. *Table 6.11* provides a summary of wastewater infrastructure proposed for each planning area using the natural treatment cluster system alternative.

Table 6.11
Summary of Wastewater Infrastructure for Natural Treatment Cluster System Alternative

Facilities	2050 Wastewater Demand
Beechwood/South Sabine Planning Area	
Total Number of Connections	879
Total Number of Plants	13
Total Plant Capacity (mgd)	0.18
Total Collection Lines (Linear Feet)	140,750
Total Force Main (Linear Feet)	32,000
Timberlane Planning Area	
Total Number of Connections	557
Total Number of Plants	12
Total Plant Capacity (mgd)	0.09
Total Collection Lines (Linear Feet)	100,095
Total Force Main (Linear Feet)	15,100
El Camino Bay Planning Area	
Total Number of Connections	823
Total Number of Plants	8
Total Plant Capacity (mgd)	0.17
Total Collection Lines (Linear Feet)	93,700
Total Force Main (Linear Feet)	20,850
Midlake Planning Area	
Total Number of Connections	353
Total Number of Plants	5
Total Plant Capacity (mgd)	0.07
Total Collection Lines (Linear Feet)	68,650
Total Force Main (Linear Feet)	1,950
North Planning Area	
Total Number of Connections	486
Total Number of Plants	9
Total Plant Capacity (mgd)	0.10
Total Collection Lines (Linear Feet)	73,100
Total Force Main (Linear Feet)	3,700

Facilities	2050 Wastewater Demand
Total Sabine County	
Total Number of Connections	3,098
Total Number of Plants	47
Total Plant Capacity (mgd)	0.61
Total Collection Lines (Linear Feet)	476,295
Total Force Main (Linear Feet)	70,600

SECTION 7 – RECOMMENDED REGIONAL WATER IMPROVEMENTS

The basic infrastructure exists today to provide significant regionalization of water supply to Sabine County. Approximately 65 percent of the total number of water connections studied as part of this report are supplied water from the G-M WSC system or from the City of Hemphill. Although the two systems are managed independently, the infrastructure is basically connected. G-M WSC currently purchases all of its water supply from the City of Hemphill. Hemphill operates the surface water treatment plant owned by the SRA. Therefore, these two systems currently provide water to a significant portion of the region.

Significant regionalization of water service could also be achieved in the southern portion of the county through the interconnection of the Beechwood WSC and South Sabine WSC systems. These two entities currently serve approximately 25 percent of the total number of water connections studied as part of this report. South Sabine is currently providing 100 percent groundwater to their service area. Beechwood WSC is a 100 percent surface water system. The two systems, due to their close proximity, could be readily interconnected to provide the total service area either treated surface water or a combination of treated surface water and groundwater. Regionalization of these two entities would also address Region I plans of reducing groundwater dependence in favor of surface water supplies in the region.

As stated previously, the basic infrastructure currently exists to provide significant regionalization of water supply in Sabine County. However, due to capacity deficiencies associated with the existing infrastructure, current water needs are not adequately met, and no capacity for growth is available. The expansion and improvement of both the SRA/City of Hemphill and Beechwood WSC surface water treatment plants are crucial components of proposed regionalization. In addition, significant improvements to existing distribution facilities (i.e., water lines, tanks, pumps) will also be required to adequately deliver water to the county throughout the 50-year planning period. *Appendix C* provides the PIPE2000 computer model input and output files for each model developed as part of this analysis.

The population of Sabine County is widely dispersed throughout the County boundary. Clusters of dense population exist in the vicinity of the City of Hamphill, City of Pineland, and multiple areas along Toledo Bend Reservoir in individual subdivisions. Because of the wide dispersion of population and the

significant percentage of the population currently served by the G-M WSC distribution system, the lack of a looped distribution system for much of the County is inherent. G-M WSC currently serves many areas of the County through a single transmission line to each population cluster. As a result, the system has several dead-end lines, which are potentially of concern for solids accumulation and stagnation problems.

Along with the infrastructure improvements detailed in this report, a program of identifying problem areas associated with dead-end lines should also be initiated. Water improvements required to develop a fully looped distribution system throughout Sabine County would be cost prohibitive and therefore are not addressed in this report. It is recommended, however, that during implementation of this plan, a program be initiated to identify problem areas and that recommendations be developed at that time to either address the problems through increased operation and maintenance activities (i.e., flushing) or through additional infrastructure (i.e., looped system, chlorinators, etc.).

CITY OF HEMPHILL

Water Supply and Treatment Improvements

The TNRCC has established that a treated water supply of at least 0.60 gpm per connection be provided to meet peak day water demands. The total combined number of connections for the City of Hemphill and G-M WSC is currently 3,403. Based on this criteria, the SRA/City of Hemphill surface water treatment plant should provide at least 2,042 gpm or 2.94 mgd treatment capacity. The existing capacity of the SRA surface water treatment plant is approximately 2.30 mgd. The total projected combined number of connections in 2050 for Hemphill and G-M WSC is 4,610. Based on the TNRCC criteria, the SRA surface water treatment plant would be required to treat 3.98 mgd in the year 2050. Based on the above criteria and projections, the existing treatment capacity of the SRA surface water treatment plant is inadequate to meet TNRCC criteria based on the existing and projected number of connections.

A capacity expansion at the SRA/City of Hemphill surface water treatment plant of 1.68 mgd would meet the projected water demands of the City of Hemphill and G-M WSC for the next 50 years. As

discussed in previous sections of this report, the City of Pineland is currently being served solely by one groundwater well. A second well is currently being constructed and is expected to be in operation by the end of this year (2001). Based on projected water demands, the City of Pineland appears to have adequate water supplies to meet demands for the 50-year planning period. However, as part of this regional planning study, it is proposed that an interconnection between G-M WSC distribution systems and the City of Pineland be established. This would provide the City of Pineland a back-up water supply in the event a water well is temporarily or permanently out of service. For the purpose of this study, it was assumed that the SRA/City of Hemphill water treatment plant would be capable of providing at least one-half of the total water supply to the City of Pineland. This would provide the City of Pineland with a backup water supply in the event of failure of one of its wells. Therefore, the SRA/City of Hemphill would be required to provide an additional expansion of approximately 0.45 mgd or a total of 2.13 mgd over the 50-year planning period to meet this supply.

For purposes of this study and for the development of the economic model for regionalization, it was assumed that this plant expansion would be conducted in two phases. The first plant expansion (Phase 1) would take place in the near term (between 2005 and 2010) to meet projected water supply needs for the first 30 years of the planning period. The next phase of capacity expansion (Phase 2) would take place later (between 2025 and 2030) to meet projected water supply needs through the year 2050. Phase 1 plant expansion would provide approximately 1.67 mgd of treatment capacity by the year 2010, and Phase 2 would provide an additional 0.42 mgd of treatment capacity by the year 2030 for a total plant expansion of 2.13 mgd over the 50-year planning period. This treatment plant expansion would adequately address the water supply needs of the City of Hemphill, G-M WSC, as well as provide a back-up supply to the City of Pineland.

The City of Hemphill's current contract with the SRA for raw water supply is 1,842 acre-feet per year. The current contract expires December 31, 2020. It is assumed for purposes of this study that this contract will be renewed throughout the 50-year planning period. Based on monthly operating reports provided by the planning participants, the total current average water use for the City of

Hemphill and G-M WSC is approximately 1,018 acre-feet per year. The total water use for the City of Pineland is approximately 249 acre-feet per year. The current contract amount of 1,842 acre feet per year should provide adequate water supply to meet projected demands for the City of Hemphill, G-M WSC, and one-half of the projected demand for the City of Pineland for the planning period.

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system for City of Hemphill are also recommended. *Table 7.1* provides a summary of recommended improvements to the water distribution system for the City of Hemphill to meet both immediate and long-term needs and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-1* and *Exhibit 7-2* provide the location of proposed distribution system improvements for the City of Hemphill for Phase 1 and Phase 2, respectively.

Table 7.1
Water Distribution System Improvements for the City of Hemphill

Phase 1 Recommended Pipe Improvements				Phase 2 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)	Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-109	8	10	325	P-10	6	8	255
P-110	8	10	909	P-102	2	3	846
P-114	2	6	434	P-104	2	3	559
P-120	2	6	328	P-105	8	10	1,309
P-122	6	8	255	P-106	8	10	214
P-124	10	18	11	P-109	10	12	325
P-125	10	12	6	P-110	10	12	909
P-126	6	8	350	P-112	8	12	461
P-147	1.5	2	724	P-120	6	8	328
P-152	6	8	1,248	P-121	6	8	560
P-153	6	8	1,423	P-122	8	12	255
P-154	4	6	804	P-123	6	10	248
P-155	4	6	1,664	P-124	18	22	11
P-156	2	3	956	P-125	12	14	6
P-16	6	10	154	P-127	6	8	270
P-161	2	4	249	P-128	6	10	243
P-166	2	3	228	P-129	6	10	339
P-20	2	4	512	P-132	2	4	351
P-206	10	18	8	P-133	2	4	352
P-209	10	12	5	P-136	1.5	2	621
P-21	10	18	190	P-142	2	3	1,388
P-210	10	12	10	P-147	2	3	724
P-211	10	12	5	P-149	1.5	3	780
P-212	10	12	11	P-151	1.5	3	51
P-213	10	12	5	P-153	8	10	1,423
P-22	10	18	71	P-164	8	10	869
P-24	6	10	3,143	P-168	8	10	122
P-28	2	4	2,793	P-169	6	8	453
P-29	2	3	160	P-173	6	8	1,844
P-33	2.5	4	1,608	P-174	6	12	203
P-34	1.5	3	387	P-175	2	12	982
P-46	2	4	3,673	P-182	6	10	473
P-59	6	8	242	P-184	6	10	2,165
P-71	2	3	1,179	P-204	2	6	561
P-75	6	8	592	P-206	18	22	8

Phase 1 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-76	8	12	368
P-89	2	4	770
P-92	2	4	585
P-93	2	4	559
P-94	2	4	341
P-95	1.5	3	1,494

Phase 2 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-209	12	14	5
P-210	12	14	10
P-211	12	14	5
P-212	12	14	11
P-213	12	14	5
P-22	18	20	71
P-44	2	6	197
P-51	2.5	6	1,184
P-51	2.5	6	1,184
P-55	6	8	62
P-59	8	10	242
P-62	6	8	2,855
P-64	2	3	2,919
P-65	6	8	182
P-70	2	3	805
P-72	2	3	718
P-73	2	3	200
P-75	8	12	592
P-76	12	16	368
P-77	6	8	76
P-78	6	8	83
P-79	6	8	31
P-8	6	8	607
P-9	2	3	387
P-99	2	3	981

A fire flow analysis was also performed on the Hemphill distribution system for residential and commercial fire flow demands. This analysis assumed 3,000 gpm for a commercial fire and 1,500 gpm for a residential fire. TNRCC requires that systems be capable of maintaining system pressures of at least 20 psi while providing the average day demand plus fire flows as appropriate. For this analysis, improvements were made to the distribution system in order to maintain system pressures at or above 20 psi, headlosses less than 10 feet per 1,000 feet, and velocities less than 10 fps.

For purposes of this analysis, it was assumed that improvements identified in *Table 7.1* for Phase 1 were made prior to assessing fire flows. Two separate residential fires were modeled in order to evaluate the system for a fire in the northern part of the city and one in the south. These analyses show that in order to provide fire protection, water line diameters would need to be increased for main supply lines as well as lines in the area of the modeled flow. *Table 7.3* compares the existing system to the three different fires evaluated and summarizes the number of lines required to be improved in order to meet fire flow criteria. *Exhibit 7-3* provides the location of proposed distribution system improvements for the City of Hemphill under fire flow conditions.

Table 7.2
Distributions System Improvements for Fire Protection for City of Hemphill

Pipe ID	Initial Diameter	Scenario		
		Residential		Commercial Fire
		Fire 1	Fire 2	
Revised Diameter				
P-105	8	12	8	8
P-106	8	12	8	8
P-107	8	12	8	8
P-109	10	12	10	10
P-11	2	4	4	10
P-110	10	12	10	10
P-112	8	12	8	8
P-113	12	12	12	12
P-114	6	8	6	6
P-116	6	8	6	6
P-12	6	6	6	10
P-120	6	8	6	6
P-121	6	8	6	6
P-122	8	8	8	12
P-126	8	8	8	12
P-127	6	6	6	12
P-152	8	10	8	8
P-16	10	10	10	12
P-164	8	12	8	8
P-168	8	12	8	8
P-169	6	10	6	6
P-173	6	10	6	6

Pipe ID	Initial Diameter	Scenario		
		Residential		Commercial Fire
		Fire 1	Fire 2	
Revised Diameter				
P-174	6	10	6	6
P-175	6	10	6	6
P-176	6	8	6	6
P-178	2	4	2	2
P-214	6	6	8	6
P-23	6	6	6	12
P-232	6	6	6	8
P-238	6	6	6	8
P-24	10	10	10	12
P-41	6	6	6	8
P-42	6	6	6	8
P-44	2	2	2	8
P-47	6	6	6	8
P-48	6	6	6	8
P-55	6	6	10	6
P-59	8	8	10	8
P-60	6	8	6	6
P-62	6	6	10	6
P-65	6	6	8	6
P-65-1	6	6	8	6
P-75	8	10	12	8
P-76	12	14	14	14

Based on this analysis, approximately 8,754 feet of 8-inch water line, 8,428 feet of 10-inch water line, and 11,514 feet of 12-inch water line would need to be constructed in order to meet criteria for fire protection in the City of Hemphill. For purposes of this study and for the development of the economic model for regionalization, the improvements required to address fire protection for the City of Hemphill were assumed to take place during the initial phase (Phase 1) of implementation.

CITY OF PINELAND

Water Supply and Treatment Improvements

As discussed previously, the City of Pineland's sole water supply is provided by a single water well with a production capacity of 370 gpm. A second water well with a production capacity of approximately 400 gpm is expected to be in service by end of this year (2001). The City of Pineland currently serves 377 water connections and is projected to serve 521 connections by the year 2050. Based on TNRCC criteria for water supply, a water supply facility of at least 226 gpm and 313 gpm should be provided by the City of Pineland to meet existing and projected 2050 water supply requirements, respectively. The production capacity of the City of Pineland water well exceeds these requirements. Therefore, improvements to water supply capacity for the City of Pineland do not appear to be needed. It should be noted, however, that well capacity tends to diminish with well age and with clogging of well screens or sands. Maintenance of the wells will be required to maintain the necessary capacity for present and future needs.

In addition, it is recommended that the City of Pineland consider potential back-up water supplies for their system. Based on Region I recommendations to limit future growth of groundwater supply and rely more heavily on surface water supplies and on the potential for losing supply from a water well either temporarily or permanently, it is recommended that an interconnection be provided between the G-M WSC system and the City of Pineland. This interconnection could provide a back-up water supply for the City of Pineland to meet water demands during service interruptions associated with existing wells. In addition, the City of Pineland could also utilize this interconnection to provide the average daily demand in their system, while utilizing their water wells to meet peak daily and hourly conditions. By operating in this manner, the City of Pineland could ensure an adequate and redundant water supply over the 50-year planning period.

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system are also recommended. *Table 7.3* provides a summary of recommended

improvements to the water distribution system for the City of Pineland to meet both immediate and long-term needs and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-4* and *Exhibit 7-5* provide the location of proposed distribution system improvements for the City of Pineland for Phase 1 and Phase 2, respectively.

**Table 7.3
Water Distribution System Improvements for City of Pineland**

Phase 1 Recommended Pipe Improvements				Phase 2 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)	Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-62	1.5	3	248	P-102	2	4	230
P-86	1.5	3	96	P-103	2	4	417
P-96	2	3	395	P-47	1.5	2	444
P-117	1.5	3	203	P-50	1.5	2	397
				P-63	8	10	306
				P-69	2	3	620
				P-71	2	3	437
				P-81	2	3	310
				P-85	2	3	143
				P-94	8	10	336
				P-95	1.5	2	263
				P-96	3	4	395
				P-97	2	4	565

A fire flow analysis was also performed on the Pineland distribution system for residential and commercial fire flow demands. This analysis assumed 3,000 gpm for a commercial fire and 1,500 gpm for a residential fire. TNRCC requires that systems be capable of maintaining system pressures

of at least 20 psi while providing the average day demand plus fire flow, as appropriate. For this analysis, improvements were made to the distribution system in order to maintain system pressures at or above 20 psi, headlosses less than 10 feet per 1,000 feet, and velocities less than 10 fps.

For purposes of this analysis, it was assumed that improvements identified in *Table 7.3* for Phase 1 were made prior to assessing fire flows. These analyses show that in order to provide fire protection, water line diameters would need to be increased for main supply lines as well as lines in the area of the modeled flow. *Table 7.4* compares the existing system to the two different fires and summarizes the number of lines required to be improved in order to meet fire flow criteria. *Exhibit 7-6* provides the location of proposed distribution system improvements for the City of Pineland under fire flow conditions.

Table 7.4
Distribution System Improvements for Fire Protection for City of Pineland

Pipe ID	Scenario			Pipe ID	Scenario		
	Initial Diameter	Residential Fire	Commercial Fire		Initial Diameter	Residential Fire	Commercial Fire
P-103	2	2	4	P-33	4	6	4
P-104	3	3	6	P-40	6	6	14
P-105	2	2	4	P-43	4	4	8
P-11	4	8	4	P-51	4	4	8
P-111	10	10	14	P-63	8	8	14
P-12	4	6	4	P-65	3	3	4
P-122	8	10	8	P-7	4	6	4
P-13	4	8	4	P-70	8	8	14
P-137	4	10	4	P-72	8	8	14
P-23	3	3	6	P-73	8	8	14
P-25	6	6	8	P-75	6	6	8
P-28	4	8	4	P-78	3	3	6
P-29	4	8	4	P-87	3	3	4
P-30	4	8	4	P-94	8	8	14
P-31	8	10	8	P-96	3	3	6
P-32	6	10	6	P-97	2	2	4

Based on this analysis, approximately 8,449 feet of 8-inch water line, 4,330 feet of 10-inch water line, and 4,589 feet of 14-inch water line would need to be constructed in order to meet criteria for fire protection in the City of Pineland. For purposes of this study and for the development of the economic model for regionalization, the improvements required to address fire protection for the City of Pineland were assumed to take place during the initial phase (Phase 1) of implementation.

G-M WATER SUPPLY CORPORATION

Water Supply and Treatment Improvements

G-M WSC currently receives all of their water supply from the SRA surface water treatment plant, through a water supply contract with the City of Hemphill. It was assumed, for purposes of this study and for the development of the economic model for regionalization, that this relationship would continue throughout the 50-year planning period. Proposed regional water supply improvements for the G-M WSC system were previously addressed in discussions relating to proposed improvements for the City of Hemphill. Approximately 75 percent of the total treatment capacity of the SRA surface water treatment plant will be dedicated to meet the water demands associated with the G-M WSC system.

Water Storage Improvements

An analysis was conducted to assess the adequacy of existing storage facilities for the G-M WSC system. The G-M WSC system consists of 12 water storage facilities throughout the county. Two of these facilities are elevated storage tanks in the City of Hemphill and Bronson. G-M WSC also operates five standpipe facilities and five ground storage tank facilities in their system. The TNRCC recommends that for water systems with more than 2,500 connections, a total elevated storage capacity of 100 gallons per connection be provided. G-M WSC currently has a total of 2,744 connections in their system. However, based on the water model for the G-M WSC system, it appears that the G-M WSC distribution system is not completely connected and is rather made up of two or more separate distribution systems. For this reason, it was assumed that the G-M WSC would

not be required to meet the TNRCC requirements for elevated storage as long as adequate service pump and total storage capacities were met.

Based on the water model developed for the G-M WSC system, an estimate was made of the number of connections served by individual water storage facilities in the G-M WSC system. A comparison was then made of existing storage capacity to required storage capacity, as per TNRCC minimum criteria for storage. The TNRCC criteria of 200 gallons per connection was used to assess the adequacy of ground storage and standpipe facilities in the G-M WSC system while the TNRCC criteria of 100 gallons per connection was used to assess the adequacy of elevated storage facilities in Hemphill and Bronson. A portion of the total storage volume in standpipe plants may actually be dedicated to maintaining system pressures for some connections in the G-M WSC system.

Therefore, this methodology is somewhat conservative because it applies the TNRCC requirement of 200 gallons per connection to all the standpipe facilities. For that portion of storage in standpipe facilities that can be utilized to maintain system pressure on connections served by that tank, the TNRCC requirement of 100 gallons per connection could be used. However, for purposes of this study and for the development of a methodology of identifying potential storage deficiencies and planning for future improvements, this conservative approach is prudent. *Table 7.5* provides a summary of storage requirements and identified deficiencies in the G-M WSC system.

Table 7.5
Summary of Water Storage Requirements for G-M WSC

Tank	Tank Type	Current Capacity (Gallons)	Connections		Required Capacity (Gallons)	
			Year 2001	Year 2050	Year 2001	Year 2050
Crossroads Tank	Ground Storage	50,000	241	326	48,200	65,200
Hwy 184 West	Ground Storage	50,000	229	309	45,800	61,800
Mid-Lake	Standpipe	50,000	312	422	62,400	84,400
Hwy 83 East	Standpipe	75,000	498	673	99,600	134,600
McMahan	Ground Storage	40,000	75	101	15,000	20,200
Tebo	Ground Storage	30,000	68	92	13,600	18,400
Red Hill	Standpipe	50,000	431	582	86,200	116,400
Jim Nethery	Ground Storage	42,000	193	261	38,600	52,200
FM 330	Standpipe	20,000	17	23	3,400	4,600
Bronson	Elevated	30,000	165	223	16,500	22,300
CL&M	Standpipe	77,000	345	465	69,000	93,000
Hemphill EST ⁽¹⁾	Elevated	34,100	170	230	17,000	23,000
Totals		548,100	2,744	3,707	515,300	696,100

⁽¹⁾ Capacity noted for Hemphill EST does not include the portion of storage dedicated to City of Hemphill system. Total capacity of Hemphill EST is 100,000 gallons.

Review of *Table 7.5* indicates that the existing total storage in the G-M WSC system is 548,100 gallons. The total storage required currently per TNRCC criteria is 515,300 gallons. However, further review of *Table 7.5* indicates that while the total storage may be adequate, some areas appear to be deficient based on the analysis performed and described above. A comparison of existing storage capacity versus required storage capacity on a facility-by-facility basis results in the identification of an existing storage shortage of 73,200 gallons. In addition, based on projected needs, this shortage is increased to 198,400 by the year 2050.

Based on these results, it is recommended that the G-M WSC system increase their existing storage facilities by 100,000 gallons in the initial implementation phase (Phase 1) and an additional increase of 100,000 gallons by the year 2030 (Phase 2).

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system are also recommended. *Tables 7.6 and 7.7* provides a summary of recommended improvements to the water distribution system for G-M WSC to meet both immediate and long-term needs, respectively, and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-7* and *Exhibit 7-8* provide the location of proposed distribution system improvements for the G-M Water Supply Corporation for Phase 1 and Phase 2, respectively.

Table 7.6
Phase 1 Recommended Pipe Improvements for G-M WSC

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
70	4	6	2,178
120	3	6	1,193
121	3	6	372
122	3	6	188
123	3	6	2,458
124	3	6	1,907
194	2	6	242
195	3	6	216
196	3	6	416
197	3	6	431
198	3	6	286
199	3	6	1,100
200	3	6	387
201	3	4	2,341
202	3	4	110
203	3	4	4,650
207	3	4	830
465	1	1.5	1,405
601	2	4	30
633	2	4	50
711	1	1.5	60
717	1.5	3	100
882	2	3	5,062
1090	2	4	1,751
1091	2	4	200
1092	2	4	50
1093	2	4	300
1094	2	4	856
1101	2	4	1,988
1102	2	4	520
1103	2	4	4,443
1104	2	4	45
1124	1	2	81
1125	1	2	306
1126	1	2	100
1129	1	2	186
1157	2	6	96
1168	6	8	1,715
1174	6	8	2,766
1175	6	8	1,236

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
1686	6	8	241
1687	6	8	111
1688	6	8	2,275
1689	6	8	1,678
1690	6	8	80
1692	6	8	597
1693	6	8	344
1694	6	8	51
1764	6	8	2,574
1765	6	8	144
1766	6	8	840
1781	6	8	410
1782	6	8	257
1783	6	8	591
2226	4	6	2,293
2227	4	6	203
2228	4	6	446
2229	4	6	136
2233	4	6	160
2244	4	6	470
2249	4	6	333
2250	4	6	198
2251	3	4	1,808
2341	3	6	1,760
2342	3	6	27
2343	3	6	73
2344	3	6	100
2345	3	6	845
2346	3	6	110
2347	3	6	88
2348	3	6	115
2349	3	6	10
2410	2	4	229
2433	2	4	321
2435	2	4	358
2436	2	4	157
2437	2	4	173
2438	2	4	174
2439	2	4	547
2477	8	10	120

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
1176	6	8	2,090
1177	6	8	607
1178	6	8	364
1179	6	8	2,404
1180	6	8	282
1181	6	8	1,350
1182	3	4	3,930
1183	3	4	2,968
1184	3	4	252
1189	2	3	4,608
1190	2	3	1,527
1196	2	3	878
1211	6	8	176
1212	6	8	154
1221	6	8	851
1226	2	3	82
1227	2	3	4,080
1243	2	4	118
1247	2	4	85
1258	2	4	300
1266	2	4	43
1278	6	8	102
1279	6	8	30
1280	6	8	815
1281	6	8	331
1282	6	8	515
1283	6	8	110
1284	6	8	649
1285	6	8	494
1286	6	8	2,179
1296	6	8	231
1297	6	8	1,204
1298	6	8	73
1341	4	6	1,758
1353	4	6	35
1354	4	6	84
1355	4	6	371
1356	4	6	230
1357	4	6	144
1358	4	6	222
1369	4	6	816
1370	4	6	1,054
1371	4	6	209

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
2480	3	4	4,842
2486	3	4	553
2487	8	10	289
2488	8	10	2,240
2510	2.5	4	84
2511	2.5	4	73
2512	2.5	4	1,141
2513	2.5	4	305
2514	2.5	4	1,021
2530	8	12	54
2531	8	12	1,970
2536	8	12	1,928
2538	8	12	3,707
2539	8	12	446
2540	8	12	808
2541	8	12	5,270
2542	8	12	75
2543	8	12	77
2544	8	12	482
2545	8	12	70
2547	8	12	537
2548	8	12	291
2549	8	12	55
2552	8	10	737
2553	8	10	179
2556	8	10	143
2557	8	10	498
2561	8	10	966
2562	8	10	77
2584	8	10	178
2585	8	10	149
2590	8	10	146
2591	8	10	133
2592	8	10	170
2593	8	10	452
2600	8	10	1,196
2601	8	10	1,228
2602	6	12	316
2603	6	8	15,166
2605	6	12	262
2613	3	4	561
2615	3	8	8,584
2616	2	4	1,839

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
1372	4	6	1,951
1373	4	6	261
1374	3	3	97
1375	4	6	521
1387	4	6	448
1389	4	6	508
1394	4	6	13
1395	4	6	227
1396	4	6	98
1398	4	6	110
1399	4	6	231
1401	4	6	280
1402	4	6	100
1403	4	6	192
1404	4	6	178
1405	4	6	33
1406	4	6	94
1410	4	6	76
1415	3	4	201
1423	3	4	26
1493	2	4	53
1589	3	4	156
1604	2	4	482
1618	4	6	2,624
1658	3	4	139
1659	3	4	131
1685	6	8	1,241

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
2673	4	6	1,000
2694	4	6	100
2695	4	6	100
2718	3	6	10
2726	4	6	500
2727	4	6	160
2728	4	6	80
2729	4	6	110
2730	4	6	50
2733	4	6	10
2734	4	6	50
2735	4	6	60
2736	4	6	300
2739	3	4	10
2747	3	4	100
2781	2	6	120
2782	2	6	50
2783	2	4	720
2784	3	4	650
2813	2	4	150
2904	6	12	1,442
P-1295	3	6	3,396
P-2614	3	6	10
P-2915	3	4	2,330
P-2945	8	10	37
P-520	1.5	2	346
P-88	3	6	1,293

Table 7.7
Phase 2 Recommended Pipe Improvements for G-M WSC

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
1408	3	6	186
1411	3	6	83
1413	3	6	48
1414	3	6	39
1415	4	6	201
1416	3	6	310
1417	3	6	23
1418	3	6	174
1419	3	6	174
1420	3	6	228
1421	3	6	150
1422	3	6	64
1427	3	6	256
2147	6	8	1,355
2148	6	8	1,201
2157	6	8	5,510
2158	6	8	332
2159	6	8	407
2160	6	8	2,095
2161	6	8	282

Pipe ID	Original Dia. (in.)	Revised Dia. (in.)	Length (ft.)
2162	6	8	547
2163	6	8	356
2164	6	8	432
2166	6	8	178
2168	6	8	519
2169	6	8	130
2490	8	10	813
2494	8	10	3,189
2495	8	10	232
2496	8	10	489
2499	8	10	198
2500	8	10	100
2501	8	10	206
2502	8	10	615
2504	8	10	131
2505	8	10	15
2506	8	10	130
2507	8	10	26
2508	8	10	836

For purposes of this study, it was assumed that only the incorporated municipalities in Sabine County (i.e., City of Hemphill and City of Pineland) would reasonably be able to provide a systematic means for fire protection. The unincorporated areas would continue to provide fire protection through a volunteer fire department. G-M WSC provides water service to individual homeowners in subdivisions primarily in the unincorporated areas of the county. Therefore, no fire flow analysis was performed for the G-M WSC distribution system.

BEECHWOOD WATER SUPPLY CORPORATION

Water Supply and Treatment Improvements

The TNRCC has established that a treated water supply of at least 0.60 gpm per connection be provided to meet peak day water demands. The total combined number of connections for Beechwood WSC is 470. Based on this criteria, the Beechwood WSC surface water treatment plant should provide at least 282 gpm or 0.41 mgd treatment capacity. The existing treatment capacity of the Beechwood WSC surface water treatment plant is approximately 0.22 mgd. The total projected number of connections for Beechwood WSC in 2050 is 634.

Based on the TNRCC criteria, the Beechwood WSC surface water treatment plant would be required to treat 0.55 mgd in the year 2050. Based on the above criteria and projections, the existing treatment capacity of the Beechwood WSC surface water treatment plant is inadequate to meet current or projected water demands. In addition, due to the age and condition of the existing water treatment facilities, a complete replacement of the facilities is recommended. Therefore, for purposes of this analysis, it is assumed that all of the current and projected water demand for Beechwood WSC will be met through new water treatment facilities.

A new Beechwood WSC surface water treatment plant with a total capacity of 0.55 mgd would meet the projected water demands of Beechwood WSC for the next 50 years. As discussed in later sections of this report, South Sabine WSC is currently being served solely by two groundwater wells. South Sabine WSC distribution systems are located adjacent to the Beechwood WSC system. Based on projected water demands, South Sabine WSC appears not to have adequate water supplies to meet the TNRCC requirements based on the existing number of connections. Furthermore, based on projected growth rates, the South Sabine WSC existing production capacity will not meet the TNRCC requirements in the year 2050.

As part of this regional planning study, it is proposed that an interconnection between Beechwood WSC distribution systems and South Sabine WSC be established. This would provide South Sabine WSC a back-up water supply in the event a water well is temporarily or permanently out of service.

For this study, it was assumed that the new Beechwood WSC water treatment plant should be capable of providing at a minimum adequate treatment capacity to meet all future growth of the South Sabine WSC. Therefore, the Beechwood WSC treatment plant would be required to provide an additional expansion of approximately 0.48 mgd or a total of 1.03 mgd over the 50-year planning period to meet this supply.

Expansion to the treatment plant was assumed to be conducted in two phases in order to develop the economic model for regionalization. The first plant expansion (Phase 1) would take place between 2005 and 2010 to meet projected water supply needs for the first 30 years of the planning period. Phase 2 of capacity expansion would take place between 2025 and 2030 to meet projected water supply needs through the year 2050. Phase 1 plant expansion would provide approximately 0.87 mgd of treatment capacity in the year 2005, and Phase 2 would provide an additional 0.16 mgd of treatment capacity in the year 2030 for a total plant expansion of 1.03 mgd over the 50-year planning period. This treatment plant expansion would adequately address the water supply needs of the Beechwood WSC, as well as provide a back-up and future growth water supply to the South Sabine WSC.

The Beechwood WSC current contract with the SRA for raw water supply is currently on a month-to-month basis. It is assumed for purposes of this study that a contract will be established throughout the 50-year planning period. Based on monthly operating reports provided by the planning participants, the total current average water use for Beechwood WSC is approximately 81-acre-feet per year with a projected usage of approximately 109 acre-feet per year over the 50-year planning period. The total water use for the South Sabine WSC is approximately 83 acre-feet per year with a projected usage of approximately 112 acre-feet per year over the 50-year planning period. The future contract amount should provide adequate water supply to meet projected demands for Beechwood WSC and all of the projected growth in water demand for South Sabine WSC. For purposes of this study, it is assumed that a supply contract with the SRA will be established to provide approximately 120 acre-feet per year over the planning period.

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system are also recommended. *Tables 7.8* and *7.9* provide a summary of recommended improvements to the water distribution systems for Beechwood WSC and South Sabine WSC, assuming the interconnection of systems described above, to meet both immediate and long-term needs, respectively, and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-9* and *Exhibit 7-10* provide the location proposed distribution system improvements for the Beechwood Water Supply Corporation for Phase 1 and Phase 2, respectively.

Table 7.8
Phase 1 Recommended Pipe Improvements for Beechwood WSC

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-137	4	6	1,446
P-138	4	8	40
P-139	4	8	40
P-140	4	8	40
P-142	6	8	30
P-17	4	6	77
P-18	4	6	228
P-29	4	6	104
P-51	4	6	500
P-52	4	6	40
P-53	6	8	30
P-57	6	8	30
P-62	4	6	256
P-63	6	8	30
P-65	4	6	197
P-66	4	6	1,140
P-68	6	10	50
P-90	3	4	188
P-93	2	6	562
P-95	2	6	838

Table 7.9
Phase 2 Recommended Pipe Improvements for Beechwood WSC

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-1	3	4	280
P-104	4	6	384
P-105	4	6	387
P-120	2	3	436
P-123	2	4	354
P-137	6	8	1,446
P-143	4	6	227
P-17	6	8	77
P-18	6	8	228
P-35	1	2	103
P-49	4	6	270
P-54	4	6	206
P-62	6	8	256
P-65	6	8	197
P-66	6	8	1,140
P-90	4	6	188
P-92	3	4	300
P-94	2	3	500
P-97	2	4	101
P-98	2	4	2,217

For purposes of this study, it was assumed that only the incorporated municipalities in Sabine County (i.e., City of Hemphill and City of Pineland) could reasonably provide a systematic means for fire protection. The unincorporated areas would continue to provide fire protection through a volunteer fire department. Beechwood WSC and South Sabine WSC provide water service to individual homeowners in subdivisions primarily in the unincorporated areas of the county. Therefore, no fire flow analysis was performed for the Beechwood WSC or South Sabine WSC distribution systems.

SOUTH SABINE WATER SUPPLY CORPORATION

Water Supply and Treatment Improvements

As discussed previously, the South Sabine WSC sole water supply is provided by two water wells with a combined capacity of 270 gpm. South Sabine WSC currently serves 770 water connections and is projected to serve 1040 connections by the year 2050. Based on TNRCC criteria for water supply, a water supply facility of at least 462 gpm and 624 gpm should be provided by South Sabine WSC to meet existing and projected 2050 water supply requirements, respectively. The combined capacity of the South Sabine WSC water wells is inadequate to meet existing and future requirements. Therefore, expansion of the existing water supply capacity for South Sabine WSC appears to be required.

As discussed in the section above summarizing improvements for Beechwood WSC, it is recommended that an interconnection be established between the South Sabine WSC and Beechwood WSC distribution systems. This is based on Region I recommendations to limit the future growth of groundwater supply and to rely more heavily on surface water supplies and on the potential for losing supply from a water well either temporarily or permanently in the future. This interconnection could provide a back-up water supply for South Sabine WSC to meet water demands during service interruptions associated with their existing wells. In addition, South Sabine WSC could also utilize this interconnection to provide the average daily demand in their system, while utilizing their water wells to meet peak daily and hourly conditions. By operating in this manner, South Sabine WSC could ensure an adequate and redundant water supply over the 50-year planning period.

If the recommended interconnection is not provided between South Sabine WSC and Beechwood WSC, then South Sabine WSC will be required to either construct another supply well or seek a treated surface water supply from another source. However, given the relatively close proximity of South Sabine WSC to the Beechwood WSC surface water treatment plant, it seems logical that surface water supplies in the southern portion of the county be provided through the Beechwood

WSC treatment plant. A new supply well capable of providing approximately 360 gpm would be required to meet TNRCC criteria by 2050, based on the projected number of connections, if the interconnection with Beechwood WSC is not implemented. Regardless of the interconnection, some improvements to the distribution system for South Sabine WSC are also required, based on the water modeling completed as part of this study.

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system are also recommended. *Tables 7.10* and *7.11* provide a summary of recommended improvements to the water distribution system for the South Sabine WSC to meet both immediate and long-term needs, respectively, and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-11* and *Exhibit 7-12* provide the location of proposed distribution system improvements for the South Sabine Water Supply Corporation for Phase 1 and Phase 2, respectively.

Table 7.10
Phase 1 Recommended Pipe Improvements for South Sabine WSC

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-1	6	12	1,100
P-102	8	14	4,540
P-103	6	8	1,350
P-111	3	6	810
P-114	3	6	310
P-12	8	10	565
P-126	3	6	295
P-128	8	10	5,255
P-129	6	8	2,140
P-130	6	8	2,835
P-14	8	10	300
P-146	6	8	2,400
P-147	6	8	3,940
P-152	3	6	250
P-153	3	6	800
P-157	4	6	480
P-158	4	6	1,210
P-162	4	6	240
P-163	4	6	575
P-167	4	6	200

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-168	4	6	215
P-169	4	6	155
P-171	4	6	920
P-172	4	6	2,100
P-24	8	12	370
P-3	8	12	2,925
P-33	8	10	275
P-37	8	10	270
P-40	8	10	285
P-41	8	10	305
P-46	8	10	2,760
P-53	1.3	12	165
P-54	3	6	400
P-64	6	8	755
P-74	6	14	6,355
P-8	8	10	280
P-88	6	8	2,910
P-95	6	14	90
P-98	6	8	1,140

**Table 7.11
Phase 2 Recommended Pipe Improvements for South Sabine WSC**

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-12	10	12	565
P-128	10	12	3,707
P-14	10	12	300
P-146	8	10	2,400
P-147	8	10	1,510
P-162	6	8	240
P-167	6	8	200
P-24	12	14	370
P-33	10	12	275
P-37	10	12	270

Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-40	10	12	285
P-41	10	12	305
P-46	10	12	2,760
P-53	12	14	165
P-64	8	10	755
P-67	2	3	170
P-8	10	12	280
P-88	8	10	2,910
P-98	8	10	1,140
P-197	10	12	1,550
P-198	8	10	2,930

For purposes of this study, it was assumed that only the incorporated municipalities in Sabine County (i.e., City of Hemphill and City of Pineland) could reasonably provide a systematic means for fire protection. The unincorporated areas would continue to provide fire protection through a volunteer fire department. Beechwood WSC and South Sabine WSC provide water service to individual homeowners in subdivisions primarily in the unincorporated areas of the county. Therefore, no fire flow analysis was performed for the South Sabine WSC distribution systems.

EL CAMINO BAY WATER SUPPLY CORPORATION

Water Supply and Treatment Improvements

The TNRCC has established that a treated water supply of at least 0.60 gpm per connection be provided to meet peak day water demands. The total combined number of connections for El Camino Bay WSC is 112. Based on this criteria, the El Camino Bay WSC surface water treatment plant should provide at least 67 gpm or 0.10 mgd treatment capacity. The existing treatment capacity of the El Camino Bay WSC surface water treatment plant is approximately 0.10 mgd. Based on information provide by the participants, the El Camino Bay area is fully built

out, and no future growth is predicted. Based on the above criteria and projections, the existing treatment capacity of the El Camino Bay WSC surface water treatment plant is adequate to meet TNRCC criteria based on current estimates of connections. However, due to the condition of the existing facilities, the lack of excess treatment capacity, and the relatively small number of connections served by the facilities, it is recommended that El Camino Bay be connected to the G-M WSC distribution systems. The surface water treatment plant for El Camino Bay WSC would be decommissioned and water lines from the G-M WSC distribution system would be extended from Highway 83 to the El Camino Bay WSC distribution system.

El Camino Bay WSC is representative of several subdivisions along Toledo Bend Reservoir currently unserved or underserved that could be connected to the G-M WSC system or the Beechwood WSC/South Sabine WSC systems relatively easily. However, neither G-M WSC nor Beechwood WSC/South Sabine WSC is capable of adequately absorbing this increased demand with their existing systems. In order to add these demands to either the G-M WSC or Beechwood WSC/South Sabine WSC systems, the proposed improvements to G-M WSC and Beechwood WSC/South Sabine WSC, discussed above, would need to be accomplished.

Water Distribution System Improvements

Based on the previously discussed engineering criteria for distribution systems, improvements to the distribution system are also recommended. *Table 7.12* provides a summary of recommended improvements to the water distribution system for the El Camino Bay WSC to meet both immediate and long-term needs and to satisfy state standards. For purposes of this study and for the development of the economic model for regionalization, improvements to the existing distribution system are proposed for implementation in two phases. The first phase (Phase 1), implemented between 2005 and 2010, will address deficiencies in the current system under existing water demands (i.e., pressure, velocity, headloss) identified during water system modeling. The second phase (Phase 2) will be implemented between 2025 and 2030 to address deficiencies identified under 2050 water demands. *Exhibit 7-13* and *Exhibit 7-14* provide the location of proposed distribution system improvements for the El Camino Bay WSC for Phase 1 and Phase 2, respectively.

Table 7.12
Recommended Water System Improvements for El Camino Bay WSC

Phase 1 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-34	3	4	18
P-35	3	4	18
P-39	3	4	12
P-40	3	4	13
P-41	3	4	14
P-42	3	4	14
P-44	3	6	9

Phase 2 Recommended Pipe Improvements			
Pipe ID	Original Diameter (in.)	Revised Diameter (in.)	Length (ft.)
P-1	4	6	12
P-34	4	6	18
P-35	4	6	18
P-39	4	6	12
P-4	4	6	140
P-40	4	6	13
P-41	4	6	14
P-42	4	6	14
P-43	4	6	135
P-45	1	2	175

SECTION 8 – RECOMMENDED REGIONAL WASTEWATER IMPROVEMENTS

Based on the cost analysis provided in *Section 9* of this report, the selection of a proposed alternative for wastewater service in Sabine County cannot be made on economics alone. The costs analysis resulted in total project costs of approximately equal cost effectiveness for each alternative assessed and discussed in Section 6 of this report. Therefore, the following factors were also considered in the selection process:

1. Degree of acceptance by the regulatory community
2. Constructability of the alternative
3. Availability of materials and equipment
4. Local experience with the alternative
5. Reliability

Based on the relative “innovative” nature of the natural treatment alternative, the significant number of treatment plants required, the significant land required to implement, the lack of experience with this technology, unknowns concerning the availability of suitable materials (i.e., media) locally to implement the technology, and the unknown reliability associated with temperature fluctuations and shock loading, the natural cluster system alternative was not selected as the recommended approach for implementation.

The recommended alternative for wastewater service in Sabine County is the conventional centralized (package plant) alternative utilizing gravity sewer collection systems in individual subdivisions, where practical. In some cases, where topography is more severe or other limitations are encountered, a STEP collection system would be utilized to direct wastewater from individual subdivisions for subsequent treatment in centralized facilities. The type of collection system implemented for each individual subdivision would be determined during engineering design of the project after more detailed information and surveys are provided.

Table 8.1 provides a summary of the recommended wastewater improvements for Sabine County for each individual wastewater planning area (Beechwood/South Sabine, Timberlane, El Camino Bay, Midlake, and North). Exhibits 6-4 through 6-8 provide the general line configurations and treatment plant locations for the proposed alternative.

Table 8.1
Summary of Proposed Wastewater Improvements

Planning Area	Planning Year	Number of Plants	Total Plant Capacity (mgd)	Total Gravity and/or STEP Sewer (Linear Feet)	Total Force Main (Linear Feet)	Number of Lift Stations
Beechwood/South Sabine	2010	2	0.20	155,805	65,900	21
Timberlane	2020	2	0.14	103,735	67,610	15
El Camino Bay	2030	4	0.23	135,695	53,300	16
Midlake	2030	1	0.12	87,825	47,410	6
North	2030	1	0.12	90,365	61,120	18
Total		10	0.81	573,425	295,340	76

The recommended wastewater improvements summarized above result in capital costs of approximately \$55 million over the 50-year planning period (see Section 9 of this report). Of this total, approximately \$2.4 million appears to be eligible for financial assistance through TWDB Economically Distressed Areas Program (EDAP). It is recommended, at this time, that only those wastewater improvements related to the \$2.4 million of EDAP-eligible grant funds be implemented. Section 12 of this report provides additional information regarding this recommendation as well as other potential sources of funding for future wastewater improvements in Sabine County.

SECTION 9 – PROPOSED REGIONAL FACILITIES COST ANALYSIS

PROPOSED WATER IMPROVEMENTS

The total construction cost estimated for the water system improvements described in the sections above is approximately \$18 million including improvement for fire flows. The total project cost for water system improvements including engineering, administration, surveying, legal, and fiscal expenses is approximately \$27 million. Based on the methods for phasing the construction of water system improvements, described in the proposed improvements section of this report, the total construction and total project cost estimated for Phase 1 (2005) is approximately \$14 million and \$20 million, respectively. The total construction and project cost for Phase 2 (2030) is approximately \$4 million and \$6 million, respectively.

Tables 9.1 and 9.2 provide a summary of construction and total project costs for each water system assessed as part of this study for Phase 1 (2005) and Phase 2 (2030), respectively. The detailed cost estimates are also provided in *Appendix D*. Costs associated with treatment plant capacity expansion projects were distributed on a pro-rata basis based on the treatment capacity requirements for each entity.

**Table 9.1
Phase 1 Water System Improvements Cost Summary**

Entity	Cost		
	Construction	Non-Construction	Total Project
City of Hemphill	\$2,028,636	\$912,886	\$2,941,522
City of Pineland	\$1,199,027	\$539,562	\$1,738,589
G-M WSC	\$6,562,774	\$2,953,248	\$9,516,022
Beechwood WSC	\$1,795,689	\$808,060	\$2,603,749
South Sabine WSC	\$2,402,946	\$1,081,326	\$3,484,272
El Camino Bay WSC	\$305,695	\$137,563	\$443,258
Total	\$14,297,767	\$6,432,645	\$20,727,412

Table 9.2
Phase 2 Water System Improvements Cost Summary

Entity	Cost		
	Construction	Non-Construction	Total Project
City of Hemphill	\$858,131	\$386,159	\$1,244,290
City of Pineland	\$183,237	\$82,457	\$265,694
G-M WSC	\$1,759,848	\$791,931	\$2,551,779
Beechwood WSC	\$372,222	\$167,500	\$539,722
South Sabine WSC	\$911,675	\$410,254	\$1,321,929
El Camino Bay WSC	\$8,641	\$3,888	\$12,529
Total	\$4,093,754	\$1,842,189	\$5,935,943

The proposed water system improvements, detailed previously in this report, include sufficient treatment capacity at the City of Hemphill/SRA plant to provide all the water demand for the City of Hemphill, G-M WSC, and El Camino Bay WSC, as well as approximately 50 percent of the total water demand of the City of Pineland. Therefore, costs associated with the SRA/City of Hemphill treatment plant expansions were distributed, based on required capacity needs to each of these entities.

Likewise, the Beechwood WSC water plant improvements, detailed previously in this report, include sufficient capacity to meet all of the Beechwood WSC demand as well as all future growth in demand for the South Sabine WSC system. Costs associated with the Beechwood plant expansion were distributed, based on required capacity needs to Beechwood WSC and South Sabine WSC.

The total project costs provided in *Tables 9.1* and *9.2* were used to develop estimated water rates for individual residences in Sabine County. These total project costs were the basis for estimating the total debt service associated with the proposed water system improvements and for determining an adequate revenue stream, based on water sales, that would be required to pay off this debt. This rate analysis is discussed further and results presented in *Section 10* of this report.

PROPOSED WASTEWATER IMPROVEMENTS

A cost analysis was prepared for the alternative approaches to wastewater service for Sabine County. The two alternatives assessed were a conventional centralized treatment systems and a natural cluster system alternative. Both of these alternatives are discussed in greater detail in previous sections of this report. For both of these alternatives, two alternatives for wastewater collection were also assessed, conventional gravity sewers and STEP collection systems. *Tables 9.3, 9.4, 9.5, and 9.6* provide a summary of the construction and total project costs for each of the alternatives. Detailed cost estimates for wastewater improvements are provided in *Appendix E*.

As previously discussed, it was assumed for purposes of this study that wastewater improvements would be phased in over the planning period starting in the southern portion of the county and proceeding north. Wastewater improvements would be implemented in the Beechwood/South Sabine Planning Area by the planning year 2010. The Timberlane Planning Area wastewater improvements would be implemented in 2020, and the remainder of the planning areas (El Camino Bay, Midlake, and North) would then be addressed by 2030. All wastewater improvements are based on projected wastewater demands for the year 2050.

Table 9.3
2010 Summary of Wastewater Improvements Costs

Cost	Conventional Centralized System with Gravity Collection	Conventional Centralized System with STEP Collection	Natural Cluster System with Gravity Collection	Natural Cluster System with STEP Collection
Construction	\$9,432,472	\$10,496,739	\$10,364,585	\$10,998,371
Non-construction	\$4,433,262	\$4,933,467	\$4,871,355	\$5,169,234
Total	\$13,865,734	\$15,430,206	\$15,235,940	\$16,167,605

Table 9.4
2020 Summary of Wastewater Improvements Costs

Cost	Conventional Centralized System with Gravity Collection	Conventional Centralized System with STEP Collection	Natural Cluster System with Gravity Collection	Natural Cluster System with STEP Collection
Construction	\$6,658,298	\$7,154,189	\$6,978,185	\$7,297,522
Non-construction	\$3,129,400	\$3,362,469	\$3,279,747	\$3,429,835
Total	\$9,787,698	\$10,516,658	\$10,257,932	\$10,727,357

Table 9.5
2030 Summary of Wastewater Improvements Costs

Cost	Conventional Centralized System with Gravity Collection	Conventional Centralized System with STEP Collection	Natural Cluster System with Gravity Collection	Natural Cluster System with STEP Collection
Construction	\$19,682,959	\$22,762,765	\$17,158,171	\$19,068,629
Non-construction	\$9,250,991	\$10,698,500	\$8,064,340	\$8,962,256
Total	\$28,933,950	\$33,461,265	\$25,222,511	\$28,030,885

Table 9.6
Total Summary of Wastewater Improvements Costs

Cost	Conventional Centralized System with Gravity Collection	Conventional Centralized System with STEP Collection	Natural Cluster System with Gravity Collection	Natural Cluster System with STEP Collection
Construction	\$35,773,730	\$40,413,693	\$34,500,941	\$37,364,522
Non-construction	\$16,813,653	\$18,994,436	\$16,215,442	\$17,561,325
Total	\$52,587,383	\$59,408,129	\$50,716,383	\$54,925,847

Based on the above analysis, the costs associated with the various wastewater service alternatives are approximately equally cost effective, particularly when considering these costs are at the planning level. Therefore, the selection of a proposed alternative for wastewater service for Sabine County was not based solely on economic factors.

As discussed in more detail previously in *Section 8* of this report, the centralized conventional wastewater treatment alternative was selected as the proposed alternative for this study based on the degree of acceptance in the regulatory community, the limited number of plant sites required, issues associated with availability and constructability, and economics. This alternative could be coupled with a conventional gravity, a STEP collection system, or a combination of both system depending on the physical limitations associated with each subdivision to be serviced. For purposes of this study and the rate analysis provided in *Section 10* below, the costs developed for a centralized conventional treatment system with a gravity collection system were used to estimate wastewater rates for Sabine County.

SECTION 10 – PROPOSED REGIONAL FACILITIES RATE ANALYSIS

CURRENT WATER RATES FOR EXISTING FACILITIES

The current rate structure for water services in Sabine County for the existing municipalities and water supply corporations, assessed as part of this study, were obtained. For each provider studied, the current rate structure consists of a flat fee up to some specified minimum monthly volume of water, with an additional fee charged on a per 1,000-gallon basis for water metered above the minimum monthly volume. Some providers have also initiated a second tier rate structure to charge an additional fee on a per 1,000-gallon basis for water metered above a second specified monthly volume. *Table 10.1* summarizes the current water rate structure for the entities studied as part of this report.

Table 10.1
Current Water Rates for Existing Providers

Water Provider	Minimum Volume (gallons)	Flat Minimum Monthly Rate (dollars)	Rate for Water Above Minimum Volume (\$/1,000 gallons)	Second Tier Volume (gallons)	Rate for Water Above Second Tier Volume (\$/1,000 gallons)
City of Hemphill	2,000	18.36	1.71	N/A	N/A
City of Pineland	2,000	8.25	1.50	N/A	N/A
G-M WSC	3,000	20.00	2.50	20,000	3.00
Beechwood WSC	3,000	28.00	1.50	10,000	2.00
South Sabine WSC	4,000	17.50	2.50	N/A	N/A
El Camino Bay WSC	3,000	13.50	2.00	N/A	N/A

Based on the information, provided by each entity listed above, for water usage and number of connections, an average monthly water bill was estimated. *Table 10.2* summarizes the estimated monthly water bills for each provider assessed as part of this study.

Table 10.2
Estimated Current Monthly Water Bills

Water Provider	Number of Connections	Average Total Monthly Water Usage (gpd)	Average Monthly Water Usage Per Connection (gallons)	Fixed Monthly Water Rate (dollars)	Additional Fee for Use Above Minimum Volume (dollars)	Total Average Monthly Water Bill (dollars)
City of Hemphill ⁽¹⁾	659	129,000	5,871	18.36	6.56	24.92
City of Pineland ⁽¹⁾	377	127,000	10,106	8.25	12.16	20.41
G-M WSC	2,744	592,000	6,472	20.00	8.68	28.68
Beechwood WSC	470	72,000	4,596	28.00	2.39	30.39
South Sabine WSC	770	74,000	2,883	17.50	N/A	17.50
El Camino Bay WSC	112	18,000	4,821	13.50	3.64	17.14

⁽¹⁾ Monthly estimates of water usage for City of Hemphill and City of Pineland based on actual metered (i.e., water sold) data.

The weighted average water bill, based on number of connections, for the water providers listed above for Sabine County is \$25.82 per month per connection. It should be noted, that the water usage information provided and utilized in this study for all participants except the City of Hemphill and the City of Pineland represents actual water pumped, treated, and distributed from each facility. Actual metered water data, for individual residences, was not obtained.

System losses of water for the City of Hemphill and City of Pineland are accounted for in this analysis. However, actual volumes of metered water delivered to customers for the other participants is likely less than the average water usage numbers used to calculate existing average monthly water bills. The same water usage data was also used to develop the projected water rate structure for proposed water system improvements. Therefore, this analysis is consistent for purposes of comparing estimated current monthly water bills to projected estimated monthly water bills for proposed water system improvements.

CURRENT WASTEWATER RATES FOR EXISTING FACILITIES

The current rate structure for wastewater services in Sabine County for providers, assessed as part of this study, was obtained. The current rate structure consists of a flat monthly fee and for some providers an additional fee charged on a per 1,000-gallon basis for water metered above a minimum monthly volume. *Table 10.3* summarizes the current wastewater rate structure for the entities studied as part of this report.

Table 10.3
Current Wastewater Rates for Existing Providers

Wastewater Provider	Minimum Volume (gallons)	Flat Minimum Monthly Rate (dollars)	Rate for Water Above Minimum Volume (\$/1,000 gallons)
City of Hemphill	3,000	12.00	1.20
City of Pineland	2,000	11.35	1.15
Beechwood WSC	N/A	22.00	N/A

Based on the information, provided by each entity listed above, for water usage and number of connections, an average monthly wastewater bill was estimated. *Table 10.4* summarizes the estimated monthly wastewater bills for each provider assessed as part of this study.

Table 10.4
Estimated Current Monthly Wastewater Bill

Wastewater Provider	Number of Connections	Average Total Monthly Water Usage (gpd)	Average Monthly Water Usage Per Connection (gallons)	Fixed Monthly Wastewater Rate (dollars)	Additional Fee for Use Above Minimum Volume (dollars)	Total Average Monthly Wastewater Bill (dollars)
City of Hemphill	659	129,000	5,871	12.00	3.45	15.45
City of Pineland	377	127,000	10,106	11.35	9.32	20.67
Beechwood WSC	470	72,000	4,596	22.00	N/A	22.00

The weighted average wastewater bill, based on number of connections, for the wastewater providers listed above for Sabine County is \$18.80 per month per connection.

RECOMMENDED RATES FOR PROPOSED WATER SYSTEM IMPROVEMENTS

A financial spreadsheet model was developed to project estimated water rates required to fund the annual operating costs of the proposed district. *Appendix F* provides the financial model developed for estimating water rates for Sabine County. For this analysis, annual operating costs are defined as annual costs associated with the operation, maintenance, rehabilitation, administration, construction, engineering, legal, financial, and debt service for water system improvements proposed as part of this study. Costs associated with construction, engineering, legal, and financial were obtained from the costs provided in *Section 9* and detailed in *Appendix D* of this report.

Due to the significant amount of water system improvements proposed for this study, the limited number of connections in Sabine County, and the variation in water use patterns between individual participants, a rate structure, similar to that used by the existing water providers, is required in order to allow an equitable charge across Sabine County while still allowing adequate funding.

The proposed rate structure for Sabine County, similar to one used by existing water providers, consists of a fixed monthly dollar amount for some specified minimum volume of water along with an additional fee, on a per 1,000-gallon basis, for water metered above the specified minimum monthly volume. One of the goals of this study was to develop a water rate structure that would result in somewhat consistent monthly water bills across customers in the county, and also with a consideration for the variation in water usage between various parts of the county. *Table 10.5* summarizes some of the key assumptions made in developing the financial model for water system improvements for Sabine County.

Table 10.5
Financial Model Assumptions

Item	Assumed Value
Interest Rate for Debt Service	3.30%
Bond Amount	Construction costs and fees plus 2 years capitalized interest
Period for Debt Service	30 years
Operation and Maintenance	\$250 per connection annually ⁽¹⁾
Administration	\$50 per connection annually ⁽¹⁾
Rehabilitation and Replacement	2% of capital costs annually beginning 20 years after capital incurred
Interest Earned on Investment	5.125%
Minimum Monthly Water Volume	6,000 gallons per month
Minimum Year End Balance	\$300,000

⁽¹⁾ Operation and Maintenance and Administration costs based on review of participant financial statements for the year 2000.

The financial model was developed for the 50-year study period (2001 through 2050). Water rates were assessed on a 5-year basis to determine if the amount to which rate increases would be required to fund the proposed district's annual operating costs while maintaining a cash balance for every year of at least \$300,000. The rate analysis was performed assuming an interest rate of 3.3%. *Table 10.6* provides a summary of the projected water rates for current year water usage for each participant studied as part of this report under the alternative financing conditions described above.

Assuming an interest rate of 0 percent and 35 percent loan forgiveness, the water rate required between current year and 2005 consists of a flat monthly fee of \$24 for up to 6,000 gallons of water per month. An additional fee of \$1.50 per 1,000 gallons of water above the 6,000 gallons would also be applied.

Table 10.6
Summary of Water Rates for Regional Water Improvements (2001-2005)

Water Provider	Number of Connections	Average Water Usage (gpd)	Average Monthly Water Usage Per Connection (gallons)	Fixed Monthly Water Rate (dollars)	Additional Fee for Use Above Minimum Volume (dollars)	Total Average Monthly Water Bill (dollars)
City of Hemphill	659	129,000	5,871	34.00	N/A	34.00
City of Pineland	377	127,000	10,106	34.00	6.16	40.16
G-M WSC	2,744	592,000	6,472	34.00	0.71	34.71
Beechwood WSC	470	72,000	4,596	34.00	N/A	34.00
South Sabine WSC	770	74,000	2,883	34.00	N/A	34.00
El Camino Bay WSC	112	18,000	4,821	34.00	N/A	34.00

The weighted average water bill for *Tables 10.6* based on number of connections, for the water providers listed above for Sabine County is \$34.83 per month per connection.

Based on a comparison of existing water rates to proposed rates, the proposed water system improvements can be economically supported while also achieving somewhat lesser average water bills to individual customers for some planning participants using a regional plan for financing water system improvements. *Table 10.7* provides a summary of projected water rates and projected water bills over the 50-year planning period for each entity assessed as part of this study.

Projected water rates, as expected, are increased over time in relationship to construction projects and bond issues. Based on the results summarized in *Table 10.7*, water rates are increased at intervals of not less than 5 years. Results also indicated that water rate increases were not required for every 5-year interval over the study duration, and when increases were required, the magnitude of the increase ranged from 5 percent to 11 percent. Over the 50-year study period, the fixed monthly water rates are projected to increase from approximately \$24 per month per connection initially to approximately \$37 per month per connection by the year 2050.

Table 10.7
Summary of Projected Rates for Proposed Regional Water System Improvements

Year	Fixed Monthly Rate (dollars)	Rate Above 6,000 gallons per month (\$/1,000 gallons)	Average Monthly Water Bill (dollars)					
			City of Hemphill	City of Pineland	G-M WSC	Beechwood WSC	South Sabine WSC	El Camino Bay WSC
2001	24.00	1.50	34.00	40.16	34.71	34.00	34.00	34.00
2005	24.00	1.50	34.00	40.16	34.71	34.00	34.00	34.00
2010	28.00	1.50	37.00	43.16	37.71	37.00	37.00	37.00
2015	32.00	1.50	41.00	47.16	41.71	41.00	41.00	41.00
2020	33.00	1.50	44.00	50.16	44.71	44.00	44.00	44.00
2025	37.00	1.50	47.00	53.16	47.71	47.00	47.00	47.00
2030	37.00	1.50	50.00	56.16	50.71	50.00	50.00	50.00
2035	37.00	1.50	50.00	56.16	50.71	50.00	50.00	50.00
2040	37.00	1.50	50.00	56.16	50.71	50.00	50.00	50.00
2045	37.00	1.50	50.00	56.16	50.71	50.00	50.00	50.00
2050	37.00	1.50	50.00	56.16	50.71	50.00	50.00	50.00

RECOMMENDED RATES FOR PROPOSED WASTEWATER SYSTEM IMPROVEMENTS

A financial spreadsheet model was also developed to project estimated wastewater rates required to fund the annual operating costs of the proposed district. *Appendix G* provides the financial model developed for estimating wastewater rates for Sabine County. Costs associated with construction, engineering, legal, and financial were obtained from the costs provided in Section 9 and detailed in *Appendix E* of this report for all five wastewater planning areas (i.e., Beechwood/South Sabine,

Timberlane, El Camino Bay, Midlake, and North). A value of \$1.4 million was used for the City of Hemphill wastewater improvements based on information provided by the City for improvements planned for year 2002. No known planned or required improvement dollars were proposed for the City of Pineland wastewater system.

For purposes of simplicity and to achieve the stated goal of consistent monthly bills across customers in Sabine County, the proposed wastewater rate structure for Sabine County consists of a fixed monthly dollar amount per connection. *Table 10.8* summarizes some of the key assumptions made in developing the financial model for wastewater system improvements for Sabine County.

Table 10.8
Financial Model Assumptions

Item	Assumed Value
Interest Rate for Debt Service	3.30%
Bond Amount	Construction costs and fees plus 2 years capitalized interest
Period for Debt Service	30 years
Operation and Maintenance	\$250 per connection annually
Administration	\$50 per connection annually
Rehabilitation and Replacement	2% of capital costs annually beginning 20 years after capital incurred
Interest Earned on Investment	5.125%
Minimum Year End Balance	\$300,000

The financial model was developed for the 50-year study period (2001 through 2050). Wastewater rates were assessed on a 5-year basis to determine if and the amount to which rate increases would be required to fund the proposed districts annual operating costs while maintaining a cash balance for every year of at least \$300,000. The rate analysis for wastewater improvements was also performed assuming a loan at 3.30 percent interest. *Table 10.9* provides a summary of projected wastewater rates, over the 50-year study period, for all participants studied. Results summarized in *Tables 10.9* indicate initial fixed monthly wastewater bills for customers in Sabine County of approximately \$40 per month per connection.

Table 10.9
Summary of Projected Rates for
Proposed Regional Wastewater System Improvements

Year	Fixed Monthly Wastewater Rate (\$ per month per connection)
2001	40
2005	40
2010	47
2015	55
2020	61
2025	72
2030	72
2035	72
2040	72
2045	72
2050	72

Projected wastewater rates, as expected, are increased over time in relationship to construction projects and bond issues. Based on the financial model, wastewater rates are increased at intervals of not less than 5 years. Results also indicated that wastewater rate increases were not required for every 5-year interval over the study duration, and when increases were required, the magnitude of the increase ranged from 15 percent to 20 percent. Over the 50-year study period, the fixed monthly wastewater rates are projected to increase from approximately \$40 per month per connection initially to approximately \$72 per month per connection by the year 2050.

SECTION 11 – REGIONAL MANAGEMENT AUTHORITY AND WATER CONSERVATION PLAN

CONSENSUS MODEL MANAGEMENT AUTHORITY

It is the intent of Sabine County to form a management authority for the purpose of consolidating and managing existing water and wastewater facilities in the County as well as for providing a mechanism for funding and managing proposed improvements to both water and wastewater facilities. The consensus model management authority, developed through meetings and discussions with planning participants, is a Freshwater Supply District created pursuant to Texas Water Code Chapter 53. Freshwater Supply Districts are created through petition, hearing, and election and can include the management of both water and wastewater facilities if approved by the electorate.

PETITION PROCESS

A petition for creation of a Freshwater Supply District must be presented to the County Commissioners Court or, if not in session, to the County Judge for Sabine County. The petition must be signed by 50 percent or a majority of the electors who own land within the boundary of the proposed district. The petition must state the boundaries of the proposed district, the general nature of the projects proposed to be performed, the necessity for the proposed district, the feasibility of the proposed district, and the proposed name of the district (i.e., Sabine County Freshwater Supply District). In addition, a \$100 deposit must also accompany the petition.

HEARING PROCESS

Upon receipt of the petition, the Commissioners Court or County Judge shall immediately set a time and place for a public hearing on the petition. The hearing must be held during the period beginning on the 15th day and ending with the 30th day after the day the petition is presented. The County Clerk must issue a notice of the scheduled time and place of the hearing. The notice must be posted at the courthouse door and a copy must be posted at each of four different locations in the proposed district. The notice must include a statement that any person is entitled to appear at the hearing.

The Commissioners Court has jurisdiction to determine all matters pertaining to the sufficiency of the petition and must allow any interested person to appear and offer testimony relative to the petition. If the Commissioners Court grants the petition, the Commissioners Court will appoint five temporary supervisors to serve on the board of the district until permanent supervisors are appointed. Following appointment, the five temporary supervisors are required to meet and begin to organize the district. Within 60 days of creation, the district must file notice of its creation with the TNRCC.

ELECTION PROCESS

An election must be held to determine if the proposed district will be established prior to the issuance of any bonds or other obligations by the district. The election must be held on a uniform date and conducted in accordance with Section 49.102 of the Texas Water Code and the Election Code. Only registered voters within the proposed boundaries of the district will be allowed to vote on the creation of the district. Following approval of district creation through election, all future bonds, including revenue bonds, must be approved through subsequent elections with the exception of revenue notes with a term not to exceed greater than 20 years.

Sabine County officials are currently planning to place the creation of the Sabine County Freshwater Supply District on the February 2002 ballot. Therefore, the petition will need to be initiated and submitted to the Sabine County Commissioners Court and the hearing process began likely before the end of this year (2001).

SPECIAL CONSIDERATIONS

A portion of the study area for this report includes a small area within adjacent San Augustine County to the west. Residences in this area of San Augustine County are provided water through distribution facilities owned and operated by the G-M WSC in Sabine County. For purposes of this planning study, this area was included in the analyses. However, it should be noted that this area in San Augustine County cannot be included within the proposed boundaries of the Sabine County Freshwater Supply District. The inclusion of land outside the jurisdictional boundaries of Sabine County can be achieved, following creation of the district, through subsequent annexations.

It should also be noted that the creation of a district inside the extraterritorial jurisdiction of a city will require city consent. Therefore, both the City of Hemphill and the City of Pineland will have to consent to its inclusion in the district boundary prior to district creation or, if consent is not granted, then the proposed district boundary must not include the extraterritorial jurisdiction of the city.

WATER CONSERVATION PLAN

The Texas Legislature, through its passing of Senate Bill 1 in 1997, requires all public water suppliers with water rights holdings of more than 1,000 acre-feet per year prepare a Water Conservation Plan and Drought Contingency Plan. In addition, as a condition for receiving financial assistance from the TWDB, public water suppliers are required to prepare a Water Conservation Plan.

A Water Conservation Plan cannot effectively be prepared at this time due to several unknowns associated with the creation of a management authority for Sabine County. At present, no single consolidated management authority (i.e., district) is presently representing the planning area for this study. As discussed in previous sections of this report, the creation of such a management authority for Sabine County will require approval by the districts constituents through election. In addition, individual water supply corporations (i.e., Beechwood and South Sabine) as well as municipalities (Hemphill and Pineland) will need to decide whether they are interested in being part of a newly formed district or if they wish to opt-out of the district boundaries.

These decisions have not been made by all participants in this study as of the date of this report. Upon creation of a management authority (i.e., district) in Sabine County, the newly formed district will be required to prepare and submit a Water Conservation Plan to the TNRCC as well as the TWDB for review and approval. In general, the Water Conservation Plan and Drought Contingency Plan will include the following information:

Water Conservation Plan

1. Utility profile, including information regarding population and customer data, water use data, water supply system data, and wastewater system data
2. Specification of conservation goals including municipal per capita water use goals, the basis for the development of such goals, and a time frame for achieving the specified goals
3. Specification of metering device(s) used to measure and account for the amount of water diverted from the source of supply
4. Establishment of program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement
5. Measures to determine and control unaccounted-for uses of water (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections, abandoned services, etc.)
6. Establishment of program of continuing public education and information regarding water conservation
7. Water rate structure which is not “promotional” (a cost-based rate structure that does not encourage the excessive use of water)
8. A reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies
9. A means of implementation and enforcement, which shall be evidenced by
 - a. A copy of the ordinance, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier
 - b. A description of the authority by which the water supplier will implement and enforce the conservation plan
 - c. Documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans
10. A program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted-for uses of water

11. A record management system to record water pumped, water deliveries, water sales, and water losses, allowing for the desegregation of water sales and uses into user classes (i.e., residential, commercial, public and institutional, and industrial)
12. Adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition
13. A program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures
14. Reuse and/or recycling of wastewater and/or greywater
15. A program for pressure control and/or reduction in the distribution system and/or for customer connections
16. A program and/or ordinance(s) for landscape water management
17. A method for monitoring the effectiveness and efficiency of the water conservation plan
18. Any other water conservation practice, method, or technique that the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan

Drought Contingency Plan

1. A description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria
2. Drought or emergency response stages providing for the implementation of measures in response to at least the following situations
 - a. Reduction in available water supply up to a repeat of the drought of record
 - b. Water production or distribution system limitations
 - c. Supply source contamination
 - d. System outage due to the failure or damage of major water system components (e.g., pumps)

3. Specific water supply or water demand management measures to be implemented during each stage of the plan including the following
 - a. Curtailment of non-essential water uses
 - b. Utilization of alternative water sources and/or alternative delivery mechanisms with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.)
4. Procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public
5. Procedures for granting variances to the plan
6. Procedures for the enforcement of any mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions

SECTION 12 – IMPLEMENTATION

Proposed improvements for water facilities in Sabine County include the expansion and/or replacement of existing water treatment plants, additional storage facilities, and improvements to existing water distribution lines. As part of this study, improvements are proposed to the City of Hemphill, City of Pineland, G-M WSC, Beechwood WSC, South Sabine WSC, and El Camino Bay WSC systems. The implementation of proposed water improvements detailed in this study will allow future expansion of these systems to provide water to currently underserved or unserved areas in the county.

Proposed improvements for wastewater facilities in Sabine County include the construction of multiple centralized wastewater treatment plants along Toledo Bend Reservoir, an extensive system of force mains and gravity mains to direct wastewater to treatment facilities, and gravity sewer and/or STEP collection lines in individual subdivisions. As part of this study, improvements are proposed to the five wastewater planning areas (Beechwood/South Sabine, Timberlane, El Camino Bay, Midlake, and North) identified and described previously in this report. The implementation of proposed wastewater improvements detailed in this study will allow providing conventional wastewater services to areas currently utilizing on-site (septic tank) treatment.

The purpose of this regional facilities plan is to provide a planning document to assist Sabine County in developing near-term and long-term water and wastewater system improvement projects, estimating probable construction costs for proposed projects, and projecting potential water and wastewater rates required to fund projects. Following approval of this document by Sabine County and the TWDB, several steps, as described below, are required to be completed prior to construction.

PROJECT FUNDING

The Draft Regional Plan for Sabine County identified a total of approximately \$25 million in water improvements and approximately \$55 million in wastewater improvements for a total cost of \$80 million. Of the total costs, approximately \$1.5 million for water improvements and \$2.4 million for wastewater improvements are eligible for grant funding from the Texas Water Development Board (TWDB) Economically Distressed Areas Program (EDAP). The remaining costs are proposed

for funding as follows based on the timing and subsequent growth within Sabine County as outlined below.

Water Improvements

The initial improvements and funding recommended in the Draft Regional Plan include approximately \$16 million in water improvements. Of this amount approximately \$1.5 million is EDAP-eligible that will consist of a combination of grant and loan funds from the EDAP water grant account and the EDAP water loan account. The remainder of the \$16 million in water improvements is proposed for funding from the TWDB Drinking State Revolving Fund (DWSRF). Sabine County is fortunate in that they have been ranked as No. 5 on the TWDB Intended Use Plan (IUP) for FY 2002 as eligible for a DWSRF loan up to \$16,210,000 under the Disadvantaged Community Program.

The high ranking would appear, at this time, to ensure that Sabine County will be able to receive funds under this program to fund the Phase 1 improvements recommended in this Draft Report. More significant is the apparent eligibility of Sabine County to qualify under the Disadvantaged Community Program of the DWSRF. Although substantial benefit is gained under the small community DWSRF program through lower interest rates (200 basis points below market rates), the Disadvantaged Community Program allows zero percent interest, and dependent on economic hardship, up to 35 percent loan forgiveness. It should be noted here that preliminary calculations indicate that Sabine County will qualify for the 35 percent loan forgiveness although this is yet to be confirmed by the TWDB.

Irregardless of which program, Sabine County and the proposed Fresh Water Supply District and ultimately the rate payer, will realize huge savings in both interest and principal costs over the life of the loan. As the eligible applicant and a political subdivision, Sabine County would receive the funds with repayment backed by contract revenues pledged by the Fresh Water Supply District. Consequently, at this time it would appear that Phase 1 of the water improvements can be fully funded through a combination of DWRSF and EDAP grant and loan funds.

The Draft Regional Plan also recommends an additional \$9 million in water improvements in the year 2030. At this time, either the DWSRF (if still in existence) or bond proceeds would be used to fund these improvements. However, due to the extended time period it is not possible to say what funding programs may be available almost 30 years from now to fund the Phase 2 improvements.

Wastewater

As discussed above almost \$55 million in wastewater improvements are recommended in the Draft Regional Plan over the next fifty years. Of this amount, approximately \$2.4 million appears to be EDAP-eligible.

It is not anticipated that the majority of these costs would be funded at this time. This recommendation is made due to the following factors of consideration:

- The population and housing density is not substantial enough to support a centralized wastewater collection system.
- Past studies and research have indicated contamination problems along the lake area, the most populous areas of the County. However there has not been significant data developed to date to warrant the construction of wastewater facilities in these areas.
- The majority of residents do not support wastewater improvements throughout the entire County area.
- The creation of a new District and the overwhelming water needs preclude significant debt for wastewater improvements. In other words, water problems are currently more significant than wastewater as evidenced by the past TNRCC enforcement actions.

Based on the considerations listed above, it is recommended that only the EDAP-eligible improvements proceed through funding by the TWDB EDAP sewer grant and loan accounts. When subsequent growth occurs and the economic stability of the District has been established, the remaining improvements could be funded by a combination of Clean Water State Revolving Funds (CWSRF), Texas Department of Housing and Community Affairs (TDHCA) Community Development Block Grant (CDBG) Funds, TDHCA STEP funds, and low interest loans from the U.S. Department of Agriculture Rural Development Assistance. It is also possible that as growth and increased demand occurs; the proposed District could issue bonds for wastewater improvements.

One last consideration of funding for wastewater improvements is the State Participation Plan Program managed by the TWDB. This program basically allows funding (up to 50%) up front for initial improvements with deferred payments several years later for interest and principal. This allows political subdivisions to design and construct for future growth without placing the entire burden of the costs on the current ratepayers.

Similar to the water improvements, Sabine County would be the applicant for the funding sources referenced above. Repayment of the fund proceeds would be through the District through the pledge of contract revenues.

PROJECT PRIORITY AND DEFINITION

This regional facilities plan summarizes a proposed phasing of projects for water and wastewater improvements for Sabine County. Construction costs and the resulting water and wastewater rates required to fund the improvements are based on this proposed phasing of projects. While the proposed phasing of projects and estimates of probable costs, described in this report, are believed to be accurate based on current information, the priorities of the county and individual participants may change over time.

Therefore, upon approval of this plan, further assessment of these priorities should be developed to ensure that the appropriate projects are implemented to meet participants' goals and objectives. This assessment will develop a detailed timeline for project implementation and will define, in greater detail, the water and wastewater projects scheduled for implementation. Items to be considered during this assessment include:

1. The amount of funding available to Sabine County for water and wastewater projects
2. The number of planning participants ultimately committed to the creation of a management authority (district) in Sabine County
3. The establishment of short-term and long-term goals and priorities for planning participants

4. Public acceptance of projected water and wastewater rates for residents in Sabine County
5. Results from preliminary engineering design

The results of this planning phase will be used to develop a 10-year Capital Improvements Plan (CIP) for Sabine County. Based on the projects identified as being a priority for implementation in the next 10 years, the CIP can be developed to define upcoming projects, schedule milestones for engineering and construction, and better project water and wastewater rates for residents in the county. The CIP will be reviewed annually and adjustments made, if applicable, to reflect changes in project priorities or if additional projects have been identified since the previous CIP was developed.

PRELIMINARY ENGINEERING DESIGN

The regional facilities plan, detailed in this report, provides the overall direction and focus for water and wastewater planning for Sabine County and will become the tool used to develop short-term and long-term project priorities, project definitions, and implementation schedules. This regional facilities plan is not meant to provide sufficient detail for projects to a preliminary design level.

Preliminary engineering designs will be developed for each project defined as a result of establishing project priorities and developing a 10-year CIP as described above. The purpose of preliminary engineering design will be to better define the design components of projects scheduled for implementation. Components of preliminary engineering design include:

1. Verification and calibration of water models developed as part of this plan
2. Field inspection and verification of project sites
3. Identification of equipment types and sizes
4. Identification of most applicable wastewater collection systems for individual subdivisions
5. Identification and resolution of right-of-way, permitting, environmental and other non-engineering issues
6. Detailed cost estimation for projects scheduled for implementation

ENGINEERING DESIGN AND SPECIFICATION

Following completion of the preliminary engineering design for projects scheduled for implementation, detailed engineering design plans and construction specifications will be prepared. The design plans and specifications packages developed for each project or combined projects will be of sufficient detail to construct facilities and to obtain accurate bids from qualified contractors. Engineering designs will be in conformance with Chapters 290 and 317 of the TNRCC Rules and Regulations for water and wastewater systems, respectively.

CONSTRUCTION BIDDING

Competitive bids will be solicited from qualified construction contractors in the area, on behalf of Sabine County, for construction of water and wastewater projects. The engineering design plans and specifications developed for each project or combined projects will be used as a basis for construction bidding. It should be noted that some level of self-performance by the county may be initiated as a means to reduce overall construction costs. If it is determined that the county wishes to self-perform some portions of construction, as opposed to utilizing contractors, then the solicitations for bid will clearly identify which items in the engineering design plans will be contractor responsibility.

Following receipt of bids, an award will be made to the lowest most qualified respondent for construction of the proposed project. Solicitation and award of construction contracts will be performed in accordance with local and state regulations related to the bidding of publicly owned utilities.

SECTION 13 – PUBLIC INVOLVEMENT AND PARTICIPATION

The Sabine County Regional Water and Wastewater Planning Group encouraged early participation from various individual water supply corporations so that concerns could be addressed as the plan was being developed. Early in the planning process, fact-finding visits were made to each individual WSC in order to accurately represent each system within the county.

A public “kick-off” meeting was held on February 27, 2001, to gather suggestions and recommendations from the public as to issues that should be addressed or provisions that should be included in the regional water plan.

A project status meeting was held June 21, 2001, to provide a briefing on the status of the regional planning activities and to gather input and suggestions from the public as to current planning recommendations.

A public hearing was held on September 27, 2001. At this hearing, recommendations for water and wastewater improvements for the 50-year planning period were made. This plan is intended to provide a planning framework for water and wastewater improvements for Sabine County’s long-range growth.

At each meeting, a formal presentation was given by Turner Collie & Braden Inc. and time was given to answering public questions, comments, and concerns. Draft plans were distributed to planning participants and comments were solicited by TC&B at the hearing on September 27. Additionally, a copy of the Preliminary Draft of the Sabine County Regional Water and Wastewater Facilities Plan was placed in the J.R. Huffman Public Library in Hemphill for public review and comment.

Appendix H includes the presentations from the three meetings, along with copies of the sign-in sheets, minutes of each meeting, and comment letters received by TC&B.

City of Hemphill Monthly Operating Reports 1998 (MGD)

Day	Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	0.920	1.049		0.749	0.986	1.313	1.395	1.726	1.379	1.142		0.705
2	1.000	0.686		0.775	0.996	1.791	1.816	1.609	1.179	0.599		0.674
3	0.892	0.864		0.760	1.102	1.694	1.653	1.564	1.105	0.901		0.783
4	0.721	0.400		0.860	0.812	1.311	1.606	1.852	1.58	0.841		0.638
5	0.879	0.423		0.792	0.959	1.174	1.832	2.002	1.248	0.77		0.865
6	0.640	0.876		0.747	0.946	1.35	1.648	1.677	1.058	0.766		0.764
7	0.738	0.761		0.834	1.061	1.194	1.667	1.615	1.056	0.863		0.848
8	0.691	0.734		0.839	0.881	0.896	1.381	1.064	1.254	0.723		0.726
9	0.778	0.692		0.917	0.893	0.91	1.501	1.614	1.117	0.67		0.421
10	0.770	0.544		0.736	0.974	1.061	1.459	2.091	1.057	0.979		1.185
11	0.735	0.335		0.805	0.718	1.182	1.628	1.266	0.822	0.966		0.906
12	0.701	0.416		1.107	0.942	1.495	1.671	1.931	0.895	0.829		0.789
13	0.642	0.920		0.776	0.948	1.324	1.54	1.681	1.142	0.868		0.715
14	0.711	0.938		0.805	0.729	1.073	1.692	1.442	0.913	1.348		0.9
15	0.607	0.766		0.839	0.928	0.889	1.386	1.446	0.821	0.805		0.822
16	0.640	0.777		0.861	1.101	0.939	1.262	1.177	1.561	0.737		0.723
17	0.686	0.692		0.790	0.711	1.068	1.422	1.669	0.814	0.917		0.741
18	0.769	0.450		0.773	0.776	1.401	1.563	1.395	0.932	0.749		0.787
19	0.671	0.451		0.665	0.798	1.61	1.649	1.334	0.896	0.7498		0.759
20	0.750	0.359		0.661	0.952	1.733	1.601	0.95	0.851	0.813		0.65
21	0.651	0.969		0.596	0.734	1.449	1.519	0.845	0.919	0.799		0.827
22	0.593	0.606		0.579	0.920	1.184	1.345	0.979	0.951	0.932		0.638
23	0.814	0.616		0.988	0.835	1.478	1.408	1.256	0.855	0.643		0.755
24	0.776	0.774		0.710	1.082	1.461	1.634	1.037	0.818	0.774		0.656
25	0.690	0.584		0.627	0.659	1.321	1.614	0.84	0.826	0.87		0.915
26	0.585	0.732		0.956	1.466	1.396	1.818	1.267	0.849	1.008		0.903
27	0.667	0.519		0.621	1.356	1.551	1.669	0.876	1.001	1.313		0.833
28	0.697	0.752		0.724	0.928	1.482	1.474	1.165	0.88	0.627		0.923
29	0.360			0.689	1.024	1.49	1.713	1.287	0.89	0.37		0.803
30	0.702			0.740	1.194	1.4	1.621	0.796	0.949	0.865		0.863
31	0.759				1.042		1.844	0.768		0.91		0.777
Total (TG/Month)	22.235	18.685		23.321	29.453	39.620	49.031	42.221	30.618	26.147		24.294

Total Water Usage for the Year

305.625 MGY
937.86659 ac-ft/year

City of Hemphill Monthly Operating Reports 1999 (MGD)

Day	Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	0.818	0.855	0.802	0.816	1.083	1.11	1.668		1.668	1.668	1.321	0.899
2	0.674	0.896	0.791	0.683	1.212	1.166	1.149		1.149	1.149	0.725	1.018
3	0.842	0.828	0.712	0.916	1.034	1.245	1.235		1.235	1.235	0.885	0.858
4	0.974	1.265	0.773	0.763	0.913	1.088	1.653		1.653	1.653	0.906	1.063
5	1.306	1.139	0.667	0.636	0.723	1.394	1.443		1.443	1.443	0.91	0.915
6	0.604	0.878	0.704	0.857	0.928	1.206	1.039		1.039	1.039	0.952	0.946
7	1.22	1.095	0.803	0.743	0.855	1.256	1.613		1.613	1.613	1.443	0.86
8	1.189	0.669	0.672	0.625	0.991	1.359	1.404		1.404	1.404	1.166	0.898
9	0.852	0.781	0.773	0.872	0.867	1.453	1.105		1.105	1.105	0.915	0.94
10	0.778	0.95	0.749	1.036	0.906	1.554	1.08		1.08	1.08	1.621	1.03
11	0.896	1.092	0.66	0.843	0.944	0.756	1.118		1.118	1.118	1.077	1.554
12	0.898	0.95	0.829	0.971	0.938	1.21	1.105		1.105	1.105	0.881	1.469
13	0.857	0.886	0.672	0.853	0.932	1.224	1.268		1.268	1.268	0.955	0.761
14	0.865	1.352	0.707	0.842	0.939	1.047	1.021		1.021	1.021	1.506	1.33
15	0.82	0.91	0.733	0.979	0.656	0.759	1.191		1.191	1.191	1.343	0.407
16	0.853	0.699	0.727	0.553	1.082	1.188	1.114		1.114	1.114	1.102	0.575
17	0.791	0.773	0.78	0.929	1.245	1.324	1.254		1.254	1.254	1.102	0.732
18	0.733	0.977	0.919	0.891	1.158	1.374	1.053		1.053	1.053	1.245	1.066
19	0.885	0.843	0.736	0.851	1.04	1.313	0.811		0.811	0.811	1.411	0.823
20	0.76	0.787	0.636	0.807	1.1	1.348	1.604		1.604	1.604	0.875	0.923
21	0.731	0.787	0.918	1.321	0.7	1.469	0.533		0.533	0.533	1.047	0.772
22	0.759	0.76	0.81	0.567	1.132	1.248	0.819		0.819	0.819	1.004	0.966
23	0.727	0.705	0.771	0.846	1.161	1.36	0.927		0.927	0.927	1.341	0.852
24	0.693	0.812	0.788	0.993	1.256	0.961	1.154		1.154	1.154	0.733	0.915
25	0.751	0.896	0.626	0.926	1.059	0.997	0.837		0.837	0.837	0.899	0.934
26	0.613	1.307	0.771	0.899	0.759	1.141	1.334		1.334	1.334	1.439	0.991
27	0.821	0.769	0.669	0.931	1.154	1.174	0.804		0.804	0.804	0.674	1.883
28	0.656	0.982	0.836	0.929	0.63	1.465	1.204		1.204	1.204	0.621	0.91
29	0.749		0.535	0.928	1.095	0.946	0.885		0.885	0.885	0.719	0.901
30	0.802		0.922	0.831	1.23	1.296	0.919		0.919	0.919	0.764	0.995
31	0.674		0.881		0.623		1.511					0.905
Total (TG/Month)	25.591	25.643	23.372	25.637	30.345	36.431	35.855		34.344	34.344	31.582	30.091

Total Water Usage for the Year

333.235 MGY
1022.5936 ac-ft/year

City of Pineland Monthly Operating Reports 2000
 Thousand Gallons per Day

Day	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00
1	175	230	126	128	164	297			310		
2	175	171	136	153	147	198			310		
3	163	171	119	140	193	198			310		
4	219	183	132	92	167	198			310		
5	220	183	164	127	154	170			472		
6	162	183	114	132	154	330			436		
7	202	169	119	149	154	200			340		
8	202	268	130	135	240	205			252		
9	202	101	143	128	151	205			252		
10	176	202	124	128	182	160			252		
11	168	166	139	137	172	330			252		
12	173	166	133	114	172	330			252		
13	176	166	93	115	174	330			252		
14	176	174	153	134	174	154			190		
15	177	157	161	140	174	154			190		
16	177	168	116	144	174	154			262		
17	225	158	129	148	206	154			245		
18	189	353	132	146	206	154			162		
19	189	176	91	146	136	165			233		
20	160	176	160	140	192	165			196		
21	160	187	101	132	192	210			186		
22	160	183	117	162	155	195			182		
23	160	157	137	136	173	195			182		
24	176	171	212	137	173	190			182		
25	221	238	189	141	211	195			178		
26	167	169	134	120	224	195			602		
27	194	156	128	151	229	195			221		
28	246	183	127	122	182	195			204		
29	194	180	221	118	247	200			200		
30	179		124	147	186	200					
31	160		134		186						
Meter Reading at beginning of Month							78006	85207		1803	8879
Meter Reading at end of Month							84178	93398		8467	14123
Difference							6172	8191		6664	5244
Total											
(TG/Month)	5723	5345	4238	4042	5644	6221	6172	8191	7615	6664	5244
Total Water Usage for the Year			65099 TGY								
			65.099 MGY								
			199.7684 ac-ft/year								

G-M Water Supply Corporation Monthly Operating Reports 1999 (MGD)

Day	Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	0.538	0.604	0.552	0.432	0.581	0.575	0.576	0.729	0.762	0.640	0.564	0.584
2	0.538	0.656	0.534	0.517	0.581	0.504	0.620	0.729	0.685	0.692	0.516	0.589
3	0.538	0.631	0.456	0.517	0.581	0.532	0.699	0.723	0.684	0.692	0.540	0.607
4	0.538	0.513	0.428	0.517	0.479	0.579	0.699	0.653	0.706	0.693	0.543	0.595
5	0.589	0.574	0.429	0.517	0.462	0.665	0.699	0.696	0.706	0.711	0.568	0.595
6	0.544	0.619	0.459	0.434	0.521	0.665	0.700	0.749	0.707	0.713	0.580	0.595
7	0.523	0.619	0.459	0.445	0.518	0.665	0.534	0.811	0.686	0.622	0.581	0.573
8	0.586	0.619	0.460	0.475	0.619	0.588	0.554	0.811	0.658	0.588	0.580	0.604
9	0.611	0.551	0.445	0.493	0.619	0.610	0.545	0.811	0.613	0.588	0.590	0.604
10	0.611	0.589	0.481	0.544	0.619	0.570	0.535	0.793	0.650	0.588	0.601	0.580
11	0.611	0.549	0.384	0.544	0.462	0.523	0.536	0.750	0.686	0.591	0.618	0.595
12	0.596	0.570	0.433	0.544	0.471	0.544	0.536	0.825	0.686	0.589	0.612	0.596
13	0.613	0.581	0.459	0.487	0.458	0.544	0.468	0.866	0.686	0.581	0.623	0.596
14	0.607	0.582	0.459	0.500	0.487	0.544	0.468	0.867	0.653	0.556	0.625	0.632
15	0.528	0.581	0.459	0.441	0.529	0.518	0.546	0.867	0.652	0.546	0.624	0.591
16	0.508	0.590	0.473	0.401	0.529	0.525	0.537	0.867	0.699	0.587	0.658	0.589
17	0.508	0.556	0.493	0.468	0.492	0.539	0.583	0.894	0.625	0.587	0.637	0.503
18	0.509	0.550	0.442	0.468	0.482	0.566	0.583	0.899	0.624	0.586	0.724	0.547
19	0.548	0.562	0.510	0.468	0.519	0.693	0.583	0.808	0.624	0.492	0.652	0.546
20	0.506	0.555	0.524	0.573	0.555	0.693	0.546	1.051	0.624	0.435	0.660	0.547
21	0.442	0.556	0.524	0.520	0.606	0.693	0.545	0.810	0.716	0.578	0.660	0.618
22	0.439	0.555	0.524	0.508	0.607	0.626	0.536	0.810	0.705	0.551	0.597	0.547
23	0.462	0.793	0.493	0.520	0.606	0.531	0.550	0.810	0.703	0.609	0.590	0.575
24	0.462	0.555	0.453	0.589	0.606	0.485	0.639	0.913	0.680	0.609	0.552	0.570
25	0.463	0.536	0.474	0.589	0.656	0.485	0.640	0.788	0.753	0.609	0.617	0.570
26	0.439	0.536	0.437	0.589	0.492	0.493	0.640	0.857	0.754	0.541	0.617	0.570
27	0.473	0.536	0.498	0.557	0.480	0.493	0.699	0.899	0.753	0.574	0.617	0.570
28	0.448	0.536	0.498	0.481	0.483	0.495	0.578	0.899	0.788	0.580	0.617	0.597
29	0.406		0.497	0.562	0.575	0.493	0.659	0.899	0.802	0.570	0.617	0.549
30	0.604		0.486	0.579	0.575	0.614	0.711	0.879	0.679	0.564	0.608	0.575
31	0.604		0.527		0.575		0.729	0.810		0.565		
Total (MG/Month)	16.392	16.254	14.750	15.279	16.825	17.050	18.473	25.573	20.749	18.427	18.188	17.409
Total Water Usage for the Year	215.369 MGY 660.90079 ac-ft/year											

G-M Water Supply Corporation Monthly Operating Reports 2000 (MGD)

Day	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00
1	0.639	0.586	0.573	0.488	0.571	0.708	0.552	0.599	0.820	0.887
2	0.639	0.559	0.549	0.488	0.498	0.667	0.552	0.630	0.929	0.886
3	0.639	0.544	0.550	0.488	0.470	0.716	0.553	0.596	0.929	1.038
4	0.534	0.556	0.601	0.444	0.470	0.716	0.595	0.627	0.929	0.643
5	0.469	0.580	0.600	0.480	0.448	0.716	0.596	0.764	0.939	0.609
6	0.507	0.581	0.601	0.467	0.524	0.514	0.543	0.764	0.840	0.561
7	0.510	0.580	0.608	0.482	0.525	0.554	0.543	0.764	0.828	0.611
8	0.516	0.547	0.632	0.517	0.525	0.555	0.675	0.805	0.765	0.608
9	0.515	0.596	0.579	0.519	0.550	0.573	0.675	0.625	0.687	0.608
10	0.516	0.636	0.557	0.517	0.579	0.646	0.675	0.635	0.680	0.608
11	0.506	0.627	0.602	0.498	0.524	0.646	0.681	0.557	0.680	0.635
12	0.518	0.558	0.600	0.482	0.507	0.645	0.676	0.744	0.639	0.609
13	0.523	0.559	0.600	0.463	0.637	0.820	0.709	0.744	0.711	0.607
14	0.510	0.558	0.566	0.505	0.637	0.609	0.714	0.744	0.621	0.671
15	0.555	0.503	0.570	0.503	0.637	0.585	0.767	0.738	0.676	0.669
16	0.555	0.505	0.509	0.504	0.690	0.689	0.767	0.701	0.652	0.672
17	0.556	0.536	0.543	0.503	0.526	0.831	0.767	0.756	0.649	0.745
18	0.555	0.475	0.529	0.528	0.552	0.830	0.838	0.607	0.648	0.744
19	0.564	0.541	0.530	0.526	0.542	0.831	0.784	0.800	0.648	0.623
20	0.521	0.540	0.529	0.534	0.565	0.602	0.863	0.800	0.711	0.651
21	0.509	0.540	0.537	0.643	0.565	0.435	0.802	0.800	0.629	0.677
22	0.555	0.540	0.562	0.644	0.565	0.592	0.872	0.707	0.616	0.673
23	0.555	0.520	0.748	0.643	0.529	0.693	0.872	0.672	0.677	0.673
24	0.555	0.511	0.607	0.644	0.542	0.693	0.872	0.632	0.673	0.766
25	0.559	0.514	0.565	0.533	0.588	0.693	0.872	0.645	0.673	0.734
26	0.477	0.591	0.564	0.493	0.677	0.693	1.043	0.791	0.565	0.699
27	0.527	0.591	0.565	0.529	0.672	0.681	0.747	0.786	0.519	0.689
28	0.507	0.591	0.554	0.503	0.672	0.584	0.982	0.786	0.511	0.585
29	0.566	0.577	0.471	0.570	0.672	0.560	0.819	0.806	0.561	0.579
30	0.567		0.486	0.571	0.672	0.477	0.819	0.807	0.886	0.579
31	0.566		0.479		0.683		0.819	0.854		0.620

Total										
(MG/Month)	16.790	16.142	17.566	15.709	17.814	19.554	23.044	22.286	21.291	20.959

Total Water Usage for the Year 191.155 MGY
586.5947 ac-ft/year

Beechwood Water Supply Corporation Monthly Operating Reports 1998 (MGD)

Day	Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	0.156	0.050	0.000	0.000	0.100	0.169	0.457	0.234	0.060	0.059	0.047	0.040
2	0.062	0.055	0.069	0.000	0.070	0.179	0.041	0.239	0.050	0.070	0.058	0.044
3	0.126	0.053	0.075	0.186	0.000	0.303	0.205	0.128	0.050	0.060	0.043	0.045
4	0.000	0.000	0.116	0.000	0.177	0.114	0.184	0.171	0.050	0.061	0.063	0.151
5	0.165	0.056	0.000	0.159	0.037	0.185	0.224	0.185	0.350	0.153	0.049	0.000
6	0.000	0.000	0.004	0.000	0.125	0.000	0.246	0.166	0.249	0.028	0.078	0.000
7	0.060	0.048	0.000	0.000	0.000	0.204	0.250	0.036	0.152	0.054	0.079	0.043
8	0.059	0.000	0.125	0.000	0.177	0.000	0.192	0.095	0.096	0.056	0.012	0.043
9	0.000	0.156	0.159	0.329	0.000	0.181	0.246	0.080	0.101	0.037	0.040	0.037
10	0.085	0.069	0.000	0.121	0.095	0.112	0.235	0.000	0.055	0.059	0.046	0.036
11	0.037	0.000	0.000	0.213	0.111	0.085	0.179	0.105	0.053	0.052	0.048	0.140
12	0.027	0.092	0.000	0.000	0.180	0.123	0.173	0.010	0.077	0.080	0.049	0.000
13	0.140	0.046	0.154	0.075	0.144	0.098	0.221	0.062	0.155	0.035	0.048	0.000
14	0.000	0.160	0.205	0.000	0.000	0.123	0.000	0.076	0.155	0.042	0.049	0.020
15	0.045	0.000	0.000	0.132	0.121	0.159	0.082	0.095	0.063	0.053	0.043	0.000
16	0.179	0.268	0.085	0.138	0.000	0.195	0.229	0.069	0.085	0.025	0.010	0.047
17	0.000	0.092	0.000	0.000	0.000	0.163	0.088	0.079	0.057	0.018	0.021	0.043
18	0.000	0.013	0.000	0.000	0.000	0.102	0.225	0.039	0.000	0.104	0.022	0.052
19	0.010	0.000	0.136	0.120	0.151	0.084	0.238	0.107	0.085	0.045	0.089	0.100
20	0.000	0.172	0.089	0.000	0.095	0.140	0.420	0.078	0.063	0.057	0.051	0.000
21	0.000	0.000	0.151	0.171	0.235	0.184	0.050	0.082	0.039	0.043	0.051	0.044
22	0.055	0.000	0.000	0.000	0.183	0.152	0.050	0.102	0.000	0.042	0.052	0.051
23	0.076	0.173	0.000	0.130	0.208	0.208	0.223	0.165	0.019	0.110	0.041	0.155
24	0.000	0.261	0.199	0.230	0.260	0.173	0.207	0.030	0.364	0.025	0.041	0.000
25	0.000	0.000	0.000	0.000	0.150	0.144	0.233	0.198	0.041	0.045	0.041	0.000
26	0.105	0.150	0.186	0.000	0.140	0.160	0.073	0.000	0.113	0.041	0.043	0.155
27	0.000	0.091	0.000	0.000	0.187	0.009	0.106	0.104	0.103	0.041	0.079	0.000
28	0.034	0.000	0.203	0.230	0.187	0.197	0.129	0.126	0.053	0.062	0.045	0.171
29	0.001		0.000	0.093	0.189	0.197	0.056	0.193	0.074	0.048	0.051	0.049
30	0.123		0.000	0.017		0.199	0.114	0.020	0.074	0.057	0.043	0.060
31			0.196				0.230	0.063		0.033		0.040
Total (MG/Month)	1.544	2.003	2.154	2.344	3.323	4.338	5.604	3.136	2.886	1.695	1.432	1.566

Total Water Usage for the Year

32.026 MGY
98.276624 ac-ft/year

Beechwood Water Supply Corporation Monthly Operating Reports 1999 (MGD)

Day	Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	0.000	0.042	0.000	0.105	0.079	0.044	0.040	0.068	0.050	0.081	0.048	0.046
2	0.111	0.048	0.055	0.048	0.101	0.055	0.139	0.088	0.066	0.082	0.041	0.044
3	0.000	0.044	0.042	0.121	0.088	0.050	0.150	0.077	0.071	0.090	0.037	0.057
4	0.050	0.000	0.050	0.028	0.027	0.088	0.150	0.088	0.123	0.087	0.047	0.120
5	0.053	0.161	0.040	0.054	0.077	0.081	0.102	0.102	0.130	0.094	0.067	0.051
6	0.056	0.093	0.030	0.055	0.045	0.067	0.050	0.114	0.093	0.066	0.059	0.051
7	0.034	0.000	0.000	0.067	0.045	0.051	0.051	0.132	0.093	0.110	0.037	0.073
8	0.050	0.000	0.148	0.062	0.115	0.060	0.059	0.100	0.070	0.095	0.065	0.057
9	0.069	0.039	0.046	0.060	0.064	0.060	0.050	0.112	0.057	0.102	0.039	0.071
10	0.000	0.000	0.080	0.057	0.054	0.056	0.072	0.090	0.082	0.075	0.051	0.079
11	0.069	0.000	0.000	0.090	0.054	0.064	0.091	0.080	0.100	0.085	0.019	0.107
12	0.042	0.039	0.104	0.064	0.058	0.062	0.050	0.096	0.040	0.085	0.074	0.066
13	0.052	0.000	0.000	0.088	0.058	0.059	0.034	0.120	0.060	0.073	0.058	0.079
14	0.042	0.000	0.000	0.096	0.147	0.056	0.048	0.167	0.052	0.058	0.053	0.079
15	0.049	0.210	0.188	0.056	0.115	0.050	0.050	0.109	0.052	0.052	0.070	0.084
16	0.049	0.047	0.065	0.068	0.123	0.053	0.062	0.097	0.137	0.057	0.027	0.059
17	0.049	0.049	0.080	0.069	0.000	0.076	0.046	0.102	0.072	0.048	0.054	0.076
18	0.049	0.057	0.134	0.053	0.063	0.068	0.058	0.125	0.106	0.056	0.053	0.084
19	0.079	0.091	0.130	0.060	0.063	0.062	0.055	0.110	0.069	0.063	0.052	0.049
20	0.000	0.000	0.141	0.068	0.127	0.089	0.073	0.139	0.126	0.125	0.067	0.102
21	0.000	0.119	0.140	0.065	0.000	0.076	0.085	0.113	0.082	0.180	0.059	0.044
22	0.155	0.000	0.136	0.066	0.115	0.050	0.063	0.169	0.090	0.198	0.044	0.080
23	0.230	0.111	0.114	0.082	0.071	0.050	0.063	0.097	0.114	0.064	0.063	0.076
24	0.031	0.000	0.076	0.093	0.072	0.048	0.093	0.098	0.138	0.059	0.044	0.078
25	0.029	0.097	0.060	0.140	0.041	0.068	0.087	0.171	0.117	0.131	0.060	0.069
26	0.029	0.098	0.077	0.000	0.036	0.078	0.069	0.084	0.099	0.079	0.057	0.073
27	0.031	0.000	0.000	0.120	0.064	0.035	0.080	0.135	0.097	0.056	0.075	0.077
28	0.031	0.095	0.107	0.000	0.068	0.057	0.086	0.166	0.177	0.061	0.063	0.083
29	0.000		0.000	0.069	0.129	0.059	0.076	0.106	0.159	0.064	0.050	0.070
30	0.000		0.098	0.076	0.095	0.058	0.091	0.121	0.150	0.050	0.044	0.099
31	0.000		0.000		0.024		0.157	0.084		0.048		0.092
Total (MG/Month)	1.439	1.440	2.141	2.080	2.218	1.830	2.380	3.460	2.872	2.574	1.577	2.275

Total Water Usage for the Year

26.286 MGY
80.664801 ac-ft/year

Beechwood Water Supply Corporation Monthly Operating Reports 2000 (MGD)

Day	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00
1	0.080		0.055	0.054	0.067	0.072	0.065	0.066	0.204	0.080
2	0.090		0.054	0.070	0.031	0.061	0.096	0.084	0.251	0.069
3	0.087		0.057	0.059	0.030	0.074	0.091	0.105	0.196	0.074
4	0.048		0.063	0.045	0.042	0.053	0.089	0.240	0.190	0.068
5	0.063		0.061	0.048	0.048	0.050	0.040	0.130	0.097	0.080
6	0.066		0.067	0.052	0.067	0.051	0.067	0.038	0.078	0.064
7	0.069		0.063	0.051	0.030	0.070	0.067	0.096	0.089	0.051
8	0.047		0.065	0.079	0.061	0.094	0.079	0.092	0.057	0.057
9	0.080		0.061	0.048	0.031	0.080	0.081	0.121	0.095	0.097
10	0.069		0.050	0.041	0.044	0.046	0.096	0.134	0.056	0.083
11	0.058		0.064	0.050	0.060	0.044	0.080	0.119	0.076	0.079
12	0.063		0.057	0.041	0.080	0.064	0.083	0.175	0.043	0.075
13	0.068		0.059	0.047	0.047	0.049	0.026	0.138	0.040	0.088
14	0.074		0.057	0.054	0.042	0.062	0.119	0.131	0.066	0.081
15	0.080		0.060	0.044	0.046	0.089	0.096	0.115	0.102	0.100
16	0.072		0.112	0.053	0.055	0.080	0.085	0.130	0.090	0.075
17	0.074		0.066	0.092	0.044	0.065	0.095	0.110	0.067	0.085
18	0.060		0.080	0.046	0.047	0.061	0.089	0.175	0.075	0.063
19	0.083		0.065	0.056	0.077	0.053	0.092	0.176	0.078	0.052
20	0.057		0.077	0.059	0.060	0.045	0.104	0.109	0.060	0.099
21	0.070		0.064	0.099	0.045	0.059	0.146	0.083	0.049	0.093
22	0.074		0.054	0.133	0.043	0.062	0.114	0.071	0.053	0.044
23	0.080		0.065	0.044	0.048	0.074	0.104	0.068	0.070	0.058
24	0.056		0.081	0.052	0.085	0.068	0.098	0.117	0.070	0.056
25	0.063		0.073	0.085	0.069	0.087	0.096	0.117	0.064	0.056
26	0.078		0.051	0.073	0.105	0.083	0.125	0.125	0.061	0.055
27	0.053		0.080	0.038	0.158	0.030	0.106	0.151	0.040	0.070
28	0.000		0.044	0.077	0.122	0.073	0.145	0.108	0.103	0.075
29	0.067		0.048	0.051	0.110	0.054	0.098	0.087	0.085	0.075
30	0.030		0.048	0.042	0.064	0.065	0.091	0.080	0.088	0.074
31	0.074		0.055		0.107		0.052	0.091		0.068
Total (MG/Month)	2.033		1.956	1.783	1.965	1.918	2.815	3.582	2.693	2.244

Total Water Usage for the Year
 20.989 MGY
 64.409881 ac-ft/year

South Sabine Water Supply Corporation Monthly Operating Reports 1998
 Thousand Gallons per Day

Day	Jan-98	Feb-98	Mar-98	Apr-98	May-98	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98
1	40	52	55	46	40	179	124	134	64	229	49	59
2	40	50	40	37	40	135	104	200	87	133	49	51
3	55	24	40	52	126	132	170	208	78	98	43	45
4	50	41	36	60	40	125	170	190	105	87	49	51
5	46	40	42	74	60	131	160	150	152	100	55	52
6	22	45	40	63	85	73	198	125	170	93	47	50
7	20	50	40	42	58	80	117	89	209	96	53	40
8	17	45	40	59	75	83	146	92	124	82	51	45
9	20	38	60	57	92	84	144	100	102	94	66	40
10	25	24	75	73	89	55	166	103	210	87	71	41
11	57	28	70	80	100	100	165	82	90	112	39	41
12	37	32	22	103	73	109	200	101	69	112	44	40
13	40	50	40	100	82	153	203	94	70	111	48	58
14	20	42	43	80	82	150	91	83	74	81	61	58
15	46	50	50	58	72	150	100	70	80	102	118	43
16	34	49	62	61	105	112	95	74	60	110	57	41
17	46	36	38	44	100	100	80	85	79	52	45	53
18	48	30	56	43	128	144	137	86	99	80	43	43
19	46	37	44	49	114	134	200	80	60	100	46	43
20	30	34	87	48	65	150	153	102	60	79	49	61
21	36	44	63	33	102	175	142	120	117	74	34	58
22	38	49	45	50	97	175	135	107	80	43	59	42
23	21	43	60	57	132	92	132	100	80	48	59	45
24	37	34	45	50	210	108	118	95	30	56	48	63
25	20	44	53	70	200	120	200	84	8	60	41	66
26	39	15	57	73	139	120	140	81	14	60	60	41
27	38	45	41	81	79	120	106	109	25	34	52	55
28	27	45	61	54	80	125	97	85	242	58	80	59
29	40		77	38	142	63	108	140	100	49	80	43
30	34		40	38	112	108	162	120	223	61	44	56
31	40		65		160		133	125		54		52
Total (TG/Month)	1109	1116	1587	1773	3079	3585	4396	3414	2961	2635	1640	1535

Total Water Usage for the Year
 28830 TGY
 28.83 MGY
 88.470222 ac-ft/year

South Sabine Water Supply Corporation Monthly Operating Reports 1999
 Thousand Gallons per Day

Day	Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99
1	67	60	46	40	75	81	60	127	81	50	51	50
2	67	45	49	70	95	60	76	91	63	60	41	50
3	70	40	50	77	47	60	136	95	73	71	50	60
4	67	49	60	84	54	52	140	90	86	107	40	60
5	42	59	45	64	55	95	134	100	100	60	40	50
6	43	40	47	53	63	99	82	151	100	68	62	70
7	53	60	60	44	71	100	71	144	80	70	69	50
8	68	65	79	48	99	58	58	200	74	43	72	30
9	43	53	62	49	100	64	48	129	50	50	42	44
10	52	33	63	70	100	70	60	124	45	60	60	38
11	64	43	47	72	52	59	80	140	63	66	70	42
12	64	47	44	70	41	60	71	127	80	47	49	52
13	41	45	70	76	54	80	58	113	69	73	27	50
14	58	78	61	54	54	55	62	215	70	151	65	39
15	42	64	45	54	45	55	68	213	65	275	85	28
16	60	45	62	45	73	56	53	133	72	332	53	43
17	60	43	72	80	79	43	61	140	74	280	70	45
18	65	55	68	59	74	70	63	135	130	102	45	55
19	69	40	50	52	132	75	37	141	144	45	67	43
20	53	49	85	70	79	110	57	129	85	57	72	43
21	68	66	70	45	76	95	53	135	74	50	65	31
22	52	67	54	70	80	95	60	135	80	48	65	55
23	50	40	84	65	70	250	45	200	61	70	41	35
24	62	46	48	70	77	112	70	216	100	80	54	50
25	55	47	49	70	80	61	50	136	103	70	59	50
26	51	87	56	91	76	52	87	150	100	42	52	50
27	45	64	47	58	64	50	184	134	122	74	77	60
28	62	69	65	43	63	66	86	118	102	66	77	24
29	43		52	61	73	66	80	160	61	64	50	163
30	61		61	61	90	50	100	175	47	67	55	198
31	45		42		100		100	120		54		50
Total (TG/Month)	1742	1499	1793	1865	2291	2299	2390	4416	2454	2752	1725	1708

Total Water Usage for the Year
 26934 TGY
 26.934 MGY
 82.651993 ac-ft/year

South Sabine Water Supply Corporation Monthly Operating Reports 2000
 Thousand Gallons per Day

Day	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00
1	50	44	48	81	90	95	90	62	140	100	83
2	68	50	52	49	55	115	80	85	195	110	62
3	80	30	48	63	30	140	95	110	245	80	60
4	73	40	90	38	50	120	90	100	225	80	60
5	42	50	88	59	40	70	95	133	205	100	70
6	40	60	76	47	55	65	63	157	140	75	60
7	45	60	73	73	45	50	57	120	100	55	60
8	40	50	67	46	60	60	95	120	80	70	55
9	45	44	79	59	56	80	91	100	80	45	45
10	50	42	69	70	79	56	123	105	100	65	70
11	38	42	71	55	65	74	81	120	80	40	60
12	66	53	77	40	70	80	104	160	85	65	55
13	43	79	69	35	80	100	91	195	70	50	65
14	38	0	58	32	58	95	120	165	85	85	40
15	65	41	55	56	64	50	115	110	85	65	60
16	55	37	57	65	63	51	155	136	100	80	40
17	70	50	69	55	65	55	120	114	105	50	45
18	47	68	40	50	60	74	132	125	80	45	65
19	63	60	84	70	65	65	128	150	80	60	50
20	50	65	80	54	64	60	135	205	90	75	60
21	44	75	46	78	64	55	130	150	60	111	65
22	53	72	54	122	55	55	201	135	55	84	50
23	50	44	48	122	77	65	215	100	60	80	65
24	68	55	67	68	75	100	189	100	70	45	80
25	66	57	61	58	90	110	125	115	75	75	75
26	71	70	79	53	85	115	105	130	55	60	75
27	49	60	52	57	140	85	105	170	190	70	80
28	66	52	43	56	150	60	135	135	235	90	50
29	44	40	48	65	155	60	156	130	70	80	45
30	39		46	99	116	55	190	135	80	85	65
31	40		56		114		162	100		70	
Total (TG/Month)	1658	1490	1950	1875	2335	2315	3773	3972	3320	2245	1815

Total Water Usage for the Year
 26748 TGY
 26.748 MGY
 82.081217 ac-ft/year

El Camino Water Supply Corporation Monthly Operating Reports 1999 (MGD)

Date	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00
1	0.015	0.009	0.011	0.008	0.014	0.020	0.012	0.016	0.038	0.019	0.022
2	0.011	0.010	0.012	0.009	0.009	0.020	0.015	0.026	0.029	0.021	0.018
3	0.017	0.010	0.015	0.010	0.007	0.020	0.013	0.017	0.045	0.021	0.010
4	0.016	0.009	0.012	0.008	0.008	0.018	0.013	0.035	0.039	0.022	0.013
5	0.010	0.009	0.016	0.007	0.009	0.011	0.011	0.024	0.031	0.027	0.012
6	0.010	0.009	0.018	0.009	0.008	0.008	0.014	0.024	0.034	0.013	0.012
7	0.010	0.011	0.013	0.009	0.010	0.009	0.012	0.028	0.022	0.009	0.011
8	0.010	0.011	0.013	0.011	0.014	0.020	0.014	0.025	0.021	0.009	0.010
9	0.010	0.013	0.013	0.011	0.010	0.014	0.011	0.026	0.017	0.011	0.011
10	0.011	0.014	0.014	0.011	0.010	0.011	0.013	0.043	0.015	0.011	0.012
11	0.010	0.012	0.016	0.010	0.008	0.013	0.011	0.034	0.022	0.011	0.011
12	0.010	0.014	0.010	0.010	0.012	0.017	0.017	0.020	0.014	0.014	0.011
13	0.012	0.011	0.011	0.008	0.012	0.019	0.017	0.013	0.015	0.014	0.011
14	0.011	0.010	0.011	0.009	0.009	0.018	0.027	0.020	0.007	0.013	0.011
15	0.010	0.008	0.009	0.009	0.012	0.018	0.029	0.025	0.012	0.014	0.010
16	0.012	0.010	0.010	0.010	0.013	0.015	0.031	0.017	0.015	0.014	0.010
17	0.015	0.011	0.011	0.010	0.014	0.015	0.028	0.019	0.021	0.013	0.011
18	0.015	0.016	0.011	0.010	0.017	0.013	0.033	0.029	0.026	0.010	0.010
19	0.017	0.018	0.011	0.012	0.022	0.010	0.020	0.032	0.030	0.013	0.010
20	0.012	0.011	0.011	0.015	0.013	0.008	0.024	0.030	0.018	0.016	0.010
21	0.012	0.015	0.010	0.025	0.010	0.008	0.037	0.025	0.014	0.016	0.012
22	0.010	0.014	0.009	0.019	0.010	0.008	0.030	0.026	0.011	0.016	0.013
23	0.013	0.017	0.010	0.021	0.010	0.010	0.028	0.024	0.014	0.016	0.013
24	0.013	0.013	0.011	0.018	0.012	0.011	0.034	0.021	0.021	0.013	0.015
25	0.010	0.014	0.011	0.011	0.013	0.012	0.035	0.023	0.014	0.021	0.014
26	0.011	0.017	0.013	0.009	0.014	0.015	0.031	0.031	0.009	0.020	0.015
27	0.010	0.012	0.010	0.011	0.020	0.016	0.022	0.029	0.013	0.024	0.011
28	0.010	0.011	0.009	0.009	0.025	0.010	0.030	0.025	0.018	0.013	0.011
29	0.010	0.011	0.011	0.011	0.022	0.008	0.026	0.041	0.029	0.012	0.009
30	0.009		0.008	0.013	0.020	0.010	0.027	0.027	0.018	0.024	0.009
31	0.009		0.009		0.014		0.011	0.040		0.035	
Total (MG/Month)	0.361	0.350	0.359	0.343	0.401	0.405	0.676	0.815	0.632	0.505	0.358

Total Water Usage for the Year

5.205 MGY
15.972511 ac-ft/year

Proposed Sanitary Sewer System Modeling for Existing Beechwood/South Sabine

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		MH-1		3600	47.38	0.19	0.0000	3	0.05	3.86	3.86	0.19
2	MH-1	215.0	WW-1	205.0	6050	84.93	0.11	0.0017	6	0.20	0.54	1.16	0.23
FM	LS-2		WW-1		1200	4.62	0.01	0.0000	2	0.02	0.47	0.47	0.01
FM	LS-3		WW-1		2930	146.75	0.33	0.0000	3	0.05	6.66	6.66	0.33
FM	LS-4		MH-2		4580	16.76	0.04	0.0000	2	0.02	1.71	1.71	0.04
3	MH-2	240.0	MH-3	210.0	1050	16.76	0.04	0.0286	2	0.02	1.71	2.33	0.05
4	MH-3	210.0	LS-3	182.0	2280	65.87	0.15	0.0123	4	0.09	1.68	2.42	0.21
FM	LS-5		MH-3		3100	49.11	0.11	0.0000	2	0.02	5.02	5.02	0.11
FM	LS-6		LS-5		6200	35.24	0.08	0.0000	2	0.02	3.60	3.60	0.08
FM	LS-7		MH-4		3000	7.51	0.02	0.0000	2	0.02	0.77	0.77	0.02
5	MH-4	240.0	LS-6	200.0	1200	7.51	0.02	0.0333	2	0.02	0.77	2.51	0.05
FM	LS-8		LS-6		4570	16.18	0.04	0.0000	2	0.02	1.65	1.65	0.04
FM	LS-9		MH-5		1800	6.36	0.01	0.0000	2	0.02	0.65	0.65	0.01
6	MH-5	240.0	LS-8	210.0	900	6.36	0.01	0.0333	2	0.02	0.65	2.51	0.01
FM	LS-10		LS-8		900	9.82	0.02	0.0000	2	0.02	1.00	1.00	0.02
FM	LS-11		LS-3		3500	75.69	0.17	0.0000	3	0.05	3.44	3.44	0.17
FM	LS-12		LS-11		3560	65.29	0.15	0.0000	2	0.02	6.67	6.67	0.15
FM	LS-13		LS-12		2220	17.33	0.04	0.0000	2	0.02	1.77	1.77	0.04
FM	LS-14		LS-12		3500	10.98	0.02	0.0000	2	0.02	1.12	1.12	0.02
FM	LS-15		LS-12		7100	32.93	0.07	0.0000	2	0.02	3.37	3.37	0.07
FM	LS-16		MH-6		3410	12.13	0.03	0.0000	2	0.02	1.24	1.24	0.03
6	MH-6	250.0	WW-2	195.0	3680	73.38	0.16	0.0149	4	0.09	1.87	2.67	0.23
FM	LS-17		MH-6		1850	24.27	0.05	0.0000	2	0.02	2.48	2.48	0.05
FM	LS-18		MH-6		1950	20.80	0.05	0.0000	2	0.02	2.13	2.13	0.05
7	MH-7	280.0	WW-2	195.0	2800	33.51	0.07	0.0304	2.5	0.03	2.19	2.78	0.09
FM	LS-19		MH-5		3050	17.91	0.04	0.0000	2	0.02	1.83	1.83	0.04
FM	LS-20		LS-21		1800	6.93	0.02	0.0000	2	0.02	0.71	0.71	0.02
FM	LS-21		MH-7		2520	9.81	0.02	0.0000	2	0.02	1.00	1.00	0.02

Proposed Sanitary Sewer System Modeling for 2050 Beechwood/South Sabine

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		MH-1		3600	63.4	0.25	0.0000	3	0.05	5.16	5.16	0.25
2	MH-1	215.0	WW-1	205.0	6050	113.7	0.14	0.0017	3	0.05	2.88	0.73	0.04
FM	LS-2		WW-1		1200	6.2	0.01	0.0000	2	0.02	0.63	0.63	0.01
FM	LS-3		WW-1		2930	196.4	0.44	0.0000	4	0.09	5.02	5.02	0.44
FM	LS-4		MH-2		4580	22.4	0.05	0.0000	2	0.02	2.29	2.29	0.05
3	MH-2	240.0	MH-3	210.0	1050	22.4	0.05	0.0286	2	0.02	2.29	2.33	0.05
4	MH-3	210.0	LS-3	182.0	2280	88.1	0.20	0.0123	4	0.09	2.25	2.42	0.21
FM	LS-5		MH-3		3100	65.7	0.15	0.0000	2	0.02	6.72	6.72	0.15
FM	LS-6		LS-5		6200	47.2	0.11	0.0000	2	0.02	4.82	4.82	0.11
FM	LS-7		MH-4		3000	10.1	0.02	0.0000	2	0.02	1.03	1.03	0.02
5	MH-4	240.0	LS-6	200.0	1200	10.1	0.02	0.0333	2	0.02	1.03	2.51	0.05
FM	LS-8		LS-6		4570	21.6	0.05	0.0000	2	0.02	2.21	2.21	0.05
FM	LS-9		MH-5		1800	8.5	0.02	0.0000	2	0.02	0.87	0.87	0.02
6	MH-5	240.0	LS-8	210.0	900	8.5	0.02	0.0333	2	0.02	0.87	0.87	0.02
FM	LS-10		LS-8		900	13.1	0.03	0.0000	2	0.02	1.34	1.34	0.03
FM	LS-11		LS-3		3500	101.3	0.23	0.0000	3	0.05	4.60	4.60	0.23
FM	LS-12		LS-11		3560	87.4	0.19	0.0000	3	0.05	3.97	3.97	0.19
FM	LS-13		LS-12		2220	23.2	0.05	0.0000	2	0.02	2.37	2.37	0.05
FM	LS-14		LS-12		3500	14.7	0.03	0.0000	2	0.02	1.50	1.50	0.03
FM	LS-15		LS-12		7100	44.1	0.10	0.0000	2	0.02	4.50	4.50	0.10
FM	LS-16		MH-6		3410	16.2	0.04	0.0000	2	0.02	1.66	1.66	0.04
6	MH-6	250.0	WW-2	195.0	3680	98.2	0.22	0.0149	4	0.09	2.51	2.67	0.23
FM	LS-17		MH-6		1850	32.5	0.07	0.0000	2	0.02	3.32	3.32	0.07
FM	LS-18		MH-6		1950	27.8	0.06	0.0000	2	0.02	2.84	2.84	0.06
7	MH-7	280.0	WW-2	195.0	2800	44.8	0.10	0.0304	3	0.05	2.04	3.14	0.15
FM	LS-19		MH-5		3050	24.0	0.05	0.0000	2	0.02	2.45	2.45	0.05
FM	LS-20		LS-21		1800	9.3	0.02	0.0000	2	0.02	0.95	0.95	0.02
FM	LS-21		MH-7		2520	13.1	0.03	0.0000	2	0.02	1.34	1.34	0.03

Proposed Sanitary Sewer System Modeling for Existing Timberlane

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		5600	15.02	0.03	0.0000	2	0.02	1.54	1.54	0.03
FM	LS-2		MH-1		1920	20.80	0.05	0.0000	2	0.02	2.13	2.13	0.05
FM	LS-3		MH-1		10820	16.76	0.04	0.0000	2	0.02	1.71	1.71	0.04
1	MH-1	265.0	WW-1	200.0	3640	37.56	0.08	0.0179	3	0.05	1.71	2.41	0.12
FM	LS-4		LS-5		4240	31.78	0.07	0.0000	2	0.02	3.25	3.25	0.07
FM	LS-5		WW-1		2730	41.02	0.09	0.0000	2	0.02	4.19	4.19	0.09
FM	LS-6		LS-7		3700	11.56	0.03	0.0000	2	0.02	1.18	1.18	0.03
FM	LS-7		WW-1		1440	68.76	0.15	0.0000	3	0.05	3.12	3.12	0.15
FM	LS-8		LS-9		4470	13.87	0.03	0.0000	2	0.02	1.42	1.42	0.03
FM	LS-9		LS-12		6980	23.11	0.05	0.0000	2	0.02	2.36	2.36	0.05
FM	LS-10		LS-11		1890	14.44	0.03	0.0000	2	0.02	1.48	1.48	0.03
FM	LS-11		LS-12		3460	38.71	0.09	0.0000	2	0.02	3.96	3.96	0.09
FM	LS-12		WW-2		3720	61.82	0.14	0.0000	2	0.02	6.32	6.32	0.14
FM	LS-13		WW-2		7470	20.80	0.05	0.0000	2	0.02	2.13	2.13	0.05
FM	LS-14		WW-2		6270	5.20	0.01	0.0000	2	0.02	0.53	0.53	0.01
FM	LS-15		WW-2		2900	6.93	0.02	0.0000	2	0.02	0.71	0.71	0.02

Proposed Sanitary Sewer System Modeling for 2050 Timberlane

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		5600	20.3	0.05	0.0000	2	0.02	2.07	2.07	0.05
FM	LS-2		MH-1		1920	28.1	0.06	0.0000	2	0.02	2.87	2.87	0.06
FM	LS-3		MH-1		10820	22.6	0.05	0.0000	2	0.02	2.31	2.31	0.05
1	MH-1	265.0	WW-1	200.0	3640	50.7	0.11	0.0179	3	0.05	2.30	2.41	0.12
FM	LS-4		LS-5		4240	42.9	0.10	0.0000	2	0.02	4.39	4.39	0.10
FM	LS-5		WW-1		2730	55.4	0.12	0.0000	2	0.02	5.66	5.66	0.12
FM	LS-6		LS-7		3700	15.6	0.03	0.0000	2	0.02	1.60	1.60	0.03
FM	LS-7		WW-1		1440	92.9	0.21	0.0000	3	0.05	4.22	4.22	0.21
FM	LS-8		LS-9		4470	18.7	0.04	0.0000	2	0.02	1.91	1.91	0.04
FM	LS-9		LS-12		6980	31.2	0.07	0.0000	2	0.02	3.19	3.19	0.07
FM	LS-10		LS-11		1890	19.5	0.04	0.0000	2	0.02	1.99	1.99	0.04
FM	LS-11		LS-12		3460	52.3	0.12	0.0000	2	0.02	5.34	5.34	0.12
FM	LS-12		WW-2		3720	83.5	0.19	0.0000	3	0.05	3.79	3.79	0.19
FM	LS-13		WW-2		7470	28.1	0.06	0.0000	2	0.02	2.87	2.87	0.06
FM	LS-14		WW-2		6270	7.0	0.02	0.0000	2	0.02	0.72	0.72	0.02
FM	LS-15		WW-2		2900	9.4	0.02	0.0000	2	0.02	0.96	0.96	0.02

Proposed Sanitary Sewer System Modeling for Existing El Camino

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		8040	4.62	0.01	0.0000	2	0.02	0.47	0.47	0.01
FM	LS-2		LS-4		7030	4.62	0.01	0.0000	2	0.02	0.47	0.47	0.01
FM	LS-3		LS-4		2100	6.36	0.01	0.0000	2	0.02	0.65	0.65	0.01
FM	LS-4		LS-6		5380	10.98	0.02	0.0000	2	0.02	1.12	1.12	0.02
FM	LS-5		LS-6		3220	2.31	0.01	0.0000	2	0.02	0.24	0.24	0.01
FM	LS-6		LS-9		1380	19.07	0.04	0.0000	2	0.02	1.95	1.95	0.04
FM	LS-7		LS-9		2330	6.36	0.01	0.0000	2	0.02	0.65	0.65	0.01
FM	LS-8		LS-9		3300	31.78	0.07	0.0000	2	0.02	3.25	3.25	0.07
FM	LS-9		MH-1		1050	76.84	0.17	0.0000	2.5	0.03	5.03	5.03	0.17
1	MH-1	240.0	WW-1	175.0	1490	141.56	0.32	0.0438	4	0.09	3.62	4.56	0.40
FM	LS-10		MH-2		2550	35.24	0.08	0.0000	2	0.02	3.60	3.60	0.08
2	MH-2	220.0	WW-2	183.0	2100	61.24	0.14	0.0170	4	0.09	1.56	2.90	0.25
3	MH-3	280.0	LS-11	175.0	8580	9.24	0.02	0.0122	2	0.02	0.94	1.52	0.03
FM	LS-11		MH-4		2030	18.48	0.04	0.0000	2	0.02	1.89	1.89	0.04
4	MH-4	190.0	WW-3	170.0	2250	57.77	0.13	0.0089	4	0.09	1.48	2.06	0.18
FM	LS-12		LS-13		2890	4.91	0.01	0.0000	2	0.02	0.50	0.50	0.01
FM	LS-13		MH-5		2250	24.55	0.05	0.0000	2	0.02	2.51	2.51	0.05
5	MH-5	240.0	MH-6	225.0	8550	24.55	0.05	0.0018	4	0.09	0.63	0.92	0.08
FM	LS-14		LS-16		6450	14.44	0.03	0.0000	2	0.02	1.48	1.48	0.03
FM	LS-15		LS-16		1800	8.09	0.02	0.0000	2	0.02	0.83	0.83	0.02
FM	LS-16		MH-6		1500	22.53	0.05	0.0000	2	0.02	2.30	2.30	0.05
6	MH-6	225.0	WW-4	175.0	4650	47.08	0.10	0.0108	4	0.09	1.20	2.27	0.20

Proposed Sanitary Sewer System Modeling for 2050 El Camino

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		8040	6	0.01	0.0000	2	0.02	0.63	0.63	0.01
FM	LS-2		LS-4		7030	6.2	0.01	0.0000	2	0.02	0.63	0.63	0.01
FM	LS-3		LS-4		2100	8.5	0.02	0.0000	2	0.02	0.87	0.87	0.02
FM	LS-4		LS-6		5380	14.7	0.03	0.0000	2	0.02	1.50	1.50	0.03
FM	LS-5		LS-6		3220	3.1	0.01	0.0000	2	0.02	0.32	0.32	0.01
FM	LS-6		LS-9		1380	25.5	0.06	0.0000	2	0.02	2.61	2.61	0.06
FM	LS-7		LS-9		2330	8.5	0.02	0.0000	2	0.02	0.87	0.87	0.02
FM	LS-8		LS-9		3300	42.5	0.09	0.0000	2	0.02	4.35	4.35	0.09
FM	LS-9		MH-1		1050	102.8	0.23	0.0000	3	0.05	4.67	4.67	0.23
1	MH-1	240.0	WW-1	175.0	1490	189.4	0.42	0.0436	6	0.20	2.15	5.98	1.17
FM	LS-10		MH-2		2550	47.2	0.11	0.0000	2	0.02	4.82	4.82	0.11
2	MH-2	220.0	WW-2	183.0	2100	82.0	0.18	0.0176	4	0.09	2.09	2.90	0.25
3	MH-3	280.0	LS-11	175.0	8580	12.4	0.03	0.0122	2	0.02	1.26	1.52	0.03
FM	LS-11		MH-4		2030	24.7	0.06	0.0000	2	0.02	2.53	2.53	0.06
4	MH-4	190.0	WW-3	170.0	2250	77.3	0.17	0.0089	4	0.09	1.97	2.06	0.18
FM	LS-12		LS-13		2890	6.6	0.01	0.0000	2	0.02	0.67	0.67	0.01
FM	LS-13		MH-5		2250	32.9	0.07	0.0000	2	0.02	3.36	3.36	0.07
5	MH-5	240.0	MH-6	225.0	8550	32.9	0.07	0.0016	4	0.09	0.84	0.92	0.08
FM	LS-14		LS-15		3450	19.3	0.04	0.0000	2	0.02	1.97	1.97	0.04
FM	LS-15		LS-16		1800	10.8	0.02	0.0000	2	0.02	1.11	1.11	0.02
FM	LS-15		MH-6		3150	30.2	0.07	0.0000	2	0.02	3.08	3.08	0.07
6	MH-6	225.0	WW-4	175.0	4650	63.0	0.14	0.0108	4	0.09	1.61	2.27	0.20

Proposed Sanitary Sewer System Modeling for Existing Midlake

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		12320	4.04	0.01	0.0000	2	0.02	0.41	0.41	0.01
FM	LS-2		LS-3		9190	9.24	0.02	0.0000	2	0.02	0.94	0.94	0.02
FM	LS-3		LS-4		6100	35.24	0.08	0.0000	2	0.02	3.60	3.60	0.08
FM	LS-4		MH-1		9600	40.44	0.09	0.0000	2	0.02	4.13	4.13	0.09
1	MH-1	265.0	WW-1	190.0	7960	40.44	0.09	0.0094	4	0.09	1.03	2.12	0.18
FM	LS-5		WW-1		7500	15.02	0.03	0.0000	2	0.02	1.54	1.54	0.03
FM	LS-6		MH-2		2700	75.11	0.17	0.0000	3	0.05	3.41	3.41	0.17
2	MH-2	210.0	WW-1	190.0	2080	112.09	0.25	0.0096	6	0.20	1.27	2.81	0.55

Proposed Sanitary Sewer System Modeling for 2050 Midlake

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		LS-2		12320	5	0.01	0.0000	2	0.02	0.55	0.55	0.01
FM	LS-2		LS-3		9190	12.4	0.03	0.0000	2	0.02	1.26	1.26	0.03
FM	LS-3		LS-4		6100	47.2	0.11	0.0000	2	0.02	4.82	4.82	0.11
FM	LS-4		MH-1		9600	54.1	0.12	0.0000	2	0.02	5.53	5.53	0.12
1	MH-1	265.0	WW-1	190.0	7960	54.1	0.12	0.0094	4	0.09	1.38	2.12	0.18
FM	LS-5		WW-1		7500	20.1	0.04	0.0000	2	0.02	2.05	2.05	0.04
FM	LS-6		MH-2		2700	100.5	0.22	0.0000	3	0.05	4.56	4.56	0.22
2	MH-2	210.0	WW-1	190.0	2080	150.0	0.33	0.0096	6	0.20	1.70	2.81	0.55

Proposed Sanitary Sewer System Modeling for Existing North

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		MH-1		2900	10.98	0.02	0.0000	2	0.02	1.12	1.12	0.02
1	MH-1	260.0	LS-2	220.0	2780	10.98	0.02	0.0144	2	0.02	1.12	1.65	0.02
FM	LS-2		LS-3		4680	12.13	0.03	0.0000	2	0.02	1.24	1.24	0.03
FM	LS-3		MH-2		5200	12.71	0.03	0.0000	2	0.02	1.30	1.30	0.03
FM	LS-4		MH-2		3400	9.25	0.02	0.0000	2	0.02	0.95	0.95	0.02
2	MH-2	245.0	LS-5	240.0	1000	21.96	0.05	0.0050	3	0.05	1.00	1.28	0.05
FM	LS-5		MH-3		2700	23.12	0.05	0.0000	2	0.02	2.36	2.36	0.05
FM	LS-6		MH-3		5600	13.87	0.03	0.0000	2	0.02	1.42	1.42	0.03
3	MH-3	240	LS-7	175	2100	36.99	0.08	0.0310	3	0.05	1.68	3.17	0.16
FM	LS-7		LS-8		2100	42.77	0.10	0.0000	2	0.02	4.37	4.37	0.10
FM	LS-8		LS-13		3560	45.66	0.10	0.0000	2	0.02	4.67	4.67	0.10
FM	LS-9		LS-10		2400	6.93	0.02	0.0000	2	0.02	0.71	0.71	0.02
FM	LS-11		MH-4		2600	23.68	0.05	0.0000	2	0.02	2.42	2.42	0.05
4	MH-4	245.0	LS-12	220.0	1070	23.68	0.05	0.0234	3	0.05	1.08	2.76	0.14
FM	LS-12		LS-10		2400	26.57	0.06	0.0000	2	0.02	2.72	2.72	0.06
FM	LS-10		LS-13		1700	33.50	0.07	0.0000	2	0.02	3.42	3.42	0.07
FM	LS-13		MH-5		3200	90.14	0.20	0.0000	3	0.05	4.09	4.09	0.20
5	MH-5	230.0	WW-1	190.0	3380	90.14	0.20	0.0113	4	0.09	2.30	2.38	0.21
FM	LS-14		LS-15		2000	6.93	0.02	0.0000	2	0.02	0.71	0.71	0.02
FM	LS-15		LS-16		5490	26.58	0.06	0.0000	2	0.02	2.72	2.72	0.06
FM	LS-16		LS-17		2720	86.09	0.19	0.0000	3	0.05	3.91	3.91	0.19
FM	LS-17		LS-18		4660	98.22	0.22	0.0000	3	0.05	4.46	4.46	0.22
FM	LS-18		WW-1		3810	119.02	0.27	0.0000	3	0.05	5.41	5.41	0.27

Proposed Sanitary Sewer System Modeling for 2050 North

Reach	Manholes				Length feet	WW Flows in Pipe gpm	Flow cfs	Slope	Diameter inch	Pipe Area ft ²	Velocity ft/sec.	Max Full Pipe Velocity ft/sec.	Full Capacity cfs
	Upstream		Downstream										
	Name	Elevation	Name	Elevation									
FM	LS-1		MH-1		2900	14.7	0.03	0.0000	2	0.02	1.50	1.50	0.03
1	MH-1	260.0	LS-2	220.0	2780	14.7	0.03	0.0144	2	0.02	1.50	1.65	0.03
FM	LS-2		LS-3		4680	16.2	0.04	0.0000	2	0.02	1.66	1.66	0.04
FM	LS-3		MH-2		5200	17.0	0.04	0.0000	2	0.02	1.74	1.74	0.04
FM	LS-4		MH-2		3400	12.4	0.03	0.0000	2	0.02	1.26	1.26	0.03
2	MH-2	245.0	LS-5	240.0	1000	29.4	0.07	0.0050	3	0.05	1.33	1.28	0.07
FM	LS-5		MH-3		2700	30.9	0.07	0.0000	2	0.02	3.16	3.16	0.07
FM	LS-6		MH-3		5600	18.6	0.04	0.0000	2	0.02	1.90	1.90	0.04
3	MH-3	240	LS-7	175	2100	49.5	0.11	0.0310	3	0.05	2.25	3.17	0.16
FM	LS-7		LS-8		2100	57.2	0.13	0.0000	2	0.02	5.85	5.85	0.13
FM	LS-8		LS-13		3560	61.1	0.14	0.0000	2	0.02	6.24	6.24	0.14
FM	LS-9		LS-10		2400	9.3	0.02	0.0000	2	0.02	0.95	0.95	0.02
FM	LS-11		MH-4		2600	31.7	0.07	0.0000	2	0.02	3.24	3.24	0.07
4	MH-4	245.0	LS-12	220.0	1070	31.7	0.07	0.0234	3	0.05	1.44	2.76	0.14
FM	LS-12		LS-10		2400	35.6	0.08	0.0000	2	0.02	3.63	3.63	0.08
FM	LS-10		LS-13		1700	44.8	0.10	0.0000	2	0.02	4.58	4.58	0.10
FM	LS-13		MH-5		3200	120.6	0.27	0.0000	3	0.05	5.48	5.48	0.27
5	MH-5	230.0	WW-1	190.0	3380	120.6	0.27	0.0118	6	0.20	1.37	3.11	0.61
FM	LS-14		LS-15		2000	9.3	0.02	0.0000	2	0.02	0.95	0.95	0.02
FM	LS-15		LS-16		5490	35.6	0.08	0.0000	2	0.02	3.63	3.63	0.08
FM	LS-16		LS-17		2720	115.2	0.26	0.0000	3	0.05	5.23	5.23	0.26
FM	LS-17		LS-18		4660	131.4	0.29	0.0000	3	0.05	5.97	5.97	0.29
FM	LS-18		WW-1		3810	159.3	0.35	0.0000	4	0.09	4.07	4.07	0.35

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* * * * * K Y P I P E 4 * * * * *
*
*   University of Kentucky Network Modeling Software
*
*   Copyrighted by KPFS 1998
*   Version 1.200 - 01/26/2000
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\HEMPWI-4.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\HEMPWI-4.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\HEMPWI-4.RS2

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*****
SUMMARY OF ORIGINAL DATA
*****

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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-1	315.25	6.00	100.0000	0.00
P-10	J-14	J-10	254.76	6.00	100.0000	0.00
P-100	J-303	J-302	828.95	1.50	100.0000	0.00
P-101	J-302	J-304	236.07	2.00	100.0000	0.00
P-102	J-302	J-309	845.65	2.00	100.0000	0.00
P-103	J-309	J-319	2081.37	6.00	100.0000	0.00
P-104	J-320	J-319	558.79	2.00	100.0000	0.00
P-105	J-325	J-236	1308.92	8.00	100.0000	0.00
P-106	J-328	J-325	214.24	8.00	100.0000	0.00
P-107	J-238	J-333	1677.55	8.00	100.0000	0.00
P-108	J-334	J-169	833.01	8.00	100.0000	0.00
P-109	J-234	J-338	325.13	10.00	100.0000	0.00
P-11	J-17	J-18	355.13	2.00	100.0000	0.00
P-110	J-338	J-328	909.10	10.00	100.0000	0.00
P-111	J-338	J-340	357.42	6.00	100.0000	0.00
P-112	J-333	J-341	460.78	8.00	100.0000	0.00
P-113	J-341	J-334	94.85	12.00	100.0000	0.00
P-114	J-341	J-346	433.84	6.00	100.0000	0.00
P-115	J-347	J-319	504.71	6.00	100.0000	0.00
P-116	J-347	J-346	150.42	6.00	100.0000	0.00
P-117	J-346	J-348	452.76	6.00	100.0000	0.00
P-118	J-348	J-349	290.67	6.00	100.0000	0.00
P-119	J-349	J-350	205.72	2.00	100.0000	0.00
P-12	J-19	J-17	183.94	6.00	100.0000	0.00
P-120	J-325	J-351	328.06	6.00	100.0000	0.00
P-121	J-351	J-347	559.11	6.00	100.0000	0.00
P-122	J-234	J-353	254.83	8.00	100.0000	0.00
P-123	J-334	J-354	247.87	6.00	100.0000	0.00
P-124	J-3	T-2	11.47	18.00	100.0000	0.00
P-125	J-3	Pump-1	5.94	12.00	100.0000	0.00
P-126	J-353	J-358	350.38	8.00	100.0000	0.00
P-127	J-358	J-38	269.88	6.00	100.0000	0.00
P-128	J-354	J-360	243.22	6.00	100.0000	0.00
P-129	J-360	J-353	338.83	6.00	100.0000	0.00

P-13	J-19	J-21	657.71	6.00	100.0000	0.00
P-130	J-358	J-361	341.14	6.00	100.0000	0.00
P-131	J-361	J-362	251.02	6.00	100.0000	0.00
P-132	J-361	J-360	351.45	2.00	100.0000	0.00
P-133	J-354	J-362	352.30	2.00	100.0000	0.00
P-134	J-16	J-362	282.23	2.00	100.0000	0.00
P-135	J-21	J-11	576.50	6.00	100.0000	0.00
P-136	J-364	J-367	620.85	1.50	100.0000	0.00
P-137	J-364	J-368	103.65	6.00	100.0000	0.00
P-138	J-369	J-368	1216.25	2.00	100.0000	0.00
P-139	J-368	J-376	178.68	6.00	100.0000	0.00
P-14	J-48	J-16	444.47	6.00	100.0000	0.00
P-140	J-377	J-376	731.35	2.00	100.0000	0.00
P-141	J-381	J-376	642.56	2.00	100.0000	0.00
P-142	J-328	J-385	1387.92	2.00	100.0000	0.00
P-143	J-386	J-387	159.86	2.00	100.0000	0.00
P-144	J-388	J-389	73.73	2.00	100.0000	0.00
P-145	J-389	J-391	794.08	2.00	100.0000	0.00
P-146	J-389	J-392	153.38	2.00	100.0000	0.00
P-147	J-385	J-395	723.50	2.00	100.0000	0.00
P-148	J-395	J-386	1092.31	1.50	100.0000	0.00
P-149	J-405	J-410	780.07	1.50	100.0000	0.00
P-15	J-25	J-26	17.76	2.00	100.0000	0.00
P-150	J-410	J-411	352.80	1.50	100.0000	0.00
P-151	J-410	J-395	50.96	1.50	100.0000	0.00
P-152	J-333	J-413	1247.88	8.00	100.0000	0.00
P-153	J-413	J-422	1423.13	8.00	100.0000	0.00
P-154	J-422	J-391	803.67	6.00	100.0000	0.00
P-155	J-391	J-431	1663.98	6.00	100.0000	0.00
P-156	J-431	J-434	955.76	3.00	100.0000	0.00
P-157	J-434	J-435	498.96	2.00	100.0000	0.00
P-158	J-435	J-437	423.36	2.00	100.0000	0.00
P-159	J-434	J-438	304.30	2.00	100.0000	0.00
P-16	J-27	J-25	154.27	10.00	100.0000	0.00
P-160	J-435	J-439	222.51	4.00	100.0000	0.00
P-161	J-431	J-441	249.24	4.00	100.0000	0.00
P-162	J-441	J-442	559.25	2.00	100.0000	0.00
P-163	J-441	J-444	483.18	2.00	100.0000	0.00
P-164	J-445	J-238	868.59	8.00	100.0000	0.00
P-165	J-447	J-445	57.96	2.00	100.0000	0.00
P-166	J-445	J-448	228.21	3.00	100.0000	0.00
P-167	J-277	J-455	925.21	8.00	100.0000	0.00
P-168	J-455	J-445	121.78	8.00	100.0000	0.00
P-169	J-455	J-456	453.47	6.00	100.0000	0.00
P-17	J-25	J-29	88.77	6.00	100.0000	0.00
P-170	J-242	J-276	719.95	8.00	100.0000	0.00
P-171	J-276	J-458	327.44	8.00	100.0000	0.00
P-172	J-456	J-462	377.99	6.00	100.0000	0.00
P-173	J-456	J-413	1843.98	6.00	100.0000	0.00
P-174	J-456	J-465	202.93	6.00	100.0000	0.00
P-175	J-465	J-469	981.82	6.00	100.0000	0.00
P-176	J-465	J-470	469.69	6.00	100.0000	0.00
P-177	J-470	J-471	187.69	2.00	100.0000	0.00
P-178	J-470	J-476	1163.45	2.00	100.0000	0.00
P-179	J-469	J-479	531.82	6.00	100.0000	0.00
P-18	J-29	J-30	195.27	6.00	100.0000	0.00
P-180	J-479	J-480	355.28	2.00	100.0000	0.00
P-181	J-479	J-481	408.20	2.00	100.0000	0.00
P-182	J-469	J-484	473.01	6.00	100.0000	0.00
P-183	J-484	J-487	667.87	2.00	100.0000	0.00
P-184	J-484	J-491	2165.33	6.00	100.0000	0.00
P-185	J-491	J-502	2217.23	2.00	100.0000	0.00
P-186	J-458	J-504	147.27	2.00	100.0000	0.00
P-187	J-458	J-507	668.94	8.00	100.0000	0.00
P-188	J-508	J-277	1691.16	8.00	100.0000	0.00
P-189	J-508	J-518	1217.87	6.00	100.0000	0.00
P-19	J-31	J-29	122.08	2.00	100.0000	0.00
P-190	J-519	J-522	969.00	2.00	100.0000	0.00
P-191	J-522	J-508	921.86	8.00	100.0000	0.00
P-192	J-522	J-528	61.46	8.00	100.0000	0.00
P-193	J-528	J-529	144.86	6.00	100.0000	0.00

P-194	J-529	J-532	615.35	2.00	100.0000	0.00
P-195	J-529	J-533	252.59	6.00	100.0000	0.00
P-196	J-533	J-534	389.92	2.00	100.0000	0.00
P-197	J-533	J-535	307.77	6.00	100.0000	0.00
P-198	J-535	J-536	687.87	2.00	100.0000	0.00
P-199	J-535	J-538	473.11	2.00	100.0000	0.00
P-2	J-2	J-5	474.91	6.00	100.0000	0.00
P-20	J-29	J-34	511.89	4.00	100.0000	0.00
P-200	J-533	J-549	498.16	6.00	100.0000	0.00
P-201	J-528	J-541	462.15	6.00	100.0000	0.00
P-202	J-541	J-548	885.58	6.00	100.0000	0.00
P-203	J-541	J-549	328.31	6.00	100.0000	0.00
P-204	J-549	J-550	561.42	2.00	100.0000	0.00
P-205-XX	T-1	J-572	7860.71	10.00	100.0000	0.00
P-206	T-1	J-15	7.63	18.00	100.0000	0.00
P-207	J-1	J-4	462.87	6.00	100.0000	0.00
P-208	J-194	J-207	10.75	6.00	100.0000	0.00
P-209	J-3	Pump-3	5.14	12.00	100.0000	0.00
P-21	J-35	J-27	189.92	18.00	100.0000	0.00
P-210	J-15	Pump-2	10.09	12.00	100.0000	0.00
P-211	Pump-1	J-15	5.04	12.00	100.0000	0.00
P-212	Pump-2	J-3	10.81	12.00	100.0000	0.00
P-213	Pump-3	J-15	5.46	12.00	100.0000	0.00
P-214	J-189	J-187	900.00	6.00	100.0000	0.00
P-215	J-11	J-364	166.53	6.00	100.0000	0.00
P-216	J-11	J-12	704.96	2.00	100.0000	0.00
P-217	J-20	J-99	214.75	8.00	100.0000	0.00
P-218	J-20	J-24	533.16	6.00	100.0000	0.00
P-219	J-23	J-54	529.86	8.00	100.0000	0.00
P-22	J-27	T-2	70.66	18.00	100.0000	0.00
P-220	J-23	J-28	397.39	2.00	100.0000	0.00
P-221	J-32	J-62	613.78	8.00	100.0000	0.00
P-222	J-32	J-33	629.85	2.00	100.0000	0.00
P-223	J-36	J-40	171.17	2.50	100.0000	0.00
P-224	J-36	J-37	337.95	2.00	100.0000	0.00
P-225	J-287	J-41	2385.33	2.00	100.0000	0.00
P-226	J-40	J-153	371.12	2.50	100.0000	0.00
P-227	J-548	J-43	1900.00	2.00	100.0000	0.00
P-228	J-183	G-M1	1454.66	6.00	100.0000	0.00
P-229	J-143	G-M2	1164.54	6.00	100.0000	0.00
P-23	J-38	J-19	767.97	6.00	100.0000	0.00
P-232	J-47	J-42	620.65	6.00	100.0000	0.00
P-233	J-422	G-M3	447.31	8.00	100.0000	0.00
P-238	J-58	J-42	1326.60	6.00	100.0000	0.00
P-24	J-42	J-25	3142.84	10.00	100.0000	0.00
P-25	J-48	J-38	121.47	6.00	100.0000	0.00
P-26	J-49	J-51	256.02	2.00	100.0000	0.00
P-27	J-51	J-53	222.20	2.00	100.0000	0.00
P-28	J-54	J-61	2793.09	4.00	100.0000	0.00
P-29	J-51	J-62	159.60	3.00	100.0000	0.00
P-3	J-5	J-6	297.38	6.00	100.0000	0.00
P-30	J-63	J-32	322.24	8.00	100.0000	0.00
P-31	J-62	J-76	1716.40	8.00	100.0000	0.00
P-32	J-76	J-54	1704.98	8.00	100.0000	0.00
P-33	J-76	J-86	1607.52	4.00	100.0000	0.00
P-34	J-86	J-87	386.82	3.00	100.0000	0.00
P-35	J-88	J-23	219.26	8.00	100.0000	0.00
P-36	J-88	J-96	1136.02	2.00	100.0000	0.00
P-37	J-42	J-20	495.65	8.00	100.0000	0.00
P-38	J-99	J-88	406.40	8.00	100.0000	0.00
P-39	J-99	J-101	569.50	2.00	100.0000	0.00
P-4	J-4	J-7	152.48	2.00	100.0000	0.00
P-40	J-102	J-101	294.31	1.50	100.0000	0.00
P-41	J-22	J-104	227.16	6.00	100.0000	0.00
P-42	J-104	J-47	1022.52	6.00	100.0000	0.00
P-43	J-104	J-119	1945.50	4.00	100.0000	0.00
P-44	J-17	J-120	196.90	2.00	100.0000	0.00
P-45	J-120	J-22	22.72	8.00	100.0000	0.00
P-46	J-120	J-129	3672.76	4.00	100.0000	0.00
P-47	J-38	J-131	201.14	6.00	100.0000	0.00
P-48	J-131	J-58	597.75	6.00	100.0000	0.00

P-49	J-131	J-139	437.26	2.00	100.0000	0.00
P-5	J-5	J-8	178.38	2.00	100.0000	0.00
P-50	J-143	J-1	1063.75	6.00	100.0000	0.00
P-51	J-143	J-36	1184.00	2.50	100.0000	0.00
P-52	J-143	J-154	942.86	6.00	100.0000	0.00
P-53	J-155	J-154	284.72	2.00	100.0000	0.00
P-54	J-14	J-157	27.84	8.00	100.0000	0.00
P-55	J-157	J-158	62.13	6.00	100.0000	0.00
P-56	J-158	J-161	659.07	6.00	100.0000	0.00
P-57	J-161	J-168	1390.51	2.00	100.0000	0.00
P-58	J-169	J-14	602.60	8.00	100.0000	0.00
P-59	J-157	J-171	242.28	8.00	100.0000	0.00
P-6	J-8	J-4	127.99	2.00	100.0000	0.00
P-60	J-169	J-171	346.03	6.00	100.0000	0.00
P-61	J-171	J-172	571.40	2.00	100.0000	0.00
P-62	J-158	J-189	2854.86	6.00	100.0000	0.00
P-63	J-184	J-186	957.32	4.00	100.0000	0.00
P-64	J-44	J-226	2919.07	2.00	100.0000	0.00
P-65	J-189	J-183	182.01	6.00	100.0000	0.00
P-65-1	J-189	J-192	1191.00	6.00	100.0000	0.00
P-66	J-192	J-193	706.00	2.00	100.0000	0.00
P-67	J-194	J-14	1007.96	6.00	100.0000	0.00
P-68	J-184	J-199	1034.96	6.00	100.0000	0.00
P-69	J-199	J-194	626.76	6.00	100.0000	0.00
P-7	J-8	J-9	160.09	2.00	100.0000	0.00
P-70	J-199	J-206	804.73	2.00	100.0000	0.00
P-71	J-207	J-217	1179.47	3.00	100.0000	0.00
P-72	J-217	J-44	717.59	2.00	100.0000	0.00
P-73	J-227	J-217	199.86	2.00	100.0000	0.00
P-74	J-228	J-35	716.48	8.00	100.0000	0.00
P-75	J-171	J-234	592.28	8.00	100.0000	0.00
P-76	J-234	J-35	367.82	12.00	100.0000	0.00
P-77	J-236	J-237	75.84	6.00	100.0000	0.00
P-78	J-238	J-240	82.65	6.00	100.0000	0.00
P-79	J-240	J-237	30.69	6.00	100.0000	0.00
P-8	J-10	J-2	607.39	6.00	100.0000	0.00
P-80	J-240	J-241	622.03	6.00	100.0000	0.00
P-81	J-236	J-242	863.90	8.00	100.0000	0.00
P-82	J-242	J-246	847.96	6.00	100.0000	0.00
P-83	J-246	J-249	587.14	6.00	100.0000	0.00
P-84	J-237	J-249	1225.86	6.00	100.0000	0.00
P-85	J-249	J-253	103.85	6.00	100.0000	0.00
P-86	J-246	J-258	971.12	6.00	100.0000	0.00
P-87	J-258	J-259	87.18	6.00	100.0000	0.00
P-88	J-258	J-264	578.05	2.00	100.0000	0.00
P-89	J-265	J-266	770.41	4.00	100.0000	0.00
P-9	J-10	J-13	387.24	2.00	100.0000	0.00
P-90	J-259	J-265	752.50	6.00	100.0000	0.00
P-91	J-265	J-276	694.72	6.00	100.0000	0.00
P-92	J-277	J-278	584.71	4.00	100.0000	0.00
P-93	J-279	J-278	559.03	4.00	100.0000	0.00
P-94	J-278	J-281	340.76	4.00	100.0000	0.00
P-95	J-281	J-284	1493.84	3.00	100.0000	0.00
P-96	J-285	J-286	228.59	6.00	100.0000	0.00
P-97	J-287	J-286	107.43	6.00	100.0000	0.00
P-98	J-286	J-259	1987.34	6.00	100.0000	0.00
P-99	J-298	J-302	980.60	2.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
G-M1		0.00	260.00	
G-M2		0.00	263.00	
G-M3		0.00	300.00	
J-1		0.00	267.48	
J-10		0.00	271.75	
J-101		1.06	309.41	
J-102		0.00	310.00	
J-104		4.66	304.60	
J-11		0.00	292.00	
J-119		1.06	290.00	
J-12		0.00	295.00	
J-120		0.00	300.60	
J-129		9.32	304.02	
J-13		2.38	264.48	
J-131		0.00	300.00	
J-139		0.00	291.98	
J-14		2.38	280.00	
J-143		0.00	263.30	
J-15		0.00	280.00	
J-153		2.38	281.83	
J-154		1.19	260.00	
J-155		1.19	260.00	
J-157		0.00	280.00	
J-158		0.00	280.00	
J-16		0.00	291.00	
J-161		0.00	270.00	
J-168		0.00	263.08	
J-169		0.00	280.00	
J-17		0.00	303.37	
J-171		0.00	280.00	
J-172		0.00	271.79	
J-18		0.00	310.00	
J-183		2.38	259.92	
J-184		0.00	263.89	
J-186		2.38	240.47	
J-187		2.38	240.00	
J-189		0.00	260.00	
J-19		9.32	304.63	
J-192		4.76	250.00	
J-193		0.00	237.00	
J-194		0.00	280.00	
J-199		4.76	276.97	
J-2		2.38	270.00	
J-20		0.00	297.00	

J-206	2.38	270.00
J-207	0.00	280.00
J-21	4.66	297.50
J-217	0.00	267.84
J-22	4.66	299.91
J-226	2.38	258.96
J-227	2.38	270.00
J-228	0.00	287.77
J-23	0.00	305.00
J-234	4.66	284.93
J-236	4.66	254.79
J-237	0.00	257.27
J-238	0.00	257.84
J-24	0.00	290.00
J-240	0.00	258.38
J-241	4.66	256.48
J-242	0.00	285.73
J-246	0.00	264.14
J-249	0.00	260.99
J-25	0.00	280.00
J-253	0.00	263.44
J-258	0.00	274.64
J-259	0.00	273.33
J-26	0.00	280.00
J-264	0.00	280.00
J-265	9.32	280.00
J-266	4.66	262.95
J-27	0.00	280.00
J-276	0.00	275.96
J-277	0.00	274.93
J-278	0.00	280.00
J-279	4.66	280.00
J-28	0.00	300.00
J-281	0.00	274.53
J-284	4.66	294.97
J-285	0.00	310.00
J-286	9.32	292.33
J-287	0.00	292.76
J-29	0.00	280.00
J-298	2.38	240.00
J-3	0.00	280.00
J-30	0.00	272.79
J-302	0.00	233.85
J-303	0.00	242.80
J-304	0.00	230.00
J-309	0.00	244.20
J-31	0.00	278.41
J-319	4.66	271.11
J-32	0.00	273.00
J-320	2.38	270.00
J-325	0.00	280.00
J-328	0.00	280.00
J-33	0.00	270.00
J-333	0.00	280.00
J-334	9.32	285.09
J-338	4.66	288.64
J-34	4.66	280.00
J-340	0.00	281.35
J-341	0.00	283.16
J-346	0.00	275.38
J-347	4.66	274.79
J-348	0.00	281.34
J-349	0.00	280.00
J-35	4.66	280.00
J-350	0.00	280.00
J-351	4.66	280.00
J-353	9.32	287.75
J-354	4.66	288.61
J-358	9.32	295.52
J-36	0.00	277.00
J-360	4.66	290.00

J-361	9.32	290.00
J-362	4.66	290.00
J-364	0.00	291.03
J-367	1.06	291.54
J-368	0.00	294.06
J-369	1.06	280.00
J-37	0.00	275.00
J-376	0.00	300.79
J-377	1.06	308.07
J-38	4.66	296.07
J-381	1.06	295.71
J-385	0.00	289.30
J-386	0.00	300.97
J-387	0.00	305.78
J-388	0.00	270.00
J-389	1.06	270.00
J-391	0.00	290.61
J-392	0.00	275.02
J-395	1.06	300.00
J-4	2.38	257.30
J-40	0.00	279.00
J-405	1.06	305.01
J-41	0.00	250.00
J-410	0.00	300.00
J-411	0.00	300.00
J-413	0.00	274.34
J-42	9.32	298.30
J-422	2.12	300.00
J-43	0.00	230.00
J-431	0.00	304.83
J-434	1.06	305.07
J-435	0.00	300.59
J-437	1.06	310.00
J-438	0.00	310.00
J-439	0.00	291.34
J-44	0.00	259.82
J-441	0.00	304.63
J-442	0.00	310.00
J-444	1.06	320.00
J-445	0.00	285.39
J-447	0.00	284.02
J-448	4.66	285.15
J-455	4.66	281.89
J-456	0.00	282.32
J-458	0.00	275.18
J-462	1.06	288.46
J-465	0.00	287.11
J-469	1.06	310.00
J-47	0.00	300.00
J-470	1.06	293.43
J-471	0.00	290.00
J-476	0.00	310.00
J-479	1.06	310.00
J-48	0.00	293.36
J-480	0.00	306.99
J-481	0.00	320.00
J-484	0.00	308.25
J-487	1.06	291.23
J-49	0.00	278.91
J-491	1.06	254.57
J-5	0.00	260.00
J-502	1.06	250.00
J-504	0.00	273.97
J-507	0.00	270.69
J-508	0.00	255.88
J-51	4.66	289.90
J-518	1.06	270.92
J-519	0.00	230.00
J-522	0.00	251.78
J-528	0.00	250.37
J-529	0.00	250.00

J-53	0.00	288.83	
J-532	1.06	250.00	
J-533	1.06	240.00	
J-534	0.00	240.00	
J-535	0.00	240.00	
J-536	1.06	233.67	
J-538	1.06	263.02	
J-54	9.32	307.84	
J-541	1.06	239.97	
J-548	1.06	233.10	
J-549	0.00	236.88	
J-550	1.06	230.00	
J-572	2.38	300.00	
J-58	0.00	299.00	
J-6	2.38	252.85	
J-61	9.32	288.72	
J-62	4.66	290.00	
J-63	4.66	262.49	
J-7	0.00	254.10	
J-76	4.66	320.00	
J-8	0.00	258.16	
J-86	4.66	290.00	
J-87	4.66	288.51	
J-88	0.00	303.82	
J-9	0.00	252.47	
J-96	1.06	301.83	
J-99	9.32	296.50	
Pump-1	0.00	280.00	
Pump-2	0.00	280.00	
Pump-3	0.00	280.00	
T-1	----	280.00	304.00
T-2	----	280.00	423.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 60
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 60

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 233
 NUMBER OF END NODES(j) = 216
 NUMBER OF PRIMARY LOOPS(l) = 16
 NUMBER OF SUPPLY NODES(f) = 2
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 2)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 3 TRIALS: ACCURACY = 0.00223

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	J-2	J-1	72.33	0.29	0.00	0.82	0.93
P-10	J-14	J-10	110.54	0.52	0.00	1.25	2.04
P-100	J-303	J-302	0.00	0.00	0.00	0.00	0.00
P-101	J-302	J-304	0.00	0.00	0.00	0.00	0.00
P-102	J-302	J-309	-11.42	5.43	0.00	1.17	6.42
P-103	J-309	J-319	-11.42	0.06	0.00	0.13	0.03
P-104	J-320	J-319	-11.42	3.59	0.00	1.17	6.42
P-105	J-325	J-236	324.01	4.82	0.00	2.07	3.68
P-106	J-328	J-325	476.26	1.61	0.00	3.04	7.52
P-107	J-238	J-333	-65.54	0.32	0.00	0.42	0.19
P-108	J-334	J-169	-163.67	0.87	0.00	1.04	1.04
P-109	J-234	J-338	508.80	0.93	0.00	2.08	2.87
P-11	J-17	J-18	0.00	0.00	0.00	0.00	0.00
P-110	J-338	J-328	486.43	2.40	0.00	1.99	2.64
P-111	J-338	J-340	0.00	0.00	0.00	0.00	0.00
P-112	J-333	J-341	-386.89	2.36	0.00	2.47	5.12
P-113	J-341	J-334	-324.59	0.05	0.00	0.92	0.51
P-114	J-341	J-346	-62.30	0.31	0.00	0.71	0.71
P-115	J-347	J-319	45.22	0.20	0.00	0.51	0.39
P-116	J-347	J-346	62.30	0.11	0.00	0.71	0.71
P-117	J-346	J-348	0.00	0.00	0.00	0.00	0.00
P-118	J-348	J-349	0.00	0.00	0.00	0.00	0.00
P-119	J-349	J-350	0.00	0.00	0.00	0.00	0.00
P-12	J-19	J-17	9.01	0.00	0.00	0.10	0.02
P-120	J-325	J-351	152.25	1.21	0.00	1.73	3.69
P-121	J-351	J-347	129.88	1.54	0.00	1.47	2.75
P-122	J-234	J-353	505.17	2.14	0.00	3.22	8.38
P-123	J-334	J-354	-205.66	1.60	0.00	2.33	6.44
P-124	J-3	T-2	4549.77	0.11	0.00	5.74	9.47
P-125	J-3	Pump-1	-1517.25	0.05	0.00	4.30	8.92
P-126	J-353	J-358	233.08	0.70	0.00	1.49	2.00
P-127	J-358	J-38	100.02	0.46	0.00	1.13	1.70
P-128	J-354	J-360	-214.25	1.69	0.00	2.43	6.95
P-129	J-360	J-353	-227.35	2.63	0.00	2.58	7.76
P-13	J-19	J-21	42.72	0.23	0.00	0.48	0.35
P-130	J-358	J-361	88.33	0.46	0.00	1.00	1.35
P-131	J-361	J-362	34.33	0.06	0.00	0.39	0.23
P-132	J-361	J-360	9.26	1.53	0.00	0.95	4.36
P-133	J-354	J-362	-13.78	3.20	0.00	1.41	9.09
P-134	J-16	J-362	1.82	0.06	0.00	0.19	0.21
P-135	J-21	J-11	20.35	0.05	0.00	0.23	0.09
P-136	J-364	J-367	5.09	3.62	0.00	0.92	5.83
P-137	J-364	J-368	15.26	0.01	0.00	0.17	0.05
P-138	J-369	J-368	-5.09	1.75	0.00	0.52	1.44
P-139	J-368	J-376	10.18	0.00	0.00	0.12	0.02
P-14	J-48	J-16	1.82	0.00	0.00	0.02	0.00
P-140	J-377	J-376	-5.09	1.05	0.00	0.52	1.44
P-141	J-381	J-376	-5.09	0.92	0.00	0.52	1.44
P-142	J-328	J-385	10.18	7.20	0.00	1.04	5.19
P-143	J-386	J-387	0.00	0.00	0.00	0.00	0.00
P-144	J-388	J-389	0.00	0.00	0.00	0.00	0.00
P-145	J-389	J-391	-5.09	1.14	0.00	0.52	1.44
P-146	J-389	J-392	0.00	0.00	0.00	0.00	0.00
P-147	J-385	J-395	10.18	3.75	0.00	1.04	5.19
P-148	J-395	J-386	0.00	0.00	0.00	0.00	0.00
P-149	J-405	J-410	-5.09	4.55	0.00	0.92	5.83
P-15	J-25	J-26	0.00	0.00	0.00	0.00	0.00
P-150	J-410	J-411	0.00	0.00	0.00	0.00	0.00
P-151	J-410	J-395	-5.09	0.30	0.00	0.92	5.83
P-152	J-333	J-413	321.35	4.53	0.00	2.05	3.63
P-153	J-413	J-422	388.53	7.34	0.00	2.48	5.16
P-154	J-422	J-391	20.35	0.07	0.00	0.23	0.09
P-155	J-391	J-431	15.26	0.09	0.00	0.17	0.05

P-156	J-431	J-434	10.18	0.69	0.00	0.46	0.72
P-157	J-434	J-435	5.09	0.72	0.00	0.52	1.44
P-158	J-435	J-437	5.09	0.61	0.00	0.52	1.44
P-159	J-434	J-438	0.00	0.00	0.00	0.00	0.00
P-16	J-27	J-25	451.88	0.35	0.00	1.85	2.30
P-160	J-435	J-439	0.00	0.00	0.00	0.00	0.00
P-161	J-431	J-441	5.09	0.01	0.00	0.13	0.05
P-162	J-441	J-442	0.00	0.00	0.00	0.00	0.00
P-163	J-441	J-444	5.09	0.69	0.00	0.52	1.44
P-164	J-445	J-238	-232.97	1.74	0.00	1.49	2.00
P-165	J-447	J-445	0.00	0.00	0.00	0.00	0.00
P-166	J-445	J-448	22.37	0.71	0.00	1.02	3.10
P-167	J-277	J-455	-85.44	0.29	0.00	0.55	0.31
P-168	J-455	J-445	-210.60	0.20	0.00	1.34	1.66
P-169	J-455	J-456	102.80	0.81	0.00	1.17	1.78
P-17	J-25	J-29	22.37	0.01	0.00	0.25	0.11
P-170	J-242	J-276	64.30	0.13	0.00	0.41	0.18
P-171	J-276	J-458	0.00	0.00	0.00	0.00	0.00
P-172	J-456	J-462	5.09	0.00	0.00	0.06	0.01
P-173	J-456	J-413	67.18	1.50	0.00	0.76	0.81
P-174	J-456	J-465	30.53	0.04	0.00	0.35	0.19
P-175	J-465	J-469	25.44	0.13	0.00	0.29	0.13
P-176	J-465	J-470	5.09	0.00	0.00	0.06	0.01
P-177	J-470	J-471	0.00	0.00	0.00	0.00	0.00
P-178	J-470	J-476	0.00	0.00	0.00	0.00	0.00
P-179	J-469	J-479	5.09	0.00	0.00	0.06	0.01
P-18	J-29	J-30	0.00	0.00	0.00	0.00	0.00
P-180	J-479	J-480	0.00	0.00	0.00	0.00	0.00
P-181	J-479	J-481	0.00	0.00	0.00	0.00	0.00
P-182	J-469	J-484	15.26	0.02	0.00	0.17	0.05
P-183	J-484	J-487	5.09	0.96	0.00	0.52	1.44
P-184	J-484	J-491	10.18	0.05	0.00	0.12	0.02
P-185	J-491	J-502	5.09	3.18	0.00	0.52	1.44
P-186	J-458	J-504	0.00	0.00	0.00	0.00	0.00
P-187	J-458	J-507	0.00	0.00	0.00	0.00	0.00
P-188	J-508	J-277	-40.70	0.13	0.00	0.26	0.08
P-189	J-508	J-518	5.09	0.01	0.00	0.06	0.01
P-19	J-31	J-29	0.00	0.00	0.00	0.00	0.00
P-190	J-519	J-522	0.00	0.00	0.00	0.00	0.00
P-191	J-522	J-508	-35.62	0.06	0.00	0.23	0.06
P-192	J-522	J-528	35.62	0.00	0.00	0.23	0.06
P-193	J-528	J-529	20.40	0.01	0.00	0.23	0.09
P-194	J-529	J-532	5.09	0.88	0.00	0.52	1.44
P-195	J-529	J-533	15.31	0.01	0.00	0.17	0.05
P-196	J-533	J-534	0.00	0.00	0.00	0.00	0.00
P-197	J-533	J-535	10.18	0.01	0.00	0.12	0.02
P-198	J-535	J-536	5.09	0.99	0.00	0.52	1.44
P-199	J-535	J-538	5.09	0.68	0.00	0.52	1.44
P-2	J-2	J-5	15.37	0.03	0.00	0.17	0.05
P-20	J-29	J-34	22.37	0.39	0.00	0.57	0.76
P-200	J-533	J-549	0.05	0.00	0.00	0.00	0.00
P-201	J-528	J-541	15.22	0.02	0.00	0.17	0.05
P-202	J-541	J-548	5.09	0.01	0.00	0.06	0.01
P-203	J-541	J-549	5.04	0.00	0.00	0.06	0.01
P-204	J-549	J-550	5.09	0.81	0.00	0.52	1.44
P-205	T-1	J-572	11.42	0.02	0.00	0.05	0.00
P-206	T-1	J-15	4549.77	0.07	0.00	5.74	9.47
P-207	J-1	J-4	7.48	0.01	0.00	0.08	0.01
P-208	J-194	J-207	22.85	0.00	0.00	0.26	0.11
P-209	J-3	Pump-3	-1517.33	0.05	0.00	4.30	8.92
P-21	J-35	J-27	-1610.59	0.26	0.00	2.03	1.38
P-210	J-15	Pump-2	1515.18	0.09	0.00	4.30	8.90
P-211	Pump-1	J-15	-1517.25	0.04	0.00	4.30	8.92
P-212	Pump-2	J-3	1515.18	0.10	0.00	4.30	8.90
P-213	Pump-3	J-15	-1517.33	0.05	0.00	4.30	8.92
P-214	J-189	J-187	11.42	0.03	0.00	0.13	0.03
P-215	J-11	J-364	20.35	0.01	0.00	0.23	0.09
P-216	J-11	J-12	0.00	0.00	0.00	0.00	0.00
P-217	J-20	J-99	278.59	0.60	0.00	1.78	2.78
P-218	J-20	J-24	0.00	0.00	0.00	0.00	0.00
P-219	J-23	J-54	223.68	0.98	0.00	1.43	1.85

P-22	J-27	T-2	-2062.46	0.15	0.00	2.60	2.19
P-220	J-23	J-28	0.00	0.00	0.00	0.00	0.00
P-221	J-32	J-62	-22.37	0.02	0.00	0.14	0.03
P-222	J-32	J-33	0.00	0.00	0.00	0.00	0.00
P-223	J-36	J-40	11.42	0.37	0.00	0.75	2.17
P-224	J-36	J-37	0.00	0.00	0.00	0.00	0.00
P-225	J-287	J-41	0.00	0.00	0.00	0.00	0.00
P-226	J-40	J-153	11.42	0.80	0.00	0.75	2.17
P-227	J-548	J-43	0.00	0.00	0.00	0.00	0.00
P-228	J-183	G-M1	152.00	5.35	0.00	1.72	3.68
P-229	J-143	G-M2	42.00	0.40	0.00	0.48	0.34
P-23	J-38	J-19	96.46	1.22	0.00	1.09	1.59
P-232	J-47	J-42	-85.55	0.79	0.00	0.97	1.27
P-233	J-422	G-M3	358.00	1.98	0.00	2.28	4.43
P-238	J-58	J-42	-20.63	0.12	0.00	0.23	0.09
P-24	J-42	J-25	-429.51	6.58	0.00	1.75	2.09
P-25	J-48	J-38	-1.82	0.00	0.00	0.02	0.00
P-26	J-49	J-51	0.00	0.00	0.00	0.00	0.00
P-27	J-51	J-53	0.00	0.00	0.00	0.00	0.00
P-28	J-54	J-61	44.74	7.69	0.00	1.14	2.75
P-29	J-51	J-62	-22.37	0.49	0.00	1.02	3.10
P-3	J-5	J-6	11.42	0.01	0.00	0.13	0.03
P-30	J-63	J-32	-22.37	0.01	0.00	0.14	0.03
P-31	J-62	J-76	-67.10	0.34	0.00	0.43	0.20
P-32	J-76	J-54	-134.21	1.23	0.00	0.86	0.72
P-33	J-76	J-86	44.74	4.42	0.00	1.14	2.75
P-34	J-86	J-87	22.37	1.20	0.00	1.02	3.10
P-35	J-88	J-23	223.68	0.41	0.00	1.43	1.85
P-36	J-88	J-96	5.09	1.63	0.00	0.52	1.44
P-37	J-42	J-20	278.59	1.38	0.00	1.78	2.78
P-38	J-99	J-88	228.77	0.79	0.00	1.46	1.93
P-39	J-99	J-101	5.09	0.82	0.00	0.52	1.44
P-4	J-4	J-7	0.00	0.00	0.00	0.00	0.00
P-40	J-102	J-101	0.00	0.00	0.00	0.00	0.00
P-41	J-22	J-104	-58.10	0.14	0.00	0.66	0.62
P-42	J-104	J-47	-85.55	1.30	0.00	0.97	1.27
P-43	J-104	J-119	5.09	0.10	0.00	0.13	0.05
P-44	J-17	J-120	9.01	0.81	0.00	0.92	4.14
P-45	J-120	J-22	-35.73	0.00	0.00	0.23	0.06
P-46	J-120	J-129	44.74	10.11	0.00	1.14	2.75
P-47	J-38	J-131	-20.63	0.02	0.00	0.23	0.09
P-48	J-131	J-58	-20.63	0.05	0.00	0.23	0.09
P-49	J-131	J-139	0.00	0.00	0.00	0.00	0.00
P-5	J-5	J-8	3.94	0.16	0.00	0.40	0.90
P-50	J-143	J-1	-64.85	0.81	0.00	0.74	0.76
P-51	J-143	J-36	11.42	2.57	0.00	0.75	2.17
P-52	J-143	J-154	11.42	0.03	0.00	0.13	0.03
P-53	J-155	J-154	-5.71	0.51	0.00	0.58	1.78
P-54	J-14	J-157	-198.17	0.04	0.00	1.26	1.48
P-55	J-157	J-158	197.70	0.37	0.00	2.24	5.99
P-56	J-158	J-161	0.00	0.00	0.00	0.00	0.00
P-57	J-161	J-168	0.00	0.00	0.00	0.00	0.00
P-58	J-169	J-14	-7.66	0.00	0.00	0.05	0.00
P-59	J-157	J-171	-395.86	1.29	0.00	2.53	5.34
P-6	J-8	J-4	3.94	0.11	0.00	0.40	0.90
P-60	J-169	J-171	-156.01	1.34	0.00	1.77	3.86
P-61	J-171	J-172	0.00	0.00	0.00	0.00	0.00
P-62	J-158	J-189	197.70	17.10	0.00	2.24	5.99
P-63	J-184	J-186	11.42	0.21	0.00	0.29	0.22
P-64	J-44	J-226	11.42	18.75	0.00	1.17	6.42
P-65	J-189	J-183	163.42	0.77	0.00	1.85	4.21
P-65-1	J-189	J-192	22.85	0.13	0.00	0.26	0.11
P-66	J-192	J-193	0.00	0.00	0.00	0.00	0.00
P-67	J-194	J-14	-68.54	0.85	0.00	0.78	0.84
P-68	J-184	J-199	-11.42	0.03	0.00	0.13	0.03
P-69	J-199	J-194	-45.70	0.25	0.00	0.52	0.40
P-7	J-8	J-9	0.00	0.00	0.00	0.00	0.00
P-70	J-199	J-206	11.42	5.17	0.00	1.17	6.42
P-71	J-207	J-217	22.85	3.80	0.00	1.04	3.22
P-72	J-217	J-44	11.42	4.61	0.00	1.17	6.42
P-73	J-227	J-217	-11.42	1.28	0.00	1.17	6.42

P-74	J-228	J-35	0.00	0.00	0.00	0.00	0.00
P-75	J-171	J-234	-551.88	5.85	0.00	3.52	9.88
P-76	J-234	J-35	-1588.22	3.57	0.00	4.51	9.71
P-77	J-236	J-237	203.03	0.48	0.00	2.30	6.29
P-78	J-238	J-240	-167.43	0.36	0.00	1.90	4.40
P-79	J-240	J-237	-189.80	0.17	0.00	2.15	5.55
P-8	J-10	J-2	99.12	1.01	0.00	1.12	1.67
P-80	J-240	J-241	22.37	0.07	0.00	0.25	0.11
P-81	J-236	J-242	98.61	0.35	0.00	0.63	0.41
P-82	J-242	J-246	34.31	0.20	0.00	0.39	0.23
P-83	J-246	J-249	-13.23	0.02	0.00	0.15	0.04
P-84	J-237	J-249	13.23	0.05	0.00	0.15	0.04
P-85	J-249	J-253	0.00	0.00	0.00	0.00	0.00
P-86	J-246	J-258	47.54	0.42	0.00	0.54	0.43
P-87	J-258	J-259	47.54	0.04	0.00	0.54	0.43
P-88	J-258	J-264	0.00	0.00	0.00	0.00	0.00
P-89	J-265	J-266	22.37	0.59	0.00	0.57	0.76
P-9	J-10	J-13	11.42	2.49	0.00	1.17	6.42
P-90	J-259	J-265	2.80	0.00	0.00	0.03	0.00
P-91	J-265	J-276	-64.30	0.52	0.00	0.73	0.75
P-92	J-277	J-278	44.74	1.61	0.00	1.14	2.75
P-93	J-279	J-278	-22.37	0.43	0.00	0.57	0.76
P-94	J-278	J-281	22.37	0.26	0.00	0.57	0.76
P-95	J-281	J-284	22.37	4.62	0.00	1.02	3.10
P-96	J-285	J-286	0.00	0.00	0.00	0.00	0.00
P-97	J-287	J-286	0.00	0.00	0.00	0.00	0.00
P-98	J-286	J-259	-44.74	0.76	0.00	0.51	0.38
P-99	J-298	J-302	-11.42	6.30	0.00	1.17	6.42

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	1517.25	23.88	143.16	119.3	----	-----	---	----
Pump-2	1515.18	23.84	143.20	119.4	----	-----	---	----
Pump-3	1517.33	23.88	143.15	119.3	----	-----	---	----

E N D N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
G-M1		152.00	388.28	260.00	128.28	55.59
G-M2		42.00	408.80	263.00	145.80	63.18
G-M3		358.00	394.71	300.00	94.71	41.04
J-1		0.00	410.00	267.48	142.52	61.76
J-10		0.00	411.31	271.75	139.56	60.47
J-101		5.09(4.80)	413.11	309.41	103.70	44.94
J-102		0.00	413.11	310.00	103.11	44.68
J-104		22.37(4.80)	413.82	304.60	109.22	47.33
J-11		0.00	414.22	292.00	122.22	52.96
J-119		5.09(4.80)	413.73	290.00	123.73	53.61
J-12		0.00	414.22	295.00	119.22	51.66
J-120		0.00	413.68	300.60	113.08	49.00
J-129		44.74(4.80)	403.57	304.02	99.55	43.14
J-13		11.42(4.80)	408.82	264.48	144.34	62.55
J-131		0.00	415.73	300.00	115.73	50.15
J-139		0.00	415.73	291.98	123.75	53.63
J-14		11.42(4.80)	411.83	280.00	131.83	57.12
J-143		0.00	409.19	263.30	145.89	63.22
J-15		0.00	303.93	280.00	23.93	10.37
J-153		11.42(4.80)	405.45	281.83	123.62	53.57

J-154	5.71 (4.80)	409.16	260.00	149.16	64.64
J-155	5.71 (4.80)	408.66	260.00	148.66	64.42
J-157	0.00	411.87	280.00	131.87	57.14
J-158	0.00	411.50	280.00	131.50	56.98
J-16	0.00	415.71	291.00	124.71	54.04
J-161	0.00	411.50	270.00	141.50	61.31
J-168	0.00	411.50	263.08	148.42	64.31
J-169	0.00	411.82	280.00	131.82	57.12
J-17	0.00	414.49	303.37	111.12	48.15
J-171	0.00	413.16	280.00	133.16	57.70
J-172	0.00	413.16	271.79	141.37	61.26
J-18	0.00	414.49	310.00	104.49	45.28
J-183	11.42 (4.80)	393.63	259.92	133.71	57.94
J-184	0.00	410.70	263.89	146.81	63.62
J-186	11.42 (4.80)	410.49	240.47	170.02	73.67
J-187	11.42 (4.80)	394.37	240.00	154.37	66.89
J-189	0.00	394.40	260.00	134.40	58.24
J-19	44.74 (4.80)	414.50	304.63	109.87	47.61
J-192	22.85 (4.80)	394.27	250.00	144.27	62.52
J-193	0.00	394.27	237.00	157.27	68.15
J-194	0.00	410.98	280.00	130.98	56.76
J-199	22.85 (4.80)	410.73	276.97	133.76	57.96
J-2	11.42 (4.80)	410.29	270.00	140.29	60.79
J-20	0.00	414.53	297.00	117.53	50.93
J-206	11.42 (4.80)	405.56	270.00	135.56	58.74
J-207	0.00	410.98	280.00	130.98	56.76
J-21	22.37 (4.80)	414.27	297.50	116.77	50.60
J-217	0.00	407.18	267.84	139.34	60.38
J-22	22.37 (4.80)	413.68	299.91	113.77	49.30
J-226	11.42 (4.80)	383.82	258.96	124.86	54.10
J-227	11.42 (4.80)	405.90	270.00	135.90	58.89
J-228	0.00	422.58	287.77	134.81	58.42
J-23	0.00	412.74	305.00	107.74	46.69
J-234	22.37 (4.80)	419.01	284.93	134.08	58.10
J-236	22.37 (4.80)	409.25	254.79	154.46	66.93
J-237	0.00	408.77	257.27	151.50	65.65
J-238	0.00	408.23	257.84	150.39	65.17
J-24	0.00	414.53	290.00	124.53	53.96
J-240	0.00	408.60	258.38	150.22	65.10
J-241	22.37 (4.80)	408.54	256.48	152.06	65.89
J-242	0.00	408.90	285.73	123.17	53.37
J-246	0.00	408.70	264.14	144.56	62.64
J-249	0.00	408.72	260.99	147.73	64.02
J-25	0.00	422.49	280.00	142.49	61.75
J-253	0.00	408.72	263.44	145.28	62.96
J-258	0.00	408.28	274.64	133.64	57.91
J-259	0.00	408.25	273.33	134.92	58.46
J-26	0.00	422.49	280.00	142.49	61.75
J-264	0.00	408.28	280.00	128.28	55.59
J-265	44.74 (4.80)	408.25	280.00	128.25	55.57
J-266	22.37 (4.80)	407.66	262.95	144.71	62.71
J-27	0.00	422.85	280.00	142.85	61.90
J-276	0.00	408.77	275.96	132.81	57.55
J-277	0.00	406.00	274.93	131.07	56.80
J-278	0.00	404.40	280.00	124.40	53.90
J-279	22.37 (4.80)	403.97	280.00	123.97	53.72
J-28	0.00	412.74	300.00	112.74	48.85
J-281	0.00	404.14	274.53	129.61	56.16
J-284	22.37 (4.80)	399.51	294.97	104.54	45.30
J-285	0.00	407.49	310.00	97.49	42.24
J-286	44.74 (4.80)	407.49	292.33	115.16	49.90
J-287	0.00	407.49	292.76	114.73	49.72
J-29	0.00	422.48	280.00	142.48	61.74
J-298	11.42 (4.80)	399.33	240.00	159.33	69.04
J-3	0.00	423.11	280.00	143.11	62.01
J-30	0.00	422.48	272.79	149.69	64.87
J-302	0.00	405.63	233.85	171.78	74.44
J-303	0.00	405.63	242.80	162.83	70.56
J-304	0.00	405.63	230.00	175.63	76.11
J-309	0.00	411.06	244.20	166.86	72.31
J-31	0.00	422.48	278.41	144.07	62.43

J-319	22.37 (4.80)	411.13	271.11	140.02	60.67
J-32	0.00	410.17	273.00	137.17	59.44
J-320	11.42 (4.80)	407.54	270.00	137.54	59.60
J-325	0.00	414.07	280.00	134.07	58.10
J-328	0.00	415.68	280.00	135.68	58.80
J-33	0.00	410.17	270.00	140.17	60.74
J-333	0.00	408.55	280.00	128.55	55.71
J-334	44.74 (4.80)	410.96	285.09	125.87	54.54
J-338	22.37 (4.80)	418.08	288.64	129.44	56.09
J-34	22.37 (4.80)	422.09	280.00	142.09	61.57
J-340	0.00	418.08	281.35	136.73	59.25
J-341	0.00	410.91	283.16	127.75	55.36
J-346	0.00	411.22	275.38	135.84	58.86
J-347	22.37 (4.80)	411.32	274.79	136.53	59.16
J-348	0.00	411.22	281.34	129.88	56.28
J-349	0.00	411.22	280.00	131.22	56.86
J-35	22.37 (4.80)	422.58	280.00	142.58	61.79
J-350	0.00	411.22	280.00	131.22	56.86
J-351	22.37 (4.80)	412.86	280.00	132.86	57.57
J-353	44.74 (4.80)	416.87	287.75	129.12	55.95
J-354	22.37 (4.80)	412.56	288.61	123.95	53.71
J-358	44.74 (4.80)	416.17	295.52	120.65	52.28
J-36	0.00	406.63	277.00	129.63	56.17
J-360	22.37 (4.80)	414.25	290.00	124.25	53.84
J-361	44.74 (4.80)	415.71	290.00	125.71	54.48
J-362	22.37 (4.80)	415.65	290.00	125.65	54.45
J-364	0.00	414.20	291.03	123.17	53.37
J-367	5.09 (4.80)	410.58	291.54	119.04	51.58
J-368	0.00	414.20	294.06	120.14	52.06
J-369	5.09 (4.80)	412.45	280.00	132.45	57.39
J-37	0.00	406.63	275.00	131.63	57.04
J-376	0.00	414.19	300.79	113.40	49.14
J-377	5.09 (4.80)	413.14	308.07	105.07	45.53
J-38	22.37 (4.80)	415.71	296.07	119.64	51.85
J-381	5.09 (4.80)	413.27	295.71	117.56	50.94
J-385	0.00	408.48	289.30	119.18	51.65
J-386	0.00	404.73	300.97	103.76	44.96
J-387	0.00	404.73	305.78	98.95	42.88
J-388	0.00	395.48	270.00	125.48	54.37
J-389	5.09 (4.80)	395.48	270.00	125.48	54.37
J-391	0.00	396.62	290.61	106.01	45.94
J-392	0.00	395.48	275.02	120.46	52.20
J-395	5.09 (4.80)	404.73	300.00	104.73	45.38
J-4	11.42 (4.80)	409.99	257.30	152.69	66.17
J-40	0.00	406.26	279.00	127.26	55.14
J-405	5.09 (4.80)	399.89	305.01	94.88	41.11
J-41	0.00	407.49	250.00	157.49	68.24
J-410	0.00	404.44	300.00	104.44	45.26
J-411	0.00	404.44	300.00	104.44	45.26
J-413	0.00	404.03	274.34	129.69	56.20
J-42	44.74 (4.80)	415.91	298.30	117.61	50.96
J-422	10.18 (4.80)	396.69	300.00	96.69	41.90
J-43	0.00	405.78	230.00	175.78	76.17
J-431	0.00	396.53	304.83	91.70	39.74
J-434	5.09 (4.80)	395.84	305.07	90.77	39.33
J-435	0.00	395.12	300.59	94.53	40.97
J-437	5.09 (4.80)	394.52	310.00	84.52	36.62
J-438	0.00	395.84	310.00	85.84	37.20
J-439	0.00	395.12	291.34	103.78	44.97
J-44	0.00	402.57	259.82	142.75	61.86
J-441	0.00	396.52	304.63	91.89	39.82
J-442	0.00	396.52	310.00	86.52	37.49
J-444	5.09 (4.80)	395.82	320.00	75.82	32.86
J-445	0.00	406.50	285.39	121.11	52.48
J-447	0.00	406.50	284.02	122.48	53.07
J-448	22.37 (4.80)	405.79	285.15	120.64	52.28
J-455	22.37 (4.80)	406.29	281.89	124.40	53.91
J-456	0.00	405.52	282.32	123.20	53.39
J-458	0.00	408.77	275.18	133.59	57.89
J-462	5.09 (4.80)	405.52	288.46	117.06	50.73
J-465	0.00	405.48	287.11	118.37	51.30

J-469	5.09 (4.80)	405.35	310.00	95.35	41.32
J-47	0.00	415.12	300.00	115.12	49.89
J-470	5.09 (4.80)	405.48	293.43	112.05	48.56
J-471	0.00	405.48	290.00	115.48	50.04
J-476	0.00	405.48	310.00	95.48	41.37
J-479	5.09 (4.80)	405.35	310.00	95.35	41.32
J-48	0.00	415.71	293.36	122.35	53.02
J-480	0.00	405.35	306.99	98.36	42.62
J-481	0.00	405.35	320.00	85.35	36.98
J-484	0.00	405.33	308.25	97.08	42.07
J-487	5.09 (4.80)	404.37	291.23	113.14	49.03
J-49	0.00	409.69	278.91	130.78	56.67
J-491	5.09 (4.80)	405.27	254.57	150.70	65.30
J-5	0.00	410.27	260.00	150.27	65.12
J-502	5.09 (4.80)	402.09	250.00	152.09	65.91
J-504	0.00	408.77	273.97	134.80	58.41
J-507	0.00	408.77	270.69	138.08	59.83
J-508	0.00	405.87	255.88	149.99	65.00
J-51	22.37 (4.80)	409.69	289.90	119.79	51.91
J-518	5.09 (4.80)	405.86	270.92	134.94	58.48
J-519	0.00	405.81	230.00	175.81	76.19
J-522	0.00	405.81	251.78	154.03	66.75
J-528	0.00	405.81	250.37	155.44	67.36
J-529	0.00	405.80	250.00	155.80	67.51
J-53	0.00	409.69	288.83	120.86	52.37
J-532	5.09 (4.80)	404.91	250.00	154.91	67.13
J-533	5.09 (4.80)	405.78	240.00	165.78	71.84
J-534	0.00	405.78	240.00	165.78	71.84
J-535	0.00	405.78	240.00	165.78	71.84
J-536	5.09 (4.80)	404.79	233.67	171.12	74.15
J-538	5.09 (4.80)	405.10	263.02	142.08	61.57
J-54	44.74 (4.80)	411.76	307.84	103.92	45.03
J-541	5.09 (4.80)	405.79	239.97	165.82	71.85
J-548	5.09 (4.80)	405.78	233.10	172.68	74.83
J-549	0.00	405.78	236.88	168.90	73.19
J-550	5.09 (4.80)	404.98	230.00	174.98	75.82
J-572	11.42 (4.80)	303.98	300.00	3.98	1.72
J-58	0.00	415.79	299.00	116.79	50.61
J-6	11.42 (4.80)	410.26	252.85	157.41	68.21
J-61	44.74 (4.80)	404.07	288.72	115.35	49.98
J-62	22.37 (4.80)	410.19	290.00	120.19	52.08
J-63	22.37 (4.80)	410.16	262.49	147.67	63.99
J-7	0.00	409.99	254.10	155.89	67.55
J-76	22.37 (4.80)	410.53	320.00	90.53	39.23
J-8	0.00	410.11	258.16	151.95	65.84
J-86	22.37 (4.80)	406.10	290.00	116.10	50.31
J-87	22.37 (4.80)	404.91	288.51	116.40	50.44
J-88	0.00	413.14	303.82	109.32	47.37
J-9	0.00	410.11	252.47	157.64	68.31
J-96	5.09 (4.80)	411.51	301.83	109.68	47.53
J-99	44.74 (4.80)	413.93	296.50	117.43	50.89
Pump-1	0.00	303.88	280.00	23.88	10.35
Pump-2	0.00	303.84	280.00	23.84	10.33
Pump-3	0.00	303.88	280.00	23.88	10.35
T-1	----	304.00	280.00	24.00	10.40
T-2	----	423.00	280.00	143.00	61.97
Pump-1	0.00	423.16	280.00	143.16	62.04
Pump-2	0.00	423.20	280.00	143.20	62.06
Pump-3	0.00	423.15	280.00	143.15	62.03

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-519	76.19	J-572	1.72
J-43	76.17	Pump-2	10.33
J-304	76.11	Pump-3	10.35
J-550	75.82	Pump-1	10.35
J-548	74.83	J-15	10.37
J-302	74.44	T-1	10.40
J-536	74.15	J-444	32.86
J-186	73.67	J-437	36.62
J-549	73.19	J-481	36.98
J-309	72.31	J-438	37.20
J-541	71.85	J-442	37.49
J-533	71.84	J-76	39.23
J-534	71.84	J-434	39.33
J-535	71.84	J-431	39.74
J-303	70.56	J-441	39.82
J-298	69.04	J-435	40.97
J-9	68.31	G-M3	41.04
J-41	68.24	J-405	41.11
J-6	68.21	J-479	41.32
J-193	68.15	J-469	41.32

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-124	5.74	P-200	0.00
P-206	5.74	P-14	0.02
P-76	4.51	P-25	0.02
P-209	4.30	P-90	0.03
P-213	4.30	P-205	0.05
P-125	4.30	P-58	0.05
P-211	4.30	P-203	0.06
P-210	4.30	P-172	0.06
P-212	4.30	P-176	0.06
P-75	3.52	P-179	0.06
P-122	3.22	P-189	0.06
P-106	3.04	P-202	0.06
P-22	2.60	P-207	0.08
P-129	2.58	P-12	0.10
P-59	2.53	P-139	0.12
P-153	2.48	P-184	0.12
P-112	2.47	P-197	0.12
P-128	2.43	P-103	0.13
P-123	2.33	P-214	0.13
P-77	2.30	P-3	0.13

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-75	9.88	P-200	0.00
P-76	9.71	P-14	0.00
P-206	9.47	P-25	0.00
P-124	9.47	P-90	0.00
P-133	9.09	P-205	0.00
P-209	8.92	P-58	0.00
P-213	8.92	P-203	0.01
P-125	8.92	P-189	0.01
P-211	8.92	P-202	0.01

P-210	8.90	P-172	0.01
P-212	8.90	P-176	0.01
P-122	8.38	P-179	0.01
P-129	7.76	P-207	0.01
P-106	7.52	P-12	0.02
P-128	6.95	P-139	0.02
P-123	6.44	P-197	0.02
P-70	6.42	P-184	0.02
P-102	6.42	P-221	0.03
P-104	6.42	P-30	0.03
P-64	6.42	P-214	0.03

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE

T-1	4561.20	
T-2	-2487.31	

NET SYSTEM INFLOW = 4561.20
 NET SYSTEM OUTFLOW = -2487.31
 NET SYSTEM DEMAND = 2073.89

***** HYDRAULIC ANALYSIS COMPLETED *****


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* * * * * K Y P I P E 4 * * * * *
*
* University of Kentucky Network Modeling Software
*
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* Version 1.200 - 01/26/2000
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\HEMPWI-2.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\HEMPWI-2.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\HEMPWI-2.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-1	315.25	6.00	100.0000	0.00
P-10	J-14	J-10	254.76	8.00	100.0000	0.00
P-100	J-303	J-302	828.95	1.50	100.0000	0.00
P-101	J-302	J-304	236.07	2.00	100.0000	0.00
P-102	J-302	J-309	845.65	3.00	100.0000	0.00
P-103	J-309	J-319	2081.37	6.00	100.0000	0.00
P-104	J-320	J-319	558.79	3.00	100.0000	0.00
P-105	J-325	J-236	1308.92	10.00	100.0000	0.00
P-106	J-328	J-325	214.24	12.00	100.0000	0.00
P-107	J-238	J-333	1677.55	8.00	100.0000	0.00
P-108	J-334	J-169	833.01	8.00	100.0000	0.00
P-109	J-234	J-338	325.13	12.00	100.0000	0.00
P-11	J-17	J-18	355.13	2.00	100.0000	0.00
P-110	J-338	J-328	909.10	12.00	100.0000	0.00
P-111	J-338	J-340	357.42	6.00	100.0000	0.00
P-112	J-333	J-341	460.78	12.00	100.0000	0.00
P-113	J-341	J-334	94.85	12.00	100.0000	0.00
P-114	J-341	J-346	433.84	6.00	100.0000	0.00
P-115	J-347	J-319	504.71	6.00	100.0000	0.00
P-116	J-347	J-346	150.42	6.00	100.0000	0.00
P-117	J-346	J-348	452.76	6.00	100.0000	0.00
P-118	J-348	J-349	290.67	6.00	100.0000	0.00
P-119	J-349	J-350	205.72	2.00	100.0000	0.00
P-12	J-19	J-17	183.94	6.00	100.0000	0.00
P-120	J-325	J-351	328.06	8.00	100.0000	0.00
P-121	J-351	J-347	559.11	8.00	100.0000	0.00
P-122	J-234	J-353	254.83	12.00	100.0000	0.00
P-123	J-334	J-354	247.87	8.00	100.0000	0.00
P-124	J-3	T-2	11.47	20.00	100.0000	0.00
P-125	J-3	Pump-1	5.94	14.00	100.0000	0.00
P-126	J-353	J-358	350.38	8.00	100.0000	0.00
P-127	J-358	J-38	269.88	8.00	100.0000	0.00
P-128	J-354	J-360	243.22	8.00	100.0000	0.00
P-129	J-360	J-353	338.83	8.00	100.0000	0.00

P-13	J-19	J-21	657.71	6.00	100.0000	0.00
P-130	J-358	J-361	341.14	6.00	100.0000	0.00
P-131	J-361	J-362	251.02	6.00	100.0000	0.00
P-132	J-361	J-360	351.45	4.00	100.0000	0.00
P-133	J-354	J-362	352.30	4.00	100.0000	0.00
P-134	J-16	J-362	282.23	2.00	100.0000	0.00
P-135	J-21	J-11	576.50	6.00	100.0000	0.00
P-136	J-364	J-367	620.85	2.00	100.0000	0.00
P-137	J-364	J-368	103.65	6.00	100.0000	0.00
P-138	J-369	J-368	1216.25	2.00	100.0000	0.00
P-139	J-368	J-376	178.68	6.00	100.0000	0.00
P-14	J-48	J-16	444.47	6.00	100.0000	0.00
P-140	J-377	J-376	731.35	2.00	100.0000	0.00
P-141	J-381	J-376	642.56	2.00	100.0000	0.00
P-142	J-328	J-385	1387.92	3.00	100.0000	0.00
P-143	J-386	J-387	159.86	2.00	100.0000	0.00
P-144	J-388	J-389	73.73	2.00	100.0000	0.00
P-145	J-389	J-391	794.08	2.00	100.0000	0.00
P-146	J-389	J-392	153.38	2.00	100.0000	0.00
P-147	J-385	J-395	723.50	3.00	100.0000	0.00
P-148	J-395	J-386	1092.31	1.50	100.0000	0.00
P-149	J-405	J-410	780.07	2.00	100.0000	0.00
P-15	J-25	J-26	17.76	2.00	100.0000	0.00
P-150	J-410	J-411	352.80	1.50	100.0000	0.00
P-151	J-410	J-395	50.96	2.00	100.0000	0.00
P-152	J-333	J-413	1247.88	8.00	100.0000	0.00
P-153	J-413	J-422	1423.13	6.00	100.0000	0.00
P-154	J-422	J-391	803.67	4.00	100.0000	0.00
P-155	J-391	J-431	1663.98	4.00	100.0000	0.00
P-156	J-431	J-434	955.76	3.00	100.0000	0.00
P-157	J-434	J-435	498.96	2.00	100.0000	0.00
P-158	J-435	J-437	423.36	2.00	100.0000	0.00
P-159	J-434	J-438	304.30	2.00	100.0000	0.00
P-16	J-27	J-25	154.27	10.00	100.0000	0.00
P-160	J-435	J-439	222.51	4.00	100.0000	0.00
P-161	J-431	J-441	249.24	2.00	100.0000	0.00
P-162	J-441	J-442	559.25	2.00	100.0000	0.00
P-163	J-441	J-444	483.18	2.00	100.0000	0.00
P-164	J-445	J-238	868.59	10.00	100.0000	0.00
P-165	J-447	J-445	57.96	2.00	100.0000	0.00
P-166	J-445	J-448	228.21	3.00	100.0000	0.00
P-167	J-277	J-455	925.21	8.00	100.0000	0.00
P-168	J-455	J-445	121.78	10.00	100.0000	0.00
P-169	J-455	J-456	453.47	8.00	100.0000	0.00
P-17	J-25	J-29	88.77	6.00	100.0000	0.00
P-170	J-242	J-276	719.95	8.00	100.0000	0.00
P-171	J-276	J-458	327.44	8.00	100.0000	0.00
P-172	J-456	J-462	377.99	6.00	100.0000	0.00
P-173	J-456	J-413	1843.98	8.00	100.0000	0.00
P-174	J-456	J-465	202.93	12.00	100.0000	0.00
P-175	J-465	J-469	981.82	12.00	100.0000	0.00
P-176	J-465	J-470	469.69	6.00	100.0000	0.00
P-177	J-470	J-471	187.69	2.00	100.0000	0.00
P-178	J-470	J-476	1163.45	2.00	100.0000	0.00
P-179	J-469	J-479	531.82	6.00	100.0000	0.00
P-18	J-29	J-30	195.27	6.00	100.0000	0.00
P-180	J-479	J-480	355.28	2.00	100.0000	0.00
P-181	J-479	J-481	408.20	2.00	100.0000	0.00
P-182	J-469	J-484	473.01	10.00	100.0000	0.00
P-183	J-484	J-487	667.87	2.00	100.0000	0.00
P-184	J-484	J-491	2165.33	10.00	100.0000	0.00
P-185	J-491	J-502	2217.23	2.00	100.0000	0.00
P-186	J-458	J-504	147.27	2.00	100.0000	0.00
P-187	J-458	J-507	668.94	8.00	100.0000	0.00
P-188	J-508	J-277	1691.16	8.00	100.0000	0.00
P-189	J-508	J-518	1217.87	6.00	100.0000	0.00
P-19	J-31	J-29	122.08	2.00	100.0000	0.00
P-190	J-519	J-522	969.00	2.00	100.0000	0.00
P-191	J-522	J-508	921.86	8.00	100.0000	0.00
P-192	J-522	J-528	61.46	8.00	100.0000	0.00
P-193	J-528	J-529	144.86	6.00	100.0000	0.00

P-194	J-529	J-532	615.35	2.00	100.0000	0.00
P-195	J-529	J-533	252.59	6.00	100.0000	0.00
P-196	J-533	J-534	389.92	2.00	100.0000	0.00
P-197	J-533	J-535	307.77	6.00	100.0000	0.00
P-198	J-535	J-536	687.87	2.00	100.0000	0.00
P-199	J-535	J-538	473.11	2.00	100.0000	0.00
P-2	J-2	J-5	474.91	6.00	100.0000	0.00
P-20	J-29	J-34	511.89	4.00	100.0000	0.00
P-200	J-533	J-549	498.16	6.00	100.0000	0.00
P-201	J-528	J-541	462.15	6.00	100.0000	0.00
P-202	J-541	J-548	885.58	6.00	100.0000	0.00
P-203	J-541	J-549	328.31	6.00	100.0000	0.00
P-204	J-549	J-550	561.42	6.00	100.0000	0.00
P-205-XX	T-1	J-572	7860.71	10.00	100.0000	0.00
P-206	T-1	J-15	7.63	20.00	100.0000	0.00
P-207	J-1	J-4	462.87	6.00	100.0000	0.00
P-208	J-194	J-207	10.75	6.00	100.0000	0.00
P-209	J-3	Pump-3	5.14	14.00	100.0000	0.00
P-21	J-35	J-27	189.92	18.00	100.0000	0.00
P-210	J-15	Pump-2	10.09	14.00	100.0000	0.00
P-211	Pump-1	J-15	5.04	14.00	100.0000	0.00
P-212	Pump-2	J-3	10.81	14.00	100.0000	0.00
P-213	Pump-3	J-15	5.46	14.00	100.0000	0.00
P-214	J-189	J-187	900.00	6.00	100.0000	0.00
P-215	J-11	J-364	166.53	6.00	100.0000	0.00
P-216	J-11	J-12	704.96	2.00	100.0000	0.00
P-217	J-20	J-99	214.75	8.00	100.0000	0.00
P-218	J-20	J-24	533.16	6.00	100.0000	0.00
P-219	J-23	J-54	529.86	8.00	100.0000	0.00
P-22	J-27	T-2	70.66	20.00	100.0000	0.00
P-220	J-23	J-28	397.39	2.00	100.0000	0.00
P-221	J-32	J-62	613.78	8.00	100.0000	0.00
P-222	J-32	J-33	629.85	2.00	100.0000	0.00
P-223	J-36	J-40	171.17	6.00	100.0000	0.00
P-224	J-36	J-37	337.95	2.00	100.0000	0.00
P-225	J-287	J-41	2385.33	2.00	100.0000	0.00
P-226	J-40	J-153	371.12	2.50	100.0000	0.00
P-227	J-548	J-43	1900.00	2.00	100.0000	0.00
P-228	J-183	G-M1	1454.66	8.00	100.0000	0.00
P-229	J-143	G-M2	1164.54	6.00	100.0000	0.00
P-23	J-38	J-19	767.97	6.00	100.0000	0.00
P-230	J-491	G-M3	768.01	10.00	100.0000	0.00
P-232	J-47	J-42	620.65	6.00	100.0000	0.00
P-238	J-58	J-42	1326.60	6.00	100.0000	0.00
P-24	J-42	J-25	3142.84	10.00	100.0000	0.00
P-25	J-48	J-38	121.47	6.00	100.0000	0.00
P-26	J-49	J-51	256.02	2.00	100.0000	0.00
P-27	J-51	J-53	222.20	2.00	100.0000	0.00
P-28	J-54	J-61	2793.09	4.00	100.0000	0.00
P-29	J-51	J-62	159.60	3.00	100.0000	0.00
P-3	J-5	J-6	297.38	6.00	100.0000	0.00
P-30	J-63	J-32	322.24	8.00	100.0000	0.00
P-31	J-62	J-76	1716.40	8.00	100.0000	0.00
P-32	J-76	J-54	1704.98	8.00	100.0000	0.00
P-33	J-76	J-86	1607.52	4.00	100.0000	0.00
P-34	J-86	J-87	386.82	3.00	100.0000	0.00
P-35	J-88	J-23	219.26	8.00	100.0000	0.00
P-36	J-88	J-96	1136.02	2.00	100.0000	0.00
P-37	J-42	J-20	495.65	8.00	100.0000	0.00
P-38	J-99	J-88	406.40	8.00	100.0000	0.00
P-39	J-99	J-101	569.50	2.00	100.0000	0.00
P-4	J-4	J-7	152.48	2.00	100.0000	0.00
P-40	J-102	J-101	294.31	1.50	100.0000	0.00
P-41	J-22	J-104	227.16	6.00	100.0000	0.00
P-42	J-104	J-47	1022.52	6.00	100.0000	0.00
P-43	J-104	J-119	1945.50	4.00	100.0000	0.00
P-44	J-17	J-120	196.90	4.00	100.0000	0.00
P-45	J-120	J-22	22.72	8.00	100.0000	0.00
P-46	J-120	J-129	3672.76	4.00	100.0000	0.00
P-47	J-38	J-131	201.14	6.00	100.0000	0.00
P-48	J-131	J-58	597.75	6.00	100.0000	0.00

P-49	J-131	J-139	437.26	2.00	100.0000	0.00
P-5	J-5	J-8	178.38	2.00	100.0000	0.00
P-50	J-143	J-1	1063.75	6.00	100.0000	0.00
P-51	J-143	J-36	1184.00	6.00	100.0000	0.00
P-52	J-143	J-154	942.86	6.00	100.0000	0.00
P-53	J-155	J-154	284.72	2.00	100.0000	0.00
P-54	J-14	J-157	27.84	8.00	100.0000	0.00
P-55	J-157	J-158	62.13	8.00	100.0000	0.00
P-56	J-158	J-161	659.07	6.00	100.0000	0.00
P-57	J-161	J-168	1390.51	2.00	100.0000	0.00
P-58	J-169	J-14	602.60	8.00	100.0000	0.00
P-59	J-157	J-171	242.28	10.00	100.0000	0.00
P-6	J-8	J-4	127.99	2.00	100.0000	0.00
P-60	J-169	J-171	346.03	6.00	100.0000	0.00
P-61	J-171	J-172	571.40	2.00	100.0000	0.00
P-62	J-158	J-189	2854.86	8.00	100.0000	0.00
P-63	J-184	J-186	957.32	4.00	100.0000	0.00
P-64	J-44	J-226	2919.07	3.00	100.0000	0.00
P-65	J-189	J-183	182.01	8.00	100.0000	0.00
P-65-1	J-189	J-192	1191.00	6.00	100.0000	0.00
P-66	J-192	J-193	706.00	2.00	100.0000	0.00
P-67	J-194	J-14	1007.96	6.00	100.0000	0.00
P-68	J-184	J-199	1034.96	6.00	100.0000	0.00
P-69	J-199	J-194	626.76	6.00	100.0000	0.00
P-7	J-8	J-9	160.09	2.00	100.0000	0.00
P-70	J-199	J-206	804.73	3.00	100.0000	0.00
P-71	J-207	J-217	1179.47	3.00	100.0000	0.00
P-72	J-217	J-44	717.59	3.00	100.0000	0.00
P-73	J-227	J-217	199.86	3.00	100.0000	0.00
P-74	J-228	J-35	716.48	8.00	100.0000	0.00
P-75	J-171	J-234	592.28	12.00	100.0000	0.00
P-76	J-234	J-35	367.82	16.00	100.0000	0.00
P-77	J-236	J-237	75.84	8.00	100.0000	0.00
P-78	J-238	J-240	82.65	8.00	100.0000	0.00
P-79	J-240	J-237	30.69	8.00	100.0000	0.00
P-8	J-10	J-2	607.39	8.00	100.0000	0.00
P-80	J-240	J-241	622.03	6.00	100.0000	0.00
P-81	J-236	J-242	863.90	8.00	100.0000	0.00
P-82	J-242	J-246	847.96	6.00	100.0000	0.00
P-83	J-246	J-249	587.14	6.00	100.0000	0.00
P-84	J-237	J-249	1225.86	6.00	100.0000	0.00
P-85	J-249	J-253	103.85	6.00	100.0000	0.00
P-86	J-246	J-258	971.12	6.00	100.0000	0.00
P-87	J-258	J-259	87.18	6.00	100.0000	0.00
P-88	J-258	J-264	578.05	2.00	100.0000	0.00
P-89	J-265	J-266	770.41	4.00	100.0000	0.00
P-9	J-10	J-13	387.24	3.00	100.0000	0.00
P-90	J-259	J-265	752.50	6.00	100.0000	0.00
P-91	J-265	J-276	694.72	6.00	100.0000	0.00
P-92	J-277	J-278	584.71	4.00	100.0000	0.00
P-93	J-279	J-278	559.03	4.00	100.0000	0.00
P-94	J-278	J-281	340.76	4.00	100.0000	0.00
P-95	J-281	J-284	1493.84	3.00	100.0000	0.00
P-96	J-285	J-286	228.59	6.00	100.0000	0.00
P-97	J-287	J-286	107.43	6.00	100.0000	0.00
P-98	J-286	J-259	1987.34	6.00	100.0000	0.00
P-99	J-298	J-302	980.60	3.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
150.00	0.00	75.00 (Default)
142.00	800.00	75.00 (Default)
106.00	1800.00	75.00 (Default)

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
G-M1		0.00	260.00	
G-M2		0.00	263.00	
G-M3		0.00	254.00	
J-1		0.00	267.48	
J-10		0.00	271.75	
J-101		1.06	309.41	
J-102		0.00	310.00	
J-104		4.66	304.60	
J-11		0.00	292.00	
J-119		1.06	290.00	
J-12		0.00	295.00	
J-120		0.00	300.60	
J-129		9.32	304.02	
J-13		2.38	264.48	
J-131		0.00	300.00	
J-139		0.00	291.98	
J-14		2.38	280.00	
J-143		0.00	263.30	
J-15		0.00	280.00	
J-153		2.38	281.83	
J-154		1.19	260.00	
J-155		1.19	260.00	
J-157		0.00	280.00	
J-158		0.00	280.00	
J-16		0.00	291.00	
J-161		0.00	270.00	
J-168		0.00	263.08	
J-169		0.00	280.00	
J-17		0.00	303.37	
J-171		0.00	280.00	
J-172		0.00	271.79	
J-18		0.00	310.00	
J-183		19.11	259.92	
J-184		0.00	263.89	
J-186		2.38	240.47	
J-187		2.38	240.00	
J-189		0.00	260.00	
J-19		9.32	304.63	
J-192		4.76	250.00	
J-193		0.00	237.00	
J-194		0.00	280.00	
J-199		4.76	276.97	
J-2		2.38	270.00	
J-20		0.00	297.00	

J-206	2.38	270.00
J-207	0.00	280.00
J-21	4.66	297.50
J-217	0.00	267.84
J-22	4.66	299.91
J-226	2.38	258.96
J-227	2.38	270.00
J-228	0.00	287.77
J-23	0.00	305.00
J-234	4.66	284.93
J-236	4.66	254.79
J-237	0.00	257.27
J-238	0.00	257.84
J-24	0.00	290.00
J-240	0.00	258.38
J-241	4.66	256.48
J-242	0.00	285.73
J-246	0.00	264.14
J-249	0.00	260.99
J-25	0.00	280.00
J-253	0.00	263.44
J-258	0.00	274.64
J-259	0.00	273.33
J-26	0.00	280.00
J-264	0.00	280.00
J-265	9.32	280.00
J-266	4.66	262.95
J-27	0.00	280.00
J-276	0.00	275.96
J-277	0.00	274.93
J-278	0.00	280.00
J-279	4.66	280.00
J-28	0.00	300.00
J-281	0.00	274.53
J-284	4.66	294.97
J-285	0.00	310.00
J-286	9.32	292.33
J-287	16.73	292.76
J-29	0.00	280.00
J-298	2.38	240.00
J-3	0.00	280.00
J-30	0.00	272.79
J-302	0.00	233.85
J-303	0.00	242.80
J-304	0.00	230.00
J-309	0.00	244.20
J-31	0.00	278.41
J-319	4.66	271.11
J-32	0.00	273.00
J-320	2.38	270.00
J-325	0.00	280.00
J-328	0.00	280.00
J-33	0.00	270.00
J-333	0.00	280.00
J-334	9.32	285.09
J-338	4.66	288.64
J-34	4.66	280.00
J-340	0.00	281.35
J-341	0.00	283.16
J-346	0.00	275.38
J-347	4.66	274.79
J-348	0.00	281.34
J-349	0.00	280.00
J-35	4.66	280.00
J-350	0.00	280.00
J-351	4.66	280.00
J-353	9.32	287.75
J-354	4.66	288.61
J-358	9.32	295.52
J-36	0.00	277.00
J-360	4.66	290.00

J-361	9.32	290.00
J-362	4.66	290.00
J-364	0.00	291.03
J-367	1.06	291.54
J-368	0.00	294.06
J-369	1.06	280.00
J-37	0.00	275.00
J-376	0.00	300.79
J-377	1.06	308.07
J-38	4.66	296.07
J-381	1.06	295.71
J-385	0.00	289.30
J-386	0.00	300.97
J-387	0.00	305.78
J-388	0.00	270.00
J-389	1.06	270.00
J-391	0.00	290.61
J-392	0.00	275.02
J-395	1.06	300.00
J-4	2.38	257.30
J-40	16.73	279.00
J-405	1.06	305.01
J-41	0.00	250.00
J-410	0.00	300.00
J-411	0.00	300.00
J-413	0.00	274.34
J-42	9.32	298.30
J-422	2.12	300.00
J-43	0.00	230.00
J-431	0.00	304.83
J-434	1.06	305.07
J-435	0.00	300.59
J-437	1.06	310.00
J-438	0.00	310.00
J-439	0.00	291.34
J-44	0.00	259.82
J-441	0.00	304.63
J-442	0.00	310.00
J-444	1.06	320.00
J-445	0.00	285.39
J-447	0.00	284.02
J-448	4.66	285.15
J-455	4.66	281.89
J-456	0.00	282.32
J-458	0.00	275.18
J-462	1.06	288.46
J-465	0.00	287.11
J-469	1.06	310.00
J-47	16.73	300.00
J-470	1.06	293.43
J-471	0.00	290.00
J-476	0.00	310.00
J-479	1.06	310.00
J-48	0.00	293.36
J-480	0.00	306.99
J-481	0.00	320.00
J-484	0.00	308.25
J-487	1.06	291.23
J-49	0.00	278.91
J-491	1.06	254.57
J-5	0.00	260.00
J-502	1.06	250.00
J-504	0.00	273.97
J-507	0.00	270.69
J-508	0.00	255.88
J-51	4.66	289.90
J-518	1.06	270.92
J-519	0.00	230.00
J-522	0.00	251.78
J-528	0.00	250.37
J-529	0.00	250.00

J-53	0.00	288.83	
J-532	1.06	250.00	
J-533	1.06	240.00	
J-534	0.00	240.00	
J-535	0.00	240.00	
J-536	1.06	233.67	
J-538	1.06	263.02	
J-54	9.32	307.84	
J-541	1.06	239.97	
J-548	17.79	233.10	
J-549	0.00	236.88	
J-550	17.79	230.00	
J-572	2.38	300.00	
J-58	16.73	299.00	
J-6	2.38	252.85	
J-61	9.32	288.72	
J-62	4.66	290.00	
J-63	4.66	262.49	
J-7	0.00	254.10	
J-76	4.66	320.00	
J-8	0.00	258.16	
J-86	4.66	290.00	
J-87	4.66	288.51	
J-88	0.00	303.82	
J-9	0.00	252.47	
J-96	1.06	301.83	
J-99	9.32	296.50	
Pump-1	0.00	280.00	
Pump-2	0.00	280.00	
Pump-3	0.00	280.00	
T-1	----	280.00	304.00
T-2	----	280.00	423.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 233
 NUMBER OF END NODES(j) = 216
 NUMBER OF PRIMARY LOOPS(l) = 16
 NUMBER OF SUPPLY NODES(f) = 2
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 2)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00321

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	J-2	J-1	162.55	1.31	0.00	1.84	4.17
P-10	J-14	J-10	205.85	0.41	0.00	1.31	1.59
P-100	J-303	J-302	0.00	0.00	0.00	0.00	0.00
P-101	J-302	J-304	0.00	0.00	0.00	0.00	0.00
P-102	J-302	J-309	-11.42	0.75	0.00	0.52	0.89
P-103	J-309	J-319	-11.42	0.06	0.00	0.13	0.03
P-104	J-320	J-319	-11.42	0.50	0.00	0.52	0.89
P-105	J-325	J-236	550.62	4.34	0.00	2.25	3.32
P-106	J-328	J-325	697.14	0.45	0.00	1.98	2.11
P-107	J-238	J-333	-241.16	3.58	0.00	1.54	2.13
P-108	J-334	J-169	-190.38	1.15	0.00	1.22	1.38
P-109	J-234	J-338	729.68	0.75	0.00	2.07	2.30
P-11	J-17	J-18	0.00	0.00	0.00	0.00	0.00
P-110	J-338	J-328	707.32	1.97	0.00	2.01	2.17
P-111	J-338	J-340	0.00	0.00	0.00	0.00	0.00
P-112	J-333	J-341	-527.19	0.58	0.00	1.50	1.26
P-113	J-341	J-334	-470.62	0.10	0.00	1.33	1.02
P-114	J-341	J-346	-56.57	0.26	0.00	0.64	0.59
P-115	J-347	J-319	45.22	0.20	0.00	0.51	0.39
P-116	J-347	J-346	56.57	0.09	0.00	0.64	0.59
P-117	J-346	J-348	0.00	0.00	0.00	0.00	0.00
P-118	J-348	J-349	0.00	0.00	0.00	0.00	0.00
P-119	J-349	J-350	0.00	0.00	0.00	0.00	0.00
P-12	J-19	J-17	53.31	0.10	0.00	0.60	0.53
P-120	J-325	J-351	146.52	0.28	0.00	0.94	0.85
P-121	J-351	J-347	124.15	0.35	0.00	0.79	0.62
P-122	J-234	J-353	788.96	0.68	0.00	2.24	2.66
P-123	J-334	J-354	-324.97	0.92	0.00	2.07	3.70
P-124	J-3	T-2	4559.53	0.07	0.00	4.66	5.69
P-125	J-3	Pump-1	-1520.16	0.03	0.00	3.17	4.23
P-126	J-353	J-358	375.16	1.69	0.00	2.39	4.83
P-127	J-358	J-38	258.70	0.66	0.00	1.65	2.43
P-128	J-354	J-360	-318.08	0.87	0.00	2.03	3.56
P-129	J-360	J-353	-369.07	1.59	0.00	2.36	4.69
P-13	J-19	J-21	42.72	0.23	0.00	0.48	0.35
P-130	J-358	J-361	71.72	0.31	0.00	0.81	0.92
P-131	J-361	J-362	55.60	0.14	0.00	0.63	0.57
P-132	J-361	J-360	-28.62	0.42	0.00	0.73	1.20
P-133	J-354	J-362	-29.26	0.44	0.00	0.75	1.25
P-134	J-16	J-362	-3.97	0.26	0.00	0.41	0.91
P-135	J-21	J-11	20.35	0.05	0.00	0.23	0.09
P-136	J-364	J-367	5.09	0.89	0.00	0.52	1.44
P-137	J-364	J-368	15.26	0.01	0.00	0.17	0.05
P-138	J-369	J-368	-5.09	1.75	0.00	0.52	1.44
P-139	J-368	J-376	10.18	0.00	0.00	0.12	0.02
P-14	J-48	J-16	-3.97	0.00	0.00	0.05	0.00
P-140	J-377	J-376	-5.09	1.05	0.00	0.52	1.44
P-141	J-381	J-376	-5.09	0.92	0.00	0.52	1.44
P-142	J-328	J-385	10.18	1.00	0.00	0.46	0.72
P-143	J-386	J-387	0.00	0.00	0.00	0.00	0.00
P-144	J-388	J-389	0.00	0.00	0.00	0.00	0.00
P-145	J-389	J-391	-5.09	1.14	0.00	0.52	1.44
P-146	J-389	J-392	0.00	0.00	0.00	0.00	0.00
P-147	J-385	J-395	10.18	0.52	0.00	0.46	0.72
P-148	J-395	J-386	0.00	0.00	0.00	0.00	0.00
P-149	J-405	J-410	-5.09	1.12	0.00	0.52	1.44
P-15	J-25	J-26	0.00	0.00	0.00	0.00	0.00
P-150	J-410	J-411	0.00	0.00	0.00	0.00	0.00
P-151	J-410	J-395	-5.09	0.07	0.00	0.52	1.44
P-152	J-333	J-413	286.03	3.65	0.00	1.83	2.92
P-153	J-413	J-422	30.53	0.27	0.00	0.35	0.19
P-154	J-422	J-391	20.35	0.51	0.00	0.52	0.64
P-155	J-391	J-431	15.26	0.63	0.00	0.39	0.38

P-156	J-431	J-434	10.18	0.69	0.00	0.46	0.72
P-157	J-434	J-435	5.09	0.72	0.00	0.52	1.44
P-158	J-435	J-437	5.09	0.61	0.00	0.52	1.44
P-159	J-434	J-438	0.00	0.00	0.00	0.00	0.00
P-16	J-27	J-25	448.01	0.35	0.00	1.83	2.26
P-160	J-435	J-439	0.00	0.00	0.00	0.00	0.00
P-161	J-431	J-441	5.09	0.36	0.00	0.52	1.44
P-162	J-441	J-442	0.00	0.00	0.00	0.00	0.00
P-163	J-441	J-444	5.09	0.69	0.00	0.52	1.44
P-164	J-445	J-238	-554.90	2.92	0.00	2.27	3.37
P-165	J-447	J-445	0.00	0.00	0.00	0.00	0.00
P-166	J-445	J-448	22.37	0.71	0.00	1.02	3.10
P-167	J-277	J-455	-246.05	2.05	0.00	1.57	2.21
P-168	J-455	J-445	-532.53	0.38	0.00	2.18	3.12
P-169	J-455	J-456	264.11	1.14	0.00	1.69	2.52
P-17	J-25	J-29	22.37	0.01	0.00	0.25	0.11
P-170	J-242	J-276	103.24	0.32	0.00	0.66	0.44
P-171	J-276	J-458	0.00	0.00	0.00	0.00	0.00
P-172	J-456	J-462	5.09	0.00	0.00	0.06	0.01
P-173	J-456	J-413	-255.50	4.37	0.00	1.63	2.37
P-174	J-456	J-465	514.53	0.24	0.00	1.46	1.20
P-175	J-465	J-469	509.44	1.16	0.00	1.45	1.18
P-176	J-465	J-470	5.09	0.00	0.00	0.06	0.01
P-177	J-470	J-471	0.00	0.00	0.00	0.00	0.00
P-178	J-470	J-476	0.00	0.00	0.00	0.00	0.00
P-179	J-469	J-479	5.09	0.00	0.00	0.06	0.01
P-18	J-29	J-30	0.00	0.00	0.00	0.00	0.00
P-180	J-479	J-480	0.00	0.00	0.00	0.00	0.00
P-181	J-479	J-481	0.00	0.00	0.00	0.00	0.00
P-182	J-469	J-484	499.26	1.31	0.00	2.04	2.77
P-183	J-484	J-487	5.09	0.96	0.00	0.52	1.44
P-184	J-484	J-491	494.18	5.88	0.00	2.02	2.72
P-185	J-491	J-502	5.09	3.18	0.00	0.52	1.44
P-186	J-458	J-504	0.00	0.00	0.00	0.00	0.00
P-187	J-458	J-507	0.00	0.00	0.00	0.00	0.00
P-188	J-508	J-277	-201.31	2.58	0.00	1.28	1.53
P-189	J-508	J-518	5.09	0.01	0.00	0.06	0.01
P-19	J-31	J-29	0.00	0.00	0.00	0.00	0.00
P-190	J-519	J-522	0.00	0.00	0.00	0.00	0.00
P-191	J-522	J-508	-196.22	1.34	0.00	1.25	1.46
P-192	J-522	J-528	196.22	0.09	0.00	1.25	1.46
P-193	J-528	J-529	88.59	0.20	0.00	1.01	1.35
P-194	J-529	J-532	5.09	0.88	0.00	0.52	1.44
P-195	J-529	J-533	83.50	0.31	0.00	0.95	1.21
P-196	J-533	J-534	0.00	0.00	0.00	0.00	0.00
P-197	J-533	J-535	10.18	0.01	0.00	0.12	0.02
P-198	J-535	J-536	5.09	0.99	0.00	0.52	1.44
P-199	J-535	J-538	5.09	0.68	0.00	0.52	1.44
P-2	J-2	J-5	20.45	0.04	0.00	0.23	0.09
P-20	J-29	J-34	22.37	0.39	0.00	0.57	0.76
P-200	J-533	J-549	68.24	0.42	0.00	0.77	0.84
P-201	J-528	J-541	107.63	0.90	0.00	1.22	1.94
P-202	J-541	J-548	85.39	1.12	0.00	0.97	1.27
P-203	J-541	J-549	17.15	0.02	0.00	0.19	0.06
P-204	J-549	J-550	85.39	0.71	0.00	0.97	1.27
P-205	T-1	J-572	11.42	0.02	0.00	0.05	0.00
P-206	T-1	J-15	4559.53	0.04	0.00	4.66	5.69
P-207	J-1	J-4	2.40	0.00	0.00	0.03	0.00
P-208	J-194	J-207	22.85	0.00	0.00	0.26	0.11
P-209	J-3	Pump-3	-1520.19	0.02	0.00	3.17	4.23
P-21	J-35	J-27	-2370.58	0.54	0.00	2.99	2.83
P-210	J-15	Pump-2	1519.18	0.04	0.00	3.17	4.22
P-211	Pump-1	J-15	-1520.16	0.02	0.00	3.17	4.23
P-212	Pump-2	J-3	1519.18	0.05	0.00	3.17	4.22
P-213	Pump-3	J-15	-1520.19	0.02	0.00	3.17	4.23
P-214	J-189	J-187	11.42	0.03	0.00	0.13	0.03
P-215	J-11	J-364	20.35	0.01	0.00	0.23	0.09
P-216	J-11	J-12	0.00	0.00	0.00	0.00	0.00
P-217	J-20	J-99	278.59	0.60	0.00	1.78	2.78
P-218	J-20	J-24	0.00	0.00	0.00	0.00	0.00
P-219	J-23	J-54	223.68	0.98	0.00	1.43	1.85

P-22	J-27	T-2	-2818.59	0.16	0.00	2.88	2.33
P-220	J-23	J-28	0.00	0.00	0.00	0.00	0.00
P-221	J-32	J-62	-22.37	0.02	0.00	0.14	0.03
P-222	J-32	J-33	0.00	0.00	0.00	0.00	0.00
P-223	J-36	J-40	91.73	0.25	0.00	1.04	1.44
P-224	J-36	J-37	0.00	0.00	0.00	0.00	0.00
P-225	J-287	J-41	0.00	0.00	0.00	0.00	0.00
P-226	J-40	J-153	11.42	0.80	0.00	0.75	2.17
P-227	J-548	J-43	0.00	0.00	0.00	0.00	0.00
P-228	J-183	G-M1	205.00	2.30	0.00	1.31	1.58
P-229	J-143	G-M2	57.00	0.70	0.00	0.65	0.60
P-23	J-38	J-19	140.77	2.45	0.00	1.60	3.19
P-230	J-491	G-M3	484.00	2.01	0.00	1.98	2.61
P-232	J-47	J-42	-121.55	1.51	0.00	1.38	2.43
P-238	J-58	J-42	19.24	0.11	0.00	0.22	0.08
P-24	J-42	J-25	-425.64	6.47	0.00	1.74	2.06
P-25	J-48	J-38	3.97	0.00	0.00	0.05	0.00
P-26	J-49	J-51	0.00	0.00	0.00	0.00	0.00
P-27	J-51	J-53	0.00	0.00	0.00	0.00	0.00
P-28	J-54	J-61	44.74	7.69	0.00	1.14	2.75
P-29	J-51	J-62	-22.37	0.49	0.00	1.02	3.10
P-3	J-5	J-6	11.42	0.01	0.00	0.13	0.03
P-30	J-63	J-32	-22.37	0.01	0.00	0.14	0.03
P-31	J-62	J-76	-67.10	0.34	0.00	0.43	0.20
P-32	J-76	J-54	-134.21	1.23	0.00	0.86	0.72
P-33	J-76	J-86	44.74	4.42	0.00	1.14	2.75
P-34	J-86	J-87	22.37	1.20	0.00	1.02	3.10
P-35	J-88	J-23	223.68	0.41	0.00	1.43	1.85
P-36	J-88	J-96	5.09	1.63	0.00	0.52	1.44
P-37	J-42	J-20	278.59	1.38	0.00	1.78	2.78
P-38	J-99	J-88	228.77	0.79	0.00	1.46	1.93
P-39	J-99	J-101	5.09	0.82	0.00	0.52	1.44
P-4	J-4	J-7	0.00	0.00	0.00	0.00	0.00
P-40	J-102	J-101	0.00	0.00	0.00	0.00	0.00
P-41	J-22	J-104	-13.79	0.01	0.00	0.16	0.04
P-42	J-104	J-47	-41.25	0.34	0.00	0.47	0.33
P-43	J-104	J-119	5.09	0.10	0.00	0.13	0.05
P-44	J-17	J-120	53.31	0.75	0.00	1.36	3.81
P-45	J-120	J-22	8.58	0.00	0.00	0.05	0.00
P-46	J-120	J-129	44.74	10.11	0.00	1.14	2.75
P-47	J-38	J-131	99.54	0.34	0.00	1.13	1.68
P-48	J-131	J-58	99.54	1.00	0.00	1.13	1.68
P-49	J-131	J-139	0.00	0.00	0.00	0.00	0.00
P-5	J-5	J-8	9.03	0.74	0.00	0.92	4.15
P-50	J-143	J-1	-160.15	4.31	0.00	1.82	4.05
P-51	J-143	J-36	91.73	1.71	0.00	1.04	1.44
P-52	J-143	J-154	11.42	0.03	0.00	0.13	0.03
P-53	J-155	J-154	-5.71	0.51	0.00	0.58	1.78
P-54	J-14	J-157	-325.10	0.10	0.00	2.07	3.71
P-55	J-157	J-158	331.00	0.24	0.00	2.11	3.83
P-56	J-158	J-161	0.00	0.00	0.00	0.00	0.00
P-57	J-161	J-168	0.00	0.00	0.00	0.00	0.00
P-58	J-169	J-14	-39.29	0.04	0.00	0.25	0.07
P-59	J-157	J-171	-656.10	1.11	0.00	2.68	4.59
P-6	J-8	J-4	9.03	0.53	0.00	0.92	4.15
P-60	J-169	J-171	-151.09	1.26	0.00	1.71	3.64
P-61	J-171	J-172	0.00	0.00	0.00	0.00	0.00
P-62	J-158	J-189	331.00	10.94	0.00	2.11	3.83
P-63	J-184	J-186	11.42	0.21	0.00	0.29	0.22
P-64	J-44	J-226	11.42	2.60	0.00	0.52	0.89
P-65	J-189	J-183	296.73	0.57	0.00	1.89	3.13
P-65-1	J-189	J-192	22.85	0.13	0.00	0.26	0.11
P-66	J-192	J-193	0.00	0.00	0.00	0.00	0.00
P-67	J-194	J-14	-68.54	0.85	0.00	0.78	0.84
P-68	J-184	J-199	-11.42	0.03	0.00	0.13	0.03
P-69	J-199	J-194	-45.70	0.25	0.00	0.52	0.40
P-7	J-8	J-9	0.00	0.00	0.00	0.00	0.00
P-70	J-199	J-206	11.42	0.72	0.00	0.52	0.89
P-71	J-207	J-217	22.85	3.80	0.00	1.04	3.22
P-72	J-217	J-44	11.42	0.64	0.00	0.52	0.89
P-73	J-227	J-217	-11.42	0.18	0.00	0.52	0.89

P-74	J-228	J-35	0.00	0.00	0.00	0.00	0.00
P-75	J-171	J-234	-807.20	1.64	0.00	2.29	2.77
P-76	J-234	J-35	-2348.21	1.82	0.00	3.75	4.94
P-77	J-236	J-237	380.61	0.38	0.00	2.43	4.96
P-78	J-238	J-240	-313.74	0.29	0.00	2.00	3.47
P-79	J-240	J-237	-336.11	0.12	0.00	2.15	3.94
P-8	J-10	J-2	194.42	0.87	0.00	1.24	1.43
P-80	J-240	J-241	22.37	0.07	0.00	0.25	0.11
P-81	J-236	J-242	147.64	0.74	0.00	0.94	0.86
P-82	J-242	J-246	44.40	0.32	0.00	0.50	0.38
P-83	J-246	J-249	-44.50	0.22	0.00	0.50	0.38
P-84	J-237	J-249	44.50	0.46	0.00	0.50	0.38
P-85	J-249	J-253	0.00	0.00	0.00	0.00	0.00
P-86	J-246	J-258	88.90	1.32	0.00	1.01	1.36
P-87	J-258	J-259	88.90	0.12	0.00	1.01	1.36
P-88	J-258	J-264	0.00	0.00	0.00	0.00	0.00
P-89	J-265	J-266	22.37	0.59	0.00	0.57	0.76
P-9	J-10	J-13	11.42	0.35	0.00	0.52	0.89
P-90	J-259	J-265	-36.14	0.19	0.00	0.41	0.26
P-91	J-265	J-276	-103.24	1.25	0.00	1.17	1.80
P-92	J-277	J-278	44.74	1.61	0.00	1.14	2.75
P-93	J-279	J-278	-22.37	0.43	0.00	0.57	0.76
P-94	J-278	J-281	22.37	0.26	0.00	0.57	0.76
P-95	J-281	J-284	22.37	4.62	0.00	1.02	3.10
P-96	J-285	J-286	0.00	0.00	0.00	0.00	0.00
P-97	J-287	J-286	-80.30	0.12	0.00	0.91	1.13
P-98	J-286	J-259	-125.04	5.10	0.00	1.42	2.56
P-99	J-298	J-302	-11.42	0.87	0.00	0.52	0.89

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	1520.16	23.94	143.09	119.2	----	-----	---	----
Pump-2	1519.18	23.91	143.11	119.2	----	-----	---	----
Pump-3	1520.19	23.93	143.09	119.2	----	-----	---	----

E N D N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
G-M1		205.00	403.68	260.00	143.68	62.26
G-M2		57.00	410.03	263.00	147.03	63.71
G-M3		484.00	397.13	254.00	143.13	62.02
J-1		0.00	415.04	267.48	147.56	63.94
J-10		0.00	417.22	271.75	145.47	63.04
J-101		5.09 (4.80)	413.22	309.41	103.81	44.98
J-102		0.00	413.22	310.00	103.22	44.73
J-104		22.37 (4.80)	414.17	304.60	109.57	47.48
J-11		0.00	414.73	292.00	122.73	53.18
J-119		5.09 (4.80)	414.07	290.00	124.07	53.76
J-12		0.00	414.73	295.00	119.73	51.88
J-120		0.00	414.16	300.60	113.56	49.21
J-129		44.74 (4.80)	404.05	304.02	100.03	43.35
J-13		11.42 (4.80)	416.87	264.48	152.39	66.04
J-131		0.00	417.12	300.00	117.12	50.75
J-139		0.00	417.12	291.98	125.14	54.23
J-14		11.42 (4.80)	417.62	280.00	137.62	59.64
J-143		0.00	410.72	263.30	147.42	63.88
J-15		0.00	303.96	280.00	23.96	10.38
J-153		11.42 (4.80)	407.96	281.83	126.13	54.66

J-154	5.71 (4.80)	410.70	260.00	150.70	65.30
J-155	5.71 (4.80)	410.19	260.00	150.19	65.08
J-157	0.00	417.73	280.00	137.73	59.68
J-158	0.00	417.49	280.00	137.49	59.58
J-16	0.00	417.46	291.00	126.46	54.80
J-161	0.00	417.49	270.00	147.49	63.91
J-168	0.00	417.49	263.08	154.41	66.91
J-169	0.00	417.58	280.00	137.58	59.62
J-17	0.00	414.91	303.37	111.54	48.33
J-171	0.00	418.84	280.00	138.84	60.16
J-172	0.00	418.84	271.79	147.05	63.72
J-18	0.00	414.91	310.00	104.91	45.46
J-183	91.73 (4.80)	405.98	259.92	146.06	63.29
J-184	0.00	416.50	263.89	152.61	66.13
J-186	11.42 (4.80)	416.29	240.47	175.82	76.19
J-187	11.42 (4.80)	406.52	240.00	166.52	72.16
J-189	0.00	406.55	260.00	146.55	63.50
J-19	44.74 (4.80)	415.01	304.63	110.38	47.83
J-192	22.85 (4.80)	406.42	250.00	156.42	67.78
J-193	0.00	406.42	237.00	169.42	73.41
J-194	0.00	416.78	280.00	136.78	59.27
J-199	22.85 (4.80)	416.53	276.97	139.56	60.47
J-2	11.42 (4.80)	416.35	270.00	146.35	63.42
J-20	0.00	414.63	297.00	117.63	50.97
J-206	11.42 (4.80)	415.81	270.00	145.81	63.18
J-207	0.00	416.77	280.00	136.77	59.27
J-21	22.37 (4.80)	414.78	297.50	117.28	50.82
J-217	0.00	412.98	267.84	145.14	62.89
J-22	22.37 (4.80)	414.16	299.91	114.25	49.51
J-226	11.42 (4.80)	409.73	258.96	150.77	65.34
J-227	11.42 (4.80)	412.80	270.00	142.80	61.88
J-228	0.00	422.30	287.77	134.53	58.30
J-23	0.00	412.84	305.00	107.84	46.73
J-234	22.37 (4.80)	420.48	284.93	135.55	58.74
J-236	22.37 (4.80)	412.97	254.79	158.18	68.54
J-237	0.00	412.59	257.27	155.32	67.31
J-238	0.00	412.18	257.84	154.34	66.88
J-24	0.00	414.63	290.00	124.63	54.01
J-240	0.00	412.47	258.38	154.09	66.77
J-241	22.37 (4.80)	412.40	256.48	155.92	67.57
J-242	0.00	412.22	285.73	126.49	54.81
J-246	0.00	411.90	264.14	147.76	64.03
J-249	0.00	412.13	260.99	151.14	65.49
J-25	0.00	422.49	280.00	142.49	61.74
J-253	0.00	412.13	263.44	148.69	64.43
J-258	0.00	410.58	274.64	135.94	58.91
J-259	0.00	410.46	273.33	137.13	59.42
J-26	0.00	422.49	280.00	142.49	61.74
J-264	0.00	410.58	280.00	130.58	56.58
J-265	44.74 (4.80)	410.66	280.00	130.66	56.62
J-266	22.37 (4.80)	410.07	262.95	147.12	63.75
J-27	0.00	422.84	280.00	142.84	61.90
J-276	0.00	411.90	275.96	135.94	58.91
J-277	0.00	406.83	274.93	131.90	57.16
J-278	0.00	405.22	280.00	125.22	54.26
J-279	22.37 (4.80)	404.80	280.00	124.80	54.08
J-28	0.00	412.84	300.00	112.84	48.90
J-281	0.00	404.96	274.53	130.43	56.52
J-284	22.37 (4.80)	400.34	294.97	105.37	45.66
J-285	0.00	405.37	310.00	95.37	41.33
J-286	44.74 (4.80)	405.37	292.33	113.04	48.98
J-287	80.30 (4.80)	405.25	292.76	112.49	48.74
J-29	0.00	422.48	280.00	142.48	61.74
J-298	11.42 (4.80)	414.79	240.00	174.79	75.74
J-3	0.00	423.07	280.00	143.07	61.99
J-30	0.00	422.48	272.79	149.69	64.86
J-302	0.00	415.67	233.85	181.82	78.79
J-303	0.00	415.67	242.80	172.87	74.91
J-304	0.00	415.67	230.00	185.67	80.46
J-309	0.00	416.42	244.20	172.22	74.63
J-31	0.00	422.48	278.41	144.07	62.43

J-319	22.37 (4.80)	416.49	271.11	145.38	63.00
J-32	0.00	410.27	273.00	137.27	59.49
J-320	11.42 (4.80)	415.99	270.00	145.99	63.26
J-325	0.00	417.31	280.00	137.31	59.50
J-328	0.00	417.76	280.00	137.76	59.70
J-33	0.00	410.27	270.00	140.27	60.79
J-333	0.00	415.76	280.00	135.76	58.83
J-334	44.74 (4.80)	416.43	285.09	131.34	56.92
J-338	22.37 (4.80)	419.73	288.64	131.09	56.81
J-34	22.37 (4.80)	422.09	280.00	142.09	61.57
J-340	0.00	419.73	281.35	138.38	59.97
J-341	0.00	416.34	283.16	133.18	57.71
J-346	0.00	416.59	275.38	141.21	61.19
J-347	22.37 (4.80)	416.68	274.79	141.89	61.49
J-348	0.00	416.59	281.34	135.25	58.61
J-349	0.00	416.59	280.00	136.59	59.19
J-35	22.37 (4.80)	422.30	280.00	142.30	61.66
J-350	0.00	416.59	280.00	136.59	59.19
J-351	22.37 (4.80)	417.03	280.00	137.03	59.38
J-353	44.74 (4.80)	419.81	287.75	132.06	57.22
J-354	22.37 (4.80)	417.35	288.61	128.74	55.79
J-358	44.74 (4.80)	418.11	295.52	122.59	53.12
J-36	0.00	409.01	277.00	132.01	57.21
J-360	22.37 (4.80)	418.22	290.00	128.22	55.56
J-361	44.74 (4.80)	417.80	290.00	127.80	55.38
J-362	22.37 (4.80)	417.66	290.00	127.66	55.32
J-364	0.00	414.71	291.03	123.68	53.60
J-367	5.09 (4.80)	413.82	291.54	122.28	52.99
J-368	0.00	414.71	294.06	120.65	52.28
J-369	5.09 (4.80)	412.96	280.00	132.96	57.62
J-37	0.00	409.01	275.00	134.01	58.07
J-376	0.00	414.70	300.79	113.91	49.36
J-377	5.09 (4.80)	413.65	308.07	105.58	45.75
J-38	22.37 (4.80)	417.46	296.07	121.39	52.60
J-381	5.09 (4.80)	413.78	295.71	118.07	51.16
J-385	0.00	416.76	289.30	127.46	55.23
J-386	0.00	416.24	300.97	115.27	49.95
J-387	0.00	416.24	305.78	110.46	47.87
J-388	0.00	410.19	270.00	140.19	60.75
J-389	5.09 (4.80)	410.19	270.00	140.19	60.75
J-391	0.00	411.33	290.61	120.72	52.31
J-392	0.00	410.19	275.02	135.17	58.57
J-395	5.09 (4.80)	416.24	300.00	116.24	50.37
J-4	11.42 (4.80)	415.04	257.30	157.74	68.35
J-40	80.30 (4.80)	408.77	279.00	129.77	56.23
J-405	5.09 (4.80)	415.05	305.01	110.04	47.68
J-41	0.00	405.25	250.00	155.25	67.27
J-410	0.00	416.17	300.00	116.17	50.34
J-411	0.00	416.17	300.00	116.17	50.34
J-413	0.00	412.11	274.34	137.77	59.70
J-42	44.74 (4.80)	416.01	298.30	117.71	51.01
J-422	10.18 (4.80)	411.84	300.00	111.84	48.46
J-43	0.00	400.80	230.00	170.80	74.01
J-431	0.00	410.70	304.83	105.87	45.88
J-434	5.09 (4.80)	410.01	305.07	104.94	45.48
J-435	0.00	409.30	300.59	108.71	47.11
J-437	5.09 (4.80)	408.69	310.00	98.69	42.76
J-438	0.00	410.01	310.00	100.01	43.34
J-439	0.00	409.30	291.34	117.96	51.11
J-44	0.00	412.34	259.82	152.52	66.09
J-441	0.00	410.34	304.63	105.71	45.81
J-442	0.00	410.34	310.00	100.34	43.48
J-444	5.09 (4.80)	409.65	320.00	89.65	38.85
J-445	0.00	409.26	285.39	123.87	53.68
J-447	0.00	409.26	284.02	125.24	54.27
J-448	22.37 (4.80)	408.55	285.15	123.40	53.47
J-455	22.37 (4.80)	408.88	281.89	126.99	55.03
J-456	0.00	407.73	282.32	125.41	54.35
J-458	0.00	411.90	275.18	136.72	59.25
J-462	5.09 (4.80)	407.73	288.46	119.27	51.68
J-465	0.00	407.49	287.11	120.38	52.16

J-469	5.09 (4.80)	406.33	310.00	96.33	41.74
J-47	80.30 (4.80)	414.50	300.00	114.50	49.62
J-470	5.09 (4.80)	407.49	293.43	114.06	49.42
J-471	0.00	407.49	290.00	117.49	50.91
J-476	0.00	407.49	310.00	97.49	42.24
J-479	5.09 (4.80)	406.32	310.00	96.32	41.74
J-48	0.00	417.46	293.36	124.10	53.78
J-480	0.00	406.32	306.99	99.33	43.05
J-481	0.00	406.32	320.00	86.32	37.41
J-484	0.00	405.02	308.25	96.77	41.93
J-487	5.09 (4.80)	404.06	291.23	112.83	48.89
J-49	0.00	409.80	278.91	130.89	56.72
J-491	5.09 (4.80)	399.14	254.57	144.57	62.65
J-5	0.00	416.31	260.00	156.31	67.73
J-502	5.09 (4.80)	395.95	250.00	145.95	63.25
J-504	0.00	411.90	273.97	137.93	59.77
J-507	0.00	411.90	270.69	141.21	61.19
J-508	0.00	404.25	255.88	148.37	64.29
J-51	22.37 (4.80)	409.80	289.90	119.90	51.95
J-518	5.09 (4.80)	404.24	270.92	133.32	57.77
J-519	0.00	402.91	230.00	172.91	74.93
J-522	0.00	402.91	251.78	151.13	65.49
J-528	0.00	402.82	250.37	152.45	66.06
J-529	0.00	402.62	250.00	152.62	66.14
J-53	0.00	409.80	288.83	120.97	52.42
J-532	5.09 (4.80)	401.74	250.00	151.74	65.75
J-533	5.09 (4.80)	402.32	240.00	162.32	70.34
J-534	0.00	402.32	240.00	162.32	70.34
J-535	0.00	402.31	240.00	162.31	70.33
J-536	5.09 (4.80)	401.32	233.67	167.65	72.65
J-538	5.09 (4.80)	401.63	263.02	138.61	60.06
J-54	44.74 (4.80)	411.86	307.84	104.02	45.08
J-541	5.09 (4.80)	401.92	239.97	161.95	70.18
J-548	85.39 (4.80)	400.80	233.10	167.70	72.67
J-549	0.00	401.90	236.88	165.02	71.51
J-550	85.39 (4.80)	401.19	230.00	171.19	74.18
J-572	11.42 (4.80)	303.98	300.00	3.98	1.72
J-58	80.30 (4.80)	416.12	299.00	117.12	50.75
J-6	11.42 (4.80)	416.30	252.85	163.45	70.83
J-61	44.74 (4.80)	404.17	288.72	115.45	50.03
J-62	22.37 (4.80)	410.29	290.00	120.29	52.13
J-63	22.37 (4.80)	410.27	262.49	147.78	64.04
J-7	0.00	415.04	254.10	160.94	69.74
J-76	22.37 (4.80)	410.63	320.00	90.63	39.27
J-8	0.00	415.57	258.16	157.41	68.21
J-86	22.37 (4.80)	406.21	290.00	116.21	50.36
J-87	22.37 (4.80)	405.01	288.51	116.50	50.48
J-88	0.00	413.25	303.82	109.43	47.42
J-9	0.00	415.57	252.47	163.10	70.68
J-96	5.09 (4.80)	411.62	301.83	109.79	47.57
J-99	44.74 (4.80)	414.03	296.50	117.53	50.93
Pump-1	0.00	303.94	280.00	23.94	10.37
Pump-2	0.00	303.91	280.00	23.91	10.36
Pump-3	0.00	303.93	280.00	23.93	10.37
T-1	---	304.00	280.00	24.00	10.40
T-2	---	423.00	280.00	143.00	61.97
Pump-1	0.00	423.09	280.00	143.09	62.01
Pump-2	0.00	423.11	280.00	143.11	62.01
Pump-3	0.00	423.09	280.00	143.09	62.00

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-304	80.46	J-572	1.72
J-302	78.79	Pump-2	10.36
J-186	76.19	Pump-3	10.37
J-298	75.74	Pump-1	10.37
J-519	74.93	J-15	10.38
J-303	74.91	T-1	10.40
J-309	74.63	J-481	37.41
J-550	74.18	J-444	38.85
J-43	74.01	J-76	39.27
J-193	73.41	J-285	41.33
J-548	72.67	J-479	41.74
J-536	72.65	J-469	41.74
J-187	72.16	J-484	41.93
J-549	71.51	J-476	42.24
J-6	70.83	J-437	42.76
J-9	70.68	J-480	43.05
J-533	70.34	J-438	43.34
J-534	70.34	J-129	43.35
J-535	70.33	J-442	43.48
J-541	70.18	J-102	44.73

VELOCITIES

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-124	4.66	P-207	0.03
P-206	4.66	P-14	0.05
P-76	3.75	P-25	0.05
P-209	3.17	P-205	0.05
P-213	3.17	P-45	0.05
P-125	3.17	P-172	0.06
P-211	3.17	P-176	0.06
P-210	3.17	P-179	0.06
P-212	3.17	P-189	0.06
P-21	2.99	P-139	0.12
P-22	2.88	P-197	0.12
P-59	2.68	P-103	0.13
P-77	2.43	P-214	0.13
P-126	2.39	P-3	0.13
P-129	2.36	P-52	0.13
P-75	2.29	P-68	0.13
P-164	2.27	P-43	0.13
P-105	2.25	P-221	0.14
P-122	2.24	P-30	0.14
P-168	2.18	P-41	0.16

HL / 1000

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-124	5.69	P-207	0.00
P-206	5.69	P-205	0.00
P-77	4.96	P-14	0.00
P-76	4.94	P-25	0.00
P-126	4.83	P-45	0.00
P-129	4.69	P-189	0.01
P-59	4.59	P-172	0.01
P-209	4.23	P-176	0.01
P-213	4.23	P-179	0.01

P-211	4.23	P-139	0.02
P-125	4.23	P-197	0.02
P-210	4.22	P-221	0.03
P-212	4.22	P-30	0.03
P-1	4.17	P-214	0.03
P-5	4.15	P-3	0.03
P-6	4.15	P-68	0.03
P-50	4.05	P-103	0.03
P-79	3.94	P-52	0.03
P-55	3.83	P-41	0.04
P-62	3.83	P-43	0.05

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE

T-1	4570.95	
T-2	-1740.94	

NET SYSTEM INFLOW = 4570.95
 NET SYSTEM OUTFLOW = -1740.94
 NET SYSTEM DEMAND = 2830.01

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
*
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*
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\PINELA-3.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\PINELA-3.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\PINELA-3.RS2

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S U M M A R Y   O F   O R I G I N A L   D A T A
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-8	922.80	4.00	100.0000	0.00
P-10	J-24	J-25	184.99	3.00	100.0000	0.00
P-100	J-223	J-236	1045.37	4.00	100.0000	0.00
P-101	J-236	J-227	292.39	4.00	100.0000	0.00
P-102	J-225	J-238	229.58	2.00	100.0000	0.00
P-103	J-238	J-74	416.55	2.00	100.0000	0.00
P-104	J-76	J-194	346.02	3.00	100.0000	0.00
P-105	J-238	J-236	1054.40	2.00	100.0000	0.00
P-106	J-243	J-245	425.00	3.00	100.0000	0.00
P-107	J-243	J-246	266.40	8.00	100.0000	0.00
P-108	J-246	J-223	611.43	8.00	100.0000	0.00
P-109	J-250	J-246	303.93	4.00	100.0000	0.00
P-11	J-26	J-53	2202.08	4.00	100.0000	0.00
P-110	J-9	J-60	1306.51	4.00	100.0000	0.00
P-111	J-224	T-1	1570.91	10.00	100.0000	0.00
P-112	J-73	J-243	278.07	8.00	100.0000	0.00
P-113	J-73	J-254	314.69	8.00	100.0000	0.00
P-114	J-22	J-255	324.13	4.00	100.0000	0.00
P-115	J-250	J-254	525.82	2.00	100.0000	0.00
P-116	J-254	J-256	308.64	2.00	100.0000	0.00
P-117	J-257	J-11	202.54	3.00	100.0000	0.00
P-118	J-11	J-250	289.94	4.00	100.0000	0.00
P-119	J-254	J-14	344.91	8.00	100.0000	0.00
P-12	J-53	J-13	398.13	4.00	100.0000	0.00
P-120	J-14	J-22	314.35	8.00	100.0000	0.00
P-121	J-259	J-163	2696.50	8.00	100.0000	0.00
P-122	J-259	J-94	2597.58	8.00	100.0000	0.00
P-123	J-126	J-276	107.99	8.00	100.0000	0.00
P-124	J-276	J-259	82.99	8.00	100.0000	0.00
P-125	J-277	J-282	862.37	3.00	100.0000	0.00
P-126	J-276	J-286	1184.00	4.00	100.0000	0.00
P-127	J-286	J-277	520.08	4.00	100.0000	0.00
P-128	J-286	J-292	763.70	2.00	100.0000	0.00
P-129	J-37	J-293	145.88	10.00	100.0000	0.00
P-13	J-58	J-60	395.65	4.00	100.0000	0.00
P-130	J-293	J-294	1289.01	4.00	100.0000	0.00

P-131	J-293	J-7	115.95	6.00	100.0000	0.00
P-137	J-16	J-87	980.47	4.00	100.0000	0.00
P-14	J-61	J-62	531.22	3.00	100.0000	0.00
P-15	J-62	J-24	499.96	4.00	100.0000	0.00
P-153	J-37	Pump-1	9.86	10.00	100.0000	0.00
P-154	Pump-1	T-2	16.40	10.00	100.0000	0.00
P-16	J-53	J-61	335.54	4.00	100.0000	0.00
P-17	J-61	J-62	1127.51	4.00	100.0000	0.00
P-18	J-24	J-66	242.70	8.00	100.0000	0.00
P-19	J-66	J-67	224.85	4.00	100.0000	0.00
P-2	J-9	J-10	392.49	4.00	100.0000	0.00
P-20	J-66	J-71	1093.94	6.00	100.0000	0.00
P-21	T-1	J-73	243.89	10.00	100.0000	0.00
P-22	J-74	J-75	296.00	4.00	100.0000	0.00
P-23	J-76	J-77	201.36	3.00	100.0000	0.00
P-24	J-10	J-58	1311.80	4.00	100.0000	0.00
P-25	J-79	J-81	960.88	6.00	100.0000	0.00
P-26	J-67	J-82	465.90	4.00	100.0000	0.00
P-27	J-10	J-86	601.86	4.00	100.0000	0.00
P-28	J-87	J-58	450.56	4.00	100.0000	0.00
P-29	J-87	J-86	1422.66	4.00	100.0000	0.00
P-3	J-11	J-12	300.39	4.00	100.0000	0.00
P-30	J-86	J-26	1622.77	4.00	100.0000	0.00
P-31	J-94	J-96	598.76	8.00	100.0000	0.00
P-32	J-96	J-16	153.34	6.00	100.0000	0.00
P-33	J-96	J-26	1569.42	4.00	100.0000	0.00
P-34	J-2	J-103	387.88	6.00	100.0000	0.00
P-35	J-104	J-2	2506.94	8.00	100.0000	0.00
P-36	J-112	J-104	1766.78	4.00	100.0000	0.00
P-37	J-37	J-126	1060.08	10.00	100.0000	0.00
P-38	J-127	J-8	436.18	4.00	100.0000	0.00
P-39	J-104	J-131	727.64	8.00	100.0000	0.00
P-4	J-12	J-13	361.86	4.00	100.0000	0.00
P-40	J-131	J-79	1465.86	6.00	100.0000	0.00
P-41	J-136	J-137	55.12	4.00	100.0000	0.00
P-42	J-136	J-138	352.05	2.00	100.0000	0.00
P-43	J-81	J-139	47.56	4.00	100.0000	0.00
P-44	J-103	J-140	71.49	6.00	100.0000	0.00
P-45	J-139	J-141	279.00	3.00	100.0000	0.00
P-46	J-142	J-136	615.53	4.00	100.0000	0.00
P-47	J-143	J-142	444.21	1.50	100.0000	0.00
P-48	J-81	J-144	313.66	4.00	100.0000	0.00
P-49	J-144	J-142	338.04	4.00	100.0000	0.00
P-5	J-12	J-14	757.18	2.00	100.0000	0.00
P-50	J-145	J-144	397.18	1.50	100.0000	0.00
P-51	J-139	J-151	1117.41	4.00	100.0000	0.00
P-52	J-152	J-151	441.85	4.00	100.0000	0.00
P-53	J-151	J-153	219.72	4.00	100.0000	0.00
P-54	J-153	J-154	486.07	4.00	100.0000	0.00
P-55	J-103	J-127	927.62	4.00	100.0000	0.00
P-56	J-156	J-157	670.03	3.00	100.0000	0.00
P-57	J-158	J-156	276.85	3.00	100.0000	0.00
P-58	J-153	J-159	181.87	3.00	100.0000	0.00
P-59	J-159	J-156	275.33	3.00	100.0000	0.00
P-6	J-14	J-15	282.69	4.00	100.0000	0.00
P-60	J-162	J-159	761.94	3.00	100.0000	0.00
P-61	J-163	J-167	1232.44	6.00	100.0000	0.00
P-62	J-168	J-169	248.31	3.00	100.0000	0.00
P-63	J-168	J-171	305.97	8.00	100.0000	0.00
P-64	J-167	J-75	262.89	6.00	100.0000	0.00
P-65	J-75	J-168	952.15	3.00	100.0000	0.00
P-66	J-8	J-178	87.80	4.00	100.0000	0.00
P-67	J-179	J-171	249.55	4.00	100.0000	0.00
P-68	J-167	J-180	223.49	6.00	100.0000	0.00
P-69	J-180	J-182	619.48	2.00	100.0000	0.00
P-7	J-13	J-21	720.51	4.00	100.0000	0.00
P-70	J-183	J-168	284.23	8.00	100.0000	0.00
P-71	J-185	J-77	437.44	2.00	100.0000	0.00
P-72	J-131	J-188	546.91	8.00	100.0000	0.00
P-73	J-188	J-183	79.22	8.00	100.0000	0.00
P-74	J-188	J-189	275.65	4.00	100.0000	0.00

P-75	J-190	J-131	230.58	6.00	100.0000	0.00
P-76	J-191	J-76	250.42	3.00	100.0000	0.00
P-77	J-60	J-193	431.95	4.00	100.0000	0.00
P-78	J-194	J-190	136.49	3.00	100.0000	0.00
P-79	J-180	J-200	616.94	6.00	100.0000	0.00
P-8	J-21	J-22	16.45	8.00	100.0000	0.00
P-80	J-200	J-190	459.31	4.00	100.0000	0.00
P-81	J-201	J-204	310.48	2.00	100.0000	0.00
P-82	J-204	J-194	440.69	3.00	100.0000	0.00
P-83	J-204	J-200	142.67	4.00	100.0000	0.00
P-84	J-200	J-206	160.57	4.00	100.0000	0.00
P-85	J-206	J-207	142.65	2.00	100.0000	0.00
P-86	J-208	J-206	95.70	3.00	100.0000	0.00
P-87	J-190	J-211	495.51	3.00	100.0000	0.00
P-88	J-212	J-193	620.15	4.00	100.0000	0.00
P-89	J-211	J-214	641.43	3.00	100.0000	0.00
P-9	J-21	J-24	325.36	8.00	100.0000	0.00
P-90	J-206	J-217	383.12	4.00	100.0000	0.00
P-91	J-217	J-218	301.45	2.00	100.0000	0.00
P-92	J-217	J-211	315.10	4.00	100.0000	0.00
P-93	J-163	J-223	1061.63	8.00	100.0000	0.00
P-94	J-171	J-224	336.11	8.00	100.0000	0.00
P-95	J-171	J-225	262.57	1.50	100.0000	0.00
P-96	J-77	J-183	394.44	3.00	100.0000	0.00
P-97	J-225	J-227	565.39	2.00	100.0000	0.00
P-98	J-227	J-224	23.55	8.00	100.0000	0.00
P-99	J-193	J-9	2151.62	4.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
138.00	0.00	75.00 (Default)
130.00	480.00	75.00 (Default)
110.00	750.00	75.00 (Default)

PUMP SPEED RATIO = 0.980

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-10		0.80	240.00	
J-103		1.76	242.81	
J-104		2.60	243.59	
J-11		2.60	255.87	
J-112		2.60	231.46	
J-12		2.60	260.00	
J-126		1.10	237.01	
J-127		1.76	256.70	
J-13		2.60	260.28	
J-131		0.00	240.00	
J-136		1.04	211.35	
J-137		0.00	210.00	
J-138		1.04	210.00	
J-139		0.00	220.00	
J-14		2.60	270.00	
J-140		0.00	241.31	
J-141		1.04	222.11	
J-142		0.00	220.00	
J-143		1.04	220.00	
J-144		1.04	220.00	
J-145		1.04	220.00	

J-15	0.00	270.00
J-151	0.00	241.60
J-152	1.04	240.00
J-153	1.04	245.46
J-154	1.04	247.51
J-156	0.00	241.19
J-157	1.04	240.43
J-158	1.04	236.81
J-159	1.04	242.78
J-16	0.00	260.00
J-162	1.04	242.60
J-163	4.40	220.82
J-167	5.20	243.11
J-168	2.60	260.00
J-169	2.60	259.29
J-171	5.20	260.00
J-178	0.00	265.05
J-179	0.00	260.00
J-180	0.00	242.29
J-182	2.60	223.99
J-183	2.60	253.99
J-185	2.60	244.86
J-188	5.20	251.78
J-189	2.60	250.09
J-190	2.60	240.00
J-191	2.60	240.00
J-193	0.80	290.00
J-194	2.60	240.00
J-2	3.52	252.63
J-200	0.00	237.85
J-201	2.60	240.81
J-204	2.60	240.00
J-206	2.60	236.70
J-207	2.60	236.32
J-208	2.60	234.45
J-21	2.60	270.00
J-211	2.60	240.00
J-212	0.80	289.09
J-214	0.00	238.90
J-217	2.60	239.78
J-218	0.00	235.51
J-22	0.00	270.00
J-223	2.60	242.40
J-224	0.00	260.00
J-225	2.60	260.00
J-227	2.60	260.00
J-236	2.60	260.00
J-238	2.60	257.90
J-24	2.60	275.23
J-243	0.00	256.07
J-245	2.60	260.14
J-246	2.60	247.06
J-25	0.00	273.41
J-250	0.00	257.84
J-254	0.00	267.76
J-255	2.60	270.00
J-256	0.00	270.00
J-257	2.60	249.22
J-259	0.00	231.54
J-26	0.80	230.00
J-276	0.00	233.84
J-277	0.00	260.14
J-282	1.10	255.03
J-286	0.00	255.73
J-292	1.10	246.95
J-293	0.50	234.58
J-294	0.60	240.00
J-37	0.00	237.55
J-53	0.00	261.14
J-58	0.80	282.94
J-60	0.80	290.00

J-61	2.60	270.00	
J-62	2.60	276.90	
J-66	0.00	280.00	
J-67	5.20	280.00	
J-7	0.00	233.00	
J-71	2.60	280.00	
J-73	2.60	263.06	
J-74	2.60	252.12	
J-75	2.60	250.00	
J-76	2.60	246.16	
J-77	2.60	250.56	
J-79	4.16	225.80	
J-8	1.76	264.14	
J-81	0.00	220.00	
J-82	2.60	283.36	
J-86	0.80	239.16	
J-87	0.80	272.47	
J-9	0.80	243.90	
J-94	0.80	270.00	
J-96	0.80	264.79	
Pump-1	0.00	241.00	
T-1	----	268.31	402.00
T-2	----	241.00	260.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 134
 NUMBER OF END NODES(j) = 113
 NUMBER OF PRIMARY LOOPS(l) = 20
 NUMBER OF SUPPLY NODES(f) = 2
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 2)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00000

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS #1	NODE NUMBERS #2	FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
P-1	J-2	J-8	8.91	0.13	0.00	0.23	0.14
P-10	J-24	J-25	0.00	0.00	0.00	0.00	0.00
P-100	J-223	J-236	10.69	0.20	0.00	0.27	0.19
P-101	J-236	J-227	-10.38	0.05	0.00	0.27	0.18
P-102	J-225	J-238	5.21	0.34	0.00	0.53	1.50
P-103	J-238	J-74	1.32	0.05	0.00	0.13	0.12
P-104	J-76	J-194	-18.12	0.73	0.00	0.82	2.10
P-105	J-238	J-236	-8.59	3.99	0.00	0.88	3.79
P-106	J-243	J-245	12.48	0.45	0.00	0.57	1.05
P-107	J-243	J-246	241.04	0.57	0.00	1.54	2.13
P-108	J-246	J-223	203.85	0.95	0.00	1.30	1.56
P-109	J-250	J-246	-24.71	0.28	0.00	0.63	0.92
P-11	J-26	J-53	-22.08	1.64	0.00	0.56	0.74
P-110	J-9	J-60	1.16	0.00	0.00	0.03	0.00

P-111	J-224	T-1	-397.49	2.85	0.00	1.62	1.81
P-112	J-73	J-243	253.52	0.65	0.00	1.62	2.34
P-113	J-73	J-254	172.09	0.36	0.00	1.10	1.14
P-114	J-22	J-255	12.48	0.08	0.00	0.32	0.26
P-115	J-250	J-254	-6.35	1.14	0.00	0.65	2.16
P-116	J-254	J-256	0.00	0.00	0.00	0.00	0.00
P-117	J-257	J-11	-12.48	0.21	0.00	0.57	1.05
P-118	J-11	J-250	-31.06	0.41	0.00	0.79	1.40
P-119	J-254	J-14	165.74	0.37	0.00	1.06	1.06
P-12	J-53	J-13	-15.92	0.16	0.00	0.41	0.41
P-120	J-14	J-22	147.91	0.27	0.00	0.94	0.86
P-121	J-259	J-163	-41.28	0.22	0.00	0.26	0.08
P-122	J-259	J-94	20.16	0.06	0.00	0.13	0.02
P-123	J-126	J-276	-10.56	0.00	0.00	0.07	0.01
P-124	J-276	J-259	-21.12	0.00	0.00	0.13	0.02
P-125	J-277	J-282	5.28	0.18	0.00	0.24	0.21
P-126	J-276	J-286	10.56	0.22	0.00	0.27	0.19
P-127	J-286	J-277	5.28	0.03	0.00	0.13	0.05
P-128	J-286	J-292	5.28	1.17	0.00	0.54	1.54
P-129	J-37	J-293	5.28	0.00	0.00	0.02	0.00
P-13	J-58	J-60	7.94	0.04	0.00	0.20	0.11
P-130	J-293	J-294	2.88	0.02	0.00	0.07	0.02
P-131	J-293	J-7	0.00	0.00	0.00	0.00	0.00
P-137	J-16	J-87	16.84	0.44	0.00	0.43	0.45
P-14	J-61	J-62	-7.71	0.23	0.00	0.35	0.43
P-15	J-62	J-24	-31.12	0.70	0.00	0.79	1.41
P-153	J-37	Pump-1	0.00	0.00	0.00	0.00	0.00
P-154	Pump-1	T-2	0.00	0.00	0.00	0.00	0.00
P-16	J-53	J-61	-6.16	0.02	0.00	0.16	0.07
P-17	J-61	J-62	-10.94	0.23	0.00	0.28	0.20
P-18	J-24	J-66	49.92	0.03	0.00	0.32	0.12
P-19	J-66	J-67	37.44	0.45	0.00	0.96	1.98
P-2	J-9	J-10	-7.42	0.04	0.00	0.19	0.10
P-20	J-66	J-71	12.48	0.04	0.00	0.14	0.04
P-21	T-1	J-73	438.09	0.53	0.00	1.79	2.17
P-22	J-74	J-75	-11.16	0.06	0.00	0.28	0.21
P-23	J-76	J-77	-6.84	0.07	0.00	0.31	0.34
P-24	J-10	J-58	-0.64	0.00	0.00	0.02	0.00
P-25	J-79	J-81	64.90	0.73	0.00	0.74	0.76
P-26	J-67	J-82	12.48	0.12	0.00	0.32	0.26
P-27	J-10	J-86	-10.62	0.12	0.00	0.27	0.19
P-28	J-87	J-58	12.42	0.12	0.00	0.32	0.26
P-29	J-87	J-86	0.59	0.00	0.00	0.01	0.00
P-3	J-11	J-12	6.10	0.02	0.00	0.16	0.07
P-30	J-86	J-26	-13.88	0.51	0.00	0.35	0.31
P-31	J-94	J-96	16.32	0.01	0.00	0.10	0.01
P-32	J-96	J-16	16.84	0.01	0.00	0.19	0.06
P-33	J-96	J-26	-4.37	0.06	0.00	0.11	0.04
P-34	J-2	J-103	16.43	0.02	0.00	0.19	0.06
P-35	J-104	J-2	42.24	0.21	0.00	0.27	0.08
P-36	J-112	J-104	-12.48	0.46	0.00	0.32	0.26
P-37	J-37	J-126	-5.28	0.00	0.00	0.02	0.00
P-38	J-127	J-8	-0.46	0.00	0.00	0.01	0.00
P-39	J-104	J-131	-67.20	0.15	0.00	0.43	0.20
P-4	J-12	J-13	-1.02	0.00	0.00	0.03	0.00
P-40	J-131	J-79	84.86	1.83	0.00	0.96	1.25
P-41	J-136	J-137	0.00	0.00	0.00	0.00	0.00
P-42	J-136	J-138	4.99	0.49	0.00	0.51	1.39
P-43	J-81	J-139	39.94	0.11	0.00	1.02	2.23
P-44	J-103	J-140	0.00	0.00	0.00	0.00	0.00
P-45	J-139	J-141	4.99	0.05	0.00	0.23	0.19
P-46	J-142	J-136	9.98	0.11	0.00	0.25	0.17
P-47	J-143	J-142	-4.99	2.50	0.00	0.91	5.63
P-48	J-81	J-144	24.96	0.29	0.00	0.64	0.93
P-49	J-144	J-142	14.98	0.12	0.00	0.38	0.36
P-5	J-12	J-14	-5.36	1.20	0.00	0.55	1.58
P-50	J-145	J-144	-4.99	2.24	0.00	0.91	5.63
P-51	J-139	J-151	34.94	1.95	0.00	0.89	1.74
P-52	J-152	J-151	-4.99	0.02	0.00	0.13	0.05
P-53	J-151	J-153	29.95	0.29	0.00	0.76	1.31
P-54	J-153	J-154	4.99	0.02	0.00	0.13	0.05

P-55	J-103	J-127	7.99	0.11	0.00	0.20	0.11
P-56	J-156	J-157	4.99	0.13	0.00	0.23	0.19
P-57	J-158	J-156	-4.99	0.05	0.00	0.23	0.19
P-58	J-153	J-159	19.97	0.46	0.00	0.91	2.51
P-59	J-159	J-156	9.98	0.19	0.00	0.45	0.69
P-6	J-14	J-15	0.00	0.00	0.00	0.00	0.00
P-60	J-162	J-159	-4.99	0.15	0.00	0.23	0.19
P-61	J-163	J-167	118.29	2.85	0.00	1.34	2.31
P-62	J-168	J-169	12.48	0.26	0.00	0.57	1.05
P-63	J-168	J-171	-331.98	1.18	0.00	2.12	3.85
P-64	J-167	J-75	9.11	0.01	0.00	0.10	0.02
P-65	J-75	J-168	-14.54	1.33	0.00	0.66	1.39
P-66	J-8	J-178	0.00	0.00	0.00	0.00	0.00
P-67	J-179	J-171	0.00	0.00	0.00	0.00	0.00
P-68	J-167	J-180	84.22	0.28	0.00	0.96	1.23
P-69	J-180	J-182	12.48	4.69	0.00	1.27	7.57
P-7	J-13	J-21	-29.43	0.91	0.00	0.75	1.27
P-70	J-183	J-168	-292.48	0.87	0.00	1.87	3.05
P-71	J-185	J-77	-12.48	3.31	0.00	1.27	7.57
P-72	J-131	J-188	-210.77	0.91	0.00	1.35	1.66
P-73	J-188	J-183	-248.21	0.18	0.00	1.58	2.25
P-74	J-188	J-189	12.48	0.07	0.00	0.32	0.26
P-75	J-190	J-131	-58.70	0.15	0.00	0.67	0.63
P-76	J-191	J-76	-12.48	0.26	0.00	0.57	1.05
P-77	J-60	J-193	5.26	0.02	0.00	0.13	0.05
P-78	J-194	J-190	-23.24	0.45	0.00	1.05	3.32
P-79	J-180	J-200	71.74	0.57	0.00	0.81	0.92
P-8	J-21	J-22	-135.43	0.01	0.00	0.86	0.73
P-80	J-200	J-190	-8.92	0.06	0.00	0.23	0.14
P-81	J-201	J-204	-12.48	2.35	0.00	1.27	7.57
P-82	J-204	J-194	7.37	0.17	0.00	0.33	0.40
P-83	J-204	J-200	-32.33	0.22	0.00	0.83	1.51
P-84	J-200	J-206	48.34	0.51	0.00	1.23	3.18
P-85	J-206	J-207	12.48	1.08	0.00	1.27	7.57
P-86	J-208	J-206	-12.48	0.10	0.00	0.57	1.05
P-87	J-190	J-211	14.06	0.65	0.00	0.64	1.31
P-88	J-212	J-193	-3.84	0.02	0.00	0.10	0.03
P-89	J-211	J-214	0.00	0.00	0.00	0.00	0.00
P-9	J-21	J-24	93.52	0.12	0.00	0.60	0.37
P-90	J-206	J-217	10.90	0.08	0.00	0.28	0.20
P-91	J-217	J-218	0.00	0.00	0.00	0.00	0.00
P-92	J-217	J-211	-1.58	0.00	0.00	0.04	0.01
P-93	J-163	J-223	-180.68	1.33	0.00	1.15	1.25
P-94	J-171	J-224	-363.09	1.53	0.00	2.32	4.55
P-95	J-171	J-225	6.15	2.17	0.00	1.12	8.28
P-96	J-77	J-183	-31.80	2.34	0.00	1.44	5.94
P-97	J-225	J-227	-11.54	3.70	0.00	1.18	6.55
P-98	J-227	J-224	-34.40	0.00	0.00	0.22	0.06
P-99	J-193	J-9	-2.42	0.03	0.00	0.06	0.01

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
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Device "Pump-1" is closed

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-10		3.84(4.80)	397.12	240.00	157.12	68.09
J-103		8.45(4.80)	394.11	242.81	151.30	65.56
J-104		12.48(4.80)	394.34	243.59	150.75	65.33
J-11		12.48(4.80)	399.57	255.87	143.70	62.27
J-112		12.48(4.80)	393.89	231.46	162.43	70.38
J-12		12.48(4.80)	399.55	260.00	139.55	60.47
J-126		5.28(4.80)	397.75	237.01	160.74	69.65
J-127		8.45(4.80)	394.00	256.70	137.30	59.50
J-13		12.48(4.80)	399.55	260.28	139.27	60.35
J-131		0.00	394.49	240.00	154.49	66.95
J-136		4.99(4.80)	391.40	211.35	180.05	78.02
J-137		0.00	391.40	210.00	181.40	78.61
J-138		4.99(4.80)	390.92	210.00	180.92	78.40
J-139		0.00	391.82	220.00	171.82	74.45
J-14		12.48(4.80)	400.74	270.00	130.74	56.66
J-140		0.00	394.11	241.31	152.80	66.21
J-141		4.99(4.80)	391.76	222.11	169.65	73.52
J-142		0.00	391.51	220.00	171.51	74.32
J-143		4.99(4.80)	389.01	220.00	169.01	73.24
J-144		4.99(4.80)	391.63	220.00	171.63	74.37
J-145		4.99(4.80)	389.40	220.00	169.40	73.40
J-15		0.00	400.74	270.00	130.74	56.66
J-151		0.00	389.87	241.60	148.27	64.25
J-152		4.99(4.80)	389.85	240.00	149.85	64.94
J-153		4.99(4.80)	389.58	245.46	144.12	62.45
J-154		4.99(4.80)	389.56	247.51	142.05	61.56
J-156		0.00	388.94	241.19	147.75	64.02
J-157		4.99(4.80)	388.81	240.43	148.38	64.30
J-158		4.99(4.80)	388.88	236.81	152.07	65.90
J-159		4.99(4.80)	389.13	242.78	146.35	63.42
J-16		0.00	397.68	260.00	137.68	59.66
J-162		4.99(4.80)	388.98	242.60	146.38	63.43
J-163		21.12(4.80)	397.97	220.82	177.15	76.77
J-167		24.96(4.80)	395.12	243.11	152.01	65.87
J-168		12.48(4.80)	396.44	260.00	136.44	59.12
J-169		12.48(4.80)	396.18	259.29	136.89	59.32
J-171		24.96(4.80)	397.62	260.00	137.62	59.64
J-178		0.00	394.00	265.05	128.95	55.88
J-179		0.00	397.62	260.00	137.62	59.64
J-180		0.00	394.85	242.29	152.56	66.11
J-182		12.48(4.80)	390.16	223.99	166.17	72.01
J-183		12.48(4.80)	395.58	253.99	141.59	61.35
J-185		12.48(4.80)	389.92	244.86	145.06	62.86
J-188		24.96(4.80)	395.40	251.78	143.62	62.23
J-189		12.48(4.80)	395.33	250.09	145.24	62.94
J-190		12.48(4.80)	394.34	240.00	154.34	66.88
J-191		12.48(4.80)	392.90	240.00	152.90	66.26
J-193		3.84(4.80)	397.05	290.00	107.05	46.39
J-194		12.48(4.80)	393.89	240.00	153.89	66.69
J-2		16.90(4.80)	394.13	252.63	141.50	61.32
J-200		0.00	394.28	237.85	156.43	67.79
J-201		12.48(4.80)	391.72	240.81	150.91	65.39
J-204		12.48(4.80)	394.06	240.00	154.06	66.76
J-206		12.48(4.80)	393.77	236.70	157.07	68.06
J-207		12.48(4.80)	392.69	236.32	156.37	67.76
J-208		12.48(4.80)	393.67	234.45	159.22	68.99
J-21		12.48(4.80)	400.46	270.00	130.46	56.53
J-211		12.48(4.80)	393.69	240.00	153.69	66.60
J-212		3.84(4.80)	397.04	289.09	107.95	46.78
J-214		0.00	393.69	238.90	154.79	67.08
J-217		12.48(4.80)	393.69	239.78	153.91	66.70
J-218		0.00	393.69	235.51	158.18	68.55
J-22		0.00	400.47	270.00	130.47	56.54
J-223		12.48(4.80)	399.30	242.40	156.90	67.99
J-224		0.00	399.15	260.00	139.15	60.30

J-225	12.48 (4.80)	395.45	260.00	135.45	58.69
J-227	12.48 (4.80)	399.15	260.00	139.15	60.30
J-236	12.48 (4.80)	399.09	260.00	139.09	60.27
J-238	12.48 (4.80)	395.10	257.90	137.20	59.45
J-24	12.48 (4.80)	400.34	275.23	125.11	54.21
J-243	0.00	400.82	256.07	144.75	62.72
J-245	12.48 (4.80)	400.37	260.14	140.23	60.77
J-246	12.48 (4.80)	400.25	247.06	153.19	66.38
J-25	0.00	400.34	273.41	126.93	55.00
J-250	0.00	399.97	257.84	142.13	61.59
J-254	0.00	401.11	267.76	133.35	57.79
J-255	12.48 (4.80)	400.39	270.00	130.39	56.50
J-256	0.00	401.11	270.00	131.11	56.81
J-257	12.48 (4.80)	399.35	249.22	150.13	65.06
J-259	0.00	397.75	231.54	166.21	72.03
J-26	3.84 (4.80)	397.75	230.00	167.75	72.69
J-276	0.00	397.75	233.84	163.91	71.03
J-277	0.00	397.50	260.14	137.36	59.52
J-282	5.28 (4.80)	397.31	255.03	142.28	61.66
J-286	0.00	397.53	255.73	141.80	61.45
J-292	5.28 (4.80)	396.35	246.95	149.40	64.74
J-293	2.40 (4.80)	397.75	234.58	163.17	70.71
J-294	2.88 (4.80)	397.73	240.00	157.73	68.35
J-37	0.00	397.75	237.55	160.20	69.42
J-53	0.00	399.39	261.14	138.25	59.91
J-58	3.84 (4.80)	397.12	282.94	114.18	49.48
J-60	3.84 (4.80)	397.08	290.00	107.08	46.40
J-61	12.48 (4.80)	399.41	270.00	129.41	56.08
J-62	12.48 (4.80)	399.64	276.90	122.74	53.19
J-66	0.00	400.31	280.00	120.31	52.14
J-67	24.96 (4.80)	399.87	280.00	119.87	51.94
J-7	0.00	397.75	233.00	164.75	71.39
J-71	12.48 (4.80)	400.27	280.00	120.27	52.12
J-73	12.48 (4.80)	401.47	263.06	138.41	59.98
J-74	12.48 (4.80)	395.05	252.12	142.93	61.94
J-75	12.48 (4.80)	395.12	250.00	145.12	62.88
J-76	12.48 (4.80)	393.16	246.16	147.00	63.70
J-77	12.48 (4.80)	393.23	250.56	142.67	61.83
J-79	19.97 (4.80)	392.66	225.80	166.86	72.30
J-8	8.45 (4.80)	394.00	264.14	129.86	56.27
J-81	0.00	391.92	220.00	171.92	74.50
J-82	12.48 (4.80)	399.75	283.36	116.39	50.43
J-86	3.84 (4.80)	397.24	239.16	158.08	68.50
J-87	3.84 (4.80)	397.24	272.47	124.77	54.07
J-9	3.84 (4.80)	397.08	243.90	153.18	66.38
J-94	3.84 (4.80)	397.70	270.00	127.70	55.34
J-96	3.84 (4.80)	397.69	264.79	132.90	57.59
Pump-1	0.00	397.75	241.00	156.75	67.92
T-1	----	402.00	268.31	133.69	57.93
T-2	----	260.00	241.00	19.00	8.23
Pump-1	0.00	260.00	241.00	19.00	8.23

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-137	78.61	T-2	8.23
J-138	78.40	Pump-1	8.23
J-136	78.02	J-193	46.39
J-163	76.77	J-60	46.40
J-81	74.50	J-212	46.78
J-139	74.45	J-58	49.48
J-144	74.37	J-82	50.43
J-142	74.32	J-67	51.94
J-141	73.52	J-71	52.12
J-145	73.40	J-66	52.14

J-143	73.24	J-62	53.19
J-26	72.69	J-87	54.07
J-79	72.30	J-24	54.21
J-259	72.03	J-25	55.00
J-182	72.01	J-94	55.34
J-7	71.39	J-178	55.88
J-276	71.03	J-61	56.08
J-293	70.71	J-8	56.27
J-112	70.38	J-255	56.50
J-126	69.65	J-21	56.53

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-94	2.32	P-38	0.01
P-63	2.12	P-29	0.01
P-70	1.87	P-24	0.02
P-21	1.79	P-129	0.02
P-111	1.62	P-37	0.02
P-112	1.62	P-4	0.03
P-73	1.58	P-110	0.03
P-107	1.54	P-92	0.04
P-96	1.44	P-99	0.06
P-72	1.35	P-123	0.07
P-61	1.34	P-130	0.07
P-108	1.30	P-88	0.10
P-69	1.27	P-64	0.10
P-71	1.27	P-31	0.10
P-81	1.27	P-33	0.11
P-85	1.27	P-52	0.13
P-84	1.23	P-54	0.13
P-97	1.18	P-122	0.13
P-93	1.15	P-77	0.13
P-95	1.12	P-103	0.13

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-95	8.28	P-38	0.00
P-69	7.57	P-129	0.00
P-71	7.57	P-37	0.00
P-81	7.57	P-29	0.00
P-85	7.57	P-24	0.00
P-97	6.55	P-4	0.00
P-96	5.94	P-110	0.00
P-47	5.63	P-92	0.01
P-50	5.63	P-123	0.01
P-94	4.55	P-99	0.01
P-63	3.85	P-31	0.01
P-105	3.79	P-130	0.02
P-78	3.32	P-64	0.02
P-84	3.18	P-122	0.02
P-70	3.05	P-124	0.02
P-58	2.51	P-88	0.03
P-112	2.34	P-20	0.04
P-61	2.31	P-33	0.04
P-73	2.25	P-52	0.05
P-43	2.23	P-54	0.05

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
(-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
T-1	835.58	
T-2	0.00	

NET SYSTEM INFLOW = 835.58
NET SYSTEM OUTFLOW = 0.00
NET SYSTEM DEMAND = 835.58

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
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*
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\PINELA-4.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\PINELA-4.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\PINELA-4.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NAMES #1	NODE NAMES #2	LENGTH (ft)	DIAMETER (in)	ROUGHNESS COEFF.	MINOR LOSS COEFF.
P-1	J-2	J-8	922.80	4.00	100.0000	0.00
P-10	J-24	J-25	184.99	3.00	100.0000	0.00
P-100	J-223	J-236	1045.37	4.00	100.0000	0.00
P-101	J-236	J-227	292.39	4.00	100.0000	0.00
P-102	J-225	J-238	229.58	4.00	100.0000	0.00
P-103	J-238	J-74	416.55	4.00	100.0000	0.00
P-104	J-76	J-194	346.02	3.00	100.0000	0.00
P-105	J-238	J-236	1054.40	2.00	100.0000	0.00
P-106	J-243	J-245	425.00	3.00	100.0000	0.00
P-107	J-243	J-246	266.40	8.00	100.0000	0.00
P-108	J-246	J-223	611.43	8.00	100.0000	0.00
P-109	J-250	J-246	303.93	4.00	100.0000	0.00
P-11	J-26	J-53	2202.08	4.00	100.0000	0.00
P-110	J-9	J-60	1306.51	4.00	100.0000	0.00
P-111	J-224	T-1	1570.91	10.00	100.0000	0.00
P-112	J-73	J-243	278.07	8.00	100.0000	0.00
P-113	J-73	J-254	314.69	8.00	100.0000	0.00
P-114	J-22	J-255	324.13	4.00	100.0000	0.00
P-115	J-250	J-254	525.82	2.00	100.0000	0.00
P-116	J-254	J-256	308.64	2.00	100.0000	0.00
P-117	J-257	J-11	202.54	3.00	100.0000	0.00
P-118	J-11	J-250	289.94	4.00	100.0000	0.00
P-119	J-254	J-14	344.91	8.00	100.0000	0.00
P-12	J-53	J-13	398.13	4.00	100.0000	0.00
P-120	J-14	J-22	314.35	8.00	100.0000	0.00
P-121	J-259	J-163	2696.50	8.00	100.0000	0.00
P-122	J-259	J-94	2597.58	8.00	100.0000	0.00
P-123	J-126	J-276	107.99	8.00	100.0000	0.00
P-124	J-276	J-259	82.99	8.00	100.0000	0.00
P-125	J-277	J-282	862.37	3.00	100.0000	0.00
P-126	J-276	J-286	1184.00	4.00	100.0000	0.00
P-127	J-286	J-277	520.08	4.00	100.0000	0.00
P-128	J-286	J-292	763.70	2.00	100.0000	0.00
P-129	J-37	J-293	145.88	10.00	100.0000	0.00
P-13	J-58	J-60	395.65	4.00	100.0000	0.00
P-130	J-293	J-294	1289.01	4.00	100.0000	0.00
P-131	J-293	J-7	115.95	6.00	100.0000	0.00

P-137	J-16	J-87	980.47	4.00	100.0000	0.00
P-14	J-61	J-62	531.22	3.00	100.0000	0.00
P-15	J-62	J-24	499.96	4.00	100.0000	0.00
P-153	J-37	Pump-1	9.86	10.00	100.0000	0.00
P-154	Pump-1	T-2	16.40	10.00	100.0000	0.00
P-16	J-53	J-61	335.54	4.00	100.0000	0.00
P-17	J-61	J-62	1127.51	4.00	100.0000	0.00
P-18	J-24	J-66	242.70	8.00	100.0000	0.00
P-19	J-66	J-67	224.85	4.00	100.0000	0.00
P-2	J-9	J-10	392.49	4.00	100.0000	0.00
P-20	J-66	J-71	1093.94	6.00	100.0000	0.00
P-21	T-1	J-73	243.89	10.00	100.0000	0.00
P-22	J-74	J-75	296.00	4.00	100.0000	0.00
P-23	J-76	J-77	201.36	3.00	100.0000	0.00
P-24	J-10	J-58	1311.80	4.00	100.0000	0.00
P-25	J-79	J-81	960.88	6.00	100.0000	0.00
P-26	J-67	J-82	465.90	4.00	100.0000	0.00
P-27	J-10	J-86	601.86	4.00	100.0000	0.00
P-28	J-87	J-58	450.56	4.00	100.0000	0.00
P-29	J-87	J-86	1422.66	4.00	100.0000	0.00
P-3	J-11	J-12	300.39	4.00	100.0000	0.00
P-30	J-86	J-26	1622.77	4.00	100.0000	0.00
P-31	J-94	J-96	598.76	8.00	100.0000	0.00
P-32	J-96	J-16	153.34	6.00	100.0000	0.00
P-33	J-96	J-26	1569.42	4.00	100.0000	0.00
P-34	J-2	J-103	387.88	6.00	100.0000	0.00
P-35	J-104	J-2	2506.94	8.00	100.0000	0.00
P-36	J-112	J-104	1766.78	4.00	100.0000	0.00
P-37	J-37	J-126	1060.08	10.00	100.0000	0.00
P-38	J-127	J-8	436.18	4.00	100.0000	0.00
P-39	J-104	J-131	727.64	8.00	100.0000	0.00
P-4	J-12	J-13	361.86	4.00	100.0000	0.00
P-40	J-131	J-79	1465.86	6.00	100.0000	0.00
P-41	J-136	J-137	55.12	4.00	100.0000	0.00
P-42	J-136	J-138	352.05	2.00	100.0000	0.00
P-43	J-81	J-139	47.56	4.00	100.0000	0.00
P-44	J-103	J-140	71.49	6.00	100.0000	0.00
P-45	J-139	J-141	279.00	3.00	100.0000	0.00
P-46	J-142	J-136	615.53	4.00	100.0000	0.00
P-47	J-143	J-142	444.21	2.00	100.0000	0.00
P-48	J-81	J-144	313.66	4.00	100.0000	0.00
P-49	J-144	J-142	338.04	4.00	100.0000	0.00
P-5	J-12	J-14	757.18	2.00	100.0000	0.00
P-50	J-145	J-144	397.18	2.00	100.0000	0.00
P-51	J-139	J-151	1117.41	4.00	100.0000	0.00
P-52	J-152	J-151	441.85	4.00	100.0000	0.00
P-53	J-151	J-153	219.72	4.00	100.0000	0.00
P-54	J-153	J-154	486.07	4.00	100.0000	0.00
P-55	J-103	J-127	927.62	4.00	100.0000	0.00
P-56	J-156	J-157	670.03	3.00	100.0000	0.00
P-57	J-158	J-156	276.85	3.00	100.0000	0.00
P-58	J-153	J-159	181.87	3.00	100.0000	0.00
P-59	J-159	J-156	275.33	3.00	100.0000	0.00
P-6	J-14	J-15	282.69	4.00	100.0000	0.00
P-60	J-162	J-159	761.94	3.00	100.0000	0.00
P-61	J-163	J-167	1232.44	6.00	100.0000	0.00
P-62	J-168	J-169	248.31	3.00	100.0000	0.00
P-63	J-168	J-171	305.97	10.00	100.0000	0.00
P-64	J-167	J-75	262.89	6.00	100.0000	0.00
P-65	J-75	J-168	952.15	3.00	100.0000	0.00
P-66	J-8	J-178	87.80	4.00	100.0000	0.00
P-67	J-179	J-171	249.55	4.00	100.0000	0.00
P-68	J-167	J-180	223.49	6.00	100.0000	0.00
P-69	J-180	J-182	619.48	3.00	100.0000	0.00
P-7	J-13	J-21	720.51	4.00	100.0000	0.00
P-70	J-183	J-168	284.23	8.00	100.0000	0.00
P-71	J-185	J-77	437.44	3.00	100.0000	0.00
P-72	J-131	J-188	546.91	8.00	100.0000	0.00
P-73	J-188	J-183	79.22	8.00	100.0000	0.00
P-74	J-188	J-189	275.65	4.00	100.0000	0.00
P-75	J-190	J-131	230.58	6.00	100.0000	0.00

P-76	J-191	J-76	250.42	3.00	100.0000	0.00
P-77	J-60	J-193	431.95	4.00	100.0000	0.00
P-78	J-194	J-190	136.49	3.00	100.0000	0.00
P-79	J-180	J-200	616.94	6.00	100.0000	0.00
P-8	J-21	J-22	16.45	8.00	100.0000	0.00
P-80	J-200	J-190	459.31	4.00	100.0000	0.00
P-81	J-201	J-204	310.48	3.00	100.0000	0.00
P-82	J-204	J-194	440.69	3.00	100.0000	0.00
P-83	J-204	J-200	142.67	4.00	100.0000	0.00
P-84	J-200	J-206	160.57	4.00	100.0000	0.00
P-85	J-206	J-207	142.65	3.00	100.0000	0.00
P-86	J-208	J-206	95.70	3.00	100.0000	0.00
P-87	J-190	J-211	495.51	3.00	100.0000	0.00
P-88	J-212	J-193	620.15	4.00	100.0000	0.00
P-89	J-211	J-214	641.43	3.00	100.0000	0.00
P-9	J-21	J-24	325.36	8.00	100.0000	0.00
P-90	J-206	J-217	383.12	4.00	100.0000	0.00
P-91	J-217	J-218	301.45	2.00	100.0000	0.00
P-92	J-217	J-211	315.10	4.00	100.0000	0.00
P-93	J-163	J-223	1061.63	8.00	100.0000	0.00
P-94	J-171	J-224	336.11	10.00	100.0000	0.00
P-95	J-171	J-225	262.57	2.00	100.0000	0.00
P-96	J-77	J-183	394.44	4.00	100.0000	0.00
P-97	J-225	J-227	565.39	4.00	100.0000	0.00
P-98	J-227	J-224	23.55	8.00	100.0000	0.00
P-99	J-193	J-9	2151.62	4.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
138.00	0.00	75.00 (Default)
130.00	480.00	75.00 (Default)
110.00	750.00	75.00 (Default)

PUMP SPEED RATIO = 0.980

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-10		0.80	240.00	
J-103		1.76	242.81	
J-104		2.60	243.59	
J-11		2.60	255.87	
J-112		2.60	231.46	
J-12		2.60	260.00	
J-126		1.10	237.01	
J-127		1.76	256.70	
J-13		2.60	260.28	
J-131		0.00	240.00	
J-136		1.04	211.35	
J-137		0.00	210.00	
J-138		1.04	210.00	
J-139		0.00	220.00	
J-14		2.60	270.00	
J-140		16.88	241.31	
J-141		1.04	222.11	
J-142		0.00	220.00	
J-143		1.04	220.00	
J-144		1.04	220.00	
J-145		1.04	220.00	
J-15		0.00	270.00	

J-151	0.00	241.60
J-152	1.04	240.00
J-153	1.04	245.46
J-154	1.04	247.51
J-156	0.00	241.19
J-157	1.04	240.43
J-158	1.04	236.81
J-159	1.04	242.78
J-16	16.88	260.00
J-162	1.04	242.60
J-163	4.40	220.82
J-167	5.20	243.11
J-168	2.60	260.00
J-169	2.60	259.29
J-171	5.20	260.00
J-178	0.00	265.05
J-179	0.00	260.00
J-180	0.00	242.29
J-182	2.60	223.99
J-183	2.60	253.99
J-185	2.60	244.86
J-188	5.20	251.78
J-189	2.60	250.09
J-190	2.60	240.00
J-191	2.60	240.00
J-193	0.80	290.00
J-194	2.60	240.00
J-2	3.52	252.63
J-200	0.00	237.85
J-201	2.60	240.81
J-204	2.60	240.00
J-206	2.60	236.70
J-207	2.60	236.32
J-208	2.60	234.45
J-21	2.60	270.00
J-211	2.60	240.00
J-212	0.80	289.09
J-214	0.00	238.90
J-217	2.60	239.78
J-218	0.00	235.51
J-22	0.00	270.00
J-223	2.60	242.40
J-224	0.00	260.00
J-225	2.60	260.00
J-227	2.60	260.00
J-236	2.60	260.00
J-238	2.60	257.90
J-24	2.60	275.23
J-243	0.00	256.07
J-245	2.60	260.14
J-246	2.60	247.06
J-25	0.00	273.41
J-250	0.00	257.84
J-254	0.00	267.76
J-255	2.60	270.00
J-256	0.00	270.00
J-257	2.60	249.22
J-259	0.00	231.54
J-26	0.80	230.00
J-276	0.00	233.84
J-277	0.00	260.14
J-282	1.10	255.03
J-286	0.00	255.73
J-292	1.10	246.95
J-293	0.50	234.58
J-294	0.60	240.00
J-37	0.00	237.55
J-53	0.00	261.14
J-58	0.80	282.94
J-60	0.80	290.00
J-61	2.60	270.00

J-62	2.60	276.90	
J-66	0.00	280.00	
J-67	5.20	280.00	
J-7	16.88	233.00	
J-71	19.48	280.00	
J-73	2.60	263.06	
J-74	2.60	252.12	
J-75	2.60	250.00	
J-76	2.60	246.16	
J-77	2.60	250.56	
J-79	4.16	225.80	
J-8	1.76	264.14	
J-81	0.00	220.00	
J-82	2.60	283.36	
J-86	0.80	239.16	
J-87	0.80	272.47	
J-9	0.80	243.90	
J-94	0.80	270.00	
J-96	0.80	264.79	
Pump-1	0.00	241.00	
T-1	----	268.31	402.00
T-2	----	241.00	260.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 134
 NUMBER OF END NODES(j) = 113
 NUMBER OF PRIMARY LOOPS(l) = 20
 NUMBER OF SUPPLY NODES(f) = 2
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 2)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 5 TRIALS: ACCURACY = 0.00009

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS #1 #2		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
P-1	J-2	J-8	17.75	0.46	0.00	0.45	0.50
P-10	J-24	J-25	0.00	0.00	0.00	0.00	0.00
P-100	J-223	J-236	9.20	0.15	0.00	0.23	0.15
P-101	J-236	J-227	-9.76	0.05	0.00	0.25	0.16
P-102	J-225	J-238	44.52	0.63	0.00	1.14	2.73
P-103	J-238	J-74	38.51	0.87	0.00	0.98	2.09
P-104	J-76	J-194	-1.26	0.01	0.00	0.06	0.02
P-105	J-238	J-236	-6.48	2.37	0.00	0.66	2.25
P-106	J-243	J-245	12.48	0.45	0.00	0.57	1.05
P-107	J-243	J-246	317.20	0.94	0.00	2.02	3.54
P-108	J-246	J-223	271.48	1.62	0.00	1.73	2.65
P-109	J-250	J-246	-33.24	0.48	0.00	0.85	1.59
P-11	J-26	J-53	-39.70	4.86	0.00	1.01	2.21

P-110	J-9	J-60	1.24	0.00	0.00	0.03	0.00
P-111	J-224	T-1	-519.92	4.69	0.00	2.12	2.98
P-112	J-73	J-243	329.68	1.06	0.00	2.10	3.80
P-113	J-73	J-254	262.20	0.78	0.00	1.67	2.49
P-114	J-22	J-255	12.48	0.08	0.00	0.32	0.26
P-115	J-250	J-254	-7.89	1.70	0.00	0.81	3.23
P-116	J-254	J-256	0.00	0.00	0.00	0.00	0.00
P-117	J-257	J-11	-12.48	0.21	0.00	0.57	1.05
P-118	J-11	J-250	-41.13	0.68	0.00	1.05	2.36
P-119	J-254	J-14	254.31	0.81	0.00	1.62	2.35
P-12	J-53	J-13	-30.08	0.53	0.00	0.77	1.32
P-120	J-14	J-22	235.36	0.64	0.00	1.50	2.04
P-121	J-259	J-163	-150.30	2.39	0.00	0.96	0.89
P-122	J-259	J-94	83.56	0.78	0.00	0.53	0.30
P-123	J-126	J-276	-56.18	0.02	0.00	0.36	0.14
P-124	J-276	J-259	-66.74	0.02	0.00	0.43	0.20
P-125	J-277	J-282	5.28	0.18	0.00	0.24	0.21
P-126	J-276	J-286	10.56	0.22	0.00	0.27	0.19
P-127	J-286	J-277	5.28	0.03	0.00	0.13	0.05
P-128	J-286	J-292	5.28	1.17	0.00	0.54	1.54
P-129	J-37	J-293	86.30	0.02	0.00	0.35	0.11
P-13	J-58	J-60	7.84	0.04	0.00	0.20	0.11
P-130	J-293	J-294	2.88	0.02	0.00	0.07	0.02
P-131	J-293	J-7	81.02	0.13	0.00	0.92	1.15
P-137	J-16	J-87	10.76	0.19	0.00	0.27	0.20
P-14	J-61	J-62	-9.14	0.31	0.00	0.41	0.59
P-15	J-62	J-24	-34.58	0.85	0.00	0.88	1.71
P-153	J-37	Pump-1	-35.40	0.00	0.00	0.14	0.02
P-154	Pump-1	T-2	-35.40	0.00	0.00	0.14	0.02
P-16	J-53	J-61	-9.62	0.05	0.00	0.25	0.16
P-17	J-61	J-62	-12.97	0.31	0.00	0.33	0.28
P-18	J-24	J-66	130.94	0.17	0.00	0.84	0.69
P-19	J-66	J-67	37.44	0.45	0.00	0.96	1.98
P-2	J-9	J-10	-7.52	0.04	0.00	0.19	0.10
P-20	J-66	J-71	93.50	1.64	0.00	1.06	1.50
P-21	T-1	J-73	604.36	0.96	0.00	2.47	3.94
P-22	J-74	J-75	26.03	0.30	0.00	0.66	1.01
P-23	J-76	J-77	-23.70	0.69	0.00	1.08	3.44
P-24	J-10	J-58	0.55	0.00	0.00	0.01	0.00
P-25	J-79	J-81	64.90	0.73	0.00	0.74	0.76
P-26	J-67	J-82	12.48	0.12	0.00	0.32	0.26
P-27	J-10	J-86	-11.90	0.14	0.00	0.30	0.24
P-28	J-87	J-58	11.14	0.09	0.00	0.28	0.21
P-29	J-87	J-86	-4.21	0.05	0.00	0.11	0.03
P-3	J-11	J-12	16.17	0.13	0.00	0.41	0.42
P-30	J-86	J-26	-19.96	1.00	0.00	0.51	0.62
P-31	J-94	J-96	79.72	0.16	0.00	0.51	0.27
P-32	J-96	J-16	91.79	0.22	0.00	1.04	1.45
P-33	J-96	J-26	-15.90	0.64	0.00	0.41	0.41
P-34	J-2	J-103	88.62	0.53	0.00	1.01	1.36
P-35	J-104	J-2	123.26	1.54	0.00	0.79	0.62
P-36	J-112	J-104	-12.48	0.46	0.00	0.32	0.26
P-37	J-37	J-126	-50.90	0.04	0.00	0.21	0.04
P-38	J-127	J-8	-9.30	0.07	0.00	0.24	0.15
P-39	J-104	J-131	-148.22	0.63	0.00	0.95	0.87
P-4	J-12	J-13	10.16	0.06	0.00	0.26	0.18
P-40	J-131	J-79	84.86	1.83	0.00	0.96	1.25
P-41	J-136	J-137	0.00	0.00	0.00	0.00	0.00
P-42	J-136	J-138	4.99	0.49	0.00	0.51	1.39
P-43	J-81	J-139	39.94	0.11	0.00	1.02	2.23
P-44	J-103	J-140	81.02	0.08	0.00	0.92	1.15
P-45	J-139	J-141	4.99	0.05	0.00	0.23	0.19
P-46	J-142	J-136	9.98	0.11	0.00	0.25	0.17
P-47	J-143	J-142	-4.99	0.62	0.00	0.51	1.39
P-48	J-81	J-144	24.96	0.29	0.00	0.64	0.93
P-49	J-144	J-142	14.98	0.12	0.00	0.38	0.36
P-5	J-12	J-14	-6.47	1.70	0.00	0.66	2.24
P-50	J-145	J-144	-4.99	0.55	0.00	0.51	1.39
P-51	J-139	J-151	34.94	1.95	0.00	0.89	1.74
P-52	J-152	J-151	-4.99	0.02	0.00	0.13	0.05
P-53	J-151	J-153	29.95	0.29	0.00	0.76	1.31

P-54	J-153	J-154	4.99	0.02	0.00	0.13	0.05
P-55	J-103	J-127	-0.85	0.00	0.00	0.02	0.00
P-56	J-156	J-157	4.99	0.13	0.00	0.23	0.19
P-57	J-158	J-156	-4.99	0.05	0.00	0.23	0.19
P-58	J-153	J-159	19.97	0.46	0.00	0.91	2.51
P-59	J-159	J-156	9.98	0.19	0.00	0.45	0.69
P-6	J-14	J-15	0.00	0.00	0.00	0.00	0.00
P-60	J-162	J-159	-4.99	0.15	0.00	0.23	0.19
P-61	J-163	J-167	78.38	1.33	0.00	0.89	1.08
P-62	J-168	J-169	12.48	0.26	0.00	0.57	1.05
P-63	J-168	J-171	-415.72	0.60	0.00	1.70	1.97
P-64	J-167	J-75	-32.75	0.06	0.00	0.37	0.21
P-65	J-75	J-168	-19.20	2.22	0.00	0.87	2.33
P-66	J-8	J-178	0.00	0.00	0.00	0.00	0.00
P-67	J-179	J-171	0.00	0.00	0.00	0.00	0.00
P-68	J-167	J-180	86.17	0.29	0.00	0.98	1.29
P-69	J-180	J-182	12.48	0.65	0.00	0.57	1.05
P-7	J-13	J-21	-32.40	1.09	0.00	0.83	1.51
P-70	J-183	J-168	-371.56	1.35	0.00	2.37	4.75
P-71	J-185	J-77	-12.48	0.46	0.00	0.57	1.05
P-72	J-131	J-188	-272.99	1.47	0.00	1.74	2.68
P-73	J-188	J-183	-310.43	0.27	0.00	1.98	3.40
P-74	J-188	J-189	12.48	0.07	0.00	0.32	0.26
P-75	J-190	J-131	-39.90	0.07	0.00	0.45	0.31
P-76	J-191	J-76	-12.48	0.26	0.00	0.57	1.05
P-77	J-60	J-193	5.24	0.02	0.00	0.13	0.05
P-78	J-194	J-190	-12.74	0.15	0.00	0.58	1.09
P-79	J-180	J-200	73.69	0.59	0.00	0.84	0.96
P-8	J-21	J-22	-222.88	0.03	0.00	1.42	1.84
P-80	J-200	J-190	-1.14	0.00	0.00	0.03	0.00
P-81	J-201	J-204	-12.48	0.33	0.00	0.57	1.05
P-82	J-204	J-194	1.00	0.00	0.00	0.05	0.01
P-83	J-204	J-200	-25.96	0.14	0.00	0.66	1.00
P-84	J-200	J-206	48.86	0.52	0.00	1.25	3.24
P-85	J-206	J-207	12.48	0.15	0.00	0.57	1.05
P-86	J-208	J-206	-12.48	0.10	0.00	0.57	1.05
P-87	J-190	J-211	13.54	0.61	0.00	0.61	1.22
P-88	J-212	J-193	-3.84	0.02	0.00	0.10	0.03
P-89	J-211	J-214	0.00	0.00	0.00	0.00	0.00
P-9	J-21	J-24	178.01	0.40	0.00	1.14	1.21
P-90	J-206	J-217	11.42	0.08	0.00	0.29	0.22
P-91	J-217	J-218	0.00	0.00	0.00	0.00	0.00
P-92	J-217	J-211	-1.06	0.00	0.00	0.03	0.00
P-93	J-163	J-223	-249.80	2.42	0.00	1.59	2.28
P-94	J-171	J-224	-449.43	0.77	0.00	1.84	2.28
P-95	J-171	J-225	8.75	1.03	0.00	0.89	3.92
P-96	J-77	J-183	-48.66	1.27	0.00	1.24	3.22
P-97	J-225	J-227	-48.25	1.79	0.00	1.23	3.17
P-98	J-227	J-224	-70.49	0.01	0.00	0.45	0.22
P-99	J-193	J-9	-2.44	0.03	0.00	0.06	0.01

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	35.40	19.00	151.53	132.5	----	-----	---	----

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-10		3.84 (4.80)	391.15	240.00	151.15	65.50
J-103		8.45 (4.80)	390.16	242.81	147.35	63.85
J-104		12.48 (4.80)	392.23	243.59	148.64	64.41
J-11		12.48 (4.80)	397.87	255.87	142.00	61.53
J-112		12.48 (4.80)	391.77	231.46	160.31	69.47
J-12		12.48 (4.80)	397.75	260.00	137.75	59.69
J-126		5.28 (4.80)	392.57	237.01	155.56	67.41
J-127		8.45 (4.80)	390.16	256.70	133.46	57.83
J-13		12.48 (4.80)	397.68	260.28	137.40	59.54
J-131		0.00	392.86	240.00	152.86	66.24
J-136		4.99 (4.80)	389.77	211.35	178.42	77.32
J-137		0.00	389.77	210.00	179.77	77.90
J-138		4.99 (4.80)	389.29	210.00	179.29	77.69
J-139		0.00	390.19	220.00	170.19	73.75
J-14		12.48 (4.80)	399.44	270.00	129.44	56.09
J-140		81.02 (4.80)	390.08	241.31	148.77	64.47
J-141		4.99 (4.80)	390.14	222.11	168.03	72.81
J-142		0.00	389.88	220.00	169.88	73.61
J-143		4.99 (4.80)	389.26	220.00	169.26	73.35
J-144		4.99 (4.80)	390.00	220.00	170.00	73.67
J-145		4.99 (4.80)	389.45	220.00	169.45	73.43
J-15		0.00	399.44	270.00	129.44	56.09
J-151		0.00	388.24	241.60	146.64	63.54
J-152		4.99 (4.80)	388.22	240.00	148.22	64.23
J-153		4.99 (4.80)	387.95	245.46	142.49	61.75
J-154		4.99 (4.80)	387.93	247.51	140.42	60.85
J-156		0.00	387.31	241.19	146.12	63.32
J-157		4.99 (4.80)	387.18	240.43	146.75	63.59
J-158		4.99 (4.80)	387.25	236.81	150.44	65.19
J-159		4.99 (4.80)	387.50	242.78	144.72	62.71
J-16		81.02 (4.80)	391.44	260.00	131.44	56.96
J-162		4.99 (4.80)	387.35	242.60	144.75	62.73
J-163		21.12 (4.80)	395.00	220.82	174.18	75.48
J-167		24.96 (4.80)	393.67	243.11	150.56	65.24
J-168		12.48 (4.80)	395.95	260.00	135.95	58.91
J-169		12.48 (4.80)	395.68	259.29	136.39	59.10
J-171		24.96 (4.80)	396.55	260.00	136.55	59.17
J-178		0.00	390.23	265.05	125.18	54.24
J-179		0.00	396.55	260.00	136.55	59.17
J-180		0.00	393.38	242.29	151.09	65.47
J-182		12.48 (4.80)	392.73	223.99	168.74	73.12
J-183		12.48 (4.80)	394.60	253.99	140.61	60.93
J-185		12.48 (4.80)	392.87	244.86	148.01	64.14
J-188		24.96 (4.80)	394.33	251.78	142.55	61.77
J-189		12.48 (4.80)	394.25	250.09	144.16	62.47
J-190		12.48 (4.80)	392.79	240.00	152.79	66.21
J-191		12.48 (4.80)	392.37	240.00	152.37	66.03
J-193		3.84 (4.80)	391.09	290.00	101.09	43.80
J-194		12.48 (4.80)	392.64	240.00	152.64	66.14
J-2		16.90 (4.80)	390.69	252.63	138.06	59.83
J-200		0.00	392.79	237.85	154.94	67.14
J-201		12.48 (4.80)	392.32	240.81	151.51	65.65
J-204		12.48 (4.80)	392.64	240.00	152.64	66.15
J-206		12.48 (4.80)	392.27	236.70	155.57	67.41
J-207		12.48 (4.80)	392.12	236.32	155.80	67.51
J-208		12.48 (4.80)	392.17	234.45	157.72	68.34
J-21		12.48 (4.80)	398.77	270.00	128.77	55.80
J-211		12.48 (4.80)	392.18	240.00	152.18	65.95
J-212		3.84 (4.80)	391.07	289.09	101.98	44.19
J-214		0.00	392.18	238.90	153.28	66.42
J-217		12.48 (4.80)	392.18	239.78	152.40	66.04
J-218		0.00	392.18	235.51	156.67	67.89
J-22		0.00	398.80	270.00	128.80	55.81
J-223		12.48 (4.80)	397.41	242.40	155.01	67.17
J-224		0.00	397.31	260.00	137.31	59.50

J-225	12.48 (4.80)	395.52	260.00	135.52	58.72
J-227	12.48 (4.80)	397.31	260.00	137.31	59.50
J-236	12.48 (4.80)	397.26	260.00	137.26	59.48
J-238	12.48 (4.80)	394.89	257.90	136.99	59.36
J-24	12.48 (4.80)	398.38	275.23	123.15	53.36
J-243	0.00	399.98	256.07	143.91	62.36
J-245	12.48 (4.80)	399.53	260.14	139.39	60.40
J-246	12.48 (4.80)	399.04	247.06	151.98	65.86
J-25	0.00	398.38	273.41	124.97	54.15
J-250	0.00	398.55	257.84	140.71	60.98
J-254	0.00	400.26	267.76	132.50	57.41
J-255	12.48 (4.80)	398.72	270.00	128.72	55.78
J-256	0.00	400.26	270.00	130.26	56.44
J-257	12.48 (4.80)	397.66	249.22	148.44	64.32
J-259	0.00	392.60	231.54	161.06	69.79
J-26	3.84 (4.80)	392.30	230.00	162.30	70.33
J-276	0.00	392.59	233.84	158.75	68.79
J-277	0.00	392.34	260.14	132.20	57.28
J-282	5.28 (4.80)	392.15	255.03	137.12	59.42
J-286	0.00	392.36	255.73	136.63	59.21
J-292	5.28 (4.80)	391.19	246.95	144.24	62.50
J-293	2.40 (4.80)	392.51	234.58	157.93	68.44
J-294	2.88 (4.80)	392.49	240.00	152.49	66.08
J-37	0.00	392.53	237.55	154.98	67.16
J-53	0.00	397.16	261.14	136.02	58.94
J-58	3.84 (4.80)	391.15	282.94	108.21	46.89
J-60	3.84 (4.80)	391.11	290.00	101.11	43.81
J-61	12.48 (4.80)	397.21	270.00	127.21	55.12
J-62	12.48 (4.80)	397.52	276.90	120.62	52.27
J-66	0.00	398.21	280.00	118.21	51.22
J-67	24.96 (4.80)	397.77	280.00	117.77	51.03
J-7	81.02 (4.80)	392.38	233.00	159.38	69.06
J-71	93.50 (4.80)	396.57	280.00	116.57	50.52
J-73	12.48 (4.80)	401.04	263.06	137.98	59.79
J-74	12.48 (4.80)	394.02	252.12	141.90	61.49
J-75	12.48 (4.80)	393.72	250.00	143.72	62.28
J-76	12.48 (4.80)	392.63	246.16	146.47	63.47
J-77	12.48 (4.80)	393.33	250.56	142.77	61.87
J-79	19.97 (4.80)	391.03	225.80	165.23	71.60
J-8	8.45 (4.80)	390.23	264.14	126.09	54.64
J-81	0.00	390.29	220.00	170.29	73.79
J-82	12.48 (4.80)	397.65	283.36	114.29	49.52
J-86	3.84 (4.80)	391.30	239.16	152.14	65.93
J-87	3.84 (4.80)	391.25	272.47	118.78	51.47
J-9	3.84 (4.80)	391.11	243.90	147.21	63.79
J-94	3.84 (4.80)	391.83	270.00	121.83	52.79
J-96	3.84 (4.80)	391.66	264.79	126.87	54.98
Pump-1	0.00	392.53	241.00	151.53	65.66
T-1	----	402.00	268.31	133.69	57.93
T-2	----	260.00	241.00	19.00	8.23
Pump-1	0.00	260.00	241.00	19.00	8.23

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-137	77.90	Pump-1	8.23
J-138	77.69	T-2	8.23
J-136	77.32	J-193	43.80
J-163	75.48	J-60	43.81
J-81	73.79	J-212	44.19
J-139	73.75	J-58	46.89
J-144	73.67	J-82	49.52
J-142	73.61	J-71	50.52

J-145	73.43	J-67	51.03
J-143	73.35	J-66	51.22
J-182	73.12	J-87	51.47
J-141	72.81	J-62	52.27
J-79	71.60	J-94	52.79
J-26	70.33	J-24	53.36
J-259	69.79	J-25	54.15
J-112	69.47	J-178	54.24
J-7	69.06	J-8	54.64
J-276	68.79	J-96	54.98
J-293	68.44	J-61	55.12
J-208	68.34	J-255	55.78

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-21	2.47	P-24	0.01
P-70	2.37	P-55	0.02
P-111	2.12	P-92	0.03
P-112	2.10	P-80	0.03
P-107	2.02	P-110	0.03
P-73	1.98	P-82	0.05
P-94	1.84	P-104	0.06
P-72	1.74	P-99	0.06
P-108	1.73	P-130	0.07
P-63	1.70	P-88	0.10
P-113	1.67	P-29	0.11
P-119	1.62	P-52	0.13
P-93	1.59	P-54	0.13
P-120	1.50	P-77	0.13
P-8	1.42	P-127	0.13
P-84	1.25	P-153	0.14
P-96	1.24	P-154	0.14
P-97	1.23	P-2	0.19
P-102	1.14	P-13	0.20
P-9	1.14	P-37	0.21

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-70	4.75	P-24	0.00
P-21	3.94	P-55	0.00
P-95	3.92	P-92	0.00
P-112	3.80	P-80	0.00
P-107	3.54	P-110	0.00
P-23	3.44	P-82	0.01
P-73	3.40	P-99	0.01
P-84	3.24	P-104	0.02
P-115	3.23	P-130	0.02
P-96	3.22	P-153	0.02
P-97	3.17	P-154	0.02
P-111	2.98	P-88	0.03
P-102	2.73	P-29	0.03
P-72	2.68	P-37	0.04
P-108	2.65	P-52	0.05
P-58	2.51	P-54	0.05
P-113	2.49	P-77	0.05
P-118	2.36	P-127	0.05
P-119	2.35	P-2	0.10
P-65	2.33	P-129	0.11

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
(-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
T-1	1124.28	
T-2	35.40	

NET SYSTEM INFLOW = 1159.68
NET SYSTEM OUTFLOW = 0.00
NET SYSTEM DEMAND = 1159.68

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
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INPUT DATA FILENAME ----- C:\JENNIF-1\GM_2001.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\GM_2001.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\GM_2001.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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R E G U L A T I N G V A L V E D A T A

VALVE LABEL	VALVE TYPE	VALVE SETTING (ft or gpm)
PRV-1	PSV	446.15

P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E NAME	NODE NAMES		LENGTH (ft)	DIAMETER (in)	ROUGHNESS COEFF.	MINOR LOSS COEFF.
	#1	#2				
1	2675	133	1060.00	2.00	150.0000	0.00
2	133	5001	953.00	2.00	150.0000	0.00
3	5001	357	1334.00	2.00	150.0000	0.00
4	357	2123	983.00	2.00	150.0000	0.00
5	5002	5003	1158.00	3.00	150.0000	0.00
6	5003	1794	480.00	2.00	150.0000	0.00
7	5003	71	272.00	3.00	150.0000	0.00
8	71	74	530.00	3.00	150.0000	0.00
9	74	682	150.00	3.00	150.0000	0.00
10	682	70	220.00	3.00	150.0000	0.00
11	5011	1888	1588.00	2.00	150.0000	0.00
12	1888	5004	1675.00	2.50	150.0000	0.00
13	5004	365	997.00	2.50	150.0000	0.00
14	365	5005	484.00	2.50	150.0000	0.00
15	5005	5006	1255.00	1.00	150.0000	0.00
16	5005	5007	393.00	2.50	150.0000	0.00
17	5007	5008	3046.00	2.50	150.0000	0.00
18	5008	908	886.00	2.50	150.0000	0.00
19	908	5009	1010.00	2.50	150.0000	0.00
20	5009	631	1344.00	2.50	150.0000	0.00
21	631	630	376.00	2.50	150.0000	0.00
22	5002	979	98.00	4.00	150.0000	0.00
23	979	611	590.00	4.00	150.0000	0.00
24	611	5010	140.00	4.00	150.0000	0.00

25	70	5011	634.00	3.00	150.0000	0.00
26	5010	7000	68.00	4.00	150.0000	0.00
27	7000	7001	1747.00	4.00	150.0000	0.00
28	7001	1321	894.00	4.00	150.0000	0.00
29	5012	111	1174.00	2.00	150.0000	0.00
30	111	880	131.00	2.00	150.0000	0.00
31	5012	552	1109.00	4.00	150.0000	0.00
32	62	174	83.00	2.00	150.0000	0.00
33	174	938	584.00	2.00	150.0000	0.00
34	938	629	47.00	2.00	150.0000	0.00
35	552	150	1016.00	4.00	150.0000	0.00
36	150	7002	1469.00	4.00	150.0000	0.00
37	7002	5013	1461.00	4.00	150.0000	0.00
38	5013	5014	4729.00	4.00	150.0000	0.00
39	5014	5015	2397.00	4.00	150.0000	0.00
40	5015	1693	107.00	4.00	150.0000	0.00
41	1693	345	1022.00	2.00	150.0000	0.00
42	345	1138	1034.00	2.00	150.0000	0.00
43	5015	848	1291.00	4.00	150.0000	0.00
44	848	5016	638.00	4.00	150.0000	0.00
45	5016	409	645.00	4.00	150.0000	0.00
46	409	397	550.00	4.00	150.0000	0.00
47	397	5017	301.00	3.00	150.0000	0.00
48	5017	5018	1203.00	3.00	150.0000	0.00
49	5018	588	839.00	3.00	150.0000	0.00
50	588	5019	2347.00	3.00	150.0000	0.00
51	5019	5020	866.00	3.00	150.0000	0.00
52	5020	5022	274.00	2.00	150.0000	0.00
53	5020	5021	464.00	3.00	150.0000	0.00
54	5022	976	286.00	1.00	150.0000	0.00
55	5022	444	1785.00	2.00	150.0000	0.00
56	444	1968	446.00	1.00	150.0000	0.00
57	5021	5024	410.00	3.00	150.0000	0.00
58	5024	975	25.00	2.00	150.0000	0.00
59	641	2249	2015.00	2.00	150.0000	0.00
60	5024	1981	294.00	2.00	150.0000	0.00
61	5013	5023	484.00	6.00	150.0000	0.00
62	5023	7003	160.00	2.00	150.0000	0.00
63	7003	1912	325.00	2.00	150.0000	0.00
64	1912	1464	1152.00	2.00	150.0000	0.00
65	1464	5025	3141.00	2.00	150.0000	0.00
66	5025	5026	1155.00	2.00	150.0000	0.00
67	5023	966	2369.00	6.00	150.0000	0.00
68	966	1352	976.00	6.00	150.0000	0.00
69	1352	5027	1154.00	6.00	150.0000	0.00
70	5027	5030	2178.00	6.00	150.0000	0.00
71	5027	5031	3518.00	6.00	150.0000	0.00
72	5031	842	437.00	6.00	150.0000	0.00
73	842	847	2056.00	6.00	150.0000	0.00
74	847	5028	3910.00	6.00	150.0000	0.00
75	5028	5029	126.00	6.00	150.0000	0.00
76	5311	2205	25.00	2.00	150.0000	0.00
77	5028	2112	3133.00	2.00	150.0000	0.00
78	2112	1397	2115.00	2.00	150.0000	0.00
79	1397	2147	1218.00	2.00	150.0000	0.00
80	2147	7004	2823.00	2.00	150.0000	0.00
81	7004	5032	1363.00	2.50	150.0000	0.00
82	5032	792	705.00	2.00	150.0000	0.00
83	5032	1884	652.00	2.00	150.0000	0.00
84	5029	549	717.00	2.00	150.0000	0.00
85	549	1276	35.00	2.00	150.0000	0.00
86	5029	1293	718.00	6.00	150.0000	0.00
89	5035	5036	2456.00	2.00	150.0000	0.00
90	5034	801	1178.00	4.00	150.0000	0.00
91	801	434	240.00	4.00	150.0000	0.00
92	434	5037	1377.00	4.00	150.0000	0.00
93	5037	4	4096.00	2.00	150.0000	0.00
94	4	5038	927.00	2.00	150.0000	0.00
95	5038	1409	218.00	2.00	150.0000	0.00
96	5038	474	743.00	2.00	150.0000	0.00
97	5037	5039	386.00	4.00	150.0000	0.00

98	5039	1107	561.00	2.00	150.0000	0.00
99	5039	5570	2191.00	4.00	150.0000	0.00
100	1467	808	1492.00	4.00	150.0000	0.00
101	5041	5042	3024.00	4.00	150.0000	0.00
102	5042	2009	1924.00	4.00	150.0000	0.00
103	2009	2381	196.00	4.00	150.0000	0.00
104	2381	870	3332.00	4.00	150.0000	0.00
105	870	5043	42.00	4.00	150.0000	0.00
106	5043	506	513.00	6.00	150.0000	0.00
107	5043	468	686.00	6.00	150.0000	0.00
108	506	5044	714.00	6.00	150.0000	0.00
109	5044	5054	400.00	2.00	150.0000	0.00
110	5055	2067	25.00	2.00	150.0000	0.00
111	5055	8060	25.00	2.00	150.0000	0.00
112	5044	5045	185.00	6.00	150.0000	0.00
113	5045	443	391.00	6.00	150.0000	0.00
114	443	2550	292.00	6.00	150.0000	0.00
115	2550	977	509.00	6.00	150.0000	0.00
116	977	5046	2952.00	6.00	150.0000	0.00
117	5046	1126	498.00	2.00	150.0000	0.00
118	1126	1646	100.00	2.00	150.0000	0.00
119	5046	5047	1988.00	6.00	150.0000	0.00
120	5668	2539	1193.00	6.00	150.0000	0.00
121	2539	917	372.00	6.00	150.0000	0.00
122	917	2480	188.00	6.00	150.0000	0.00
123	2480	1134	2458.00	6.00	150.0000	0.00
124	1134	404	1907.00	6.00	150.0000	0.00
125	404	7005	488.00	3.00	150.0000	0.00
126	7005	7006	473.00	3.00	150.0000	0.00
127	5045	194	170.00	2.00	150.0000	0.00
128	194	1434	523.00	2.00	150.0000	0.00
129	1434	715	900.00	2.00	150.0000	0.00
131	7006	2025	743.00	2.50	150.0000	0.00
132	2025	1885	1116.00	2.50	150.0000	0.00
133	1885	1013	829.00	2.50	150.0000	0.00
134	1013	1142	232.00	2.50	150.0000	0.00
135	5054	5055	120.00	2.00	150.0000	0.00
136	5055	2040	20.00	2.00	150.0000	0.00
137	5054	8067	492.00	2.00	150.0000	0.00
138	468	2721	110.00	6.00	150.0000	0.00
139	2721	2646	176.00	6.00	150.0000	0.00
140	2646	1809	209.00	6.00	150.0000	0.00
141	1809	2337	1114.00	6.00	150.0000	0.00
142	2337	795	414.00	6.00	150.0000	0.00
143	795	2691	16.00	6.00	150.0000	0.00
144	2691	8051	2115.00	6.00	150.0000	0.00
145	8051	2043	72.00	6.00	150.0000	0.00
146	2043	2016	95.00	6.00	150.0000	0.00
147	2016	1227	409.00	6.00	150.0000	0.00
148	1227	5056	303.00	6.00	150.0000	0.00
149	7007	472	20.00	2.00	150.0000	0.00
150	5056	7007	125.00	2.00	150.0000	0.00
151	5056	2344	268.00	6.00	150.0000	0.00
152	2344	2029	2784.00	6.00	150.0000	0.00
153	2029	2554	1554.00	6.00	150.0000	0.00
154	2554	2203	340.00	6.00	150.0000	0.00
155	2203	1562	220.00	6.00	150.0000	0.00
156	1562	5048	93.00	6.00	150.0000	0.00
158	5667	1439	261.00	6.00	150.0000	0.00
159	1439	5057	123.00	6.00	150.0000	0.00
160	5057	7008	25.00	6.00	150.0000	0.00
161	7008	595	582.00	6.00	150.0000	0.00
162	595	956	175.00	6.00	150.0000	0.00
163	956	5049	2072.00	6.00	150.0000	0.00
164	5049	1900	465.00	6.00	150.0000	0.00
165	1900	796	1828.00	6.00	150.0000	0.00
166	796	5050	400.00	6.00	150.0000	0.00
167	5050	5051	507.00	2.50	150.0000	0.00
168	5051	5052	880.00	2.50	150.0000	0.00
169	5052	5053	1008.00	2.50	150.0000	0.00
170	5053	2699	786.00	2.50	150.0000	0.00

171	5058	208	22.00	2.50	150.0000	0.00
172	5058	646	105.00	2.50	150.0000	0.00
174	5059	1942	614.00	2.00	150.0000	0.00
175	1942	2061	32.00	2.00	150.0000	0.00
176	5059	5060	616.00	2.50	150.0000	0.00
177	5060	781	1347.00	1.00	150.0000	0.00
178	781	2017	63.00	1.00	150.0000	0.00
179	5060	1006	213.00	2.50	150.0000	0.00
180	1006	5061	4482.00	2.50	150.0000	0.00
181	5061	5062	823.00	2.50	150.0000	0.00
182	5062	495	306.00	1.00	150.0000	0.00
183	5062	5063	5335.00	2.50	150.0000	0.00
184	5063	7072	375.00	1.00	150.0000	0.00
185	7072	2258	250.00	1.00	150.0000	0.00
186	5063	1067	1764.00	2.50	150.0000	0.00
187	1067	1231	1945.00	2.50	150.0000	0.00
188	1231	1005	410.00	2.50	150.0000	0.00
189	1005	1578	297.00	2.50	150.0000	0.00
190	5030	423	279.00	2.00	150.0000	0.00
191	423	5066	1809.00	2.00	150.0000	0.00
192	5066	2131	450.00	1.00	150.0000	0.00
193	5066	5067	299.00	2.00	150.0000	0.00
194	5030	5068	242.00	6.00	150.0000	0.00
195	5068	2185	216.00	6.00	150.0000	0.00
196	2185	741	416.00	6.00	150.0000	0.00
197	741	414	431.00	6.00	150.0000	0.00
198	414	881	286.00	6.00	150.0000	0.00
199	881	849	1100.00	6.00	150.0000	0.00
200	849	347	387.00	6.00	150.0000	0.00
201	347	1472	2341.00	4.00	150.0000	0.00
202	1472	5069	110.00	4.00	150.0000	0.00
203	5069	5065	4650.00	4.00	150.0000	0.00
204	5064	5065	1229.00	3.00	150.0000	0.00
205	5068	5076	7499.00	2.00	150.0000	0.00
206	5065	5070	1374.00	2.00	150.0000	0.00
207	5065	5071	830.00	4.00	150.0000	0.00
210	1232	5072	140.00	6.00	150.0000	0.00
211	5072	5073	110.00	2.00	150.0000	0.00
212	5073	2078	581.00	2.00	150.0000	0.00
213	5073	1353	751.00	2.00	150.0000	0.00
214	1353	2200	235.00	2.00	150.0000	0.00
215	5072	5074	1134.00	6.00	150.0000	0.00
216	5074	1490	1210.00	6.00	150.0000	0.00
217	1490	1716	39.00	6.00	150.0000	0.00
218	1716	517	538.00	6.00	150.0000	0.00
219	517	2623	1303.00	6.00	150.0000	0.00
220	2623	5075	1239.00	6.00	150.0000	0.00
221	5075	5077	110.00	2.00	150.0000	0.00
222	5077	144	631.00	2.00	150.0000	0.00
223	144	466	202.00	2.00	150.0000	0.00
224	5075	558	758.00	6.00	150.0000	0.00
225	558	130	1212.00	6.00	150.0000	0.00
226	130	1049	232.00	6.00	150.0000	0.00
227	1049	5078	436.00	6.00	150.0000	0.00
228	5078	1605	229.00	4.00	150.0000	0.00
229	1605	2256	465.00	4.00	150.0000	0.00
230	5078	5079	733.00	6.00	150.0000	0.00
231	5079	5080	1764.00	4.00	150.0000	0.00
232	5080	5081	2288.00	4.00	150.0000	0.00
233	2256	5082	1652.00	4.00	150.0000	0.00
234	5083	5084	568.00	4.00	150.0000	0.00
235	5083	5085	228.00	2.00	150.0000	0.00
236	5085	2210	110.00	2.00	150.0000	0.00
237	2210	1883	734.00	1.00	150.0000	0.00
238	5085	356	1632.00	2.00	150.0000	0.00
239	356	7009	500.00	2.00	150.0000	0.00
240	7009	1953	716.00	2.00	150.0000	0.00
241	5082	5086	425.00	4.00	150.0000	0.00
242	5082	1953	22.00	2.00	150.0000	0.00
243	5079	5083	1848.00	4.00	150.0000	0.00
244	5086	5088	1330.00	1.00	150.0000	0.00

245	5086	394	787.00	4.00	150.0000	0.00
246	394	5087	46.00	4.00	150.0000	0.00
247	5087	677	110.00	4.00	150.0000	0.00
248	5087	1050	480.00	4.00	150.0000	0.00
249	1050	5089	320.00	4.00	150.0000	0.00
250	677	2152	1817.00	2.00	150.0000	0.00
251	5081	2028	1041.00	4.00	150.0000	0.00
252	2028	1930	55.00	4.00	150.0000	0.00
253	1930	8075	726.00	4.00	150.0000	0.00
254	8075	2325	745.00	4.00	150.0000	0.00
255	2325	107	310.00	4.00	150.0000	0.00
256	107	106	203.00	4.00	150.0000	0.00
257	106	5090	1790.00	4.00	150.0000	0.00
258	5090	745	75.00	2.00	150.0000	0.00
259	745	1056	650.00	2.00	150.0000	0.00
260	1056	2031	980.00	2.00	150.0000	0.00
261	2031	1955	801.00	2.00	150.0000	0.00
262	5090	326	1890.00	3.00	150.0000	0.00
263	326	363	4136.00	3.00	150.0000	0.00
264	363	2532	1138.00	3.00	150.0000	0.00
265	2532	7010	856.00	3.00	150.0000	0.00
266	7010	5091	733.00	3.00	150.0000	0.00
267	5091	2316	1089.00	2.00	150.0000	0.00
268	5091	5094	1701.00	3.00	150.0000	0.00
269	5094	724	32.00	3.00	150.0000	0.00
270	724	5092	1683.00	2.50	150.0000	0.00
271	5092	5093	1566.00	2.50	150.0000	0.00
272	5084	1284	1587.00	4.00	150.0000	0.00
273	1284	5095	795.00	4.00	150.0000	0.00
274	5095	408	132.00	2.50	150.0000	0.00
275	408	5096	1014.00	2.50	150.0000	0.00
276	5096	27	830.00	2.50	150.0000	0.00
277	5096	5097	3356.00	2.00	150.0000	0.00
278	5097	342	114.00	2.00	150.0000	0.00
279	342	1675	590.00	1.00	150.0000	0.00
280	1675	8032	38.00	1.00	150.0000	0.00
281	5095	1484	549.00	3.00	150.0000	0.00
282	1484	5098	501.00	3.00	150.0000	0.00
283	5098	7011	110.00	2.00	150.0000	0.00
284	7011	1386	185.00	2.00	150.0000	0.00
285	5098	5099	1657.00	3.00	150.0000	0.00
286	5099	751	1700.00	3.00	150.0000	0.00
287	5100	5101	2568.00	2.50	150.0000	0.00
288	5101	8043	929.00	2.00	150.0000	0.00
289	8043	1036	710.00	2.00	150.0000	0.00
290	1036	2314	170.00	2.00	150.0000	0.00
291	751	5100	2240.00	3.00	150.0000	0.00
292	5100	7012	129.00	3.00	150.0000	0.00
293	7012	2094	527.00	3.00	150.0000	0.00
294	2094	2355	238.00	3.00	150.0000	0.00
295	2355	5102	448.00	3.00	150.0000	0.00
296	5102	5103	989.00	3.00	150.0000	0.00
297	1899	669	5993.00	2.00	150.0000	0.00
298	669	582	1624.00	2.00	150.0000	0.00
299	5103	1480	798.00	2.50	150.0000	0.00
300	5103	5104	82.00	2.00	150.0000	0.00
301	5104	1899	46.00	2.00	150.0000	0.00
302	1480	5105	775.00	2.50	150.0000	0.00
303	5105	5106	1409.00	2.50	150.0000	0.00
304	5106	2322	960.00	2.00	150.0000	0.00
305	2322	1035	120.00	2.00	150.0000	0.00
306	1035	670	263.00	2.00	150.0000	0.00
307	670	2395	312.00	2.00	150.0000	0.00
308-XX	5104	2659	4412.00	1.50	150.0000	0.00
309	2659	1966	28.00	1.50	150.0000	0.00
310	1966	5108	2873.00	1.50	150.0000	0.00
311	5108	712	3186.00	2.00	150.0000	0.00
312	712	1254	102.00	2.00	150.0000	0.00
313	1254	1422	2010.00	2.00	150.0000	0.00
314	1422	2272	95.00	2.00	150.0000	0.00
315	2272	1166	129.00	4.00	150.0000	0.00

316	1166	57	423.00	4.00	150.0000	0.00
317	57	2234	413.00	4.00	150.0000	0.00
318	2234	684	298.00	4.00	150.0000	0.00
319	684	5107	940.00	4.00	150.0000	0.00
320	5107	1324	67.00	2.00	150.0000	0.00
321	1324	2252	236.00	2.00	150.0000	0.00
322	2252	8047	34.00	2.00	150.0000	0.00
323	8047	872	132.00	2.00	150.0000	0.00
324	872	1193	216.00	2.00	150.0000	0.00
325	1193	2443	651.00	2.00	150.0000	0.00
326	7013	1365	128.00	1.50	150.0000	0.00
327	5107	5109	50.00	4.00	150.0000	0.00
328	5109	5110	60.00	4.00	150.0000	0.00
329	5109	5111	305.00	4.00	150.0000	0.00
330	5111	1237	225.00	3.00	150.0000	0.00
331	1237	1179	220.00	3.00	150.0000	0.00
332	5110	5326	162.00	1.50	150.0000	0.00
333	5112	7014	285.00	6.00	150.0000	0.00
334	5111	1621	312.00	4.00	150.0000	0.00
335	1621	426	186.00	4.00	150.0000	0.00
336	426	8001	161.00	4.00	150.0000	0.00
337	8001	5113	171.00	4.00	150.0000	0.00
338	7014	5114	737.00	6.00	150.0000	0.00
339-XX	5113	5114	20.00	4.00	150.0000	0.00
340	5114	5115	50.00	4.00	150.0000	0.00
341	5115	2546	30.00	4.00	150.0000	0.00
342	5115	1534	70.00	4.00	150.0000	0.00
343	1534	1060	60.00	4.00	150.0000	0.00
344	5112	5261	285.00	6.00	150.0000	0.00
345	5110	7013	10.00	1.50	150.0000	0.00
346	5113	2529	269.00	4.00	150.0000	0.00
347	2529	1255	166.00	4.00	150.0000	0.00
348	1255	5116	123.00	4.00	150.0000	0.00
349	5116	612	45.00	2.00	150.0000	0.00
350	612	1410	271.00	2.00	150.0000	0.00
351	5116	5117	80.00	4.00	150.0000	0.00
352	5117	569	227.00	4.00	150.0000	0.00
353	5117	1253	149.00	1.00	150.0000	0.00
354	1253	1905	90.00	1.00	150.0000	0.00
355	1905	2672	230.00	1.00	150.0000	0.00
356	2672	680	720.00	1.00	150.0000	0.00
357	5116	676	184.00	4.00	150.0000	0.00
358	676	379	47.00	4.00	150.0000	0.00
359	379	694	539.00	4.00	150.0000	0.00
360	694	832	143.00	4.00	150.0000	0.00
361	832	5118	90.00	4.00	150.0000	0.00
362	5118	2715	212.00	4.00	150.0000	0.00
363	5114	J-18	1911.00	6.00	150.0000	0.00
364	5118	7015	122.00	4.00	150.0000	0.00
365	7015	5119	227.00	4.00	150.0000	0.00
366	5119	5121	137.00	6.00	150.0000	0.00
368	5121	435	359.00	4.00	150.0000	0.00
369	435	2072	182.00	4.00	150.0000	0.00
370	5119	1403	174.00	6.00	150.0000	0.00
371	1403	1987	81.00	6.00	150.0000	0.00
372	1987	1986	26.00	6.00	150.0000	0.00
374	2062	J-3	101.00	1.50	150.0000	0.00
375	1369	7412	20.00	1.50	150.0000	0.00
376	7412	1835	93.00	1.50	150.0000	0.00
377	1835	5122	110.00	1.50	150.0000	0.00
378	5122	1937	67.00	1.50	150.0000	0.00
379	1937	1829	142.00	1.50	150.0000	0.00
380	1829	1973	317.00	1.50	150.0000	0.00
381	1973	2006	100.00	1.50	150.0000	0.00
382	2715	2628	153.00	4.00	150.0000	0.00
383	2628	378	81.00	4.00	150.0000	0.00
384	378	1635	116.00	4.00	150.0000	0.00
385	1635	187	103.00	4.00	150.0000	0.00
386	5132	583	130.00	1.50	150.0000	0.00
387	583	838	66.00	1.50	150.0000	0.00
388	5132	5131	396.00	6.00	150.0000	0.00

389	5131	5130	30.00	6.00	150.0000	0.00
390	5130	5129	155.00	4.00	150.0000	0.00
391	5129	971	134.00	4.00	150.0000	0.00
392	971	7018	151.00	4.00	150.0000	0.00
393	5129	5128	293.00	4.00	150.0000	0.00
394	5128	2414	108.00	1.50	150.0000	0.00
395	2414	928	226.00	1.50	150.0000	0.00
396	928	1413	102.00	1.50	150.0000	0.00
397	5128	1521	108.00	2.00	150.0000	0.00
398	1521	5125	238.00	2.00	150.0000	0.00
399	5125	1140	207.00	2.00	150.0000	0.00
400	1140	5124	55.00	2.00	150.0000	0.00
401	5124	5123	114.00	2.00	150.0000	0.00
402	5123	455	87.00	2.00	150.0000	0.00
403	5123	2232	20.00	2.00	150.0000	0.00
404	455	2453	302.00	2.00	150.0000	0.00
405	2453	696	31.00	2.00	150.0000	0.00
406	696	8064	258.00	2.00	150.0000	0.00
407	8064	7016	204.00	2.00	150.0000	0.00
408	7016	2276	170.00	2.00	150.0000	0.00
409	5124	952	171.00	1.50	150.0000	0.00
410	952	2345	244.00	1.50	150.0000	0.00
411	5125	573	151.00	2.00	150.0000	0.00
412	573	575	35.00	2.00	150.0000	0.00
413	575	5126	86.00	2.00	150.0000	0.00
414	5126	2399	35.00	2.00	150.0000	0.00
415	2399	2269	143.00	2.00	150.0000	0.00
416	5126	5127	65.00	2.00	150.0000	0.00
417	5127	1571	89.00	2.00	150.0000	0.00
418	1571	7017	55.00	2.00	150.0000	0.00
419	5127	2710	210.00	2.00	150.0000	0.00
420	2710	8069	64.00	2.00	150.0000	0.00
421	5119	5120	10.00	4.00	150.0000	0.00
422	1986	5132	81.00	6.00	150.0000	0.00
423	5131	7019	201.00	2.00	150.0000	0.00
424	7019	7020	130.00	2.00	150.0000	0.00
425	7020	7021	127.00	2.00	150.0000	0.00
426	7021	2356	29.00	2.00	150.0000	0.00
427	2356	5133	156.00	2.00	150.0000	0.00
428	5133	1431	128.00	1.50	150.0000	0.00
429	1431	465	93.00	1.50	150.0000	0.00
430	465	5134	33.00	1.50	150.0000	0.00
431	5134	1811	55.00	1.50	150.0000	0.00
432	1811	1435	189.00	1.50	150.0000	0.00
433	1435	2118	61.00	1.50	150.0000	0.00
434	5133	530	314.00	1.50	150.0000	0.00
435	530	1089	204.00	1.50	150.0000	0.00
436	1089	5135	304.00	1.50	150.0000	0.00
437	5135	579	705.00	1.50	150.0000	0.00
438	579	2694	20.00	1.50	150.0000	0.00
439	5130	2436	159.00	4.00	150.0000	0.00
440	2436	1351	302.00	4.00	150.0000	0.00
441	1351	2580	186.00	4.00	150.0000	0.00
442	2580	7022	322.00	4.00	150.0000	0.00
443	7022	1273	207.00	4.00	150.0000	0.00
444	1273	5136	87.00	4.00	150.0000	0.00
445	5136	5137	443.00	4.00	150.0000	0.00
446-XX	5137	5138	23.00	4.00	150.0000	0.00
447	5138	1251	206.00	4.00	150.0000	0.00
448	1251	2679	99.00	4.00	150.0000	0.00
449	5138	189	95.00	2.00	150.0000	0.00
450	189	398	91.00	2.00	150.0000	0.00
451	398	1378	339.00	2.00	150.0000	0.00
452	5137	5139	307.00	2.00	150.0000	0.00
453	5139	5140	86.00	2.00	150.0000	0.00
454	5140	1418	156.00	2.00	150.0000	0.00
455	5140	554	60.00	2.00	150.0000	0.00
456	5140	452	35.00	2.00	150.0000	0.00
457	5140	2223	102.00	2.00	150.0000	0.00
458	2223	1256	361.00	1.50	150.0000	0.00
459	1256	2217	271.00	1.50	150.0000	0.00

460	1378	1564	258.00	2.00	150.0000	0.00
461	1564	2521	1358.00	2.00	150.0000	0.00
462	2521	914	603.00	2.00	150.0000	0.00
463	1714	723	24.00	2.00	150.0000	0.00
464	914	1714	888.00	2.00	150.0000	0.00
465	8072	5141	1405.00	1.50	150.0000	0.00
466	5141	941	375.00	1.50	150.0000	0.00
467	941	1079	31.00	1.50	150.0000	0.00
468	723	8072	347.00	2.00	150.0000	0.00
469	1079	5152	798.00	1.50	150.0000	0.00
470	1529	1756	64.00	1.50	150.0000	0.00
471	5152	1069	191.00	1.50	150.0000	0.00
472	1069	5153	1098.00	1.50	150.0000	0.00
473	2324	2115	10.00	1.50	150.0000	0.00
474	5153	965	249.00	1.50	150.0000	0.00
475	452	7023	388.00	2.00	150.0000	0.00
476	7023	5143	389.00	2.00	150.0000	0.00
477	5143	1202	31.00	2.00	150.0000	0.00
478	1202	5144	71.00	2.00	150.0000	0.00
479	5144	5151	70.00	2.00	150.0000	0.00
480	1285	1414	80.00	2.00	150.0000	0.00
481	5144	2052	153.00	2.00	150.0000	0.00
482	2052	2724	271.00	2.00	150.0000	0.00
483	5136	5145	20.00	4.00	150.0000	0.00
484	5145	7024	238.00	2.00	150.0000	0.00
485	7024	2706	353.00	2.00	150.0000	0.00
486	5145	1258	213.00	4.00	150.0000	0.00
487	1258	1595	215.00	4.00	150.0000	0.00
488	5149	5146	330.00	4.00	150.0000	0.00
489	5148	7026	425.00	4.00	150.0000	0.00
490	7026	1717	255.00	4.00	150.0000	0.00
491	1717	5147	217.00	4.00	150.0000	0.00
492	5147	2341	451.00	2.00	150.0000	0.00
493	2341	2459	705.00	1.50	150.0000	0.00
494	2459	1367	171.00	1.50	150.0000	0.00
495	1367	1320	815.00	1.50	150.0000	0.00
496	5147	7027	86.00	1.50	150.0000	0.00
497	7027	2244	28.00	1.50	150.0000	0.00
498	2244	673	418.00	1.50	150.0000	0.00
499	673	1553	120.00	1.50	150.0000	0.00
500	412	1553	52.00	1.50	150.0000	0.00
501	412	454	127.00	1.50	150.0000	0.00
502	454	439	571.00	1.50	150.0000	0.00
503	439	1090	299.00	1.50	150.0000	0.00
504	5146	5148	554.00	4.00	150.0000	0.00
505	1595	5149	74.00	4.00	150.0000	0.00
506	7025	581	256.00	4.00	150.0000	0.00
507	5149	7025	86.00	4.00	150.0000	0.00
508	7025	1130	824.00	4.00	150.0000	0.00
509	1130	2633	80.00	4.00	150.0000	0.00
510	5148	1576	25.00	4.00	150.0000	0.00
511	5148	5150	86.00	4.00	150.0000	0.00
512	5150	873	25.00	4.00	150.0000	0.00
513	5150	750	30.00	4.00	150.0000	0.00
514	5150	8005	220.00	4.00	150.0000	0.00
515	5147	1002	25.00	4.00	150.0000	0.00
516	5138	2444	334.00	2.00	150.0000	0.00
517	5334	1436	165.00	2.00	150.0000	0.00
518	5151	1285	15.00	2.00	150.0000	0.00
519	5152	1529	471.00	1.50	150.0000	0.00
521	5153	2324	130.00	1.50	150.0000	0.00
522	1294	2427	464.00	2.00	150.0000	0.00
523	2427	1940	739.00	2.00	150.0000	0.00
524	1940	732	1522.00	2.00	150.0000	0.00
525	732	5142	1660.00	2.00	150.0000	0.00
526	5142	5154	867.00	2.00	150.0000	0.00
527	5154	5155	1361.00	2.50	150.0000	0.00
528	5155	155	786.00	2.00	150.0000	0.00
529	5155	748	1039.00	2.50	150.0000	0.00
530	748	5156	927.00	2.50	150.0000	0.00
531	5156	1488	1742.00	3.00	150.0000	0.00

532	1488	5157	512.00	3.00	150.0000	0.00
533	5157	1391	92.00	3.00	150.0000	0.00
534	1391	1275	1586.00	3.00	150.0000	0.00
535	1275	1153	2341.00	3.00	150.0000	0.00
536	1153	1957	2563.00	3.00	150.0000	0.00
537	1957	206	329.00	3.00	150.0000	0.00
538	206	1317	453.00	3.00	150.0000	0.00
539	1317	2222	597.00	3.00	150.0000	0.00
540	2222	853	50.00	3.00	150.0000	0.00
541	853	5158	2475.00	3.00	150.0000	0.00
542	5158	5159	231.00	2.00	150.0000	0.00
543	5159	5160	1303.00	2.00	150.0000	0.00
544	5158	747	487.00	3.00	150.0000	0.00
545	747	1244	604.00	3.00	150.0000	0.00
546	1244	5161	1625.00	3.00	150.0000	0.00
547	5161	5162	3578.00	3.00	150.0000	0.00
548	5162	697	1399.00	2.00	150.0000	0.00
549	697	618	1586.00	2.00	150.0000	0.00
550	618	1651	100.00	2.00	150.0000	0.00
551	5162	1380	403.00	4.00	150.0000	0.00
552	1380	185	1655.00	4.00	150.0000	0.00
553	185	1323	901.00	4.00	150.0000	0.00
554	1323	5163	1442.00	4.00	150.0000	0.00
555	5163	5164	1889.00	4.00	150.0000	0.00
556	5164	890	1012.00	4.00	150.0000	0.00
557	890	5165	4013.00	4.00	150.0000	0.00
558	5165	5166	80.00	4.00	150.0000	0.00
559	5166	5167	293.00	2.00	150.0000	0.00
560	5166	5168	596.00	2.00	150.0000	0.00
561	5166	5169	859.00	6.00	150.0000	0.00
562	5169	5170	790.00	6.00	150.0000	0.00
563	5170	984	3012.00	6.00	150.0000	0.00
564	984	620	270.00	6.00	150.0000	0.00
565	620	5171	105.00	6.00	150.0000	0.00
566	5165	1387	2172.00	4.00	150.0000	0.00
567	1387	1388	90.00	4.00	150.0000	0.00
568	1388	1689	350.00	4.00	150.0000	0.00
569	1689	5172	140.00	4.00	150.0000	0.00
570	5172	112	130.00	1.00	150.0000	0.00
571	112	1681	146.00	1.00	150.0000	0.00
572	1681	1818	95.00	1.00	150.0000	0.00
573	5173	1959	50.00	4.00	150.0000	0.00
574	5174	5175	1239.00	2.00	150.0000	0.00
575	5174	672	363.00	4.00	150.0000	0.00
576	672	2253	252.00	4.00	150.0000	0.00
577	5173	5174	80.00	4.00	150.0000	0.00
578	5172	5173	2412.00	4.00	150.0000	0.00
579	2253	5176	179.00	4.00	150.0000	0.00
580	5176	1427	378.00	2.00	150.0000	0.00
581	1427	1408	131.00	2.00	150.0000	0.00
582	1408	5177	491.00	2.00	150.0000	0.00
583	5177	656	25.00	2.00	150.0000	0.00
584	5177	651	55.00	2.00	150.0000	0.00
585	5177	1383	160.00	2.00	150.0000	0.00
586	1383	1504	70.00	2.00	150.0000	0.00
587	1504	1382	1350.00	2.00	150.0000	0.00
588	1382	2247	70.00	2.00	150.0000	0.00
589	2247	7028	1779.00	2.00	150.0000	0.00
590	7028	1189	40.00	2.00	150.0000	0.00
591	5176	5179	32.00	4.00	150.0000	0.00
592	5179	5178	1426.00	2.00	150.0000	0.00
593	5179	728	356.00	4.00	150.0000	0.00
594	728	5180	633.00	4.00	150.0000	0.00
595	5180	5181	439.00	2.00	150.0000	0.00
596	5180	5182	396.00	4.00	150.0000	0.00
597	5182	267	1400.00	2.00	150.0000	0.00
598	267	1906	57.00	2.00	150.0000	0.00
599	1906	2190	80.00	2.00	150.0000	0.00
600	5182	5183	384.00	4.00	150.0000	0.00
601	5183	5184	30.00	4.00	150.0000	0.00
602	5184	1745	50.00	2.00	150.0000	0.00

603	1745	406	391.00	1.00	150.0000	0.00
604	406	2228	549.00	1.00	150.0000	0.00
605	5183	81	137.00	2.00	150.0000	0.00
606	5184	5185	776.00	4.00	150.0000	0.00
607	5185	5186	11.00	2.50	150.0000	0.00
608	5185	7029	147.00	2.00	150.0000	0.00
609	7029	933	86.00	2.00	150.0000	0.00
610	933	5187	46.00	2.00	150.0000	0.00
611	5187	1201	80.00	2.00	150.0000	0.00
612	1201	94	456.00	2.00	150.0000	0.00
613	5187	742	501.00	2.00	150.0000	0.00
614	5186	2578	391.00	2.50	150.0000	0.00
615	5185	5188	893.00	4.00	150.0000	0.00
616	5188	7030	80.00	4.00	150.0000	0.00
617	7030	294	385.00	1.00	150.0000	0.00
618	2578	1364	965.00	2.50	150.0000	0.00
619	1364	5189	787.00	2.50	150.0000	0.00
620	5188	502	1170.00	4.00	150.0000	0.00
621	1205	688	604.00	2.00	150.0000	0.00
622	688	5190	336.00	2.00	150.0000	0.00
623	5189	1684	125.00	2.00	150.0000	0.00
624	1684	1685	100.00	2.00	150.0000	0.00
625	1685	234	40.00	2.00	150.0000	0.00
626	234	565	280.00	2.00	150.0000	0.00
627	5189	1205	54.00	2.00	150.0000	0.00
628	502	7031	2258.00	4.00	150.0000	0.00
629	7031	1744	187.00	4.00	150.0000	0.00
630	1744	1774	804.00	4.00	150.0000	0.00
631	1774	2091	722.00	4.00	150.0000	0.00
632	5192	5191	155.00	4.00	150.0000	0.00
633	5191	2091	50.00	4.00	150.0000	0.00
634	5191	7032	80.00	2.00	150.0000	0.00
635	5192	5193	1550.00	4.00	150.0000	0.00
636	5193	1752	80.00	2.00	150.0000	0.00
637	1752	2426	74.00	2.00	150.0000	0.00
638	2426	1751	61.00	2.00	150.0000	0.00
639	5193	5194	9361.00	4.00	150.0000	0.00
640	5194	5195	71.00	3.00	150.0000	0.00
641	5194	2490	1961.00	2.50	150.0000	0.00
642	2490	1747	173.00	2.50	150.0000	0.00
643	1747	5196	994.00	2.00	150.0000	0.00
644	5196	5197	81.00	2.00	150.0000	0.00
645	5197	1291	119.00	2.00	150.0000	0.00
646	5197	7033	122.00	2.00	150.0000	0.00
647	5196	1741	447.00	2.00	150.0000	0.00
648	1741	653	1513.00	2.00	150.0000	0.00
649	653	1755	588.00	2.00	150.0000	0.00
650	5195	2688	558.00	3.00	150.0000	0.00
651	2688	1749	632.00	3.00	150.0000	0.00
652	1749	1748	1083.00	3.00	150.0000	0.00
653	1748	5198	2213.00	3.00	150.0000	0.00
654	5198	1740	447.00	3.00	150.0000	0.00
655	1740	1742	600.00	3.00	150.0000	0.00
656	1742	5199	394.00	3.00	150.0000	0.00
657	5199	1753	79.00	2.00	150.0000	0.00
658	5200	1762	778.00	2.50	150.0000	0.00
659	1762	1763	30.00	2.50	150.0000	0.00
660	1763	1760	209.00	2.50	150.0000	0.00
661	1760	701	109.00	2.50	150.0000	0.00
662	701	1750	893.00	2.50	150.0000	0.00
663	5199	5200	30.00	2.00	150.0000	0.00
664	5200	1761	316.00	3.00	150.0000	0.00
665	1761	5201	962.00	3.00	150.0000	0.00
666	5201	5202	293.00	2.00	150.0000	0.00
667	5202	1758	83.00	2.00	150.0000	0.00
668	1758	1780	196.00	2.00	150.0000	0.00
669	1780	5203	100.00	2.00	150.0000	0.00
670	5203	1759	20.00	2.00	150.0000	0.00
671	5203	2305	368.00	2.00	150.0000	0.00
672	2305	5204	105.00	2.00	150.0000	0.00
673	1759	923	231.00	2.00	150.0000	0.00

674	923	1243	32.00	2.00	150.0000	0.00
675	1243	2551	163.00	2.00	150.0000	0.00
676	2551	134	181.00	2.00	150.0000	0.00
677	134	272	106.00	2.00	150.0000	0.00
678	272	5204	69.00	2.00	150.0000	0.00
679	5204	5205	304.00	2.00	150.0000	0.00
680	5205	109	157.00	2.00	150.0000	0.00
681	109	615	169.00	2.00	150.0000	0.00
682	5202	2127	389.00	2.00	150.0000	0.00
683	2127	482	182.00	2.00	150.0000	0.00
684	5190	310	1056.00	2.00	150.0000	0.00
685	310	2089	634.00	2.00	150.0000	0.00
686	2089	1964	497.00	2.00	150.0000	0.00
687	1964	312	318.00	2.00	150.0000	0.00
688	312	309	521.00	2.00	150.0000	0.00
689	1060	5207	944.00	4.00	150.0000	0.00
690	5207	237	776.00	2.00	150.0000	0.00
691	237	1939	130.00	2.00	150.0000	0.00
692	1939	369	320.00	2.00	150.0000	0.00
693	975	641	931.00	2.00	150.0000	0.00
694	5033	1293	115.00	6.00	150.0000	0.00
695	5033	J-11	343.00	6.00	150.0000	0.00
697	5207	8024	369.00	4.00	150.0000	0.00
698	8024	1228	10.00	4.00	150.0000	0.00
699	1228	2219	781.00	2.00	150.0000	0.00
700	2219	5209	170.00	2.00	150.0000	0.00
701	5209	691	210.00	1.50	150.0000	0.00
702	691	717	252.00	1.50	150.0000	0.00
703	717	1971	100.00	1.50	150.0000	0.00
704	1971	1084	410.00	1.50	150.0000	0.00
705	1084	2680	102.00	1.50	150.0000	0.00
706	2680	1815	97.00	1.50	150.0000	0.00
707	5210	5211	50.00	1.50	150.0000	0.00
708	5209	5210	749.00	2.00	150.0000	0.00
709	5210	807	60.00	1.50	150.0000	0.00
710	5211	374	280.00	1.00	150.0000	0.00
711	5211	831	60.00	1.50	150.0000	0.00
712	807	830	220.00	1.50	150.0000	0.00
713	831	1913	220.00	1.50	150.0000	0.00
714	830	7034	867.00	1.50	150.0000	0.00
715	1913	1805	840.00	1.50	150.0000	0.00
716	7034	1703	404.00	1.50	150.0000	0.00
717	1703	7	100.00	3.00	150.0000	0.00
718	1805	1065	740.00	1.00	150.0000	0.00
719	1065	1555	160.00	1.00	150.0000	0.00
720-XX	1555	5212	1479.00	2.00	150.0000	0.00
721	5214	5213	616.00	2.00	150.0000	0.00
722	5213	5212	30.00	2.00	150.0000	0.00
723	5212	2289	80.00	2.00	150.0000	0.00
724	5213	2592	174.00	2.00	150.0000	0.00
725	2592	271	550.00	2.00	150.0000	0.00
726	271	5215	2668.00	2.00	150.0000	0.00
727	5215	260	2013.00	2.00	150.0000	0.00
728	5215	1831	2303.00	2.50	150.0000	0.00
729	260	1992	15.00	2.00	150.0000	0.00
730	1992	1837	229.00	2.00	150.0000	0.00
731	1831	1647	758.00	2.50	150.0000	0.00
732	1647	1645	101.00	2.50	150.0000	0.00
733	1645	1922	139.00	2.50	150.0000	0.00
734	1922	2696	911.00	2.50	150.0000	0.00
735	2696	5216	462.00	2.50	150.0000	0.00
736	5216	2063	249.00	2.00	150.0000	0.00
737	2063	679	284.00	2.00	150.0000	0.00
738	679	2520	407.00	2.00	150.0000	0.00
739	2520	1355	237.00	2.00	150.0000	0.00
740	1355	2400	380.00	2.00	150.0000	0.00
741	5216	2412	524.00	3.00	150.0000	0.00
742	2412	543	62.00	3.00	150.0000	0.00
743	543	2403	363.00	3.00	150.0000	0.00
744	5217	348	30.00	2.00	150.0000	0.00
745	348	305	73.00	2.00	150.0000	0.00

746	305	1509	367.00	2.00	150.0000	0.00
747	1509	1009	812.00	2.00	150.0000	0.00
748	1009	996	107.00	2.00	150.0000	0.00
749	996	313	633.00	2.00	150.0000	0.00
750	313	1904	62.00	2.00	150.0000	0.00
751	1904	1557	705.00	2.00	150.0000	0.00
752	1557	537	249.00	2.00	150.0000	0.00
753	537	1544	597.00	2.00	150.0000	0.00
754	1544	2262	481.00	2.00	150.0000	0.00
755	2262	1908	133.00	2.00	150.0000	0.00
756	1908	1738	5.00	2.00	150.0000	0.00
757	1738	2121	50.00	2.00	150.0000	0.00
758	2121	396	897.00	2.00	150.0000	0.00
759	396	518	15.00	2.00	150.0000	0.00
760	518	1597	190.00	2.00	150.0000	0.00
761	2403	5217	45.00	3.00	150.0000	0.00
762	5217	5218	125.00	3.00	150.0000	0.00
765	7035	2229	114.00	6.00	150.0000	0.00
766	536	2229	240.00	6.00	150.0000	0.00
767	536	2290	951.00	6.00	150.0000	0.00
768	1461	2290	30.00	6.00	150.0000	0.00
769	1677	1461	120.00	6.00	150.0000	0.00
770	10	1677	202.00	6.00	150.0000	0.00
771	79	10	531.00	6.00	150.0000	0.00
772	1613	79	917.00	6.00	150.0000	0.00
773	2278	1613	657.00	6.00	150.0000	0.00
774	96	2278	71.00	6.00	150.0000	0.00
775	5219	96	407.00	6.00	150.0000	0.00
776	5219	5220	1323.00	2.00	150.0000	0.00
778	5221	55	239.00	6.00	150.0000	0.00
779	55	8073	110.00	6.00	150.0000	0.00
780	8073	1334	1282.00	6.00	150.0000	0.00
781	1334	450	360.00	6.00	150.0000	0.00
782	450	156	204.00	6.00	150.0000	0.00
783	156	1152	520.00	6.00	150.0000	0.00
784	1152	1713	584.00	6.00	150.0000	0.00
785	1713	218	520.00	6.00	150.0000	0.00
786	218	885	456.00	6.00	150.0000	0.00
787	885	2101	1970.00	6.00	150.0000	0.00
788	2101	7036	542.00	6.00	150.0000	0.00
789	7036	1411	1075.00	6.00	150.0000	0.00
790	1411	136	348.00	6.00	150.0000	0.00
791	136	1699	701.00	6.00	150.0000	0.00
792	1699	1206	25.00	6.00	150.0000	0.00
793	1206	1549	342.00	6.00	150.0000	0.00
794	1549	2109	3265.00	6.00	150.0000	0.00
795	2109	740	170.00	6.00	150.0000	0.00
796	740	8002	270.00	6.00	150.0000	0.00
797	8002	5222	381.00	6.00	150.0000	0.00
798	5222	1661	479.00	6.00	150.0000	0.00
799	1661	5223	25.00	6.00	150.0000	0.00
800	5223	5224	30.00	6.00	150.0000	0.00
801	5224	1163	60.00	6.00	150.0000	0.00
802	1163	377	56.00	6.00	150.0000	0.00
803	377	1938	562.00	6.00	150.0000	0.00
804	1938	5171	10.00	6.00	150.0000	0.00
805	5171	2343	297.00	4.00	150.0000	0.00
806	2343	1263	237.00	4.00	150.0000	0.00
807	5223	32	145.00	4.00	150.0000	0.00
808	32	5225	455.00	4.00	150.0000	0.00
809	5225	169	25.00	4.00	150.0000	0.00
810	5225	5226	30.00	4.00	150.0000	0.00
811	5226	1116	186.00	4.00	150.0000	0.00
812	5225	1098	261.00	2.00	150.0000	0.00
813	1116	1012	493.00	4.00	150.0000	0.00
814	1012	1120	270.00	4.00	150.0000	0.00
815	1122	1120	220.00	4.00	150.0000	0.00
816	1122	1896	372.00	4.00	150.0000	0.00
817	1896	1097	172.00	4.00	150.0000	0.00
818	5228	2712	84.00	4.00	150.0000	0.00
819	2641	2712	190.00	4.00	150.0000	0.00

820	2641	2522	145.00	4.00	150.0000	0.00
821	2522	678	243.00	4.00	150.0000	0.00
822	678	5227	88.00	4.00	150.0000	0.00
823	1097	5228	30.00	4.00	150.0000	0.00
824	5227	5229	110.00	4.00	150.0000	0.00
825	5227	1198	1037.00	2.00	150.0000	0.00
826	5229	327	1357.00	4.00	150.0000	0.00
827	5230	2408	1192.00	2.00	150.0000	0.00
828	2408	1338	274.00	2.00	150.0000	0.00
829	1338	2003	382.00	2.00	150.0000	0.00
830	2003	8007	180.00	2.00	150.0000	0.00
831	8006	5231	2766.00	4.00	150.0000	0.00
832	5231	749	1252.00	4.00	150.0000	0.00
833	749	1533	300.00	4.00	150.0000	0.00
834	1533	1295	50.00	4.00	150.0000	0.00
835	1295	5232	240.00	4.00	150.0000	0.00
836	5232	1299	109.00	2.50	150.0000	0.00
837	1299	1374	465.00	2.50	150.0000	0.00
838	1374	1577	480.00	2.50	150.0000	0.00
839	1577	1660	584.00	2.50	150.0000	0.00
840	1660	1662	954.00	2.50	150.0000	0.00
841	1662	5233	151.00	2.50	150.0000	0.00
842	5233	1838	242.00	2.00	150.0000	0.00
843	1838	1914	72.00	2.00	150.0000	0.00
844	1914	476	101.00	2.00	150.0000	0.00
845	476	2328	808.00	2.00	150.0000	0.00
846	2328	2317	181.00	2.00	150.0000	0.00
847	2317	2372	608.00	2.00	150.0000	0.00
848	2372	1322	2110.00	2.00	150.0000	0.00
849	5233	2602	369.00	2.00	150.0000	0.00
850	2602	36	302.00	2.00	150.0000	0.00
851	36	26	10.00	2.00	150.0000	0.00
852	26	8008	554.00	2.00	150.0000	0.00
853	8008	5234	2434.00	2.00	150.0000	0.00
854	5234	14	298.00	2.00	150.0000	0.00
855	14	1622	462.00	2.00	150.0000	0.00
856	5234	1624	518.00	2.00	150.0000	0.00
857	1624	1623	352.00	2.00	150.0000	0.00
858	5219	5235	3739.00	6.00	150.0000	0.00
859	5235	1277	904.00	2.00	150.0000	0.00
860	1277	5236	130.00	2.00	150.0000	0.00
861	5236	1700	380.00	1.00	150.0000	0.00
862	5236	773	414.00	2.00	150.0000	0.00
863	1192	5235	1463.00	6.00	150.0000	0.00
864	2479	1192	108.00	6.00	150.0000	0.00
865	1144	2479	523.00	6.00	150.0000	0.00
866	2259	1144	1559.00	6.00	150.0000	0.00
867	5237	2259	1478.00	6.00	150.0000	0.00
868	5237	1960	1569.00	2.00	150.0000	0.00
869	1960	1318	137.00	2.00	150.0000	0.00
870	1318	258	182.00	2.00	150.0000	0.00
871	258	800	111.00	2.00	150.0000	0.00
872	5237	2081	315.00	2.00	150.0000	0.00
873	2081	2454	317.00	2.00	150.0000	0.00
874	2454	616	80.00	2.00	150.0000	0.00
875	616	5238	518.00	2.00	150.0000	0.00
876	2387	5237	66.00	6.00	150.0000	0.00
877	5239	2387	2023.00	6.00	150.0000	0.00
878	1207	5239	747.00	6.00	150.0000	0.00
879	349	1207	1061.00	6.00	150.0000	0.00
880	1070	349	309.00	6.00	150.0000	0.00
881	5240	1070	124.00	6.00	150.0000	0.00
882	5240	763	5062.00	3.00	150.0000	0.00
883	8050	5240	198.00	6.00	150.0000	0.00
884	2166	8050	141.00	6.00	150.0000	0.00
885	1552	2166	682.00	6.00	150.0000	0.00
886	2485	1552	449.00	6.00	150.0000	0.00
887	2485	2460	180.00	6.00	150.0000	0.00
888	2460	5241	1298.00	6.00	150.0000	0.00
889	5241	1312	72.00	6.00	150.0000	0.00
890	1312	1073	2330.00	6.00	150.0000	0.00

891	1073	1373	358.00	6.00	150.0000	0.00
892	1373	1608	45.00	6.00	150.0000	0.00
893	1608	5242	210.00	6.00	150.0000	0.00
894	5242	5243	266.00	2.00	150.0000	0.00
895	5243	2362	160.00	2.00	150.0000	0.00
896	5242	2606	166.00	6.00	150.0000	0.00
897	2606	2593	401.00	6.00	150.0000	0.00
898	5244	339	1319.00	2.00	150.0000	0.00
899	339	2639	200.00	2.00	150.0000	0.00
900	5244	5245	2405.00	6.00	150.0000	0.00
901	2593	5244	1097.00	6.00	150.0000	0.00
902	5245	2146	50.00	6.00	150.0000	0.00
903	2146	1264	181.00	6.00	150.0000	0.00
904	1264	7037	61.00	6.00	150.0000	0.00
905	7037	1718	142.00	6.00	150.0000	0.00
906	1718	7038	101.00	6.00	150.0000	0.00
907	7038	1304	282.00	6.00	150.0000	0.00
908	1304	5246	20.00	6.00	150.0000	0.00
909	5246	1965	110.00	6.00	150.0000	0.00
910	5246	154	33.00	6.00	150.0000	0.00
911	154	157	198.00	6.00	150.0000	0.00
912	157	766	642.00	6.00	150.0000	0.00
913	766	1518	290.00	6.00	150.0000	0.00
914	1518	2567	197.00	6.00	150.0000	0.00
915	2567	2398	724.00	6.00	150.0000	0.00
916	2398	1313	310.00	6.00	150.0000	0.00
917	1313	1239	367.00	6.00	150.0000	0.00
918	1239	5247	110.00	6.00	150.0000	0.00
919	5248	64	272.00	2.00	150.0000	0.00
920	5248	333	256.00	2.00	150.0000	0.00
921	5247	5248	4148.00	2.00	150.0000	0.00
922	5247	1494	564.00	6.00	150.0000	0.00
923	1494	5249	494.00	6.00	150.0000	0.00
924	5249	1561	122.00	2.00	150.0000	0.00
925	1561	2472	145.00	2.00	150.0000	0.00
926	5249	2334	290.00	6.00	150.0000	0.00
927	2334	2525	80.00	6.00	150.0000	0.00
928	2525	5250	180.00	6.00	150.0000	0.00
929	5250	343	15.00	2.00	150.0000	0.00
930	5250	340	15.00	2.00	150.0000	0.00
931	5250	5251	534.00	6.00	150.0000	0.00
932	5251	7039	876.00	6.00	150.0000	0.00
933	7039	2428	158.00	6.00	150.0000	0.00
934	5252	167	233.00	2.00	150.0000	0.00
935	167	2242	112.00	2.00	150.0000	0.00
936	2428	5252	96.00	6.00	150.0000	0.00
937	1241	33	169.00	6.00	150.0000	0.00
938	33	1580	72.00	6.00	150.0000	0.00
939	33	1062	100.00	2.00	150.0000	0.00
940	1545	1580	1276.00	6.00	150.0000	0.00
941	1545	1708	611.00	6.00	150.0000	0.00
942	1708	2527	81.00	6.00	150.0000	0.00
943	2527	1607	10.00	6.00	150.0000	0.00
944	1607	1901	15.00	6.00	150.0000	0.00
945	1901	1688	150.00	2.00	150.0000	0.00
946	1607	2647	302.00	6.00	150.0000	0.00
947	2647	2220	320.00	6.00	150.0000	0.00
948	2220	761	245.00	6.00	150.0000	0.00
949	761	1970	100.00	6.00	150.0000	0.00
950	1970	1694	100.00	6.00	150.0000	0.00
951	1694	760	201.00	6.00	150.0000	0.00
952	760	252	20.00	2.00	150.0000	0.00
953	760	1081	100.00	6.00	150.0000	0.00
954	1081	228	201.00	6.00	150.0000	0.00
955	228	7040	112.00	6.00	150.0000	0.00
956	7040	648	130.00	6.00	150.0000	0.00
957	648	341	60.00	6.00	150.0000	0.00
958	341	225	121.00	6.00	150.0000	0.00
959	225	338	94.00	6.00	150.0000	0.00
960	338	2476	178.00	6.00	150.0000	0.00
961	2476	1326	206.00	6.00	150.0000	0.00

962	1326	2070	351.00	6.00	150.0000	0.00
963	5252	1241	532.00	6.00	150.0000	0.00
964	5245	710	445.00	6.00	150.0000	0.00
965	710	329	1573.00	6.00	150.0000	0.00
966	329	250	40.00	6.00	150.0000	0.00
967	250	249	4156.00	6.00	150.0000	0.00
968	249	1980	1216.00	6.00	150.0000	0.00
969	1980	5254	126.00	6.00	150.0000	0.00
970	5254	572	168.00	2.00	150.0000	0.00
971	572	5255	4029.00	2.00	150.0000	0.00
972	5255	5256	1394.00	2.00	150.0000	0.00
973	5255	5257	3169.00	2.00	150.0000	0.00
974	5254	5258	1648.00	6.00	150.0000	0.00
975	5258	5259	110.00	2.00	150.0000	0.00
976	5259	180	104.00	2.00	150.0000	0.00
977	180	1016	316.00	2.00	150.0000	0.00
978	1016	66	202.00	2.00	150.0000	0.00
979	5260	223	110.00	2.00	150.0000	0.00
980	223	226	1102.00	2.00	150.0000	0.00
981	226	752	628.00	2.00	150.0000	0.00
982	752	1416	458.00	2.00	150.0000	0.00
983	5260	8074	3980.00	6.00	150.0000	0.00
984	8074	1932	70.00	6.00	150.0000	0.00
985	1932	1525	272.00	6.00	150.0000	0.00
986	1525	1579	87.00	2.00	150.0000	0.00
987	1525	664	1012.00	6.00	150.0000	0.00
988	664	782	3905.00	6.00	150.0000	0.00
989	782	1363	816.00	6.00	150.0000	0.00
990	1363	926	100.00	6.00	150.0000	0.00
991	5258	J-69	4790.00	6.00	150.0000	0.00
992	2070	5253	60.00	6.00	150.0000	0.00
993	5253	7041	889.00	6.00	150.0000	0.00
994	7041	1996	1210.00	6.00	150.0000	0.00
995	1996	1454	206.00	6.00	150.0000	0.00
996	1454	1371	1068.00	6.00	150.0000	0.00
997	1371	1370	158.00	6.00	150.0000	0.00
998	5253	5262	152.00	3.00	150.0000	0.00
999	5262	514	1781.00	3.00	150.0000	0.00
1000	514	5263	1440.00	3.00	150.0000	0.00
1001	5263	586	2365.00	3.00	150.0000	0.00
1002	586	7042	212.00	3.00	150.0000	0.00
1003	7042	1550	1644.00	3.00	150.0000	0.00
1004	1550	5264	2486.00	3.00	150.0000	0.00
1005	5264	5265	1479.00	3.00	150.0000	0.00
1006	5265	2011	2145.00	2.00	150.0000	0.00
1007	5265	5266	1737.00	3.00	150.0000	0.00
1008	5266	147	1240.00	3.00	150.0000	0.00
1009	147	2145	1780.00	3.00	150.0000	0.00
1010	2145	5267	442.00	3.00	150.0000	0.00
1011	5267	2214	879.00	1.00	150.0000	0.00
1012	5267	5268	4312.00	3.00	150.0000	0.00
1013	5268	145	30.00	3.00	150.0000	0.00
1014	5268	68	1639.00	3.00	150.0000	0.00
1015	68	1687	1024.00	3.00	150.0000	0.00
1016	1687	191	444.00	3.00	150.0000	0.00
1017	191	1949	920.00	3.00	150.0000	0.00
1018	1949	5269	4363.00	3.00	150.0000	0.00
1019	5269	5270	110.00	2.00	150.0000	0.00
1020	5270	2158	767.00	2.00	150.0000	0.00
1021	5269	767	581.00	3.00	150.0000	0.00
1022	767	1967	7065.00	3.00	150.0000	0.00
1023	5089	1967	4459.00	3.00	150.0000	0.00
1024	5089	5271	838.00	2.50	150.0000	0.00
1025	5271	5272	450.00	2.00	150.0000	0.00
1026	5271	2046	891.00	2.50	150.0000	0.00
1027	2046	1209	3105.00	2.50	150.0000	0.00
1028	1209	5273	86.00	2.50	150.0000	0.00
1029	5273	2288	600.00	2.50	150.0000	0.00
1030	2288	1164	1432.00	2.50	150.0000	0.00
1031	1164	498	2072.00	2.00	150.0000	0.00
1032	5274	5275	163.00	6.00	150.0000	0.00

1033	5275	2627	15.00	6.00	150.0000	0.00
1034	2627	2270	86.00	6.00	150.0000	0.00
1035	2270	1812	200.00	6.00	150.0000	0.00
1036	1812	1162	180.00	6.00	150.0000	0.00
1037	1162	492	753.00	6.00	150.0000	0.00
1038	492	2251	300.00	6.00	150.0000	0.00
1039	230	2251	211.00	6.00	150.0000	0.00
1040	230	2141	420.00	6.00	150.0000	0.00
1041	2141	1633	100.00	6.00	150.0000	0.00
1042	1633	5276	1196.00	6.00	150.0000	0.00
1043	5276	925	2246.00	6.00	150.0000	0.00
1044	925	1582	74.00	6.00	150.0000	0.00
1045	1582	5277	391.00	6.00	150.0000	0.00
1046	5277	1057	888.00	2.00	150.0000	0.00
1047	1057	857	915.00	2.00	150.0000	0.00
1048	5277	137	320.00	6.00	150.0000	0.00
1049	137	1599	61.00	6.00	150.0000	0.00
1050	1599	494	509.00	6.00	150.0000	0.00
1051	494	2665	3392.00	6.00	150.0000	0.00
1052	2665	5278	687.00	6.00	150.0000	0.00
1053	5278	1133	614.00	2.00	150.0000	0.00
1054	1133	5279	1834.00	2.00	150.0000	0.00
1055	5279	1034	1497.00	2.00	150.0000	0.00
1056	1034	2686	502.00	2.00	150.0000	0.00
1057	5281	1654	474.00	2.00	150.0000	0.00
1058	1654	2545	448.00	2.00	150.0000	0.00
1059	2545	2075	708.00	2.00	150.0000	0.00
1060	2075	2048	208.00	2.00	150.0000	0.00
1061	2048	5280	140.00	2.00	150.0000	0.00
1062	5280	1501	225.00	2.00	150.0000	0.00
1063	5280	1460	535.00	2.00	150.0000	0.00
1064	1460	1641	266.00	2.00	150.0000	0.00
1065	2686	5281	385.00	2.00	150.0000	0.00
1066	5278	1459	1330.00	6.00	150.0000	0.00
1067	1459	302	1118.00	6.00	150.0000	0.00
1068	302	1979	2694.00	6.00	150.0000	0.00
1069	1979	5282	1350.00	6.00	150.0000	0.00
1070	5282	1697	108.00	6.00	150.0000	0.00
1071	1697	1151	458.00	6.00	150.0000	0.00
1072	1151	2332	355.00	6.00	150.0000	0.00
1073	2332	5283	559.00	6.00	150.0000	0.00
1074	5321	5284	441.00	2.00	150.0000	0.00
1075	5284	5285	253.00	2.00	150.0000	0.00
1076	5285	1214	3226.00	2.00	150.0000	0.00
1077	1214	927	454.00	2.00	150.0000	0.00
1078	927	935	64.00	2.00	150.0000	0.00
1079	935	1216	605.00	2.00	150.0000	0.00
1080	1216	125	1116.00	2.00	150.0000	0.00
1081	125	1225	272.00	2.00	150.0000	0.00
1082	1225	5286	4541.00	2.00	150.0000	0.00
1083	5286	2056	2429.00	2.00	150.0000	0.00
1084	2056	2057	401.00	2.00	150.0000	0.00
1085	2057	2058	50.00	2.00	150.0000	0.00
1086	5050	924	1151.00	6.00	150.0000	0.00
1087	924	5287	705.00	6.00	150.0000	0.00
1088	5287	2634	675.00	6.00	150.0000	0.00
1089	2634	1510	370.00	6.00	150.0000	0.00
1090	1010	1492	1751.00	4.00	150.0000	0.00
1091	1010	2698	200.00	4.00	150.0000	0.00
1092	2698	903	50.00	4.00	150.0000	0.00
1093	903	201	300.00	4.00	150.0000	0.00
1094	201	5288	856.00	4.00	150.0000	0.00
1095	5288	2295	15.00	2.00	150.0000	0.00
1096	5288	248	110.00	2.00	150.0000	0.00
1097	248	865	1019.00	2.00	150.0000	0.00
1098	865	5289	10.00	2.00	150.0000	0.00
1099	5289	841	100.00	2.00	150.0000	0.00
1100	5289	866	150.00	2.00	150.0000	0.00
1101	5288	1111	1988.00	4.00	150.0000	0.00
1102	1111	60	520.00	4.00	150.0000	0.00
1103	60	861	4443.00	4.00	150.0000	0.00

1104	861	5290	45.00	4.00	150.0000	0.00
1105	5290	2417	1733.00	2.00	150.0000	0.00
1106	2417	5291	896.00	2.00	150.0000	0.00
1107	5291	1841	1463.00	2.00	150.0000	0.00
1108	1841	580	1243.00	2.00	150.0000	0.00
1109	580	5292	621.00	2.00	150.0000	0.00
1110	5292	1640	1509.00	2.00	150.0000	0.00
1111	1640	5293	70.00	2.00	150.0000	0.00
1112	5293	2168	250.00	2.00	150.0000	0.00
1113	2168	2015	889.00	2.00	150.0000	0.00
1114	2015	2431	680.00	2.00	150.0000	0.00
1115	2431	1725	286.00	2.00	150.0000	0.00
1116	1725	5294	207.00	2.00	150.0000	0.00
1117	5294	2402	840.00	2.00	150.0000	0.00
1118	2402	1858	220.00	2.00	150.0000	0.00
1119	1858	2711	279.00	2.00	150.0000	0.00
1120	2711	8003	181.00	2.00	150.0000	0.00
1121	8003	2079	100.00	2.00	150.0000	0.00
1122	2079	8004	65.00	2.00	150.0000	0.00
1123	5294	5295	3018.00	2.00	150.0000	0.00
1124	5295	2195	81.00	2.00	150.0000	0.00
1125	2195	2541	306.00	2.00	150.0000	0.00
1126	2541	2333	100.00	2.00	150.0000	0.00
1127	2333	2416	150.00	1.00	150.0000	0.00
1128	2416	2167	251.00	1.00	150.0000	0.00
1129	5295	2033	186.00	2.00	150.0000	0.00
1130	2033	1335	242.00	1.00	150.0000	0.00
1131	1335	2099	21.00	1.00	150.0000	0.00
1132	2099	1696	60.00	1.00	150.0000	0.00
1133	2167	972	277.00	1.00	150.0000	0.00
1134	5290	1329	1986.00	2.00	150.0000	0.00
1135	1329	2445	80.00	2.00	150.0000	0.00
1136	2445	2391	171.00	2.00	150.0000	0.00
1137	2391	2703	371.00	2.00	150.0000	0.00
1138	2703	2420	249.00	2.00	150.0000	0.00
1139	2420	1897	203.00	2.00	150.0000	0.00
1140	5274	2008	304.00	6.00	150.0000	0.00
1141	2008	5296	322.00	6.00	150.0000	0.00
1142	5296	754	258.00	2.00	150.0000	0.00
1143	754	5297	242.00	2.00	150.0000	0.00
1144	5297	1121	20.00	2.00	150.0000	0.00
1145	1121	825	74.00	2.00	150.0000	0.00
1146	825	753	82.00	2.00	150.0000	0.00
1147	5297	930	90.00	2.00	150.0000	0.00
1148	930	2001	350.00	2.00	150.0000	0.00
1149	2001	2283	70.00	2.00	150.0000	0.00
1150	2283	2320	100.00	2.00	150.0000	0.00
1151	5296	80	79.00	6.00	150.0000	0.00
1152	80	5298	212.00	6.00	150.0000	0.00
1153	5298	811	356.00	2.00	150.0000	0.00
1154	5298	5299	2476.00	6.00	150.0000	0.00
1155	5299	480	748.00	2.00	150.0000	0.00
1156	480	1887	598.00	2.00	150.0000	0.00
1157	5299	473	96.00	6.00	150.0000	0.00
1158	473	7043	740.00	6.00	150.0000	0.00
1159	7043	50	24.00	6.00	150.0000	0.00
1160	50	491	582.00	6.00	150.0000	0.00
1161	491	1054	826.00	6.00	150.0000	0.00
1162	1054	1406	1284.00	6.00	150.0000	0.00
1163	1406	48	1969.00	6.00	150.0000	0.00
1164	48	238	984.00	6.00	150.0000	0.00
1165	238	5300	2273.00	6.00	150.0000	0.00
1166	5300	PRV-1	137.00	8.00	150.0000	0.00
1167	PRV-1	5059	2846.00	2.50	150.0000	0.00
1168	5300	5301	1715.00	8.00	150.0000	0.00
1169	5302	1261	471.00	4.00	150.0000	0.00
1170	5303	1260	120.00	4.00	150.0000	0.00
1171	5303	1259	1308.00	4.00	150.0000	0.00
1172	5302	5303	963.00	4.00	150.0000	0.00
1173	5301	5302	2173.00	4.00	150.0000	0.00
1174	5301	7044	2766.00	8.00	150.0000	0.00

1175	7044	5304	1236.00	8.00	150.0000	0.00
1176	5304	1269	2090.00	8.00	150.0000	0.00
1177	1269	1086	607.00	8.00	150.0000	0.00
1178	1086	1919	364.00	8.00	150.0000	0.00
1179	1919	7045	2404.00	8.00	150.0000	0.00
1180	7045	224	282.00	8.00	150.0000	0.00
1181	224	5305	1350.00	8.00	150.0000	0.00
1182	5305	2010	3930.00	4.00	150.0000	0.00
1183	2010	2024	2968.00	4.00	150.0000	0.00
1184	2024	5306	252.00	4.00	150.0000	0.00
1185	5306	497	46.00	1.00	150.0000	0.00
1186	497	1985	577.00	1.00	150.0000	0.00
1187	1985	332	1553.00	1.00	150.0000	0.00
1188	332	1077	33.00	1.00	150.0000	0.00
1189	5306	5307	4608.00	3.00	150.0000	0.00
1190	5307	5308	1527.00	3.00	150.0000	0.00
1191	5308	2037	443.00	2.00	150.0000	0.00
1192	2037	2389	321.00	2.00	150.0000	0.00
1193	2389	5311	194.00	2.00	150.0000	0.00
1194	2205	2517	163.00	2.00	150.0000	0.00
1195	5311	2617	241.00	2.00	150.0000	0.00
1196	5308	5309	878.00	3.00	150.0000	0.00
1197	5309	5310	585.00	2.00	150.0000	0.00
1198	5310	2301	15.00	2.00	150.0000	0.00
1199	5310	1851	345.00	2.00	150.0000	0.00
1200	1851	2440	20.00	2.00	150.0000	0.00
1201	5309	2181	66.00	2.00	150.0000	0.00
1202	2181	2246	207.00	2.00	150.0000	0.00
1203	2246	2182	55.00	2.00	150.0000	0.00
1204	2182	1638	60.00	2.00	150.0000	0.00
1205	1638	2463	285.00	2.00	150.0000	0.00
1206	2463	2188	116.00	2.00	150.0000	0.00
1207	2206	1438	163.00	2.00	150.0000	0.00
1208	1438	2183	82.00	2.00	150.0000	0.00
1209	2183	1226	26.00	2.00	150.0000	0.00
1210	1226	2439	20.00	2.00	150.0000	0.00
1211	5305	2110	176.00	8.00	150.0000	0.00
1212	2110	5312	154.00	8.00	150.0000	0.00
1213	5312	1771	311.00	2.00	150.0000	0.00
1214	1771	410	275.00	2.00	150.0000	0.00
1215	410	2215	527.00	2.00	150.0000	0.00
1216	2215	2090	721.00	2.00	150.0000	0.00
1217	2090	2701	603.00	2.00	150.0000	0.00
1218	2701	2248	316.00	2.00	150.0000	0.00
1219	2248	2069	355.00	2.00	150.0000	0.00
1220	2069	2065	361.00	2.00	150.0000	0.00
1221	5312	2236	851.00	8.00	150.0000	0.00
1222	5313	5314	2644.00	3.00	150.0000	0.00
1223	5314	1032	504.00	2.00	150.0000	0.00
1224	1032	8048	51.00	2.00	150.0000	0.00
1225	8048	1072	576.00	2.00	150.0000	0.00
1226	5314	1161	82.00	3.00	150.0000	0.00
1227	1161	5315	4080.00	3.00	150.0000	0.00
1228	5315	7047	88.00	2.00	150.0000	0.00
1229	7047	7046	32.00	2.00	150.0000	0.00
1230	7046	5316	243.00	2.00	150.0000	0.00
1231	5316	1524	150.00	2.00	150.0000	0.00
1232	1524	161	137.00	2.00	150.0000	0.00
1233	5316	5317	116.00	2.00	150.0000	0.00
1234	5317	311	56.00	2.00	150.0000	0.00
1235	311	5318	141.00	2.00	150.0000	0.00
1236	5318	2261	248.00	2.00	150.0000	0.00
1237	2261	1011	175.00	2.00	150.0000	0.00
1238	5317	1907	97.00	2.00	150.0000	0.00
1239	1907	303	66.00	2.00	150.0000	0.00
1240	303	324	20.00	2.00	150.0000	0.00
1241	324	344	82.00	2.00	150.0000	0.00
1242	344	19	242.00	2.00	150.0000	0.00
1243	19	5319	118.00	4.00	150.0000	0.00
1244	5315	7048	146.00	2.00	150.0000	0.00
1245	7048	7049	117.00	2.00	150.0000	0.00

1246	7049	5319	222.00	2.00	150.0000	0.00
1247	5319	56	85.00	4.00	150.0000	0.00
1248	56	203	94.00	2.00	150.0000	0.00
1249	203	268	463.00	2.00	150.0000	0.00
1250	268	7050	10.00	2.00	150.0000	0.00
1251	7050	1975	44.00	2.00	150.0000	0.00
1252	1975	7051	274.00	2.00	150.0000	0.00
1253	7051	265	107.00	2.00	150.0000	0.00
1254	265	160	51.00	2.00	150.0000	0.00
1255	5050	5321	110.00	6.00	150.0000	0.00
1256	5283	5321	431.00	6.00	150.0000	0.00
1257	2699	5058	599.00	2.50	150.0000	0.00
1258	5275	1492	300.00	4.00	150.0000	0.00
1259	2188	2206	83.00	2.00	150.0000	0.00
1260	160	5320	33.00	2.00	150.0000	0.00
1261	5320	1188	38.00	2.00	150.0000	0.00
1262	1188	490	60.00	2.00	150.0000	0.00
1263	490	1018	232.00	2.00	150.0000	0.00
1264	1018	337	495.00	2.00	150.0000	0.00
1265	337	16	229.00	2.00	150.0000	0.00
1266	16	2339	43.00	4.00	150.0000	0.00
1267	2339	255	30.00	2.00	150.0000	0.00
1268	255	213	10.00	2.00	150.0000	0.00
1269	213	229	64.00	2.00	150.0000	0.00
1270	229	293	76.00	2.00	150.0000	0.00
1271	293	259	16.00	2.00	150.0000	0.00
1272	259	5318	179.00	2.00	150.0000	0.00
1273	5320	5322	735.00	2.00	150.0000	0.00
1274	5322	1196	255.00	2.00	150.0000	0.00
1275	5322	5323	961.00	2.00	150.0000	0.00
1276	5323	8052	131.00	2.00	150.0000	0.00
1277	5323	5324	368.00	2.00	150.0000	0.00
1278	2236	5313	102.00	8.00	150.0000	0.00
1279	5313	1446	30.00	8.00	150.0000	0.00
1280	1446	2595	815.00	8.00	150.0000	0.00
1281	2595	1449	331.00	8.00	150.0000	0.00
1282	1449	2552	515.00	8.00	150.0000	0.00
1283	2552	791	110.00	8.00	150.0000	0.00
1284	791	2313	649.00	8.00	150.0000	0.00
1285	2313	475	494.00	8.00	150.0000	0.00
1286	475	5325	2179.00	8.00	150.0000	0.00
1287	5325	7052	94.00	2.00	150.0000	0.00
1288	7052	7053	90.00	2.00	150.0000	0.00
1289	7053	854	320.00	2.00	150.0000	0.00
1290	854	657	179.00	2.00	150.0000	0.00
1291	657	2004	198.00	2.00	150.0000	0.00
1292	5326	2620	2361.00	1.50	150.0000	0.00
1293	2620	2718	13.00	1.50	150.0000	0.00
1294	2718	1507	13.00	1.50	150.0000	0.00
1296	5325	893	231.00	8.00	150.0000	0.00
1297	893	1346	1204.00	8.00	150.0000	0.00
1298	1346	5327	73.00	8.00	150.0000	0.00
1299	5327	8038	448.00	3.00	150.0000	0.00
1300	8038	8037	51.00	3.00	150.0000	0.00
1301	8037	2559	287.00	3.00	150.0000	0.00
1302	2559	1704	624.00	3.00	150.0000	0.00
1303	1704	240	893.00	3.00	150.0000	0.00
1304	240	1644	691.00	3.00	150.0000	0.00
1305	1644	1190	110.00	3.00	150.0000	0.00
1306	1190	1903	183.00	3.00	150.0000	0.00
1307	1903	2470	333.00	3.00	150.0000	0.00
1308	2470	7054	80.00	3.00	150.0000	0.00
1309	7054	5328	325.00	3.00	150.0000	0.00
1310	5328	202	73.00	2.00	150.0000	0.00
1311	202	1588	41.00	2.00	150.0000	0.00
1312	1588	1827	110.00	2.00	150.0000	0.00
1313	1827	1423	71.00	2.00	150.0000	0.00
1314	1423	2230	25.00	2.00	150.0000	0.00
1315	2230	1943	80.00	2.00	150.0000	0.00
1316	1943	7055	155.00	2.00	150.0000	0.00
1317	5328	5329	2300.00	3.00	150.0000	0.00

1318	5329	1840	1207.00	2.50	150.0000	0.00
1319	1840	5330	1552.00	2.50	150.0000	0.00
1320	5330	907	1206.00	2.00	150.0000	0.00
1321	5329	1984	782.00	2.50	150.0000	0.00
1323	1984	7073	602.00	2.50	150.0000	0.00
1324	5076	2432	3058.00	2.00	150.0000	0.00
1325	2432	2055	2356.00	2.00	150.0000	0.00
1326	7073	1000	100.00	2.50	150.0000	0.00
1327	1000	1729	897.00	2.50	150.0000	0.00
1328	1729	5331	2957.00	2.50	150.0000	0.00
1329	5331	5332	4006.00	2.50	150.0000	0.00
1330	5332	2413	283.00	2.50	150.0000	0.00
1331	2413	5333	30.00	2.50	150.0000	0.00
1332	5333	1574	417.00	2.50	150.0000	0.00
1333	1574	2007	365.00	2.50	150.0000	0.00
1334	2007	1270	415.00	2.50	150.0000	0.00
1335	5334	5136	55.00	2.00	150.0000	0.00
1336	2444	5334	54.00	2.00	150.0000	0.00
1337	1270	120	406.00	2.00	150.0000	0.00
1338	120	1340	251.00	2.00	150.0000	0.00
1339	1370	J-63	1837.00	6.00	150.0000	0.00
1340-CV	FGN-LLHemphill-T		10.00	6.00	150.0000	0.00
1341	716	5336	1758.00	6.00	150.0000	0.00
1342	8059	5336	10.00	4.00	150.0000	0.00
1343	1198	5230	44.00	2.00	150.0000	0.00
1344	327	8006	2657.00	4.00	150.0000	0.00
1345	1837	2455	188.00	2.00	150.0000	0.00
1346	5214	1698	15.00	2.00	150.0000	0.00
1347	5261	926	1353.00	6.00	150.0000	0.00
1348	5336	1348	118.00	1.00	150.0000	0.00
1349	1348	1037	407.00	1.00	150.0000	0.00
1350	1037	2265	100.00	1.00	150.0000	0.00
1351	2265	2274	100.00	1.00	150.0000	0.00
1352	1348	1023	52.00	1.00	150.0000	0.00
1353	1017	1336	35.00	6.00	150.0000	0.00
1354	5336	1017	84.00	6.00	150.0000	0.00
1355	1336	5337	371.00	6.00	150.0000	0.00
1356	5337	1728	230.00	6.00	150.0000	0.00
1357	1728	2589	144.00	6.00	150.0000	0.00
1358	2589	5338	222.00	6.00	150.0000	0.00
1359	5337	5339	1061.00	2.00	150.0000	0.00
1360	5339	5340	232.00	2.00	150.0000	0.00
1361	5340	1055	215.00	2.00	150.0000	0.00
1362	1055	661	81.00	2.00	150.0000	0.00
1363	5339	2238	50.00	2.00	150.0000	0.00
1364	2238	1720	180.00	2.00	150.0000	0.00
1365	1720	8061	72.00	2.00	150.0000	0.00
1366	8061	1721	168.00	2.00	150.0000	0.00
1367	1721	820	107.00	2.00	150.0000	0.00
1368	820	2555	50.00	2.00	150.0000	0.00
1369	5338	731	816.00	6.00	150.0000	0.00
1370	731	2649	1054.00	6.00	150.0000	0.00
1371	2649	5341	209.00	6.00	150.0000	0.00
1372	5341	5342	1951.00	6.00	150.0000	0.00
1373	5342	72	261.00	6.00	150.0000	0.00
1374	5344	2108	97.00	3.00	150.0000	0.00
1375	72	8070	521.00	6.00	150.0000	0.00
1376	5344	5345	473.00	3.00	150.0000	0.00
1377	5345	2315	20.00	3.00	150.0000	0.00
1378	5345	5346	422.00	3.00	150.0000	0.00
1379	5346	5343	80.00	3.00	150.0000	0.00
1380	5343	2280	323.00	3.00	150.0000	0.00
1381	2280	1695	40.00	3.00	150.0000	0.00
1382	1695	2282	289.00	3.00	150.0000	0.00
1383	2282	2139	308.00	2.00	150.0000	0.00
1384	2139	2116	30.00	2.00	150.0000	0.00
1385	2116	2268	185.00	2.00	150.0000	0.00
1386	2315	2306	280.00	3.00	150.0000	0.00
1387	8070	1543	448.00	6.00	150.0000	0.00
1388	2306	5347	359.00	3.00	150.0000	0.00
1389	1543	254	508.00	6.00	150.0000	0.00

1390	5347	5348	291.00	3.00	150.0000	0.00
1391	5347	2397	261.00	2.00	150.0000	0.00
1392	2397	2379	194.00	2.00	150.0000	0.00
1393	2379	2330	44.00	2.00	150.0000	0.00
1394	5348	2338	13.00	6.00	150.0000	0.00
1395	2338	478	227.00	6.00	150.0000	0.00
1396	5327	716	98.00	6.00	150.0000	0.00
1397	5344	72	110.00	3.00	150.0000	0.00
1398	5348	254	110.00	6.00	150.0000	0.00
1399	478	5350	231.00	6.00	150.0000	0.00
1400	5350	5349	2472.00	6.00	150.0000	0.00
1401	5349	2643	280.00	6.00	150.0000	0.00
1402	2643	493	100.00	6.00	150.0000	0.00
1403	493	2013	192.00	6.00	150.0000	0.00
1404	2013	2143	178.00	6.00	150.0000	0.00
1405	2143	2359	33.00	6.00	150.0000	0.00
1406	358	5351	94.00	6.00	150.0000	0.00
1407	5351	1473	26.00	2.00	150.0000	0.00
1408	5351	1508	186.00	3.00	150.0000	0.00
1409	5349	1233	371.00	2.00	150.0000	0.00
1410	2359	358	76.00	6.00	150.0000	0.00
1411	1508	5352	83.00	3.00	150.0000	0.00
1412	5351	2346	73.00	4.00	150.0000	0.00
1413	5352	1917	48.00	3.00	150.0000	0.00
1414	1917	1066	39.00	3.00	150.0000	0.00
1415	1066	51	201.00	4.00	150.0000	0.00
1416	51	1280	310.00	3.00	150.0000	0.00
1417	1280	5353	23.00	3.00	150.0000	0.00
1418	5353	2142	174.00	3.00	150.0000	0.00
1419	2142	1893	174.00	3.00	150.0000	0.00
1420	1893	708	228.00	3.00	150.0000	0.00
1421	708	647	150.00	3.00	150.0000	0.00
1422	647	5354	64.00	3.00	150.0000	0.00
1423	5354	5	26.00	4.00	150.0000	0.00
1424	5	1522	138.00	2.00	150.0000	0.00
1425	1522	1604	55.00	2.00	150.0000	0.00
1426	1522	5355	270.00	2.00	150.0000	0.00
1427	5354	5356	256.00	3.00	150.0000	0.00
1428	5356	1327	591.00	3.00	150.0000	0.00
1429	1327	2042	277.00	3.00	150.0000	0.00
1430	2042	1278	276.00	3.00	150.0000	0.00
1431	1278	2128	556.00	3.00	150.0000	0.00
1432	2128	1951	204.00	3.00	150.0000	0.00
1433	1951	1948	796.00	3.00	150.0000	0.00
1434	1948	1825	202.00	3.00	150.0000	0.00
1435	1825	5357	10.00	3.00	150.0000	0.00
1436	5357	1114	781.00	3.00	150.0000	0.00
1437	5357	864	388.00	3.00	150.0000	0.00
1438	864	1950	570.00	3.00	150.0000	0.00
1439	1950	2170	598.00	3.00	150.0000	0.00
1440	2170	2264	821.00	3.00	150.0000	0.00
1441	2264	5358	725.00	3.00	150.0000	0.00
1442	5358	896	1002.00	3.00	150.0000	0.00
1443	896	1443	389.00	3.00	150.0000	0.00
1444	5359	1928	81.00	2.00	150.0000	0.00
1445	1928	2124	37.00	2.00	150.0000	0.00
1446	2124	8009	118.00	2.00	150.0000	0.00
1447	2113	2371	229.00	2.00	150.0000	0.00
1448	2371	2563	92.00	2.00	150.0000	0.00
1449	2563	5360	55.00	2.00	150.0000	0.00
1450	5360	2292	20.00	2.00	150.0000	0.00
1452	858	J-1	68.00	2.00	150.0000	0.00
1453	5361	746	27.00	3.00	150.0000	0.00
1454	5361	2469	41.00	3.00	150.0000	0.00
1455	2469	1671	43.00	3.00	150.0000	0.00
1456	1671	1581	27.00	3.00	150.0000	0.00
1457	1581	2566	10.00	3.00	150.0000	0.00
1458	2566	5362	60.00	3.00	150.0000	0.00
1459	5362	529	16.00	3.00	150.0000	0.00
1460	529	883	88.00	3.00	150.0000	0.00
1461	883	5363	50.00	3.00	150.0000	0.00

1462	5363	2160	225.00	2.00	150.0000	0.00
1463	5363	1266	55.00	3.00	150.0000	0.00
1464	1266	1616	134.00	3.00	150.0000	0.00
1465	5364	2692	65.00	2.00	150.0000	0.00
1466	2692	5365	39.00	2.00	150.0000	0.00
1467	5365	241	30.00	1.00	150.0000	0.00
1468	241	1727	50.00	1.00	150.0000	0.00
1469	5364	8010	220.00	2.00	150.0000	0.00
1470	8010	1706	72.00	2.00	150.0000	0.00
1471	1727	186	34.00	1.00	150.0000	0.00
1472	1706	1474	50.00	2.00	150.0000	0.00
1473	1474	1495	50.00	2.00	150.0000	0.00
1474	1495	336	173.00	2.00	150.0000	0.00
1475	336	8068	95.00	2.00	150.0000	0.00
1476	8068	1505	40.00	2.00	150.0000	0.00
1477	1505	2564	10.00	2.00	150.0000	0.00
1478	2564	967	93.00	2.00	150.0000	0.00
1479	967	231	35.00	2.00	150.0000	0.00
1480	231	2600	38.00	2.00	150.0000	0.00
1481	2600	2165	22.00	2.00	150.0000	0.00
1482	2165	2448	101.00	2.00	150.0000	0.00
1483	2448	1619	42.00	2.00	150.0000	0.00
1484	1619	2254	57.00	2.00	150.0000	0.00
1485	2254	8011	104.00	2.00	150.0000	0.00
1486	8011	373	78.00	2.00	150.0000	0.00
1487	373	2235	27.00	2.00	150.0000	0.00
1488	288	290	111.00	2.00	150.0000	0.00
1489	5366	288	39.00	2.00	150.0000	0.00
1490	288	479	129.00	2.00	150.0000	0.00
1491	5366	132	79.00	2.00	150.0000	0.00
1492	132	40	10.00	2.00	150.0000	0.00
1493	40	2191	53.00	4.00	150.0000	0.00
1494	2191	2032	68.00	2.00	150.0000	0.00
1495	5367	1481	247.00	3.00	150.0000	0.00
1496	1481	852	39.00	3.00	150.0000	0.00
1497	852	8013	59.00	3.00	150.0000	0.00
1498	8012	1707	36.00	3.00	150.0000	0.00
1499	1707	8013	56.00	3.00	150.0000	0.00
1500	8013	1145	146.00	3.00	150.0000	0.00
1501	5362	236	94.00	3.00	150.0000	0.00
1502	236	1145	135.00	3.00	150.0000	0.00
1503	5367	5368	228.00	3.00	150.0000	0.00
1504	2032	5367	41.00	2.00	150.0000	0.00
1505	5368	5359	267.00	2.00	150.0000	0.00
1506	5368	5369	223.00	4.00	150.0000	0.00
1507	5369	2231	120.00	2.00	150.0000	0.00
1508	2231	5370	150.00	2.00	150.0000	0.00
1509	5370	2311	75.00	2.00	150.0000	0.00
1510	2311	777	224.00	2.00	150.0000	0.00
1511	777	910	188.00	2.00	150.0000	0.00
1512	5369	1535	140.00	4.00	150.0000	0.00
1513	1535	577	81.00	4.00	150.0000	0.00
1514	577	1091	16.00	4.00	150.0000	0.00
1515	1091	2111	76.00	4.00	150.0000	0.00
1516	2111	1169	112.00	4.00	150.0000	0.00
1517	1169	730	64.00	4.00	150.0000	0.00
1518	730	433	50.00	4.00	150.0000	0.00
1519	433	1041	120.00	4.00	150.0000	0.00
1520	592	541	37.00	4.00	150.0000	0.00
1521	541	140	46.00	4.00	150.0000	0.00
1522	140	2407	10.00	4.00	150.0000	0.00
1523	2407	7056	76.00	4.00	150.0000	0.00
1524	1041	592	55.00	4.00	150.0000	0.00
1525	7056	123	83.00	4.00	150.0000	0.00
1526	123	918	50.00	4.00	150.0000	0.00
1527	918	1027	66.00	4.00	150.0000	0.00
1528	1027	997	20.00	4.00	150.0000	0.00
1529	997	1583	45.00	4.00	150.0000	0.00
1530	1583	1626	40.00	4.00	150.0000	0.00
1531	1626	2425	79.00	4.00	150.0000	0.00
1532	2425	550	30.00	4.00	150.0000	0.00

1533	550	233	24.00	4.00	150.0000	0.00
1534	233	383	50.00	4.00	150.0000	0.00
1535	383	5371	100.00	4.00	150.0000	0.00
1536	5371	659	25.00	4.00	150.0000	0.00
1537	5371	5372	30.00	4.00	150.0000	0.00
1538	5372	1972	25.00	4.00	150.0000	0.00
1539	5372	1350	121.00	4.00	150.0000	0.00
1540	1350	1625	26.00	4.00	150.0000	0.00
1541	1625	256	45.00	4.00	150.0000	0.00
1542	256	783	26.00	4.00	150.0000	0.00
1543	783	1514	71.00	4.00	150.0000	0.00
1544	1514	1059	75.00	4.00	150.0000	0.00
1545	1059	2093	31.00	4.00	150.0000	0.00
1546	2093	8014	81.00	4.00	150.0000	0.00
1547	8014	526	144.00	4.00	150.0000	0.00
1548	526	2308	102.00	4.00	150.0000	0.00
1549	2308	944	96.00	4.00	150.0000	0.00
1550	944	5373	123.00	4.00	150.0000	0.00
1551	5373	2493	61.00	4.00	150.0000	0.00
1552	2493	1600	91.00	4.00	150.0000	0.00
1553	1600	1892	115.00	4.00	150.0000	0.00
1554	1892	1458	352.00	4.00	150.0000	0.00
1555	1458	859	81.00	4.00	150.0000	0.00
1556	859	888	73.00	4.00	150.0000	0.00
1557	888	2227	15.00	4.00	150.0000	0.00
1558	2227	1477	266.00	4.00	150.0000	0.00
1559	2346	1477	32.00	4.00	150.0000	0.00
1560	5373	124	217.00	3.00	150.0000	0.00
1561	124	5374	68.00	3.00	150.0000	0.00
1562	5374	602	57.00	2.00	150.0000	0.00
1563	602	533	91.00	2.00	150.0000	0.00
1564	533	879	67.00	2.00	150.0000	0.00
1565	879	1978	26.00	2.00	150.0000	0.00
1566	1978	964	50.00	2.00	150.0000	0.00
1567	964	1487	36.00	2.00	150.0000	0.00
1568	1487	834	109.00	2.00	150.0000	0.00
1569	834	2273	125.00	2.00	150.0000	0.00
1570	2273	2169	88.00	2.00	150.0000	0.00
1571	2169	1710	29.00	2.00	150.0000	0.00
1572	1710	1737	127.00	2.00	150.0000	0.00
1573	1737	980	90.00	2.00	150.0000	0.00
1574	980	1669	130.00	2.00	150.0000	0.00
1575	1669	2293	123.00	2.00	150.0000	0.00
1576	2293	778	44.00	2.00	150.0000	0.00
1577	778	77	20.00	2.00	150.0000	0.00
1578	481	779	88.00	2.00	150.0000	0.00
1579	5361	5375	365.00	3.00	150.0000	0.00
1580	5375	5376	2168.00	3.00	150.0000	0.00
1581	5376	405	221.00	2.00	150.0000	0.00
1582	405	2547	121.00	2.00	150.0000	0.00
1583	2547	1921	55.00	2.00	150.0000	0.00
1584	1921	2542	231.00	2.00	150.0000	0.00
1585	2542	2543	100.00	2.00	150.0000	0.00
1586	2543	584	46.00	2.00	150.0000	0.00
1587	584	978	55.00	2.00	150.0000	0.00
1588	5376	235	32.00	3.00	150.0000	0.00
1589	235	42	156.00	4.00	150.0000	0.00
1590	42	2579	102.00	3.00	150.0000	0.00
1591	2579	113	72.00	3.00	150.0000	0.00
1592	113	438	33.00	3.00	150.0000	0.00
1593	438	2473	30.00	3.00	150.0000	0.00
1594	2473	5377	108.00	3.00	150.0000	0.00
1595	5377	5378	537.00	3.00	150.0000	0.00
1596	5378	1031	160.00	2.00	150.0000	0.00
1597	1031	1183	214.00	2.00	150.0000	0.00
1598	1183	1185	316.00	2.00	150.0000	0.00
1599	1185	2625	187.00	2.00	150.0000	0.00
1600	2625	1448	256.00	2.00	150.0000	0.00
1601	5378	8025	94.00	3.00	150.0000	0.00
1602	8025	5379	371.00	3.00	150.0000	0.00
1603	5379	5380	1030.00	2.00	150.0000	0.00

1604	5380	35	482.00	4.00	150.0000	0.00
1605	35	1722	38.00	2.00	150.0000	0.00
1606	1722	2613	29.00	2.00	150.0000	0.00
1607	2613	1127	29.00	2.00	150.0000	0.00
1608	1127	1430	165.00	2.00	150.0000	0.00
1609	1430	1733	476.00	2.00	150.0000	0.00
1610	1733	900	63.00	2.00	150.0000	0.00
1611	900	2630	105.00	2.00	150.0000	0.00
1612	2630	2707	86.00	2.00	150.0000	0.00
1613	2707	5381	63.00	2.00	150.0000	0.00
1614	5381	2618	61.00	2.00	150.0000	0.00
1615	5381	5380	974.00	2.00	150.0000	0.00
1616	5379	2104	32.00	3.00	150.0000	0.00
1617	2104	911	67.00	3.00	150.0000	0.00
1618	5342	47	2624.00	6.00	150.0000	0.00
1619	47	2538	116.00	4.00	150.0000	0.00
1620	2538	5382	328.00	4.00	150.0000	0.00
1621	5382	5383	390.00	4.00	150.0000	0.00
1622	5383	2747	71.00	2.00	150.0000	0.00
1623	2747	2742	11.00	2.00	150.0000	0.00
1624	2742	2752	39.00	2.00	150.0000	0.00
1625	2752	2771	59.00	2.00	150.0000	0.00
1626	2771	2744	80.00	2.00	150.0000	0.00
1627	2744	7057	91.00	2.00	150.0000	0.00
1628	7057	2733	80.00	2.00	150.0000	0.00
1629	2733	2746	97.00	2.00	150.0000	0.00
1630	2746	2736	80.00	2.00	150.0000	0.00
1631	5383	5384	203.00	4.00	150.0000	0.00
1632	5384	2766	31.00	4.00	150.0000	0.00
1633	5384	2770	143.00	4.00	150.0000	0.00
1634	2770	2760	85.00	4.00	150.0000	0.00
1635	5384	2741	21.00	4.00	150.0000	0.00
1636	2741	2759	43.00	4.00	150.0000	0.00
1637	2759	8071	43.00	4.00	150.0000	0.00
1638	8071	2754	44.00	4.00	150.0000	0.00
1639	2754	2729	50.00	4.00	150.0000	0.00
1640	2729	2732	44.00	4.00	150.0000	0.00
1641	2732	5385	60.00	4.00	150.0000	0.00
1642	5385	2757	32.00	4.00	150.0000	0.00
1643	2757	2737	62.00	4.00	150.0000	0.00
1644	2737	2751	47.00	4.00	150.0000	0.00
1645	2751	7058	30.00	4.00	150.0000	0.00
1646	7058	2728	89.00	4.00	150.0000	0.00
1647	2728	2731	535.00	4.00	150.0000	0.00
1648	2731	2734	21.00	4.00	150.0000	0.00
1649	2734	2735	95.00	4.00	150.0000	0.00
1650	2735	2748	20.00	4.00	150.0000	0.00
1651	2748	2769	106.00	4.00	150.0000	0.00
1652	2769	2726	16.00	4.00	150.0000	0.00
1653	5386	5387	239.00	3.00	150.0000	0.00
1654	5387	2727	38.00	3.00	150.0000	0.00
1655	2727	7059	152.00	3.00	150.0000	0.00
1656	7059	2764	92.00	3.00	150.0000	0.00
1657	2753	2764	156.00	3.00	150.0000	0.00
1658	2753	43	139.00	4.00	150.0000	0.00
1659	43	5385	131.00	4.00	150.0000	0.00
1660	5387	5388	47.00	3.00	150.0000	0.00
1661	5388	5389	271.00	3.00	150.0000	0.00
1662	5389	2761	51.00	3.00	150.0000	0.00
1663	2761	5382	175.00	3.00	150.0000	0.00
1664	5389	2758	132.00	3.00	150.0000	0.00
1665	2758	2762	114.00	3.00	150.0000	0.00
1666	5388	2739	98.00	3.00	150.0000	0.00
1667	2739	2743	56.00	3.00	150.0000	0.00
1668	2743	2730	40.00	3.00	150.0000	0.00
1669	2730	2756	107.00	3.00	150.0000	0.00
1670	2756	2745	96.00	3.00	150.0000	0.00
1671	5386	2763	124.00	3.00	150.0000	0.00
1672	2763	5390	66.00	3.00	150.0000	0.00
1673	5390	2755	101.00	3.00	150.0000	0.00
1674	2755	1347	185.00	3.00	150.0000	0.00

1675	1347	2749	187.00	3.00	150.0000	0.00
1676	2749	2750	47.00	3.00	150.0000	0.00
1677	5390	2767	140.00	2.00	150.0000	0.00
1678	2767	7060	79.00	2.00	150.0000	0.00
1679	7060	2738	125.00	2.00	150.0000	0.00
1680	2738	7061	105.00	2.00	150.0000	0.00
1681	7061	2765	164.00	2.00	150.0000	0.00
1682	2765	7062	54.00	2.00	150.0000	0.00
1683	7062	2768	129.00	2.00	150.0000	0.00
1684	5386	2726	83.00	3.00	150.0000	0.00
1685	5274	1547	1241.00	8.00	150.0000	0.00
1686	1547	2437	241.00	8.00	150.0000	0.00
1687	2437	905	111.00	8.00	150.0000	0.00
1688	905	5391	2275.00	8.00	150.0000	0.00
1689	5391	5392	1678.00	8.00	150.0000	0.00
1690	5392	902	80.00	8.00	150.0000	0.00
1691	5392	2393	635.00	6.00	150.0000	0.00
1692	902	5393	597.00	8.00	150.0000	0.00
1693	5393	904	344.00	8.00	150.0000	0.00
1694	904	5394	51.00	8.00	150.0000	0.00
1696	5395	JimNethery	340.00	6.00	150.0000	0.00
1697	5395	2250	750.00	6.00	150.0000	0.00
1698	2250	5396	109.00	6.00	150.0000	0.00
1699	5396	2120	221.00	2.00	150.0000	0.00
1700	2120	2360	534.00	2.00	150.0000	0.00
1701	2360	2499	291.00	2.00	150.0000	0.00
1702	2499	2533	609.00	2.00	150.0000	0.00
1703	2533	1349	189.00	2.00	150.0000	0.00
1704	1349	2598	267.00	2.00	150.0000	0.00
1705	2598	2500	437.00	2.00	150.0000	0.00
1706	5396	330	447.00	6.00	150.0000	0.00
1707	1248	330	1333.00	6.00	150.0000	0.00
1708	5397	1248	5049.00	6.00	150.0000	0.00
1709	5398	1468	1049.00	6.00	150.0000	0.00
1710	1468	1995	47.00	6.00	150.0000	0.00
1711	2405	2367	965.00	6.00	150.0000	0.00
1712	2367	1824	44.00	6.00	150.0000	0.00
1713	5398	5579	3830.00	6.00	150.0000	0.00
1714	5398	5399	796.00	6.00	150.0000	0.00
1715	5399	5400	2816.00	3.00	150.0000	0.00
1716	5400	2077	4983.00	3.00	150.0000	0.00
1717	2077	5401	34.00	3.00	150.0000	0.00
1718	5401	2442	370.00	3.00	150.0000	0.00
1719	2442	5402	284.00	3.00	150.0000	0.00
1720	5402	2505	59.00	2.00	150.0000	0.00
1721	2505	2296	365.00	2.00	150.0000	0.00
1722	2296	2153	124.00	2.00	150.0000	0.00
1723	2153	5403	188.00	2.00	150.0000	0.00
1724	5403	2129	116.00	2.00	150.0000	0.00
1725	5403	5404	112.00	2.00	150.0000	0.00
1726	5404	5405	49.00	2.00	150.0000	0.00
1727	5405	8016	39.00	2.00	150.0000	0.00
1728	5405	2189	10.00	2.00	150.0000	0.00
1729	5404	2501	40.00	2.00	150.0000	0.00
1730	2501	736	20.00	2.00	150.0000	0.00
1731	736	2683	48.00	2.00	150.0000	0.00
1732	2683	1724	270.00	2.00	150.0000	0.00
1733	1724	1773	31.00	2.00	150.0000	0.00
1734	5402	2565	84.00	3.00	150.0000	0.00
1735	2565	2023	101.00	3.00	150.0000	0.00
1736	2023	5406	97.00	3.00	150.0000	0.00
1737	5406	368	53.00	3.00	150.0000	0.00
1738	368	1433	44.00	3.00	150.0000	0.00
1739	1433	5407	843.00	3.00	150.0000	0.00
1740	5407	1043	50.00	2.00	150.0000	0.00
1741	1043	2535	62.00	2.00	150.0000	0.00
1742	2535	2071	82.00	2.00	150.0000	0.00
1743	2071	2353	389.00	2.00	150.0000	0.00
1744	2353	1876	233.00	2.00	150.0000	0.00
1745	1876	5408	30.00	2.00	150.0000	0.00

1746	5408	2082	59.00	2.00	150.0000	0.00
1747	2082	8045	303.00	2.00	150.0000	0.00
1748	8045	2073	200.00	2.00	150.0000	0.00
1749	2073	1415	24.00	2.00	150.0000	0.00
1750	1415	2700	116.00	2.00	150.0000	0.00
1751	2700	2303	151.00	2.00	150.0000	0.00
1752	2303	846	271.00	2.00	150.0000	0.00
1753	846	1952	119.00	2.00	150.0000	0.00
1754	1952	2241	531.00	2.00	150.0000	0.00
1755	5408	2342	218.00	2.00	150.0000	0.00
1756	5407	634	185.00	2.00	150.0000	0.00
1757	634	2370	121.00	2.00	150.0000	0.00
1758	7063	2080	73.00	2.00	150.0000	0.00
1759	2080	2059	174.00	2.00	150.0000	0.00
1760	2059	8017	121.00	2.00	150.0000	0.00
1761	8017	2221	143.00	2.00	150.0000	0.00
1762	2221	2390	58.00	2.00	150.0000	0.00
1763	2390	2083	503.00	2.00	150.0000	0.00
1764	5409	5399	2574.00	8.00	150.0000	0.00
1765	5409	585	144.00	8.00	150.0000	0.00
1766	585	5410	840.00	8.00	150.0000	0.00
1767	5410	5411	942.00	4.00	150.0000	0.00
1768	5411	5412	549.00	4.00	150.0000	0.00
1769	5412	1482	348.00	3.00	150.0000	0.00
1770	1482	627	681.00	3.00	150.0000	0.00
1771	627	1569	447.00	3.00	150.0000	0.00
1772	1569	20	25.00	3.00	150.0000	0.00
1773	20	489	10.00	3.00	150.0000	0.00
1774	489	2610	161.00	3.00	150.0000	0.00
1775	2610	2197	113.00	3.00	150.0000	0.00
1776	5413	31	119.00	2.00	150.0000	0.00
1777	31	1245	15.00	2.00	150.0000	0.00
1778	5413	262	97.00	3.00	150.0000	0.00
1779	262	5412	1205.00	3.00	150.0000	0.00
1780	2197	5413	32.00	3.00	150.0000	0.00
1781	5410	5414	410.00	8.00	150.0000	0.00
1782	5414	5416	257.00	8.00	150.0000	0.00
1783	5416	5415	591.00	8.00	150.0000	0.00
1785	5417	5418	390.00	4.00	150.0000	0.00
1786	5418	2599	144.00	4.00	150.0000	0.00
1787	2599	5419	144.00	4.00	150.0000	0.00
1788	5419	5420	664.00	4.00	150.0000	0.00
1789	5420	5421	647.00	4.00	150.0000	0.00
1790	5421	5422	362.00	4.00	150.0000	0.00
1791	5422	5424	1118.00	3.00	150.0000	0.00
1792	5424	5425	40.00	3.00	150.0000	0.00
1793	5425	5426	11.00	2.00	150.0000	0.00
1794	5426	8028	60.00	2.00	150.0000	0.00
1795	8028	562	140.00	2.00	150.0000	0.00
1796	562	1025	20.00	2.00	150.0000	0.00
1797	1025	5427	67.00	2.00	150.0000	0.00
1798	5427	947	114.00	2.00	150.0000	0.00
1799	947	1167	86.00	2.00	150.0000	0.00
1800	5427	512	97.00	2.00	150.0000	0.00
1801	512	1271	31.00	2.00	150.0000	0.00
1802	1271	8040	52.00	2.00	150.0000	0.00
1803	8040	8042	26.00	2.00	150.0000	0.00
1804	8042	8041	21.00	2.00	150.0000	0.00
1805	8041	993	161.00	2.00	150.0000	0.00
1806	993	863	61.00	2.00	150.0000	0.00
1807	863	2161	26.00	2.00	150.0000	0.00
1808	2161	1366	67.00	2.00	150.0000	0.00
1809	5428	1123	31.00	2.00	150.0000	0.00
1810	1123	2640	303.00	2.00	150.0000	0.00
1811	2640	1337	56.00	2.00	150.0000	0.00
1812	1337	1042	125.00	2.00	150.0000	0.00
1813	1042	49	74.00	2.00	150.0000	0.00
1814	49	2401	73.00	2.00	150.0000	0.00
1815	2401	1404	56.00	2.00	150.0000	0.00
1816	1404	1211	113.00	2.00	150.0000	0.00
1817	1211	5429	106.00	2.00	150.0000	0.00

1818	5428	415	63.00	2.00	150.0000	0.00
1819	5429	590	258.00	2.00	150.0000	0.00
1820	590	1165	106.00	2.00	150.0000	0.00
1821	1165	540	60.00	2.00	150.0000	0.00
1822	540	91	191.00	2.00	150.0000	0.00
1823	91	1918	56.00	2.00	150.0000	0.00
1824	1918	1033	282.00	2.00	150.0000	0.00
1825	1033	596	88.00	2.00	150.0000	0.00
1826	596	5430	142.00	2.00	150.0000	0.00
1827	5430	5431	20.00	2.00	150.0000	0.00
1828	5431	5432	10.00	2.00	150.0000	0.00
1829	5432	645	52.00	2.00	150.0000	0.00
1830	645	2528	56.00	2.00	150.0000	0.00
1831	2528	817	111.00	2.00	150.0000	0.00
1832	817	1357	21.00	2.00	150.0000	0.00
1833	5432	5433	996.00	6.00	150.0000	0.00
1834	5432	5434	166.00	6.00	150.0000	0.00
1835	5430	5435	146.00	2.00	150.0000	0.00
1836	5429	2388	101.00	2.00	150.0000	0.00
1837	2388	1603	86.00	2.00	150.0000	0.00
1838	1603	8063	60.00	2.00	150.0000	0.00
1839	8063	168	75.00	2.00	150.0000	0.00
1840	168	513	245.00	2.00	150.0000	0.00
1841	513	2562	110.00	2.00	150.0000	0.00
1842	2562	90	251.00	2.00	150.0000	0.00
1843	90	5435	112.00	2.00	150.0000	0.00
1844	5435	5434	10.00	2.00	150.0000	0.00
1845	5434	1584	78.00	2.00	150.0000	0.00
1846	1584	1958	220.00	2.00	150.0000	0.00
1847	1958	163	196.00	2.00	150.0000	0.00
1848	163	2064	584.00	2.00	150.0000	0.00
1849	2064	1310	120.00	2.00	150.0000	0.00
1850	1310	83	130.00	2.00	150.0000	0.00
1851	83	560	174.00	2.00	150.0000	0.00
1852	560	297	191.00	2.00	150.0000	0.00
1853	5434	5436	319.00	6.00	150.0000	0.00
1854	297	5437	16.00	2.00	150.0000	0.00
1855	5437	5438	51.00	2.00	150.0000	0.00
1856	5438	826	224.00	2.00	150.0000	0.00
1857	826	86	100.00	2.00	150.0000	0.00
1858	86	960	300.00	2.00	150.0000	0.00
1859	960	2329	454.00	2.00	150.0000	0.00
1860	5439	5440	132.00	2.00	150.0000	0.00
1861	5439	1594	18.00	2.00	150.0000	0.00
1862	1594	5436	32.00	2.00	150.0000	0.00
1863	5436	1568	64.00	2.00	150.0000	0.00
1864	1568	559	50.00	2.00	150.0000	0.00
1865	559	2652	146.00	2.00	150.0000	0.00
1866	2652	153	110.00	2.00	150.0000	0.00
1867	153	8044	130.00	2.00	150.0000	0.00
1868	8044	1540	115.00	2.00	150.0000	0.00
1869	1540	1441	82.00	2.00	150.0000	0.00
1870	2329	5439	87.00	2.00	150.0000	0.00
1871	5436	5441	134.00	6.00	150.0000	0.00
1872	5438	5442	134.00	3.00	150.0000	0.00
1873	5442	5443	133.00	3.00	150.0000	0.00
1874	5443	2086	184.00	2.00	150.0000	0.00
1875	2086	436	140.00	2.00	150.0000	0.00
1876	436	8065	146.00	2.00	150.0000	0.00
1877	5443	2299	65.00	2.00	150.0000	0.00
1878	2299	5444	62.00	2.00	150.0000	0.00
1879	5444	5445	121.00	2.00	150.0000	0.00
1880	5445	300	93.00	2.00	150.0000	0.00
1881	300	5446	141.00	2.00	150.0000	0.00
1882	5437	5446	896.00	2.00	150.0000	0.00
1883	5443	5447	117.00	3.00	150.0000	0.00
1884	5440	1548	94.00	2.00	150.0000	0.00
1885	1548	430	55.00	2.00	150.0000	0.00
1886	430	148	100.00	2.00	150.0000	0.00
1887	148	887	251.00	2.00	150.0000	0.00
1888	887	804	50.00	2.00	150.0000	0.00

1889	5447	5448	237.00	3.00	150.0000	0.00
1890	5448	5449	152.00	6.00	150.0000	0.00
1891	5440	5441	55.00	6.00	150.0000	0.00
1892	5441	5450	100.00	6.00	150.0000	0.00
1893	5448	5450	615.00	6.00	150.0000	0.00
1894	5449	1008	84.00	2.00	150.0000	0.00
1895	1008	2651	36.00	2.00	150.0000	0.00
1896	2651	939	138.00	2.00	150.0000	0.00
1897	939	7064	102.00	2.00	150.0000	0.00
1898	7064	7065	10.00	2.00	150.0000	0.00
1899	7065	946	165.00	2.00	150.0000	0.00
1900	946	515	10.00	2.00	150.0000	0.00
1901	515	1452	46.00	2.00	150.0000	0.00
1902	1452	8019	34.00	2.00	150.0000	0.00
1903	5449	5451	124.00	6.00	150.0000	0.00
1904	5451	5452	159.00	6.00	150.0000	0.00
1905	5452	5454	17.00	6.00	150.0000	0.00
1906	5454	5453	28.00	6.00	150.0000	0.00
1907	5455	5456	10.00	2.00	150.0000	0.00
1908	5453	5455	20.00	2.00	150.0000	0.00
1909	5456	30	299.00	2.00	150.0000	0.00
1910	30	8023	50.00	2.00	150.0000	0.00
1911	8023	1014	35.00	2.00	150.0000	0.00
1912	1014	897	55.00	2.00	150.0000	0.00
1913	897	390	59.00	2.00	150.0000	0.00
1914	390	8020	20.00	2.00	150.0000	0.00
1915	8020	8021	34.00	2.00	150.0000	0.00
1916	8021	8027	10.00	2.00	150.0000	0.00
1917	8027	142	104.00	2.00	150.0000	0.00
1918	142	2002	188.00	2.00	150.0000	0.00
1919	2002	1083	15.00	2.00	150.0000	0.00
1920	2002	8049	60.00	2.00	150.0000	0.00
1921	5454	5457	359.00	3.00	150.0000	0.00
1922	5457	5458	342.00	3.00	150.0000	0.00
1923	5458	5428	54.00	3.00	150.0000	0.00
1924	5456	41	41.00	2.00	150.0000	0.00
1925	41	1399	84.00	2.00	150.0000	0.00
1926	1399	1288	231.00	2.00	150.0000	0.00
1927	1288	5428	367.00	2.00	150.0000	0.00
1928	5453	5459	45.00	2.00	150.0000	0.00
1929	5459	5460	75.00	2.00	150.0000	0.00
1930	5460	969	50.00	2.00	150.0000	0.00
1931	5460	2368	169.00	2.00	150.0000	0.00
1932	2368	2588	114.00	2.00	150.0000	0.00
1933	2588	8053	35.00	2.00	150.0000	0.00
1934	8053	5461	110.00	2.00	150.0000	0.00
1935	5449	5461	130.00	2.00	150.0000	0.00
1936	5461	727	50.00	2.00	150.0000	0.00
1937	727	139	25.00	2.00	150.0000	0.00
1938	139	2233	10.00	2.00	150.0000	0.00
1939	2233	814	300.00	2.00	150.0000	0.00
1940	814	5444	166.00	2.00	150.0000	0.00
1941	5446	720	139.00	2.00	150.0000	0.00
1942	720	2260	421.00	2.00	150.0000	0.00
1943	2260	2060	106.00	2.00	150.0000	0.00
1944	2060	5602	663.00	2.00	150.0000	0.00
1945	5602	2518	425.00	2.00	150.0000	0.00
1946	2518	2267	29.00	2.00	150.0000	0.00
1947	2267	2466	14.00	2.00	150.0000	0.00
1948	5415	5417	55.00	6.00	150.0000	0.00
1950	5463	5462	928.00	6.00	150.0000	0.00
1951	5455	5464	844.00	2.00	150.0000	0.00
1952	5453	5417	454.00	6.00	150.0000	0.00
1953	5459	5465	300.00	2.00	150.0000	0.00
1954	5418	5464	20.00	2.00	150.0000	0.00
1955	5464	292	120.00	2.00	150.0000	0.00
1956	292	464	10.00	2.00	150.0000	0.00
1957	464	418	321.00	2.00	150.0000	0.00
1958	418	46	264.00	2.00	150.0000	0.00
1959	46	1611	101.00	2.00	150.0000	0.00
1960	1611	507	81.00	2.00	150.0000	0.00

1961	507	5466	235.00	2.00	150.0000	0.00
1962	5466	962	85.00	2.00	150.0000	0.00
1963	962	8034	54.00	2.00	150.0000	0.00
1964	8034	8029	65.00	2.00	150.0000	0.00
1965	8029	8030	146.00	2.00	150.0000	0.00
1966	8030	5467	121.00	2.00	150.0000	0.00
1967	5467	1502	65.00	2.00	150.0000	0.00
1968	5468	1637	44.00	2.00	150.0000	0.00
1969	5422	5468	184.00	2.00	150.0000	0.00
1970	1502	5468	90.00	2.00	150.0000	0.00
1971	5467	8036	270.00	2.00	150.0000	0.00
1972	8036	1486	48.00	2.00	150.0000	0.00
1973	1486	534	37.00	2.00	150.0000	0.00
1974	534	8031	168.00	2.00	150.0000	0.00
1975	8031	2035	63.00	2.00	150.0000	0.00
1976	2035	994	116.00	2.00	150.0000	0.00
1977	994	5466	119.00	2.00	150.0000	0.00
1978	5422	5423	50.00	2.00	150.0000	0.00
1979	5423	607	75.00	2.00	150.0000	0.00
1980	607	2239	50.00	2.00	150.0000	0.00
1981	2239	12	75.00	2.00	150.0000	0.00
1982	12	957	85.00	2.00	150.0000	0.00
1983	957	117	65.00	2.00	150.0000	0.00
1984	117	116	55.00	2.00	150.0000	0.00
1985	116	391	50.00	2.00	150.0000	0.00
1986	391	1417	65.00	2.00	150.0000	0.00
1987	1417	936	68.00	2.00	150.0000	0.00
1988	936	758	62.00	2.00	150.0000	0.00
1989	758	5426	506.00	2.00	150.0000	0.00
1990	5423	1311	10.00	2.00	150.0000	0.00
1991	1311	457	60.00	2.00	150.0000	0.00
1992	457	973	171.00	2.00	150.0000	0.00
1993	973	38	164.00	2.00	150.0000	0.00
1994	38	738	66.00	2.00	150.0000	0.00
1995	738	934	59.00	2.00	150.0000	0.00
1996	934	528	80.00	2.00	150.0000	0.00
1997	528	93	43.00	2.00	150.0000	0.00
1998	93	1394	391.00	2.00	150.0000	0.00
1999	1394	806	150.00	2.00	150.0000	0.00
2000	806	8035	150.00	2.00	150.0000	0.00
2001	8035	5469	66.00	2.00	150.0000	0.00
2002	5469	1554	75.00	2.00	150.0000	0.00
2003	1554	269	457.00	2.00	150.0000	0.00
2004	269	270	33.00	2.00	150.0000	0.00
2005	5464	2608	128.00	2.00	150.0000	0.00
2006	270	2608	193.00	2.00	150.0000	0.00
2007	5433	1358	241.00	6.00	150.0000	0.00
2008	1358	279	185.00	6.00	150.0000	0.00
2009	279	5470	167.00	6.00	150.0000	0.00
2010	5470	101	103.00	4.00	150.0000	0.00
2011	5470	913	73.00	2.00	150.0000	0.00
2012	913	67	44.00	2.00	150.0000	0.00
2013	101	2347	144.00	4.00	150.0000	0.00
2014	67	227	116.00	2.00	150.0000	0.00
2015	227	100	123.00	2.00	150.0000	0.00
2016	100	131	108.00	2.00	150.0000	0.00
2017	131	141	175.00	2.00	150.0000	0.00
2018	2347	600	500.00	4.00	150.0000	0.00
2019	141	649	49.00	2.00	150.0000	0.00
2020	649	551	157.00	2.00	150.0000	0.00
2021	551	1197	120.00	2.00	150.0000	0.00
2022	1197	484	55.00	2.00	150.0000	0.00
2023	484	1570	49.00	2.00	150.0000	0.00
2024	1570	1308	25.00	2.00	150.0000	0.00
2025	1308	1432	180.00	2.00	150.0000	0.00
2026	1432	671	162.00	2.00	150.0000	0.00
2027	600	589	798.00	4.00	150.0000	0.00
2028	671	1328	121.00	2.00	150.0000	0.00
2029	1328	5471	222.00	2.00	150.0000	0.00
2030	589	5472	305.00	4.00	150.0000	0.00
2031	5471	5472	30.00	2.00	150.0000	0.00

2032	5471	1102	13.00	2.00	150.0000	0.00
2033	1102	1095	60.00	2.00	150.0000	0.00
2034	1095	951	30.00	2.00	150.0000	0.00
2035	951	1094	81.00	2.00	150.0000	0.00
2036	1094	874	111.00	2.00	150.0000	0.00
2037	874	624	70.00	2.00	150.0000	0.00
2038	624	827	100.00	2.00	150.0000	0.00
2039	827	705	15.00	2.00	150.0000	0.00
2040	5472	2410	535.00	4.00	150.0000	0.00
2041	2410	640	73.00	4.00	150.0000	0.00
2042	640	5473	37.00	4.00	150.0000	0.00
2043	705	5474	242.00	2.00	150.0000	0.00
2044	5473	1991	85.00	3.00	150.0000	0.00
2045	1991	2609	68.00	3.00	150.0000	0.00
2046	5477	1305	120.00	2.00	150.0000	0.00
2047	1305	251	55.00	2.00	150.0000	0.00
2048	251	1497	50.00	2.00	150.0000	0.00
2049	2609	1870	551.00	3.00	150.0000	0.00
2050	1870	5475	103.00	3.00	150.0000	0.00
2051	5475	1668	16.00	2.00	150.0000	0.00
2052	5475	5476	30.00	2.00	150.0000	0.00
2053	1497	5476	550.00	2.00	150.0000	0.00
2054	5476	2100	130.00	2.00	150.0000	0.00
2055	2100	1424	32.00	2.00	150.0000	0.00
2056	1424	1496	78.00	2.00	150.0000	0.00
2057	1496	1822	235.00	2.00	150.0000	0.00
2058	1822	291	63.00	2.00	150.0000	0.00
2059	291	5470	134.00	2.00	150.0000	0.00
2060	5474	5477	36.00	2.00	150.0000	0.00
2061	5474	5478	149.00	2.00	150.0000	0.00
2062	5478	1542	81.00	2.00	150.0000	0.00
2063	1542	2654	69.00	2.00	150.0000	0.00
2064	5478	5483	351.00	2.00	150.0000	0.00
2065	5477	642	404.00	2.00	150.0000	0.00
2066	642	370	53.00	2.00	150.0000	0.00
2067	862	525	207.00	2.00	150.0000	0.00
2068	525	92	553.00	2.00	150.0000	0.00
2069	92	2510	255.00	2.00	150.0000	0.00
2070	2510	1790	33.00	2.00	150.0000	0.00
2071	1790	1341	32.00	2.00	150.0000	0.00
2072	1341	5479	297.00	2.00	150.0000	0.00
2073	5479	5480	323.00	2.00	150.0000	0.00
2074	5480	1828	10.00	2.00	150.0000	0.00
2075	1828	995	10.00	2.00	150.0000	0.00
2076	1898	1828	83.00	2.00	150.0000	0.00
2077	5479	5485	172.00	2.00	150.0000	0.00
2078	1736	209	56.00	2.00	150.0000	0.00
2079	209	282	12.00	2.00	150.0000	0.00
2080	282	354	29.00	2.00	150.0000	0.00
2081	354	1078	76.00	2.00	150.0000	0.00
2082	1078	1044	99.00	2.00	150.0000	0.00
2083	1044	266	65.00	2.00	150.0000	0.00
2084	266	1686	151.00	2.00	150.0000	0.00
2085	1686	729	274.00	2.00	150.0000	0.00
2086	729	813	251.00	2.00	150.0000	0.00
2087	813	1437	103.00	2.00	150.0000	0.00
2088	1437	2447	77.00	2.00	150.0000	0.00
2089	2447	1168	90.00	2.00	150.0000	0.00
2090	1168	605	25.00	2.00	150.0000	0.00
2091	605	307	25.00	2.00	150.0000	0.00
2092	307	5481	360.00	2.00	150.0000	0.00
2093	370	5481	49.00	2.00	150.0000	0.00
2094	5483	862	56.00	2.00	150.0000	0.00
2095	5473	5482	532.00	3.00	150.0000	0.00
2096	5482	5484	589.00	3.00	150.0000	0.00
2097	5485	1736	71.00	2.00	150.0000	0.00
2098	5481	5482	30.00	3.00	150.0000	0.00
2099	5482	5483	10.00	3.00	150.0000	0.00
2100	5484	5485	31.00	3.00	150.0000	0.00
2101	5463	2534	246.00	6.00	150.0000	0.00
2102	2534	999	1154.00	6.00	150.0000	0.00

2103	999	5486	208.00	6.00	150.0000	0.00	
2104	5486	5489	2591.00	6.00	150.0000	0.00	
2105	5488	5490	43.00	4.00	150.0000	0.00	
2106	5490	5615	255.00	3.00	150.0000	0.00	
2107	5488	5616	109.00	3.00	150.0000	0.00	
2108	5489	5487	470.00	6.00	150.0000	0.00	
2109	5615	5491	48.00	3.00	150.0000	0.00	
2110	5616	5492	727.00	3.00	150.0000	0.00	
2111	5491	5493	552.00	3.00	150.0000	0.00	
2112	5487	5494	1626.00	6.00	150.0000	0.00	
2113	5492	5495	1250.00	3.00	150.0000	0.00	
2114	5494	5495	10.00	6.00	150.0000	0.00	
2115	5614WTMidlake-		18.00	6.00	150.0000	0.00	
2116	FGN-AA	5614	30.00	6.00	150.0000	0.00	
2117-CV	FGN-TT	5496	243.00	10.00	150.0000	0.00	
2118-XX		5494	182.00	6.00	150.0000	0.00	
2119		5495	237.00	3.00	150.0000	0.00	
2120-XX		5498	10.00	3.00	150.0000	0.00	
2121		5497	2126	4567.00	6.00	150.0000	0.00
2122		2126	2019	375.00	6.00	150.0000	0.00
2123		2019	5499	3934.00	6.00	150.0000	0.00
2124		5499	2084	924.00	2.00	150.0000	0.00
2125		2084	1994	1195.00	2.00	150.0000	0.00
2126		5499	668	716.00	6.00	150.0000	0.00
2127		668	5500	211.00	6.00	150.0000	0.00
2128		5500	1916	89.00	2.00	150.0000	0.00
2129		1916	2678	436.00	2.00	150.0000	0.00
2130		2678	2196	58.00	2.00	150.0000	0.00
2131		5500	5501	1559.00	6.00	150.0000	0.00
2132		5502	8022	174.00	4.00	150.0000	0.00
2133		2644	1719	433.00	3.00	150.0000	0.00
2134		121	8022	1611.00	6.00	150.0000	0.00
2135		5503	2644	1072.00	3.00	150.0000	0.00
2136		1719	1911	752.00	3.00	150.0000	0.00
2137		1911	5661	121.00	3.00	150.0000	0.00
2139		8022	J-34	1209.00	4.00	150.0000	0.00
2143		5506	2481	1845.00	8.00	150.0000	0.00
2144		2481	2300	1363.00	8.00	150.0000	0.00
2145		2300	1104	2502.00	8.00	150.0000	0.00
2146		1104	5507	1706.00	8.00	150.0000	0.00
2147		5507	2224	1355.00	6.00	150.0000	0.00
2148		2224	5508	1201.00	6.00	150.0000	0.00
2149		5508	2662	161.00	2.00	150.0000	0.00
2150		2662	1816	204.00	2.00	150.0000	0.00
2151		1816	2245	121.00	2.00	150.0000	0.00
2152		2245	1052	818.00	2.00	150.0000	0.00
2153		1052	1976	773.00	2.00	150.0000	0.00
2154		1976	462	256.00	2.00	150.0000	0.00
2155		462	1565	378.00	1.00	150.0000	0.00
2156		1565	1519	254.00	1.00	150.0000	0.00
2157		5508	755	5510.00	6.00	150.0000	0.00
2158		755	1541	332.00	6.00	150.0000	0.00
2159		1541	2281	407.00	6.00	150.0000	0.00
2160		2281	5509	2095.00	6.00	150.0000	0.00
2161		5509	1982	282.00	6.00	150.0000	0.00
2162		1982	5510	547.00	6.00	150.0000	0.00
2163		5510	5621	356.00	6.00	150.0000	0.00
2164		5621	5514	432.00	6.00	150.0000	0.00
2165		5514	5622	110.00	2.00	150.0000	0.00
2166		5511	5623	178.00	6.00	150.0000	0.00
2167		5623	5624	110.00	2.00	150.0000	0.00
2168		5623	5515	519.00	6.00	150.0000	0.00
2169		5514	5511	130.00	6.00	150.0000	0.00
2170		5515	5516	8715.00	6.00	150.0000	0.00
2171		5516	5517	66.00	6.00	150.0000	0.00
2172		5517	5518	1643.00	3.00	150.0000	0.00
2173		5518	5519	1140.00	3.00	150.0000	0.00
2174		5519	5520	800.00	3.00	150.0000	0.00
2175		5520	5521	239.00	3.00	150.0000	0.00
2176		5521	501	15.00	3.00	150.0000	0.00
2177		5521	84	15.00	3.00	150.0000	0.00

2178	84	2544	25.00	3.00	150.0000	0.00
2179	5520	5522	420.00	3.00	150.0000	0.00
2180	5522	75	15.00	3.00	150.0000	0.00
2181	5522	61	15.00	3.00	150.0000	0.00
2182	5519	2685	731.00	3.00	150.0000	0.00
2183	2685	2708	107.00	3.00	150.0000	0.00
2184	2708	2663	97.00	3.00	150.0000	0.00
2185	2663	2240	105.00	3.00	150.0000	0.00
2186	5518	5523	1432.00	3.00	150.0000	0.00
2187	5523	843	3060.00	3.00	150.0000	0.00
2188	843	2045	41.00	3.00	150.0000	0.00
2189	2045	1672	112.00	3.00	150.0000	0.00
2190	1672	5524	101.00	3.00	150.0000	0.00
2191	5524	178	59.00	2.00	150.0000	0.00
2192	178	2709	51.00	2.00	150.0000	0.00
2193	2709	1664	41.00	2.00	150.0000	0.00
2194	1664	1977	20.00	2.00	150.0000	0.00
2195	1977	110	70.00	2.00	150.0000	0.00
2196	5524	5525	611.00	3.00	150.0000	0.00
2197	5525	5526	84.00	3.00	150.0000	0.00
2198	2587	2285	432.00	2.00	150.0000	0.00
2199	5526	2482	110.00	2.00	150.0000	0.00
2200	2482	1532	30.00	2.00	150.0000	0.00
2201	1532	2354	99.00	2.00	150.0000	0.00
2202	2354	198	203.00	2.00	150.0000	0.00
2203	5525	5527	20.00	3.00	150.0000	0.00
2204	151	2586	65.00	1.00	150.0000	0.00
2205	5527	151	38.00	1.00	150.0000	0.00
2206	5527	5528	194.00	3.00	150.0000	0.00
2207	5528	5529	769.00	3.00	150.0000	0.00
2208	5529	614	121.00	2.50	150.0000	0.00
2209	614	253	179.00	2.50	150.0000	0.00
2210	253	2484	100.00	2.50	150.0000	0.00
2211	2484	2483	131.00	2.50	150.0000	0.00
2212	1945	2483	1321.00	2.50	150.0000	0.00
2213	1945	5530	207.00	2.50	150.0000	0.00
2214	5530	2519	388.00	2.00	150.0000	0.00
2215	2519	2327	82.00	2.00	150.0000	0.00
2216	2327	1333	46.00	2.00	150.0000	0.00
2217	1333	1779	63.00	2.00	150.0000	0.00
2218	1779	2186	91.00	2.00	150.0000	0.00
2219	2186	5531	199.00	2.00	150.0000	0.00
2220	5531	2133	133.00	2.00	150.0000	0.00
2221	2133	1001	130.00	2.00	150.0000	0.00
2222	5531	1655	100.00	2.00	150.0000	0.00
2223	1655	2213	634.00	2.00	150.0000	0.00
2224	2213	2097	187.00	2.00	150.0000	0.00
2225	2097	5532	291.00	2.00	150.0000	0.00
2226	5517	2286	2293.00	6.00	150.0000	0.00
2227	2286	823	203.00	6.00	150.0000	0.00
2228	823	5533	446.00	6.00	150.0000	0.00
2229	5533	5534	136.00	6.00	1560.0000	0.00
2230	5534	1513	121.00	2.00	150.0000	0.00
2231	1513	320	274.00	2.00	150.0000	0.00
2232	320	2279	171.00	2.00	150.0000	0.00
2233	5534	5535	160.00	6.00	150.0000	0.00
2234	5535	375	575.00	2.00	150.0000	0.00
2235	375	548	60.00	2.00	150.0000	0.00
2236	548	2377	170.00	2.00	150.0000	0.00
2237	2377	2495	340.00	2.00	150.0000	0.00
2238	5533	2208	369.00	2.00	150.0000	0.00
2239	2208	5666	412.00	2.00	150.0000	0.00
2240	5666	1539	1426.00	2.00	150.0000	0.00
2241	1539	1589	31.00	2.00	150.0000	0.00
2242	1589	284	460.00	2.00	150.0000	0.00
2243	284	2597	25.00	2.00	150.0000	0.00
2244	5535	5536	470.00	6.00	150.0000	0.00
2245	5536	662	430.00	2.00	150.0000	0.00
2246	662	2621	140.00	2.00	150.0000	0.00
2247	2621	2096	300.00	2.00	150.0000	0.00
2248	2096	663	671.00	2.00	150.0000	0.00

2249	5536	5538	333.00	6.00	150.0000	0.00
2250	5538	5537	198.00	6.00	150.0000	0.00
2251	5539	5540	1808.00	4.00	150.0000	0.00
2252	5540	5541	575.00	3.00	150.0000	0.00
2253	5541	5542	785.00	3.00	150.0000	0.00
2254	5505	1934	4089.00	4.00	150.0000	0.00
2255	1934	2154	2602.00	4.00	150.0000	0.00
2256	2154	2192	3373.00	4.00	150.0000	0.00
2257	2192	8066	57.00	4.00	150.0000	0.00
2258	8066	1764	161.00	4.00	150.0000	0.00
2259	1764	5543	43.00	4.00	150.0000	0.00
2260	5543	2336	703.00	2.00	150.0000	0.00
2261	5543	1650	253.00	4.00	150.0000	0.00
2262	1650	1935	455.00	4.00	150.0000	0.00
2263	1935	2357	594.00	4.00	150.0000	0.00
2264	2357	2705	52.00	4.00	150.0000	0.00
2265	2705	5544	1823.00	4.00	150.0000	0.00
2266	5544	1768	108.00	2.00	150.0000	0.00
2267	1768	2553	172.00	2.00	150.0000	0.00
2268	2553	1796	156.00	2.00	150.0000	0.00
2269	1796	1793	716.00	2.00	150.0000	0.00
2270	1793	1797	123.00	2.00	150.0000	0.00
2271	1797	5545	344.00	2.00	150.0000	0.00
2272	5545	1783	30.00	2.00	150.0000	0.00
2273	1783	2363	24.00	2.00	150.0000	0.00
2274-XX	5502	5545	14880.00	10.00	150.0000	0.00
2275	5544	2561	107.00	4.00	150.0000	0.00
2276	2561	2502	1250.00	4.00	150.0000	0.00
2277	2502	1734	50.00	4.00	150.0000	0.00
2278	1734	1785	568.00	4.00	150.0000	0.00
2279	1785	2661	26.00	4.00	150.0000	0.00
2280	2661	1444	429.00	4.00	150.0000	0.00
2281	1444	54	172.00	4.00	150.0000	0.00
2282	54	1787	280.00	4.00	150.0000	0.00
2283	1787	5546	80.00	4.00	150.0000	0.00
2284	5546	1810	125.00	2.00	150.0000	0.00
2285	1810	2636	263.00	2.00	150.0000	0.00
2286	2636	2366	52.00	2.00	150.0000	0.00
2287	2366	8046	49.00	2.00	150.0000	0.00
2288	5546	1782	408.00	4.00	150.0000	0.00
2289	1782	1636	53.00	4.00	150.0000	0.00
2290	1636	1795	318.00	4.00	150.0000	0.00
2291	1795	1770	286.00	4.00	150.0000	0.00
2292	1786	5548	210.00	2.00	150.0000	0.00
2293	1786	1807	355.00	2.00	150.0000	0.00
2294	5547	2375	210.00	1.00	150.0000	0.00
2295	1770	5547	193.00	4.00	150.0000	0.00
2296	5548	1808	30.00	2.00	150.0000	0.00
2297	5547	5548	50.00	4.00	150.0000	0.00
2298	5548	2581	192.00	4.00	150.0000	0.00
2299	2581	487	153.00	4.00	150.0000	0.00
2300	5549	1801	639.00	2.00	150.0000	0.00
2301	1801	2386	264.00	2.00	150.0000	0.00
2302	2386	1806	1515.00	2.00	150.0000	0.00
2303	1806	1766	156.00	2.00	150.0000	0.00
2304	5549	5550	689.00	3.00	150.0000	0.00
2305	5550	1791	114.00	3.00	150.0000	0.00
2306	1791	1767	531.00	3.00	150.0000	0.00
2307	1767	1769	2016.00	3.00	150.0000	0.00
2308	1769	5551	40.00	3.00	150.0000	0.00
2309	5551	5552	50.00	3.00	150.0000	0.00
2310	5552	1802	125.00	3.00	150.0000	0.00
2311	5552	2157	40.00	2.00	150.0000	0.00
2312	2157	2671	229.00	2.00	150.0000	0.00
2313	2671	1772	170.00	2.00	150.0000	0.00
2314	5551	5553	635.00	3.00	150.0000	0.00
2315	5553	1799	248.00	2.50	150.0000	0.00
2316	1799	315	770.00	2.50	150.0000	0.00
2317	315	1765	240.00	2.50	150.0000	0.00
2318	1765	2138	573.00	2.50	150.0000	0.00
2319	2138	1792	334.00	2.50	150.0000	0.00

2320	1792	1692	154.00	2.00	150.0000	0.00
2321	1692	5554	168.00	2.00	150.0000	0.00
2322	5554	1560	31.00	2.00	150.0000	0.00
2323	1560	1096	1077.00	2.00	150.0000	0.00
2324	1096	1135	73.00	2.00	150.0000	0.00
2325	1135	2540	513.00	2.00	150.0000	0.00
2326	2540	1804	309.00	2.00	150.0000	0.00
2327	1804	2287	206.00	2.00	150.0000	0.00
2328	2287	1803	263.00	2.00	150.0000	0.00
2329	1803	1047	28.00	2.00	150.0000	0.00
2330	1047	1789	1559.00	2.00	150.0000	0.00
2331	5553	2582	230.00	3.00	150.0000	0.00
2332	2582	5555	108.00	3.00	150.0000	0.00
2333	5555	428	175.00	1.00	150.0000	0.00
2334	5555	2212	706.00	2.50	150.0000	0.00
2335	2212	2601	223.00	2.50	150.0000	0.00
2336	2601	1798	138.00	2.50	150.0000	0.00
2337	1798	5556	540.00	2.50	150.0000	0.00
2338	5556	1778	1340.00	2.00	150.0000	0.00
2339	5556	7074	1165.00	2.00	150.0000	0.00
2340	487	2635	162.00	4.00	150.0000	0.00
2341	5609	505	1760.00	6.00	150.0000	0.00
2342	505	485	27.00	6.00	150.0000	0.00
2343	485	461	73.00	6.00	150.0000	0.00
2344	461	460	100.00	6.00	150.0000	0.00
2345	460	5557	845.00	6.00	150.0000	0.00
2346	5557	1465	110.00	6.00	150.0000	0.00
2347	1465	503	88.00	6.00	150.0000	0.00
2348	503	1061	115.00	6.00	150.0000	0.00
2349	1061	5558	10.00	6.00	150.0000	0.00
2350	5558	5559	28.00	3.00	150.0000	0.00
2351	5558	532	579.00	2.00	150.0000	0.00
2352	532	2068	392.00	2.00	150.0000	0.00
2353	5559	5561	454.00	1.00	150.0000	0.00
2354	5561	5560	495.00	1.00	150.0000	0.00
2355	2068	2491	591.00	2.00	150.0000	0.00
2356	2491	5562	1542.00	2.00	150.0000	0.00
2357	5559	1732	197.00	3.00	150.0000	0.00
2358	1732	1895	760.00	3.00	150.0000	0.00
2359	1895	335	50.00	3.00	150.0000	0.00
2360	335	5563	149.00	3.00	150.0000	0.00
2361	161	286	15.00	2.00	150.0000	0.00
2362	5563	5564	80.00	2.00	150.0000	0.00
2363	5564	598	75.00	2.00	150.0000	0.00
2364	5564	304	607.00	2.00	150.0000	0.00
2365	304	25	121.00	2.00	150.0000	0.00
2366	5563	1119	818.00	3.00	150.0000	0.00
2367	1119	1478	149.00	3.00	150.0000	0.00
2368	1478	9	1064.00	3.00	150.0000	0.00
2369	9	912	581.00	3.00	150.0000	0.00
2370	912	321	155.00	3.00	150.0000	0.00
2371	321	5565	502.00	3.00	150.0000	0.00
2372	5565	5566	24.00	4.00	150.0000	0.00
2373	5566	833	60.00	2.50	150.0000	0.00
2374	833	1118	67.00	2.50	150.0000	0.00
2375	1118	5567	1345.00	2.50	150.0000	0.00
2376	5565	1683	110.00	2.00	150.0000	0.00
2377	1683	1585	346.00	2.00	150.0000	0.00
2378	216	1517	251.00	2.00	150.0000	0.00
2379	1517	2560	315.00	2.00	150.0000	0.00
2380	2560	824	485.00	2.00	150.0000	0.00
2381	824	898	446.00	2.00	150.0000	0.00
2382	1585	216	252.00	2.00	150.0000	0.00
2383	5566	5568	80.00	4.00	150.0000	0.00
2384	5568	5569	3645.00	4.00	150.0000	0.00
2385	5569	2568	1811.00	2.00	150.0000	0.00
2386	2568	2569	118.00	2.00	150.0000	0.00
2387	5040	1909	1964.00	2.50	150.0000	0.00
2388	1909	1112	102.00	2.50	150.0000	0.00
2389	1112	2477	491.00	2.50	150.0000	0.00
2390	2477	1344	597.00	2.50	150.0000	0.00

2391	1344	546	383.00	2.50	150.0000	0.00
2392	546	1836	66.00	2.50	150.0000	0.00
2393	1836	1113	125.00	2.50	150.0000	0.00
2394	1113	1390	92.00	2.50	150.0000	0.00
2395	1390	2626	121.00	2.50	150.0000	0.00
2396	2626	1339	71.00	2.50	150.0000	0.00
2397	1339	2209	20.00	2.50	150.0000	0.00
2398	5570	1156	349.00	4.00	150.0000	0.00
2399	1156	5040	531.00	4.00	150.0000	0.00
2400	5040	1467	711.00	4.00	150.0000	0.00
2401	5375	126	110.00	3.00	150.0000	0.00
2402	126	1690	185.00	3.00	150.0000	0.00
2403	1690	2207	278.00	3.00	150.0000	0.00
2404	2207	2088	223.00	3.00	150.0000	0.00
2405	2088	1617	291.00	3.00	150.0000	0.00
2406	1617	1610	474.00	3.00	150.0000	0.00
2407	1610	5356	329.00	3.00	150.0000	0.00
2408	5374	481	81.00	2.00	150.0000	0.00
2409	779	547	55.00	2.00	150.0000	0.00
2410	547	77	229.00	4.00	150.0000	0.00
2411	1616	5364	114.00	3.00	150.0000	0.00
2412	5569	195	988.00	4.00	150.0000	0.00
2413	195	2570	902.00	4.00	150.0000	0.00
2414	2570	2572	272.00	4.00	150.0000	0.00
2415	2572	2573	201.00	4.00	150.0000	0.00
2416	2573	2574	251.00	4.00	150.0000	0.00
2417	2574	2575	101.00	4.00	150.0000	0.00
2418	2575	2576	83.00	4.00	150.0000	0.00
2419	2576	2632	332.00	4.00	150.0000	0.00
2420	2632	2693	49.00	4.00	150.0000	0.00
2421	2693	2577	26.00	4.00	150.0000	0.00
2422	2577	5571	2869.00	4.00	150.0000	0.00
2423	5572	1961	1034.00	6.00	150.0000	0.00
2424	1961	5573	1095.00	6.00	150.0000	0.00
2425	5574	1099	60.00	1.00	150.0000	0.00
2426	5574	1652	180.00	1.00	150.0000	0.00
2427	5573	5574	110.00	1.00	150.0000	0.00
2428	5573	1281	261.00	6.00	150.0000	0.00
2429	1281	204	140.00	6.00	150.0000	0.00
2430	204	1678	140.00	6.00	150.0000	0.00
2431	1678	5575	191.00	6.00	150.0000	0.00
2432	5575	790	80.00	6.00	150.0000	0.00
2433	5575	992	321.00	4.00	150.0000	0.00
2434	790	1040	321.00	6.00	150.0000	0.00
2435	992	2051	358.00	4.00	150.0000	0.00
2436	2051	5576	157.00	4.00	150.0000	0.00
2437	5576	1833	173.00	4.00	150.0000	0.00
2438	1833	1656	174.00	4.00	150.0000	0.00
2439	1656	5577	547.00	4.00	150.0000	0.00
2440	5577	2284	70.00	1.00	150.0000	0.00
2441	5578	5397	2555.00	6.00	150.0000	0.00
2444	1995	1826	94.00	6.00	150.0000	0.00
2445	1826	2405	59.00	6.00	150.0000	0.00
2446	2284	232	169.00	1.00	150.0000	0.00
2447	232	2173	103.00	1.00	150.0000	0.00
2448	5577	1315	618.00	2.00	150.0000	0.00
2449	1315	1520	245.00	2.00	150.0000	0.00
2450	1520	1834	274.00	2.00	150.0000	0.00
2451	1834	2319	51.00	2.00	150.0000	0.00
2452	2319	2667	262.00	2.00	150.0000	0.00
2453	2667	1674	55.00	2.00	150.0000	0.00
2454	1674	2415	497.00	2.00	150.0000	0.00
2455	1040	1963	1838.00	6.00	150.0000	0.00
2456	1963	5580	476.00	6.00	150.0000	0.00
2457	5580	2039	262.00	2.00	150.0000	0.00
2458	2039	1777	247.00	2.00	150.0000	0.00
2459	1777	188	852.00	2.00	150.0000	0.00
2460	188	2155	60.00	2.00	150.0000	0.00
2461	2155	2103	1005.00	2.00	150.0000	0.00
2462	2103	210	1966.00	2.00	150.0000	0.00
2463	210	683	515.00	2.00	150.0000	0.00

2464	5581	5580	2920.00	6.00	150.0000	0.00
2465	5581	1218	639.00	2.00	150.0000	0.00
2466	5581	1236	770.00	6.00	150.0000	0.00
2467	1236	2164	152.00	6.00	150.0000	0.00
2468	2164	5582	742.00	6.00	150.0000	0.00
2469	5582	1974	1382.00	6.00	150.0000	0.00
2470	1974	2464	203.00	6.00	150.0000	0.00
2471	2464	1087	1046.00	6.00	150.0000	0.00
2472	1087	650	405.00	6.00	150.0000	0.00
2473	650	948	769.00	6.00	150.0000	0.00
2474	948	950	502.00	6.00	150.0000	0.00
2475	950	949	151.00	6.00	150.0000	0.00
2476	949	5583	4155.00	6.00	150.0000	0.00
2477	5584	5585	120.00	10.00	150.0000	0.00
2479	5583	Hwy83	143.00	6.00	150.0000	0.00
2480	5585	263	4842.00	4.00	150.0000	0.00
2481	5586	28	1631.00	2.50	150.0000	0.00
2482	28	654	94.00	2.50	150.0000	0.00
2483	5586	1238	453.00	2.00	150.0000	0.00
2484	1238	875	5649.00	2.00	150.0000	0.00
2485	875	1015	243.00	2.00	150.0000	0.00
2486	263	5586	553.00	4.00	150.0000	0.00
2487	5584	162	289.00	10.00	150.0000	0.00
2488	162	5587	2240.00	10.00	150.0000	0.00
2489	5587	1658	185.00	4.00	150.0000	0.00
2490	5587	5588	813.00	8.00	150.0000	0.00
2491	5588	380	1402.00	2.00	150.0000	0.00
2492	380	359	625.00	2.00	150.0000	0.00
2493	359	1657	196.00	2.00	150.0000	0.00
2494	5588	5589	3189.00	8.00	150.0000	0.00
2495	5589	1262	232.00	8.00	150.0000	0.00
2496	1262	5590	489.00	8.00	150.0000	0.00
2497	5590	770	81.00	8.00	150.0000	0.00
2498	770	1342	324.00	8.00	150.0000	0.00
2499	5590	2669	198.00	8.00	150.0000	0.00
2500	2669	1223	100.00	8.00	150.0000	0.00
2501	1184	1223	206.00	8.00	150.0000	0.00
2502	1184	1170	615.00	8.00	150.0000	0.00
2503	1170	2383	10.00	8.00	150.0000	0.00
2504	1170	361	131.00	8.00	150.0000	0.00
2505	361	2340	15.00	8.00	150.0000	0.00
2506	2340	1819	130.00	8.00	150.0000	0.00
2507	1819	1990	26.00	8.00	150.0000	0.00
2508	1990	5591	836.00	8.00	150.0000	0.00
2509	5591	2030	2556.00	8.00	150.0000	0.00
2510	2030	610	84.00	4.00	150.0000	0.00
2511	610	407	73.00	4.00	150.0000	0.00
2512	407	982	1141.00	4.00	150.0000	0.00
2513	982	1160	305.00	4.00	150.0000	0.00
2514	1160	619	1021.00	4.00	150.0000	0.00
2515	619	5592	1049.00	2.50	150.0000	0.00
2516	5592	2098	1854.00	2.00	150.0000	0.00
2517	2098	1453	51.00	2.00	150.0000	0.00
2518	5592	5593	897.00	2.00	150.0000	0.00
2519	5593	2468	435.00	2.00	150.0000	0.00
2520	2468	2237	1919.00	2.00	150.0000	0.00
2521	2237	5594	833.00	2.00	150.0000	0.00
2522	5594	1115	402.00	1.00	150.0000	0.00
2523	5594	1428	146.00	2.00	150.0000	0.00
2524	1428	39	1866.00	2.00	150.0000	0.00
2525	355	1679	19.00	2.00	150.0000	0.00
2526	1679	1889	1512.00	2.00	150.0000	0.00
2527	1889	2044	973.00	2.00	150.0000	0.00
2528	2044	2365	576.00	2.00	150.0000	0.00
2529	39	355	94.00	2.00	150.0000	0.00
2530	5591	1393	54.00	12.00	150.0000	0.00
2531	1393	5595	1970.00	12.00	150.0000	0.00
2532	5595	1419	575.00	2.00	150.0000	0.00
2533	1419	1910	762.00	2.00	150.0000	0.00
2534	1910	5596	49.00	2.00	150.0000	0.00
2535	5596	772	55.00	1.00	150.0000	0.00

2536	5595	644	1928.00	12.00	150.0000	0.00
2537	644	89	10.00	8.00	150.0000	0.00
2538	644	1781	3707.00	12.00	150.0000	0.00
2539	1781	771	446.00	12.00	150.0000	0.00
2540	771	5597	808.00	12.00	150.0000	0.00
2541	5597	1491	5270.00	12.00	150.0000	0.00
2542	1491	2584	75.00	12.00	150.0000	0.00
2543	2584	2021	77.00	12.00	150.0000	0.00
2544	2021	1642	482.00	12.00	150.0000	0.00
2545	1642	1705	70.00	12.00	150.0000	0.00
2546	1705	1839	110.00	2.00	150.0000	0.00
2547	1705	1007	537.00	12.00	150.0000	0.00
2548	1007	2434	291.00	12.00	150.0000	0.00
2549	2434	5598	55.00	12.00	150.0000	0.00
2550	5598	1648	291.00	1.00	150.0000	0.00
2551	1648	127	142.00	1.00	150.0000	0.00
2552	5598	308	737.00	10.00	150.0000	0.00
2553	308	5599	179.00	10.00	150.0000	0.00
2554	5599	1931	110.00	1.00	150.0000	0.00
2555	1931	1680	150.00	1.00	150.0000	0.00
2556	5599	1788	143.00	10.00	150.0000	0.00
2557	1788	5600	498.00	10.00	150.0000	0.00
2558	5600	176	110.00	2.00	150.0000	0.00
2559	176	1029	502.00	1.00	150.0000	0.00
2560	1029	1933	101.00	1.00	150.0000	0.00
2561	5600	625	966.00	10.00	150.0000	0.00
2562	625	5601	77.00	10.00	150.0000	0.00
2563	5601	2014	473.00	2.00	150.0000	0.00
2564	2014	2704	331.00	2.00	150.0000	0.00
2565	1623	2660	1606.00	2.00	150.0000	0.00
2566	2660	2411	204.00	2.00	150.0000	0.00
2567	2411	1516	75.00	2.00	150.0000	0.00
2568	1516	1746	330.00	2.00	150.0000	0.00
2569	1746	1506	101.00	2.00	150.0000	0.00
2570	5438	7063	48.00	2.00	150.0000	0.00
2571	415	417	48.00	2.00	150.0000	0.00
2572	417	524	38.00	2.00	150.0000	0.00
2573	524	173	38.00	2.00	150.0000	0.00
2574	173	328	31.00	2.00	150.0000	0.00
2575	328	1601	39.00	2.00	150.0000	0.00
2576	1601	725	45.00	2.00	150.0000	0.00
2577	725	1392	42.00	2.00	150.0000	0.00
2578	1392	217	71.00	2.00	150.0000	0.00
2579	217	389	78.00	2.00	150.0000	0.00
2580	389	220	78.00	2.00	150.0000	0.00
2581	220	7067	39.00	2.00	150.0000	0.00
2582	7067	58	55.00	2.00	150.0000	0.00
2583	58	5426	63.00	2.00	150.0000	0.00
2584	5601	658	178.00	10.00	150.0000	0.00
2585	658	5603	149.00	10.00	150.0000	0.00
2586	5603	1989	713.00	2.00	150.0000	0.00
2587	1989	2677	51.00	2.00	150.0000	0.00
2588	2677	2689	487.00	2.00	150.0000	0.00
2589	2689	2682	80.00	2.00	150.0000	0.00
2590	5603	2	146.00	10.00	150.0000	0.00
2591	2	8062	133.00	10.00	150.0000	0.00
2592	8062	1076	170.00	10.00	150.0000	0.00
2593	1076	5604	452.00	10.00	150.0000	0.00
2594	5604	5665	523.00	2.00	150.0000	0.00
2595	1356	2271	329.00	2.00	150.0000	0.00
2596	2271	1045	286.00	2.00	150.0000	0.00
2597	1045	2199	353.00	2.00	150.0000	0.00
2598	2199	2198	137.00	2.00	150.0000	0.00
2599	5665	2687	140.00	2.00	150.0000	0.00
2600	5604	2430	1196.00	10.00	150.0000	0.00
2601	2430	5605	1228.00	10.00	150.0000	0.00
2602	5605	5606	316.00	12.00	150.0000	0.00
2603	5606	2255	15166.00	8.00	150.0000	0.00
2604	5422	352	45.00	2.00	150.0000	0.00
2605	2255	1735	262.00	12.00	150.0000	0.00
2606	5607	921	973.00	2.00	150.0000	0.00

2607	5608	108	332.00	2.00	150.0000	0.00
2608	108	1187	242.00	2.00	150.0000	0.00
2609	5607	5608	834.00	6.00	150.0000	0.00
2610	5608	9004	64.00	6.00	150.0000	0.00
2611	5243	8039	10.00	2.00	150.0000	0.00
2612	5635	1927	10.00	2.00	150.0000	0.00
2613	289	5644	561.00	4.00	150.0000	0.00
2615	5608	5612	8584.00	8.00	150.0000	0.00
2616	5612	5613	1839.00	4.00	150.0000	0.00
2617	5613	8056	808.00	2.00	150.0000	0.00
2618	8056	8055	10.00	2.00	150.0000	0.00
2619	8055	8058	121.00	2.00	150.0000	0.00
2620	8058	8057	34.00	2.00	150.0000	0.00
2621	5613	2148	1682.00	2.00	150.0000	0.00
2622	2148	2503	261.00	2.00	150.0000	0.00
2623	2503	2178	340.00	2.00	150.0000	0.00
2624	2178	2175	27.00	2.00	150.0000	0.00
2625	2175	2174	477.00	2.00	150.0000	0.00
2626	2174	2177	585.00	2.00	150.0000	0.00
2627	2177	2180	472.00	2.00	150.0000	0.00
2628	2180	2179	430.00	2.00	150.0000	0.00
2629	2179	2176	206.00	2.00	150.0000	0.00
2630	5430	416	48.00	2.00	150.0000	0.00
2631-XX	5496	5502	13710.00	10.00	150.0000	0.00
2632	5488	9002	102.00	4.00	150.0000	0.00
2633	5490	9001	42.00	4.00	150.0000	0.00
2634	5492	5493	43.00	3.00	150.0000	0.00
2635	5493	9000	39.00	3.00	150.0000	0.00
2636	FGN-BB	J-44	58.00	6.00	150.0000	0.00
2637	5617	5497	55.00	6.00	150.0000	0.00
2638	5618	1572	672.00	3.00	150.0000	0.00
2639	1572	1592	127.00	3.00	150.0000	0.00
2640	1592	1551	10.00	3.00	150.0000	0.00
2641	1551	1593	396.00	3.00	150.0000	0.00
2642	1593	159	262.00	3.00	150.0000	0.00
2643	159	2450	11.00	3.00	150.0000	0.00
2644	2450	932	141.00	3.00	150.0000	0.00
2645	932	98	313.00	3.00	150.0000	0.00
2646	98	1229	320.00	3.00	150.0000	0.00
2647	1229	5619	20.00	3.00	150.0000	0.00
2648	5619	215	204.00	3.00	150.0000	0.00
2649	1384	5620	811.00	3.00	150.0000	0.00
2650	1566	660	178.00	3.00	150.0000	0.00
2651	660	2449	185.00	3.00	150.0000	0.00
2652	2449	714	25.00	3.00	150.0000	0.00
2653	714	1332	266.00	3.00	150.0000	0.00
2654	1332	2498	51.00	3.00	150.0000	0.00
2655	2498	181	263.00	3.00	150.0000	0.00
2656	5501	2331	458.00	6.00	150.0000	0.00
2657	2331	121	73.00	6.00	150.0000	0.00
2658	5618	1384	208.00	3.00	150.0000	0.00
2659	5618	5503	574.00	3.00	150.0000	0.00
2660	1379	1566	41.00	3.00	150.0000	0.00
2661	5620	1379	445.00	3.00	150.0000	0.00
2662	5620	1511	260.00	3.00	150.0000	0.00
2663	5515	2458	62.00	6.00	150.0000	0.00
2664	2458	1527	433.00	6.00	150.0000	0.00
2666	2144	5513	172.00	6.00	150.0000	0.00
2667	5625	199	124.00	2.00	150.0000	0.00
2668	199	2135	104.00	2.00	150.0000	0.00
2669	2135	2038	357.00	2.00	150.0000	0.00
2670	2038	1475	91.00	2.00	150.0000	0.00
2671	1596	1476	200.00	2.00	150.0000	0.00
2672	5513	5625	745.00	6.00	150.0000	0.00
2673	5537	5626	1000.00	6.00	150.0000	0.00
2674	5626	5627	500.00	4.00	150.0000	0.00
2675	5627	8054	120.00	4.00	150.0000	0.00
2676	8054	143	10.00	4.00	150.0000	0.00
2677	143	5628	210.00	4.00	150.0000	0.00
2678	5628	1691	700.00	2.00	150.0000	0.00
2679	1691	840	10.00	2.00	150.0000	0.00

2680	840	739	190.00	2.00	150.0000	0.00
2681	739	8018	300.00	2.00	150.0000	0.00
2682	8018	1372	70.00	2.00	150.0000	0.00
2683	5628	655	60.00	2.00	150.0000	0.00
2684	655	2695	200.00	2.00	150.0000	0.00
2685	2695	639	200.00	2.00	150.0000	0.00
2686	639	13	220.00	2.00	150.0000	0.00
2687	13	5629	120.00	2.00	150.0000	0.00
2688	5629	1080	80.00	2.00	150.0000	0.00
2689	1080	1224	230.00	2.00	150.0000	0.00
2690	1224	759	40.00	2.00	150.0000	0.00
2691	5629	1630	50.00	1.00	150.0000	0.00
2692	1630	1639	230.00	1.00	150.0000	0.00
2693	1639	1063	30.00	1.00	150.0000	0.00
2694	5626	5630	100.00	6.00	150.0000	0.00
2695	5630	5631	100.00	6.00	150.0000	0.00
2696	5631	5632	50.00	3.00	150.0000	0.00
2697	5632	2471	250.00	3.00	150.0000	0.00
2698	2471	5633	280.00	3.00	150.0000	0.00
2699	5633	718	400.00	2.00	150.0000	0.00
2700	718	5634	800.00	2.00	150.0000	0.00
2701	5634	280	150.00	2.00	150.0000	0.00
2702	280	1287	10.00	2.00	150.0000	0.00
2703	1287	5635	140.00	2.00	150.0000	0.00
2704	5635	196	150.00	2.00	150.0000	0.00
2705	196	1915	10.00	2.00	150.0000	0.00
2706	1927	1926	100.00	2.00	150.0000	0.00
2707	1926	1946	10.00	2.00	150.0000	0.00
2708	1946	2000	140.00	2.00	150.0000	0.00
2709	2000	1999	10.00	2.00	150.0000	0.00
2710	1999	511	200.00	2.00	150.0000	0.00
2711	511	5636	760.00	2.00	150.0000	0.00
2712	5636	2204	40.00	3.00	150.0000	0.00
2713	2204	5637	40.00	3.00	150.0000	0.00
2714	5637	5640	200.00	2.00	150.0000	0.00
2715	5637	5638	200.00	2.00	150.0000	0.00
2716	5638	5639	10.00	3.00	150.0000	0.00
2717-XX	5638	5632	180.00	3.00	150.0000	0.00
2718	5639	5640	10.00	6.00	150.0000	0.00
2719	5639	5641	50.00	2.00	150.0000	0.00
2720	5641	1894	80.00	2.00	150.0000	0.00
2721	1894	711	140.00	2.00	150.0000	0.00
2722	5641	2041	70.00	2.00	150.0000	0.00
2723	2041	447	70.00	2.00	150.0000	0.00
2724	447	17	70.00	2.00	150.0000	0.00
2725	17	2309	100.00	2.00	150.0000	0.00
2726	2433	1420	500.00	6.00	150.0000	0.00
2727	5640	2673	160.00	6.00	150.0000	0.00
2728	2673	2433	80.00	6.00	150.0000	0.00
2729	5631	1556	110.00	6.00	150.0000	0.00
2730	1556	5639	50.00	6.00	150.0000	0.00
2731	5643	289	50.00	4.00	150.0000	0.00
2732	5643	1420	60.00	4.00	150.0000	0.00
2733	1420	693	10.00	6.00	150.0000	0.00
2734	693	73	50.00	6.00	150.0000	0.00
2735	73	82	60.00	6.00	150.0000	0.00
2736	82	5642	300.00	6.00	150.0000	0.00
2737	5644	1210	10.00	3.00	150.0000	0.00
2738	1210	372	130.00	3.00	150.0000	0.00
2739	372	15	10.00	4.00	150.0000	0.00
2740	5644	5645	200.00	3.00	150.0000	0.00
2741	5645	2140	140.00	3.00	150.0000	0.00
2742	2140	845	60.00	3.00	150.0000	0.00
2743	845	700	30.00	3.00	150.0000	0.00
2744	700	990	100.00	3.00	150.0000	0.00
2745	990	1272	30.00	3.00	150.0000	0.00
2746	1272	221	30.00	3.00	150.0000	0.00
2747	221	23	100.00	4.00	150.0000	0.00
2748	23	1659	150.00	3.00	150.0000	0.00
2749	1659	2107	10.00	3.00	150.0000	0.00
2750	2107	298	70.00	3.00	150.0000	0.00

2751	298	601	200.00	3.00	150.0000	0.00
2752	5645	591	100.00	3.00	150.0000	0.00
2753	591	483	10.00	3.00	150.0000	0.00
2754	483	2202	100.00	3.00	150.0000	0.00
2755	2202	2117	10.00	3.00	150.0000	0.00
2756	2117	1377	150.00	3.00	150.0000	0.00
2757	1377	5646	10.00	3.00	150.0000	0.00
2758	5646	5647	50.00	3.00	150.0000	0.00
2759	5647	1546	160.00	3.00	150.0000	0.00
2760	1546	1483	10.00	3.00	150.0000	0.00
2761	1483	844	130.00	3.00	150.0000	0.00
2762	844	5648	50.00	3.00	150.0000	0.00
2763	5648	1092	50.00	3.00	150.0000	0.00
2764	1092	5649	250.00	3.00	150.0000	0.00
2765	5649	2684	200.00	2.00	150.0000	0.00
2766	2684	802	10.00	2.00	150.0000	0.00
2767	802	65	100.00	2.00	150.0000	0.00
2768	65	419	70.00	3.00	150.0000	0.00
2769	419	1303	50.00	2.00	150.0000	0.00
2770	1303	1969	100.00	2.00	150.0000	0.00
2771	1969	1375	80.00	2.00	150.0000	0.00
2772	2172	1375	150.00	2.00	150.0000	0.00
2773	991	2172	90.00	2.00	150.0000	0.00
2774	991	5650	150.00	2.00	150.0000	0.00
2775	5650	102	120.00	2.00	150.0000	0.00
2776	102	276	50.00	2.00	150.0000	0.00
2777	276	1100	100.00	2.00	150.0000	0.00
2778	1100	182	50.00	2.00	150.0000	0.00
2779	182	733	10.00	2.00	150.0000	0.00
2780	733	570	120.00	2.00	150.0000	0.00
2781	570	219	120.00	6.00	150.0000	0.00
2782	219	5642	50.00	6.00	150.0000	0.00
2783	5642	5647	720.00	4.00	150.0000	0.00
2784	5630	5539	650.00	4.00	150.0000	0.00
2785	5542	9003	52.00	3.00	150.0000	0.00
2786	5605	510	350.00	2.00	150.0000	0.00
2787	510	200	250.00	2.00	150.0000	0.00
2788	200	2512	150.00	2.00	150.0000	0.00
2789	2512	2513	150.00	2.00	150.0000	0.00
2790	2513	2537	100.00	2.00	150.0000	0.00
2791	2537	264	200.00	2.00	150.0000	0.00
2792	264	2516	100.00	2.00	150.0000	0.00
2793	2516	2515	10.00	2.00	150.0000	0.00
2794	2515	2514	150.00	2.00	150.0000	0.00
2795	2514	2666	100.00	2.00	150.0000	0.00
2796	2666	2302	250.00	2.00	150.0000	0.00
2797	2302	2506	300.00	2.00	150.0000	0.00
2798	2506	2507	300.00	2.00	150.0000	0.00
2799	5660	5610	500.00	4.00	150.0000	0.00
2800	757	1653	10.00	2.00	150.0000	0.00
2801	1653	1920	50.00	2.00	150.0000	0.00
2802	1920	1150	10.00	2.00	150.0000	0.00
2803	5610	5611	300.00	4.00	150.0000	0.00
2804	5611	1020	150.00	2.00	150.0000	0.00
2805	1020	164	100.00	2.00	150.0000	0.00
2806	5611	1925	50.00	4.00	150.0000	0.00
2807	1925	2452	150.00	4.00	150.0000	0.00
2808	2452	5651	100.00	4.00	150.0000	0.00
2809	5651	606	100.00	2.00	150.0000	0.00
2810	606	6	50.00	2.00	150.0000	0.00
2811	6	322	100.00	2.00	150.0000	0.00
2812	322	172	30.00	2.00	150.0000	0.00
2813	5651	5652	150.00	4.00	150.0000	0.00
2814	5652	5654	100.00	4.00	150.0000	0.00
2815	5654	1268	10.00	2.00	150.0000	0.00
2816	1268	212	120.00	2.00	150.0000	0.00
2817	212	1004	100.00	2.00	150.0000	0.00
2818	5654	5655	150.00	4.00	150.0000	0.00
2819	5655	793	250.00	3.00	150.0000	0.00
2820	793	794	10.00	3.00	150.0000	0.00
2821	794	1499	150.00	3.00	150.0000	0.00

2822	5656	193	200.00	2.00	150.0000	0.00
2823	1499	5656	30.00	3.00	150.0000	0.00
2824	193	471	100.00	2.00	150.0000	0.00
2825	471	283	100.00	2.00	150.0000	0.00
2826	283	1286	100.00	2.00	150.0000	0.00
2827	1286	1149	80.00	2.00	150.0000	0.00
2828	5656	5657	100.00	2.00	150.0000	0.00
2829	5657	88	30.00	2.00	150.0000	0.00
2830	88	175	80.00	2.00	150.0000	0.00
2831	175	441	10.00	2.00	150.0000	0.00
2832	441	1479	80.00	2.00	150.0000	0.00
2833	1479	1537	10.00	2.00	150.0000	0.00
2834	1537	1800	100.00	2.00	150.0000	0.00
2835	1800	706	10.00	2.00	150.0000	0.00
2836	706	1586	50.00	2.00	150.0000	0.00
2837	1586	1503	40.00	2.00	150.0000	0.00
2838	1503	889	60.00	2.00	150.0000	0.00
2839	889	1240	50.00	2.00	150.0000	0.00
2840	5653	699	100.00	2.00	150.0000	0.00
2841	699	5657	400.00	2.00	150.0000	0.00
2842	5653	499	50.00	2.00	150.0000	0.00
2843	499	2674	70.00	2.00	150.0000	0.00
2844	2674	929	50.00	2.00	150.0000	0.00
2845	929	1267	70.00	2.00	150.0000	0.00
2846	1267	545	30.00	2.00	150.0000	0.00
2847	545	1591	40.00	2.00	150.0000	0.00
2848	1591	1093	80.00	2.00	150.0000	0.00
2849	1093	5658	100.00	2.00	150.0000	0.00
2850	5658	5659	200.00	2.00	150.0000	0.00
2851	5659	788	30.00	2.00	150.0000	0.00
2852	5659	789	20.00	2.00	150.0000	0.00
2853	5658	869	50.00	2.00	150.0000	0.00
2854	869	171	50.00	2.00	150.0000	0.00
2855	171	599	200.00	2.00	150.0000	0.00
2856	599	1590	105.00	2.00	150.0000	0.00
2857	5660	821	100.00	2.00	150.0000	0.00
2858	821	1665	10.00	2.00	150.0000	0.00
2859	5610	784	100.00	2.00	150.0000	0.00
2860	1476	621	800.00	2.00	150.0000	0.00
2861	621	2590	1000.00	2.00	150.0000	0.00
2862	2590	1775	1100.00	2.00	150.0000	0.00
2863	1775	2557	900.00	2.00	150.0000	0.00
2864	2557	860	500.00	2.00	150.0000	0.00
2865	860	2591	10.00	2.00	150.0000	0.00
2866	5622	9005	40.00	3.00	150.0000	0.00
2867	5624	9006	40.00	3.00	150.0000	0.00
2868	1527	5512	47.00	6.00	150.0000	0.00
2869	5606	9007	74.00	6.00	150.0000	0.00
2870	5512	2144	83.00	6.00	150.0000	0.00
2871	5625	5660	250.00	4.00	150.0000	0.00
2872	784	757	10.00	4.00	150.0000	0.00
2873	5652	5653	10.00	4.00	150.0000	0.00
2874	1475	1596	10.00	2.00	150.0000	0.00
2875	2123	5002	460.00	2.00	150.0000	0.00
2876	1321	5012	88.00	4.00	150.0000	0.00
2877	808	2702	894.00	4.00	150.0000	0.00
2878	2702	5041	461.00	4.00	150.0000	0.00
2879	5526	2587	100.00	2.00	150.0000	0.00
2880	5532	5662	2405.00	2.00	150.0000	0.00
2881	5662	2605	975.00	2.00	150.0000	0.00
2882	2605	2583	248.00	2.00	150.0000	0.00
2883	2583	179	250.00	2.00	150.0000	0.00
2884	179	1402	53.00	2.00	150.0000	0.00
2885	1402	281	420.00	2.00	150.0000	0.00
2886	2635	5549	195.00	4.00	150.0000	0.00
2887	5232	388	1112.00	2.50	150.0000	0.00
2888	388	1670	254.00	2.50	150.0000	0.00
2889	1670	5663	107.00	2.50	150.0000	0.00
2890	5663	5664	83.00	2.00	150.0000	0.00
2891	5664	432	440.00	2.00	150.0000	0.00
2892	5663	306	538.00	2.50	150.0000	0.00

2893	306	703	160.00	2.50	150.0000	0.00
2894	5377	115	537.00	2.00	150.0000	0.00
2895	115	2066	113.00	2.00	150.0000	0.00
2896	2066	7070	10.00	2.00	150.0000	0.00
2897	7070	2511	10.00	2.00	150.0000	0.00
2898	2511	7071	97.00	2.00	150.0000	0.00
2899	7071	1726	152.00	2.00	150.0000	0.00
2900	1726	197	10.00	2.00	150.0000	0.00
2901	197	2740	65.00	2.00	150.0000	0.00
2903	5665	1356	13.00	2.00	150.0000	0.00
2904	1735	5607	1442.00	12.00	150.0000	0.00
2907	62	552	110.00	2.00	150.0000	0.00
P-1295	5572	R-2	3396.00	6.00	150.0000	0.00
P-130	J-11	McMahan-1	6.00	6.00	150.0000	0.00
P-1322	J-1	5361	115.00	2.00	150.0000	0.00
P-1451	5120	J-3	127.00	1.50	150.0000	0.00
P-157	5667	Payne-2	17.00	6.00	150.0000	0.00
P-1695	JimNethery	JimNethery	20.00	6.00	150.0000	0.00
P-173	5667	Payne-1	24.00	6.00	150.0000	0.00
P-1784	5661	J-22	73.00	3.00	150.0000	0.00
P-1949	Hwy83-Plan	Hwy83-2	39.00	4.00	150.0000	0.00
P-208	Tebo	Tebo-1	10.00	4.00	150.0000	0.00
P-209	Tebo	Tebo-2	10.00	4.00	150.0000	0.00
P-2138	J-34	Hwy83-Plan	121.00	4.00	150.0000	0.00
P-2140	Hwy83-Plan	Hwy83-1	35.00	4.00	150.0000	0.00
P-2141	J-37	J-22	15.00	3.00	150.0000	0.00
P-2142	J-37	5505	33.00	4.00	150.0000	0.00
P-2442	J-21	King-2	108.00	6.00	150.0000	0.00
P-2443	J-21	King-1	66.00	6.00	150.0000	0.00
P-2478	7035	CrossRoad-	352.00	6.00	150.0000	0.00
P-2614	Plant-A5	5668	10.00	6.00	100.0000	0.00
P-2665	T-1184	Pump-1	154.00	6.00	150.0000	0.00
P-2902	Hemphill-T	5335	76.00	6.00	150.0000	0.00
P-2905	Payne-2	5048	15.00	6.00	150.0000	0.00
P-2906	McMahan	J-8	45.00	4.00	150.0000	0.00
P-2908	5047	Plant-A5	10.00	6.00	150.0000	0.00
P-2909	5668	5047	97.00	6.00	150.0000	0.00
P-2910	McMahan	5035	53.00	2.00	150.0000	0.00
P-2911	McMahan-1	McMahan	6.00	6.00	150.0000	0.00
P-2912	McMahan-2	McMahan	6.00	6.00	150.0000	0.00
P-2913	Payne-1	5048	12.00	6.00	150.0000	0.00
P-2914	5048	PRV-1	225.00	6.00	150.0000	0.00
P-2915	5071	Tebo	2330.00	4.00	150.0000	0.00
P-2916	1232	J-29	1278.00	6.00	150.0000	0.00
P-2917	JimNethery	JimNethery	20.00	6.00	150.0000	0.00
P-2918	Tebo-1	J-29	10.00	6.00	150.0000	0.00
P-2919	Tebo-2	J-29	10.00	6.00	150.0000	0.00
P-2920	JimNethery	5394	20.00	6.00	150.0000	0.00
P-2921	JimNethery	5394	20.00	6.00	150.0000	0.00
P-2922	5579	J-21	174.00	6.00	150.0000	0.00
P-2923	King-1	5578	67.00	6.00	150.0000	0.00
P-2924	King-2	5578	101.00	6.00	150.0000	0.00
P-2925	5462	Midlake	30.00	6.00	150.0000	0.00
P-2926	Midlake	Midlake-2	49.00	6.00	150.0000	0.00
P-2927	Midlake	Midlake-1	49.00	6.00	150.0000	0.00
P-2928	J-24	5415	23.00	6.00	150.0000	0.00
P-2929	Midlake-2	J-24	50.00	6.00	150.0000	0.00
P-2930	Midlake-1	J-24	52.00	6.00	150.0000	0.00
P-2931	J-37	5506	23.00	8.00	150.0000	0.00
P-2932	Hwy83-1	J-37	32.00	4.00	150.0000	0.00
P-2933	Hwy83-2	J-37	27.00	4.00	150.0000	0.00
P-2934	5221	J-45	109.00	6.00	150.0000	0.00
P-2935	J-44	WTHwy83-1	35.00	6.00	150.0000	0.00
P-2936	CrossRoad-	J-45	10.00	4.00	150.0000	0.00
P-2937	Bron-Pump-	Bronson-ES	19.00	6.00	150.0000	0.00
P-2938	CrossRoad-	J-45	10.00	4.00	150.0000	0.00
P-2939	J-53	5617	94.00	6.00	150.0000	0.00
P-2940	WTHwy83-1	J-53	26.00	6.00	150.0000	0.00
P-2941	WTHwy83-2	J-53	10.00	6.00	150.0000	0.00
P-2942	5614	WTMidlake-	15.00	6.00	150.0000	0.00
P-2943	WTMidlake-	5494	17.00	6.00	150.0000	0.00

P-2944	WTMidlake-	5494	25.00	6.00	150.0000	0.00
P-2945	Hwy83	5585	37.00	10.00	150.0000	0.00
P-2946	J-18Bron-Pump-		9.00	6.00	150.0000	0.00
P-2947	Bronson-ESBronPump-2		13.00	6.00	150.0000	0.00
P-2948	J-69	5260	3035.00	6.00	150.0000	0.00
P-2949	Bronson-ES	5119	13.00	6.00	150.0000	0.00
P-2951	184-Pump-1	J-63	152.00	6.00	150.0000	0.00
P-2952	Midlake	Pump-1	46.00	6.00	150.0000	0.00
P-2953	184-Pump-2	T-1	171.00	6.00	150.0000	0.00
P-2954	5335	T-1	61.00	6.00	150.0000	0.00
P-2955	Pump-1	J-24	47.00	6.00	150.0000	0.00
P-2956	184-Pump-2	J-63	143.00	6.00	150.0000	0.00
P-2957	WTHyw83-2	J-44	20.00	6.00	150.0000	0.00
P-367	BronPump-2	J-18	10.00	6.00	150.0000	0.00
P-373	J-3	1369	36.00	1.50	150.0000	0.00
P-520	J-1	5360	346.00	2.00	150.0000	0.00
P-696	J-11 McMahan-2		6.00	6.00	150.0000	0.00
P-763	CrossRoad-CrossRoad-		10.00	4.00	150.0000	0.00
P-764	CrossRoad-CrossRoad-		10.00	4.00	150.0000	0.00
P-777	5218	J-45	3.00	3.00	150.0000	0.00
P-87	5034	J-8	249.00	4.00	150.0000	0.00
P-88	5609	R-1	1293.00	6.00	150.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE 184-Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 2)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
387.69	0.00	1.00
276.92	250.00	1.00
180.00	375.00	1.00

THERE IS A DEVICE AT NODE 184-Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
387.69	0.00	1.00
276.92	250.00	1.00
180.00	375.00	1.00

THERE IS A DEVICE AT NODE Bron-Pump- DESCRIBED BY THE' FOLLOWING DATA: (ID= 4)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	200.00	1.00
97.50	300.00	1.00

THERE IS A DEVICE AT NODE BronPump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 5)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	200.00	1.00
97.50	300.00	1.00

THERE IS A DEVICE AT NODE CrossRoad- DESCRIBED BY THE' FOLLOWING DATA: (ID= 6)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
193.85	0.00	1.00
138.46	250.00	1.00
90.00	375.00	1.00

THERE IS A DEVICE AT NODE CrossRoad- DESCRIBED BY THE' FOLLOWING DATA: (ID= 7)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
193.85	0.00	1.00
138.46	250.00	1.00
90.00	375.00	1.00

THERE IS A DEVICE AT NODE Hwy83-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	75.00 (Default)
200.00	250.00	75.00 (Default)
160.00	400.00	75.00 (Default)

PUMP SPEED RATIO = 0.990

THERE IS A DEVICE AT NODE Hwy83-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	75.00 (Default)
200.00	250.00	75.00 (Default)
160.00	400.00	75.00 (Default)

PUMP SPEED RATIO = 0.980

THERE IS A DEVICE AT NODE JimNethery DESCRIBED BY THE' FOLLOWING DATA: (ID= 8)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
678.46	0.00	1.00
484.62	250.00	1.00
315.00	375.00	1.00

THERE IS A DEVICE AT NODE JimNethery DESCRIBED BY THE' FOLLOWING DATA: (ID= 9)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
678.46	0.00	1.00
484.62	250.00	1.00
315.00	375.00	1.00

THERE IS A DEVICE AT NODE King-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 10)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	225.00	1.00
120.00	337.50	1.00

THERE IS A DEVICE AT NODE King-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 11)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	225.00	1.00
120.00	337.50	1.00

THERE IS A DEVICE AT NODE McMahan-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 12)

HEAD	FLOWRATE	EFFICIENCY
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(ft)	(gpm)	(%)
258.46	0.00	1.00
184.62	240.00	1.00
120.00	360.00	1.00

THERE IS A DEVICE AT NODE McMahan-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 13)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	240.00	1.00
120.00	360.00	1.00

THERE IS A DEVICE AT NODE Midlake-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 14)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Midlake-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 15)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Payne-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 16)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
206.77	0.00	1.00
147.69	250.00	1.00
96.00	375.00	1.00

THERE IS A DEVICE AT NODE Payne-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 17)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
206.77	0.00	1.00
147.69	250.00	1.00
96.00	375.00	1.00

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 18)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Tebo-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 19)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
226.15	0.00	1.00
161.54	250.00	1.00
105.00	375.00	1.00

THERE IS A DEVICE AT NODE Tebo-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 20)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
226.15	0.00	1.00
161.54	250.00	1.00
105.00	375.00	1.00

THERE IS A DEVICE AT NODE WTHwy83-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 21)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	150.00	1.00
97.50	225.00	1.00

THERE IS A DEVICE AT NODE WTHyw83-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 22)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	150.00	1.00
97.50	225.00	1.00

THERE IS A DEVICE AT NODE WTMidlake- DESCRIBED BY THE' FOLLOWING DATA: (ID= 23)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	200.00	1.00
120.00	300.00	1.00

THERE IS A DEVICE AT NODE WTMidlake- DESCRIBED BY THE' FOLLOWING DATA: (ID= 24)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	200.00	1.00
120.00	300.00	1.00

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NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
2		1.00	190.00	
4		1.00	360.00	
5		1.00	220.00	
6		1.00	190.00	
7		1.00	330.00	
9		1.00	250.00	
10		1.00	330.00	
12		1.00	185.00	
13		1.00	200.00	
14		1.00	300.00	
15		1.00	230.00	
16		1.00	200.00	
17		1.00	215.00	
19		1.00	210.00	
20		1.00	190.00	
23		1.00	230.00	
25		1.00	290.00	
26		1.00	290.00	
27		1.00	280.00	

28	1.00	290.00
30	1.00	200.00
31	1.00	190.00
32	1.00	310.00
33	1.00	330.00
35	1.00	200.00
36	1.00	290.00
38	1.00	190.00
39	1.00	230.00
40	1.00	190.00
41	1.00	195.00
42	1.00	220.00
43	1.00	185.00
46	1.00	185.00
47	1.00	190.00
48	1.00	480.00
49	1.00	185.00
50	1.00	425.00
51	1.00	230.00
54	1.00	315.00
55	1.00	350.00
56	1.00	210.00
57	1.00	390.00
58	1.00	185.00
60	1.00	300.00
61	1.00	220.00
62	1.00	410.00
64	1.00	270.00
65	1.00	210.00
66	1.00	330.00
67	1.00	185.00
68	1.00	240.00
70	1.00	390.00
71	1.00	420.00
72	1.00	180.00
73	1.00	215.00
74	1.00	400.00
75	1.00	220.00
77	1.00	200.00
79	1.00	320.00
80	1.00	340.00
81	1.00	265.00
82	1.00	215.00
83	1.00	200.00
84	1.00	210.00
86	1.00	210.00
88	1.00	185.00
89	1.00	280.00
90	1.00	210.00
91	1.00	190.00
92	1.00	185.00
93	1.00	190.00
94	1.00	250.00
96	1.00	320.00
98	1.00	260.00
100	1.00	185.00
101	1.00	185.00
102	1.00	200.00
106	1.00	350.00
107	1.00	350.00
108	1.00	240.00
109	1.00	180.00
110	1.00	230.00
111	1.00	370.00
112	1.00	270.00
113	1.00	220.00
115	1.00	210.00
116	1.00	185.00
117	1.00	185.00
120	1.00	230.00
121	1.00	260.00

123	1.00	190.00
124	1.00	210.00
125	1.00	360.00
126	1.00	210.00
127	1.00	230.00
130	1.00	320.00
131	1.00	185.00
132	1.00	190.00
133	1.00	430.00
134	1.00	180.00
136	1.00	310.00
137	1.00	340.00
139	1.00	210.00
140	1.00	190.00
141	1.00	185.00
142	1.00	200.00
143	1.00	235.00
144	1.00	330.00
145	1.00	230.00
147	1.00	230.00
148	1.00	230.00
150	1.00	400.00
151	1.00	210.00
153	1.00	210.00
154	1.00	300.00
155	1.00	320.00
156	1.00	360.00
157	1.00	300.00
159	1.00	240.00
160	1.00	210.00
161	1.00	220.00
162	1.00	310.00
163	1.00	210.00
164	1.00	190.00
167	1.00	310.00
168	1.00	190.00
169	1.00	310.00
171	1.00	190.00
172	1.00	185.00
173	1.00	185.00
174	1.00	410.00
175	1.00	185.00
176	1.00	210.00
178	1.00	230.00
179	1.00	250.00
180	1.00	320.00
181	1.00	250.00
182	1.00	205.00
185	1.00	280.00
186	1.00	190.00
187	1.00	390.00
188	1.00	260.00
189	1.00	320.00
191	1.00	250.00
193	1.00	185.00
194	1.00	460.00
195	1.00	270.00
196	1.00	190.00
197	1.00	220.00
198	1.00	210.00
199	1.00	200.00
200	1.00	180.00
201	1.00	330.00
202	1.00	270.00
203	1.00	210.00
204	1.00	270.00
206	1.00	300.00
208	1.00	370.00
209	1.00	185.00
210	1.00	190.00
212	1.00	190.00

213	1.00	190.00
215	1.00	264.00
216	1.00	260.00
217	1.00	185.00
218	1.00	360.00
219	1.00	205.00
220	1.00	185.00
221	1.00	230.00
223	1.00	350.00
224	1.00	275.00
225	1.00	310.00
226	1.00	370.00
227	1.00	185.00
228	1.00	310.00
229	1.00	190.00
230	1.00	270.00
231	1.00	190.00
232	1.00	250.00
233	1.00	190.00
234	1.00	250.00
235	1.00	240.00
236	1.00	210.00
237	1.00	360.00
238	1.00	440.00
240	1.00	260.00
241	1.00	190.00
248	1.00	340.00
249	1.00	320.00
250	1.00	320.00
251	1.00	185.00
252	1.00	320.00
253	1.00	210.00
254	1.00	180.00
255	1.00	190.00
256	1.00	200.00
258	1.00	300.00
259	1.00	190.00
260	1.00	310.00
262	1.00	190.00
263	1.00	330.00
264	1.00	190.00
265	1.00	220.00
266	1.00	185.00
267	1.00	260.00
268	1.00	210.00
269	1.00	190.00
270	1.00	190.00
271	1.00	330.00
272	1.00	180.00
276	1.00	200.00
279	1.00	185.00
280	1.00	200.00
281	1.00	230.00
282	1.00	185.00
283	1.00	185.00
284	1.00	200.00
286	1.00	220.00
288	1.00	190.00
289	1.00	215.00
290	1.00	190.00
291	1.00	185.00
292	1.00	190.00
293	1.00	190.00
294	1.00	270.00
297	1.00	200.00
298	1.00	220.00
300	1.00	205.00
302	1.00	320.00
303	1.00	200.00
304	1.00	290.00
305	1.00	340.00

306	1.00	310.00
307	1.00	190.00
308	1.00	220.00
309	1.00	240.00
310	1.00	240.00
311	1.00	200.00
312	1.00	240.00
313	1.00	340.00
315	1.00	260.00
320	1.00	240.00
321	1.00	250.00
322	1.00	195.00
324	1.00	200.00
326	1.00	360.00
327	1.00	300.00
328	1.00	185.00
329	1.00	320.00
330	1.00	310.00
332	1.00	220.00
333	1.00	270.00
335	1.00	285.00
336	1.00	190.00
337	1.00	200.00
338	1.00	310.00
339	1.00	285.00
340	1.00	290.00
341	1.00	310.00
342	1.00	280.00
343	1.00	290.00
344	1.00	200.00
345	1.00	320.00
347	1.00	410.00
348	1.00	340.00
349	1.00	280.00
352	1.00	190.00
354	1.00	185.00
355	1.00	230.00
356	1.00	290.00
357	1.00	430.00
358	1.00	200.00
359	1.00	300.00
361	1.00	290.00
363	1.00	345.00
365	1.00	310.00
368	1.00	185.00
369	1.00	360.00
370	1.00	185.00
372	1.00	230.00
373	1.00	190.00
374	1.00	340.00
375	1.00	220.00
377	1.00	310.00
378	1.00	385.00
379	1.00	360.00
380	1.00	300.00
383	1.00	190.00
388	1.00	300.00
389	1.00	185.00
390	1.00	200.00
391	1.00	185.00
394	1.00	320.00
396	1.00	300.00
397	1.00	340.00
398	1.00	325.00
404	1.00	530.00
405	1.00	220.00
406	1.00	275.00
407	1.00	250.00
408	1.00	285.00
409	1.00	340.00
410	1.00	230.00

412	1.00	340.00
414	1.00	440.00
415	1.00	185.00
416	1.00	200.00
417	1.00	185.00
418	1.00	190.00
419	1.00	210.00
423	1.00	420.00
426	1.00	360.00
428	1.00	260.00
430	1.00	231.00
432	1.00	310.00
433	1.00	190.00
434	1.00	335.00
435	1.00	375.00
436	1.00	220.00
438	1.00	220.00
439	1.00	330.00
441	1.00	185.00
443	1.00	470.00
444	1.00	390.00
447	1.00	215.00
450	1.00	360.00
452	1.00	325.00
454	1.00	340.00
455	1.00	330.00
457	1.00	190.00
460	1.00	295.00
461	1.00	295.00
462	1.00	290.00
464	1.00	190.00
465	1.00	360.00
466	1.00	330.00
468	1.00	460.00
471	1.00	185.00
472	1.00	445.00
473	1.00	390.00
474	1.00	400.00
475	1.00	250.00
476	1.00	270.00
478	1.00	180.00
479	1.00	190.00
480	1.00	400.00
481	1.00	210.00
482	1.00	180.00
483	1.00	240.00
484	1.00	185.00
485	1.00	295.00
487	1.00	300.00
489	1.00	190.00
490	1.00	200.00
491	1.00	430.00
492	1.00	280.00
493	1.00	210.00
494	1.00	320.00
495	1.00	335.00
497	1.00	265.00
498	1.00	306.00
499	1.00	190.00
501	1.00	210.00
502	1.00	260.00
503	1.00	290.00
505	1.00	295.00
506	1.00	470.00
507	1.00	185.00
510	1.00	190.00
511	1.00	200.00
512	1.00	185.00
513	1.00	200.00
514	1.00	285.00
515	1.00	220.00

517	1.00	300.00
518	1.00	300.00
524	1.00	185.00
525	1.00	185.00
526	1.00	200.00
528	1.00	190.00
529	1.00	200.00
530	1.00	360.00
532	1.00	290.00
533	1.00	210.00
534	1.00	190.00
536	1.00	345.00
537	1.00	310.00
540	1.00	185.00
541	1.00	190.00
543	1.00	340.00
545	1.00	190.00
546	1.00	370.00
547	1.00	210.00
548	1.00	220.00
549	1.00	380.00
550	1.00	190.00
551	1.00	185.00
552	1.00	410.00
554	1.00	325.00
558	1.00	340.00
559	1.00	220.00
560	1.00	200.00
562	1.00	185.00
565	1.00	250.00
569	1.00	360.00
570	1.00	205.00
572	1.00	330.00
573	1.00	345.00
575	1.00	345.00
577	1.00	190.00
579	1.00	390.00
580	1.00	250.00
581	1.00	310.00
582	1.00	350.00
583	1.00	370.00
584	1.00	220.00
585	1.00	210.00
586	1.00	290.00
588	1.00	340.00
589	1.00	185.00
590	1.00	185.00
591	1.00	240.00
592	1.00	190.00
595	1.00	390.00
596	1.00	200.00
598	1.00	280.00
599	1.00	190.00
600	1.00	185.00
601	1.00	220.00
602	1.00	210.00
605	1.00	190.00
606	1.00	190.00
607	1.00	190.00
610	1.00	250.00
611	1.00	430.00
612	1.00	360.00
614	1.00	210.00
615	1.00	180.00
616	1.00	280.00
618	1.00	250.00
619	1.00	240.00
620	1.00	300.00
621	1.00	220.00
624	1.00	185.00
625	1.00	200.00

627	1.00	190.00
629	1.00	420.00
630	1.00	420.00
631	1.00	420.00
634	1.00	185.00
639	1.00	215.00
640	1.00	185.00
641	1.00	390.00
642	1.00	185.00
644	1.00	280.00
645	1.00	200.00
646	1.00	370.00
647	1.00	220.00
648	1.00	320.00
649	1.00	185.00
650	1.00	230.00
651	1.00	280.00
653	1.00	205.00
654	1.00	290.00
655	1.00	235.00
656	1.00	280.00
657	1.00	210.00
658	1.00	200.00
659	1.00	190.00
660	1.00	290.00
661	1.00	230.00
662	1.00	245.00
663	1.00	230.00
664	1.00	360.00
668	1.00	290.00
669	1.00	350.00
670	1.00	320.00
671	1.00	185.00
672	1.00	300.00
673	1.00	340.00
676	1.00	360.00
677	1.00	320.00
678	1.00	290.00
679	1.00	340.00
680	1.00	350.00
682	1.00	400.00
683	1.00	215.00
684	1.00	390.00
688	1.00	240.00
691	1.00	345.00
693	1.00	215.00
694	1.00	360.00
696	1.00	320.00
697	1.00	260.00
699	1.00	190.00
700	1.00	240.00
701	1.00	200.00
703	1.00	310.00
705	1.00	185.00
706	1.00	185.00
708	1.00	210.00
710	1.00	320.00
711	1.00	225.00
712	1.00	388.00
714	1.00	280.00
715	1.00	500.00
716	1.00	240.00
717	1.00	340.00
718	1.00	230.00
720	1.00	210.00
723	1.00	330.00
724	1.00	370.00
725	1.00	185.00
727	1.00	210.00
728	1.00	290.00
729	1.00	190.00

730	1.00	190.00
731	1.00	220.00
732	1.00	310.00
733	1.00	205.00
736	1.00	185.00
738	1.00	190.00
739	1.00	220.00
740	1.00	310.00
741	1.00	470.00
742	1.00	250.00
745	1.00	360.00
746	1.00	210.00
747	1.00	270.00
748	1.00	310.00
749	1.00	240.00
750	1.00	360.00
751	1.00	300.00
752	1.00	380.00
753	1.00	320.00
754	1.00	345.00
755	1.00	225.00
757	1.00	195.00
758	1.00	185.00
759	1.00	200.00
760	1.00	320.00
761	1.00	330.00
763	1.00	300.00
766	1.00	300.00
767	1.00	302.00
770	1.00	280.00
771	1.00	240.00
772	1.00	290.00
773	1.00	260.00
777	1.00	230.00
778	1.00	200.00
779	1.00	210.00
781	1.00	380.00
782	1.00	360.00
783	1.00	200.00
784	1.00	195.00
788	1.00	190.00
789	1.00	190.00
790	1.00	270.00
791	1.00	200.00
792	1.00	380.00
793	1.00	185.00
794	1.00	185.00
795	1.00	480.00
796	1.00	360.00
800	1.00	300.00
801	1.00	340.00
802	1.00	210.00
804	1.00	215.00
806	1.00	195.00
807	1.00	330.00
808	1.00	320.00
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813	1.00	190.00
814	1.00	210.00
817	1.00	195.00
820	1.00	235.00
821	1.00	195.00
823	1.00	250.00
824	1.00	260.00
825	1.00	330.00
826	1.00	205.00
827	1.00	185.00
830	1.00	320.00
831	1.00	330.00
832	1.00	370.00
833	1.00	260.00

834	1.00	210.00
838	1.00	370.00
840	1.00	220.00
841	1.00	300.00
842	1.00	280.00
843	1.00	240.00
844	1.00	230.00
845	1.00	240.00
846	1.00	185.00
847	1.00	340.00
848	1.00	320.00
849	1.00	430.00
852	1.00	200.00
853	1.00	290.00
854	1.00	210.00
857	1.00	350.00
858	1.00	210.00
859	1.00	200.00
860	1.00	185.00
861	1.00	282.00
862	1.00	185.00
863	1.00	185.00
864	1.00	220.00
865	1.00	300.00
866	1.00	300.00
869	1.00	190.00
870	1.00	430.00
872	1.00	390.00
873	1.00	360.00
874	1.00	185.00
875	1.00	250.00
879	1.00	210.00
880	1.00	370.00
881	1.00	420.00
883	1.00	200.00
885	1.00	360.00
887	1.00	215.00
888	1.00	200.00
889	1.00	185.00
890	1.00	260.00
893	1.00	210.00
896	1.00	240.00
897	1.00	200.00
898	1.00	260.00
900	1.00	210.00
902	1.00	365.00
903	1.00	322.00
904	1.00	390.00
905	1.00	340.00
907	1.00	270.00
908	1.00	380.00
910	1.00	230.00
911	1.00	190.00
912	1.00	250.00
913	1.00	185.00
914	1.00	320.00
917	1.00	540.00
918	1.00	190.00
921	1.00	240.00
923	1.00	180.00
924	1.00	350.00
925	1.00	340.00
926	1.00	360.00
927	1.00	370.00
928	1.00	360.00
929	1.00	190.00
930	1.00	340.00
932	1.00	230.00
933	1.00	270.00
934	1.00	190.00
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947	1.00	185.00
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949	1.00	250.00
950	1.00	250.00
951	1.00	185.00
952	1.00	330.00
956	1.00	390.00
957	1.00	185.00
960	1.00	210.00
962	1.00	190.00
964	1.00	210.00
965	1.00	340.00
966	1.00	350.00
967	1.00	190.00
969	1.00	195.00
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978	1.00	220.00
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980	1.00	200.00
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990	1.00	240.00
991	1.00	210.00
992	1.00	270.00
993	1.00	185.00
994	1.00	190.00
995	1.00	185.00
996	1.00	330.00
997	1.00	190.00
999	1.00	185.00
1000	1.00	230.00
1001	1.00	200.00
1002	1.00	350.00
1004	1.00	185.00
1005	1.00	350.00
1006	1.00	370.00
1007	1.00	230.00
1008	1.00	210.00
1009	1.00	330.00
1010	1.00	322.00
1011	1.00	200.00
1012	1.00	310.00
1013	1.00	560.00
1014	1.00	200.00
1015	1.00	250.00
1016	1.00	320.00
1017	1.00	230.00
1018	1.00	200.00
1020	1.00	190.00
1023	1.00	240.00
1025	1.00	185.00
1027	1.00	190.00
1029	1.00	210.00
1031	1.00	200.00
1032	1.00	240.00
1033	1.00	200.00
1034	1.00	320.00
1035	1.00	320.00
1036	1.00	330.00
1037	1.00	230.00

1040	1.00	270.00
1041	1.00	190.00
1042	1.00	185.00
1043	1.00	185.00
1044	1.00	185.00
1045	1.00	190.00
1047	1.00	240.00
1049	1.00	320.00
1050	1.00	310.00
1052	1.00	300.00
1054	1.00	440.00
1055	1.00	230.00
1056	1.00	340.00
1057	1.00	340.00
1059	1.00	200.00
1060	1.00	370.00
1061	1.00	290.00
1062	1.00	330.00
1063	1.00	200.00
1065	1.00	330.00
1066	1.00	220.00
1067	1.00	370.00
1069	1.00	330.00
1070	1.00	280.00
1072	1.00	200.00
1073	1.00	250.00
1076	1.00	190.00
1077	1.00	220.00
1078	1.00	185.00
1079	1.00	300.00
1080	1.00	200.00
1081	1.00	320.00
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1084	1.00	340.00
1086	1.00	320.00
1087	1.00	220.00
1089	1.00	360.00
1090	1.00	350.00
1091	1.00	190.00
1092	1.00	230.00
1093	1.00	190.00
1094	1.00	185.00
1095	1.00	185.00
1096	1.00	270.00
1097	1.00	290.00
1098	1.00	310.00
1099	1.00	270.00
1100	1.00	200.00
1102	1.00	185.00
1104	1.00	292.00
1107	1.00	300.00
1111	1.00	323.00
1112	1.00	340.00
1113	1.00	380.00
1114	1.00	180.00
1115	1.00	230.00
1116	1.00	310.00
1118	1.00	260.00
1119	1.00	250.00
1120	1.00	310.00
1121	1.00	340.00
1122	1.00	300.00
1123	1.00	185.00
1126	1.00	530.00
1127	1.00	200.00
1130	1.00	335.00
1133	1.00	325.00
1134	1.00	520.00
1135	1.00	270.00
1138	1.00	340.00
1140	1.00	335.00

1142	1.00	560.00
1144	1.00	280.00
1145	1.00	210.00
1149	1.00	185.00
1150	1.00	195.00
1151	1.00	330.00
1152	1.00	360.00
1153	1.00	300.00
1156	1.00	310.00
1160	1.00	240.00
1161	1.00	250.00
1162	1.00	300.00
1163	1.00	310.00
1164	1.00	250.00
1165	1.00	185.00
1166	1.00	410.00
1167	1.00	185.00
1168	1.00	190.00
1169	1.00	190.00
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1184	1.00	280.00
1185	1.00	190.00
1187	1.00	240.00
1188	1.00	200.00
1189	1.00	290.00
1190	1.00	260.00
1192	1.00	300.00
1193	1.00	390.00
1196	1.00	210.00
1197	1.00	185.00
1198	1.00	300.00
1201	1.00	260.00
1202	1.00	310.00
1205	1.00	240.00
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1261	1.00	380.00
1262	1.00	280.00
1263	1.00	320.00
1264	1.00	310.00
1266	1.00	200.00
1267	1.00	190.00
1268	1.00	190.00
1269	1.00	325.00
1270	1.00	220.00
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1287	1.00	200.00
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1310	1.00	200.00
1311	1.00	190.00
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1315	1.00	250.00
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1327	1.00	230.00
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1329	1.00	270.00
1332	1.00	270.00
1333	1.00	200.00
1334	1.00	340.00
1335	1.00	190.00
1336	1.00	230.00
1337	1.00	185.00
1338	1.00	290.00
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1352	1.00	350.00
1353	1.00	320.00
1355	1.00	340.00
1356	1.00	190.00

1357	1.00	195.00
1358	1.00	185.00
1363	1.00	360.00
1364	1.00	270.00
1365	1.00	370.00
1366	1.00	185.00
1367	1.00	330.00
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1371	1.00	320.00
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1399	1.00	195.00
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1453	1.00	220.00
1454	1.00	320.00

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1459	1.00	320.00
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1467	1.00	290.00
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1537	1.00	185.00
1539	1.00	220.00
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1733	0.98(0.98)	371.44	210.00	161.44	69.96
1734	0.98(0.98)	520.92	315.00	205.92	89.23
1735	0.98(0.98)	369.21	240.00	129.21	55.99
1736	0.98(0.98)	393.83	185.00	208.83	90.49
1737	0.98(0.98)	398.25	200.00	198.25	85.91
1738	0.98(0.98)	535.05	300.00	235.05	101.85
1740	0.98(0.98)	456.79	190.00	266.79	115.61
1741	0.98(0.98)	462.56	205.00	257.56	111.61
1742	0.98(0.98)	456.04	190.00	266.04	115.28
1744	0.98(0.98)	473.20	220.00	253.20	109.72
1745	0.98(0.98)	479.68	265.00	214.68	93.03
1746	0.98(0.98)	484.87	270.00	214.87	93.11
1747	0.98(0.98)	463.30	210.00	253.30	109.76
1748	0.98(0.98)	460.42	200.00	260.42	112.85
1749	0.98(0.98)	462.03	210.00	252.03	109.21
1750	0.98(0.98)	455.16	200.00	255.16	110.57
1751	0.98(0.98)	470.40	220.00	250.40	108.50
1752	0.98(0.98)	470.41	220.00	250.41	108.51
1753	0.98(0.98)	455.59	180.00	275.59	119.42
1755	0.98(0.98)	462.36	205.00	257.36	111.52
1756	0.98(0.98)	475.87	330.00	145.87	63.21
1758	0.98(0.98)	453.37	180.00	273.37	118.46
1759	0.98(0.98)	452.72	180.00	272.72	118.18
1760	0.98(0.98)	455.18	190.00	265.18	114.91
1761	0.98(0.98)	455.18	180.00	275.18	119.24
1762	0.98(0.98)	455.20	190.00	265.20	114.92
1763	0.98(0.98)	455.20	190.00	265.20	114.92
1764	0.98(0.98)	531.38	310.00	221.38	95.93
1765	0.98(0.98)	506.70	260.00	246.70	106.90
1766	0.98(0.98)	515.92	280.00	235.92	102.23
1767	0.98(0.98)	513.47	290.00	223.47	96.84
1768	0.98(0.98)	523.38	315.00	208.38	90.30
1769	0.98(0.98)	509.45	280.00	229.45	99.43
1770	0.98(0.98)	517.22	300.00	217.22	94.13
1771	0.98(0.98)	474.13	240.00	234.13	101.46
1772	0.98(0.98)	509.33	280.00	229.33	99.38
1773	0.98(0.98)	356.61	185.00	171.61	74.36
1774	0.98(0.98)	472.46	200.00	272.46	118.07
1775	0.98(0.98)	419.46	200.00	219.46	95.10
1777	0.98(0.98)	360.57	250.00	110.57	47.91
1778	0.98(0.98)	508.20	270.00	238.20	103.22
1779	0.98(0.98)	351.00	200.00	151.00	65.43
1780	0.98(0.98)	452.92	180.00	272.92	118.27
1781	0.98(0.98)	375.04	240.00	135.04	58.52
1782	0.98(0.98)	517.94	310.00	207.94	90.11
1783	0.98(0.98)	522.76	310.00	212.76	92.20
1785	0.98(0.98)	519.95	315.00	204.95	88.81
1786	0.98(0.98)	516.95	300.00	216.95	94.01
1787	0.98(0.98)	518.55	315.00	203.55	88.20
1788	0.98(0.98)	373.05	220.00	153.05	66.32
1789	0.98(0.98)	502.48	280.00	222.48	96.41
1790	0.98(0.98)	393.87	185.00	208.87	90.51
1791	0.98(0.98)	514.60	295.00	219.60	95.16
1792	0.98(0.98)	505.77	240.00	265.77	115.17
1793	0.98(0.98)	522.83	310.00	212.83	92.23
1794	0.98(0.98)	580.33	440.00	140.33	60.81
1795	0.98(0.98)	517.52	310.00	207.52	89.93
1796	0.98(0.98)	523.13	315.00	208.13	90.19
1797	0.98(0.98)	522.80	310.00	212.80	92.21
1798	0.98(0.98)	508.26	260.00	248.26	107.58
1799	0.98(0.98)	508.10	280.00	228.10	98.84
1800	0.98(0.98)	420.37	185.00	235.37	101.99
1801	0.98(0.98)	516.16	295.00	221.16	95.84
1802	0.98(0.98)	509.37	280.00	229.37	99.39
1803	0.98(0.98)	502.53	240.00	262.53	113.76
1804	0.98(0.98)	502.68	250.00	252.68	109.50
1805	0.98(0.98)	478.88	330.00	148.88	64.51
1806	0.98(0.98)	515.92	290.00	225.92	97.90
1807	0.98(0.98)	516.94	310.00	206.94	89.67
1808	0.98(0.98)	516.97	300.00	216.97	94.02
1809	0.98(0.98)	632.43	460.00	172.43	74.72

1810	0.98 (0.98)	518.38	315.00	203.38	88.13
1811	0.98 (0.98)	507.91	360.00	147.91	64.09
1812	0.98 (0.98)	631.57	310.00	321.57	139.35
1815	0.98 (0.98)	480.42	340.00	140.42	60.85
1816	0.98 (0.98)	519.95	300.00	219.95	95.31
1818	0.98 (0.98)	495.59	270.00	225.59	97.75
1819	0.98 (0.98)	377.92	290.00	87.92	38.10
1822	0.98 (0.98)	396.17	190.00	206.17	89.34
1824	0.98 (0.98)	374.60	190.00	184.60	79.99
1825	0.98 (0.98)	390.59	220.00	170.59	73.92
1826	0.98 (0.98)	374.60	195.00	179.60	77.83
1827	0.98 (0.98)	453.78	270.00	183.78	79.64
1828	0.98 (0.98)	393.79	185.00	208.79	90.48
1829	0.98 (0.98)	509.27	340.00	169.27	73.35
1831	0.98 (0.98)	543.84	340.00	203.84	88.33
1833	0.98 (0.98)	355.89	270.00	85.89	37.22
1834	0.98 (0.98)	354.71	250.00	104.71	45.37
1835	0.98 (0.98)	509.71	360.00	149.71	64.88
1836	0.98 (0.98)	473.39	370.00	103.39	44.80
1837	0.98 (0.98)	541.80	300.00	241.80	104.78
1838	0.98 (0.98)	494.86	270.00	224.86	97.44
1839	0.98 (0.98)	373.66	250.00	123.66	53.59
1840	0.98 (0.98)	452.91	250.00	202.91	87.93
1841	0.98 (0.98)	580.11	290.00	290.11	125.71
1851	0.98 (0.98)	465.36	210.00	255.36	110.66
1858	0.98 (0.98)	531.02	280.00	251.02	108.78
1870	0.98 (0.98)	394.90	190.00	204.90	88.79
1876	0.98 (0.98)	354.51	185.00	169.51	73.45
1883	0.98 (0.98)	567.52	280.00	287.52	124.59
1884	0.98 (0.98)	626.12	360.00	266.12	115.32
1885	0.98 (0.98)	624.65	560.00	64.65	28.02
1887	0.98 (0.98)	598.88	420.00	178.88	77.52
1888	0.98 (0.98)	579.05	330.00	249.05	107.92
1889	0.98 (0.98)	364.82	230.00	134.82	58.42
1892	0.98 (0.98)	401.11	200.00	201.11	87.15
1893	0.98 (0.98)	397.53	220.00	177.53	76.93
1894	0.98 (0.98)	369.20	225.00	144.20	62.49
1895	0.98 (0.98)	356.78	290.00	66.78	28.94
1896	0.98 (0.98)	511.89	290.00	221.89	96.15
1897	0.98 (0.98)	623.29	270.00	353.29	153.09
1898	0.98 (0.98)	393.79	185.00	208.79	90.48
1899	0.98 (0.98)	561.96	292.00	269.96	116.98
1900	0.98 (0.98)	505.68	420.00	85.68	37.13
1901	0.98 (0.98)	567.78	340.00	227.78	98.71
1903	0.98 (0.98)	454.82	260.00	194.82	84.42
1904	0.98 (0.98)	538.71	340.00	198.71	86.11
1905	0.98 (0.98)	507.19	360.00	147.19	63.78
1906	0.98 (0.98)	480.37	260.00	220.37	95.49
1907	0.98 (0.98)	444.61	200.00	244.61	106.00
1908	0.98 (0.98)	535.05	300.00	235.05	101.86
1909	0.98 (0.98)	474.26	340.00	134.26	58.18
1910	0.98 (0.98)	375.90	290.00	85.90	37.22
1911	0.98 (0.98)	562.24	300.00	262.24	113.64
1912	0.98 (0.98)	583.75	390.00	193.75	83.96
1913	0.98 (0.98)	479.72	320.00	159.72	69.21
1914	0.98 (0.98)	494.80	270.00	224.80	97.41
1915	0.98 (0.98)	368.43	190.00	178.43	77.32
1916	0.98 (0.98)	383.30	260.00	123.30	53.43
1917	0.98 (0.98)	404.91	210.00	194.91	84.46
1918	0.98 (0.98)	397.32	190.00	207.32	89.84
1919	0.98 (0.98)	486.13	294.00	192.13	83.26
1920	0.98 (0.98)	421.97	195.00	226.97	98.35
1921	0.98 (0.98)	375.24	220.00	155.24	67.27
1922	0.98 (0.98)	544.53	340.00	204.53	88.63
1925	0.98 (0.98)	421.62	190.00	231.62	100.37
1926	0.98 (0.98)	368.45	200.00	168.45	72.99
1927	0.98 (0.98)	368.45	200.00	168.45	72.99
1928	0.98 (0.98)	389.43	200.00	189.43	82.09
1930	0.98 (0.98)	567.99	315.00	252.99	109.63
1931	0.98 (0.98)	372.73	220.00	152.73	66.19
1932	0.98 (0.98)	490.01	370.00	120.01	52.00

1933	0.98 (0.98)	371.01	210.00	161.01	69.77
1934	0.98 (0.98)	549.78	310.00	239.78	103.90
1935	0.98 (0.98)	529.42	310.00	219.42	95.08
1937	0.98 (0.98)	509.41	340.00	169.41	73.41
1938	0.98 (0.98)	514.40	300.00	214.40	92.91
1939	0.98 (0.98)	488.69	360.00	128.69	55.77
1940	0.98 (0.98)	493.25	310.00	183.25	79.41
1942	0.98 (0.98)	669.73	360.00	309.73	134.22
1943	0.98 (0.98)	453.74	270.00	183.74	79.62
1945	0.98 (0.98)	353.94	200.00	153.94	66.71
1946	0.98 (0.98)	368.45	200.00	168.45	72.99
1948	0.98 (0.98)	390.63	220.00	170.63	73.94
1949	0.98 (0.98)	571.77	280.00	291.77	126.43
1950	0.98 (0.98)	390.49	230.00	160.49	69.55
1951	0.98 (0.98)	390.84	190.00	200.84	87.03
1952	0.98 (0.98)	353.40	185.00	168.40	72.97
1953	0.98 (0.98)	568.89	310.00	258.89	112.19
1955	0.98 (0.98)	567.26	310.00	257.26	111.48
1957	0.98 (0.98)	497.44	300.00	197.44	85.56
1958	0.98 (0.98)	397.66	210.00	187.66	81.32
1959	0.98 (0.98)	487.83	290.00	197.83	85.73
1960	0.98 (0.98)	423.68	300.00	123.68	53.59
1961	0.98 (0.98)	353.32	260.00	93.32	40.44
1963	0.98 (0.98)	360.19	246.00	114.19	49.48
1964	0.98 (0.98)	473.83	230.00	243.83	105.66
1965	0.98 (0.98)	498.98	300.00	198.98	86.22
1966	0.98 (0.98)	506.17	340.00	166.17	72.01
1967	0.98 (0.98)	569.42	300.00	269.42	116.75
1968	0.98 (0.98)	580.75	390.00	190.75	82.66
1969	0.98 (0.98)	368.65	210.00	158.65	68.75
1970	0.98 (0.98)	575.99	330.00	245.99	106.60
1971	0.98 (0.98)	480.89	340.00	140.89	61.05
1972	0.98 (0.98)	394.53	190.00	204.53	88.63
1973	0.98 (0.98)	509.12	340.00	169.12	73.29
1974	0.98 (0.98)	373.48	200.00	173.48	75.17
1975	0.98 (0.98)	443.53	220.00	223.53	96.86
1976	0.98 (0.98)	519.01	290.00	229.01	99.24
1977	0.98 (0.98)	360.02	230.00	130.02	56.34
1978	0.98 (0.98)	398.37	210.00	188.37	81.63
1979	0.98 (0.98)	535.16	330.00	205.16	88.90
1980	0.98 (0.98)	491.79	325.00	166.79	72.27
1981	0.98 (0.98)	581.38	400.00	181.38	78.60
1982	0.98 (0.98)	441.65	212.00	229.65	99.51
1984	0.98 (0.98)	452.35	260.00	192.35	83.35
1985	0.98 (0.98)	467.74	240.00	227.74	98.69
1986	0.98 (0.98)	510.73	340.00	170.73	73.98
1987	0.98 (0.98)	510.75	340.00	170.75	73.99
1989	0.98 (0.98)	371.97	190.00	181.97	78.86
1990	0.98 (0.98)	377.88	290.00	87.88	38.08
1991	0.98 (0.98)	394.89	185.00	209.89	90.95
1992	0.98 (0.98)	541.82	310.00	231.82	100.46
1994	0.98 (0.98)	384.20	290.00	94.20	40.82
1995	0.98 (0.98)	374.60	200.00	174.60	75.66
1996	0.98 (0.98)	614.52	320.00	294.52	127.63
1999	0.98 (0.98)	368.48	200.00	168.48	73.01
2000	0.98 (0.98)	368.47	200.00	168.47	73.01
2001	0.98 (0.98)	627.25	320.00	307.25	133.14
2002	0.98 (0.98)	397.52	200.00	197.52	85.59
2003	0.98 (0.98)	509.52	290.00	219.52	95.13
2004	0.98 (0.98)	463.12	200.00	263.12	114.02
2006	0.98 (0.98)	509.11	330.00	179.11	77.61
2007	0.98 (0.98)	449.25	210.00	239.25	103.68
2008	0.98 (0.98)	631.58	330.00	301.58	130.68
2009	0.98 (0.98)	582.02	355.00	227.02	98.37
2010	0.98 (0.98)	473.71	270.00	203.71	88.27
2011	0.98 (0.98)	580.06	220.00	360.06	156.03
2013	0.98 (0.98)	409.36	210.00	199.36	86.39
2014	0.98 (0.98)	372.35	200.00	172.35	74.68
2015	0.98 (0.98)	539.39	280.00	259.39	112.40
2016	0.98 (0.98)	647.65	448.00	199.65	86.51
2017	0.98 (0.98)	664.71	380.00	284.71	123.37

2019	0.98(0.98)	388.84	230.00	158.84	68.83
2021	0.98(0.98)	373.77	250.00	123.77	53.63
2023	0.98(0.98)	358.11	185.00	173.11	75.01
2024	0.98(0.98)	472.54	265.00	207.54	89.93
2025	0.98(0.98)	624.74	540.00	84.74	36.72
2028	0.98(0.98)	567.99	315.00	252.99	109.63
2029	0.98(0.98)	663.45	410.00	253.45	109.83
2030	0.98(0.98)	376.52	250.00	126.52	54.82
2031	0.98(0.98)	567.29	330.00	237.29	102.82
2032	0.98(0.98)	387.81	190.00	197.81	85.72
2033	0.98(0.98)	524.94	190.00	334.94	145.14
2035	0.98(0.98)	397.50	190.00	207.50	89.92
2037	0.98(0.98)	465.78	220.00	245.78	106.51
2038	0.98(0.98)	421.68	200.00	221.68	96.06
2039	0.98(0.98)	360.79	250.00	110.79	48.01
2040	0.98(0.98)	627.13	470.00	157.13	68.09
2041	0.98(0.98)	369.18	215.00	154.18	66.81
2042	0.98(0.98)	391.24	230.00	161.24	69.87
2043	0.98(0.98)	647.26	448.00	199.26	86.35
2044	0.98(0.98)	364.71	230.00	134.71	58.38
2045	0.98(0.98)	360.72	240.00	120.72	52.31
2046	0.98(0.98)	568.52	300.00	268.52	116.36
2048	0.98(0.98)	553.68	280.00	273.68	118.60
2051	0.98(0.98)	355.92	270.00	85.92	37.23
2052	0.98(0.98)	505.37	310.00	195.37	84.66
2055	0.98(0.98)	575.45	350.00	225.45	97.69
2056	0.98(0.98)	506.00	290.00	216.00	93.60
2057	0.98(0.98)	505.95	280.00	225.95	97.91
2058	0.98(0.98)	505.95	270.00	235.95	102.24
2059	0.98(0.98)	397.71	185.00	212.71	92.17
2060	0.98(0.98)	397.42	210.00	187.42	81.22
2061	0.98(0.98)	669.73	360.00	309.73	134.22
2062	0.98(0.98)	510.18	360.00	150.18	65.08
2063	0.98(0.98)	545.93	340.00	205.93	89.24
2064	0.98(0.98)	397.67	200.00	197.67	85.66
2065	0.98(0.98)	472.51	190.00	282.51	122.42
2066	0.98(0.98)	373.77	200.00	173.77	75.30
2067	0.98(0.98)	627.13	470.00	157.13	68.09
2068	0.98(0.98)	359.17	290.00	69.17	29.97
2069	0.98(0.98)	472.52	210.00	262.52	113.76
2070	0.98(0.98)	592.54	310.00	282.54	122.43
2071	0.98(0.98)	356.39	185.00	171.39	74.27
2072	0.98(0.98)	510.97	370.00	140.97	61.09
2073	0.98(0.98)	353.64	185.00	168.64	73.08
2075	0.98(0.98)	553.77	300.00	253.77	109.97
2077	0.98(0.98)	360.27	187.00	173.27	75.08
2078	0.98(0.98)	571.11	310.00	261.11	113.15
2079	0.98(0.98)	530.85	290.00	240.85	104.37
2080	0.98(0.98)	397.82	185.00	212.82	92.22
2081	0.98(0.98)	424.26	280.00	144.26	62.51
2082	0.98(0.98)	354.33	185.00	169.33	73.38
2083	0.98(0.98)	397.60	185.00	212.60	92.13
2084	0.98(0.98)	384.24	270.00	114.24	49.50
2086	0.98(0.98)	398.10	215.00	183.10	79.34
2088	0.98(0.98)	387.08	190.00	197.08	85.40
2089	0.98(0.98)	473.95	230.00	243.95	105.71
2090	0.98(0.98)	472.89	250.00	222.89	96.58
2091	0.98(0.98)	471.82	214.00	257.82	111.72
2093	0.98(0.98)	396.30	200.00	196.30	85.06
2094	0.98(0.98)	562.35	310.00	252.35	109.35
2096	0.98(0.98)	373.38	230.00	143.38	62.13
2097	0.98(0.98)	349.24	260.00	89.24	38.67
2098	0.98(0.98)	374.78	220.00	154.78	67.07
2099	0.98(0.98)	523.13	190.00	333.13	144.36
2100	0.98(0.98)	395.14	190.00	205.14	88.90
2101	0.98(0.98)	532.08	320.00	212.08	91.90
2103	0.98(0.98)	359.76	230.00	129.76	56.23
2104	0.98(0.98)	373.99	190.00	183.99	79.73
2107	0.98(0.98)	368.84	220.00	148.84	64.50
2108	0.98(0.98)	422.63	180.00	242.63	105.14
2109	0.98(0.98)	517.97	310.00	207.97	90.12

2110	0.98(0.98)	474.97	280.00	194.97	84.49
2111	0.98(0.98)	390.69	190.00	200.69	86.97
2112	0.98(0.98)	628.73	315.00	313.73	135.95
2113	0.98(0.98)	383.95	190.00	193.95	84.05
2115	0.98(0.98)	474.62	340.00	134.62	58.33
2116	0.98(0.98)	420.91	180.00	240.91	104.40
2117	0.98(0.98)	368.96	240.00	128.96	55.88
2118	0.98(0.98)	507.81	340.00	167.81	72.72
2120	0.98(0.98)	409.11	320.00	89.11	38.61
2121	0.98(0.98)	535.03	300.00	235.03	101.85
2123	0.98(0.98)	580.52	420.00	160.52	69.56
2124	0.98(0.98)	389.43	210.00	179.43	77.75
2126	0.98(0.98)	389.27	230.00	159.27	69.02
2127	0.98(0.98)	453.55	180.00	273.55	118.54
2128	0.98(0.98)	390.90	190.00	200.90	87.06
2129	0.98(0.98)	356.81	185.00	171.81	74.45
2131	0.98(0.98)	577.01	400.00	177.01	76.70
2133	0.98(0.98)	350.29	200.00	150.29	65.12
2135	0.98(0.98)	422.50	200.00	222.50	96.42
2138	0.98(0.98)	506.08	240.00	266.08	115.30
2139	0.98(0.98)	420.92	180.00	240.92	104.40
2140	0.98(0.98)	368.91	240.00	128.91	55.86
2141	0.98(0.98)	619.50	270.00	349.50	151.45
2142	0.98(0.98)	399.13	220.00	179.13	77.62
2143	0.98(0.98)	408.88	200.00	208.88	90.51
2144	0.98(0.98)	423.48	190.00	233.48	101.17
2145	0.98(0.98)	576.31	230.00	346.31	150.07
2146	0.98(0.98)	493.46	320.00	173.46	75.17
2147	0.98(0.98)	626.89	330.00	296.89	128.65
2148	0.98(0.98)	365.40	190.00	175.40	76.00
2152	0.98(0.98)	568.83	320.00	248.83	107.83
2153	0.98(0.98)	357.10	185.00	172.10	74.58
2154	0.98(0.98)	541.92	300.00	241.92	104.83
2155	0.98(0.98)	360.00	260.00	100.00	43.34
2157	0.98(0.98)	509.36	280.00	229.36	99.39
2158	0.98(0.98)	570.64	300.00	270.64	117.28
2160	0.98(0.98)	383.98	200.00	183.98	79.73
2161	0.98(0.98)	395.77	185.00	210.77	91.34
2164	0.98(0.98)	368.99	190.00	178.99	77.56
2165	0.98(0.98)	379.50	190.00	189.50	82.12
2166	0.98(0.98)	445.44	280.00	165.44	71.69
2167	0.98(0.98)	522.78	190.00	332.78	144.21
2168	0.98(0.98)	546.05	300.00	246.05	106.62
2169	0.98(0.98)	398.25	210.00	188.25	81.58
2170	0.98(0.98)	390.46	230.00	160.46	69.53
2172	0.98(0.98)	368.66	210.00	158.66	68.75
2173	0.98(0.98)	354.65	250.00	104.65	45.35
2174	0.98(0.98)	364.27	190.00	174.27	75.52
2175	0.98(0.98)	364.58	190.00	174.58	75.65
2176	0.98(0.98)	363.86	190.00	173.86	75.34
2177	0.98(0.98)	364.03	190.00	174.03	75.41
2178	0.98(0.98)	364.60	190.00	174.60	75.66
2179	0.98(0.98)	363.86	190.00	173.86	75.34
2180	0.98(0.98)	363.91	190.00	173.91	75.36
2181	0.98(0.98)	465.36	200.00	265.36	114.99
2182	0.98(0.98)	464.79	200.00	264.79	114.74
2183	0.98(0.98)	464.12	190.00	274.12	118.78
2185	0.98(0.98)	576.06	450.00	126.06	54.63
2186	0.98(0.98)	350.76	200.00	150.76	65.33
2188	0.98(0.98)	464.26	190.00	274.26	118.85
2189	0.98(0.98)	356.68	185.00	171.68	74.39
2190	0.98(0.98)	480.37	260.00	220.37	95.49
2191	0.98(0.98)	387.75	190.00	197.75	85.69
2192	0.98(0.98)	531.99	310.00	221.99	96.20
2195	0.98(0.98)	524.94	190.00	334.94	145.14
2196	0.98(0.98)	383.24	260.00	123.24	53.41
2197	0.98(0.98)	395.91	190.00	205.91	89.23
2198	0.98(0.98)	371.20	190.00	181.20	78.52
2199	0.98(0.98)	371.20	190.00	181.20	78.52
2200	0.98(0.98)	571.03	320.00	251.03	108.78
2202	0.98(0.98)	368.96	240.00	128.96	55.88

2203	0.98(0.98)	671.52	400.00	271.52	117.66
2204	0.98(0.98)	369.19	210.00	159.19	68.98
2205	0.98(0.98)	465.60	220.00	245.60	106.43
2206	0.98(0.98)	464.21	190.00	274.21	118.82
2207	0.98(0.98)	386.22	200.00	186.22	80.70
2208	0.98(0.98)	375.15	230.00	145.15	62.90
2209	0.98(0.98)	473.34	400.00	73.34	31.78
2210	0.98(0.98)	568.21	280.00	288.21	124.89
2212	0.98(0.98)	508.31	260.00	248.31	107.60
2213	0.98(0.98)	349.40	260.00	89.40	38.74
2214	0.98(0.98)	575.19	230.00	345.19	149.58
2215	0.98(0.98)	473.34	230.00	243.34	105.45
2217	0.98(0.98)	505.84	310.00	195.84	84.86
2219	0.98(0.98)	483.50	351.00	132.50	57.42
2220	0.98(0.98)	573.05	340.00	233.05	100.99
2221	0.98(0.98)	397.62	185.00	212.62	92.14
2222	0.98(0.98)	498.07	290.00	208.07	90.16
2223	0.98(0.98)	506.04	325.00	181.04	78.45
2224	0.98(0.98)	531.89	300.00	231.89	100.49
2227	0.98(0.98)	405.22	210.00	195.22	84.60
2228	0.98(0.98)	477.84	275.00	202.84	87.90
2229	0.98(0.98)	371.73	345.00	26.73	11.58
2230	0.98(0.98)	453.75	270.00	183.75	79.62
2231	0.98(0.98)	389.91	190.00	199.91	86.63
2232	0.98(0.98)	507.04	330.00	177.04	76.72
2233	0.98(0.98)	398.53	210.00	188.53	81.70
2234	0.98(0.98)	508.86	390.00	118.86	51.51
2235	0.98(0.98)	379.32	190.00	189.32	82.04
2236	0.98(0.98)	472.68	248.00	224.68	97.36
2237	0.98(0.98)	368.35	230.00	138.35	59.95
2238	0.98(0.98)	445.74	220.00	225.74	97.82
2239	0.98(0.98)	397.46	185.00	212.46	92.06
2240	0.98(0.98)	375.77	185.00	190.77	82.67
2241	0.98(0.98)	353.38	185.00	168.38	72.96
2242	0.98(0.98)	545.32	310.00	235.32	101.97
2244	0.98(0.98)	506.14	350.00	156.14	67.66
2245	0.98(0.98)	519.85	300.00	219.85	95.27
2246	0.98(0.98)	464.89	200.00	264.89	114.79
2247	0.98(0.98)	481.98	300.00	181.98	78.86
2248	0.98(0.98)	472.56	220.00	252.56	109.44
2249	0.98(0.98)	581.21	440.00	141.21	61.19
2250	0.98(0.98)	408.15	340.00	68.15	29.53
2251	0.98(0.98)	623.55	270.00	353.55	153.20
2252	0.98(0.98)	508.75	380.00	128.75	55.79
2253	0.98(0.98)	485.24	300.00	185.24	80.27
2254	0.98(0.98)	379.36	190.00	189.36	82.06
2255	0.98(0.98)	369.22	240.00	129.22	55.99
2256	0.98(0.98)	569.00	300.00	269.00	116.56
2258	0.98(0.98)	664.01	380.00	284.01	123.07
2259	0.98(0.98)	418.07	280.00	138.07	59.83
2260	0.98(0.98)	397.47	210.00	187.47	81.24
2261	0.98(0.98)	443.93	200.00	243.93	105.70
2262	0.98(0.98)	535.17	300.00	235.17	101.91
2264	0.98(0.98)	390.43	240.00	150.43	65.19
2265	0.98(0.98)	444.63	230.00	214.63	93.01
2267	0.98(0.98)	397.15	190.00	207.15	89.77
2268	0.98(0.98)	420.91	180.00	240.91	104.39
2269	0.98(0.98)	507.39	330.00	177.39	76.87
2270	0.98(0.98)	632.89	310.00	322.89	139.92
2271	0.98(0.98)	371.31	190.00	181.31	78.57
2272	0.98(0.98)	508.82	410.00	98.82	42.82
2273	0.98(0.98)	398.26	210.00	188.26	81.58
2274	0.98(0.98)	444.54	230.00	214.54	92.97
2276	0.98(0.98)	506.66	320.00	186.66	80.89
2278	0.98(0.98)	385.87	320.00	65.87	28.54
2279	0.98(0.98)	375.31	240.00	135.31	58.63
2280	0.98(0.98)	421.01	180.00	241.01	104.44
2281	0.98(0.98)	463.14	225.00	238.14	103.20
2282	0.98(0.98)	420.99	180.00	240.99	104.43
2283	0.98(0.98)	627.24	320.00	307.24	133.14
2284	0.98(0.98)	355.32	250.00	105.32	45.64

2285	0.98 (0.98)	358.75	200.00	158.75	68.79
2286	0.98 (0.98)	377.38	250.00	127.38	55.20
2287	0.98 (0.98)	502.60	240.00	262.60	113.79
2288	0.98 (0.98)	568.03	260.00	308.03	133.48
2289	0.98 (0.98)	541.39	330.00	211.39	91.60
2290	0.98 (0.98)	376.23	330.00	46.23	20.03
2292	0.98 (0.98)	383.98	210.00	173.98	75.39
2293	0.98 (0.98)	398.32	200.00	198.32	85.94
2295	0.98 (0.98)	629.91	340.00	289.91	125.63
2296	0.98 (0.98)	357.33	185.00	172.33	74.68
2299	0.98 (0.98)	398.14	210.00	188.14	81.53
2300	0.98 (0.98)	554.83	280.00	274.83	119.09
2301	0.98 (0.98)	465.40	200.00	265.40	115.01
2302	0.98 (0.98)	367.37	220.00	147.37	63.86
2303	0.98 (0.98)	353.48	185.00	168.48	73.01
2305	0.98 (0.98)	452.60	180.00	272.60	118.13
2306	0.98 (0.98)	420.48	180.00	240.48	104.21
2308	0.98 (0.98)	397.93	200.00	197.93	85.77
2309	0.98 (0.98)	369.15	215.00	154.15	66.80
2311	0.98 (0.98)	389.86	210.00	179.86	77.94
2313	0.98 (0.98)	468.03	220.00	248.03	107.48
2314	0.98 (0.98)	562.04	330.00	232.04	100.55
2315	0.98 (0.98)	421.07	180.00	241.07	104.46
2316	0.98 (0.98)	566.86	370.00	196.86	85.30
2317	0.98 (0.98)	494.35	260.00	234.35	101.55
2319	0.98 (0.98)	354.69	240.00	114.69	49.70
2320	0.98 (0.98)	627.24	320.00	307.24	133.14
2322	0.98 (0.98)	561.11	320.00	241.11	104.48
2324	0.98 (0.98)	474.62	340.00	134.62	58.34
2325	0.98 (0.98)	567.79	340.00	227.79	98.71
2327	0.98 (0.98)	351.38	200.00	151.38	65.60
2328	0.98 (0.98)	494.40	260.00	234.40	101.57
2329	0.98 (0.98)	397.90	231.00	166.90	72.32
2330	0.98 (0.98)	419.68	180.00	239.68	103.86
2331	0.98 (0.98)	381.22	250.00	131.22	56.86
2332	0.98 (0.98)	522.58	330.00	192.58	83.45
2333	0.98 (0.98)	524.71	190.00	334.71	145.04
2334	0.98 (0.98)	530.26	300.00	230.26	99.78
2336	0.98 (0.98)	531.24	310.00	221.24	95.87
2337	0.98 (0.98)	636.80	460.00	176.80	76.61
2338	0.98 (0.98)	419.26	180.00	239.26	103.68
2339	0.98 (0.98)	443.31	200.00	243.31	105.43
2340	0.98 (0.98)	378.13	280.00	98.13	42.52
2341	0.98 (0.98)	506.61	340.00	166.61	72.20
2342	0.98 (0.98)	354.43	185.00	169.43	73.42
2343	0.98 (0.98)	514.39	310.00	204.39	88.57
2344	0.98 (0.98)	651.70	445.00	206.70	89.57
2345	0.98 (0.98)	507.06	325.00	182.06	78.89
2346	0.98 (0.98)	407.71	210.00	197.71	85.67
2347	0.98 (0.98)	396.70	185.00	211.70	91.74
2353	0.98 (0.98)	355.14	185.00	170.14	73.73
2354	0.98 (0.98)	358.71	210.00	148.71	64.44
2355	0.98 (0.98)	562.29	300.00	262.29	113.66
2356	0.98 (0.98)	508.77	360.00	148.77	64.47
2357	0.98 (0.98)	527.94	310.00	217.94	94.44
2359	0.98 (0.98)	408.79	200.00	208.79	90.47
2360	0.98 (0.98)	408.63	320.00	88.63	38.41
2362	0.98 (0.98)	472.36	280.00	192.36	83.36
2363	0.98 (0.98)	522.76	310.00	212.76	92.19
2365	0.98 (0.98)	364.69	230.00	134.69	58.37
2366	0.98 (0.98)	518.31	315.00	203.31	88.10
2367	0.98 (0.98)	374.60	190.00	184.60	79.99
2368	0.98 (0.98)	398.86	205.00	193.86	84.00
2370	0.98 (0.98)	357.17	185.00	172.17	74.61
2371	0.98 (0.98)	383.96	200.00	183.96	79.72
2372	0.98 (0.98)	494.28	250.00	244.28	105.86
2375	0.98 (0.98)	516.82	300.00	216.82	93.96
2377	0.98 (0.98)	374.65	230.00	144.65	62.68
2379	0.98 (0.98)	419.68	180.00	239.68	103.86
2381	0.98 (0.98)	584.51	360.00	224.51	97.29
2383	0.98 (0.98)	378.37	280.00	98.37	42.63

2386	0.98(0.98)	516.10	295.00	221.10	95.81
2387	0.98(0.98)	424.63	280.00	144.63	62.67
2388	0.98(0.98)	397.29	185.00	212.29	91.99
2389	0.98(0.98)	465.65	230.00	235.65	102.11
2390	0.98(0.98)	397.62	185.00	212.62	92.13
2391	0.98(0.98)	623.42	270.00	353.42	153.15
2393	0.98(0.98)	682.92	350.00	332.92	144.26
2395	0.98(0.98)	561.04	320.00	241.04	104.45
2397	0.98(0.98)	419.70	180.00	239.70	103.87
2398	0.98(0.98)	514.16	300.00	214.16	92.80
2399	0.98(0.98)	507.40	345.00	162.40	70.37
2400	0.98(0.98)	545.67	340.00	205.67	89.12
2401	0.98(0.98)	397.37	185.00	212.37	92.03
2402	0.98(0.98)	531.16	270.00	261.16	113.17
2403	0.98(0.98)	547.06	345.00	202.06	87.56
2405	0.98(0.98)	374.60	195.00	179.60	77.83
2407	0.98(0.98)	392.03	190.00	202.03	87.55
2408	0.98(0.98)	509.64	315.00	194.64	84.34
2410	0.98(0.98)	394.94	185.00	209.94	90.97
2411	0.98(0.98)	484.93	270.00	214.93	93.14
2412	0.98(0.98)	546.58	340.00	206.58	89.52
2413	0.98(0.98)	449.40	210.00	239.40	103.74
2414	0.98(0.98)	510.06	360.00	150.06	65.03
2415	0.98(0.98)	354.60	212.00	142.60	61.79
2416	0.98(0.98)	523.63	190.00	333.63	144.57
2417	0.98(0.98)	605.29	250.00	355.29	153.96
2420	0.98(0.98)	623.30	270.00	353.30	153.10
2425	0.98(0.98)	393.59	190.00	203.59	88.22
2426	0.98(0.98)	470.40	220.00	250.40	108.51
2427	0.98(0.98)	493.17	340.00	153.17	66.37
2428	0.98(0.98)	544.59	310.00	234.59	101.65
2430	0.98(0.98)	371.48	210.00	161.48	69.98
2431	0.98(0.98)	534.78	270.00	264.78	114.74
2432	0.98(0.98)	575.52	350.00	225.52	97.73
2433	0.98(0.98)	369.21	215.00	154.21	66.82
2434	0.98(0.98)	373.51	230.00	143.51	62.19
2436	0.98(0.98)	509.93	350.00	159.93	69.30
2437	0.98(0.98)	647.69	340.00	307.69	133.33
2439	0.98(0.98)	464.11	190.00	274.11	118.78
2440	0.98(0.98)	465.36	190.00	275.36	119.32
2442	0.98(0.98)	359.10	185.00	174.10	75.45
2443	0.98(0.98)	508.65	370.00	138.65	60.08
2444	0.98(0.98)	506.43	310.00	196.43	85.12
2445	0.98(0.98)	623.49	270.00	353.49	153.18
2447	0.98(0.98)	393.70	190.00	203.70	88.27
2448	0.98(0.98)	379.41	190.00	189.41	82.08
2449	0.98(0.98)	558.38	290.00	268.38	116.30
2450	0.98(0.98)	558.45	240.00	318.45	137.99
2452	0.98(0.98)	421.46	190.00	231.46	100.30
2453	0.98(0.98)	506.77	320.00	186.77	80.93
2454	0.98(0.98)	424.22	280.00	144.22	62.50
2455	0.98(0.98)	541.79	290.00	251.79	109.11
2458	0.98(0.98)	423.67	190.00	233.67	101.26
2459	0.98(0.98)	505.91	330.00	175.91	76.23
2460	0.98(0.98)	451.61	280.00	171.61	74.37
2463	0.98(0.98)	464.36	200.00	264.36	114.56
2464	0.98(0.98)	373.91	200.00	173.91	75.36
2466	0.98(0.98)	397.15	190.00	207.15	89.77
2468	0.98(0.98)	371.95	240.00	131.95	57.18
2469	0.98(0.98)	384.21	210.00	174.21	75.49
2470	0.98(0.98)	454.41	260.00	194.41	84.24
2471	0.98(0.98)	369.26	215.00	154.26	66.85
2472	0.98(0.98)	528.01	300.00	228.01	98.80
2473	0.98(0.98)	374.91	210.00	164.91	71.46
2476	0.98(0.98)	587.46	310.00	277.46	120.23
2477	0.98(0.98)	473.87	340.00	133.87	58.01
2479	0.98(0.98)	409.32	300.00	109.32	47.37
2480	0.98(0.98)	624.98	540.00	84.98	36.82
2481	0.98(0.98)	558.08	290.00	268.08	116.17
2482	0.98(0.98)	358.73	210.00	148.73	64.45
2483	0.98(0.98)	356.37	210.00	146.37	63.43

2484	0.98 (0.98)	356.64	210.00	146.64	63.54
2485	0.98 (0.98)	450.76	280.00	170.76	73.99
2490	0.98 (0.98)	463.35	210.00	253.35	109.78
2491	0.98 (0.98)	359.15	290.00	69.15	29.96
2493	0.98 (0.98)	399.53	190.00	209.53	90.80
2495	0.98 (0.98)	374.63	230.00	144.63	62.67
2498	0.98 (0.98)	558.37	270.00	288.37	124.96
2499	0.98 (0.98)	408.45	320.00	88.45	38.33
2500	0.98 (0.98)	408.10	310.00	98.10	42.51
2501	0.98 (0.98)	356.66	185.00	171.66	74.39
2502	0.98 (0.98)	521.01	315.00	206.01	89.27
2503	0.98 (0.98)	365.00	190.00	175.00	75.83
2505	0.98 (0.98)	358.17	185.00	173.17	75.04
2506	0.98 (0.98)	367.34	220.00	147.34	63.85
2507	0.98 (0.98)	367.33	220.00	147.33	63.84
2510	0.98 (0.98)	393.87	185.00	208.87	90.51
2511	0.98 (0.98)	373.75	200.00	173.75	75.29
2512	0.98 (0.98)	368.53	190.00	178.53	77.36
2513	0.98 (0.98)	368.19	190.00	178.19	77.21
2514	0.98 (0.98)	367.48	200.00	167.48	72.57
2515	0.98 (0.98)	367.57	190.00	177.57	76.95
2516	0.98 (0.98)	367.58	190.00	177.58	76.95
2517	0.98 (0.98)	465.59	210.00	255.59	110.76
2518	0.98 (0.98)	397.16	190.00	207.16	89.77
2519	0.98 (0.98)	351.72	200.00	151.72	65.75
2520	0.98 (0.98)	545.71	340.00	205.71	89.14
2521	0.98 (0.98)	495.08	330.00	165.08	71.53
2522	0.98 (0.98)	511.16	300.00	211.16	91.50
2525	0.98 (0.98)	530.88	290.00	240.88	104.38
2527	0.98 (0.98)	567.70	330.00	237.70	103.00
2528	0.98 (0.98)	397.57	200.00	197.57	85.62
2529	0.98 (0.98)	509.51	360.00	149.51	64.79
2532	0.98 (0.98)	566.93	390.00	176.93	76.67
2533	0.98 (0.98)	408.20	330.00	78.20	33.88
2534	0.98 (0.98)	220.69	190.00	30.69	13.30
2535	0.98 (0.98)	356.69	185.00	171.69	74.40
2537	0.98 (0.98)	368.00	190.00	178.00	77.13
2538	0.98 (0.98)	422.97	190.00	232.97	100.95
2539	0.98 (0.98)	624.98	540.00	84.98	36.83
2540	0.98 (0.98)	502.88	270.00	232.88	100.91
2541	0.98 (0.98)	524.75	190.00	334.75	145.06
2542	0.98 (0.98)	375.14	220.00	155.14	67.23
2543	0.98 (0.98)	375.12	220.00	155.12	67.22
2544	0.98 (0.98)	375.74	210.00	165.74	71.82
2545	0.98 (0.98)	554.22	250.00	304.22	131.83
2546	0.98 (0.98)	489.30	370.00	119.30	51.70
2547	0.98 (0.98)	375.27	220.00	155.27	67.29
2550	0.98 (0.98)	626.98	480.00	146.98	63.69
2551	0.98 (0.98)	452.58	180.00	272.58	118.12
2552	0.98 (0.98)	469.39	200.00	269.39	116.73
2553	0.98 (0.98)	523.23	315.00	208.23	90.23
2554	0.98 (0.98)	670.07	400.00	270.07	117.03
2555	0.98 (0.98)	445.54	230.00	215.54	93.40
2557	0.98 (0.98)	419.24	185.00	234.24	101.50
2559	0.98 (0.98)	459.05	260.00	199.05	86.25
2560	0.98 (0.98)	350.36	260.00	90.36	39.15
2561	0.98 (0.98)	523.31	315.00	208.31	90.27
2562	0.98 (0.98)	397.41	210.00	187.41	81.21
2563	0.98 (0.98)	383.97	210.00	173.97	75.39
2564	0.98 (0.98)	379.86	190.00	189.86	82.27
2565	0.98 (0.98)	358.22	185.00	173.22	75.06
2566	0.98 (0.98)	384.24	210.00	174.24	75.50
2567	0.98 (0.98)	508.84	300.00	208.84	90.50
2568	0.98 (0.98)	350.51	224.00	126.51	54.82
2569	0.98 (0.98)	350.51	224.00	126.51	54.82
2570	0.98 (0.98)	350.59	260.00	90.59	39.26
2572	0.98 (0.98)	350.58	260.00	90.58	39.25
2573	0.98 (0.98)	350.57	260.00	90.57	39.25
2574	0.98 (0.98)	350.56	220.00	130.56	56.58
2575	0.98 (0.98)	350.56	220.00	130.56	56.57
2576	0.98 (0.98)	350.56	210.00	140.56	60.91

2577	0.98 (0.98)	350.55	195.00	155.55	67.41
2578	0.98 (0.98)	477.46	270.00	207.46	89.90
2579	0.98 (0.98)	375.21	220.00	155.21	67.26
2580	0.98 (0.98)	508.76	330.00	178.76	77.46
2581	0.98 (0.98)	516.81	300.00	216.81	93.95
2582	0.98 (0.98)	508.47	260.00	248.47	107.67
2583	0.98 (0.98)	346.81	280.00	66.81	28.95
2584	0.98 (0.98)	373.78	250.00	123.78	53.64
2586	0.98 (0.98)	358.57	210.00	148.57	64.38
2587	0.98 (0.98)	358.76	200.00	158.76	68.80
2588	0.98 (0.98)	398.75	205.00	193.75	83.96
2589	0.98 (0.98)	445.45	220.00	225.45	97.70
2590	0.98 (0.98)	419.92	220.00	199.92	86.63
2591	0.98 (0.98)	419.18	185.00	234.18	101.48
2592	0.98 (0.98)	541.42	330.00	211.42	91.61
2593	0.98 (0.98)	475.24	290.00	185.24	80.27
2595	0.98 (0.98)	470.91	220.00	250.91	108.73
2597	0.98 (0.98)	374.32	200.00	174.32	75.54
2598	0.98 (0.98)	408.12	320.00	88.12	38.18
2599	0.98 (0.98)	399.37	190.00	209.37	90.73
2600	0.98 (0.98)	379.53	190.00	189.53	82.13
2601	0.98 (0.98)	508.27	260.00	248.27	107.59
2602	0.98 (0.98)	493.78	290.00	203.78	88.30
2605	0.98 (0.98)	346.92	280.00	66.92	29.00
2606	0.98 (0.98)	473.23	290.00	183.23	79.40
2608	0.98 (0.98)	398.97	190.00	208.97	90.55
2609	0.98 (0.98)	394.89	185.00	209.89	90.95
2610	0.98 (0.98)	395.91	190.00	205.91	89.23
2613	0.98 (0.98)	371.57	200.00	171.57	74.35
2617	0.98 (0.98)	465.59	210.00	255.59	110.76
2618	0.98 (0.98)	371.44	210.00	161.44	69.96
2620	0.98 (0.98)	506.45	360.00	146.45	63.46
2621	0.98 (0.98)	373.41	240.00	133.41	57.81
2623	0.98 (0.98)	569.97	290.00	279.97	121.32
2625	0.98 (0.98)	373.92	190.00	183.92	79.70
2626	0.98 (0.98)	473.34	400.00	73.34	31.78
2627	0.98 (0.98)	633.46	310.00	323.46	140.17
2628	0.98 (0.98)	510.53	385.00	125.53	54.40
2630	0.98 (0.98)	371.43	210.00	161.43	69.95
2632	0.98 (0.98)	350.55	200.00	150.55	65.24
2633	0.98 (0.98)	507.16	335.00	172.16	74.60
2634	0.98 (0.98)	516.62	340.00	176.62	76.53
2635	0.98 (0.98)	516.57	300.00	216.57	93.85
2636	0.98 (0.98)	518.31	315.00	203.31	88.10
2639	0.98 (0.98)	480.63	280.00	200.63	86.94
2640	0.98 (0.98)	397.73	185.00	212.73	92.18
2641	0.98 (0.98)	511.32	300.00	211.32	91.57
2643	0.98 (0.98)	410.17	210.00	200.17	86.74
2644	0.98 (0.98)	560.68	300.00	260.68	112.96
2646	0.98 (0.98)	631.62	460.00	171.62	74.37
2647	0.98 (0.98)	570.33	330.00	240.33	104.14
2649	0.98 (0.98)	434.78	197.00	237.78	103.04
2651	0.98 (0.98)	398.55	210.00	188.55	81.71
2652	0.98 (0.98)	397.68	220.00	177.68	76.99
2654	0.98 (0.98)	394.23	185.00	209.23	90.66
2659	0.98 (0.98)	506.17	340.00	166.17	72.01
2660	0.98 (0.98)	485.01	270.00	215.01	93.17
2661	0.98 (0.98)	519.91	315.00	204.91	88.79
2662	0.98 (0.98)	520.19	280.00	240.19	104.08
2663	0.98 (0.98)	375.77	190.00	185.77	80.50
2665	0.98 (0.98)	568.18	325.00	243.18	105.38
2666	0.98 (0.98)	367.43	200.00	167.43	72.55
2667	0.98 (0.98)	354.62	230.00	124.62	54.00
2669	0.98 (0.98)	379.91	280.00	99.91	43.29
2671	0.98 (0.98)	509.33	280.00	229.33	99.38
2672	0.98 (0.98)	506.41	350.00	156.41	67.78
2673	0.98 (0.98)	369.22	215.00	154.22	66.83
2674	0.98 (0.98)	420.82	190.00	230.82	100.02
2675	0.98 (0.98)	579.98	440.00	139.98	60.66
2677	0.98 (0.98)	371.96	190.00	181.96	78.85
2678	0.98 (0.98)	383.25	260.00	123.25	53.41

2679	0.98 (0.98)	503.93	325.00	178.93	77.54
2680	0.98 (0.98)	480.43	340.00	140.43	60.86
2682	0.98 (0.98)	371.90	190.00	181.90	78.82
2683	0.98 (0.98)	356.64	185.00	171.64	74.38
2684	0.98 (0.98)	368.70	210.00	158.70	68.77
2685	0.98 (0.98)	375.77	221.00	154.77	67.07
2686	0.98 (0.98)	555.63	300.00	255.63	110.77
2687	0.98 (0.98)	371.46	190.00	181.46	78.63
2688	0.98 (0.98)	463.04	220.00	243.04	105.32
2689	0.98 (0.98)	371.91	190.00	181.91	78.83
2691	0.98 (0.98)	638.49	470.00	168.49	73.01
2692	0.98 (0.98)	383.52	190.00	193.52	83.86
2693	0.98 (0.98)	350.55	200.00	150.55	65.24
2694	0.98 (0.98)	507.27	390.00	117.27	50.82
2695	0.98 (0.98)	368.88	220.00	148.88	64.52
2696	0.98 (0.98)	545.51	340.00	205.51	89.05
2698	0.98 (0.98)	631.05	322.00	309.05	133.92
2699	0.98 (0.98)	516.35	350.00	166.35	72.09
2700	0.98 (0.98)	353.54	185.00	168.54	73.03
2701	0.98 (0.98)	472.64	250.00	222.64	96.48
2702	0.98 (0.98)	514.07	380.00	134.07	58.10
2703	0.98 (0.98)	623.33	270.00	353.33	153.11
2704	0.98 (0.98)	372.34	200.00	172.34	74.68
2705	0.98 (0.98)	527.81	310.00	217.81	94.38
2706	0.98 (0.98)	507.33	300.00	207.33	89.84
2707	0.98 (0.98)	371.44	210.00	161.44	69.96
2708	0.98 (0.98)	375.77	210.00	165.77	71.83
2709	0.98 (0.98)	360.03	230.00	130.03	56.35
2710	0.98 (0.98)	507.35	350.00	157.35	68.19
2711	0.98 (0.98)	530.90	280.00	250.90	108.73
2712	0.98 (0.98)	511.54	290.00	221.54	96.00
2715	0.98 (0.98)	510.54	385.00	125.54	54.40
2718	0.98 (0.98)	506.44	360.00	146.44	63.46
2721	0.98 (0.98)	630.94	460.00	170.94	74.07
2724	0.98 (0.98)	505.36	310.00	195.36	84.66
2726	0.98 (0.98)	421.85	190.00	231.85	100.47
2727	0.98 (0.98)	421.91	185.00	236.91	102.66
2728	0.98 (0.98)	421.89	185.00	236.89	102.65
2729	0.98 (0.98)	421.93	185.00	236.93	102.67
2730	0.98 (0.98)	421.92	190.00	231.92	100.50
2731	0.98 (0.98)	421.85	185.00	236.85	102.64
2732	0.98 (0.98)	421.92	185.00	236.92	102.67
2733	0.98 (0.98)	421.73	185.00	236.73	102.58
2734	0.98 (0.98)	421.85	185.00	236.85	102.64
2735	0.98 (0.98)	421.85	185.00	236.85	102.64
2736	0.98 (0.98)	421.71	185.00	236.71	102.58
2737	0.98 (0.98)	421.90	185.00	236.90	102.66
2738	0.98 (0.98)	421.45	185.00	236.45	102.46
2739	0.98 (0.98)	421.92	190.00	231.92	100.50
2740	0.98 (0.98)	373.67	220.00	153.67	66.59
2741	0.98 (0.98)	421.99	185.00	236.99	102.69
2742	0.98 (0.98)	421.93	190.00	231.93	100.50
2743	0.98 (0.98)	421.92	190.00	231.92	100.50
2744	0.98 (0.98)	421.78	185.00	236.78	102.61
2745	0.98 (0.98)	421.92	190.00	231.92	100.50
2746	0.98 (0.98)	421.72	185.00	236.72	102.58
2747	0.98 (0.98)	421.95	190.00	231.95	100.51
2748	0.98 (0.98)	421.85	185.00	236.85	102.63
2749	0.98 (0.98)	421.75	190.00	231.75	100.43
2750	0.98 (0.98)	421.75	190.00	231.75	100.42
2751	0.98 (0.98)	421.90	185.00	236.90	102.65
2752	0.98 (0.98)	421.89	185.00	236.89	102.65
2753	0.98 (0.98)	421.91	185.00	236.91	102.66
2754	0.98 (0.98)	421.95	185.00	236.95	102.68
2755	0.98 (0.98)	421.76	190.00	231.76	100.43
2756	0.98 (0.98)	421.92	190.00	231.92	100.50
2757	0.98 (0.98)	421.91	185.00	236.91	102.66
2758	0.98 (0.98)	422.14	185.00	237.14	102.76
2759	0.98 (0.98)	421.97	185.00	236.97	102.69
2760	0.98 (0.98)	421.99	185.00	236.99	102.70
2761	0.98 (0.98)	422.20	185.00	237.20	102.79

2762	0.98 (0.98)	422.14	185.00	237.14	102.76
2763	0.98 (0.98)	421.79	190.00	231.79	100.44
2764	0.98 (0.98)	421.91	185.00	236.91	102.66
2765	0.98 (0.98)	421.37	185.00	236.37	102.43
2766	0.98 (0.98)	421.99	185.00	236.99	102.70
2767	0.98 (0.98)	421.60	190.00	231.60	100.36
2768	0.98 (0.98)	421.36	185.00	236.36	102.42
2769	0.98 (0.98)	421.85	190.00	231.85	100.47
2770	0.98 (0.98)	421.99	185.00	236.99	102.70
2771	0.98 (0.98)	421.83	185.00	236.83	102.63
5001	0.00	580.12	433.00	147.12	63.75
5002	0.00	580.71	420.00	160.71	69.64
5003	0.00	580.35	430.00	150.35	65.15
5004	0.00	578.82	300.00	278.82	120.82
5005	0.00	578.64	315.00	263.64	114.24
5006	0.00	578.64	320.00	258.64	112.08
5007	0.00	578.60	325.00	253.60	109.89
5008	0.00	578.35	300.00	278.35	120.62
5009	0.00	578.24	400.00	178.24	77.24
5010	0.00	580.85	430.00	150.85	65.37
5011	0.00	580.06	380.00	200.06	86.69
5012	0.00	581.46	420.00	161.46	69.96
5013	0.00	583.75	374.00	209.75	90.89
5014	0.00	583.07	279.00	304.07	131.76
5015	0.00	582.72	334.00	248.72	107.78
5016	0.00	582.55	323.00	259.55	112.47
5017	0.00	582.40	336.00	246.40	106.77
5018	0.00	582.15	340.00	242.15	104.93
5019	0.00	581.59	370.00	211.59	91.69
5020	0.00	581.44	375.00	206.44	89.46
5021	0.00	581.42	390.00	191.42	82.95
5022	0.00	581.38	380.00	201.38	87.26
5023	0.00	583.83	380.00	203.83	88.33
5024	0.00	581.39	390.00	191.39	82.94
5025	0.00	583.72	312.00	271.72	117.74
5026	0.00	583.72	360.00	223.72	96.94
5027	0.00	584.64	350.00	234.64	101.68
5028	0.00	631.51	390.00	241.51	104.65
5029	0.00	632.14	390.00	242.14	104.93
5030	0.00	577.52	420.00	157.52	68.26
5031	0.00	601.15	270.00	331.15	143.50
5032	0.00	626.14	380.00	246.14	106.66
5033	0.00	636.33	394.00	242.33	105.01
5034	0.00	412.82	400.00	12.82	5.56
5035	0.00	410.00	400.00	10.00	4.33
5036	0.00	410.00	400.00	10.00	4.33
5037	0.00	440.06	340.00	100.06	43.36
5038	0.00	438.94	390.00	48.94	21.21
5039	0.00	444.02	320.00	124.02	53.74
5040	0.00	476.06	300.00	176.06	76.29
5041	0.00	519.86	371.00	148.86	64.51
5042	0.00	557.85	305.00	252.85	109.57
5043	0.00	627.92	430.00	197.92	85.76
5044	0.00	627.33	469.00	158.33	68.61
5045	0.00	627.25	460.00	167.25	72.47
5046	0.00	625.70	534.00	91.70	39.73
5047	0.00	625.00	560.00	65.00	28.17
5048	0.00	672.88	400.00	272.88	118.25
5049	0.00	503.42	420.00	83.42	36.15
5050	0.00	516.62	323.00	193.62	83.90
5051	0.00	516.58	320.00	196.58	85.18
5052	0.00	516.50	310.00	206.50	89.48
5053	0.00	516.42	350.00	166.42	72.12
5054	0.00	627.16	470.00	157.16	68.10
5055	0.00	627.13	470.00	157.13	68.09
5056	0.00	650.57	445.00	205.57	89.08
5057	0.00	489.57	400.00	89.57	38.81
5058	0.00	516.33	370.00	146.33	63.41
5059	0.00	669.80	370.00	299.80	129.91
5060	0.00	669.33	370.00	299.33	129.71
5061	0.00	667.44	300.00	367.44	159.22

5062	0.00	667.11	335.00	332.11	143.91
5063	0.00	665.52	380.00	285.52	123.72
5064	0.00	415.62	350.00	65.62	28.43
5065	0.00	415.62	336.00	79.62	34.50
5066	0.00	577.43	400.00	177.43	76.89
5067	0.00	577.43	400.00	177.43	76.89
5068	0.00	576.75	420.00	156.75	67.92
5069	0.00	515.12	340.00	175.12	75.89
5070	0.00	415.62	330.00	85.62	37.10
5071	0.00	397.86	330.00	67.86	29.41
5072	0.00	571.15	320.00	251.15	108.83
5073	0.00	571.13	320.00	251.13	108.82
5074	0.00	570.82	320.00	250.82	108.69
5075	0.00	569.65	321.00	248.65	107.75
5076	0.00	575.88	475.00	100.88	43.71
5077	0.00	569.64	321.00	248.64	107.74
5078	0.00	569.05	310.00	259.05	112.25
5079	0.00	568.94	300.00	268.94	116.54
5080	0.00	568.62	250.00	318.62	138.07
5081	0.00	568.19	299.00	269.19	116.65
5082	0.00	568.90	310.00	258.90	112.19
5083	0.00	568.23	264.00	304.23	131.83
5084	0.00	568.00	250.00	318.00	137.80
5085	0.00	568.23	280.00	288.23	124.90
5086	0.00	568.90	304.00	264.90	114.79
5087	0.00	568.89	320.00	248.89	107.85
5088	0.00	568.90	280.00	288.90	125.19
5089	0.00	568.89	310.00	258.89	112.19
5090	0.00	567.59	362.00	205.59	89.09
5091	0.00	566.89	388.00	178.89	77.52
5092	0.00	566.88	340.00	226.88	98.32
5093	0.00	566.88	360.00	206.88	89.65
5094	0.00	566.88	370.00	196.88	85.32
5095	0.00	567.08	285.00	282.08	122.24
5096	0.00	566.91	280.00	286.91	124.33
5097	0.00	566.09	280.00	286.09	123.97
5098	0.00	566.14	280.00	286.14	124.00
5099	0.00	565.03	260.00	305.03	132.18
5100	0.00	562.57	290.00	272.57	118.11
5101	0.00	562.35	330.00	232.35	100.69
5102	0.00	562.20	270.00	292.20	126.62
5103	0.00	561.99	292.00	269.99	116.99
5104	0.00	561.97	292.00	269.97	116.99
5105	0.00	561.71	270.00	291.71	126.41
5106	0.00	561.51	294.00	267.51	115.92
5107	0.00	508.95	365.00	143.95	62.38
5108	0.00	507.52	360.00	147.52	63.93
5109	0.00	508.96	365.00	143.96	62.38
5110	0.00	508.96	365.00	143.96	62.38
5111	0.00	509.06	365.00	144.06	62.42
5112	0.00	489.39	365.00	124.39	53.90
5113	0.00	509.39	370.00	139.39	60.40
5114	0.00	489.32	370.00	119.32	51.71
5115	0.00	489.30	370.00	119.30	51.70
5116	0.00	509.66	360.00	149.66	64.85
5117	0.00	509.66	360.00	149.66	64.85
5118	0.00	510.54	375.00	135.54	58.73
5119	0.00	510.98	390.00	120.98	52.42
5120	0.00	510.98	390.00	120.98	52.42
5121	0.00	510.98	390.00	120.98	52.42
5122	0.00	509.53	360.00	149.53	64.80
5123	0.00	507.04	330.00	177.04	76.72
5124	0.00	507.17	330.00	177.17	76.77
5125	0.00	507.75	350.00	157.75	68.36
5126	0.00	507.40	345.00	162.40	70.37
5127	0.00	507.38	345.00	162.38	70.36
5128	0.00	510.17	360.00	150.17	65.07
5129	0.00	510.27	370.00	140.27	60.78
5130	0.00	510.33	360.00	150.33	65.14
5131	0.00	510.35	360.00	150.35	65.15
5132	0.00	510.66	375.00	135.66	58.79

5133	0.00	508.48	365.00	143.48	62.18
5134	0.00	507.96	360.00	147.96	64.12
5135	0.00	507.60	365.00	142.60	61.79
5136	0.00	507.38	310.00	197.38	85.53
5137	0.00	507.33	320.00	187.33	81.17
5138	0.00	503.93	320.00	183.93	79.70
5139	0.00	506.34	325.00	181.34	78.58
5140	0.00	506.07	325.00	181.07	78.46
5141	0.00	481.42	290.00	191.42	82.95
5142	0.00	494.32	320.00	174.32	75.54
5143	0.00	505.44	290.00	215.44	93.36
5144	0.00	505.39	310.00	195.39	84.67
5145	0.00	507.37	310.00	197.37	85.52
5146	0.00	507.08	305.00	202.08	87.57
5147	0.00	506.80	350.00	156.80	67.95
5148	0.00	506.94	360.00	146.94	63.67
5149	0.00	507.16	310.00	197.16	85.44
5150	0.00	506.94	360.00	146.94	63.67
5151	0.00	505.38	310.00	195.38	84.67
5152	0.00	476.10	310.00	166.10	71.98
5153	0.00	474.68	340.00	134.68	58.36
5154	0.00	494.68	330.00	164.68	71.36
5155	0.00	494.87	315.00	179.87	77.95
5156	0.00	495.37	290.00	205.37	88.99
5157	0.00	495.67	260.00	235.67	102.12
5158	0.00	499.76	240.00	259.76	112.56
5159	0.00	499.76	240.00	259.76	112.56
5160	0.00	499.76	285.00	214.76	93.06
5161	0.00	501.92	222.00	279.92	121.30
5162	0.00	504.95	265.00	239.95	103.98
5163	0.00	506.41	235.00	271.41	117.61
5164	0.00	507.09	258.00	249.09	107.94
5165	0.00	509.05	300.00	209.05	90.59
5166	0.00	509.60	300.00	209.60	90.83
5167	0.00	509.60	300.00	209.60	90.83
5168	0.00	509.60	300.00	209.60	90.83
5169	0.00	510.41	250.00	260.41	112.85
5170	0.00	511.16	250.00	261.16	113.17
5171	0.00	514.39	300.00	214.39	92.90
5172	0.00	497.10	270.00	227.10	98.41
5173	0.00	487.83	290.00	197.83	85.73
5174	0.00	487.53	290.00	197.53	85.60
5175	0.00	487.53	270.00	217.53	94.26
5176	0.00	484.60	300.00	184.60	79.99
5177	0.00	482.75	280.00	202.75	87.86
5178	0.00	484.51	240.00	244.51	105.95
5179	0.00	484.51	300.00	184.51	79.95
5180	0.00	481.80	280.00	201.80	87.45
5181	0.00	481.80	280.00	201.80	87.45
5182	0.00	480.72	275.00	205.72	89.15
5183	0.00	479.76	265.00	214.76	93.06
5184	0.00	479.69	265.00	214.69	93.03
5185	0.00	477.96	264.00	213.96	92.72
5186	0.00	477.95	264.00	213.95	92.71
5187	0.00	477.82	260.00	217.82	94.39
5188	0.00	476.93	270.00	206.93	89.67
5189	0.00	475.70	260.00	215.70	93.47
5190	0.00	474.89	229.00	245.89	106.55
5191	0.00	471.78	214.00	257.78	111.70
5192	0.00	471.66	214.00	257.66	111.65
5193	0.00	470.43	220.00	250.43	108.52
5194	0.00	464.13	216.00	248.13	107.52
5195	0.00	464.01	216.00	248.01	107.47
5196	0.00	462.67	202.00	260.67	112.96
5197	0.00	462.66	202.00	260.66	112.95
5198	0.00	457.40	181.00	276.40	119.77
5199	0.00	455.59	186.00	269.59	116.82
5200	0.00	455.37	186.00	269.37	116.73
5201	0.00	454.68	180.00	274.68	119.03
5202	0.00	453.60	180.00	273.60	118.56
5203	0.00	452.74	180.00	272.74	118.19

5204	0.00	452.58	180.00	272.58	118.12
5205	0.00	452.54	180.00	272.54	118.10
5207	0.00	488.90	360.00	128.90	55.86
5209	0.00	482.46	351.00	131.46	56.97
5210	0.00	480.42	340.00	140.42	60.85
5211	0.00	480.24	340.00	140.24	60.77
5212	0.00	541.40	330.00	211.40	91.61
5213	0.00	541.40	330.00	211.40	91.61
5214	0.00	541.38	330.00	211.38	91.60
5215	0.00	542.67	335.00	207.67	89.99
5216	0.00	546.09	340.00	206.09	89.30
5217	0.00	547.12	345.00	202.12	87.58
5218	0.00	547.59	350.00	197.59	85.62
5219	0.00	387.79	314.00	73.79	31.98
5220	0.00	387.79	300.00	87.79	38.04
5221	0.00	547.32	350.00	197.32	85.50
5222	0.00	516.21	310.00	206.21	89.36
5223	0.00	515.13	310.00	205.13	88.89
5224	0.00	515.10	310.00	205.10	88.88
5225	0.00	514.13	310.00	204.13	88.46
5226	0.00	514.09	310.00	204.09	88.44
5227	0.00	510.81	290.00	220.81	95.68
5228	0.00	511.64	290.00	221.64	96.04
5229	0.00	510.72	290.00	220.72	95.65
5230	0.00	510.13	300.00	210.13	91.06
5231	0.00	505.67	260.00	245.67	106.46
5232	0.00	504.40	270.00	234.40	101.58
5233	0.00	495.15	270.00	225.15	97.56
5234	0.00	486.95	280.00	206.95	89.68
5235	0.00	402.84	300.00	102.84	44.57
5236	0.00	402.61	300.00	102.61	44.46
5237	0.00	424.34	280.00	144.34	62.55
5238	0.00	424.22	280.00	144.22	62.49
5239	0.00	433.72	242.00	191.72	83.08
5240	0.00	443.86	280.00	163.86	71.01
5241	0.00	457.83	240.00	217.83	94.39
5242	0.00	472.40	290.00	182.40	79.04
5243	0.00	472.37	290.00	182.37	79.03
5244	0.00	480.79	295.00	185.79	80.51
5245	0.00	493.11	312.00	181.11	78.48
5246	0.00	498.98	300.00	198.98	86.22
5247	0.00	520.01	296.00	224.01	97.07
5248	0.00	519.53	270.00	249.53	108.13
5249	0.00	528.03	302.00	226.03	97.95
5250	0.00	532.27	290.00	242.27	104.99
5251	0.00	536.47	270.00	266.47	115.47
5252	0.00	545.35	310.00	235.35	101.98
5253	0.00	593.09	310.00	283.09	122.67
5254	0.00	491.76	330.00	161.76	70.10
5255	0.00	491.76	320.00	171.76	74.43
5256	0.00	491.76	320.00	171.76	74.43
5257	0.00	491.76	270.00	221.76	96.10
5258	0.00	491.51	320.00	171.51	74.32
5259	0.00	491.48	320.00	171.48	74.31
5260	0.00	490.46	350.00	140.46	60.86
5261	0.00	489.41	360.00	129.41	56.08
5262	0.00	592.88	310.00	282.88	122.58
5263	0.00	588.69	245.00	343.69	148.93
5264	0.00	581.50	186.00	395.50	171.39
5265	0.00	580.13	212.00	368.13	159.52
5266	0.00	578.67	219.00	359.67	155.86
5267	0.00	576.01	225.00	351.01	152.11
5268	0.00	573.50	230.00	343.50	148.85
5269	0.00	570.67	300.00	270.67	117.29
5270	0.00	570.67	300.00	270.67	117.29
5271	0.00	568.71	320.00	248.71	107.78
5272	0.00	568.71	320.00	248.71	107.78
5273	0.00	568.08	273.00	295.08	127.87
5274	0.00	634.93	319.00	315.93	136.90
5275	0.00	633.56	319.00	314.56	136.31
5276	0.00	611.30	235.00	376.30	163.07

5277	0.00	594.20	331.00	263.20	114.05
5278	0.00	564.04	340.00	224.04	97.08
5279	0.00	559.20	250.00	309.20	133.99
5280	0.00	553.65	286.00	267.65	115.98
5281	0.00	555.17	273.00	282.17	122.28
5282	0.00	527.65	310.00	217.65	94.32
5283	0.00	519.53	323.00	196.53	85.16
5284	0.00	516.36	320.00	196.36	85.09
5285	0.00	515.88	300.00	215.88	93.55
5286	0.00	506.59	300.00	206.59	89.52
5287	0.00	516.62	320.00	196.62	85.20
5288	0.00	629.91	340.00	289.91	125.63
5289	0.00	629.62	300.00	329.62	142.83
5290	0.00	625.30	282.00	343.30	148.76
5291	0.00	595.73	210.00	385.73	167.15
5292	0.00	562.29	200.00	362.29	156.99
5293	0.00	548.11	300.00	248.11	107.51
5294	0.00	531.90	250.00	281.90	122.16
5295	0.00	525.02	190.00	335.02	145.17
5296	0.00	628.05	340.00	288.05	124.82
5297	0.00	627.37	340.00	287.37	124.53
5298	0.00	624.97	340.00	284.97	123.49
5299	0.00	598.99	390.00	208.99	90.56
5300	0.00	510.00	437.00	73.00	31.63
5301	0.00	505.27	457.00	48.27	20.92
5302	0.00	505.25	360.00	145.25	62.94
5303	0.00	505.25	350.00	155.25	67.28
5304	0.00	494.40	397.00	97.40	42.21
5305	0.00	475.38	260.00	215.38	93.33
5306	0.00	472.44	265.00	207.44	89.89
5307	0.00	467.65	240.00	227.65	98.65
5308	0.00	466.06	220.00	246.06	106.63
5309	0.00	465.54	200.00	265.54	115.07
5310	0.00	465.40	210.00	255.40	110.67
5311	0.00	465.60	230.00	235.60	102.09
5312	0.00	474.60	280.00	194.60	84.33
5313	0.00	472.45	248.00	224.45	97.26
5314	0.00	461.53	241.00	220.53	95.56
5315	0.00	447.38	211.00	236.38	102.43
5316	0.00	445.09	205.00	240.09	104.04
5317	0.00	444.62	200.00	244.62	106.00
5318	0.00	443.96	200.00	243.96	105.72
5319	0.00	444.70	210.00	234.70	101.70
5320	0.00	443.19	200.00	243.19	105.38
5321	0.00	517.18	323.00	194.18	84.15
5322	0.00	443.10	210.00	233.10	101.01
5323	0.00	443.07	220.00	223.07	96.66
5324	0.00	443.07	220.00	223.07	96.66
5325	0.00	463.32	215.00	248.32	107.60
5326	0.00	508.80	365.00	143.80	62.31
5327	0.00	460.75	240.00	220.75	95.66
5328	0.00	453.98	270.00	183.98	79.72
5329	0.00	452.96	252.00	200.96	87.08
5330	0.00	452.89	271.00	181.89	78.82
5331	0.00	450.68	300.00	150.68	65.29
5332	0.00	449.48	185.00	264.48	114.61
5333	0.00	449.39	207.00	242.39	105.04
5334	0.00	506.88	310.00	196.88	85.31
5335	0.00	375.62	320.00	55.62	24.10
5336	0.00	450.07	240.00	210.07	91.03
5337	0.00	447.39	230.00	217.39	94.20
5338	0.00	444.32	216.00	228.32	98.94
5339	0.00	445.79	220.00	225.79	97.84
5340	0.00	445.76	230.00	215.76	93.50
5341	0.00	433.73	197.00	236.73	102.58
5342	0.00	423.87	179.00	244.87	106.11
5343	0.00	421.05	180.00	241.05	104.46
5344	0.00	422.63	180.00	242.63	105.14
5345	0.00	421.11	180.00	241.11	104.48
5346	0.00	421.06	180.00	241.06	104.46
5347	0.00	419.76	190.00	229.76	99.56

5348	0.00	419.30	180.00	239.30	103.70
5349	0.00	410.95	190.00	220.95	95.75
5350	0.00	417.96	180.00	237.96	103.12
5351	0.00	408.33	210.00	198.33	85.94
5352	0.00	405.42	210.00	195.42	84.68
5353	0.00	400.78	230.00	170.78	74.00
5354	0.00	393.67	220.00	173.67	75.26
5355	0.00	393.66	215.00	178.66	77.42
5356	0.00	391.73	230.00	161.73	70.08
5357	0.00	390.59	220.00	170.59	73.92
5358	0.00	390.42	220.00	170.42	73.85
5359	0.00	389.45	200.00	189.45	82.10
5360	0.00	383.98	210.00	173.98	75.39
5361	0.00	384.20	210.00	174.20	75.49
5362	0.00	384.27	210.00	174.27	75.52
5363	0.00	383.99	200.00	183.99	79.73
5364	0.00	383.55	200.00	183.55	79.54
5365	0.00	383.51	190.00	193.51	83.86
5366	0.00	387.72	190.00	197.72	85.68
5367	0.00	387.85	190.00	197.85	85.74
5368	0.00	389.52	190.00	199.52	86.46
5369	0.00	389.96	190.00	199.96	86.65
5370	0.00	389.87	200.00	189.87	82.28
5371	0.00	394.40	190.00	204.40	88.57
5372	0.00	394.53	190.00	204.53	88.63
5373	0.00	399.08	190.00	209.08	90.60
5374	0.00	398.76	210.00	188.76	81.80
5375	0.00	384.18	210.00	174.18	75.48
5376	0.00	375.64	240.00	135.64	58.78
5377	0.00	374.71	214.00	160.71	69.64
5378	0.00	374.21	205.00	169.21	73.32
5379	0.00	374.00	190.00	184.00	79.73
5380	0.00	371.64	200.00	171.64	74.38
5381	0.00	371.44	210.00	161.44	69.96
5382	0.00	422.39	186.00	236.39	102.43
5383	0.00	422.08	190.00	232.08	100.57
5384	0.00	421.99	185.00	236.99	102.70
5385	0.00	421.91	185.00	236.91	102.66
5386	0.00	421.85	190.00	231.85	100.47
5387	0.00	421.91	185.00	236.91	102.66
5388	0.00	421.93	185.00	236.93	102.67
5389	0.00	422.15	185.00	237.15	102.76
5390	0.00	421.77	190.00	231.77	100.43
5391	0.00	668.37	270.00	398.37	172.63
5392	0.00	682.92	365.00	317.92	137.76
5393	0.00	688.81	350.00	338.81	146.82
5394	0.00	692.25	380.00	312.25	135.31
5395	0.00	399.79	350.00	49.79	21.58
5396	0.00	409.37	321.00	88.37	38.29
5397	0.00	488.73	210.00	278.73	120.78
5398	0.00	374.60	207.00	167.60	72.63
5399	0.00	384.10	205.00	179.10	77.61
5400	0.00	375.50	193.00	182.50	79.08
5401	0.00	360.17	187.00	173.17	75.04
5402	0.00	358.33	185.00	173.33	75.11
5403	0.00	356.82	185.00	171.82	74.45
5404	0.00	356.69	185.00	171.69	74.40
5405	0.00	356.68	185.00	171.68	74.39
5406	0.00	358.01	185.00	173.01	74.97
5407	0.00	357.20	185.00	172.20	74.62
5408	0.00	354.44	185.00	169.44	73.42
5409	0.00	392.79	205.00	187.79	81.38
5410	0.00	396.13	200.00	196.13	84.99
5411	0.00	396.05	202.00	194.05	84.09
5412	0.00	396.01	202.00	194.01	84.07
5413	0.00	395.91	190.00	205.91	89.23
5414	0.00	397.57	195.00	202.57	87.78
5415	0.00	400.56	185.00	215.56	93.41
5416	0.00	398.48	190.00	208.48	90.34
5417	0.00	400.34	185.00	215.34	93.31
5418	0.00	399.49	190.00	209.49	90.78

5419	0.00	399.25	190.00	209.25	90.68
5420	0.00	398.71	195.00	203.71	88.27
5421	0.00	398.18	190.00	208.18	90.21
5422	0.00	397.89	190.00	207.89	90.09
5423	0.00	397.68	190.00	207.68	89.99
5424	0.00	397.27	185.00	212.27	91.98
5425	0.00	397.25	185.00	212.25	91.98
5426	0.00	397.21	185.00	212.21	91.96
5427	0.00	396.19	185.00	211.19	91.51
5428	0.00	398.39	185.00	213.39	92.47
5429	0.00	397.30	185.00	212.30	92.00
5430	0.00	397.60	200.00	197.60	85.63
5431	0.00	397.61	200.00	197.61	85.63
5432	0.00	397.61	200.00	197.61	85.63
5433	0.00	397.20	185.00	212.20	91.95
5434	0.00	397.69	210.00	187.69	81.33
5435	0.00	397.67	210.00	187.67	81.32
5436	0.00	397.89	231.00	166.89	72.32
5437	0.00	397.89	200.00	197.89	85.75
5438	0.00	397.94	200.00	197.94	85.77
5439	0.00	397.90	231.00	166.90	72.32
5440	0.00	397.99	231.00	166.99	72.36
5441	0.00	397.99	231.00	166.99	72.36
5442	0.00	398.04	205.00	193.04	83.65
5443	0.00	398.15	210.00	188.15	81.53
5444	0.00	398.14	210.00	188.14	81.53
5445	0.00	398.03	205.00	193.03	83.65
5446	0.00	397.86	205.00	192.86	83.57
5447	0.00	398.29	210.00	188.29	81.59
5448	0.00	398.59	210.00	188.59	81.72
5449	0.00	398.76	210.00	188.76	81.80
5450	0.00	398.07	220.00	178.07	77.16
5451	0.00	398.94	205.00	193.94	84.04
5452	0.00	399.17	195.00	204.17	88.47
5453	0.00	399.25	195.00	204.25	88.51
5454	0.00	399.19	195.00	204.19	88.48
5455	0.00	399.11	195.00	204.11	88.45
5456	0.00	399.03	195.00	204.03	88.41
5457	0.00	398.81	195.00	203.81	88.32
5458	0.00	398.44	185.00	213.44	92.49
5459	0.00	399.18	195.00	204.18	88.48
5460	0.00	399.06	195.00	204.06	88.43
5461	0.00	398.68	210.00	188.68	81.76
5462	0.00	200.52	185.00	15.52	6.72
5463	0.00	216.46	190.00	26.46	11.47
5464	0.00	399.27	190.00	209.27	90.68
5465	0.00	399.18	185.00	214.18	92.81
5466	0.00	397.55	190.00	207.55	89.94
5467	0.00	397.56	190.00	207.56	89.94
5468	0.00	397.68	190.00	207.68	89.99
5469	0.00	397.92	195.00	202.92	87.93
5470	0.00	396.97	185.00	211.97	91.85
5471	0.00	395.05	185.00	210.05	91.02
5472	0.00	395.16	185.00	210.16	91.07
5473	0.00	394.89	185.00	209.89	90.95
5474	0.00	394.29	185.00	209.29	90.69
5475	0.00	394.90	190.00	204.90	88.79
5476	0.00	394.90	190.00	204.90	88.79
5477	0.00	394.29	185.00	209.29	90.69
5478	0.00	394.24	185.00	209.24	90.67
5479	0.00	393.88	185.00	208.88	90.51
5480	0.00	393.80	185.00	208.80	90.48
5481	0.00	394.20	185.00	209.20	90.65
5482	0.00	394.20	185.00	209.20	90.66
5483	0.00	394.20	185.00	209.20	90.66
5484	0.00	393.95	185.00	208.95	90.55
5485	0.00	393.94	185.00	208.94	90.54
5486	0.00	244.19	185.00	59.19	25.65
5487	0.00	297.15	185.00	112.15	48.60
5488	0.00	313.84	185.00	128.84	55.83
5489	0.00	289.02	185.00	104.02	45.08

5490	0.00	313.84	185.00	128.84	55.83
5491	0.00	314.20	185.00	129.20	55.99
5492	0.00	315.02	195.00	120.02	52.01
5493	0.00	314.87	195.00	119.87	51.94
5494	0.00	325.29	190.00	135.29	58.62
5495	0.00	325.29	190.00	135.29	58.62
5496	0.00	455.00	190.00	265.00	114.83
5497	0.00	394.65	190.00	204.65	88.68
5498	0.00	325.29	190.00	135.29	58.62
5499	0.00	384.34	260.00	124.34	53.88
5500	0.00	383.32	290.00	93.32	40.44
5501	0.00	381.69	250.00	131.69	57.07
5502	0.00	379.52	300.00	79.52	34.46
5503	0.00	559.45	280.00	279.45	121.10
5505	0.00	562.45	300.00	262.45	113.73
5506	0.00	562.50	300.00	262.50	113.75
5507	0.00	544.87	319.00	225.87	97.88
5508	0.00	520.44	208.00	312.44	135.39
5509	0.00	444.20	212.00	232.20	100.62
5510	0.00	436.73	175.00	261.73	113.41
5511	0.00	428.62	180.00	248.62	107.73
5512	0.00	423.50	190.00	233.50	101.19
5513	0.00	423.42	200.00	223.42	96.82
5514	0.00	429.64	180.00	249.64	108.18
5515	0.00	423.69	180.00	243.69	105.60
5516	0.00	384.84	240.00	144.84	62.77
5517	0.00	384.55	240.00	144.55	62.64
5518	0.00	376.11	281.00	95.11	41.22
5519	0.00	375.81	221.00	154.81	67.09
5520	0.00	375.74	220.00	155.74	67.49
5521	0.00	375.74	210.00	165.74	71.82
5522	0.00	375.74	220.00	155.74	67.49
5523	0.00	371.25	270.00	101.25	43.87
5524	0.00	360.09	230.00	130.09	56.37
5525	0.00	358.78	210.00	148.78	64.47
5526	0.00	358.77	210.00	148.77	64.47
5527	0.00	358.76	210.00	148.76	64.46
5528	0.00	358.53	210.00	148.53	64.36
5529	0.00	357.65	200.00	157.65	68.32
5530	0.00	353.60	210.00	143.60	62.23
5531	0.00	350.30	210.00	140.30	60.80
5532	0.00	349.05	210.00	139.05	60.26
5533	0.00	375.38	240.00	135.38	58.67
5534	0.00	375.38	240.00	135.38	58.66
5535	0.00	374.92	240.00	134.92	58.47
5536	0.00	373.62	250.00	123.62	53.57
5537	0.00	372.22	250.00	122.22	52.96
5538	0.00	372.74	250.00	122.74	53.19
5539	0.00	364.89	240.00	124.89	54.12
5540	0.00	352.51	200.00	152.51	66.09
5541	0.00	336.52	190.00	146.52	63.49
5542	0.00	314.71	190.00	124.71	54.04
5543	0.00	531.26	310.00	221.26	95.88
5544	0.00	523.51	315.00	208.51	90.35
5545	0.00	522.76	310.00	212.76	92.20
5546	0.00	518.43	315.00	203.43	88.15
5547	0.00	517.02	300.00	217.02	94.04
5548	0.00	516.97	300.00	216.97	94.02
5549	0.00	516.43	295.00	221.43	95.95
5550	0.00	514.86	295.00	219.86	95.27
5551	0.00	509.37	280.00	229.37	99.40
5552	0.00	509.37	280.00	229.37	99.39
5553	0.00	508.51	280.00	228.51	99.02
5554	0.00	505.11	225.00	280.11	121.38
5555	0.00	508.46	260.00	248.46	107.66
5556	0.00	508.24	270.00	238.24	103.24
5557	0.00	359.39	290.00	69.39	30.07
5558	0.00	359.35	290.00	69.35	30.05
5559	0.00	359.28	290.00	69.28	30.02
5560	0.00	359.28	290.00	69.28	30.02
5561	0.00	359.28	290.00	69.28	30.02

5562	0.00	359.15	290.00	69.15	29.96
5563	0.00	356.32	280.00	76.32	33.07
5564	0.00	356.30	280.00	76.30	33.06
5565	0.00	351.14	260.00	91.14	39.49
5566	0.00	351.13	260.00	91.13	39.49
5567	0.00	351.13	260.00	91.13	39.49
5568	0.00	351.12	260.00	91.12	39.49
5569	0.00	350.72	260.00	90.72	39.31
5570	0.00	466.83	264.00	202.83	87.89
5571	0.00	350.55	195.00	155.55	67.41
5572	0.00	351.85	260.00	91.85	39.80
5573	0.00	354.91	270.00	84.91	36.79
5574	0.00	354.53	260.00	94.53	40.96
5575	0.00	356.01	270.00	86.01	37.27
5576	0.00	355.90	270.00	85.90	37.23
5577	0.00	355.83	250.00	105.83	45.86
5578	0.00	518.46	269.00	249.46	108.10
5579	0.00	330.03	269.00	61.03	26.45
5580	0.00	361.10	250.00	111.10	48.14
5581	0.00	367.07	215.00	152.07	65.90
5582	0.00	370.56	190.00	180.56	78.24
5583	0.00	389.67	310.00	79.67	34.53
5584	0.00	389.91	310.00	79.91	34.63
5585	0.00	389.98	310.00	79.98	34.66
5586	0.00	389.82	318.00	71.82	31.12
5587	0.00	388.40	300.00	88.40	38.31
5588	0.00	386.98	300.00	86.98	37.69
5589	0.00	381.48	280.00	101.48	43.98
5590	0.00	380.25	280.00	100.25	43.44
5591	0.00	376.54	290.00	86.54	37.50
5592	0.00	374.99	212.00	162.99	70.63
5593	0.00	372.94	191.00	181.94	78.84
5594	0.00	367.09	216.00	151.09	65.47
5595	0.00	376.13	290.00	86.13	37.32
5596	0.00	375.90	290.00	85.90	37.22
5597	0.00	374.80	187.00	187.80	81.38
5598	0.00	373.50	230.00	143.50	62.19
5599	0.00	373.11	220.00	153.11	66.35
5600	0.00	372.84	210.00	162.84	70.56
5601	0.00	372.40	200.00	172.40	74.71
5602	0.00	397.26	190.00	207.26	89.81
5603	0.00	372.27	200.00	172.27	74.65
5604	0.00	371.92	190.00	181.92	78.83
5605	0.00	371.04	185.00	186.04	80.62
5606	0.00	370.99	200.00	170.99	74.10
5607	0.00	369.19	240.00	129.19	55.98
5608	0.00	368.82	248.00	120.82	52.36
5609	0.00	359.80	261.00	98.80	42.81
5610	0.00	422.04	195.00	227.04	98.38
5611	0.00	421.67	190.00	231.67	100.39
5612	0.00	368.79	240.00	128.79	55.81
5613	0.00	368.55	210.00	158.55	68.71
5614	0.00	199.37	190.00	9.37	4.06
5615	0.00	314.15	185.00	129.15	55.96
5616	0.00	313.99	185.00	128.99	55.90
5617	0.00	394.71	190.00	204.71	88.71
5618	0.00	558.79	260.00	298.79	129.48
5619	0.00	558.42	260.00	298.42	129.32
5620	0.00	558.52	290.00	268.52	116.36
5621	0.00	433.52	180.00	253.52	109.86
5622	0.00	428.06	180.00	248.06	107.49
5623	0.00	427.22	180.00	247.22	107.13
5624	0.00	425.75	180.00	245.75	106.49
5625	0.00	423.18	200.00	223.18	96.71
5626	0.00	369.56	225.00	144.56	62.64
5627	0.00	369.46	235.00	134.46	58.26
5628	0.00	369.40	235.00	134.40	58.24
5629	0.00	368.22	200.00	168.22	72.89
5630	0.00	369.34	225.00	144.34	62.55
5631	0.00	369.30	225.00	144.30	62.53
5632	0.00	369.29	225.00	144.29	62.53

5633	0.00	369.23	220.00	149.23	64.67
5634	0.00	368.55	210.00	158.55	68.70
5635	0.00	368.45	200.00	168.45	72.99
5636	0.00	369.18	210.00	159.18	68.98
5637	0.00	369.19	210.00	159.19	68.98
5638	0.00	369.25	215.00	154.25	66.84
5639	0.00	369.25	215.00	154.25	66.84
5640	0.00	369.25	215.00	154.25	66.84
5641	0.00	369.21	215.00	154.21	66.82
5642	0.00	369.10	210.00	159.10	68.94
5643	0.00	369.12	215.00	154.12	66.78
5644	0.00	369.03	240.00	129.03	55.91
5645	0.00	368.96	240.00	128.96	55.88
5646	0.00	368.97	240.00	128.97	55.89
5647	0.00	368.98	240.00	128.98	55.89
5648	0.00	368.89	230.00	138.89	60.19
5649	0.00	368.86	210.00	158.86	68.84
5650	0.00	368.71	200.00	168.71	73.11
5651	0.00	421.36	190.00	231.36	100.25
5652	0.00	421.23	190.00	231.23	100.20
5653	0.00	421.23	190.00	231.23	100.20
5654	0.00	421.21	190.00	231.21	100.19
5655	0.00	421.19	190.00	231.19	100.18
5656	0.00	420.96	185.00	235.96	102.25
5657	0.00	420.87	185.00	235.87	102.21
5658	0.00	420.22	190.00	230.22	99.76
5659	0.00	420.20	190.00	230.20	99.75
5660	0.00	422.78	195.00	227.78	98.70
5661	0.00	562.42	300.00	262.42	113.72
5662	0.00	347.53	280.00	67.53	29.26
5663	0.00	504.12	300.00	204.12	88.45
5664	0.00	504.12	310.00	194.12	84.12
5665	0.00	371.46	190.00	181.46	78.63
5666	0.00	374.98	230.00	144.98	62.82
5667	0.00	487.75	400.00	87.75	38.02
5668	0.00	625.00	560.00	65.00	28.17
7000	0.98(0.98)	580.86	430.00	150.86	65.37
7001	0.98(0.98)	581.23	410.00	171.23	74.20
7002	0.98(0.98)	582.99	380.00	202.99	87.96
7003	0.98(0.98)	583.79	410.00	173.79	75.31
7004	0.98(0.98)	626.20	400.00	226.20	98.02
7005	0.98(0.98)	624.89	530.00	94.89	41.12
7006	0.98(0.98)	624.85	540.00	84.85	36.77
7007	0.98(0.98)	650.56	445.00	205.56	89.08
7008	0.98(0.98)	489.69	400.00	89.69	38.87
7009	0.98(0.98)	568.56	300.00	268.56	116.38
7010	0.98(0.98)	566.90	390.00	176.90	76.66
7011	0.98(0.98)	566.13	280.00	286.13	123.99
7012	0.98(0.98)	562.52	310.00	252.52	109.42
7013	0.98(0.98)	508.96	365.00	143.96	62.38
7014	0.98(0.98)	489.37	360.00	129.37	56.06
7015	0.98(0.98)	510.69	380.00	130.69	56.63
7016	0.98(0.98)	506.67	320.00	186.67	80.89
7017	0.98(0.98)	507.36	340.00	167.36	72.52
7018	0.98(0.98)	510.27	370.00	140.27	60.78
7019	0.98(0.98)	509.60	360.00	149.60	64.83
7020	0.98(0.98)	509.19	360.00	149.19	64.65
7021	0.98(0.98)	508.84	360.00	148.84	64.50
7022	0.98(0.98)	508.02	320.00	188.02	81.48
7023	0.98(0.98)	505.68	310.00	195.68	84.80
7024	0.98(0.98)	507.34	305.00	202.34	87.68
7025	0.98(0.98)	507.16	310.00	197.16	85.44
7026	0.98(0.98)	506.87	360.00	146.87	63.64
7027	0.98(0.98)	506.27	350.00	156.27	67.72
7028	0.98(0.98)	481.78	290.00	191.78	83.10
7029	0.98(0.98)	477.87	260.00	217.87	94.41
7030	0.98(0.98)	476.93	270.00	206.93	89.67
7031	0.98(0.98)	473.38	220.00	253.38	109.80
7032	0.98(0.98)	471.78	214.00	257.78	111.70
7033	0.98(0.98)	462.65	202.00	260.65	112.95
7034	0.98(0.98)	479.03	330.00	149.03	64.58

7035	0.98(0.98)	371.30	345.00	26.30	11.40
7036	0.98(0.98)	530.82	326.00	204.82	88.75
7037	0.98(0.98)	495.14	310.00	185.14	80.23
7038	0.98(0.98)	496.84	300.00	196.84	85.30
7039	0.98(0.98)	543.34	300.00	243.34	105.45
7040	0.98(0.98)	582.22	320.00	262.22	113.63
7041	0.98(0.98)	602.14	290.00	312.14	135.26
7042	0.98(0.98)	585.51	290.00	295.51	128.06
7043	0.98(0.98)	590.33	425.00	165.33	71.64
7044	0.98(0.98)	497.75	470.00	27.75	12.02
7045	0.98(0.98)	479.71	275.00	204.71	88.71
7046	0.98(0.98)	446.53	215.00	231.53	100.33
7047	0.98(0.98)	446.74	215.00	231.74	100.42
7048	0.98(0.98)	446.46	210.00	236.46	102.47
7049	0.98(0.98)	445.81	210.00	235.81	102.18
7050	0.98(0.98)	443.58	210.00	233.58	101.22
7051	0.98(0.98)	443.29	225.00	218.29	94.59
7052	0.98(0.98)	463.26	215.00	248.26	107.58
7053	0.98(0.98)	463.22	215.00	248.22	107.56
7054	0.98(0.98)	454.31	260.00	194.31	84.20
7055	0.98(0.98)	453.73	270.00	183.73	79.62
7056	0.98(0.98)	392.27	190.00	202.27	87.65
7057	0.98(0.98)	421.75	185.00	236.75	102.59
7058	0.98(0.98)	421.89	185.00	236.89	102.65
7059	0.98(0.98)	421.91	185.00	236.91	102.66
7060	0.98(0.98)	421.53	185.00	236.53	102.50
7061	0.98(0.98)	421.41	185.00	236.41	102.44
7062	0.98(0.98)	421.36	185.00	236.36	102.42
7063	0.98(0.98)	397.88	200.00	197.88	85.75
7064	0.98(0.98)	398.30	220.00	178.30	77.26
7065	0.98(0.98)	398.29	220.00	178.29	77.26
7067	0.98(0.98)	397.22	185.00	212.22	91.96
7070	0.98(0.98)	373.76	200.00	173.76	75.30
7071	0.98(0.98)	373.71	220.00	153.71	66.61
7072	0.98(0.98)	664.25	380.00	284.25	123.17
7073	0.98(0.98)	451.97	230.00	221.97	96.19
7074	0.98(0.98)	508.20	260.00	248.20	107.56
7412	0.98(0.98)	509.95	370.00	139.95	60.65
8001	0.98(0.98)	509.31	360.00	149.31	64.70
8002	0.98(0.98)	517.02	310.00	207.02	89.71
8003	0.98(0.98)	530.86	290.00	240.86	104.37
8004	0.98(0.98)	530.85	290.00	240.85	104.37
8005	0.98(0.98)	506.94	360.00	146.94	63.67
8006	0.98(0.98)	507.64	300.00	207.64	89.98
8007	0.98(0.98)	509.52	290.00	219.52	95.12
8008	0.98(0.98)	491.52	290.00	201.52	87.33
8009	0.98(0.98)	389.43	210.00	179.43	77.75
8010	0.98(0.98)	382.06	190.00	192.06	83.23
8011	0.98(0.98)	379.33	190.00	189.33	82.04
8012	0.98(0.98)	385.94	210.00	175.94	76.24
8013	0.98(0.98)	385.94	210.00	175.94	76.24
8014	0.98(0.98)	396.69	200.00	196.69	85.23
8016	0.98(0.98)	356.68	185.00	171.68	74.39
8017	0.98(0.98)	397.66	185.00	212.66	92.15
8018	0.98(0.98)	368.87	220.00	148.87	64.51
8019	0.98(0.98)	398.22	220.00	178.22	77.23
8020	0.98(0.98)	397.64	200.00	197.64	85.64
8021	0.98(0.98)	397.61	200.00	197.61	85.63
8022	0.98(0.98)	379.52	298.00	81.52	35.32
8023	0.98(0.98)	397.94	200.00	197.94	85.77
8024	0.98(0.98)	488.80	360.00	128.80	55.81
8025	0.98(0.98)	374.16	200.00	174.16	75.47
8027	0.98(0.98)	397.60	200.00	197.60	85.63
8028	0.98(0.98)	396.95	185.00	211.95	91.85
8029	0.98(0.98)	397.54	190.00	207.54	89.93
8030	0.98(0.98)	397.54	190.00	207.54	89.94
8031	0.98(0.98)	397.50	190.00	207.50	89.92
8032	0.98(0.98)	564.03	300.00	264.03	114.41
8034	0.98(0.98)	397.54	190.00	207.54	89.93
8035	0.98(0.98)	397.86	195.00	202.86	87.91

8036		0.98 (0.98)	397.50	190.00	207.50	89.92
8037		0.98 (0.98)	459.62	260.00	199.62	86.50
8038		0.98 (0.98)	459.73	260.00	199.73	86.55
8039		0.98 (0.98)	472.37	290.00	182.37	79.03
8040		0.98 (0.98)	395.90	185.00	210.90	91.39
8041		0.98 (0.98)	395.86	185.00	210.86	91.37
8042		0.98 (0.98)	395.87	185.00	210.87	91.38
8043		0.98 (0.98)	562.13	330.00	232.13	100.59
8044		0.98 (0.98)	397.60	200.00	197.60	85.63
8045		0.98 (0.98)	353.87	185.00	168.87	73.18
8046		0.98 (0.98)	518.31	315.00	203.31	88.10
8047		0.98 (0.98)	508.73	390.00	118.73	51.45
8048		0.98 (0.98)	461.40	240.00	221.40	95.94
8049		0.98 (0.98)	397.51	200.00	197.51	85.59
8050		0.98 (0.98)	444.78	280.00	164.78	71.40
8051		0.98 (0.98)	646.97	448.00	198.97	86.22
8052		0.98 (0.98)	443.07	220.00	223.07	96.66
8053		0.98 (0.98)	398.73	205.00	193.73	83.95
8054		0.98 (0.98)	369.43	235.00	134.43	58.25
8055		0.98 (0.98)	368.21	190.00	178.21	77.23
8056		0.98 (0.98)	368.22	190.00	178.22	77.23
8057		0.98 (0.98)	368.20	190.00	178.20	77.22
8058		0.98 (0.98)	368.20	190.00	178.20	77.22
8059		0.98 (0.98)	450.07	240.00	210.07	91.03
8060		0.98 (0.98)	627.13	470.00	157.13	68.09
8061		0.98 (0.98)	445.60	220.00	225.60	97.76
8062		0.98 (0.98)	372.16	190.00	182.16	78.94
8063		0.98 (0.98)	397.30	185.00	212.30	91.99
8064		0.98 (0.98)	506.69	320.00	186.69	80.90
8065		0.98 (0.98)	398.08	220.00	178.08	77.17
8066		0.98 (0.98)	531.83	310.00	221.83	96.12
8067		0.98 (0.98)	627.14	460.00	167.14	72.43
8068		0.98 (0.98)	380.02	190.00	190.02	82.34
8069		0.98 (0.98)	507.35	350.00	157.35	68.18
8070		0.98 (0.98)	421.77	180.00	241.77	104.77
8071		0.98 (0.98)	421.96	185.00	236.96	102.68
8072		0.98 (0.98)	490.03	330.00	160.03	69.35
8073		0.98 (0.98)	546.42	350.00	196.42	85.12
8074		0.98 (0.98)	490.02	370.00	120.02	52.01
8075		0.98 (0.98)	567.88	330.00	237.88	103.08
9000		14.70 (0.98)	314.85	220.00	94.85	41.10
9001		24.50 (0.98)	313.82	220.00	93.82	40.65
9002		17.64 (0.98)	313.81	190.00	123.81	53.65
9003		109.76 (0.98)	313.26	190.00	123.26	53.41
9004		57.82 (0.98)	368.81	248.00	120.81	52.35
9005		26.46 (0.98)	427.98	180.00	247.98	107.46
9006		25.48 (0.98)	425.67	180.00	245.67	106.46
9007		162.68 (0.98)	370.85	200.00	170.85	74.03
184 - Pump-1		0.00	339.56	320.00	19.56	8.47
184 - Pump-2		0.00	339.51	320.00	19.51	8.45
Bron- Pump-		0.00	489.32	390.00	99.32	43.04
BronPump-2		0.00	489.32	390.00	99.32	43.04
Bronson-ES		----	511.00	390.00	121.00	52.43
CrossRoad-		0.00	369.93	350.00	19.93	8.64
CrossRoad-		0.00	369.93	350.00	19.93	8.64
CrossRoad-		----	370.00	350.00	20.00	8.67
FGN-AA	Mn<MdlD-455/	----	200.00	190.00	10.00	4.33
FGN-BB	Mn<83-D-455/	----	200.00	190.00	10.00	4.33
FGN-LL	184---D-500/	----	500.00	320.00	180.00	78.00
FGN-TT	Mn<CtyD-455/	----	455.00	190.00	265.00	114.83
Hemphill-T		----	420.00	280.00	140.00	60.67
Hwy83	CLM---S-380/	----	390.00	310.00	80.00	34.67
Hwy83-1		0.00	564.24	300.00	264.24	114.51
Hwy83-2		0.00	563.26	300.00	263.26	114.08
Hwy83-Plan		----	370.00	300.00	70.00	30.33
J-1		0.00	384.13	210.00	174.13	75.45
J-11		0.00	638.06	400.00	238.06	103.16
J-18		0.00	489.32	390.00	99.32	43.04
J-21		0.00	328.01	269.00	59.01	25.57
J-22		0.00	562.53	300.00	262.53	113.76
J-24		0.00	401.26	185.00	216.26	93.71

J-29	0.00	571.62	325.00	246.62	106.87
J-3	0.00	510.20	390.00	120.20	52.09
J-34	0.00	370.87	300.00	70.87	30.71
J-37	0.00	562.55	300.00	262.55	113.77
J-44	0.00	199.93	190.00	9.93	4.30
J-45	0.00	547.60	350.00	197.60	85.63
J-53	0.00	394.82	190.00	204.82	88.76
J-63	0.00	648.45	320.00	328.45	142.33
J-69	0.00	490.86	340.00	150.86	65.37
J-8	0.00	410.43			
JimNethery	----	396.00	380.00	16.00	6.93
JimNethery	0.00	692.45	380.00	312.45	135.39
JimNethery	0.00	692.45	380.00	312.45	135.39
King-1	0.00	327.79	269.00	58.79	25.48
King-2	0.00	327.66	269.00	58.66	25.42
McMahan	----	410.00	400.00	10.00	4.33
McMahan-1	0.00	409.99	400.00	9.99	4.33
McMahan-2	0.00	409.99	400.00	9.99	4.33
Midlake	----	200.00	185.00	15.00	6.50
Midlake-1	0.00	401.47	185.00	216.47	93.80
Midlake-2	0.00	401.46	185.00	216.46	93.80
Payne-1	0.00	672.89	400.00	272.89	118.25
Payne-2	0.00	487.73	400.00	87.73	38.01
Pipe-Plant	RdH-S/D-510/	510.00	440.00	70.00	30.33
Plant-A5	----	625.00	560.00	65.00	28.17
PRV-1	0.00	672.87	400.00	272.87	118.25
Pump-1	0.00	401.45	185.00	216.45	93.79
R-1	----	360.00	261.00	99.00	42.90
R-2	----	347.00	261.00	86.00	37.27
T-1	----	340.00	320.00	20.00	8.67
Tebo	----	348.00	325.00	23.00	9.97
Tebo-1	0.00	571.62	325.00	246.62	106.87
Tebo-2	0.00	571.62	325.00	246.62	106.87
WTHwy83-1	0.00	199.92	190.00	9.92	4.30
WTHyw83-2	0.00	199.93	190.00	9.93	4.30
WTMidlake-	0.00	199.27	190.00	9.27	4.02
WTMidlake-	0.00	199.29	190.00	9.29	4.02
184-Pump-1	0.00	648.89	320.00	328.89	142.52
184-Pump-2	0.00	648.86	320.00	328.86	142.51
Bron-Pump-	0.00	511.00	390.00	121.00	52.43
BronPump-2	0.00	511.00	390.00	121.00	52.43
CrossRoad-	0.00	547.67	350.00	197.67	85.66
CrossRoad-	0.00	547.67	350.00	197.67	85.66
Hwy83-1	0.00	368.88	300.00	68.88	29.85
Hwy83-2	0.00	368.97	300.00	68.97	29.89
JimNethery	0.00	395.80	380.00	15.80	6.85
JimNethery	0.00	395.80	380.00	15.80	6.85
King-1	0.00	518.68	269.00	249.68	108.19
King-2	0.00	518.78	269.00	249.78	108.24
McMahan-1	0.00	638.07	400.00	238.07	103.16
McMahan-2	0.00	638.07	400.00	238.07	103.16
Midlake-1	0.00	199.80	185.00	14.80	6.42
Midlake-2	0.00	199.80	185.00	14.80	6.42
Payne-1	0.00	487.72	400.00	87.72	38.01
Payne-2	0.00	672.90	400.00	272.90	118.26
PRV-1	----	672.87	400.00	272.87	118.25
Pump-1	0.00	199.82	185.00	14.82	6.42
Tebo-1	0.00	347.99	325.00	22.99	9.96
Tebo-2	0.00	347.99	325.00	22.99	9.96
WTHwy83-1	0.00	394.83	190.00	204.83	88.76
WTHyw83-2	0.00	394.83	190.00	204.83	88.76
WTMidlake-	0.00	325.43	190.00	135.43	58.69
WTMidlake-	0.00	325.39	190.00	135.39	58.67

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
5391	172.63	WTMidlake-1	4.02
5264	171.39	WTMidlake-2	4.02
5291	167.15	5614	4.06
5276	163.07	WTHwy83-1	4.30
5265	159.52	WTHyw83-2	4.30
5061	159.22	J-44	4.30
5292	156.99	McMahan-1	4.33
2011	156.03	McMahan-2	4.33
5266	155.86	5035	4.33
2417	153.96	5036	4.33
2251	153.20	FGN-AA	4.33
1329	153.20	FGN-BB	4.33
2445	153.18	McMahan	4.33
2391	153.15	5034	5.56
2703	153.11	Midlake-2	6.42
2420	153.10	Midlake-1	6.42
1897	153.09	Pump-1	6.42
230	152.62	Midlake	6.50
5267	152.11	5462	6.72
2141	151.45	JimNethery-	6.85

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
1340	163.95	1837	0.00
P-2902	39.90	2085	0.00
P-2954	39.90	248	0.00
P-2928	8.11	1262	0.00
2116	6.61	1656	0.00
P-2140	6.44	2498	0.01
P-2932	6.44	2503	0.01
2103	5.97	2537	0.01
2104	5.97	1995	0.01
2108	5.97	909	0.01
2112	5.97	1089	0.01
2102	5.96	1691	0.01
1950	5.94	1712	0.01
2101	5.94	2045	0.01
P-2925	5.94	1988	0.01
P-1949	5.79	2497	0.01
P-2933	5.79	1964	0.01
201	5.21	1774	0.01
202	5.18	1820	0.01
203	5.18	2752	0.02

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
1340	8000.01	1837	0.00
P-2954	583.94	248	0.00
P-2902	583.94	2085	0.00
P-2140	31.97	2498	0.00
P-2932	31.97	2503	0.00
P-2928	30.53	2537	0.00
2252	27.79	1262	0.00
2785	27.79	1656	0.00
2253	27.79	2497	0.00
P-1949	26.30	909	0.00
P-2933	26.30	1089	0.00
201	21.59	1691	0.00
207	21.40	1712	0.00

202	21.40	2045	0.00
203	21.40	1995	0.00
P-2915	21.40	1774	0.00
2116	20.93	366	0.00
1348	18.49	944	0.00
2103	17.30	1087	0.00
2104	17.30	1088	0.00

REGULATING VALVE REPORT

VALVE LABEL	VALVE TYPE	VALVE SETTING (psi or gpm)	VALVE STATUS	UPSTREAM PRESSURE (psi)	DOWNSTREAM PRESSURE (psi)	THROUGH FLOW (gpm)
PRV-1	PSV	20.00	WIDE OPEN	118.25	118.25	11.76

SUMMARY OF INFLOWS AND OUTFLOWS

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
- (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
Bronson-EST	158.76	
CrossRoad-T	-3.11	
FGN-AA	582.72	Mn<MdlD-455/
FGN-BB	123.18	Mn<83-D-455/
FGN-LL	14449.44	184---D-500/
FGN-TT	0.00	Mn<CtyD-455/
Hemphill-Ta	-10933.26	
Hwy83	509.11	CLM---S-380/
Hwy83-Plant	366.82	
JimNethery	359.75	
McMahan	138.96	
Midlake	190.65	
Pipe-Plant-	23.86	RdH-S/D-510/
Plant-A5	-53.07	
R-1	41.16	
R-2	-136.71	
T-1	-3116.26	
Tebo	-141.23	

NET SYSTEM INFLOW = 16944.39
NET SYSTEM OUTFLOW = -14383.65
NET SYSTEM DEMAND = 2560.71

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
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*
*   Copyrighted by KPFS 1998                          *
*   Version 1.200 - 01/26/2000                       *
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INPUT DATA FILENAME ----- C:\JENNIF-1\GM_2050.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\GM_2050.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\GM_2050.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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R E G U L A T I N G V A L V E D A T A

VALVE LABEL	VALVE TYPE	VALVE SETTING (ft or gpm)
PRV-1	PSV	446.15

P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E NAME	NODE NAMES #1	NODE NAMES #2	LENGTH (ft)	DIAMETER (in)	ROUGHNESS COEFF.	MINOR LOSS COEFF.
1	2675	133	1060.00	2.00	150.0000	0.00
2	133	5001	953.00	2.00	150.0000	0.00
3	5001	357	1334.00	2.00	150.0000	0.00
4	357	2123	983.00	2.00	150.0000	0.00
5	5002	5003	1158.00	3.00	150.0000	0.00
6	5003	1794	480.00	2.00	150.0000	0.00
7	5003	71	272.00	3.00	150.0000	0.00
8	71	74	530.00	3.00	150.0000	0.00
9	74	682	150.00	3.00	150.0000	0.00
10	682	70	220.00	3.00	150.0000	0.00
11	5011	1888	1588.00	2.00	150.0000	0.00
12	1888	5004	1675.00	2.50	150.0000	0.00
13	5004	365	997.00	2.50	150.0000	0.00
14	365	5005	484.00	2.50	150.0000	0.00
15	5005	5006	1255.00	1.00	150.0000	0.00
16	5005	5007	393.00	2.50	150.0000	0.00
17	5007	5008	3046.00	2.50	150.0000	0.00
18	5008	908	886.00	2.50	150.0000	0.00
19	908	5009	1010.00	2.50	150.0000	0.00
20	5009	631	1344.00	2.50	150.0000	0.00
21	631	630	376.00	2.50	150.0000	0.00
22	5002	979	98.00	4.00	150.0000	0.00
23	979	611	590.00	4.00	150.0000	0.00
24	611	5010	140.00	4.00	150.0000	0.00

25	70	5011	634.00	3.00	150.0000	0.00
26	5010	7000	68.00	4.00	150.0000	0.00
27	7000	7001	1747.00	4.00	150.0000	0.00
28	7001	1321	894.00	4.00	150.0000	0.00
29	5012	111	1174.00	2.00	150.0000	0.00
30	111	880	131.00	2.00	150.0000	0.00
31	5012	552	1109.00	4.00	150.0000	0.00
32	62	174	83.00	2.00	150.0000	0.00
33	174	938	584.00	2.00	150.0000	0.00
34	938	629	47.00	2.00	150.0000	0.00
35	552	150	1016.00	4.00	150.0000	0.00
36	150	7002	1469.00	4.00	150.0000	0.00
37	7002	5013	1461.00	4.00	150.0000	0.00
38	5013	5014	4729.00	4.00	150.0000	0.00
39	5014	5015	2397.00	4.00	150.0000	0.00
40	5015	1693	107.00	4.00	150.0000	0.00
41	1693	345	1022.00	2.00	150.0000	0.00
42	345	1138	1034.00	2.00	150.0000	0.00
43	5015	848	1291.00	4.00	150.0000	0.00
44	848	5016	638.00	4.00	150.0000	0.00
45	5016	409	645.00	4.00	150.0000	0.00
46	409	397	550.00	4.00	150.0000	0.00
47	397	5017	301.00	3.00	150.0000	0.00
48	5017	5018	1203.00	3.00	150.0000	0.00
49	5018	588	839.00	3.00	150.0000	0.00
50	588	5019	2347.00	3.00	150.0000	0.00
51	5019	5020	866.00	3.00	150.0000	0.00
52	5020	5022	274.00	2.00	150.0000	0.00
53	5020	5021	464.00	3.00	150.0000	0.00
54	5022	976	286.00	1.00	150.0000	0.00
55	5022	444	1785.00	2.00	150.0000	0.00
56	444	1968	446.00	1.00	150.0000	0.00
57	5021	5024	410.00	3.00	150.0000	0.00
58	5024	975	25.00	2.00	150.0000	0.00
59	641	2249	2015.00	2.00	150.0000	0.00
60	5024	1981	294.00	2.00	150.0000	0.00
61	5013	5023	484.00	6.00	150.0000	0.00
62	5023	7003	160.00	2.00	150.0000	0.00
63	7003	1912	325.00	2.00	150.0000	0.00
64	1912	1464	1152.00	2.00	150.0000	0.00
65	1464	5025	3141.00	2.00	150.0000	0.00
66	5025	5026	1155.00	2.00	150.0000	0.00
67	5023	966	2369.00	6.00	150.0000	0.00
68	966	1352	976.00	6.00	150.0000	0.00
69	1352	5027	1154.00	6.00	150.0000	0.00
70	5027	5030	2178.00	6.00	150.0000	0.00
71	5027	5031	3518.00	6.00	150.0000	0.00
72	5031	842	437.00	6.00	150.0000	0.00
73	842	847	2056.00	6.00	150.0000	0.00
74	847	5028	3910.00	6.00	150.0000	0.00
75	5028	5029	126.00	6.00	150.0000	0.00
76	5311	2205	25.00	2.00	150.0000	0.00
77	5028	2112	3133.00	2.00	150.0000	0.00
78	2112	1397	2115.00	2.00	150.0000	0.00
79	1397	2147	1218.00	2.00	150.0000	0.00
80	2147	7004	2823.00	2.00	150.0000	0.00
81	7004	5032	1363.00	2.50	150.0000	0.00
82	5032	792	705.00	2.00	150.0000	0.00
83	5032	1884	652.00	2.00	150.0000	0.00
84	5029	549	717.00	2.00	150.0000	0.00
85	549	1276	35.00	2.00	150.0000	0.00
86	5029	1293	718.00	6.00	150.0000	0.00
89	5035	5036	2456.00	2.00	150.0000	0.00
90	5034	801	1178.00	4.00	150.0000	0.00
91	801	434	240.00	4.00	150.0000	0.00
92	434	5037	1377.00	4.00	150.0000	0.00
93	5037	4	4096.00	2.00	150.0000	0.00
94	4	5038	927.00	2.00	150.0000	0.00
95	5038	1409	218.00	2.00	150.0000	0.00
96	5038	474	743.00	2.00	150.0000	0.00
97	5037	5039	386.00	4.00	150.0000	0.00

98	5039	1107	561.00	2.00	150.0000	0.00
99	5039	5570	2191.00	4.00	150.0000	0.00
100	1467	808	1492.00	4.00	150.0000	0.00
101	5041	5042	3024.00	4.00	150.0000	0.00
102	5042	2009	1924.00	4.00	150.0000	0.00
103	2009	2381	196.00	4.00	150.0000	0.00
104	2381	870	3332.00	4.00	150.0000	0.00
105	870	5043	42.00	4.00	150.0000	0.00
106	5043	506	513.00	6.00	150.0000	0.00
107	5043	468	686.00	6.00	150.0000	0.00
108	506	5044	714.00	6.00	150.0000	0.00
109	5044	5054	400.00	2.00	150.0000	0.00
110	5055	2067	25.00	2.00	150.0000	0.00
111	5055	8060	25.00	2.00	150.0000	0.00
112	5044	5045	185.00	6.00	150.0000	0.00
113	5045	443	391.00	6.00	150.0000	0.00
114	443	2550	292.00	6.00	150.0000	0.00
115	2550	977	509.00	6.00	150.0000	0.00
116	977	5046	2952.00	6.00	150.0000	0.00
117	5046	1126	498.00	2.00	150.0000	0.00
118	1126	1646	100.00	2.00	150.0000	0.00
119	5046	5047	1988.00	6.00	150.0000	0.00
120	5668	2539	1193.00	6.00	150.0000	0.00
121	2539	917	372.00	6.00	150.0000	0.00
122	917	2480	188.00	6.00	150.0000	0.00
123	2480	1134	2458.00	6.00	150.0000	0.00
124	1134	404	1907.00	6.00	150.0000	0.00
125	404	7005	488.00	3.00	150.0000	0.00
126	7005	7006	473.00	3.00	150.0000	0.00
127	5045	194	170.00	2.00	150.0000	0.00
128	194	1434	523.00	2.00	150.0000	0.00
129	1434	715	900.00	2.00	150.0000	0.00
131	7006	2025	743.00	2.50	150.0000	0.00
132	2025	1885	1116.00	2.50	150.0000	0.00
133	1885	1013	829.00	2.50	150.0000	0.00
134	1013	1142	232.00	2.50	150.0000	0.00
135	5054	5055	120.00	2.00	150.0000	0.00
136	5055	2040	20.00	2.00	150.0000	0.00
137	5054	8067	492.00	2.00	150.0000	0.00
138	468	2721	110.00	6.00	150.0000	0.00
139	2721	2646	176.00	6.00	150.0000	0.00
140	2646	1809	209.00	6.00	150.0000	0.00
141	1809	2337	1114.00	6.00	150.0000	0.00
142	2337	795	414.00	6.00	150.0000	0.00
143	795	2691	16.00	6.00	150.0000	0.00
144	2691	8051	2115.00	6.00	150.0000	0.00
145	8051	2043	72.00	6.00	150.0000	0.00
146	2043	2016	95.00	6.00	150.0000	0.00
147	2016	1227	409.00	6.00	150.0000	0.00
148	1227	5056	303.00	6.00	150.0000	0.00
149	7007	472	20.00	2.00	150.0000	0.00
150	5056	7007	125.00	2.00	150.0000	0.00
151	5056	2344	268.00	6.00	150.0000	0.00
152	2344	2029	2784.00	6.00	150.0000	0.00
153	2029	2554	1554.00	6.00	150.0000	0.00
154	2554	2203	340.00	6.00	150.0000	0.00
155	2203	1562	220.00	6.00	150.0000	0.00
156	1562	5048	93.00	6.00	150.0000	0.00
158	5667	1439	261.00	6.00	150.0000	0.00
159	1439	5057	123.00	6.00	150.0000	0.00
160	5057	7008	25.00	6.00	150.0000	0.00
161	7008	595	582.00	6.00	150.0000	0.00
162	595	956	175.00	6.00	150.0000	0.00
163	956	5049	2072.00	6.00	150.0000	0.00
164	5049	1900	465.00	6.00	150.0000	0.00
165	1900	796	1828.00	6.00	150.0000	0.00
166	796	5050	400.00	6.00	150.0000	0.00
167	5050	5051	507.00	2.50	150.0000	0.00
168	5051	5052	880.00	2.50	150.0000	0.00
169	5052	5053	1008.00	2.50	150.0000	0.00
170	5053	2699	786.00	2.50	150.0000	0.00

171	5058	208	22.00	2.50	150.0000	0.00
172	5058	646	105.00	2.50	150.0000	0.00
174	5059	1942	614.00	2.00	150.0000	0.00
175	1942	2061	32.00	2.00	150.0000	0.00
176	5059	5060	616.00	2.50	150.0000	0.00
177	5060	781	1347.00	1.00	150.0000	0.00
178	781	2017	63.00	1.00	150.0000	0.00
179	5060	1006	213.00	2.50	150.0000	0.00
180	1006	5061	4482.00	2.50	150.0000	0.00
181	5061	5062	823.00	2.50	150.0000	0.00
182	5062	495	306.00	1.00	150.0000	0.00
183	5062	5063	5335.00	2.50	150.0000	0.00
184	5063	7072	375.00	1.00	150.0000	0.00
185	7072	2258	250.00	1.00	150.0000	0.00
186	5063	1067	1764.00	2.50	150.0000	0.00
187	1067	1231	1945.00	2.50	150.0000	0.00
188	1231	1005	410.00	2.50	150.0000	0.00
189	1005	1578	297.00	2.50	150.0000	0.00
190	5030	423	279.00	2.00	150.0000	0.00
191	423	5066	1809.00	2.00	150.0000	0.00
192	5066	2131	450.00	1.00	150.0000	0.00
193	5066	5067	299.00	2.00	150.0000	0.00
194	5030	5068	242.00	6.00	150.0000	0.00
195	5068	2185	216.00	6.00	150.0000	0.00
196	2185	741	416.00	6.00	150.0000	0.00
197	741	414	431.00	6.00	150.0000	0.00
198	414	881	286.00	6.00	150.0000	0.00
199	881	849	1100.00	6.00	150.0000	0.00
200	849	347	387.00	6.00	150.0000	0.00
201	347	1472	2341.00	4.00	150.0000	0.00
202	1472	5069	110.00	4.00	150.0000	0.00
203	5069	5065	4650.00	4.00	150.0000	0.00
204	5064	5065	1229.00	3.00	150.0000	0.00
205	5068	5076	7499.00	2.00	150.0000	0.00
206	5065	5070	1374.00	2.00	150.0000	0.00
207	5065	5071	830.00	4.00	150.0000	0.00
210	1232	5072	140.00	6.00	150.0000	0.00
211	5072	5073	110.00	2.00	150.0000	0.00
212	5073	2078	581.00	2.00	150.0000	0.00
213	5073	1353	751.00	2.00	150.0000	0.00
214	1353	2200	235.00	2.00	150.0000	0.00
215	5072	5074	1134.00	6.00	150.0000	0.00
216	5074	1490	1210.00	6.00	150.0000	0.00
217	1490	1716	39.00	6.00	150.0000	0.00
218	1716	517	538.00	6.00	150.0000	0.00
219	517	2623	1303.00	6.00	150.0000	0.00
220	2623	5075	1239.00	6.00	150.0000	0.00
221	5075	5077	110.00	2.00	150.0000	0.00
222	5077	144	631.00	2.00	150.0000	0.00
223	144	466	202.00	2.00	150.0000	0.00
224	5075	558	758.00	6.00	150.0000	0.00
225	558	130	1212.00	6.00	150.0000	0.00
226	130	1049	232.00	6.00	150.0000	0.00
227	1049	5078	436.00	6.00	150.0000	0.00
228	5078	1605	229.00	4.00	150.0000	0.00
229	1605	2256	465.00	4.00	150.0000	0.00
230	5078	5079	733.00	6.00	150.0000	0.00
231	5079	5080	1764.00	4.00	150.0000	0.00
232	5080	5081	2288.00	4.00	150.0000	0.00
233	2256	5082	1652.00	4.00	150.0000	0.00
234	5083	5084	568.00	4.00	150.0000	0.00
235	5083	5085	228.00	2.00	150.0000	0.00
236	5085	2210	110.00	2.00	150.0000	0.00
237	2210	1883	734.00	1.00	150.0000	0.00
238	5085	356	1632.00	2.00	150.0000	0.00
239	356	7009	500.00	2.00	150.0000	0.00
240	7009	1953	716.00	2.00	150.0000	0.00
241	5082	5086	425.00	4.00	150.0000	0.00
242	5082	1953	22.00	2.00	150.0000	0.00
243	5079	5083	1848.00	4.00	150.0000	0.00
244	5086	5088	1330.00	1.00	150.0000	0.00

245	5086	394	787.00	4.00	150.0000	0.00
246	394	5087	46.00	4.00	150.0000	0.00
247	5087	677	110.00	4.00	150.0000	0.00
248	5087	1050	480.00	4.00	150.0000	0.00
249	1050	5089	320.00	4.00	150.0000	0.00
250	677	2152	1817.00	2.00	150.0000	0.00
251	5081	2028	1041.00	4.00	150.0000	0.00
252	2028	1930	55.00	4.00	150.0000	0.00
253	1930	8075	726.00	4.00	150.0000	0.00
254	8075	2325	745.00	4.00	150.0000	0.00
255	2325	107	310.00	4.00	150.0000	0.00
256	107	106	203.00	4.00	150.0000	0.00
257	106	5090	1790.00	4.00	150.0000	0.00
258	5090	745	75.00	2.00	150.0000	0.00
259	745	1056	650.00	2.00	150.0000	0.00
260	1056	2031	980.00	2.00	150.0000	0.00
261	2031	1955	801.00	2.00	150.0000	0.00
262	5090	326	1890.00	3.00	150.0000	0.00
263	326	363	4136.00	3.00	150.0000	0.00
264	363	2532	1138.00	3.00	150.0000	0.00
265	2532	7010	856.00	3.00	150.0000	0.00
266	7010	5091	733.00	3.00	150.0000	0.00
267	5091	2316	1089.00	2.00	150.0000	0.00
268	5091	5094	1701.00	3.00	150.0000	0.00
269	5094	724	32.00	3.00	150.0000	0.00
270	724	5092	1683.00	2.50	150.0000	0.00
271	5092	5093	1566.00	2.50	150.0000	0.00
272	5084	1284	1587.00	4.00	150.0000	0.00
273	1284	5095	795.00	4.00	150.0000	0.00
274	5095	408	132.00	2.50	150.0000	0.00
275	408	5096	1014.00	2.50	150.0000	0.00
276	5096	27	830.00	2.50	150.0000	0.00
277	5096	5097	3356.00	2.00	150.0000	0.00
278	5097	342	114.00	2.00	150.0000	0.00
279	342	1675	590.00	1.00	150.0000	0.00
280	1675	8032	38.00	1.00	150.0000	0.00
281	5095	1484	549.00	3.00	150.0000	0.00
282	1484	5098	501.00	3.00	150.0000	0.00
283	5098	7011	110.00	2.00	150.0000	0.00
284	7011	1386	185.00	2.00	150.0000	0.00
285	5098	5099	1657.00	3.00	150.0000	0.00
286	5099	751	1700.00	3.00	150.0000	0.00
287	5100	5101	2568.00	2.50	150.0000	0.00
288	5101	8043	929.00	2.00	150.0000	0.00
289	8043	1036	710.00	2.00	150.0000	0.00
290	1036	2314	170.00	2.00	150.0000	0.00
291	751	5100	2240.00	3.00	150.0000	0.00
292	5100	7012	129.00	3.00	150.0000	0.00
293	7012	2094	527.00	3.00	150.0000	0.00
294	2094	2355	238.00	3.00	150.0000	0.00
295	2355	5102	448.00	3.00	150.0000	0.00
296	5102	5103	989.00	3.00	150.0000	0.00
297	1899	669	5993.00	2.00	150.0000	0.00
298	669	582	1624.00	2.00	150.0000	0.00
299	5103	1480	798.00	2.50	150.0000	0.00
300	5103	5104	82.00	2.00	150.0000	0.00
301	5104	1899	46.00	2.00	150.0000	0.00
302	1480	5105	775.00	2.50	150.0000	0.00
303	5105	5106	1409.00	2.50	150.0000	0.00
304	5106	2322	960.00	2.00	150.0000	0.00
305	2322	1035	120.00	2.00	150.0000	0.00
306	1035	670	263.00	2.00	150.0000	0.00
307	670	2395	312.00	2.00	150.0000	0.00
308-XX	5104	2659	4412.00	1.50	150.0000	0.00
309	2659	1966	28.00	1.50	150.0000	0.00
310	1966	5108	2873.00	1.50	150.0000	0.00
311	5108	712	3186.00	2.00	150.0000	0.00
312	712	1254	102.00	2.00	150.0000	0.00
313	1254	1422	2010.00	2.00	150.0000	0.00
314	1422	2272	95.00	2.00	150.0000	0.00
315	2272	1166	129.00	4.00	150.0000	0.00

316	1166	57	423.00	4.00	150.0000	0.00
317	57	2234	413.00	4.00	150.0000	0.00
318	2234	684	298.00	4.00	150.0000	0.00
319	684	5107	940.00	4.00	150.0000	0.00
320	5107	1324	67.00	2.00	150.0000	0.00
321	1324	2252	236.00	2.00	150.0000	0.00
322	2252	8047	34.00	2.00	150.0000	0.00
323	8047	872	132.00	2.00	150.0000	0.00
324	872	1193	216.00	2.00	150.0000	0.00
325	1193	2443	651.00	2.00	150.0000	0.00
326	7013	1365	128.00	1.50	150.0000	0.00
327	5107	5109	50.00	4.00	150.0000	0.00
328	5109	5110	60.00	4.00	150.0000	0.00
329	5109	5111	305.00	4.00	150.0000	0.00
330	5111	1237	225.00	3.00	150.0000	0.00
331	1237	1179	220.00	3.00	150.0000	0.00
332	5110	5326	162.00	1.50	150.0000	0.00
333	5112	7014	285.00	6.00	150.0000	0.00
334	5111	1621	312.00	4.00	150.0000	0.00
335	1621	426	186.00	4.00	150.0000	0.00
336	426	8001	161.00	4.00	150.0000	0.00
337	8001	5113	171.00	4.00	150.0000	0.00
338	7014	5114	737.00	6.00	150.0000	0.00
339-XX	5113	5114	20.00	4.00	150.0000	0.00
340	5114	5115	50.00	4.00	150.0000	0.00
341	5115	2546	30.00	4.00	150.0000	0.00
342	5115	1534	70.00	4.00	150.0000	0.00
343	1534	1060	60.00	4.00	150.0000	0.00
344	5112	5261	285.00	6.00	150.0000	0.00
345	5110	7013	10.00	1.50	150.0000	0.00
346	5113	2529	269.00	4.00	150.0000	0.00
347	2529	1255	166.00	4.00	150.0000	0.00
348	1255	5116	123.00	4.00	150.0000	0.00
349	5116	612	45.00	2.00	150.0000	0.00
350	612	1410	271.00	2.00	150.0000	0.00
351	5116	5117	80.00	4.00	150.0000	0.00
352	5117	569	227.00	4.00	150.0000	0.00
353	5117	1253	149.00	1.00	150.0000	0.00
354	1253	1905	90.00	1.00	150.0000	0.00
355	1905	2672	230.00	1.00	150.0000	0.00
356	2672	680	720.00	1.00	150.0000	0.00
357	5116	676	184.00	4.00	150.0000	0.00
358	676	379	47.00	4.00	150.0000	0.00
359	379	694	539.00	4.00	150.0000	0.00
360	694	832	143.00	4.00	150.0000	0.00
361	832	5118	90.00	4.00	150.0000	0.00
362	5118	2715	212.00	4.00	150.0000	0.00
363	5114	J-18	1911.00	6.00	150.0000	0.00
364	5118	7015	122.00	4.00	150.0000	0.00
365	7015	5119	227.00	4.00	150.0000	0.00
366	5119	5121	137.00	6.00	150.0000	0.00
368	5121	435	359.00	4.00	150.0000	0.00
369	435	2072	182.00	4.00	150.0000	0.00
370	5119	1403	174.00	6.00	150.0000	0.00
371	1403	1987	81.00	6.00	150.0000	0.00
372	1987	1986	26.00	6.00	150.0000	0.00
374	2062	J-3	101.00	1.50	150.0000	0.00
375	1369	7412	20.00	1.50	150.0000	0.00
376	7412	1835	93.00	1.50	150.0000	0.00
377	1835	5122	110.00	1.50	150.0000	0.00
378	5122	1937	67.00	1.50	150.0000	0.00
379	1937	1829	142.00	1.50	150.0000	0.00
380	1829	1973	317.00	1.50	150.0000	0.00
381	1973	2006	100.00	1.50	150.0000	0.00
382	2715	2628	153.00	4.00	150.0000	0.00
383	2628	378	81.00	4.00	150.0000	0.00
384	378	1635	116.00	4.00	150.0000	0.00
385	1635	187	103.00	4.00	150.0000	0.00
386	5132	583	130.00	1.50	150.0000	0.00
387	583	838	66.00	1.50	150.0000	0.00
388	5132	5131	396.00	6.00	150.0000	0.00

389	5131	5130	30.00	6.00	150.0000	0.00
390	5130	5129	155.00	4.00	150.0000	0.00
391	5129	971	134.00	4.00	150.0000	0.00
392	971	7018	151.00	4.00	150.0000	0.00
393	5129	5128	293.00	4.00	150.0000	0.00
394	5128	2414	108.00	1.50	150.0000	0.00
395	2414	928	226.00	1.50	150.0000	0.00
396	928	1413	102.00	1.50	150.0000	0.00
397	5128	1521	108.00	2.00	150.0000	0.00
398	1521	5125	238.00	2.00	150.0000	0.00
399	5125	1140	207.00	2.00	150.0000	0.00
400	1140	5124	55.00	2.00	150.0000	0.00
401	5124	5123	114.00	2.00	150.0000	0.00
402	5123	455	87.00	2.00	150.0000	0.00
403	5123	2232	20.00	2.00	150.0000	0.00
404	455	2453	302.00	2.00	150.0000	0.00
405	2453	696	31.00	2.00	150.0000	0.00
406	696	8064	258.00	2.00	150.0000	0.00
407	8064	7016	204.00	2.00	150.0000	0.00
408	7016	2276	170.00	2.00	150.0000	0.00
409	5124	952	171.00	1.50	150.0000	0.00
410	952	2345	244.00	1.50	150.0000	0.00
411	5125	573	151.00	2.00	150.0000	0.00
412	573	575	35.00	2.00	150.0000	0.00
413	575	5126	86.00	2.00	150.0000	0.00
414	5126	2399	35.00	2.00	150.0000	0.00
415	2399	2269	143.00	2.00	150.0000	0.00
416	5126	5127	65.00	2.00	150.0000	0.00
417	5127	1571	89.00	2.00	150.0000	0.00
418	1571	7017	55.00	2.00	150.0000	0.00
419	5127	2710	210.00	2.00	150.0000	0.00
420	2710	8069	64.00	2.00	150.0000	0.00
421	5119	5120	10.00	4.00	150.0000	0.00
422	1986	5132	81.00	6.00	150.0000	0.00
423	5131	7019	201.00	2.00	150.0000	0.00
424	7019	7020	130.00	2.00	150.0000	0.00
425	7020	7021	127.00	2.00	150.0000	0.00
426	7021	2356	29.00	2.00	150.0000	0.00
427	2356	5133	156.00	2.00	150.0000	0.00
428	5133	1431	128.00	1.50	150.0000	0.00
429	1431	465	93.00	1.50	150.0000	0.00
430	465	5134	33.00	1.50	150.0000	0.00
431	5134	1811	55.00	1.50	150.0000	0.00
432	1811	1435	189.00	1.50	150.0000	0.00
433	1435	2118	61.00	1.50	150.0000	0.00
434	5133	530	314.00	1.50	150.0000	0.00
435	530	1089	204.00	1.50	150.0000	0.00
436	1089	5135	304.00	1.50	150.0000	0.00
437	5135	579	705.00	1.50	150.0000	0.00
438	579	2694	20.00	1.50	150.0000	0.00
439	5130	2436	159.00	4.00	150.0000	0.00
440	2436	1351	302.00	4.00	150.0000	0.00
441	1351	2580	186.00	4.00	150.0000	0.00
442	2580	7022	322.00	4.00	150.0000	0.00
443	7022	1273	207.00	4.00	150.0000	0.00
444	1273	5136	87.00	4.00	150.0000	0.00
445	5136	5137	443.00	4.00	150.0000	0.00
446-XX	5137	5138	23.00	4.00	150.0000	0.00
447	5138	1251	206.00	4.00	150.0000	0.00
448	1251	2679	99.00	4.00	150.0000	0.00
449	5138	189	95.00	2.00	150.0000	0.00
450	189	398	91.00	2.00	150.0000	0.00
451	398	1378	339.00	2.00	150.0000	0.00
452	5137	5139	307.00	2.00	150.0000	0.00
453	5139	5140	86.00	2.00	150.0000	0.00
454	5140	1418	156.00	2.00	150.0000	0.00
455	5140	554	60.00	2.00	150.0000	0.00
456	5140	452	35.00	2.00	150.0000	0.00
457	5140	2223	102.00	2.00	150.0000	0.00
458	2223	1256	361.00	1.50	150.0000	0.00
459	1256	2217	271.00	1.50	150.0000	0.00

460	1378	1564	258.00	2.00	150.0000	0.00
461	1564	2521	1358.00	2.00	150.0000	0.00
462	2521	914	603.00	2.00	150.0000	0.00
463	1714	723	24.00	2.00	150.0000	0.00
464	914	1714	888.00	2.00	150.0000	0.00
465	8072	5141	1405.00	1.50	150.0000	0.00
466	5141	941	375.00	1.50	150.0000	0.00
467	941	1079	31.00	1.50	150.0000	0.00
468	723	8072	347.00	2.00	150.0000	0.00
469	1079	5152	798.00	1.50	150.0000	0.00
470	1529	1756	64.00	1.50	150.0000	0.00
471	5152	1069	191.00	1.50	150.0000	0.00
472	1069	5153	1098.00	1.50	150.0000	0.00
473	2324	2115	10.00	1.50	150.0000	0.00
474	5153	965	249.00	1.50	150.0000	0.00
475	452	7023	388.00	2.00	150.0000	0.00
476	7023	5143	389.00	2.00	150.0000	0.00
477	5143	1202	31.00	2.00	150.0000	0.00
478	1202	5144	71.00	2.00	150.0000	0.00
479	5144	5151	70.00	2.00	150.0000	0.00
480	1285	1414	80.00	2.00	150.0000	0.00
481	5144	2052	153.00	2.00	150.0000	0.00
482	2052	2724	271.00	2.00	150.0000	0.00
483	5136	5145	20.00	4.00	150.0000	0.00
484	5145	7024	238.00	2.00	150.0000	0.00
485	7024	2706	353.00	2.00	150.0000	0.00
486	5145	1258	213.00	4.00	150.0000	0.00
487	1258	1595	215.00	4.00	150.0000	0.00
488	5149	5146	330.00	4.00	150.0000	0.00
489	5148	7026	425.00	4.00	150.0000	0.00
490	7026	1717	255.00	4.00	150.0000	0.00
491	1717	5147	217.00	4.00	150.0000	0.00
492	5147	2341	451.00	2.00	150.0000	0.00
493	2341	2459	705.00	1.50	150.0000	0.00
494	2459	1367	171.00	1.50	150.0000	0.00
495	1367	1320	815.00	1.50	150.0000	0.00
496	5147	7027	86.00	1.50	150.0000	0.00
497	7027	2244	28.00	1.50	150.0000	0.00
498	2244	673	418.00	1.50	150.0000	0.00
499	673	1553	120.00	1.50	150.0000	0.00
500	412	1553	52.00	1.50	150.0000	0.00
501	412	454	127.00	1.50	150.0000	0.00
502	454	439	571.00	1.50	150.0000	0.00
503	439	1090	299.00	1.50	150.0000	0.00
504	5146	5148	554.00	4.00	150.0000	0.00
505	1595	5149	74.00	4.00	150.0000	0.00
506	7025	581	256.00	4.00	150.0000	0.00
507	5149	7025	86.00	4.00	150.0000	0.00
508	7025	1130	824.00	4.00	150.0000	0.00
509	1130	2633	80.00	4.00	150.0000	0.00
510	5148	1576	25.00	4.00	150.0000	0.00
511	5148	5150	86.00	4.00	150.0000	0.00
512	5150	873	25.00	4.00	150.0000	0.00
513	5150	750	30.00	4.00	150.0000	0.00
514	5150	8005	220.00	4.00	150.0000	0.00
515	5147	1002	25.00	4.00	150.0000	0.00
516	5138	2444	334.00	2.00	150.0000	0.00
517	5334	1436	165.00	2.00	150.0000	0.00
518	5151	1285	15.00	2.00	150.0000	0.00
519	5152	1529	471.00	1.50	150.0000	0.00
521	5153	2324	130.00	1.50	150.0000	0.00
522	1294	2427	464.00	2.00	150.0000	0.00
523	2427	1940	739.00	2.00	150.0000	0.00
524	1940	732	1522.00	2.00	150.0000	0.00
525	732	5142	1660.00	2.00	150.0000	0.00
526	5142	5154	867.00	2.00	150.0000	0.00
527	5154	5155	1361.00	2.50	150.0000	0.00
528	5155	155	786.00	2.00	150.0000	0.00
529	5155	748	1039.00	2.50	150.0000	0.00
530	748	5156	927.00	2.50	150.0000	0.00
531	5156	1488	1742.00	3.00	150.0000	0.00

532	1488	5157	512.00	3.00	150.0000	0.00
533	5157	1391	92.00	3.00	150.0000	0.00
534	1391	1275	1586.00	3.00	150.0000	0.00
535	1275	1153	2341.00	3.00	150.0000	0.00
536	1153	1957	2563.00	3.00	150.0000	0.00
537	1957	206	329.00	3.00	150.0000	0.00
538	206	1317	453.00	3.00	150.0000	0.00
539	1317	2222	597.00	3.00	150.0000	0.00
540	2222	853	50.00	3.00	150.0000	0.00
541	853	5158	2475.00	3.00	150.0000	0.00
542	5158	5159	231.00	2.00	150.0000	0.00
543	5159	5160	1303.00	2.00	150.0000	0.00
544	5158	747	487.00	3.00	150.0000	0.00
545	747	1244	604.00	3.00	150.0000	0.00
546	1244	5161	1625.00	3.00	150.0000	0.00
547	5161	5162	3578.00	3.00	150.0000	0.00
548	5162	697	1399.00	2.00	150.0000	0.00
549	697	618	1586.00	2.00	150.0000	0.00
550	618	1651	100.00	2.00	150.0000	0.00
551	5162	1380	403.00	4.00	150.0000	0.00
552	1380	185	1655.00	4.00	150.0000	0.00
553	185	1323	901.00	4.00	150.0000	0.00
554	1323	5163	1442.00	4.00	150.0000	0.00
555	5163	5164	1889.00	4.00	150.0000	0.00
556	5164	890	1012.00	4.00	150.0000	0.00
557	890	5165	4013.00	4.00	150.0000	0.00
558	5165	5166	80.00	4.00	150.0000	0.00
559	5166	5167	293.00	2.00	150.0000	0.00
560	5166	5168	596.00	2.00	150.0000	0.00
561	5166	5169	859.00	6.00	150.0000	0.00
562	5169	5170	790.00	6.00	150.0000	0.00
563	5170	984	3012.00	6.00	150.0000	0.00
564	984	620	270.00	6.00	150.0000	0.00
565	620	5171	105.00	6.00	150.0000	0.00
566	5165	1387	2172.00	4.00	150.0000	0.00
567	1387	1388	90.00	4.00	150.0000	0.00
568	1388	1689	350.00	4.00	150.0000	0.00
569	1689	5172	140.00	4.00	150.0000	0.00
570	5172	112	130.00	1.00	150.0000	0.00
571	112	1681	146.00	1.00	150.0000	0.00
572	1681	1818	95.00	1.00	150.0000	0.00
573	5173	1959	50.00	4.00	150.0000	0.00
574	5174	5175	1239.00	2.00	150.0000	0.00
575	5174	672	363.00	4.00	150.0000	0.00
576	672	2253	252.00	4.00	150.0000	0.00
577	5173	5174	80.00	4.00	150.0000	0.00
578	5172	5173	2412.00	4.00	150.0000	0.00
579	2253	5176	179.00	4.00	150.0000	0.00
580	5176	1427	378.00	2.00	150.0000	0.00
581	1427	1408	131.00	2.00	150.0000	0.00
582	1408	5177	491.00	2.00	150.0000	0.00
583	5177	656	25.00	2.00	150.0000	0.00
584	5177	651	55.00	2.00	150.0000	0.00
585	5177	1383	160.00	2.00	150.0000	0.00
586	1383	1504	70.00	2.00	150.0000	0.00
587	1504	1382	1350.00	2.00	150.0000	0.00
588	1382	2247	70.00	2.00	150.0000	0.00
589	2247	7028	1779.00	2.00	150.0000	0.00
590	7028	1189	40.00	2.00	150.0000	0.00
591	5176	5179	32.00	4.00	150.0000	0.00
592	5179	5178	1426.00	2.00	150.0000	0.00
593	5179	728	356.00	4.00	150.0000	0.00
594	728	5180	633.00	4.00	150.0000	0.00
595	5180	5181	439.00	2.00	150.0000	0.00
596	5180	5182	396.00	4.00	150.0000	0.00
597	5182	267	1400.00	2.00	150.0000	0.00
598	267	1906	57.00	2.00	150.0000	0.00
599	1906	2190	80.00	2.00	150.0000	0.00
600	5182	5183	384.00	4.00	150.0000	0.00
601	5183	5184	30.00	4.00	150.0000	0.00
602	5184	1745	50.00	2.00	150.0000	0.00

603	1745	406	391.00	1.00	150.0000	0.00
604	406	2228	549.00	1.00	150.0000	0.00
605	5183	81	137.00	2.00	150.0000	0.00
606	5184	5185	776.00	4.00	150.0000	0.00
607	5185	5186	11.00	2.50	150.0000	0.00
608	5185	7029	147.00	2.00	150.0000	0.00
609	7029	933	86.00	2.00	150.0000	0.00
610	933	5187	46.00	2.00	150.0000	0.00
611	5187	1201	80.00	2.00	150.0000	0.00
612	1201	94	456.00	2.00	150.0000	0.00
613	5187	742	501.00	2.00	150.0000	0.00
614	5186	2578	391.00	2.50	150.0000	0.00
615	5185	5188	893.00	4.00	150.0000	0.00
616	5188	7030	80.00	4.00	150.0000	0.00
617	7030	294	385.00	1.00	150.0000	0.00
618	2578	1364	965.00	2.50	150.0000	0.00
619	1364	5189	787.00	2.50	150.0000	0.00
620	5188	502	1170.00	4.00	150.0000	0.00
621	1205	688	604.00	2.00	150.0000	0.00
622	688	5190	336.00	2.00	150.0000	0.00
623	5189	1684	125.00	2.00	150.0000	0.00
624	1684	1685	100.00	2.00	150.0000	0.00
625	1685	234	40.00	2.00	150.0000	0.00
626	234	565	280.00	2.00	150.0000	0.00
627	5189	1205	54.00	2.00	150.0000	0.00
628	502	7031	2258.00	4.00	150.0000	0.00
629	7031	1744	187.00	4.00	150.0000	0.00
630	1744	1774	804.00	4.00	150.0000	0.00
631	1774	2091	722.00	4.00	150.0000	0.00
632	5192	5191	155.00	4.00	150.0000	0.00
633	5191	2091	50.00	4.00	150.0000	0.00
634	5191	7032	80.00	2.00	150.0000	0.00
635	5192	5193	1550.00	4.00	150.0000	0.00
636	5193	1752	80.00	2.00	150.0000	0.00
637	1752	2426	74.00	2.00	150.0000	0.00
638	2426	1751	61.00	2.00	150.0000	0.00
639	5193	5194	9361.00	4.00	150.0000	0.00
640	5194	5195	71.00	3.00	150.0000	0.00
641	5194	2490	1961.00	2.50	150.0000	0.00
642	2490	1747	173.00	2.50	150.0000	0.00
643	1747	5196	994.00	2.00	150.0000	0.00
644	5196	5197	81.00	2.00	150.0000	0.00
645	5197	1291	119.00	2.00	150.0000	0.00
646	5197	7033	122.00	2.00	150.0000	0.00
647	5196	1741	447.00	2.00	150.0000	0.00
648	1741	653	1513.00	2.00	150.0000	0.00
649	653	1755	588.00	2.00	150.0000	0.00
650	5195	2688	558.00	3.00	150.0000	0.00
651	2688	1749	632.00	3.00	150.0000	0.00
652	1749	1748	1083.00	3.00	150.0000	0.00
653	1748	5198	2213.00	3.00	150.0000	0.00
654	5198	1740	447.00	3.00	150.0000	0.00
655	1740	1742	600.00	3.00	150.0000	0.00
656	1742	5199	394.00	3.00	150.0000	0.00
657	5199	1753	79.00	2.00	150.0000	0.00
658	5200	1762	778.00	2.50	150.0000	0.00
659	1762	1763	30.00	2.50	150.0000	0.00
660	1763	1760	209.00	2.50	150.0000	0.00
661	1760	701	109.00	2.50	150.0000	0.00
662	701	1750	893.00	2.50	150.0000	0.00
663	5199	5200	30.00	2.00	150.0000	0.00
664	5200	1761	316.00	3.00	150.0000	0.00
665	1761	5201	962.00	3.00	150.0000	0.00
666	5201	5202	293.00	2.00	150.0000	0.00
667	5202	1758	83.00	2.00	150.0000	0.00
668	1758	1780	196.00	2.00	150.0000	0.00
669	1780	5203	100.00	2.00	150.0000	0.00
670	5203	1759	20.00	2.00	150.0000	0.00
671	5203	2305	368.00	2.00	150.0000	0.00
672	2305	5204	105.00	2.00	150.0000	0.00
673	1759	923	231.00	2.00	150.0000	0.00

674	923	1243	32.00	2.00	150.0000	0.00
675	1243	2551	163.00	2.00	150.0000	0.00
676	2551	134	181.00	2.00	150.0000	0.00
677	134	272	106.00	2.00	150.0000	0.00
678	272	5204	69.00	2.00	150.0000	0.00
679	5204	5205	304.00	2.00	150.0000	0.00
680	5205	109	157.00	2.00	150.0000	0.00
681	109	615	169.00	2.00	150.0000	0.00
682	5202	2127	389.00	2.00	150.0000	0.00
683	2127	482	182.00	2.00	150.0000	0.00
684	5190	310	1056.00	2.00	150.0000	0.00
685	310	2089	634.00	2.00	150.0000	0.00
686	2089	1964	497.00	2.00	150.0000	0.00
687	1964	312	318.00	2.00	150.0000	0.00
688	312	309	521.00	2.00	150.0000	0.00
689	1060	5207	944.00	4.00	150.0000	0.00
690	5207	237	776.00	2.00	150.0000	0.00
691	237	1939	130.00	2.00	150.0000	0.00
692	1939	369	320.00	2.00	150.0000	0.00
693	975	641	931.00	2.00	150.0000	0.00
694	5033	1293	115.00	6.00	150.0000	0.00
695	5033	J-11	343.00	6.00	150.0000	0.00
697	5207	8024	369.00	4.00	150.0000	0.00
698	8024	1228	10.00	4.00	150.0000	0.00
699	1228	2219	781.00	2.00	150.0000	0.00
700	2219	5209	170.00	2.00	150.0000	0.00
701	5209	691	210.00	1.50	150.0000	0.00
702	691	717	252.00	1.50	150.0000	0.00
703	717	1971	100.00	1.50	150.0000	0.00
704	1971	1084	410.00	1.50	150.0000	0.00
705	1084	2680	102.00	1.50	150.0000	0.00
706	2680	1815	97.00	1.50	150.0000	0.00
707	5210	5211	50.00	1.50	150.0000	0.00
708	5209	5210	749.00	2.00	150.0000	0.00
709	5210	807	60.00	1.50	150.0000	0.00
710	5211	374	280.00	1.00	150.0000	0.00
711	5211	831	60.00	1.50	150.0000	0.00
712	807	830	220.00	1.50	150.0000	0.00
713	831	1913	220.00	1.50	150.0000	0.00
714	830	7034	867.00	1.50	150.0000	0.00
715	1913	1805	840.00	1.50	150.0000	0.00
716	7034	1703	404.00	1.50	150.0000	0.00
717	1703	7	100.00	3.00	150.0000	0.00
718	1805	1065	740.00	1.00	150.0000	0.00
719	1065	1555	160.00	1.00	150.0000	0.00
720-XX	1555	5212	1479.00	2.00	150.0000	0.00
721	5214	5213	616.00	2.00	150.0000	0.00
722	5213	5212	30.00	2.00	150.0000	0.00
723	5212	2289	80.00	2.00	150.0000	0.00
724	5213	2592	174.00	2.00	150.0000	0.00
725	2592	271	550.00	2.00	150.0000	0.00
726	271	5215	2668.00	2.00	150.0000	0.00
727	5215	260	2013.00	2.00	150.0000	0.00
728	5215	1831	2303.00	2.50	150.0000	0.00
729	260	1992	15.00	2.00	150.0000	0.00
730	1992	1837	229.00	2.00	150.0000	0.00
731	1831	1647	758.00	2.50	150.0000	0.00
732	1647	1645	101.00	2.50	150.0000	0.00
733	1645	1922	139.00	2.50	150.0000	0.00
734	1922	2696	911.00	2.50	150.0000	0.00
735	2696	5216	462.00	2.50	150.0000	0.00
736	5216	2063	249.00	2.00	150.0000	0.00
737	2063	679	284.00	2.00	150.0000	0.00
738	679	2520	407.00	2.00	150.0000	0.00
739	2520	1355	237.00	2.00	150.0000	0.00
740	1355	2400	380.00	2.00	150.0000	0.00
741	5216	2412	524.00	3.00	150.0000	0.00
742	2412	543	62.00	3.00	150.0000	0.00
743	543	2403	363.00	3.00	150.0000	0.00
744	5217	348	30.00	2.00	150.0000	0.00
745	348	305	73.00	2.00	150.0000	0.00

746	305	1509	367.00	2.00	150.0000	0.00
747	1509	1009	812.00	2.00	150.0000	0.00
748	1009	996	107.00	2.00	150.0000	0.00
749	996	313	633.00	2.00	150.0000	0.00
750	313	1904	62.00	2.00	150.0000	0.00
751	1904	1557	705.00	2.00	150.0000	0.00
752	1557	537	249.00	2.00	150.0000	0.00
753	537	1544	597.00	2.00	150.0000	0.00
754	1544	2262	481.00	2.00	150.0000	0.00
755	2262	1908	133.00	2.00	150.0000	0.00
756	1908	1738	5.00	2.00	150.0000	0.00
757	1738	2121	50.00	2.00	150.0000	0.00
758	2121	396	897.00	2.00	150.0000	0.00
759	396	518	15.00	2.00	150.0000	0.00
760	518	1597	190.00	2.00	150.0000	0.00
761	2403	5217	45.00	3.00	150.0000	0.00
762	5217	5218	125.00	3.00	150.0000	0.00
765	7035	2229	114.00	6.00	150.0000	0.00
766	536	2229	240.00	6.00	150.0000	0.00
767	536	2290	951.00	6.00	150.0000	0.00
768	1461	2290	30.00	6.00	150.0000	0.00
769	1677	1461	120.00	6.00	150.0000	0.00
770	10	1677	202.00	6.00	150.0000	0.00
771	79	10	531.00	6.00	150.0000	0.00
772	1613	79	917.00	6.00	150.0000	0.00
773	2278	1613	657.00	6.00	150.0000	0.00
774	96	2278	71.00	6.00	150.0000	0.00
775	5219	96	407.00	6.00	150.0000	0.00
776	5219	5220	1323.00	2.00	150.0000	0.00
778	5221	55	239.00	6.00	150.0000	0.00
779	55	8073	110.00	6.00	150.0000	0.00
780	8073	1334	1282.00	6.00	150.0000	0.00
781	1334	450	360.00	6.00	150.0000	0.00
782	450	156	204.00	6.00	150.0000	0.00
783	156	1152	520.00	6.00	150.0000	0.00
784	1152	1713	584.00	6.00	150.0000	0.00
785	1713	218	520.00	6.00	150.0000	0.00
786	218	885	456.00	6.00	150.0000	0.00
787	885	2101	1970.00	6.00	150.0000	0.00
788	2101	7036	542.00	6.00	150.0000	0.00
789	7036	1411	1075.00	6.00	150.0000	0.00
790	1411	136	348.00	6.00	150.0000	0.00
791	136	1699	701.00	6.00	150.0000	0.00
792	1699	1206	25.00	6.00	150.0000	0.00
793	1206	1549	342.00	6.00	150.0000	0.00
794	1549	2109	3265.00	6.00	150.0000	0.00
795	2109	740	170.00	6.00	150.0000	0.00
796	740	8002	270.00	6.00	150.0000	0.00
797	8002	5222	381.00	6.00	150.0000	0.00
798	5222	1661	479.00	6.00	150.0000	0.00
799	1661	5223	25.00	6.00	150.0000	0.00
800	5223	5224	30.00	6.00	150.0000	0.00
801	5224	1163	60.00	6.00	150.0000	0.00
802	1163	377	56.00	6.00	150.0000	0.00
803	377	1938	562.00	6.00	150.0000	0.00
804	1938	5171	10.00	6.00	150.0000	0.00
805	5171	2343	297.00	4.00	150.0000	0.00
806	2343	1263	237.00	4.00	150.0000	0.00
807	5223	32	145.00	4.00	150.0000	0.00
808	32	5225	455.00	4.00	150.0000	0.00
809	5225	169	25.00	4.00	150.0000	0.00
810	5225	5226	30.00	4.00	150.0000	0.00
811	5226	1116	186.00	4.00	150.0000	0.00
812	5225	1098	261.00	2.00	150.0000	0.00
813	1116	1012	493.00	4.00	150.0000	0.00
814	1012	1120	270.00	4.00	150.0000	0.00
815	1122	1120	220.00	4.00	150.0000	0.00
816	1122	1896	372.00	4.00	150.0000	0.00
817	1896	1097	172.00	4.00	150.0000	0.00
818	5228	2712	84.00	4.00	150.0000	0.00
819	2641	2712	190.00	4.00	150.0000	0.00

820	2641	2522	145.00	4.00	150.0000	0.00
821	2522	678	243.00	4.00	150.0000	0.00
822	678	5227	88.00	4.00	150.0000	0.00
823	1097	5228	30.00	4.00	150.0000	0.00
824	5227	5229	110.00	4.00	150.0000	0.00
825	5227	1198	1037.00	2.00	150.0000	0.00
826	5229	327	1357.00	4.00	150.0000	0.00
827	5230	2408	1192.00	2.00	150.0000	0.00
828	2408	1338	274.00	2.00	150.0000	0.00
829	1338	2003	382.00	2.00	150.0000	0.00
830	2003	8007	180.00	2.00	150.0000	0.00
831	8006	5231	2766.00	4.00	150.0000	0.00
832	5231	749	1252.00	4.00	150.0000	0.00
833	749	1533	300.00	4.00	150.0000	0.00
834	1533	1295	50.00	4.00	150.0000	0.00
835	1295	5232	240.00	4.00	150.0000	0.00
836	5232	1299	109.00	2.50	150.0000	0.00
837	1299	1374	465.00	2.50	150.0000	0.00
838	1374	1577	480.00	2.50	150.0000	0.00
839	1577	1660	584.00	2.50	150.0000	0.00
840	1660	1662	954.00	2.50	150.0000	0.00
841	1662	5233	151.00	2.50	150.0000	0.00
842	5233	1838	242.00	2.00	150.0000	0.00
843	1838	1914	72.00	2.00	150.0000	0.00
844	1914	476	101.00	2.00	150.0000	0.00
845	476	2328	808.00	2.00	150.0000	0.00
846	2328	2317	181.00	2.00	150.0000	0.00
847	2317	2372	608.00	2.00	150.0000	0.00
848	2372	1322	2110.00	2.00	150.0000	0.00
849	5233	2602	369.00	2.00	150.0000	0.00
850	2602	36	302.00	2.00	150.0000	0.00
851	36	26	10.00	2.00	150.0000	0.00
852	26	8008	554.00	2.00	150.0000	0.00
853	8008	5234	2434.00	2.00	150.0000	0.00
854	5234	14	298.00	2.00	150.0000	0.00
855	14	1622	462.00	2.00	150.0000	0.00
856	5234	1624	518.00	2.00	150.0000	0.00
857	1624	1623	352.00	2.00	150.0000	0.00
858	5219	5235	3739.00	6.00	150.0000	0.00
859	5235	1277	904.00	2.00	150.0000	0.00
860	1277	5236	130.00	2.00	150.0000	0.00
861	5236	1700	380.00	1.00	150.0000	0.00
862	5236	773	414.00	2.00	150.0000	0.00
863	1192	5235	1463.00	6.00	150.0000	0.00
864	2479	1192	108.00	6.00	150.0000	0.00
865	1144	2479	523.00	6.00	150.0000	0.00
866	2259	1144	1559.00	6.00	150.0000	0.00
867	5237	2259	1478.00	6.00	150.0000	0.00
868	5237	1960	1569.00	2.00	150.0000	0.00
869	1960	1318	137.00	2.00	150.0000	0.00
870	1318	258	182.00	2.00	150.0000	0.00
871	258	800	111.00	2.00	150.0000	0.00
872	5237	2081	315.00	2.00	150.0000	0.00
873	2081	2454	317.00	2.00	150.0000	0.00
874	2454	616	80.00	2.00	150.0000	0.00
875	616	5238	518.00	2.00	150.0000	0.00
876	2387	5237	66.00	6.00	150.0000	0.00
877	5239	2387	2023.00	6.00	150.0000	0.00
878	1207	5239	747.00	6.00	150.0000	0.00
879	349	1207	1061.00	6.00	150.0000	0.00
880	1070	349	309.00	6.00	150.0000	0.00
881	5240	1070	124.00	6.00	150.0000	0.00
882	5240	763	5062.00	3.00	150.0000	0.00
883	8050	5240	198.00	6.00	150.0000	0.00
884	2166	8050	141.00	6.00	150.0000	0.00
885	1552	2166	682.00	6.00	150.0000	0.00
886	2485	1552	449.00	6.00	150.0000	0.00
887	2485	2460	180.00	6.00	150.0000	0.00
888	2460	5241	1298.00	6.00	150.0000	0.00
889	5241	1312	72.00	6.00	150.0000	0.00
890	1312	1073	2330.00	6.00	150.0000	0.00

891	1073	1373	358.00	6.00	150.0000	0.00
892	1373	1608	45.00	6.00	150.0000	0.00
893	1608	5242	210.00	6.00	150.0000	0.00
894	5242	5243	266.00	2.00	150.0000	0.00
895	5243	2362	160.00	2.00	150.0000	0.00
896	5242	2606	166.00	6.00	150.0000	0.00
897	2606	2593	401.00	6.00	150.0000	0.00
898	5244	339	1319.00	2.00	150.0000	0.00
899	339	2639	200.00	2.00	150.0000	0.00
900	5244	5245	2405.00	6.00	150.0000	0.00
901	2593	5244	1097.00	6.00	150.0000	0.00
902	5245	J-52	50.00	6.00	150.0000	0.00
903	J-52	1264	181.00	6.00	150.0000	0.00
904	1264	7037	61.00	6.00	150.0000	0.00
905	7037	1718	142.00	6.00	150.0000	0.00
906	1718	7038	101.00	6.00	150.0000	0.00
907	7038	1304	282.00	6.00	150.0000	0.00
908	1304	5246	20.00	6.00	150.0000	0.00
909	5246	1965	110.00	6.00	150.0000	0.00
910	5246	154	33.00	6.00	150.0000	0.00
911	154	157	198.00	6.00	150.0000	0.00
912	157	766	642.00	6.00	150.0000	0.00
913	766	1518	290.00	6.00	150.0000	0.00
914	1518	2567	197.00	6.00	150.0000	0.00
915	2567	2398	724.00	6.00	150.0000	0.00
916	2398	1313	310.00	6.00	150.0000	0.00
917	1313	1239	367.00	6.00	150.0000	0.00
918	1239	5247	110.00	6.00	150.0000	0.00
919	5248	64	272.00	2.00	150.0000	0.00
920	5248	333	256.00	2.00	150.0000	0.00
921	5247	5248	4148.00	2.00	150.0000	0.00
922	5247	1494	564.00	6.00	150.0000	0.00
923	1494	5249	494.00	6.00	150.0000	0.00
924	5249	1561	122.00	2.00	150.0000	0.00
925	1561	2472	145.00	2.00	150.0000	0.00
926	5249	2334	290.00	6.00	150.0000	0.00
927	2334	2525	80.00	6.00	150.0000	0.00
928	2525	5250	180.00	6.00	150.0000	0.00
929	5250	343	15.00	2.00	150.0000	0.00
930	5250	340	15.00	2.00	150.0000	0.00
931	5250	5251	534.00	6.00	150.0000	0.00
932	5251	7039	876.00	6.00	150.0000	0.00
933	7039	2428	158.00	6.00	150.0000	0.00
934	5252	167	233.00	2.00	150.0000	0.00
935	167	2242	112.00	2.00	150.0000	0.00
936	2428	5252	96.00	6.00	150.0000	0.00
937	1241	33	169.00	6.00	150.0000	0.00
938	33	1580	72.00	6.00	150.0000	0.00
939	33	1062	100.00	2.00	150.0000	0.00
940	1545	1580	1276.00	6.00	150.0000	0.00
941	1545	1708	611.00	6.00	150.0000	0.00
942	1708	2527	81.00	6.00	150.0000	0.00
943	2527	1607	10.00	6.00	150.0000	0.00
944	1607	1901	15.00	6.00	150.0000	0.00
945	1901	1688	150.00	2.00	150.0000	0.00
946	1607	2647	302.00	6.00	150.0000	0.00
947	2647	2220	320.00	6.00	150.0000	0.00
948	2220	761	245.00	6.00	150.0000	0.00
949	761	1970	100.00	6.00	150.0000	0.00
950	1970	1694	100.00	6.00	150.0000	0.00
951	1694	760	201.00	6.00	150.0000	0.00
952	760	252	20.00	2.00	150.0000	0.00
953	760	1081	100.00	6.00	150.0000	0.00
954	1081	228	201.00	6.00	150.0000	0.00
955	228	7040	112.00	6.00	150.0000	0.00
956	7040	648	130.00	6.00	150.0000	0.00
957	648	341	60.00	6.00	150.0000	0.00
958	341	225	121.00	6.00	150.0000	0.00
959	225	338	94.00	6.00	150.0000	0.00
960	338	2476	178.00	6.00	150.0000	0.00
961	2476	1326	206.00	6.00	150.0000	0.00

962	1326	2070	351.00	6.00	150.0000	0.00
963	5252	1241	532.00	6.00	150.0000	0.00
964	5245	710	445.00	6.00	150.0000	0.00
965	710	329	1573.00	6.00	150.0000	0.00
966	329	250	40.00	6.00	150.0000	0.00
967	250	249	4156.00	6.00	150.0000	0.00
968	249	1980	1216.00	6.00	150.0000	0.00
969	1980	5254	126.00	6.00	150.0000	0.00
970	5254	572	168.00	2.00	150.0000	0.00
971	572	5255	4029.00	2.00	150.0000	0.00
972	5255	5256	1394.00	2.00	150.0000	0.00
973	5255	5257	3169.00	2.00	150.0000	0.00
974	5254	5258	1648.00	6.00	150.0000	0.00
975	5258	5259	110.00	2.00	150.0000	0.00
976	5259	180	104.00	2.00	150.0000	0.00
977	180	1016	316.00	2.00	150.0000	0.00
978	1016	66	202.00	2.00	150.0000	0.00
979	5260	223	110.00	2.00	150.0000	0.00
980	223	226	1102.00	2.00	150.0000	0.00
981	226	752	628.00	2.00	150.0000	0.00
982	752	1416	458.00	2.00	150.0000	0.00
983	5260	8074	3980.00	6.00	150.0000	0.00
984	8074	1932	70.00	6.00	150.0000	0.00
985	1932	1525	272.00	6.00	150.0000	0.00
986	1525	1579	87.00	2.00	150.0000	0.00
987	1525	664	1012.00	6.00	150.0000	0.00
988	664	782	3905.00	6.00	150.0000	0.00
989	782	1363	816.00	6.00	150.0000	0.00
990	1363	926	100.00	6.00	150.0000	0.00
991	5258	J-69	4790.00	6.00	150.0000	0.00
992	2070	5253	60.00	6.00	150.0000	0.00
993	5253	7041	889.00	6.00	150.0000	0.00
994	7041	1996	1210.00	6.00	150.0000	0.00
995	1996	1454	206.00	6.00	150.0000	0.00
996	1454	1371	1068.00	6.00	150.0000	0.00
997	1371	1370	158.00	6.00	150.0000	0.00
998	5253	5262	152.00	3.00	150.0000	0.00
999	5262	514	1781.00	3.00	150.0000	0.00
1000	514	5263	1440.00	3.00	150.0000	0.00
1001	5263	586	2365.00	3.00	150.0000	0.00
1002	586	7042	212.00	3.00	150.0000	0.00
1003	7042	1550	1644.00	3.00	150.0000	0.00
1004	1550	5264	2486.00	3.00	150.0000	0.00
1005	5264	5265	1479.00	3.00	150.0000	0.00
1006	5265	2011	2145.00	2.00	150.0000	0.00
1007	5265	5266	1737.00	3.00	150.0000	0.00
1008	5266	147	1240.00	3.00	150.0000	0.00
1009	147	2145	1780.00	3.00	150.0000	0.00
1010	2145	5267	442.00	3.00	150.0000	0.00
1011	5267	2214	879.00	1.00	150.0000	0.00
1012	5267	5268	4312.00	3.00	150.0000	0.00
1013	5268	145	30.00	3.00	150.0000	0.00
1014	5268	68	1639.00	3.00	150.0000	0.00
1015	68	1687	1024.00	3.00	150.0000	0.00
1016	1687	191	444.00	3.00	150.0000	0.00
1017	191	1949	920.00	3.00	150.0000	0.00
1018	1949	5269	4363.00	3.00	150.0000	0.00
1019	5269	5270	110.00	2.00	150.0000	0.00
1020	5270	2158	767.00	2.00	150.0000	0.00
1021	5269	767	581.00	3.00	150.0000	0.00
1022	767	1967	7065.00	3.00	150.0000	0.00
1023	5089	1967	4459.00	3.00	150.0000	0.00
1024	5089	5271	838.00	2.50	150.0000	0.00
1025	5271	5272	450.00	2.00	150.0000	0.00
1026	5271	2046	891.00	2.50	150.0000	0.00
1027	2046	1209	3105.00	2.50	150.0000	0.00
1028	1209	5273	86.00	2.50	150.0000	0.00
1029	5273	2288	600.00	2.50	150.0000	0.00
1030	2288	1164	1432.00	2.50	150.0000	0.00
1031	1164	498	2072.00	2.00	150.0000	0.00
1032	5274	5275	163.00	6.00	150.0000	0.00

1033	5275	2627	15.00	6.00	150.0000	0.00
1034	2627	2270	86.00	6.00	150.0000	0.00
1035	2270	1812	200.00	6.00	150.0000	0.00
1036	1812	1162	180.00	6.00	150.0000	0.00
1037	1162	492	753.00	6.00	150.0000	0.00
1038	492	2251	300.00	6.00	150.0000	0.00
1039	230	2251	211.00	6.00	150.0000	0.00
1040	230	2141	420.00	6.00	150.0000	0.00
1041	2141	1633	100.00	6.00	150.0000	0.00
1042	1633	5276	1196.00	6.00	150.0000	0.00
1043	5276	925	2246.00	6.00	150.0000	0.00
1044	925	1582	74.00	6.00	150.0000	0.00
1045	1582	5277	391.00	6.00	150.0000	0.00
1046	5277	1057	888.00	2.00	150.0000	0.00
1047	1057	857	915.00	2.00	150.0000	0.00
1048	5277	137	320.00	6.00	150.0000	0.00
1049	137	1599	61.00	6.00	150.0000	0.00
1050	1599	494	509.00	6.00	150.0000	0.00
1051	494	2665	3392.00	6.00	150.0000	0.00
1052	2665	5278	687.00	6.00	150.0000	0.00
1053	5278	1133	614.00	2.00	150.0000	0.00
1054	1133	5279	1834.00	2.00	150.0000	0.00
1055	5279	1034	1497.00	2.00	150.0000	0.00
1056	1034	2686	502.00	2.00	150.0000	0.00
1057	5281	1654	474.00	2.00	150.0000	0.00
1058	1654	2545	448.00	2.00	150.0000	0.00
1059	2545	2075	708.00	2.00	150.0000	0.00
1060	2075	2048	208.00	2.00	150.0000	0.00
1061	2048	5280	140.00	2.00	150.0000	0.00
1062	5280	1501	225.00	2.00	150.0000	0.00
1063	5280	1460	535.00	2.00	150.0000	0.00
1064	1460	1641	266.00	2.00	150.0000	0.00
1065	2686	5281	385.00	2.00	150.0000	0.00
1066	5278	1459	1330.00	6.00	150.0000	0.00
1067	1459	302	1118.00	6.00	150.0000	0.00
1068	302	1979	2694.00	6.00	150.0000	0.00
1069	1979	5282	1350.00	6.00	150.0000	0.00
1070	5282	1697	108.00	6.00	150.0000	0.00
1071	1697	1151	458.00	6.00	150.0000	0.00
1072	1151	2332	355.00	6.00	150.0000	0.00
1073	2332	5283	559.00	6.00	150.0000	0.00
1074	5321	5284	441.00	2.00	150.0000	0.00
1075	5284	5285	253.00	2.00	150.0000	0.00
1076	5285	1214	3226.00	2.00	150.0000	0.00
1077	1214	927	454.00	2.00	150.0000	0.00
1078	927	935	64.00	2.00	150.0000	0.00
1079	935	1216	605.00	2.00	150.0000	0.00
1080	1216	125	1116.00	2.00	150.0000	0.00
1081	125	1225	272.00	2.00	150.0000	0.00
1082	1225	5286	4541.00	2.00	150.0000	0.00
1083	5286	2056	2429.00	2.00	150.0000	0.00
1084	2056	2057	401.00	2.00	150.0000	0.00
1085	2057	2058	50.00	2.00	150.0000	0.00
1086	5050	924	1151.00	6.00	150.0000	0.00
1087	924	5287	705.00	6.00	150.0000	0.00
1088	5287	2634	675.00	6.00	150.0000	0.00
1089	2634	1510	370.00	6.00	150.0000	0.00
1090	1010	1492	1751.00	4.00	150.0000	0.00
1091	1010	2698	200.00	4.00	150.0000	0.00
1092	2698	903	50.00	4.00	150.0000	0.00
1093	903	201	300.00	4.00	150.0000	0.00
1094	201	5288	856.00	4.00	150.0000	0.00
1095	5288	2295	15.00	2.00	150.0000	0.00
1096	5288	248	110.00	2.00	150.0000	0.00
1097	248	865	1019.00	2.00	150.0000	0.00
1098	865	5289	10.00	2.00	150.0000	0.00
1099	5289	841	100.00	2.00	150.0000	0.00
1100	5289	866	150.00	2.00	150.0000	0.00
1101	5288	1111	1988.00	4.00	150.0000	0.00
1102	1111	60	520.00	4.00	150.0000	0.00
1103	60	861	4443.00	4.00	150.0000	0.00

1104	861	5290	45.00	4.00	150.0000	0.00
1105	5290	2417	1733.00	2.00	150.0000	0.00
1106	2417	5291	896.00	2.00	150.0000	0.00
1107	5291	1841	1463.00	2.00	150.0000	0.00
1108	1841	580	1243.00	2.00	150.0000	0.00
1109	580	5292	621.00	2.00	150.0000	0.00
1110	5292	1640	1509.00	2.00	150.0000	0.00
1111	1640	5293	70.00	2.00	150.0000	0.00
1112	5293	2168	250.00	2.00	150.0000	0.00
1113	2168	2015	889.00	2.00	150.0000	0.00
1114	2015	2431	680.00	2.00	150.0000	0.00
1115	2431	1725	286.00	2.00	150.0000	0.00
1116	1725	5294	207.00	2.00	150.0000	0.00
1117	5294	2402	840.00	2.00	150.0000	0.00
1118	2402	1858	220.00	2.00	150.0000	0.00
1119	1858	2711	279.00	2.00	150.0000	0.00
1120	2711	8003	181.00	2.00	150.0000	0.00
1121	8003	2079	100.00	2.00	150.0000	0.00
1122	2079	8004	65.00	2.00	150.0000	0.00
1123	5294	5295	3018.00	2.00	150.0000	0.00
1124	5295	2195	81.00	2.00	150.0000	0.00
1125	2195	2541	306.00	2.00	150.0000	0.00
1126	2541	2333	100.00	2.00	150.0000	0.00
1127	2333	2416	150.00	1.00	150.0000	0.00
1128	2416	2167	251.00	1.00	150.0000	0.00
1129	5295	2033	186.00	2.00	150.0000	0.00
1130	2033	1335	242.00	1.00	150.0000	0.00
1131	1335	2099	21.00	1.00	150.0000	0.00
1132	2099	1696	60.00	1.00	150.0000	0.00
1133	2167	972	277.00	1.00	150.0000	0.00
1134	5290	1329	1986.00	2.00	150.0000	0.00
1135	1329	2445	80.00	2.00	150.0000	0.00
1136	2445	2391	171.00	2.00	150.0000	0.00
1137	2391	2703	371.00	2.00	150.0000	0.00
1138	2703	2420	249.00	2.00	150.0000	0.00
1139	2420	1897	203.00	2.00	150.0000	0.00
1140	5274	2008	304.00	6.00	150.0000	0.00
1141	2008	5296	322.00	6.00	150.0000	0.00
1142	5296	754	258.00	2.00	150.0000	0.00
1143	754	5297	242.00	2.00	150.0000	0.00
1144	5297	1121	20.00	2.00	150.0000	0.00
1145	1121	825	74.00	2.00	150.0000	0.00
1146	825	753	82.00	2.00	150.0000	0.00
1147	5297	930	90.00	2.00	150.0000	0.00
1148	930	2001	350.00	2.00	150.0000	0.00
1149	2001	2283	70.00	2.00	150.0000	0.00
1150	2283	2320	100.00	2.00	150.0000	0.00
1151	5296	80	79.00	6.00	150.0000	0.00
1152	80	5298	212.00	6.00	150.0000	0.00
1153	5298	811	356.00	2.00	150.0000	0.00
1154	5298	5299	2476.00	6.00	150.0000	0.00
1155	5299	480	748.00	2.00	150.0000	0.00
1156	480	1887	598.00	2.00	150.0000	0.00
1157	5299	473	96.00	6.00	150.0000	0.00
1158	473	7043	740.00	6.00	150.0000	0.00
1159	7043	50	24.00	6.00	150.0000	0.00
1160	50	491	582.00	6.00	150.0000	0.00
1161	491	1054	826.00	6.00	150.0000	0.00
1162	1054	1406	1284.00	6.00	150.0000	0.00
1163	1406	48	1969.00	6.00	150.0000	0.00
1164	48	238	984.00	6.00	150.0000	0.00
1165	238	5300	2273.00	6.00	150.0000	0.00
1166	5300Pipe-Plant		137.00	8.00	150.0000	0.00
1167	PRV-1	5059	2846.00	2.50	150.0000	0.00
1168	5300	5301	1715.00	8.00	150.0000	0.00
1169	5302	1261	471.00	4.00	150.0000	0.00
1170	5303	1260	120.00	4.00	150.0000	0.00
1171	5303	1259	1308.00	4.00	150.0000	0.00
1172	5302	5303	963.00	4.00	150.0000	0.00
1173	5301	5302	2173.00	4.00	150.0000	0.00
1174	5301	7044	2766.00	8.00	150.0000	0.00

1175	7044	5304	1236.00	8.00	150.0000	0.00
1176	5304	1269	2090.00	8.00	150.0000	0.00
1177	1269	1086	607.00	8.00	150.0000	0.00
1178	1086	1919	364.00	8.00	150.0000	0.00
1179	1919	7045	2404.00	8.00	150.0000	0.00
1180	7045	224	282.00	8.00	150.0000	0.00
1181	224	5305	1350.00	8.00	150.0000	0.00
1182	5305	2010	3930.00	4.00	150.0000	0.00
1183	2010	2024	2968.00	4.00	150.0000	0.00
1184	2024	5306	252.00	4.00	150.0000	0.00
1185	5306	497	46.00	1.00	150.0000	0.00
1186	497	1985	577.00	1.00	150.0000	0.00
1187	1985	332	1553.00	1.00	150.0000	0.00
1188	332	1077	33.00	1.00	150.0000	0.00
1189	5306	5307	4608.00	3.00	150.0000	0.00
1190	5307	5308	1527.00	3.00	150.0000	0.00
1191	5308	2037	443.00	2.00	150.0000	0.00
1192	2037	2389	321.00	2.00	150.0000	0.00
1193	2389	5311	194.00	2.00	150.0000	0.00
1194	2205	2517	163.00	2.00	150.0000	0.00
1195	5311	2617	241.00	2.00	150.0000	0.00
1196	5308	5309	878.00	3.00	150.0000	0.00
1197	5309	5310	585.00	2.00	150.0000	0.00
1198	5310	2301	15.00	2.00	150.0000	0.00
1199	5310	1851	345.00	2.00	150.0000	0.00
1200	1851	2440	20.00	2.00	150.0000	0.00
1201	5309	2181	66.00	2.00	150.0000	0.00
1202	2181	2246	207.00	2.00	150.0000	0.00
1203	2246	2182	55.00	2.00	150.0000	0.00
1204	2182	1638	60.00	2.00	150.0000	0.00
1205	1638	2463	285.00	2.00	150.0000	0.00
1206	2463	2188	116.00	2.00	150.0000	0.00
1207	2206	1438	163.00	2.00	150.0000	0.00
1208	1438	2183	82.00	2.00	150.0000	0.00
1209	2183	1226	26.00	2.00	150.0000	0.00
1210	1226	2439	20.00	2.00	150.0000	0.00
1211	5305	2110	176.00	8.00	150.0000	0.00
1212	2110	5312	154.00	8.00	150.0000	0.00
1213	5312	1771	311.00	2.00	150.0000	0.00
1214	1771	410	275.00	2.00	150.0000	0.00
1215	410	2215	527.00	2.00	150.0000	0.00
1216	2215	2090	721.00	2.00	150.0000	0.00
1217	2090	2701	603.00	2.00	150.0000	0.00
1218	2701	2248	316.00	2.00	150.0000	0.00
1219	2248	2069	355.00	2.00	150.0000	0.00
1220	2069	2065	361.00	2.00	150.0000	0.00
1221	5312	2236	851.00	8.00	150.0000	0.00
1222	5313	5314	2644.00	3.00	150.0000	0.00
1223	5314	1032	504.00	2.00	150.0000	0.00
1224	1032	8048	51.00	2.00	150.0000	0.00
1225	8048	1072	576.00	2.00	150.0000	0.00
1226	5314	1161	82.00	3.00	150.0000	0.00
1227	1161	5315	4080.00	3.00	150.0000	0.00
1228	5315	7047	88.00	2.00	150.0000	0.00
1229	7047	7046	32.00	2.00	150.0000	0.00
1230	7046	5316	243.00	2.00	150.0000	0.00
1231	5316	1524	150.00	2.00	150.0000	0.00
1232	1524	161	137.00	2.00	150.0000	0.00
1233	5316	5317	116.00	2.00	150.0000	0.00
1234	5317	311	56.00	2.00	150.0000	0.00
1235	311	5318	141.00	2.00	150.0000	0.00
1236	5318	2261	248.00	2.00	150.0000	0.00
1237	2261	1011	175.00	2.00	150.0000	0.00
1238	5317	1907	97.00	2.00	150.0000	0.00
1239	1907	303	66.00	2.00	150.0000	0.00
1240	303	324	20.00	2.00	150.0000	0.00
1241	324	344	82.00	2.00	150.0000	0.00
1242	344	19	242.00	2.00	150.0000	0.00
1243	19	5319	118.00	4.00	150.0000	0.00
1244	5315	7048	146.00	2.00	150.0000	0.00
1245	7048	7049	117.00	2.00	150.0000	0.00

1246	7049	5319	222.00	2.00	150.0000	0.00
1247	5319	56	85.00	4.00	150.0000	0.00
1248	56	203	94.00	2.00	150.0000	0.00
1249	203	268	463.00	2.00	150.0000	0.00
1250	268	7050	10.00	2.00	150.0000	0.00
1251	7050	1975	44.00	2.00	150.0000	0.00
1252	1975	7051	274.00	2.00	150.0000	0.00
1253	7051	265	107.00	2.00	150.0000	0.00
1254	265	160	51.00	2.00	150.0000	0.00
1255	5050	5321	110.00	6.00	150.0000	0.00
1256	5283	5321	431.00	6.00	150.0000	0.00
1257	2699	5058	599.00	2.50	150.0000	0.00
1258	5275	1492	300.00	4.00	150.0000	0.00
1259	2188	2206	83.00	2.00	150.0000	0.00
1260	160	5320	33.00	2.00	150.0000	0.00
1261	5320	1188	38.00	2.00	150.0000	0.00
1262	1188	490	60.00	2.00	150.0000	0.00
1263	490	1018	232.00	2.00	150.0000	0.00
1264	1018	337	495.00	2.00	150.0000	0.00
1265	337	16	229.00	2.00	150.0000	0.00
1266	16	2339	43.00	4.00	150.0000	0.00
1267	2339	255	30.00	2.00	150.0000	0.00
1268	255	213	10.00	2.00	150.0000	0.00
1269	213	229	64.00	2.00	150.0000	0.00
1270	229	293	76.00	2.00	150.0000	0.00
1271	293	259	16.00	2.00	150.0000	0.00
1272	259	5318	179.00	2.00	150.0000	0.00
1273	5320	5322	735.00	2.00	150.0000	0.00
1274	5322	1196	255.00	2.00	150.0000	0.00
1275	5322	5323	961.00	2.00	150.0000	0.00
1276	5323	8052	131.00	2.00	150.0000	0.00
1277	5323	5324	368.00	2.00	150.0000	0.00
1278	2236	5313	102.00	8.00	150.0000	0.00
1279	5313	1446	30.00	8.00	150.0000	0.00
1280	1446	2595	815.00	8.00	150.0000	0.00
1281	2595	1449	331.00	8.00	150.0000	0.00
1282	1449	2552	515.00	8.00	150.0000	0.00
1283	2552	791	110.00	8.00	150.0000	0.00
1284	791	2313	649.00	8.00	150.0000	0.00
1285	2313	475	494.00	8.00	150.0000	0.00
1286	475	5325	2179.00	8.00	150.0000	0.00
1287	5325	7052	94.00	2.00	150.0000	0.00
1288	7052	7053	90.00	2.00	150.0000	0.00
1289	7053	854	320.00	2.00	150.0000	0.00
1290	854	657	179.00	2.00	150.0000	0.00
1291	657	2004	198.00	2.00	150.0000	0.00
1292	5326	2620	2361.00	1.50	150.0000	0.00
1293	2620	2718	13.00	1.50	150.0000	0.00
1294	2718	1507	13.00	1.50	150.0000	0.00
1296	5325	893	231.00	8.00	150.0000	0.00
1297	893	1346	1204.00	8.00	150.0000	0.00
1298	1346	5327	73.00	8.00	150.0000	0.00
1299	5327	8038	448.00	3.00	150.0000	0.00
1300	8038	8037	51.00	3.00	150.0000	0.00
1301	8037	2559	287.00	3.00	150.0000	0.00
1302	2559	1704	624.00	3.00	150.0000	0.00
1303	1704	240	893.00	3.00	150.0000	0.00
1304	240	1644	691.00	3.00	150.0000	0.00
1305	1644	1190	110.00	3.00	150.0000	0.00
1306	1190	1903	183.00	3.00	150.0000	0.00
1307	1903	2470	333.00	3.00	150.0000	0.00
1308	2470	7054	80.00	3.00	150.0000	0.00
1309	7054	5328	325.00	3.00	150.0000	0.00
1310	5328	202	73.00	2.00	150.0000	0.00
1311	202	1588	41.00	2.00	150.0000	0.00
1312	1588	1827	110.00	2.00	150.0000	0.00
1313	1827	1423	71.00	2.00	150.0000	0.00
1314	1423	2230	25.00	2.00	150.0000	0.00
1315	2230	1943	80.00	2.00	150.0000	0.00
1316	1943	7055	155.00	2.00	150.0000	0.00
1317	5328	5329	2300.00	3.00	150.0000	0.00

1318	5329	1840	1207.00	2.50	150.0000	0.00
1319	1840	5330	1552.00	2.50	150.0000	0.00
1320	5330	907	1206.00	2.00	150.0000	0.00
1321	5329	1984	782.00	2.50	150.0000	0.00
1323	1984	7073	602.00	2.50	150.0000	0.00
1324	5076	2432	3058.00	2.00	150.0000	0.00
1325	2432	2055	2356.00	2.00	150.0000	0.00
1326	7073	1000	100.00	2.50	150.0000	0.00
1327	1000	1729	897.00	2.50	150.0000	0.00
1328	1729	5331	2957.00	2.50	150.0000	0.00
1329	5331	5332	4006.00	2.50	150.0000	0.00
1330	5332	2413	283.00	2.50	150.0000	0.00
1331	2413	5333	30.00	2.50	150.0000	0.00
1332	5333	1574	417.00	2.50	150.0000	0.00
1333	1574	2007	365.00	2.50	150.0000	0.00
1334	2007	1270	415.00	2.50	150.0000	0.00
1335	5334	5136	55.00	2.00	150.0000	0.00
1336	2444	5334	54.00	2.00	150.0000	0.00
1337	1270	120	406.00	2.00	150.0000	0.00
1338	120	1340	251.00	2.00	150.0000	0.00
1339	1370	J-63	1837.00	6.00	150.0000	0.00
1340-CV	FGN-LLHemphill-T		10.00	6.00	150.0000	0.00
1341	716	5336	1758.00	6.00	150.0000	0.00
1342	8059	5336	10.00	4.00	150.0000	0.00
1343	1198	5230	44.00	2.00	150.0000	0.00
1344	327	8006	2657.00	4.00	150.0000	0.00
1345	1837	2455	188.00	2.00	150.0000	0.00
1346	5214	1698	15.00	2.00	150.0000	0.00
1347	5261	926	1353.00	6.00	150.0000	0.00
1348	5336	1348	118.00	1.00	150.0000	0.00
1349	1348	1037	407.00	1.00	150.0000	0.00
1350	1037	2265	100.00	1.00	150.0000	0.00
1351	2265	2274	100.00	1.00	150.0000	0.00
1352	1348	1023	52.00	1.00	150.0000	0.00
1353	1017	1336	35.00	6.00	150.0000	0.00
1354	5336	1017	84.00	6.00	150.0000	0.00
1355	1336	5337	371.00	6.00	150.0000	0.00
1356	5337	1728	230.00	6.00	150.0000	0.00
1357	1728	2589	144.00	6.00	150.0000	0.00
1358	2589	5338	222.00	6.00	150.0000	0.00
1359	5337	5339	1061.00	2.00	150.0000	0.00
1360	5339	5340	232.00	2.00	150.0000	0.00
1361	5340	1055	215.00	2.00	150.0000	0.00
1362	1055	661	81.00	2.00	150.0000	0.00
1363	5339	2238	50.00	2.00	150.0000	0.00
1364	2238	1720	180.00	2.00	150.0000	0.00
1365	1720	8061	72.00	2.00	150.0000	0.00
1366	8061	1721	168.00	2.00	150.0000	0.00
1367	1721	820	107.00	2.00	150.0000	0.00
1368	820	2555	50.00	2.00	150.0000	0.00
1369	5338	731	816.00	6.00	150.0000	0.00
1370	731	2649	1054.00	6.00	150.0000	0.00
1371	2649	5341	209.00	6.00	150.0000	0.00
1372	5341	5342	1951.00	6.00	150.0000	0.00
1373	5342	72	261.00	6.00	150.0000	0.00
1374	5344	2108	97.00	3.00	150.0000	0.00
1375	72	8070	521.00	6.00	150.0000	0.00
1376	5344	5345	473.00	3.00	150.0000	0.00
1377	5345	2315	20.00	3.00	150.0000	0.00
1378	5345	5346	422.00	3.00	150.0000	0.00
1379	5346	5343	80.00	3.00	150.0000	0.00
1380	5343	2280	323.00	3.00	150.0000	0.00
1381	2280	1695	40.00	3.00	150.0000	0.00
1382	1695	2282	289.00	3.00	150.0000	0.00
1383	2282	2139	308.00	2.00	150.0000	0.00
1384	2139	2116	30.00	2.00	150.0000	0.00
1385	2116	2268	185.00	2.00	150.0000	0.00
1386	2315	2306	280.00	3.00	150.0000	0.00
1387	8070	1543	448.00	6.00	150.0000	0.00
1388	2306	5347	359.00	3.00	150.0000	0.00
1389	1543	254	508.00	6.00	150.0000	0.00

1390	5347	5348	291.00	3.00	150.0000	0.00
1391	5347	2397	261.00	2.00	150.0000	0.00
1392	2397	2379	194.00	2.00	150.0000	0.00
1393	2379	2330	44.00	2.00	150.0000	0.00
1394	5348	2338	13.00	6.00	150.0000	0.00
1395	2338	478	227.00	6.00	150.0000	0.00
1396	5327	716	98.00	6.00	150.0000	0.00
1397	5344	72	110.00	3.00	150.0000	0.00
1398	5348	254	110.00	6.00	150.0000	0.00
1399	478	5350	231.00	6.00	150.0000	0.00
1400	5350	5349	2472.00	6.00	150.0000	0.00
1401	5349	2643	280.00	6.00	150.0000	0.00
1402	2643	493	100.00	6.00	150.0000	0.00
1403	493	2013	192.00	6.00	150.0000	0.00
1404	2013	2143	178.00	6.00	150.0000	0.00
1405	2143	2359	33.00	6.00	150.0000	0.00
1406	358	5351	94.00	6.00	150.0000	0.00
1407	5351	1473	26.00	2.00	150.0000	0.00
1408	5351	1508	186.00	6.00	150.0000	0.00
1409	5349	1233	371.00	2.00	150.0000	0.00
1410	2359	358	76.00	6.00	150.0000	0.00
1411	1508	5352	83.00	6.00	150.0000	0.00
1412	5351	2346	73.00	4.00	150.0000	0.00
1413	5352	1917	48.00	6.00	150.0000	0.00
1414	1917	1066	39.00	6.00	150.0000	0.00
1415	1066	51	201.00	6.00	150.0000	0.00
1416	51	1280	310.00	6.00	150.0000	0.00
1417	1280	5353	23.00	6.00	150.0000	0.00
1418	5353	2142	174.00	6.00	150.0000	0.00
1419	2142	1893	174.00	6.00	150.0000	0.00
1420	1893	708	228.00	6.00	150.0000	0.00
1421	708	647	150.00	6.00	150.0000	0.00
1422	647	5354	64.00	6.00	150.0000	0.00
1423	5354	5	26.00	4.00	150.0000	0.00
1424	5	1522	138.00	2.00	150.0000	0.00
1425	1522	1604	55.00	2.00	150.0000	0.00
1426	1522	5355	270.00	2.00	150.0000	0.00
1427	5354	5356	256.00	6.00	150.0000	0.00
1428	5356	1327	591.00	3.00	150.0000	0.00
1429	1327	2042	277.00	3.00	150.0000	0.00
1430	2042	1278	276.00	3.00	150.0000	0.00
1431	1278	2128	556.00	3.00	150.0000	0.00
1432	2128	1951	204.00	3.00	150.0000	0.00
1433	1951	1948	796.00	3.00	150.0000	0.00
1434	1948	1825	202.00	3.00	150.0000	0.00
1435	1825	5357	10.00	3.00	150.0000	0.00
1436	5357	1114	781.00	3.00	150.0000	0.00
1437	5357	864	388.00	3.00	150.0000	0.00
1438	864	1950	570.00	3.00	150.0000	0.00
1439	1950	2170	598.00	3.00	150.0000	0.00
1440	2170	2264	821.00	3.00	150.0000	0.00
1441	2264	5358	725.00	3.00	150.0000	0.00
1442	5358	896	1002.00	3.00	150.0000	0.00
1443	896	1443	389.00	3.00	150.0000	0.00
1444	5359	1928	81.00	2.00	150.0000	0.00
1445	1928	2124	37.00	2.00	150.0000	0.00
1446	2124	8009	118.00	2.00	150.0000	0.00
1447	2113	2371	229.00	2.00	150.0000	0.00
1448	2371	2563	92.00	2.00	150.0000	0.00
1449	2563	5360	55.00	2.00	150.0000	0.00
1450	5360	2292	20.00	2.00	150.0000	0.00
1452	858	J-1	68.00	2.00	150.0000	0.00
1453	5361	746	27.00	3.00	150.0000	0.00
1454	5361	2469	41.00	3.00	150.0000	0.00
1455	2469	1671	43.00	3.00	150.0000	0.00
1456	1671	1581	27.00	3.00	150.0000	0.00
1457	1581	2566	10.00	3.00	150.0000	0.00
1458	2566	5362	60.00	3.00	150.0000	0.00
1459	5362	529	16.00	3.00	150.0000	0.00
1460	529	883	88.00	3.00	150.0000	0.00
1461	883	5363	50.00	3.00	150.0000	0.00

1462	5363	2160	225.00	2.00	150.0000	0.00
1463	5363	1266	55.00	3.00	150.0000	0.00
1464	1266	1616	134.00	3.00	150.0000	0.00
1465	5364	2692	65.00	2.00	150.0000	0.00
1466	2692	5365	39.00	2.00	150.0000	0.00
1467	5365	241	30.00	1.00	150.0000	0.00
1468	241	1727	50.00	1.00	150.0000	0.00
1469	5364	8010	220.00	2.00	150.0000	0.00
1470	8010	1706	72.00	2.00	150.0000	0.00
1471	1727	186	34.00	1.00	150.0000	0.00
1472	1706	1474	50.00	2.00	150.0000	0.00
1473	1474	1495	50.00	2.00	150.0000	0.00
1474	1495	336	173.00	2.00	150.0000	0.00
1475	336	8068	95.00	2.00	150.0000	0.00
1476	8068	1505	40.00	2.00	150.0000	0.00
1477	1505	2564	10.00	2.00	150.0000	0.00
1478	2564	967	93.00	2.00	150.0000	0.00
1479	967	231	35.00	2.00	150.0000	0.00
1480	231	2600	38.00	2.00	150.0000	0.00
1481	2600	2165	22.00	2.00	150.0000	0.00
1482	2165	2448	101.00	2.00	150.0000	0.00
1483	2448	1619	42.00	2.00	150.0000	0.00
1484	1619	2254	57.00	2.00	150.0000	0.00
1485	2254	8011	104.00	2.00	150.0000	0.00
1486	8011	373	78.00	2.00	150.0000	0.00
1487	373	2235	27.00	2.00	150.0000	0.00
1488	288	290	111.00	2.00	150.0000	0.00
1489	5366	288	39.00	2.00	150.0000	0.00
1490	288	479	129.00	2.00	150.0000	0.00
1491	5366	132	79.00	2.00	150.0000	0.00
1492	132	40	10.00	2.00	150.0000	0.00
1493	40	2191	53.00	4.00	150.0000	0.00
1494	2191	2032	68.00	2.00	150.0000	0.00
1495	5367	1481	247.00	3.00	150.0000	0.00
1496	1481	852	39.00	3.00	150.0000	0.00
1497	852	8013	59.00	3.00	150.0000	0.00
1498	8012	1707	36.00	3.00	150.0000	0.00
1499	1707	8013	56.00	3.00	150.0000	0.00
1500	8013	1145	146.00	3.00	150.0000	0.00
1501	5362	236	94.00	3.00	150.0000	0.00
1502	236	1145	135.00	3.00	150.0000	0.00
1503	5367	5368	228.00	3.00	150.0000	0.00
1504	2032	5367	41.00	2.00	150.0000	0.00
1505	5368	5359	267.00	2.00	150.0000	0.00
1506	5368	5369	223.00	4.00	150.0000	0.00
1507	5369	2231	120.00	2.00	150.0000	0.00
1508	2231	5370	150.00	2.00	150.0000	0.00
1509	5370	2311	75.00	2.00	150.0000	0.00
1510	2311	777	224.00	2.00	150.0000	0.00
1511	777	910	188.00	2.00	150.0000	0.00
1512	5369	1535	140.00	4.00	150.0000	0.00
1513	1535	577	81.00	4.00	150.0000	0.00
1514	577	1091	16.00	4.00	150.0000	0.00
1515	1091	2111	76.00	4.00	150.0000	0.00
1516	2111	1169	112.00	4.00	150.0000	0.00
1517	1169	730	64.00	4.00	150.0000	0.00
1518	730	433	50.00	4.00	150.0000	0.00
1519	433	1041	120.00	4.00	150.0000	0.00
1520	592	541	37.00	4.00	150.0000	0.00
1521	541	140	46.00	4.00	150.0000	0.00
1522	140	2407	10.00	4.00	150.0000	0.00
1523	2407	7056	76.00	4.00	150.0000	0.00
1524	1041	592	55.00	4.00	150.0000	0.00
1525	7056	123	83.00	4.00	150.0000	0.00
1526	123	918	50.00	4.00	150.0000	0.00
1527	918	1027	66.00	4.00	150.0000	0.00
1528	1027	997	20.00	4.00	150.0000	0.00
1529	997	1583	45.00	4.00	150.0000	0.00
1530	1583	1626	40.00	4.00	150.0000	0.00
1531	1626	2425	79.00	4.00	150.0000	0.00
1532	2425	550	30.00	4.00	150.0000	0.00

1533	550	233	24.00	4.00	150.0000	0.00
1534	233	383	50.00	4.00	150.0000	0.00
1535	383	5371	100.00	4.00	150.0000	0.00
1536	5371	659	25.00	4.00	150.0000	0.00
1537	5371	5372	30.00	4.00	150.0000	0.00
1538	5372	1972	25.00	4.00	150.0000	0.00
1539	5372	1350	121.00	4.00	150.0000	0.00
1540	1350	1625	26.00	4.00	150.0000	0.00
1541	1625	256	45.00	4.00	150.0000	0.00
1542	256	783	26.00	4.00	150.0000	0.00
1543	783	1514	71.00	4.00	150.0000	0.00
1544	1514	1059	75.00	4.00	150.0000	0.00
1545	1059	2093	31.00	4.00	150.0000	0.00
1546	2093	8014	81.00	4.00	150.0000	0.00
1547	8014	526	144.00	4.00	150.0000	0.00
1548	526	2308	102.00	4.00	150.0000	0.00
1549	2308	944	96.00	4.00	150.0000	0.00
1550	944	5373	123.00	4.00	150.0000	0.00
1551	5373	2493	61.00	4.00	150.0000	0.00
1552	2493	1600	91.00	4.00	150.0000	0.00
1553	1600	1892	115.00	4.00	150.0000	0.00
1554	1892	1458	352.00	4.00	150.0000	0.00
1555	1458	859	81.00	4.00	150.0000	0.00
1556	859	888	73.00	4.00	150.0000	0.00
1557	888	2227	15.00	4.00	150.0000	0.00
1558	2227	1477	266.00	4.00	150.0000	0.00
1559	2346	1477	32.00	4.00	150.0000	0.00
1560	5373	124	217.00	3.00	150.0000	0.00
1561	124	5374	68.00	3.00	150.0000	0.00
1562	5374	602	57.00	2.00	150.0000	0.00
1563	602	533	91.00	2.00	150.0000	0.00
1564	533	879	67.00	2.00	150.0000	0.00
1565	879	1978	26.00	2.00	150.0000	0.00
1566	1978	964	50.00	2.00	150.0000	0.00
1567	964	1487	36.00	2.00	150.0000	0.00
1568	1487	834	109.00	2.00	150.0000	0.00
1569	834	2273	125.00	2.00	150.0000	0.00
1570	2273	2169	88.00	2.00	150.0000	0.00
1571	2169	1710	29.00	2.00	150.0000	0.00
1572	1710	1737	127.00	2.00	150.0000	0.00
1573	1737	980	90.00	2.00	150.0000	0.00
1574	980	1669	130.00	2.00	150.0000	0.00
1575	1669	2293	123.00	2.00	150.0000	0.00
1576	2293	778	44.00	2.00	150.0000	0.00
1577	778	77	20.00	2.00	150.0000	0.00
1578	481	779	88.00	2.00	150.0000	0.00
1579	5361	5375	365.00	3.00	150.0000	0.00
1580	5375	5376	2168.00	3.00	150.0000	0.00
1581	5376	405	221.00	2.00	150.0000	0.00
1582	405	2547	121.00	2.00	150.0000	0.00
1583	2547	1921	55.00	2.00	150.0000	0.00
1584	1921	2542	231.00	2.00	150.0000	0.00
1585	2542	2543	100.00	2.00	150.0000	0.00
1586	2543	584	46.00	2.00	150.0000	0.00
1587	584	978	55.00	2.00	150.0000	0.00
1588	5376	235	32.00	3.00	150.0000	0.00
1589	235	42	156.00	4.00	150.0000	0.00
1590	42	2579	102.00	3.00	150.0000	0.00
1591	2579	113	72.00	3.00	150.0000	0.00
1592	113	438	33.00	3.00	150.0000	0.00
1593	438	2473	30.00	3.00	150.0000	0.00
1594	2473	5377	108.00	3.00	150.0000	0.00
1595	5377	5378	537.00	3.00	150.0000	0.00
1596	5378	1031	160.00	2.00	150.0000	0.00
1597	1031	1183	214.00	2.00	150.0000	0.00
1598	1183	1185	316.00	2.00	150.0000	0.00
1599	1185	2625	187.00	2.00	150.0000	0.00
1600	2625	1448	256.00	2.00	150.0000	0.00
1601	5378	8025	94.00	3.00	150.0000	0.00
1602	8025	5379	371.00	3.00	150.0000	0.00
1603	5379	5380	1030.00	2.00	150.0000	0.00

1604	5380	35	482.00	4.00	150.0000	0.00
1605	35	1722	38.00	2.00	150.0000	0.00
1606	1722	2613	29.00	2.00	150.0000	0.00
1607	2613	1127	29.00	2.00	150.0000	0.00
1608	1127	1430	165.00	2.00	150.0000	0.00
1609	1430	1733	476.00	2.00	150.0000	0.00
1610	1733	900	63.00	2.00	150.0000	0.00
1611	900	2630	105.00	2.00	150.0000	0.00
1612	2630	2707	86.00	2.00	150.0000	0.00
1613	2707	5381	63.00	2.00	150.0000	0.00
1614	5381	2618	61.00	2.00	150.0000	0.00
1615	5381	5380	974.00	2.00	150.0000	0.00
1616	5379	2104	32.00	3.00	150.0000	0.00
1617	2104	911	67.00	3.00	150.0000	0.00
1618	5342	47	2624.00	6.00	150.0000	0.00
1619	47	2538	116.00	4.00	150.0000	0.00
1620	2538	5382	328.00	4.00	150.0000	0.00
1621	5382	5383	390.00	4.00	150.0000	0.00
1622	5383	2747	71.00	2.00	150.0000	0.00
1623	2747	2742	11.00	2.00	150.0000	0.00
1624	2742	2752	39.00	2.00	150.0000	0.00
1625	2752	2771	59.00	2.00	150.0000	0.00
1626	2771	2744	80.00	2.00	150.0000	0.00
1627	2744	7057	91.00	2.00	150.0000	0.00
1628	7057	2733	80.00	2.00	150.0000	0.00
1629	2733	2746	97.00	2.00	150.0000	0.00
1630	2746	2736	80.00	2.00	150.0000	0.00
1631	5383	5384	203.00	4.00	150.0000	0.00
1632	5384	2766	31.00	4.00	150.0000	0.00
1633	5384	2770	143.00	4.00	150.0000	0.00
1634	2770	2760	85.00	4.00	150.0000	0.00
1635	5384	2741	21.00	4.00	150.0000	0.00
1636	2741	2759	43.00	4.00	150.0000	0.00
1637	2759	8071	43.00	4.00	150.0000	0.00
1638	8071	2754	44.00	4.00	150.0000	0.00
1639	2754	2729	50.00	4.00	150.0000	0.00
1640	2729	2732	44.00	4.00	150.0000	0.00
1641	2732	5385	60.00	4.00	150.0000	0.00
1642	5385	2757	32.00	4.00	150.0000	0.00
1643	2757	2737	62.00	4.00	150.0000	0.00
1644	2737	2751	47.00	4.00	150.0000	0.00
1645	2751	7058	30.00	4.00	150.0000	0.00
1646	7058	2728	89.00	4.00	150.0000	0.00
1647	2728	2731	535.00	4.00	150.0000	0.00
1648	2731	2734	21.00	4.00	150.0000	0.00
1649	2734	2735	95.00	4.00	150.0000	0.00
1650	2735	2748	20.00	4.00	150.0000	0.00
1651	2748	2769	106.00	4.00	150.0000	0.00
1652	2769	2726	16.00	4.00	150.0000	0.00
1653	5386	5387	239.00	3.00	150.0000	0.00
1654	5387	2727	38.00	3.00	150.0000	0.00
1655	2727	7059	152.00	3.00	150.0000	0.00
1656	7059	2764	92.00	3.00	150.0000	0.00
1657	2753	2764	156.00	3.00	150.0000	0.00
1658	2753	43	139.00	4.00	150.0000	0.00
1659	43	5385	131.00	4.00	150.0000	0.00
1660	5387	5388	47.00	3.00	150.0000	0.00
1661	5388	5389	271.00	3.00	150.0000	0.00
1662	5389	2761	51.00	3.00	150.0000	0.00
1663	2761	5382	175.00	3.00	150.0000	0.00
1664	5389	2758	132.00	3.00	150.0000	0.00
1665	2758	2762	114.00	3.00	150.0000	0.00
1666	5388	2739	98.00	3.00	150.0000	0.00
1667	2739	2743	56.00	3.00	150.0000	0.00
1668	2743	2730	40.00	3.00	150.0000	0.00
1669	2730	2756	107.00	3.00	150.0000	0.00
1670	2756	2745	96.00	3.00	150.0000	0.00
1671	5386	2763	124.00	3.00	150.0000	0.00
1672	2763	5390	66.00	3.00	150.0000	0.00
1673	5390	2755	101.00	3.00	150.0000	0.00
1674	2755	1347	185.00	3.00	150.0000	0.00

1675	1347	2749	187.00	3.00	150.0000	0.00
1676	2749	2750	47.00	3.00	150.0000	0.00
1677	5390	2767	140.00	2.00	150.0000	0.00
1678	2767	7060	79.00	2.00	150.0000	0.00
1679	7060	2738	125.00	2.00	150.0000	0.00
1680	2738	7061	105.00	2.00	150.0000	0.00
1681	7061	2765	164.00	2.00	150.0000	0.00
1682	2765	7062	54.00	2.00	150.0000	0.00
1683	7062	2768	129.00	2.00	150.0000	0.00
1684	5386	2726	83.00	3.00	150.0000	0.00
1685	5274	1547	1241.00	8.00	150.0000	0.00
1686	1547	2437	241.00	8.00	150.0000	0.00
1687	2437	905	111.00	8.00	150.0000	0.00
1688	905	5391	2275.00	8.00	150.0000	0.00
1689	5391	5392	1678.00	8.00	150.0000	0.00
1690	5392	902	80.00	8.00	150.0000	0.00
1691	5392	2393	635.00	6.00	150.0000	0.00
1692	902	5393	597.00	8.00	150.0000	0.00
1693	5393	904	344.00	8.00	150.0000	0.00
1694	904	5394	51.00	8.00	150.0000	0.00
1696	5395	JimNethery	340.00	6.00	150.0000	0.00
1697	5395	2250	750.00	6.00	150.0000	0.00
1698	2250	5396	109.00	6.00	150.0000	0.00
1699	5396	2120	221.00	2.00	150.0000	0.00
1700	2120	2360	534.00	2.00	150.0000	0.00
1701	2360	2499	291.00	2.00	150.0000	0.00
1702	2499	2533	609.00	2.00	150.0000	0.00
1703	2533	1349	189.00	2.00	150.0000	0.00
1704	1349	2598	267.00	2.00	150.0000	0.00
1705	2598	2500	437.00	2.00	150.0000	0.00
1706	5396	330	447.00	6.00	150.0000	0.00
1707	1248	330	1333.00	6.00	150.0000	0.00
1708	5397	1248	5049.00	6.00	150.0000	0.00
1709	5398	1468	1049.00	6.00	150.0000	0.00
1710	1468	1995	47.00	6.00	150.0000	0.00
1711	2405	2367	965.00	6.00	150.0000	0.00
1712	2367	1824	44.00	6.00	150.0000	0.00
1713	5398	5579	3830.00	6.00	150.0000	0.00
1714	5398	5399	796.00	6.00	150.0000	0.00
1715	5399	5400	2816.00	3.00	150.0000	0.00
1716	5400	2077	4983.00	3.00	150.0000	0.00
1717	2077	5401	34.00	3.00	150.0000	0.00
1718	5401	2442	370.00	3.00	150.0000	0.00
1719	2442	5402	284.00	3.00	150.0000	0.00
1720	5402	2505	59.00	2.00	150.0000	0.00
1721	2505	2296	365.00	2.00	150.0000	0.00
1722	2296	2153	124.00	2.00	150.0000	0.00
1723	2153	5403	188.00	2.00	150.0000	0.00
1724	5403	2129	116.00	2.00	150.0000	0.00
1725	5403	5404	112.00	2.00	150.0000	0.00
1726	5404	5405	49.00	2.00	150.0000	0.00
1727	5405	8016	39.00	2.00	150.0000	0.00
1728	5405	2189	10.00	2.00	150.0000	0.00
1729	5404	2501	40.00	2.00	150.0000	0.00
1730	2501	736	20.00	2.00	150.0000	0.00
1731	736	2683	48.00	2.00	150.0000	0.00
1732	2683	1724	270.00	2.00	150.0000	0.00
1733	1724	1773	31.00	2.00	150.0000	0.00
1734	5402	2565	84.00	3.00	150.0000	0.00
1735	2565	2023	101.00	3.00	150.0000	0.00
1736	2023	5406	97.00	3.00	150.0000	0.00
1737	5406	368	53.00	3.00	150.0000	0.00
1738	368	1433	44.00	3.00	150.0000	0.00
1739	1433	5407	843.00	3.00	150.0000	0.00
1740	5407	1043	50.00	2.00	150.0000	0.00
1741	1043	2535	62.00	2.00	150.0000	0.00
1742	2535	2071	82.00	2.00	150.0000	0.00
1743	2071	2353	389.00	2.00	150.0000	0.00
1744	2353	1876	233.00	2.00	150.0000	0.00
1745	1876	5408	30.00	2.00	150.0000	0.00

1746	5408	2082	59.00	2.00	150.0000	0.00
1747	2082	8045	303.00	2.00	150.0000	0.00
1748	8045	2073	200.00	2.00	150.0000	0.00
1749	2073	1415	24.00	2.00	150.0000	0.00
1750	1415	2700	116.00	2.00	150.0000	0.00
1751	2700	2303	151.00	2.00	150.0000	0.00
1752	2303	846	271.00	2.00	150.0000	0.00
1753	846	1952	119.00	2.00	150.0000	0.00
1754	1952	2241	531.00	2.00	150.0000	0.00
1755	5408	2342	218.00	2.00	150.0000	0.00
1756	5407	634	185.00	2.00	150.0000	0.00
1757	634	2370	121.00	2.00	150.0000	0.00
1758	7063	2080	73.00	2.00	150.0000	0.00
1759	2080	2059	174.00	2.00	150.0000	0.00
1760	2059	8017	121.00	2.00	150.0000	0.00
1761	8017	2221	143.00	2.00	150.0000	0.00
1762	2221	2390	58.00	2.00	150.0000	0.00
1763	2390	2083	503.00	2.00	150.0000	0.00
1764	5409	5399	2574.00	8.00	150.0000	0.00
1765	5409	585	144.00	8.00	150.0000	0.00
1766	585	5410	840.00	8.00	150.0000	0.00
1767	5410	5411	942.00	4.00	150.0000	0.00
1768	5411	5412	549.00	4.00	150.0000	0.00
1769	5412	1482	348.00	3.00	150.0000	0.00
1770	1482	627	681.00	3.00	150.0000	0.00
1771	627	1569	447.00	3.00	150.0000	0.00
1772	1569	20	25.00	3.00	150.0000	0.00
1773	20	489	10.00	3.00	150.0000	0.00
1774	489	2610	161.00	3.00	150.0000	0.00
1775	2610	2197	113.00	3.00	150.0000	0.00
1776	5413	31	119.00	2.00	150.0000	0.00
1777	31	1245	15.00	2.00	150.0000	0.00
1778	5413	262	97.00	3.00	150.0000	0.00
1779	262	5412	1205.00	3.00	150.0000	0.00
1780	2197	5413	32.00	3.00	150.0000	0.00
1781	5410	5414	410.00	8.00	150.0000	0.00
1782	5414	5416	257.00	8.00	150.0000	0.00
1783	5416	5415	591.00	8.00	150.0000	0.00
1785	5417	5418	390.00	4.00	150.0000	0.00
1786	5418	2599	144.00	4.00	150.0000	0.00
1787	2599	5419	144.00	4.00	150.0000	0.00
1788	5419	5420	664.00	4.00	150.0000	0.00
1789	5420	5421	647.00	4.00	150.0000	0.00
1790	5421	5422	362.00	4.00	150.0000	0.00
1791	5422	5424	1118.00	3.00	150.0000	0.00
1792	5424	5425	40.00	3.00	150.0000	0.00
1793	5425	5426	11.00	2.00	150.0000	0.00
1794	5426	8028	60.00	2.00	150.0000	0.00
1795	8028	562	140.00	2.00	150.0000	0.00
1796	562	1025	20.00	2.00	150.0000	0.00
1797	1025	5427	67.00	2.00	150.0000	0.00
1798	5427	947	114.00	2.00	150.0000	0.00
1799	947	1167	86.00	2.00	150.0000	0.00
1800	5427	512	97.00	2.00	150.0000	0.00
1801	512	1271	31.00	2.00	150.0000	0.00
1802	1271	8040	52.00	2.00	150.0000	0.00
1803	8040	8042	26.00	2.00	150.0000	0.00
1804	8042	8041	21.00	2.00	150.0000	0.00
1805	8041	993	161.00	2.00	150.0000	0.00
1806	993	863	61.00	2.00	150.0000	0.00
1807	863	2161	26.00	2.00	150.0000	0.00
1808	2161	1366	67.00	2.00	150.0000	0.00
1809	5428	1123	31.00	2.00	150.0000	0.00
1810	1123	2640	303.00	2.00	150.0000	0.00
1811	2640	1337	56.00	2.00	150.0000	0.00
1812	1337	1042	125.00	2.00	150.0000	0.00
1813	1042	49	74.00	2.00	150.0000	0.00
1814	49	2401	73.00	2.00	150.0000	0.00
1815	2401	1404	56.00	2.00	150.0000	0.00
1816	1404	1211	113.00	2.00	150.0000	0.00
1817	1211	5429	106.00	2.00	150.0000	0.00

1818	5428	415	63.00	2.00	150.0000	0.00
1819	5429	590	258.00	2.00	150.0000	0.00
1820	590	1165	106.00	2.00	150.0000	0.00
1821	1165	540	60.00	2.00	150.0000	0.00
1822	540	91	191.00	2.00	150.0000	0.00
1823	91	1918	56.00	2.00	150.0000	0.00
1824	1918	1033	282.00	2.00	150.0000	0.00
1825	1033	596	88.00	2.00	150.0000	0.00
1826	596	5430	142.00	2.00	150.0000	0.00
1827	5430	5431	20.00	2.00	150.0000	0.00
1828	5431	5432	10.00	2.00	150.0000	0.00
1829	5432	645	52.00	2.00	150.0000	0.00
1830	645	2528	56.00	2.00	150.0000	0.00
1831	2528	817	111.00	2.00	150.0000	0.00
1832	817	1357	21.00	2.00	150.0000	0.00
1833	5432	5433	996.00	6.00	150.0000	0.00
1834	5432	5434	166.00	6.00	150.0000	0.00
1835	5430	5435	146.00	2.00	150.0000	0.00
1836	5429	2388	101.00	2.00	150.0000	0.00
1837	2388	1603	86.00	2.00	150.0000	0.00
1838	1603	8063	60.00	2.00	150.0000	0.00
1839	8063	168	75.00	2.00	150.0000	0.00
1840	168	513	245.00	2.00	150.0000	0.00
1841	513	2562	110.00	2.00	150.0000	0.00
1842	2562	90	251.00	2.00	150.0000	0.00
1843	90	5435	112.00	2.00	150.0000	0.00
1844	5435	5434	10.00	2.00	150.0000	0.00
1845	5434	1584	78.00	2.00	150.0000	0.00
1846	1584	1958	220.00	2.00	150.0000	0.00
1847	1958	163	196.00	2.00	150.0000	0.00
1848	163	2064	584.00	2.00	150.0000	0.00
1849	2064	1310	120.00	2.00	150.0000	0.00
1850	1310	83	130.00	2.00	150.0000	0.00
1851	83	560	174.00	2.00	150.0000	0.00
1852	560	297	191.00	2.00	150.0000	0.00
1853	5434	5436	319.00	6.00	150.0000	0.00
1854	297	5437	16.00	2.00	150.0000	0.00
1855	5437	5438	51.00	2.00	150.0000	0.00
1856	5438	826	224.00	2.00	150.0000	0.00
1857	826	86	100.00	2.00	150.0000	0.00
1858	86	960	300.00	2.00	150.0000	0.00
1859	960	2329	454.00	2.00	150.0000	0.00
1860	5439	5440	132.00	2.00	150.0000	0.00
1861	5439	1594	18.00	2.00	150.0000	0.00
1862	1594	5436	32.00	2.00	150.0000	0.00
1863	5436	1568	64.00	2.00	150.0000	0.00
1864	1568	559	50.00	2.00	150.0000	0.00
1865	559	2652	146.00	2.00	150.0000	0.00
1866	2652	153	110.00	2.00	150.0000	0.00
1867	153	8044	130.00	2.00	150.0000	0.00
1868	8044	1540	115.00	2.00	150.0000	0.00
1869	1540	1441	82.00	2.00	150.0000	0.00
1870	2329	5439	87.00	2.00	150.0000	0.00
1871	5436	5441	134.00	6.00	150.0000	0.00
1872	5438	5442	134.00	3.00	150.0000	0.00
1873	5442	5443	133.00	3.00	150.0000	0.00
1874	5443	2086	184.00	2.00	150.0000	0.00
1875	2086	436	140.00	2.00	150.0000	0.00
1876	436	8065	146.00	2.00	150.0000	0.00
1877	5443	2299	65.00	2.00	150.0000	0.00
1878	2299	5444	62.00	2.00	150.0000	0.00
1879	5444	5445	121.00	2.00	150.0000	0.00
1880	5445	300	93.00	2.00	150.0000	0.00
1881	300	5446	141.00	2.00	150.0000	0.00
1882	5437	5446	896.00	2.00	150.0000	0.00
1883	5443	5447	117.00	3.00	150.0000	0.00
1884	5440	1548	94.00	2.00	150.0000	0.00
1885	1548	430	55.00	2.00	150.0000	0.00
1886	430	148	100.00	2.00	150.0000	0.00
1887	148	887	251.00	2.00	150.0000	0.00
1888	887	804	50.00	2.00	150.0000	0.00

1889	5447	5448	237.00	3.00	150.0000	0.00
1890	5448	5449	152.00	6.00	150.0000	0.00
1891	5440	5441	55.00	6.00	150.0000	0.00
1892	5441	5450	100.00	6.00	150.0000	0.00
1893	5448	5450	615.00	6.00	150.0000	0.00
1894	5449	1008	84.00	2.00	150.0000	0.00
1895	1008	2651	36.00	2.00	150.0000	0.00
1896	2651	939	138.00	2.00	150.0000	0.00
1897	939	7064	102.00	2.00	150.0000	0.00
1898	7064	7065	10.00	2.00	150.0000	0.00
1899	7065	946	165.00	2.00	150.0000	0.00
1900	946	515	10.00	2.00	150.0000	0.00
1901	515	1452	46.00	2.00	150.0000	0.00
1902	1452	8019	34.00	2.00	150.0000	0.00
1903	5449	5451	124.00	6.00	150.0000	0.00
1904	5451	5452	159.00	6.00	150.0000	0.00
1905	5452	5454	17.00	6.00	150.0000	0.00
1906	5454	5453	28.00	6.00	150.0000	0.00
1907	5455	5456	10.00	2.00	150.0000	0.00
1908	5453	5455	20.00	2.00	150.0000	0.00
1909	5456	30	299.00	2.00	150.0000	0.00
1910	30	8023	50.00	2.00	150.0000	0.00
1911	8023	1014	35.00	2.00	150.0000	0.00
1912	1014	897	55.00	2.00	150.0000	0.00
1913	897	390	59.00	2.00	150.0000	0.00
1914	390	8020	20.00	2.00	150.0000	0.00
1915	8020	8021	34.00	2.00	150.0000	0.00
1916	8021	8027	10.00	2.00	150.0000	0.00
1917	8027	142	104.00	2.00	150.0000	0.00
1918	142	2002	188.00	2.00	150.0000	0.00
1919	2002	1083	15.00	2.00	150.0000	0.00
1920	2002	8049	60.00	2.00	150.0000	0.00
1921	5454	5457	359.00	3.00	150.0000	0.00
1922	5457	5458	342.00	3.00	150.0000	0.00
1923	5458	5428	54.00	3.00	150.0000	0.00
1924	5456	41	41.00	2.00	150.0000	0.00
1925	41	1399	84.00	2.00	150.0000	0.00
1926	1399	1288	231.00	2.00	150.0000	0.00
1927	1288	5428	367.00	2.00	150.0000	0.00
1928	5453	5459	45.00	2.00	150.0000	0.00
1929	5459	5460	75.00	2.00	150.0000	0.00
1930	5460	969	50.00	2.00	150.0000	0.00
1931	5460	2368	169.00	2.00	150.0000	0.00
1932	2368	2588	114.00	2.00	150.0000	0.00
1933	2588	8053	35.00	2.00	150.0000	0.00
1934	8053	5461	110.00	2.00	150.0000	0.00
1935	5449	5461	130.00	2.00	150.0000	0.00
1936	5461	727	50.00	2.00	150.0000	0.00
1937	727	139	25.00	2.00	150.0000	0.00
1938	139	2233	10.00	2.00	150.0000	0.00
1939	2233	814	300.00	2.00	150.0000	0.00
1940	814	5444	166.00	2.00	150.0000	0.00
1941	5446	720	139.00	2.00	150.0000	0.00
1942	720	2260	421.00	2.00	150.0000	0.00
1943	2260	2060	106.00	2.00	150.0000	0.00
1944	2060	5602	663.00	2.00	150.0000	0.00
1945	5602	2518	425.00	2.00	150.0000	0.00
1946	2518	2267	29.00	2.00	150.0000	0.00
1947	2267	2466	14.00	2.00	150.0000	0.00
1948	5415	5417	55.00	6.00	150.0000	0.00
1950	5463	5462	928.00	6.00	150.0000	0.00
1951	5455	5464	844.00	2.00	150.0000	0.00
1952	5453	5417	454.00	6.00	150.0000	0.00
1953	5459	5465	300.00	2.00	150.0000	0.00
1954	5418	5464	20.00	2.00	150.0000	0.00
1955	5464	292	120.00	2.00	150.0000	0.00
1956	292	464	10.00	2.00	150.0000	0.00
1957	464	418	321.00	2.00	150.0000	0.00
1958	418	46	264.00	2.00	150.0000	0.00
1959	46	1611	101.00	2.00	150.0000	0.00
1960	1611	507	81.00	2.00	150.0000	0.00

1961	507	5466	235.00	2.00	150.0000	0.00
1962	5466	962	85.00	2.00	150.0000	0.00
1963	962	8034	54.00	2.00	150.0000	0.00
1964	8034	8029	65.00	2.00	150.0000	0.00
1965	8029	8030	146.00	2.00	150.0000	0.00
1966	8030	5467	121.00	2.00	150.0000	0.00
1967	5467	1502	65.00	2.00	150.0000	0.00
1968	5468	1637	44.00	2.00	150.0000	0.00
1969	5422	5468	184.00	2.00	150.0000	0.00
1970	1502	5468	90.00	2.00	150.0000	0.00
1971	5467	8036	270.00	2.00	150.0000	0.00
1972	8036	1486	48.00	2.00	150.0000	0.00
1973	1486	534	37.00	2.00	150.0000	0.00
1974	534	8031	168.00	2.00	150.0000	0.00
1975	8031	2035	63.00	2.00	150.0000	0.00
1976	2035	994	116.00	2.00	150.0000	0.00
1977	994	5466	119.00	2.00	150.0000	0.00
1978	5422	5423	50.00	2.00	150.0000	0.00
1979	5423	607	75.00	2.00	150.0000	0.00
1980	607	2239	50.00	2.00	150.0000	0.00
1981	2239	12	75.00	2.00	150.0000	0.00
1982	12	957	85.00	2.00	150.0000	0.00
1983	957	117	65.00	2.00	150.0000	0.00
1984	117	116	55.00	2.00	150.0000	0.00
1985	116	391	50.00	2.00	150.0000	0.00
1986	391	1417	65.00	2.00	150.0000	0.00
1987	1417	936	68.00	2.00	150.0000	0.00
1988	936	758	62.00	2.00	150.0000	0.00
1989	758	5426	506.00	2.00	150.0000	0.00
1990	5423	1311	10.00	2.00	150.0000	0.00
1991	1311	457	60.00	2.00	150.0000	0.00
1992	457	973	171.00	2.00	150.0000	0.00
1993	973	38	164.00	2.00	150.0000	0.00
1994	38	738	66.00	2.00	150.0000	0.00
1995	738	934	59.00	2.00	150.0000	0.00
1996	934	528	80.00	2.00	150.0000	0.00
1997	528	93	43.00	2.00	150.0000	0.00
1998	93	1394	391.00	2.00	150.0000	0.00
1999	1394	806	150.00	2.00	150.0000	0.00
2000	806	8035	150.00	2.00	150.0000	0.00
2001	8035	5469	66.00	2.00	150.0000	0.00
2002	5469	1554	75.00	2.00	150.0000	0.00
2003	1554	269	457.00	2.00	150.0000	0.00
2004	269	270	33.00	2.00	150.0000	0.00
2005	5464	2608	128.00	2.00	150.0000	0.00
2006	270	2608	193.00	2.00	150.0000	0.00
2007	5433	1358	241.00	6.00	150.0000	0.00
2008	1358	279	185.00	6.00	150.0000	0.00
2009	279	5470	167.00	6.00	150.0000	0.00
2010	5470	101	103.00	4.00	150.0000	0.00
2011	5470	913	73.00	2.00	150.0000	0.00
2012	913	67	44.00	2.00	150.0000	0.00
2013	101	2347	144.00	4.00	150.0000	0.00
2014	67	227	116.00	2.00	150.0000	0.00
2015	227	100	123.00	2.00	150.0000	0.00
2016	100	131	108.00	2.00	150.0000	0.00
2017	131	141	175.00	2.00	150.0000	0.00
2018	2347	600	500.00	4.00	150.0000	0.00
2019	141	649	49.00	2.00	150.0000	0.00
2020	649	551	157.00	2.00	150.0000	0.00
2021	551	1197	120.00	2.00	150.0000	0.00
2022	1197	484	55.00	2.00	150.0000	0.00
2023	484	1570	49.00	2.00	150.0000	0.00
2024	1570	1308	25.00	2.00	150.0000	0.00
2025	1308	1432	180.00	2.00	150.0000	0.00
2026	1432	671	162.00	2.00	150.0000	0.00
2027	600	589	798.00	4.00	150.0000	0.00
2028	671	1328	121.00	2.00	150.0000	0.00
2029	1328	5471	222.00	2.00	150.0000	0.00
2030	589	5472	305.00	4.00	150.0000	0.00
2031	5471	5472	30.00	2.00	150.0000	0.00

2032	5471	1102	13.00	2.00	150.0000	0.00
2033	1102	1095	60.00	2.00	150.0000	0.00
2034	1095	951	30.00	2.00	150.0000	0.00
2035	951	1094	81.00	2.00	150.0000	0.00
2036	1094	874	111.00	2.00	150.0000	0.00
2037	874	624	70.00	2.00	150.0000	0.00
2038	624	827	100.00	2.00	150.0000	0.00
2039	827	705	15.00	2.00	150.0000	0.00
2040	5472	2410	535.00	4.00	150.0000	0.00
2041	2410	640	73.00	4.00	150.0000	0.00
2042	640	5473	37.00	4.00	150.0000	0.00
2043	705	5474	242.00	2.00	150.0000	0.00
2044	5473	1991	85.00	3.00	150.0000	0.00
2045	1991	2609	68.00	3.00	150.0000	0.00
2046	5477	1305	120.00	2.00	150.0000	0.00
2047	1305	251	55.00	2.00	150.0000	0.00
2048	251	1497	50.00	2.00	150.0000	0.00
2049	2609	1870	551.00	3.00	150.0000	0.00
2050	1870	5475	103.00	3.00	150.0000	0.00
2051	5475	1668	16.00	2.00	150.0000	0.00
2052	5475	5476	30.00	2.00	150.0000	0.00
2053	1497	5476	550.00	2.00	150.0000	0.00
2054	5476	2100	130.00	2.00	150.0000	0.00
2055	2100	1424	32.00	2.00	150.0000	0.00
2056	1424	1496	78.00	2.00	150.0000	0.00
2057	1496	1822	235.00	2.00	150.0000	0.00
2058	1822	291	63.00	2.00	150.0000	0.00
2059	291	5470	134.00	2.00	150.0000	0.00
2060	5474	5477	36.00	2.00	150.0000	0.00
2061	5474	5478	149.00	2.00	150.0000	0.00
2062	5478	1542	81.00	2.00	150.0000	0.00
2063	1542	2654	69.00	2.00	150.0000	0.00
2064	5478	5483	351.00	2.00	150.0000	0.00
2065	5477	642	404.00	2.00	150.0000	0.00
2066	642	370	53.00	2.00	150.0000	0.00
2067	862	525	207.00	2.00	150.0000	0.00
2068	525	92	553.00	2.00	150.0000	0.00
2069	92	2510	255.00	2.00	150.0000	0.00
2070	2510	1790	33.00	2.00	150.0000	0.00
2071	1790	1341	32.00	2.00	150.0000	0.00
2072	1341	5479	297.00	2.00	150.0000	0.00
2073	5479	5480	323.00	2.00	150.0000	0.00
2074	5480	1828	10.00	2.00	150.0000	0.00
2075	1828	995	10.00	2.00	150.0000	0.00
2076	1898	1828	83.00	2.00	150.0000	0.00
2077	5479	5485	172.00	2.00	150.0000	0.00
2078	1736	209	56.00	2.00	150.0000	0.00
2079	209	282	12.00	2.00	150.0000	0.00
2080	282	354	29.00	2.00	150.0000	0.00
2081	354	1078	76.00	2.00	150.0000	0.00
2082	1078	1044	99.00	2.00	150.0000	0.00
2083	1044	266	65.00	2.00	150.0000	0.00
2084	266	1686	151.00	2.00	150.0000	0.00
2085	1686	729	274.00	2.00	150.0000	0.00
2086	729	813	251.00	2.00	150.0000	0.00
2087	813	1437	103.00	2.00	150.0000	0.00
2088	1437	2447	77.00	2.00	150.0000	0.00
2089	2447	1168	90.00	2.00	150.0000	0.00
2090	1168	605	25.00	2.00	150.0000	0.00
2091	605	307	25.00	2.00	150.0000	0.00
2092	307	5481	360.00	2.00	150.0000	0.00
2093	370	5481	49.00	2.00	150.0000	0.00
2094	5483	862	56.00	2.00	150.0000	0.00
2095	5473	5482	532.00	3.00	150.0000	0.00
2096	5482	5484	589.00	3.00	150.0000	0.00
2097	5485	1736	71.00	2.00	150.0000	0.00
2098	5481	5482	30.00	3.00	150.0000	0.00
2099	5482	5483	10.00	3.00	150.0000	0.00
2100	5484	5485	31.00	3.00	150.0000	0.00
2101	5463	2534	246.00	6.00	150.0000	0.00
2102	2534	999	1154.00	6.00	150.0000	0.00

2103	999	5486	208.00	6.00	150.0000	0.00	
2104	5486	5489	2591.00	6.00	150.0000	0.00	
2105	5488	5490	43.00	4.00	150.0000	0.00	
2106	5490	5615	255.00	3.00	150.0000	0.00	
2107	5488	5616	109.00	3.00	150.0000	0.00	
2108	5489	5487	470.00	6.00	150.0000	0.00	
2109	5615	5491	48.00	3.00	150.0000	0.00	
2110	5616	5492	727.00	3.00	150.0000	0.00	
2111	5491	5493	552.00	3.00	150.0000	0.00	
2112	5487	5494	1626.00	6.00	150.0000	0.00	
2113	5492	5495	1250.00	3.00	150.0000	0.00	
2114	5494	5495	10.00	6.00	150.0000	0.00	
2115	5614WTMidlake-		18.00	6.00	150.0000	0.00	
2116	FGN-AA	5614	30.00	6.00	150.0000	0.00	
2117-CV	FGN-TT	5496	243.00	10.00	150.0000	0.00	
2118-XX		5494	182.00	6.00	150.0000	0.00	
2119		5495	237.00	3.00	150.0000	0.00	
2120-XX		5498	10.00	3.00	150.0000	0.00	
2121		5497	4567.00	6.00	150.0000	0.00	
2122		2126	375.00	6.00	150.0000	0.00	
2123		2019	3934.00	6.00	150.0000	0.00	
2124		5499	924.00	2.00	150.0000	0.00	
2125		2084	1195.00	2.00	150.0000	0.00	
2126		1994	716.00	6.00	150.0000	0.00	
2127		5499	668	6.00	150.0000	0.00	
2128		668	5500	211.00	6.00	150.0000	0.00
2129		5500	1916	89.00	2.00	150.0000	0.00
2130		1916	2678	436.00	2.00	150.0000	0.00
2131		2678	2196	58.00	2.00	150.0000	0.00
2132		5500	5501	1559.00	6.00	150.0000	0.00
2133		5502	8022	174.00	4.00	150.0000	0.00
2134		2644	1719	433.00	3.00	150.0000	0.00
2135		121	8022	1611.00	6.00	150.0000	0.00
2136		5503	2644	1072.00	3.00	150.0000	0.00
2137		1719	1911	752.00	3.00	150.0000	0.00
2139		1911	5661	121.00	3.00	150.0000	0.00
2143		8022	J-34	1209.00	4.00	150.0000	0.00
2144		5506	2481	1845.00	8.00	150.0000	0.00
2145		2481	2300	1363.00	8.00	150.0000	0.00
2146		2300	1104	2502.00	8.00	150.0000	0.00
2147		1104	5507	1706.00	8.00	150.0000	0.00
2148		5507	2224	1355.00	8.00	150.0000	0.00
2149		2224	5508	1201.00	8.00	150.0000	0.00
2150		5508	2662	161.00	2.00	150.0000	0.00
2151		2662	1816	204.00	2.00	150.0000	0.00
2152		1816	2245	121.00	2.00	150.0000	0.00
2153		2245	1052	818.00	2.00	150.0000	0.00
2154		1052	1976	773.00	2.00	150.0000	0.00
2155		1976	462	256.00	2.00	150.0000	0.00
2156		462	1565	378.00	1.00	150.0000	0.00
2157		1565	1519	254.00	1.00	150.0000	0.00
2158		5508	755	5510.00	8.00	150.0000	0.00
2159		755	1541	332.00	8.00	150.0000	0.00
2160		1541	2281	407.00	8.00	150.0000	0.00
2161		2281	5509	2095.00	8.00	150.0000	0.00
2162		5509	1982	282.00	8.00	150.0000	0.00
2163		1982	5510	547.00	8.00	150.0000	0.00
2164		5510	5621	356.00	8.00	150.0000	0.00
2165		5621	5514	432.00	8.00	150.0000	0.00
2166		5514	5622	110.00	2.00	150.0000	0.00
2167		5511	5623	178.00	8.00	150.0000	0.00
2168		5623	5624	110.00	2.00	150.0000	0.00
2169		5623	5515	519.00	8.00	150.0000	0.00
2170		5514	5511	130.00	8.00	150.0000	0.00
2171		5515	5516	8715.00	6.00	150.0000	0.00
2172		5516	5517	66.00	6.00	150.0000	0.00
2173		5517	5518	1643.00	3.00	150.0000	0.00
2174		5518	5519	1140.00	3.00	150.0000	0.00
2175		5519	5520	800.00	3.00	150.0000	0.00
2176		5520	5521	239.00	3.00	150.0000	0.00
2177		5521	501	15.00	3.00	150.0000	0.00
		5521	84	15.00	3.00	150.0000	0.00

2178	84	2544	25.00	3.00	150.0000	0.00
2179	5520	5522	420.00	3.00	150.0000	0.00
2180	5522	75	15.00	3.00	150.0000	0.00
2181	5522	61	15.00	3.00	150.0000	0.00
2182	5519	2685	731.00	3.00	150.0000	0.00
2183	2685	2708	107.00	3.00	150.0000	0.00
2184	2708	2663	97.00	3.00	150.0000	0.00
2185	2663	2240	105.00	3.00	150.0000	0.00
2186	5518	5523	1432.00	3.00	150.0000	0.00
2187	5523	843	3060.00	3.00	150.0000	0.00
2188	843	2045	41.00	3.00	150.0000	0.00
2189	2045	1672	112.00	3.00	150.0000	0.00
2190	1672	5524	101.00	3.00	150.0000	0.00
2191	5524	178	59.00	2.00	150.0000	0.00
2192	178	2709	51.00	2.00	150.0000	0.00
2193	2709	1664	41.00	2.00	150.0000	0.00
2194	1664	1977	20.00	2.00	150.0000	0.00
2195	1977	110	70.00	2.00	150.0000	0.00
2196	5524	5525	611.00	3.00	150.0000	0.00
2197	5525	5526	84.00	3.00	150.0000	0.00
2198	2587	2285	432.00	2.00	150.0000	0.00
2199	5526	2482	110.00	2.00	150.0000	0.00
2200	2482	1532	30.00	2.00	150.0000	0.00
2201	1532	2354	99.00	2.00	150.0000	0.00
2202	2354	198	203.00	2.00	150.0000	0.00
2203	5525	5527	20.00	3.00	150.0000	0.00
2204	151	2586	65.00	1.00	150.0000	0.00
2205	5527	151	38.00	1.00	150.0000	0.00
2206	5527	5528	194.00	3.00	150.0000	0.00
2207	5528	5529	769.00	3.00	150.0000	0.00
2208	5529	614	121.00	2.50	150.0000	0.00
2209	614	253	179.00	2.50	150.0000	0.00
2210	253	2484	100.00	2.50	150.0000	0.00
2211	2484	2483	131.00	2.50	150.0000	0.00
2212	1945	2483	1321.00	2.50	150.0000	0.00
2213	1945	5530	207.00	2.50	150.0000	0.00
2214	5530	2519	388.00	2.00	150.0000	0.00
2215	2519	2327	82.00	2.00	150.0000	0.00
2216	2327	1333	46.00	2.00	150.0000	0.00
2217	1333	1779	63.00	2.00	150.0000	0.00
2218	1779	2186	91.00	2.00	150.0000	0.00
2219	2186	5531	199.00	2.00	150.0000	0.00
2220	5531	2133	133.00	2.00	150.0000	0.00
2221	2133	1001	130.00	2.00	150.0000	0.00
2222	5531	1655	100.00	2.00	150.0000	0.00
2223	1655	2213	634.00	2.00	150.0000	0.00
2224	2213	2097	187.00	2.00	150.0000	0.00
2225	2097	5532	291.00	2.00	150.0000	0.00
2226	5517	2286	2293.00	6.00	150.0000	0.00
2227	2286	823	203.00	6.00	150.0000	0.00
2228	823	5533	446.00	6.00	150.0000	0.00
2229	5533	5534	136.00	6.00	1560.0000	0.00
2230	5534	1513	121.00	2.00	150.0000	0.00
2231	1513	320	274.00	2.00	150.0000	0.00
2232	320	2279	171.00	2.00	150.0000	0.00
2233	5534	5535	160.00	6.00	150.0000	0.00
2234	5535	375	575.00	2.00	150.0000	0.00
2235	375	548	60.00	2.00	150.0000	0.00
2236	548	2377	170.00	2.00	150.0000	0.00
2237	2377	2495	340.00	2.00	150.0000	0.00
2238	5533	2208	369.00	2.00	150.0000	0.00
2239	2208	5666	412.00	2.00	150.0000	0.00
2240	5666	1539	1426.00	2.00	150.0000	0.00
2241	1539	1589	31.00	2.00	150.0000	0.00
2242	1589	284	460.00	2.00	150.0000	0.00
2243	284	2597	25.00	2.00	150.0000	0.00
2244	5535	5536	470.00	6.00	150.0000	0.00
2245	5536	662	430.00	2.00	150.0000	0.00
2246	662	2621	140.00	2.00	150.0000	0.00
2247	2621	2096	300.00	2.00	150.0000	0.00
2248	2096	663	671.00	2.00	150.0000	0.00

2249	5536	5538	333.00	6.00	150.0000	0.00
2250	5538	5537	198.00	6.00	150.0000	0.00
2251	5539	5540	1808.00	4.00	150.0000	0.00
2252	5540	5541	575.00	3.00	150.0000	0.00
2253	5541	5542	785.00	3.00	150.0000	0.00
2254	5505	1934	4089.00	4.00	150.0000	0.00
2255	1934	2154	2602.00	4.00	150.0000	0.00
2256	2154	2192	3373.00	4.00	150.0000	0.00
2257	2192	8066	57.00	4.00	150.0000	0.00
2258	8066	1764	161.00	4.00	150.0000	0.00
2259	1764	5543	43.00	4.00	150.0000	0.00
2260	5543	2336	703.00	2.00	150.0000	0.00
2261	5543	1650	253.00	4.00	150.0000	0.00
2262	1650	1935	455.00	4.00	150.0000	0.00
2263	1935	2357	594.00	4.00	150.0000	0.00
2264	2357	2705	52.00	4.00	150.0000	0.00
2265	2705	5544	1823.00	4.00	150.0000	0.00
2266	5544	1768	108.00	2.00	150.0000	0.00
2267	1768	2553	172.00	2.00	150.0000	0.00
2268	2553	1796	156.00	2.00	150.0000	0.00
2269	1796	1793	716.00	2.00	150.0000	0.00
2270	1793	1797	123.00	2.00	150.0000	0.00
2271	1797	5545	344.00	2.00	150.0000	0.00
2272	5545	1783	30.00	2.00	150.0000	0.00
2273	1783	2363	24.00	2.00	150.0000	0.00
2274-XX	5502	5545	14880.00	10.00	150.0000	0.00
2275	5544	2561	107.00	4.00	150.0000	0.00
2276	2561	2502	1250.00	4.00	150.0000	0.00
2277	2502	1734	50.00	4.00	150.0000	0.00
2278	1734	1785	568.00	4.00	150.0000	0.00
2279	1785	2661	26.00	4.00	150.0000	0.00
2280	2661	1444	429.00	4.00	150.0000	0.00
2281	1444	54	172.00	4.00	150.0000	0.00
2282	54	1787	280.00	4.00	150.0000	0.00
2283	1787	5546	80.00	4.00	150.0000	0.00
2284	5546	1810	125.00	2.00	150.0000	0.00
2285	1810	2636	263.00	2.00	150.0000	0.00
2286	2636	2366	52.00	2.00	150.0000	0.00
2287	2366	8046	49.00	2.00	150.0000	0.00
2288	5546	1782	408.00	4.00	150.0000	0.00
2289	1782	1636	53.00	4.00	150.0000	0.00
2290	1636	1795	318.00	4.00	150.0000	0.00
2291	1795	1770	286.00	4.00	150.0000	0.00
2292	1786	5548	210.00	2.00	150.0000	0.00
2293	1786	1807	355.00	2.00	150.0000	0.00
2294	5547	2375	210.00	1.00	150.0000	0.00
2295	1770	5547	193.00	4.00	150.0000	0.00
2296	5548	1808	30.00	2.00	150.0000	0.00
2297	5547	5548	50.00	4.00	150.0000	0.00
2298	5548	2581	192.00	4.00	150.0000	0.00
2299	2581	487	153.00	4.00	150.0000	0.00
2300	5549	1801	639.00	2.00	150.0000	0.00
2301	1801	2386	264.00	2.00	150.0000	0.00
2302	2386	1806	1515.00	2.00	150.0000	0.00
2303	1806	1766	156.00	2.00	150.0000	0.00
2304	5549	5550	689.00	3.00	150.0000	0.00
2305	5550	1791	114.00	3.00	150.0000	0.00
2306	1791	1767	531.00	3.00	150.0000	0.00
2307	1767	1769	2016.00	3.00	150.0000	0.00
2308	1769	5551	40.00	3.00	150.0000	0.00
2309	5551	5552	50.00	3.00	150.0000	0.00
2310	5552	1802	125.00	3.00	150.0000	0.00
2311	5552	2157	40.00	2.00	150.0000	0.00
2312	2157	2671	229.00	2.00	150.0000	0.00
2313	2671	1772	170.00	2.00	150.0000	0.00
2314	5551	5553	635.00	3.00	150.0000	0.00
2315	5553	1799	248.00	2.50	150.0000	0.00
2316	1799	315	770.00	2.50	150.0000	0.00
2317	315	1765	240.00	2.50	150.0000	0.00
2318	1765	2138	573.00	2.50	150.0000	0.00
2319	2138	1792	334.00	2.50	150.0000	0.00

2320	1792	1692	154.00	2.00	150.0000	0.00
2321	1692	5554	168.00	2.00	150.0000	0.00
2322	5554	1560	31.00	2.00	150.0000	0.00
2323	1560	1096	1077.00	2.00	150.0000	0.00
2324	1096	1135	73.00	2.00	150.0000	0.00
2325	1135	2540	513.00	2.00	150.0000	0.00
2326	2540	1804	309.00	2.00	150.0000	0.00
2327	1804	2287	206.00	2.00	150.0000	0.00
2328	2287	1803	263.00	2.00	150.0000	0.00
2329	1803	1047	28.00	2.00	150.0000	0.00
2330	1047	1789	1559.00	2.00	150.0000	0.00
2331	5553	2582	230.00	3.00	150.0000	0.00
2332	2582	5555	108.00	3.00	150.0000	0.00
2333	5555	428	175.00	1.00	150.0000	0.00
2334	5555	2212	706.00	2.50	150.0000	0.00
2335	2212	2601	223.00	2.50	150.0000	0.00
2336	2601	1798	138.00	2.50	150.0000	0.00
2337	1798	5556	540.00	2.50	150.0000	0.00
2338	5556	1778	1340.00	2.00	150.0000	0.00
2339	5556	7074	1165.00	2.00	150.0000	0.00
2340	487	2635	162.00	4.00	150.0000	0.00
2341	5609	505	1760.00	6.00	150.0000	0.00
2342	505	485	27.00	6.00	150.0000	0.00
2343	485	461	73.00	6.00	150.0000	0.00
2344	461	460	100.00	6.00	150.0000	0.00
2345	460	5557	845.00	6.00	150.0000	0.00
2346	5557	1465	110.00	6.00	150.0000	0.00
2347	1465	503	88.00	6.00	150.0000	0.00
2348	503	1061	115.00	6.00	150.0000	0.00
2349	1061	5558	10.00	6.00	150.0000	0.00
2350	5558	5559	28.00	3.00	150.0000	0.00
2351	5558	532	579.00	2.00	150.0000	0.00
2352	532	2068	392.00	2.00	150.0000	0.00
2353	5559	5561	454.00	1.00	150.0000	0.00
2354	5561	5560	495.00	1.00	150.0000	0.00
2355	2068	2491	591.00	2.00	150.0000	0.00
2356	2491	5562	1542.00	2.00	150.0000	0.00
2357	5559	1732	197.00	3.00	150.0000	0.00
2358	1732	1895	760.00	3.00	150.0000	0.00
2359	1895	335	50.00	3.00	150.0000	0.00
2360	335	5563	149.00	3.00	150.0000	0.00
2361	161	286	15.00	2.00	150.0000	0.00
2362	5563	5564	80.00	2.00	150.0000	0.00
2363	5564	598	75.00	2.00	150.0000	0.00
2364	5564	304	607.00	2.00	150.0000	0.00
2365	304	25	121.00	2.00	150.0000	0.00
2366	5563	1119	818.00	3.00	150.0000	0.00
2367	1119	1478	149.00	3.00	150.0000	0.00
2368	1478	9	1064.00	3.00	150.0000	0.00
2369	9	912	581.00	3.00	150.0000	0.00
2370	912	321	155.00	3.00	150.0000	0.00
2371	321	5565	502.00	3.00	150.0000	0.00
2372	5565	5566	24.00	4.00	150.0000	0.00
2373	5566	833	60.00	2.50	150.0000	0.00
2374	833	1118	67.00	2.50	150.0000	0.00
2375	1118	5567	1345.00	2.50	150.0000	0.00
2376	5565	1683	110.00	2.00	150.0000	0.00
2377	1683	1585	346.00	2.00	150.0000	0.00
2378	216	1517	251.00	2.00	150.0000	0.00
2379	1517	2560	315.00	2.00	150.0000	0.00
2380	2560	824	485.00	2.00	150.0000	0.00
2381	824	898	446.00	2.00	150.0000	0.00
2382	1585	216	252.00	2.00	150.0000	0.00
2383	5566	5568	80.00	4.00	150.0000	0.00
2384	5568	5569	3645.00	4.00	150.0000	0.00
2385	5569	2568	1811.00	2.00	150.0000	0.00
2386	2568	2569	118.00	2.00	150.0000	0.00
2387	5040	1909	1964.00	2.50	150.0000	0.00
2388	1909	1112	102.00	2.50	150.0000	0.00
2389	1112	2477	491.00	2.50	150.0000	0.00
2390	2477	1344	597.00	2.50	150.0000	0.00

2391	1344	546	383.00	2.50	150.0000	0.00
2392	546	1836	66.00	2.50	150.0000	0.00
2393	1836	1113	125.00	2.50	150.0000	0.00
2394	1113	1390	92.00	2.50	150.0000	0.00
2395	1390	2626	121.00	2.50	150.0000	0.00
2396	2626	1339	71.00	2.50	150.0000	0.00
2397	1339	2209	20.00	2.50	150.0000	0.00
2398	5570	1156	349.00	4.00	150.0000	0.00
2399	1156	5040	531.00	4.00	150.0000	0.00
2400	5040	1467	711.00	4.00	150.0000	0.00
2401	5375	126	110.00	3.00	150.0000	0.00
2402	126	1690	185.00	3.00	150.0000	0.00
2403	1690	2207	278.00	3.00	150.0000	0.00
2404	2207	2088	223.00	3.00	150.0000	0.00
2405	2088	1617	291.00	3.00	150.0000	0.00
2406	1617	1610	474.00	3.00	150.0000	0.00
2407	1610	5356	329.00	3.00	150.0000	0.00
2408	5374	481	81.00	2.00	150.0000	0.00
2409	779	547	55.00	2.00	150.0000	0.00
2410	547	77	229.00	4.00	150.0000	0.00
2411	1616	5364	114.00	3.00	150.0000	0.00
2412	5569	195	988.00	4.00	150.0000	0.00
2413	195	2570	902.00	4.00	150.0000	0.00
2414	2570	2572	272.00	4.00	150.0000	0.00
2415	2572	2573	201.00	4.00	150.0000	0.00
2416	2573	2574	251.00	4.00	150.0000	0.00
2417	2574	2575	101.00	4.00	150.0000	0.00
2418	2575	2576	83.00	4.00	150.0000	0.00
2419	2576	2632	332.00	4.00	150.0000	0.00
2420	2632	2693	49.00	4.00	150.0000	0.00
2421	2693	2577	26.00	4.00	150.0000	0.00
2422	2577	5571	2869.00	4.00	150.0000	0.00
2423	5571	1961	1034.00	6.00	150.0000	0.00
2424	1961	5573	1095.00	6.00	150.0000	0.00
2425	5573	1099	60.00	1.00	150.0000	0.00
2426	5574	1652	180.00	1.00	150.0000	0.00
2427	5574	5574	110.00	1.00	150.0000	0.00
2428	5573	1281	261.00	4.00	150.0000	0.00
2429	1281	204	140.00	4.00	150.0000	0.00
2430	204	1678	140.00	4.00	150.0000	0.00
2431	1678	5575	191.00	4.00	150.0000	0.00
2432	5575	790	80.00	6.00	150.0000	0.00
2433	5575	992	321.00	4.00	150.0000	0.00
2434	790	1040	321.00	6.00	150.0000	0.00
2435	992	2051	358.00	4.00	150.0000	0.00
2436	2051	5576	157.00	4.00	150.0000	0.00
2437	5576	1833	173.00	4.00	150.0000	0.00
2438	1833	1656	174.00	4.00	150.0000	0.00
2439	1656	5577	547.00	4.00	150.0000	0.00
2440	5577	2284	70.00	1.00	150.0000	0.00
2441	5578	5397	2555.00	6.00	150.0000	0.00
2444	1995	1826	94.00	6.00	150.0000	0.00
2445	1826	2405	59.00	6.00	150.0000	0.00
2446	2284	232	169.00	1.00	150.0000	0.00
2447	232	2173	103.00	1.00	150.0000	0.00
2448	5577	1315	618.00	2.00	150.0000	0.00
2449	1315	1520	245.00	2.00	150.0000	0.00
2450	1520	1834	274.00	2.00	150.0000	0.00
2451	1834	2319	51.00	2.00	150.0000	0.00
2452	2319	2667	262.00	2.00	150.0000	0.00
2453	2667	1674	55.00	2.00	150.0000	0.00
2454	1674	2415	497.00	2.00	150.0000	0.00
2455	1040	1963	1838.00	6.00	150.0000	0.00
2456	1963	5580	476.00	6.00	150.0000	0.00
2457	5580	2039	262.00	2.00	150.0000	0.00
2458	2039	1777	247.00	2.00	150.0000	0.00
2459	1777	188	852.00	2.00	150.0000	0.00
2460	188	2155	60.00	2.00	150.0000	0.00
2461	2155	2103	1005.00	2.00	150.0000	0.00
2462	2103	210	1966.00	2.00	150.0000	0.00
2463	210	683	515.00	2.00	150.0000	0.00

2464	5581	5580	2920.00	6.00	150.0000	0.00
2465	5581	1218	639.00	2.00	150.0000	0.00
2466	5581	1236	770.00	6.00	150.0000	0.00
2467	1236	2164	152.00	6.00	150.0000	0.00
2468	2164	5582	742.00	6.00	150.0000	0.00
2469	5582	1974	1382.00	6.00	150.0000	0.00
2470	1974	2464	203.00	6.00	150.0000	0.00
2471	2464	1087	1046.00	6.00	150.0000	0.00
2472	1087	650	405.00	6.00	150.0000	0.00
2473	650	948	769.00	6.00	150.0000	0.00
2474	948	950	502.00	6.00	150.0000	0.00
2475	950	949	151.00	6.00	150.0000	0.00
2476	949	5583	4155.00	6.00	150.0000	0.00
2477	5584	5585	120.00	10.00	150.0000	0.00
2479	5583	Hwy83	143.00	6.00	150.0000	0.00
2480	5585	263	4842.00	4.00	150.0000	0.00
2481	5586	28	1631.00	2.50	150.0000	0.00
2482	28	654	94.00	2.50	150.0000	0.00
2483	5586	1238	453.00	2.00	150.0000	0.00
2484	1238	875	5649.00	2.00	150.0000	0.00
2485	875	1015	243.00	2.00	150.0000	0.00
2486	263	5586	553.00	4.00	150.0000	0.00
2487	5584	162	289.00	10.00	150.0000	0.00
2488	162	5587	2240.00	10.00	150.0000	0.00
2489	5587	1658	185.00	4.00	150.0000	0.00
2490	5587	5588	813.00	10.00	150.0000	0.00
2491	5588	380	1402.00	2.00	150.0000	0.00
2492	380	359	625.00	2.00	150.0000	0.00
2493	359	1657	196.00	2.00	150.0000	0.00
2494	5588	5589	3189.00	10.00	150.0000	0.00
2495	5589	1262	232.00	10.00	150.0000	0.00
2496	1262	5590	489.00	10.00	150.0000	0.00
2497	5590	770	81.00	8.00	150.0000	0.00
2498	770	1342	324.00	8.00	150.0000	0.00
2499	5590	2669	198.00	10.00	150.0000	0.00
2500	2669	1223	100.00	10.00	150.0000	0.00
2501	1184	1223	206.00	10.00	150.0000	0.00
2502	1184	1170	615.00	10.00	150.0000	0.00
2503	1170	2383	10.00	8.00	150.0000	0.00
2504	1170	361	131.00	10.00	150.0000	0.00
2505	361	2340	15.00	10.00	150.0000	0.00
2506	2340	1819	130.00	10.00	150.0000	0.00
2507	1819	1990	26.00	10.00	150.0000	0.00
2508	1990	5591	836.00	10.00	150.0000	0.00
2509	5591	2030	2556.00	8.00	150.0000	0.00
2510	2030	610	84.00	4.00	150.0000	0.00
2511	610	407	73.00	4.00	150.0000	0.00
2512	407	982	1141.00	4.00	150.0000	0.00
2513	982	1160	305.00	4.00	150.0000	0.00
2514	1160	619	1021.00	4.00	150.0000	0.00
2515	619	5592	1049.00	2.50	150.0000	0.00
2516	5592	2098	1854.00	2.00	150.0000	0.00
2517	2098	1453	51.00	2.00	150.0000	0.00
2518	5592	5593	897.00	2.00	150.0000	0.00
2519	5593	2468	435.00	2.00	150.0000	0.00
2520	2468	2237	1919.00	2.00	150.0000	0.00
2521	2237	5594	833.00	2.00	150.0000	0.00
2522	5594	1115	402.00	1.00	150.0000	0.00
2523	5594	1428	146.00	2.00	150.0000	0.00
2524	1428	39	1866.00	2.00	150.0000	0.00
2525	355	1679	19.00	2.00	150.0000	0.00
2526	1679	1889	1512.00	2.00	150.0000	0.00
2527	1889	2044	973.00	2.00	150.0000	0.00
2528	2044	2365	576.00	2.00	150.0000	0.00
2529	39	355	94.00	2.00	150.0000	0.00
2530	5591	1393	54.00	12.00	150.0000	0.00
2531	1393	5595	1970.00	12.00	150.0000	0.00
2532	5595	1419	575.00	2.00	150.0000	0.00
2533	1419	1910	762.00	2.00	150.0000	0.00
2534	1910	5596	49.00	2.00	150.0000	0.00
2535	5596	772	55.00	1.00	150.0000	0.00

2536	5595	644	1928.00	12.00	150.0000	0.00
2537	644	89	10.00	8.00	150.0000	0.00
2538	644	1781	3707.00	12.00	150.0000	0.00
2539	1781	771	446.00	12.00	150.0000	0.00
2540	771	5597	808.00	12.00	150.0000	0.00
2541	5597	1491	5270.00	12.00	150.0000	0.00
2542	1491	2584	75.00	12.00	150.0000	0.00
2543	2584	2021	77.00	12.00	150.0000	0.00
2544	2021	1642	482.00	12.00	150.0000	0.00
2545	1642	1705	70.00	12.00	150.0000	0.00
2546	1705	1839	110.00	2.00	150.0000	0.00
2547	1705	1007	537.00	12.00	150.0000	0.00
2548	1007	2434	291.00	12.00	150.0000	0.00
2549	2434	5598	55.00	12.00	150.0000	0.00
2550	5598	1648	291.00	1.00	150.0000	0.00
2551	1648	127	142.00	1.00	150.0000	0.00
2552	5598	308	737.00	10.00	150.0000	0.00
2553	308	5599	179.00	10.00	150.0000	0.00
2554	5599	1931	110.00	1.00	150.0000	0.00
2555	1931	1680	150.00	1.00	150.0000	0.00
2556	5599	1788	143.00	10.00	150.0000	0.00
2557	1788	5600	498.00	10.00	150.0000	0.00
2558	5600	176	110.00	2.00	150.0000	0.00
2559	176	1029	502.00	1.00	150.0000	0.00
2560	1029	1933	101.00	1.00	150.0000	0.00
2561	5600	625	966.00	10.00	150.0000	0.00
2562	625	5601	77.00	10.00	150.0000	0.00
2563	5601	2014	473.00	2.00	150.0000	0.00
2564	2014	2704	331.00	2.00	150.0000	0.00
2565	1623	2660	1606.00	2.00	150.0000	0.00
2566	2660	2411	204.00	2.00	150.0000	0.00
2567	2411	1516	75.00	2.00	150.0000	0.00
2568	1516	1746	330.00	2.00	150.0000	0.00
2569	1746	1506	101.00	2.00	150.0000	0.00
2570	5438	7063	48.00	2.00	150.0000	0.00
2571	415	417	48.00	2.00	150.0000	0.00
2572	417	524	38.00	2.00	150.0000	0.00
2573	524	173	38.00	2.00	150.0000	0.00
2574	173	328	31.00	2.00	150.0000	0.00
2575	328	1601	39.00	2.00	150.0000	0.00
2576	1601	725	45.00	2.00	150.0000	0.00
2577	725	1392	42.00	2.00	150.0000	0.00
2578	1392	217	71.00	2.00	150.0000	0.00
2579	217	389	78.00	2.00	150.0000	0.00
2580	389	220	78.00	2.00	150.0000	0.00
2581	220	7067	39.00	2.00	150.0000	0.00
2582	7067	58	55.00	2.00	150.0000	0.00
2583	58	5426	63.00	2.00	150.0000	0.00
2584	5601	658	178.00	10.00	150.0000	0.00
2585	658	5603	149.00	10.00	150.0000	0.00
2586	5603	1989	713.00	2.00	150.0000	0.00
2587	1989	2677	51.00	2.00	150.0000	0.00
2588	2677	2689	487.00	2.00	150.0000	0.00
2589	2689	2682	80.00	2.00	150.0000	0.00
2590	5603	2	146.00	10.00	150.0000	0.00
2591	2	8062	133.00	10.00	150.0000	0.00
2592	8062	1076	170.00	10.00	150.0000	0.00
2593	1076	5604	452.00	10.00	150.0000	0.00
2594	5604	5665	523.00	2.00	150.0000	0.00
2595	1356	2271	329.00	2.00	150.0000	0.00
2596	2271	1045	286.00	2.00	150.0000	0.00
2597	1045	2199	353.00	2.00	150.0000	0.00
2598	2199	2198	137.00	2.00	150.0000	0.00
2599	5665	2687	140.00	2.00	150.0000	0.00
2600	5604	2430	1196.00	10.00	150.0000	0.00
2601	2430	5605	1228.00	10.00	150.0000	0.00
2602	5605	5606	316.00	12.00	150.0000	0.00
2603	5606	2255	15166.00	8.00	150.0000	0.00
2604	5422	352	45.00	2.00	150.0000	0.00
2605	2255	1735	262.00	12.00	150.0000	0.00
2606	5607	921	973.00	2.00	150.0000	0.00

2607	5608	108	332.00	2.00	150.0000	0.00
2608	108	1187	242.00	2.00	150.0000	0.00
2609	5607	5608	834.00	6.00	150.0000	0.00
2610	5608	9004	64.00	6.00	150.0000	0.00
2611	5243	8039	10.00	2.00	150.0000	0.00
2612	5635	1927	10.00	2.00	150.0000	0.00
2613	289	5644	561.00	4.00	150.0000	0.00
2615	5608	5612	8584.00	8.00	150.0000	0.00
2616	5612	5613	1839.00	4.00	150.0000	0.00
2617	5613	8056	808.00	2.00	150.0000	0.00
2618	8056	8055	10.00	2.00	150.0000	0.00
2619	8055	8058	121.00	2.00	150.0000	0.00
2620	8058	8057	34.00	2.00	150.0000	0.00
2621	5613	2148	1682.00	2.00	150.0000	0.00
2622	2148	2503	261.00	2.00	150.0000	0.00
2623	2503	2178	340.00	2.00	150.0000	0.00
2624	2178	2175	27.00	2.00	150.0000	0.00
2625	2175	2174	477.00	2.00	150.0000	0.00
2626	2174	2177	585.00	2.00	150.0000	0.00
2627	2177	2180	472.00	2.00	150.0000	0.00
2628	2180	2179	430.00	2.00	150.0000	0.00
2629	2179	2176	206.00	2.00	150.0000	0.00
2630	5430	416	48.00	2.00	150.0000	0.00
2631-XX	5496	5502	13710.00	10.00	150.0000	0.00
2632	5488	9002	102.00	4.00	150.0000	0.00
2633	5490	9001	42.00	4.00	150.0000	0.00
2634	5492	5493	43.00	3.00	150.0000	0.00
2635	5493	9000	39.00	3.00	150.0000	0.00
2636	FGN-BB	J-44	58.00	6.00	150.0000	0.00
2637	5617	5497	55.00	6.00	150.0000	0.00
2638	5618	1572	672.00	3.00	150.0000	0.00
2639	1572	1592	127.00	3.00	150.0000	0.00
2640	1592	1551	10.00	3.00	150.0000	0.00
2641	1551	1593	396.00	3.00	150.0000	0.00
2642	1593	159	262.00	3.00	150.0000	0.00
2643	159	2450	11.00	3.00	150.0000	0.00
2644	2450	932	141.00	3.00	150.0000	0.00
2645	932	98	313.00	3.00	150.0000	0.00
2646	98	1229	320.00	3.00	150.0000	0.00
2647	1229	5619	20.00	3.00	150.0000	0.00
2648	5619	215	204.00	3.00	150.0000	0.00
2649	1384	5620	811.00	3.00	150.0000	0.00
2650	1566	660	178.00	3.00	150.0000	0.00
2651	660	2449	185.00	3.00	150.0000	0.00
2652	2449	714	25.00	3.00	150.0000	0.00
2653	714	1332	266.00	3.00	150.0000	0.00
2654	1332	2498	51.00	3.00	150.0000	0.00
2655	2498	181	263.00	3.00	150.0000	0.00
2656	5501	2331	458.00	6.00	150.0000	0.00
2657	2331	121	73.00	6.00	150.0000	0.00
2658	5618	1384	208.00	3.00	150.0000	0.00
2659	5618	5503	574.00	3.00	150.0000	0.00
2660	1379	1566	41.00	3.00	150.0000	0.00
2661	5620	1379	445.00	3.00	150.0000	0.00
2662	5620	1511	260.00	3.00	150.0000	0.00
2663	5515	2458	62.00	6.00	150.0000	0.00
2664	2458	1527	433.00	6.00	150.0000	0.00
2666	2144	5513	172.00	6.00	150.0000	0.00
2667	5625	199	124.00	2.00	150.0000	0.00
2668	199	2135	104.00	2.00	150.0000	0.00
2669	2135	2038	357.00	2.00	150.0000	0.00
2670	2038	1475	91.00	2.00	150.0000	0.00
2671	1596	1476	200.00	2.00	150.0000	0.00
2672	5513	5625	745.00	6.00	150.0000	0.00
2673	5537	5626	1000.00	6.00	150.0000	0.00
2674	5626	5627	500.00	4.00	150.0000	0.00
2675	5627	8054	120.00	4.00	150.0000	0.00
2676	8054	143	10.00	4.00	150.0000	0.00
2677	143	5628	210.00	4.00	150.0000	0.00
2678	5628	1691	700.00	2.00	150.0000	0.00
2679	1691	840	10.00	2.00	150.0000	0.00

2680	840	739	190.00	2.00	150.0000	0.00
2681	739	8018	300.00	2.00	150.0000	0.00
2682	8018	1372	70.00	2.00	150.0000	0.00
2683	5628	655	60.00	2.00	150.0000	0.00
2684	655	2695	200.00	2.00	150.0000	0.00
2685	2695	639	200.00	2.00	150.0000	0.00
2686	639	13	220.00	2.00	150.0000	0.00
2687	13	5629	120.00	2.00	150.0000	0.00
2688	5629	1080	80.00	2.00	150.0000	0.00
2689	1080	1224	230.00	2.00	150.0000	0.00
2690	1224	759	40.00	2.00	150.0000	0.00
2691	5629	1630	50.00	1.00	150.0000	0.00
2692	1630	1639	230.00	1.00	150.0000	0.00
2693	1639	1063	30.00	1.00	150.0000	0.00
2694	5626	5630	100.00	6.00	150.0000	0.00
2695	5630	5631	100.00	6.00	150.0000	0.00
2696	5631	5632	50.00	3.00	150.0000	0.00
2697	5632	2471	250.00	3.00	150.0000	0.00
2698	2471	5633	280.00	3.00	150.0000	0.00
2699	5633	718	400.00	2.00	150.0000	0.00
2700	718	5634	800.00	2.00	150.0000	0.00
2701	5634	280	150.00	2.00	150.0000	0.00
2702	280	1287	10.00	2.00	150.0000	0.00
2703	1287	5635	140.00	2.00	150.0000	0.00
2704	5635	196	150.00	2.00	150.0000	0.00
2705	196	1915	10.00	2.00	150.0000	0.00
2706	1927	1926	100.00	2.00	150.0000	0.00
2707	1926	1946	10.00	2.00	150.0000	0.00
2708	1946	2000	140.00	2.00	150.0000	0.00
2709	2000	1999	10.00	2.00	150.0000	0.00
2710	1999	511	200.00	2.00	150.0000	0.00
2711	511	5636	760.00	2.00	150.0000	0.00
2712	5636	2204	40.00	3.00	150.0000	0.00
2713	2204	5637	40.00	3.00	150.0000	0.00
2714	5637	5640	200.00	2.00	150.0000	0.00
2715	5637	5638	200.00	2.00	150.0000	0.00
2716	5638	5639	10.00	3.00	150.0000	0.00
2717-XX	5638	5632	180.00	3.00	150.0000	0.00
2718	5639	5640	10.00	6.00	150.0000	0.00
2719	5639	5641	50.00	2.00	150.0000	0.00
2720	5641	1894	80.00	2.00	150.0000	0.00
2721	1894	711	140.00	2.00	150.0000	0.00
2722	5641	2041	70.00	2.00	150.0000	0.00
2723	2041	447	70.00	2.00	150.0000	0.00
2724	447	17	70.00	2.00	150.0000	0.00
2725	17	2309	100.00	2.00	150.0000	0.00
2726	2433	1420	500.00	6.00	150.0000	0.00
2727	5640	2673	160.00	6.00	150.0000	0.00
2728	2673	2433	80.00	6.00	150.0000	0.00
2729	5631	1556	110.00	6.00	150.0000	0.00
2730	1556	5639	50.00	6.00	150.0000	0.00
2731	5643	289	50.00	4.00	150.0000	0.00
2732	5643	1420	60.00	4.00	150.0000	0.00
2733	1420	693	10.00	6.00	150.0000	0.00
2734	693	73	50.00	6.00	150.0000	0.00
2735	73	82	60.00	6.00	150.0000	0.00
2736	82	5642	300.00	6.00	150.0000	0.00
2737	5644	1210	10.00	3.00	150.0000	0.00
2738	1210	372	130.00	3.00	150.0000	0.00
2739	372	15	10.00	4.00	150.0000	0.00
2740	5644	5645	200.00	3.00	150.0000	0.00
2741	5645	2140	140.00	3.00	150.0000	0.00
2742	2140	845	60.00	3.00	150.0000	0.00
2743	845	700	30.00	3.00	150.0000	0.00
2744	700	990	100.00	3.00	150.0000	0.00
2745	990	1272	30.00	3.00	150.0000	0.00
2746	1272	221	30.00	3.00	150.0000	0.00
2747	221	23	100.00	4.00	150.0000	0.00
2748	23	1659	150.00	3.00	150.0000	0.00
2749	1659	2107	10.00	3.00	150.0000	0.00
2750	2107	298	70.00	3.00	150.0000	0.00

2751	298	601	200.00	3.00	150.0000	0.00
2752	5645	591	100.00	3.00	150.0000	0.00
2753	591	483	10.00	3.00	150.0000	0.00
2754	483	2202	100.00	3.00	150.0000	0.00
2755	2202	2117	10.00	3.00	150.0000	0.00
2756	2117	1377	150.00	3.00	150.0000	0.00
2757	1377	5646	10.00	3.00	150.0000	0.00
2758	5646	5647	50.00	3.00	150.0000	0.00
2759	5647	1546	160.00	3.00	150.0000	0.00
2760	1546	1483	10.00	3.00	150.0000	0.00
2761	1483	844	130.00	3.00	150.0000	0.00
2762	844	5648	50.00	3.00	150.0000	0.00
2763	5648	1092	50.00	3.00	150.0000	0.00
2764	1092	5649	250.00	3.00	150.0000	0.00
2765	5649	2684	200.00	2.00	150.0000	0.00
2766	2684	802	10.00	2.00	150.0000	0.00
2767	802	65	100.00	2.00	150.0000	0.00
2768	65	419	70.00	3.00	150.0000	0.00
2769	419	1303	50.00	2.00	150.0000	0.00
2770	1303	1969	100.00	2.00	150.0000	0.00
2771	1969	1375	80.00	2.00	150.0000	0.00
2772	2172	1375	150.00	2.00	150.0000	0.00
2773	991	2172	90.00	2.00	150.0000	0.00
2774	991	5650	150.00	2.00	150.0000	0.00
2775	5650	102	120.00	2.00	150.0000	0.00
2776	102	276	50.00	2.00	150.0000	0.00
2777	276	1100	100.00	2.00	150.0000	0.00
2778	1100	182	50.00	2.00	150.0000	0.00
2779	182	733	10.00	2.00	150.0000	0.00
2780	733	570	120.00	2.00	150.0000	0.00
2781	570	219	120.00	6.00	150.0000	0.00
2782	219	5642	50.00	6.00	150.0000	0.00
2783	5642	5647	720.00	4.00	150.0000	0.00
2784	5630	5539	650.00	4.00	150.0000	0.00
2785	5542	9003	52.00	3.00	150.0000	0.00
2786	5605	510	350.00	2.00	150.0000	0.00
2787	510	200	250.00	2.00	150.0000	0.00
2788	200	2512	150.00	2.00	150.0000	0.00
2789	2512	2513	150.00	2.00	150.0000	0.00
2790	2513	2537	100.00	2.00	150.0000	0.00
2791	2537	264	200.00	2.00	150.0000	0.00
2792	264	2516	100.00	2.00	150.0000	0.00
2793	2516	2515	10.00	2.00	150.0000	0.00
2794	2515	2514	150.00	2.00	150.0000	0.00
2795	2514	2666	100.00	2.00	150.0000	0.00
2796	2666	2302	250.00	2.00	150.0000	0.00
2797	2302	2506	300.00	2.00	150.0000	0.00
2798	2506	2507	300.00	2.00	150.0000	0.00
2799	5660	5610	500.00	4.00	150.0000	0.00
2800	757	1653	10.00	2.00	150.0000	0.00
2801	1653	1920	50.00	2.00	150.0000	0.00
2802	1920	1150	10.00	2.00	150.0000	0.00
2803	5610	5611	300.00	4.00	150.0000	0.00
2804	5611	1020	150.00	2.00	150.0000	0.00
2805	1020	164	100.00	2.00	150.0000	0.00
2806	5611	1925	50.00	4.00	150.0000	0.00
2807	1925	2452	150.00	4.00	150.0000	0.00
2808	2452	5651	100.00	4.00	150.0000	0.00
2809	5651	606	100.00	2.00	150.0000	0.00
2810	606	6	50.00	2.00	150.0000	0.00
2811	6	322	100.00	2.00	150.0000	0.00
2812	322	172	30.00	2.00	150.0000	0.00
2813	5651	5652	150.00	4.00	150.0000	0.00
2814	5652	5654	100.00	4.00	150.0000	0.00
2815	5654	1268	10.00	2.00	150.0000	0.00
2816	1268	212	120.00	2.00	150.0000	0.00
2817	212	1004	100.00	2.00	150.0000	0.00
2818	5654	5655	150.00	4.00	150.0000	0.00
2819	5655	793	250.00	3.00	150.0000	0.00
2820	793	794	10.00	3.00	150.0000	0.00
2821	794	1499	150.00	3.00	150.0000	0.00

2822	5656	193	200.00	2.00	150.0000	0.00
2823	1499	5656	30.00	3.00	150.0000	0.00
2824	193	471	100.00	2.00	150.0000	0.00
2825	471	283	100.00	2.00	150.0000	0.00
2826	283	1286	100.00	2.00	150.0000	0.00
2827	1286	1149	80.00	2.00	150.0000	0.00
2828	5656	5657	100.00	2.00	150.0000	0.00
2829	5657	88	30.00	2.00	150.0000	0.00
2830	88	175	80.00	2.00	150.0000	0.00
2831	175	441	10.00	2.00	150.0000	0.00
2832	441	1479	80.00	2.00	150.0000	0.00
2833	1479	1537	10.00	2.00	150.0000	0.00
2834	1537	1800	100.00	2.00	150.0000	0.00
2835	1800	706	10.00	2.00	150.0000	0.00
2836	706	1586	50.00	2.00	150.0000	0.00
2837	1586	1503	40.00	2.00	150.0000	0.00
2838	1503	889	60.00	2.00	150.0000	0.00
2839	889	1240	50.00	2.00	150.0000	0.00
2840	5653	699	100.00	2.00	150.0000	0.00
2841	699	5657	400.00	2.00	150.0000	0.00
2842	5653	499	50.00	2.00	150.0000	0.00
2843	499	2674	70.00	2.00	150.0000	0.00
2844	2674	929	50.00	2.00	150.0000	0.00
2845	929	1267	70.00	2.00	150.0000	0.00
2846	1267	545	30.00	2.00	150.0000	0.00
2847	545	1591	40.00	2.00	150.0000	0.00
2848	1591	1093	80.00	2.00	150.0000	0.00
2849	1093	5658	100.00	2.00	150.0000	0.00
2850	5658	5659	200.00	2.00	150.0000	0.00
2851	5659	788	30.00	2.00	150.0000	0.00
2852	5659	789	20.00	2.00	150.0000	0.00
2853	5658	869	50.00	2.00	150.0000	0.00
2854	869	171	50.00	2.00	150.0000	0.00
2855	171	599	200.00	2.00	150.0000	0.00
2856	599	1590	105.00	2.00	150.0000	0.00
2857	5660	821	100.00	2.00	150.0000	0.00
2858	821	1665	10.00	2.00	150.0000	0.00
2859	5610	784	100.00	2.00	150.0000	0.00
2860	1476	621	800.00	2.00	150.0000	0.00
2861	621	2590	1000.00	2.00	150.0000	0.00
2862	2590	1775	1100.00	2.00	150.0000	0.00
2863	1775	2557	900.00	2.00	150.0000	0.00
2864	2557	860	500.00	2.00	150.0000	0.00
2865	860	2591	10.00	2.00	150.0000	0.00
2866	5622	9005	40.00	3.00	150.0000	0.00
2867	5624	9006	40.00	3.00	150.0000	0.00
2868	1527	5512	47.00	6.00	150.0000	0.00
2869	5606	9007	74.00	6.00	150.0000	0.00
2870	5512	2144	83.00	6.00	150.0000	0.00
2871	5625	5660	250.00	4.00	150.0000	0.00
2872	784	757	10.00	4.00	150.0000	0.00
2873	5652	5653	10.00	4.00	150.0000	0.00
2874	1475	1596	10.00	2.00	150.0000	0.00
2875	2123	5002	460.00	2.00	150.0000	0.00
2876	1321	5012	88.00	4.00	150.0000	0.00
2877	808	2702	894.00	4.00	150.0000	0.00
2878	2702	5041	461.00	4.00	150.0000	0.00
2879	5526	2587	100.00	2.00	150.0000	0.00
2880	5532	5662	2405.00	2.00	150.0000	0.00
2881	5662	2605	975.00	2.00	150.0000	0.00
2882	2605	2583	248.00	2.00	150.0000	0.00
2883	2583	179	250.00	2.00	150.0000	0.00
2884	179	1402	53.00	2.00	150.0000	0.00
2885	1402	281	420.00	2.00	150.0000	0.00
2886	2635	5549	195.00	4.00	150.0000	0.00
2887	5232	388	1112.00	2.50	150.0000	0.00
2888	388	1670	254.00	2.50	150.0000	0.00
2889	1670	5663	107.00	2.50	150.0000	0.00
2890	5663	5664	83.00	2.00	150.0000	0.00
2891	5664	432	440.00	2.00	150.0000	0.00
2892	5663	306	538.00	2.50	150.0000	0.00

2893	306	703	160.00	2.50	150.0000	0.00
2894	5377	115	537.00	2.00	150.0000	0.00
2895	115	2066	113.00	2.00	150.0000	0.00
2896	2066	7070	10.00	2.00	150.0000	0.00
2897	7070	2511	10.00	2.00	150.0000	0.00
2898	2511	7071	97.00	2.00	150.0000	0.00
2899	7071	1726	152.00	2.00	150.0000	0.00
2900	1726	197	10.00	2.00	150.0000	0.00
2901	197	2740	65.00	2.00	150.0000	0.00
2903	5665	1356	13.00	2.00	150.0000	0.00
2904	1735	5607	1442.00	12.00	150.0000	0.00
2907	62	552	110.00	2.00	150.0000	0.00
P-1295	5572	R-2	3396.00	6.00	150.0000	0.00
P-130	J-11	McMahan-1	6.00	6.00	150.0000	0.00
P-1322	J-1	5361	115.00	2.00	150.0000	0.00
P-1451	5120	J-3	127.00	1.50	150.0000	0.00
P-157	5667	Payne-2	17.00	6.00	150.0000	0.00
P-1695	JimNethery	JimNethery	20.00	6.00	150.0000	0.00
P-173	5667	Payne-1	24.00	6.00	150.0000	0.00
P-1784	5661	J-22	73.00	3.00	150.0000	0.00
P-1949	Hwy83-Plan	Hwy83-2	39.00	4.00	150.0000	0.00
P-208	Tebo	Tebo-1	10.00	4.00	150.0000	0.00
P-209	Tebo	Tebo-2	10.00	4.00	150.0000	0.00
P-2138	J-34	Hwy83-Plan	121.00	4.00	150.0000	0.00
P-2140	Hwy83-Plan	Hwy83-1	35.00	4.00	150.0000	0.00
P-2141	J-37	J-22	15.00	3.00	150.0000	0.00
P-2142	J-37	5505	33.00	4.00	150.0000	0.00
P-2442	J-21	King-2	108.00	6.00	150.0000	0.00
P-2443	J-21	King-1	66.00	6.00	150.0000	0.00
P-2478	7035	CrossRoad-	352.00	6.00	150.0000	0.00
P-2614	Plant-A5	5668	10.00	6.00	100.0000	0.00
P-2665	T-1184	Pump-1	154.00	6.00	150.0000	0.00
P-2902	Hemphill-T	5335	76.00	6.00	150.0000	0.00
P-2905	Payne-2	5048	15.00	6.00	150.0000	0.00
P-2906	McMahan	J-8	45.00	4.00	150.0000	0.00
P-2908	5047	Plant-A5	10.00	6.00	150.0000	0.00
P-2909	5668	5047	97.00	6.00	150.0000	0.00
P-2910	McMahan	5035	53.00	2.00	150.0000	0.00
P-2911	McMahan-1	McMahan	6.00	6.00	150.0000	0.00
P-2912	McMahan-2	McMahan	6.00	6.00	150.0000	0.00
P-2913	Payne-1	5048	12.00	6.00	150.0000	0.00
P-2914	5048	PRV-1	225.00	6.00	150.0000	0.00
P-2915	5071	Tebo	2330.00	4.00	150.0000	0.00
P-2916	1232	J-29	1278.00	6.00	150.0000	0.00
P-2917	JimNethery	JimNethery	20.00	6.00	150.0000	0.00
P-2918	Tebo-1	J-29	10.00	6.00	150.0000	0.00
P-2919	Tebo-2	J-29	10.00	6.00	150.0000	0.00
P-2920	JimNethery	5394	20.00	6.00	150.0000	0.00
P-2921	JimNethery	5394	20.00	6.00	150.0000	0.00
P-2922	5579	J-21	174.00	6.00	150.0000	0.00
P-2923	King-1	5578	67.00	6.00	150.0000	0.00
P-2924	King-2	5578	101.00	6.00	150.0000	0.00
P-2925	5462	Midlake	30.00	6.00	150.0000	0.00
P-2926	Midlake	Midlake-2	49.00	6.00	150.0000	0.00
P-2927	Midlake	Midlake-1	49.00	6.00	150.0000	0.00
P-2928	J-24	5415	23.00	6.00	150.0000	0.00
P-2929	Midlake-2	J-24	50.00	6.00	150.0000	0.00
P-2930	Midlake-1	J-24	52.00	6.00	150.0000	0.00
P-2931	J-37	5506	23.00	8.00	150.0000	0.00
P-2932	Hwy83-1	J-37	32.00	4.00	150.0000	0.00
P-2933	Hwy83-2	J-37	27.00	4.00	150.0000	0.00
P-2934	5221	J-45	109.00	6.00	150.0000	0.00
P-2935	J-44	WTHwy83-1	35.00	6.00	150.0000	0.00
P-2936	CrossRoad-	J-45	10.00	4.00	150.0000	0.00
P-2937	Bron-Pump-	Bronson-ES	19.00	6.00	150.0000	0.00
P-2938	CrossRoad-	J-45	10.00	4.00	150.0000	0.00
P-2939	J-53	5617	94.00	6.00	150.0000	0.00
P-2940	WTHwy83-1	J-53	26.00	6.00	150.0000	0.00
P-2941	WTHwy83-2	J-53	10.00	6.00	150.0000	0.00
P-2942	5614	WTMidlake-	15.00	6.00	150.0000	0.00
P-2943	WTMidlake-	5494	17.00	6.00	150.0000	0.00

P-2944	WTMidlake-	5494	25.00	6.00	150.0000	0.00
P-2945	Hwy83	5585	37.00	10.00	150.0000	0.00
P-2946	J-18Bron-Pump-		9.00	6.00	150.0000	0.00
P-2947	Bronson-ESBronPump-2		13.00	6.00	150.0000	0.00
P-2948	J-69	5260	3035.00	6.00	150.0000	0.00
P-2949	Bronson-ES	5119	13.00	6.00	150.0000	0.00
P-2951	184-Pump-1	J-63	152.00	6.00	150.0000	0.00
P-2952	Midlake	Pump-1	46.00	6.00	150.0000	0.00
P-2953	184-Pump-2	T-1	171.00	6.00	150.0000	0.00
P-2954	5335	T-1	61.00	6.00	150.0000	0.00
P-2955	Pump-1	J-24	47.00	6.00	150.0000	0.00
P-2956	184-Pump-2	J-63	143.00	6.00	150.0000	0.00
P-2957	WTHyw83-2	J-44	20.00	6.00	150.0000	0.00
P-367	BronPump-2	J-18	10.00	6.00	150.0000	0.00
P-373	J-3	1369	36.00	1.50	150.0000	0.00
P-520	J-1	5360	346.00	2.00	150.0000	0.00
P-696	J-11 McMahan-2		6.00	6.00	150.0000	0.00
P-763	CrossRoad-CrossRoad-		10.00	4.00	150.0000	0.00
P-764	CrossRoad-CrossRoad-		10.00	4.00	150.0000	0.00
P-777	5218	J-45	3.00	3.00	150.0000	0.00
P-87	5034	J-8	249.00	4.00	150.0000	0.00
P-88	5609	R-1	1293.00	6.00	150.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE 184-Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 2)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
387.69	0.00	1.00
276.92	250.00	1.00
180.00	375.00	1.00

THERE IS A DEVICE AT NODE 184-Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
387.69	0.00	1.00
276.92	250.00	1.00
180.00	375.00	1.00

THERE IS A DEVICE AT NODE Bron-Pump- DESCRIBED BY THE' FOLLOWING DATA: (ID= 4)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	200.00	1.00
97.50	300.00	1.00

THERE IS A DEVICE AT NODE BronPump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 5)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	200.00	1.00
97.50	300.00	1.00

THERE IS A DEVICE AT NODE CrossRoad- DESCRIBED BY THE' FOLLOWING DATA: (ID= 6)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
193.85	0.00	1.00
138.46	250.00	1.00
90.00	375.00	1.00

THERE IS A DEVICE AT NODE CrossRoad- DESCRIBED BY THE' FOLLOWING DATA: (ID= 7)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
193.85	0.00	1.00
138.46	250.00	1.00
90.00	375.00	1.00

THERE IS A DEVICE AT NODE Hwy83-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	75.00 (Default)
200.00	250.00	75.00 (Default)
160.00	400.00	75.00 (Default)

PUMP SPEED RATIO = 0.990

THERE IS A DEVICE AT NODE Hwy83-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	75.00 (Default)
200.00	250.00	75.00 (Default)
160.00	400.00	75.00 (Default)

PUMP SPEED RATIO = 0.980

THERE IS A DEVICE AT NODE JimNethery DESCRIBED BY THE' FOLLOWING DATA: (ID= 8)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
678.46	0.00	1.00
484.62	250.00	1.00
315.00	375.00	1.00

THERE IS A DEVICE AT NODE JimNethery DESCRIBED BY THE' FOLLOWING DATA: (ID= 9)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
678.46	0.00	1.00
484.62	250.00	1.00
315.00	375.00	1.00

THERE IS A DEVICE AT NODE King-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 10)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	225.00	1.00
120.00	337.50	1.00

THERE IS A DEVICE AT NODE King-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 11)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	225.00	1.00
120.00	337.50	1.00

THERE IS A DEVICE AT NODE McMahan-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 12)

HEAD	FLOWRATE	EFFICIENCY
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(ft)	(gpm)	(%)
258.46	0.00	1.00
184.62	240.00	1.00
120.00	360.00	1.00

THERE IS A DEVICE AT NODE McMahan-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 13)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	240.00	1.00
120.00	360.00	1.00

THERE IS A DEVICE AT NODE Midlake-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 14)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Midlake-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 15)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Payne-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 16)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
206.77	0.00	1.00
147.69	250.00	1.00
96.00	375.00	1.00

THERE IS A DEVICE AT NODE Payne-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 17)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
206.77	0.00	1.00
147.69	250.00	1.00
96.00	375.00	1.00

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 18)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
252.00	0.00	1.00
180.00	300.00	1.00
117.00	450.00	1.00

THERE IS A DEVICE AT NODE Tebo-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 19)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
226.15	0.00	1.00
161.54	250.00	1.00
105.00	375.00	1.00

THERE IS A DEVICE AT NODE Tebo-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 20)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
226.15	0.00	1.00
161.54	250.00	1.00
105.00	375.00	1.00

THERE IS A DEVICE AT NODE WTHwy83-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 21)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	150.00	1.00
97.50	225.00	1.00

THERE IS A DEVICE AT NODE WTHyw83-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 22)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
210.00	0.00	1.00
150.00	150.00	1.00
97.50	225.00	1.00

THERE IS A DEVICE AT NODE WTMidlake- DESCRIBED BY THE' FOLLOWING DATA: (ID= 23)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	200.00	1.00
120.00	300.00	1.00

THERE IS A DEVICE AT NODE WTMidlake- DESCRIBED BY THE' FOLLOWING DATA: (ID= 24)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	200.00	1.00
120.00	300.00	1.00

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NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
2		1.00	190.00	
4		1.00	360.00	
5		1.00	220.00	
6		1.00	190.00	
7		1.00	330.00	
9		1.00	250.00	
10		1.00	330.00	
12		1.00	185.00	
13		1.00	200.00	
14		1.00	300.00	
15		1.00	230.00	
16		1.00	200.00	
17		1.00	215.00	
19		1.00	210.00	
20		1.00	190.00	
23		1.00	230.00	
25		1.00	290.00	
26		1.00	290.00	
27		1.00	280.00	

28	1.00	290.00
30	1.00	200.00
31	1.00	190.00
32	1.00	310.00
33	1.00	330.00
35	1.00	200.00
36	1.00	290.00
38	1.00	190.00
39	1.00	230.00
40	1.00	190.00
41	1.00	195.00
42	1.00	220.00
43	1.00	185.00
46	1.00	185.00
47	1.00	190.00
48	1.00	480.00
49	1.00	185.00
50	1.00	425.00
51	1.00	230.00
54	1.00	315.00
55	1.00	350.00
56	1.00	210.00
57	1.00	390.00
58	1.00	185.00
60	1.00	300.00
61	1.00	220.00
62	1.00	410.00
64	1.00	270.00
65	1.00	210.00
66	1.00	330.00
67	1.00	185.00
68	1.00	240.00
70	1.00	390.00
71	1.00	420.00
72	1.00	180.00
73	1.00	215.00
74	1.00	400.00
75	1.00	220.00
77	1.00	200.00
79	1.00	320.00
80	1.00	340.00
81	1.00	265.00
82	1.00	215.00
83	1.00	200.00
84	1.00	210.00
86	1.00	210.00
88	1.00	185.00
89	1.00	280.00
90	1.00	210.00
91	1.00	190.00
92	1.00	185.00
93	1.00	190.00
94	1.00	250.00
96	1.00	320.00
98	1.00	260.00
100	1.00	185.00
101	1.00	185.00
102	1.00	200.00
106	1.00	350.00
107	1.00	350.00
108	1.00	240.00
109	1.00	180.00
110	1.00	230.00
111	1.00	370.00
112	1.00	270.00
113	1.00	220.00
115	1.00	210.00
116	1.00	185.00
117	1.00	185.00
120	1.00	230.00
121	1.00	260.00

123	1.00	190.00
124	1.00	210.00
125	1.00	360.00
126	1.00	210.00
127	1.00	230.00
130	1.00	320.00
131	1.00	185.00
132	1.00	190.00
133	1.00	430.00
134	1.00	180.00
136	1.00	310.00
137	1.00	340.00
139	1.00	210.00
140	1.00	190.00
141	1.00	185.00
142	1.00	200.00
143	1.00	235.00
144	1.00	330.00
145	1.00	230.00
147	1.00	230.00
148	1.00	230.00
150	1.00	400.00
151	1.00	210.00
153	1.00	210.00
154	1.00	300.00
155	1.00	320.00
156	1.00	360.00
157	1.00	300.00
159	1.00	240.00
160	1.00	210.00
161	1.00	220.00
162	1.00	310.00
163	1.00	210.00
164	1.00	190.00
167	1.00	310.00
168	1.00	190.00
169	1.00	310.00
171	1.00	190.00
172	1.00	185.00
173	1.00	185.00
174	1.00	410.00
175	1.00	185.00
176	1.00	210.00
178	1.00	230.00
179	1.00	250.00
180	1.00	320.00
181	1.00	250.00
182	1.00	205.00
185	1.00	280.00
186	1.00	190.00
187	1.00	390.00
188	1.00	260.00
189	1.00	320.00
191	1.00	250.00
193	1.00	185.00
194	1.00	460.00
195	1.00	270.00
196	1.00	190.00
197	1.00	220.00
198	1.00	210.00
199	1.00	200.00
200	1.00	180.00
201	1.00	330.00
202	1.00	270.00
203	1.00	210.00
204	1.00	270.00
206	1.00	300.00
208	1.00	370.00
209	1.00	185.00
210	1.00	190.00
212	1.00	190.00

213	1.00	190.00
215	1.00	264.00
216	1.00	260.00
217	1.00	185.00
218	1.00	360.00
219	1.00	205.00
220	1.00	185.00
221	1.00	230.00
223	1.00	350.00
224	1.00	275.00
225	1.00	310.00
226	1.00	370.00
227	1.00	185.00
228	1.00	310.00
229	1.00	190.00
230	1.00	270.00
231	1.00	190.00
232	1.00	250.00
233	1.00	190.00
234	1.00	250.00
235	1.00	240.00
236	1.00	210.00
237	1.00	360.00
238	1.00	440.00
240	1.00	260.00
241	1.00	190.00
248	1.00	340.00
249	1.00	320.00
250	1.00	320.00
251	1.00	185.00
252	1.00	320.00
253	1.00	210.00
254	1.00	180.00
255	1.00	190.00
256	1.00	200.00
258	1.00	300.00
259	1.00	190.00
260	1.00	310.00
262	1.00	190.00
263	1.00	330.00
264	1.00	190.00
265	1.00	220.00
266	1.00	185.00
267	1.00	260.00
268	1.00	210.00
269	1.00	190.00
270	1.00	190.00
271	1.00	330.00
272	1.00	180.00
276	1.00	200.00
279	1.00	185.00
280	1.00	200.00
281	1.00	230.00
282	1.00	185.00
283	1.00	185.00
284	1.00	200.00
286	1.00	220.00
288	1.00	190.00
289	1.00	215.00
290	1.00	190.00
291	1.00	185.00
292	1.00	190.00
293	1.00	190.00
294	1.00	270.00
297	1.00	200.00
298	1.00	220.00
300	1.00	205.00
302	1.00	320.00
303	1.00	200.00
304	1.00	290.00
305	1.00	340.00

306	1.00	310.00
307	1.00	190.00
308	1.00	220.00
309	1.00	240.00
310	1.00	240.00
311	1.00	200.00
312	1.00	240.00
313	1.00	340.00
315	1.00	260.00
320	1.00	240.00
321	1.00	250.00
322	1.00	195.00
324	1.00	200.00
326	1.00	360.00
327	1.00	300.00
328	1.00	185.00
329	1.00	320.00
330	1.00	310.00
332	1.00	220.00
333	1.00	270.00
335	1.00	285.00
336	1.00	190.00
337	1.00	200.00
338	1.00	310.00
339	1.00	285.00
340	1.00	290.00
341	1.00	310.00
342	1.00	280.00
343	1.00	290.00
344	1.00	200.00
345	1.00	320.00
347	1.00	410.00
348	1.00	340.00
349	1.00	280.00
352	1.00	190.00
354	1.00	185.00
355	1.00	230.00
356	1.00	290.00
357	1.00	430.00
358	1.00	200.00
359	1.00	300.00
361	1.00	290.00
363	1.00	345.00
365	1.00	310.00
368	1.00	185.00
369	1.00	360.00
370	1.00	185.00
372	1.00	230.00
373	1.00	190.00
374	1.00	340.00
375	1.00	220.00
377	1.00	310.00
378	1.00	385.00
379	1.00	360.00
380	1.00	300.00
383	1.00	190.00
388	1.00	300.00
389	1.00	185.00
390	1.00	200.00
391	1.00	185.00
394	1.00	320.00
396	1.00	300.00
397	1.00	340.00
398	1.00	325.00
404	1.00	530.00
405	1.00	220.00
406	1.00	275.00
407	1.00	250.00
408	1.00	285.00
409	1.00	340.00
410	1.00	230.00

412	1.00	340.00
414	1.00	440.00
415	1.00	185.00
416	1.00	200.00
417	1.00	185.00
418	1.00	190.00
419	1.00	210.00
423	1.00	420.00
426	1.00	360.00
428	1.00	260.00
430	1.00	231.00
432	1.00	310.00
433	1.00	190.00
434	1.00	335.00
435	1.00	375.00
436	1.00	220.00
438	1.00	220.00
439	1.00	330.00
441	1.00	185.00
443	1.00	470.00
444	1.00	390.00
447	1.00	215.00
450	1.00	360.00
452	1.00	325.00
454	1.00	340.00
455	1.00	330.00
457	1.00	190.00
460	1.00	295.00
461	1.00	295.00
462	1.00	290.00
464	1.00	190.00
465	1.00	360.00
466	1.00	330.00
468	1.00	460.00
471	1.00	185.00
472	1.00	445.00
473	1.00	390.00
474	1.00	400.00
475	1.00	250.00
476	1.00	270.00
478	1.00	180.00
479	1.00	190.00
480	1.00	400.00
481	1.00	210.00
482	1.00	180.00
483	1.00	240.00
484	1.00	185.00
485	1.00	295.00
487	1.00	300.00
489	1.00	190.00
490	1.00	200.00
491	1.00	430.00
492	1.00	280.00
493	1.00	210.00
494	1.00	320.00
495	1.00	335.00
497	1.00	265.00
498	1.00	306.00
499	1.00	190.00
501	1.00	210.00
502	1.00	260.00
503	1.00	290.00
505	1.00	295.00
506	1.00	470.00
507	1.00	185.00
510	1.00	190.00
511	1.00	200.00
512	1.00	185.00
513	1.00	200.00
514	1.00	285.00
515	1.00	220.00

517	1.00	300.00
518	1.00	300.00
524	1.00	185.00
525	1.00	185.00
526	1.00	200.00
528	1.00	190.00
529	1.00	200.00
530	1.00	360.00
532	1.00	290.00
533	1.00	210.00
534	1.00	190.00
536	1.00	345.00
537	1.00	310.00
540	1.00	185.00
541	1.00	190.00
543	1.00	340.00
545	1.00	190.00
546	1.00	370.00
547	1.00	210.00
548	1.00	220.00
549	1.00	380.00
550	1.00	190.00
551	1.00	185.00
552	1.00	410.00
554	1.00	325.00
558	1.00	340.00
559	1.00	220.00
560	1.00	200.00
562	1.00	185.00
565	1.00	250.00
569	1.00	360.00
570	1.00	205.00
572	1.00	330.00
573	1.00	345.00
575	1.00	345.00
577	1.00	190.00
579	1.00	390.00
580	1.00	250.00
581	1.00	310.00
582	1.00	350.00
583	1.00	370.00
584	1.00	220.00
585	1.00	210.00
586	1.00	290.00
588	1.00	340.00
589	1.00	185.00
590	1.00	185.00
591	1.00	240.00
592	1.00	190.00
595	1.00	390.00
596	1.00	200.00
598	1.00	280.00
599	1.00	190.00
600	1.00	185.00
601	1.00	220.00
602	1.00	210.00
605	1.00	190.00
606	1.00	190.00
607	1.00	190.00
610	1.00	250.00
611	1.00	430.00
612	1.00	360.00
614	1.00	210.00
615	1.00	180.00
616	1.00	280.00
618	1.00	250.00
619	1.00	240.00
620	1.00	300.00
621	1.00	220.00
624	1.00	185.00
625	1.00	200.00

627	1.00	190.00
629	1.00	420.00
630	1.00	420.00
631	1.00	420.00
634	1.00	185.00
639	1.00	215.00
640	1.00	185.00
641	1.00	390.00
642	1.00	185.00
644	1.00	280.00
645	1.00	200.00
646	1.00	370.00
647	1.00	220.00
648	1.00	320.00
649	1.00	185.00
650	1.00	230.00
651	1.00	280.00
653	1.00	205.00
654	1.00	290.00
655	1.00	235.00
656	1.00	280.00
657	1.00	210.00
658	1.00	200.00
659	1.00	190.00
660	1.00	290.00
661	1.00	230.00
662	1.00	245.00
663	1.00	230.00
664	1.00	360.00
668	1.00	290.00
669	1.00	350.00
670	1.00	320.00
671	1.00	185.00
672	1.00	300.00
673	1.00	340.00
676	1.00	360.00
677	1.00	320.00
678	1.00	290.00
679	1.00	340.00
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683	1.00	215.00
684	1.00	390.00
688	1.00	240.00
691	1.00	345.00
693	1.00	215.00
694	1.00	360.00
696	1.00	320.00
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700	1.00	240.00
701	1.00	200.00
703	1.00	310.00
705	1.00	185.00
706	1.00	185.00
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711	1.00	225.00
712	1.00	388.00
714	1.00	280.00
715	1.00	500.00
716	1.00	240.00
717	1.00	340.00
718	1.00	230.00
720	1.00	210.00
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725	1.00	185.00
727	1.00	210.00
728	1.00	290.00
729	1.00	190.00

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732	1.00	310.00
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736	1.00	185.00
738	1.00	190.00
739	1.00	220.00
740	1.00	310.00
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742	1.00	250.00
745	1.00	360.00
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752	1.00	380.00
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754	1.00	345.00
755	1.00	225.00
757	1.00	195.00
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761	1.00	330.00
763	1.00	300.00
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767	1.00	302.00
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783	1.00	200.00
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790	1.00	270.00
791	1.00	200.00
792	1.00	380.00
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794	1.00	185.00
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796	1.00	360.00
800	1.00	300.00
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814	1.00	210.00
817	1.00	195.00
820	1.00	235.00
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825	1.00	330.00
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830	1.00	320.00
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832	1.00	370.00
833	1.00	260.00

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838	1.00	370.00
840	1.00	220.00
841	1.00	300.00
842	1.00	280.00
843	1.00	240.00
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846	1.00	185.00
847	1.00	340.00
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849	1.00	430.00
852	1.00	200.00
853	1.00	290.00
854	1.00	210.00
857	1.00	350.00
858	1.00	210.00
859	1.00	200.00
860	1.00	185.00
861	1.00	282.00
862	1.00	185.00
863	1.00	185.00
864	1.00	220.00
865	1.00	300.00
866	1.00	300.00
869	1.00	190.00
870	1.00	430.00
872	1.00	390.00
873	1.00	360.00
874	1.00	185.00
875	1.00	250.00
879	1.00	210.00
880	1.00	370.00
881	1.00	420.00
883	1.00	200.00
885	1.00	360.00
887	1.00	215.00
888	1.00	200.00
889	1.00	185.00
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893	1.00	210.00
896	1.00	240.00
897	1.00	200.00
898	1.00	260.00
900	1.00	210.00
902	1.00	365.00
903	1.00	322.00
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905	1.00	340.00
907	1.00	270.00
908	1.00	380.00
910	1.00	230.00
911	1.00	190.00
912	1.00	250.00
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917	1.00	540.00
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924	1.00	350.00
925	1.00	340.00
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927	1.00	370.00
928	1.00	360.00
929	1.00	190.00
930	1.00	340.00
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949	1.00	250.00
950	1.00	250.00
951	1.00	185.00
952	1.00	330.00
956	1.00	390.00
957	1.00	185.00
960	1.00	210.00
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964	1.00	210.00
965	1.00	340.00
966	1.00	350.00
967	1.00	190.00
969	1.00	195.00
971	1.00	370.00
972	1.00	190.00
973	1.00	190.00
975	1.00	390.00
976	1.00	390.00
977	1.00	510.00
978	1.00	220.00
979	1.00	420.00
980	1.00	200.00
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990	1.00	240.00
991	1.00	210.00
992	1.00	270.00
993	1.00	185.00
994	1.00	190.00
995	1.00	185.00
996	1.00	330.00
997	1.00	190.00
999	1.00	185.00
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1004	1.00	185.00
1005	1.00	350.00
1006	1.00	370.00
1007	1.00	230.00
1008	1.00	210.00
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1010	1.00	322.00
1011	1.00	200.00
1012	1.00	310.00
1013	1.00	560.00
1014	1.00	200.00
1015	1.00	250.00
1016	1.00	320.00
1017	1.00	230.00
1018	1.00	200.00
1020	1.00	190.00
1023	1.00	240.00
1025	1.00	185.00
1027	1.00	190.00
1029	1.00	210.00
1031	1.00	200.00
1032	1.00	240.00
1033	1.00	200.00
1034	1.00	320.00
1035	1.00	320.00
1036	1.00	330.00
1037	1.00	230.00

1040	1.00	270.00
1041	1.00	190.00
1042	1.00	185.00
1043	1.00	185.00
1044	1.00	185.00
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1055	1.00	230.00
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1057	1.00	340.00
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1062	1.00	330.00
1063	1.00	200.00
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1069	1.00	330.00
1070	1.00	280.00
1072	1.00	200.00
1073	1.00	250.00
1076	1.00	190.00
1077	1.00	220.00
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1079	1.00	300.00
1080	1.00	200.00
1081	1.00	320.00
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1084	1.00	340.00
1086	1.00	320.00
1087	1.00	220.00
1089	1.00	360.00
1090	1.00	350.00
1091	1.00	190.00
1092	1.00	230.00
1093	1.00	190.00
1094	1.00	185.00
1095	1.00	185.00
1096	1.00	270.00
1097	1.00	290.00
1098	1.00	310.00
1099	1.00	270.00
1100	1.00	200.00
1102	1.00	185.00
1104	1.00	292.00
1107	1.00	300.00
1111	1.00	323.00
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1114	1.00	180.00
1115	1.00	230.00
1116	1.00	310.00
1118	1.00	260.00
1119	1.00	250.00
1120	1.00	310.00
1121	1.00	340.00
1122	1.00	300.00
1123	1.00	185.00
1126	1.00	530.00
1127	1.00	200.00
1130	1.00	335.00
1133	1.00	325.00
1134	1.00	520.00
1135	1.00	270.00
1138	1.00	340.00
1140	1.00	335.00

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1144	1.00	280.00
1145	1.00	210.00
1149	1.00	185.00
1150	1.00	195.00
1151	1.00	330.00
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1153	1.00	300.00
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1163	1.00	310.00
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1165	1.00	185.00
1166	1.00	410.00
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1169	1.00	190.00
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1185	1.00	190.00
1187	1.00	240.00
1188	1.00	200.00
1189	1.00	290.00
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1197	1.00	185.00
1198	1.00	300.00
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1207	1.00	260.00
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1210	1.00	240.00
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1224	1.00	200.00
1225	1.00	350.00
1226	1.00	190.00
1227	1.00	450.00
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1255	1.00	360.00
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1262	1.00	280.00
1263	1.00	320.00
1264	1.00	310.00
1266	1.00	200.00
1267	1.00	190.00
1268	1.00	190.00
1269	1.00	325.00
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1288	1.00	190.00
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1308	1.00	185.00
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1311	1.00	190.00
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1315	1.00	250.00
1317	1.00	290.00
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1329	1.00	270.00
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1334	1.00	340.00
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1351	1.00	340.00
1352	1.00	350.00
1353	1.00	320.00
1355	1.00	340.00
1356	1.00	190.00

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1358	1.00	185.00
1363	1.00	360.00
1364	1.00	270.00
1365	1.00	370.00
1366	1.00	185.00
1367	1.00	330.00
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1371	1.00	320.00
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1384	1.00	260.00
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1387	1.00	270.00
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1394	1.00	195.00
1397	1.00	320.00
1399	1.00	195.00
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1409	1.00	400.00
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1453	1.00	220.00
1454	1.00	320.00

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1461	1.00	330.00
1464	1.00	370.00
1465	1.00	290.00
1467	1.00	290.00
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1476	1.00	200.00
1477	1.00	250.00
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1479	1.00	185.00
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1499	1.00	185.00
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1503	1.00	185.00
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1506	1.00	270.00
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1513	1.00	240.00
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1522	1.00	220.00
1524	1.00	220.00
1525	1.00	370.00
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1532	1.00	210.00
1533	1.00	270.00
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1535	1.00	190.00
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1543	1.00	190.00
1544	1.00	305.00
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1546	1.00	230.00
1547	1.00	340.00
1548	1.00	231.00

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1551	1.00	240.00
1552	1.00	290.00
1553	1.00	340.00
1554	1.00	195.00
1555	1.00	330.00
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1566	1.00	290.00
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1569	1.00	190.00
1570	1.00	185.00
1571	1.00	340.00
1572	1.00	240.00
1574	1.00	210.00
1576	1.00	360.00
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1581	1.00	210.00
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1583	1.00	190.00
1584	1.00	210.00
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1588	1.00	270.00
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1592	1.00	240.00
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1599	1.00	340.00
1600	1.00	200.00
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1603	1.00	185.00
1604	1.00	220.00
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1619	1.00	190.00
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1623	1.00	280.00
1624	1.00	280.00
1625	1.00	200.00
1626	1.00	190.00
1630	1.00	200.00
1633	1.00	270.00
1635	1.00	385.00
1636	1.00	310.00
1637	1.00	190.00
1638	1.00	200.00
1639	1.00	200.00
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1641	1.00	300.00

1642	1.00	250.00
1644	1.00	260.00
1645	1.00	340.00
1646	1.00	530.00
1647	1.00	340.00
1648	1.00	230.00
1650	1.00	310.00
1651	1.00	250.00
1652	1.00	260.00
1653	1.00	195.00
1654	1.00	260.00
1655	1.00	200.00
1656	1.00	270.00
1657	1.00	300.00
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1659	1.00	220.00
1660	1.00	280.00
1661	1.00	300.00
1662	1.00	270.00
1664	1.00	230.00
1665	1.00	195.00
1668	1.00	190.00
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1670	1.00	310.00
1671	1.00	210.00
1672	1.00	240.00
1674	1.00	230.00
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1679	1.00	230.00
1680	1.00	220.00
1681	1.00	270.00
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1684	1.00	250.00
1685	1.00	250.00
1686	1.00	185.00
1687	1.00	245.00
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1692	1.00	240.00
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1696	1.00	190.00
1697	1.00	330.00
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1699	1.00	310.00
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1705	1.00	250.00
1706	1.00	190.00
1707	1.00	210.00
1708	1.00	330.00
1710	1.00	210.00
1713	1.00	360.00
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1721	1.00	230.00
1722	1.00	200.00
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1726	1.00	220.00
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1761	1.00	180.00
1762	1.00	190.00
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1774	1.00	200.00
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1777	1.00	250.00
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1779	1.00	200.00
1780	1.00	180.00
1781	1.00	240.00
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1783	1.00	310.00
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1786	1.00	300.00
1787	1.00	315.00
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1791	1.00	295.00
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1794	1.00	440.00
1795	1.00	310.00
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1797	1.00	310.00
1798	1.00	260.00
1799	1.00	280.00
1800	1.00	185.00
1801	1.00	295.00
1802	1.00	280.00
1803	1.00	240.00
1804	1.00	250.00
1805	1.00	330.00
1806	1.00	290.00

1807	1.00	310.00
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1809	1.00	460.00
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1812	1.00	310.00
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1824	1.00	190.00
1825	1.00	220.00
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1827	1.00	270.00
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1892	1.00	200.00
1893	1.00	220.00
1894	1.00	225.00
1895	1.00	290.00
1896	1.00	290.00
1897	1.00	270.00
1898	1.00	185.00
1899	1.00	292.00
1900	1.00	420.00
1901	1.00	340.00
1903	1.00	260.00
1904	1.00	340.00
1905	1.00	360.00
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1908	1.00	300.00
1909	1.00	340.00
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1911	1.00	300.00
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1914	1.00	270.00
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1916	1.00	260.00
1917	1.00	210.00
1918	1.00	190.00
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1925	1.00	190.00
1926	1.00	200.00
1927	1.00	200.00
1928	1.00	200.00

1930	1.00	315.00
1931	1.00	220.00
1932	1.00	370.00
1933	1.00	210.00
1934	1.00	310.00
1935	1.00	310.00
1937	1.00	340.00
1938	1.00	300.00
1939	1.00	360.00
1940	1.00	310.00
1942	1.00	360.00
1943	1.00	270.00
1945	1.00	200.00
1946	1.00	200.00
1948	1.00	220.00
1949	1.00	280.00
1950	1.00	230.00
1951	1.00	190.00
1952	1.00	185.00
1953	1.00	310.00
1955	1.00	310.00
1957	1.00	300.00
1958	1.00	210.00
1959	1.00	290.00
1960	1.00	300.00
1961	1.00	260.00
1963	1.00	246.00
1964	1.00	230.00
1965	1.00	300.00
1966	1.00	340.00
1967	1.00	300.00
1968	1.00	390.00
1969	1.00	210.00
1970	1.00	330.00
1971	1.00	340.00
1972	1.00	190.00
1973	1.00	340.00
1974	1.00	200.00
1975	1.00	220.00
1976	1.00	290.00
1977	1.00	230.00
1978	1.00	210.00
1979	1.00	330.00
1980	1.00	325.00
1981	1.00	400.00
1982	1.00	212.00
1984	1.00	260.00
1985	1.00	240.00
1986	1.00	340.00
1987	1.00	340.00
1989	1.00	190.00
1990	1.00	290.00
1991	1.00	185.00
1992	1.00	310.00
1994	1.00	290.00
1995	1.00	200.00
1996	1.00	320.00
1999	1.00	200.00
2000	1.00	200.00
2001	1.00	320.00
2002	1.00	200.00
2003	1.00	290.00
2004	1.00	200.00
2006	1.00	330.00
2007	1.00	210.00
2008	1.00	330.00
2009	1.00	355.00
2010	1.00	270.00
2011	1.00	220.00
2013	1.00	210.00
2014	1.00	200.00

2015	1.00	280.00
2016	1.00	448.00
2017	1.00	380.00
2019	1.00	230.00
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2023	1.00	185.00
2024	1.00	265.00
2025	1.00	540.00
2028	1.00	315.00
2029	1.00	410.00
2030	1.00	250.00
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2032	1.00	190.00
2033	1.00	190.00
2035	1.00	190.00
2037	1.00	220.00
2038	1.00	200.00
2039	1.00	250.00
2040	1.00	470.00
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2044	1.00	230.00
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2046	1.00	300.00
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2051	1.00	270.00
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2056	1.00	290.00
2057	1.00	280.00
2058	1.00	270.00
2059	1.00	185.00
2060	1.00	210.00
2061	1.00	360.00
2062	1.00	360.00
2063	1.00	340.00
2064	1.00	200.00
2065	1.00	190.00
2066	1.00	200.00
2067	1.00	470.00
2068	1.00	290.00
2069	1.00	210.00
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2071	1.00	185.00
2072	1.00	370.00
2073	1.00	185.00
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2077	1.00	187.00
2078	1.00	310.00
2079	1.00	290.00
2080	1.00	185.00
2081	1.00	280.00
2082	1.00	185.00
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2084	1.00	270.00
2086	1.00	215.00
2088	1.00	190.00
2089	1.00	230.00
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2091	1.00	214.00
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2094	1.00	310.00
2096	1.00	230.00
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2098	1.00	220.00
2099	1.00	190.00
2100	1.00	190.00
2101	1.00	320.00
2103	1.00	230.00
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2108	1.00	180.00
2109	1.00	310.00
2110	1.00	280.00
2111	1.00	190.00
2112	1.00	315.00
2113	1.00	190.00
2115	1.00	340.00
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2118	1.00	340.00
2120	1.00	320.00
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2126	1.00	230.00
2127	1.00	180.00
2128	1.00	190.00
2129	1.00	185.00
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2135	1.00	200.00
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2140	1.00	240.00
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2145	1.00	230.00
2147	1.00	330.00
2148	1.00	190.00
2152	1.00	320.00
2153	1.00	185.00
2154	1.00	300.00
2155	1.00	260.00
2157	1.00	280.00
2158	1.00	300.00
2160	1.00	200.00
2161	1.00	185.00
2164	1.00	190.00
2165	1.00	190.00
2166	1.00	280.00
2167	1.00	190.00
2168	1.00	300.00
2169	1.00	210.00
2170	1.00	230.00
2172	1.00	210.00
2173	1.00	250.00
2174	1.00	190.00
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2178	1.00	190.00
2179	1.00	190.00
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2181	1.00	200.00
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2185	1.00	450.00
2186	1.00	200.00
2188	1.00	190.00
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2190	1.00	260.00
2191	1.00	190.00
2192	1.00	310.00
2195	1.00	190.00
2196	1.00	260.00
2197	1.00	190.00
2198	1.00	190.00
2199	1.00	190.00

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2202	1.00	240.00
2203	1.00	400.00
2204	1.00	210.00
2205	1.00	220.00
2206	1.00	190.00
2207	1.00	200.00
2208	1.00	230.00
2209	1.00	400.00
2210	1.00	280.00
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2213	1.00	260.00
2214	1.00	230.00
2215	1.00	230.00
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2219	1.00	351.00
2220	1.00	340.00
2221	1.00	185.00
2222	1.00	290.00
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2227	1.00	210.00
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2229	1.00	345.00
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2231	1.00	190.00
2232	1.00	330.00
2233	1.00	210.00
2234	1.00	390.00
2235	1.00	190.00
2236	1.00	248.00
2237	1.00	230.00
2238	1.00	220.00
2239	1.00	185.00
2240	1.00	185.00
2241	1.00	185.00
2242	1.00	310.00
2244	1.00	350.00
2245	1.00	300.00
2246	1.00	200.00
2247	1.00	300.00
2248	1.00	220.00
2249	1.00	440.00
2250	1.00	340.00
2251	1.00	270.00
2252	1.00	380.00
2253	1.00	300.00
2254	1.00	190.00
2255	1.00	240.00
2256	1.00	300.00
2258	1.00	380.00
2259	1.00	280.00
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2276	1.00	320.00
2278	1.00	320.00
2279	1.00	240.00
2280	1.00	180.00
2281	1.00	225.00
2282	1.00	180.00

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2287	1.00	240.00
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2303	1.00	185.00
2305	1.00	180.00
2306	1.00	180.00
2308	1.00	200.00
2309	1.00	215.00
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2317	1.00	260.00
2319	1.00	240.00
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2322	1.00	320.00
2324	1.00	340.00
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2327	1.00	200.00
2328	1.00	260.00
2329	1.00	231.00
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2333	1.00	190.00
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2397	1.00	180.00
2398	1.00	300.00
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2400	1.00	340.00
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2477	1.00	340.00
2479	1.00	300.00
2480	1.00	540.00
2481	1.00	290.00

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2483	1.00	210.00
2484	1.00	210.00
2485	1.00	280.00
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2491	1.00	290.00
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2498	1.00	270.00
2499	1.00	320.00
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2502	1.00	315.00
2503	1.00	190.00
2505	1.00	185.00
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2507	1.00	220.00
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2533	1.00	330.00
2534	1.00	190.00
2535	1.00	185.00
2537	1.00	190.00
2538	1.00	190.00
2539	1.00	540.00
2540	1.00	270.00
2541	1.00	190.00
2542	1.00	220.00
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5502	0.00	300.00
5503	0.00	280.00
5505	0.00	300.00
5506	0.00	300.00
5507	0.00	319.00
5508	0.00	208.00
5509	0.00	212.00
5510	0.00	175.00
5511	0.00	180.00
5512	0.00	190.00
5513	0.00	200.00
5514	0.00	180.00
5515	0.00	180.00
5516	0.00	240.00
5517	0.00	240.00
5518	0.00	281.00
5519	0.00	221.00
5520	0.00	220.00
5521	0.00	210.00
5522	0.00	220.00
5523	0.00	270.00
5524	0.00	230.00
5525	0.00	210.00
5526	0.00	210.00
5527	0.00	210.00
5528	0.00	210.00
5529	0.00	200.00
5530	0.00	210.00
5531	0.00	210.00
5532	0.00	210.00
5533	0.00	240.00
5534	0.00	240.00
5535	0.00	240.00
5536	0.00	250.00
5537	0.00	250.00
5538	0.00	250.00
5539	0.00	240.00
5540	0.00	200.00
5541	0.00	190.00
5542	0.00	190.00
5543	0.00	310.00
5544	0.00	315.00
5545	0.00	310.00
5546	0.00	315.00
5547	0.00	300.00
5548	0.00	300.00
5549	0.00	295.00
5550	0.00	295.00
5551	0.00	280.00
5552	0.00	280.00
5553	0.00	280.00
5554	0.00	225.00
5555	0.00	260.00
5556	0.00	270.00
5557	0.00	290.00
5558	0.00	290.00
5559	0.00	290.00

5560	0.00	290.00
5561	0.00	290.00
5562	0.00	290.00
5563	0.00	280.00
5564	0.00	280.00
5565	0.00	260.00
5566	0.00	260.00
5567	0.00	260.00
5568	0.00	260.00
5569	0.00	260.00
5570	0.00	264.00
5571	0.00	195.00
5572	0.00	260.00
5573	0.00	270.00
5574	0.00	260.00
5575	0.00	270.00
5576	0.00	270.00
5577	0.00	250.00
5578	0.00	269.00
5579	0.00	269.00
5580	0.00	250.00
5581	0.00	215.00
5582	0.00	190.00
5583	0.00	310.00
5584	0.00	310.00
5585	0.00	310.00
5586	0.00	318.00
5587	0.00	300.00
5588	0.00	300.00
5589	0.00	280.00
5590	0.00	280.00
5591	0.00	290.00
5592	0.00	212.00
5593	0.00	191.00
5594	0.00	216.00
5595	0.00	290.00
5596	0.00	290.00
5597	0.00	187.00
5598	0.00	230.00
5599	0.00	220.00
5600	0.00	210.00
5601	0.00	200.00
5602	0.00	190.00
5603	0.00	200.00
5604	0.00	190.00
5605	0.00	185.00
5606	0.00	200.00
5607	0.00	240.00
5608	0.00	248.00
5609	0.00	261.00
5610	0.00	195.00
5611	0.00	190.00
5612	0.00	240.00
5613	0.00	210.00
5614	0.00	190.00
5615	0.00	185.00
5616	0.00	185.00
5617	0.00	190.00
5618	0.00	260.00
5619	0.00	260.00
5620	0.00	290.00
5621	0.00	180.00
5622	0.00	180.00
5623	0.00	180.00
5624	0.00	180.00
5625	0.00	200.00
5626	0.00	225.00
5627	0.00	235.00
5628	0.00	235.00
5629	0.00	200.00
5630	0.00	225.00

5631	0.00	225.00
5632	0.00	225.00
5633	0.00	220.00
5634	0.00	210.00
5635	0.00	200.00
5636	0.00	210.00
5637	0.00	210.00
5638	0.00	215.00
5639	0.00	215.00
5640	0.00	215.00
5641	0.00	215.00
5642	0.00	210.00
5643	0.00	215.00
5644	0.00	240.00
5645	0.00	240.00
5646	0.00	240.00
5647	0.00	240.00
5648	0.00	230.00
5649	0.00	210.00
5650	0.00	200.00
5651	0.00	190.00
5652	0.00	190.00
5653	0.00	190.00
5654	0.00	190.00
5655	0.00	190.00
5656	0.00	185.00
5657	0.00	185.00
5658	0.00	190.00
5659	0.00	190.00
5660	0.00	195.00
5661	0.00	300.00
5662	0.00	280.00
5663	0.00	300.00
5664	0.00	310.00
5665	0.00	190.00
5666	0.00	230.00
5667	0.00	400.00
5668	0.00	560.00
7000	1.00	430.00
7001	1.00	410.00
7002	1.00	380.00
7003	1.00	410.00
7004	1.00	400.00
7005	1.00	530.00
7006	1.00	540.00
7007	1.00	445.00
7008	1.00	400.00
7009	1.00	300.00
7010	1.00	390.00
7011	1.00	280.00
7012	1.00	310.00
7013	1.00	365.00
7014	1.00	360.00
7015	1.00	380.00
7016	1.00	320.00
7017	1.00	340.00
7018	1.00	370.00
7019	1.00	360.00
7020	1.00	360.00
7021	1.00	360.00
7022	1.00	320.00
7023	1.00	310.00
7024	1.00	305.00
7025	1.00	310.00
7026	1.00	360.00
7027	1.00	350.00
7028	1.00	290.00
7029	1.00	260.00
7030	1.00	270.00
7031	1.00	220.00
7032	1.00	214.00

7033	1.00	202.00
7034	1.00	330.00
7035	1.00	345.00
7036	1.00	326.00
7037	1.00	310.00
7038	1.00	300.00
7039	1.00	300.00
7040	1.00	320.00
7041	1.00	290.00
7042	1.00	290.00
7043	1.00	425.00
7044	1.00	470.00
7045	1.00	275.00
7046	1.00	215.00
7047	1.00	215.00
7048	1.00	210.00
7049	1.00	210.00
7050	1.00	210.00
7051	1.00	225.00
7052	1.00	215.00
7053	1.00	215.00
7054	1.00	260.00
7055	1.00	270.00
7056	1.00	190.00
7057	1.00	185.00
7058	1.00	185.00
7059	1.00	185.00
7060	1.00	185.00
7061	1.00	185.00
7062	1.00	185.00
7063	1.00	200.00
7064	1.00	220.00
7065	1.00	220.00
7067	1.00	185.00
7070	1.00	200.00
7071	1.00	220.00
7072	1.00	380.00
7073	1.00	230.00
7074	1.00	260.00
7412	1.00	370.00
8001	1.00	360.00
8002	1.00	310.00
8003	1.00	290.00
8004	1.00	290.00
8005	1.00	360.00
8006	1.00	300.00
8007	1.00	290.00
8008	1.00	290.00
8009	1.00	210.00
8010	1.00	190.00
8011	1.00	190.00
8012	1.00	210.00
8013	1.00	210.00
8014	1.00	200.00
8016	1.00	185.00
8017	1.00	185.00
8018	1.00	220.00
8019	1.00	220.00
8020	1.00	200.00
8021	1.00	200.00
8022	1.00	298.00
8023	1.00	200.00
8024	1.00	360.00
8025	1.00	200.00
8027	1.00	200.00
8028	1.00	185.00
8029	1.00	190.00
8030	1.00	190.00
8031	1.00	190.00
8032	1.00	300.00
8034	1.00	190.00

8035		1.00	195.00	
8036		1.00	190.00	
8037		1.00	260.00	
8038		1.00	260.00	
8039		1.00	290.00	
8040		1.00	185.00	
8041		1.00	185.00	
8042		1.00	185.00	
8043		1.00	330.00	
8044		1.00	200.00	
8045		1.00	185.00	
8046		1.00	315.00	
8047		1.00	390.00	
8048		1.00	240.00	
8049		1.00	200.00	
8050		1.00	280.00	
8051		1.00	448.00	
8052		1.00	220.00	
8053		1.00	205.00	
8054		1.00	235.00	
8055		1.00	190.00	
8056		1.00	190.00	
8057		1.00	190.00	
8058		1.00	190.00	
8059		1.00	240.00	
8060		1.00	470.00	
8061		1.00	220.00	
8062		1.00	190.00	
8063		1.00	185.00	
8064		1.00	320.00	
8065		1.00	220.00	
8066		1.00	310.00	
8067		1.00	460.00	
8068		1.00	190.00	
8069		1.00	350.00	
8070		1.00	180.00	
8071		1.00	185.00	
8072		1.00	330.00	
8073		1.00	350.00	
8074		1.00	370.00	
8075		1.00	330.00	
9000		15.00	220.00	
9001		25.00	220.00	
9002		18.00	190.00	
9003		112.00	190.00	
9004		59.00	248.00	
9005		27.00	180.00	
9006		26.00	180.00	
9007		166.00	200.00	
184 - Pump-1		0.00	320.00	
184 - Pump-2		0.00	320.00	
Bron - Pump-		0.00	390.00	
BronPump-2		0.00	390.00	
Bronson-ES		----	390.00	511.00
CrossRoad-		0.00	350.00	
CrossRoad-		0.00	350.00	
CrossRoad-		----	350.00	370.00
FGN-AA	Mn<MdlD-455/	----	190.00	200.00
FGN-BB	Mn<83-D-455/	----	190.00	200.00
FGN-LL	184---D-500/	----	320.00	500.00
FGN-TT	Mn<CtyD-455/	----	190.00	455.00
Hemphill-T		----	280.00	420.00
Hwy83	CLM---S-380/	----	310.00	390.00
Hwy83-1		0.00	300.00	
Hwy83-2		0.00	300.00	
Hwy83-Plan		----	300.00	382.00
J-1		0.00	210.00	
J-11		0.00	400.00	
J-18		0.00	390.00	
J-21		0.00	269.00	
J-22		0.00	300.00	

J-24		0.00	185.00	
J-29		0.00	325.00	
J-3		0.00	390.00	
J-34		0.00	300.00	
J-37		0.00	300.00	
J-44		0.00	190.00	
J-45		0.00	350.00	
J-52		1.00	320.00	
J-53		0.00	190.00	
J-63		0.00	320.00	
J-69		0.00	340.00	
J-8		0.00	0.00	
JimNethery		----	380.00	396.00
JimNethery		0.00	380.00	
JimNethery		0.00	380.00	
King-1		0.00	269.00	
King-2		0.00	269.00	
McMahan		----	400.00	410.00
McMahan-1		0.00	400.00	
McMahan-2		0.00	400.00	
Midlake		----	185.00	200.00
Midlake-1		0.00	185.00	
Midlake-2		0.00	185.00	
Payne-1		0.00	400.00	
Payne-2		0.00	400.00	
Pipe-Plant	RdH-S/D-510/	----	440.00	510.00
Plant-A5		----	560.00	625.00
PRV-1		0.00	400.00	
Pump-1		0.00	185.00	
R-1		----	261.00	360.00
R-2		----	261.00	347.00
T-1		----	320.00	340.00
Tebo		----	325.00	348.00
Tebo-1		0.00	325.00	
Tebo-2		0.00	325.00	
WTHwy83-1		0.00	190.00	
WTHwy83-2		0.00	190.00	
WTMidlake-		0.00	190.00	
WTMidlake-		0.00	190.00	

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SUPPLY ZONE DATA

THIS SYSTEM HAS MULTIPLE SUPPLY ZONES

ZONE NO. 1 IS SUPPLIED THROUGH THE FOLLOWING PIPES:
 ~@Bronson-EST

ZONE NO. 2 IS SUPPLIED THROUGH THE FOLLOWING PIPES:

ZONE NO. 3 IS SUPPLIED THROUGH THE FOLLOWING PIPES:

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 2956
 NUMBER OF END NODES(j) = 2880
 NUMBER OF PRIMARY LOOPS(l) = 61
 NUMBER OF SUPPLY NODES(f) = 18
 NUMBER OF SUPPLY ZONES(z) = 3

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CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00338

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
1	2675	133	-1.25	0.05	0.00	0.13	0.05
2	133	5001	-2.50	0.17	0.00	0.26	0.18
3	5001	357	-2.50	0.24	0.00	0.26	0.18
4	357	2123	-3.75	0.38	0.00	0.38	0.39
5	5002	5003	12.50	0.58	0.00	0.57	0.50
6	5003	1794	1.25	0.02	0.00	0.13	0.05
7	5003	71	11.25	0.11	0.00	0.51	0.41
8	71	74	10.00	0.17	0.00	0.45	0.33
9	74	682	8.75	0.04	0.00	0.40	0.26
10	682	70	7.50	0.04	0.00	0.34	0.19
11	5011	1888	6.25	1.58	0.00	0.64	0.99
12	1888	5004	5.00	0.37	0.00	0.33	0.22
13	5004	365	5.00	0.22	0.00	0.33	0.22
14	365	5005	3.75	0.06	0.00	0.25	0.13
15	5005	5006	0.00	0.00	0.00	0.00	0.00
16	5005	5007	3.75	0.05	0.00	0.25	0.13
17	5007	5008	3.75	0.40	0.00	0.25	0.13
18	5008	908	3.75	0.12	0.00	0.25	0.13
19	908	5009	2.50	0.06	0.00	0.16	0.06
20	5009	631	2.50	0.08	0.00	0.16	0.06
21	631	630	1.25	0.01	0.00	0.08	0.02
22	5002	979	-17.50	0.02	0.00	0.45	0.23
23	979	611	-18.75	0.15	0.00	0.48	0.26
24	611	5010	-20.00	0.04	0.00	0.51	0.29
25	70	5011	6.25	0.09	0.00	0.28	0.14
26	5010	7000	-20.00	0.02	0.00	0.51	0.29
27	7000	7001	-21.25	0.57	0.00	0.54	0.33
28	7001	1321	-22.50	0.33	0.00	0.57	0.36
29	5012	111	2.50	0.21	0.00	0.26	0.18
30	111	880	1.25	0.01	0.00	0.13	0.05
31	5012	552	-26.25	0.54	0.00	0.67	0.48
32	62	174	3.75	0.03	0.00	0.38	0.39
33	174	938	2.50	0.11	0.00	0.26	0.18
34	938	629	1.25	0.00	0.00	0.13	0.05
35	552	150	-32.50	0.73	0.00	0.83	0.72
36	150	7002	-33.75	1.13	0.00	0.86	0.77
37	7002	5013	-35.00	1.20	0.00	0.89	0.82
38	5013	5014	17.50	1.08	0.00	0.45	0.23
39	5014	5015	17.50	0.55	0.00	0.45	0.23
40	5015	1693	3.75	0.00	0.00	0.10	0.01
41	1693	345	2.50	0.19	0.00	0.26	0.18
42	345	1138	1.25	0.05	0.00	0.13	0.05
43	5015	848	13.75	0.19	0.00	0.35	0.15

44	848	5016	12.50	0.08	0.00	0.32	0.12
45	5016	409	12.50	0.08	0.00	0.32	0.12
46	409	397	11.25	0.06	0.00	0.29	0.10
47	397	5017	10.00	0.10	0.00	0.45	0.33
48	5017	5018	10.00	0.40	0.00	0.45	0.33
49	5018	588	10.00	0.28	0.00	0.45	0.33
50	588	5019	8.75	0.60	0.00	0.40	0.26
51	5019	5020	8.75	0.22	0.00	0.40	0.26
52	5020	5022	3.75	0.11	0.00	0.38	0.39
53	5020	5021	5.00	0.04	0.00	0.23	0.09
54	5022	976	1.25	0.42	0.00	0.51	1.47
55	5022	444	2.50	0.32	0.00	0.26	0.18
56	444	1968	1.25	0.66	0.00	0.51	1.47
57	5021	5024	5.00	0.04	0.00	0.23	0.09
58	5024	975	3.75	0.01	0.00	0.38	0.39
59	641	2249	1.25	0.10	0.00	0.13	0.05
60	5024	1981	1.25	0.01	0.00	0.13	0.05
61	5013	5023	-52.50	0.12	0.00	0.60	0.24
62	5023	7003	3.75	0.06	0.00	0.38	0.39
63	7003	1912	2.50	0.06	0.00	0.26	0.18
64	1912	1464	1.25	0.06	0.00	0.13	0.05
65	1464	5025	0.00	0.00	0.00	0.00	0.00
66	5025	5026	0.00	0.00	0.00	0.00	0.00
67	5023	966	-56.25	0.65	0.00	0.64	0.28
68	966	1352	-57.50	0.28	0.00	0.65	0.29
69	1352	5027	-58.75	0.34	0.00	0.67	0.30
70	5027	5030	213.13	7.08	0.00	2.42	3.25
71	5027	5031	-271.88	17.94	0.00	3.08	5.10
72	5031	842	-271.88	2.23	0.00	3.08	5.10
73	842	847	-273.13	10.57	0.00	3.10	5.14
74	847	5028	-274.38	20.28	0.00	3.11	5.19
75	5028	5029	-281.88	0.69	0.00	3.20	5.45
76	5311	2205	2.50	0.00	0.00	0.26	0.18
77	5028	2112	7.50	4.36	0.00	0.77	1.39
78	2112	1397	6.25	2.10	0.00	0.64	0.99
79	1397	2147	5.00	0.80	0.00	0.51	0.66
80	2147	7004	3.75	1.09	0.00	0.38	0.39
81	7004	5032	2.50	0.08	0.00	0.16	0.06
82	5032	792	1.25	0.04	0.00	0.13	0.05
83	5032	1884	1.25	0.03	0.00	0.13	0.05
84	5029	549	2.50	0.13	0.00	0.26	0.18
85	549	1276	1.25	0.00	0.00	0.13	0.05
86	5029	1293	-284.38	3.98	0.00	3.23	5.54
89	5035	5036	0.00	0.00	0.00	0.00	0.00
90	5034	801	-127.04	10.57	0.00	3.24	8.98
91	801	434	-128.29	2.19	0.00	3.28	9.14
92	434	5037	-129.54	12.82	0.00	3.31	9.31
93	5037	4	3.75	1.58	0.00	0.38	0.39
94	4	5038	2.50	0.17	0.00	0.26	0.18
95	5038	1409	1.25	0.01	0.00	0.13	0.05
96	5038	474	1.25	0.04	0.00	0.13	0.05
97	5037	5039	-133.29	3.79	0.00	3.40	9.81
98	5039	1107	1.25	0.03	0.00	0.13	0.05
99	5039	5570	-134.54	21.87	0.00	3.43	9.98
100	1467	808	-150.79	18.40	0.00	3.85	12.33
101	5041	5042	-153.29	38.44	0.00	3.91	12.71
102	5042	2009	-153.29	24.46	0.00	3.91	12.71
103	2009	2381	-154.54	2.53	0.00	3.95	12.90
104	2381	870	-155.79	43.64	0.00	3.98	13.10
105	870	5043	-157.04	0.56	0.00	4.01	13.29
106	5043	506	57.99	0.15	0.00	0.66	0.29
107	5043	468	-215.03	2.27	0.00	2.44	3.30
108	506	5044	56.74	0.20	0.00	0.64	0.28
109	5044	5054	5.00	0.26	0.00	0.51	0.66
110	5055	2067	1.25	0.00	0.00	0.13	0.05
111	5055	8060	1.25	0.00	0.00	0.13	0.05
112	5044	5045	51.74	0.04	0.00	0.59	0.24
113	5045	443	47.99	0.08	0.00	0.54	0.21
114	443	2550	46.74	0.06	0.00	0.53	0.20
115	2550	977	45.49	0.09	0.00	0.52	0.19
116	977	5046	44.24	0.52	0.00	0.50	0.18

117	5046	1126	2.50	0.09	0.00	0.26	0.18
118	1126	1646	1.25	0.01	0.00	0.13	0.05
119	5046	5047	41.74	0.32	0.00	0.47	0.16
120	5668	2539	13.75	0.02	0.00	0.16	0.02
121	2539	917	12.50	0.01	0.00	0.14	0.02
122	917	2480	11.25	0.00	0.00	0.13	0.01
123	2480	1134	10.00	0.03	0.00	0.11	0.01
124	1134	404	8.75	0.02	0.00	0.10	0.01
125	404	7005	7.50	0.09	0.00	0.34	0.19
126	7005	7006	6.25	0.07	0.00	0.28	0.14
127	5045	194	3.75	0.07	0.00	0.38	0.39
128	194	1434	2.50	0.10	0.00	0.26	0.18
129	1434	715	1.25	0.05	0.00	0.13	0.05
131	7006	2025	5.00	0.16	0.00	0.33	0.22
132	2025	1885	3.75	0.15	0.00	0.25	0.13
133	1885	1013	2.50	0.05	0.00	0.16	0.06
134	1013	1142	1.25	0.00	0.00	0.08	0.02
135	5054	5055	3.75	0.05	0.00	0.38	0.39
136	5055	2040	1.25	0.00	0.00	0.13	0.05
137	5054	8067	1.25	0.02	0.00	0.13	0.05
138	468	2721	-216.28	0.37	0.00	2.45	3.34
139	2721	2646	-217.53	0.59	0.00	2.47	3.37
140	2646	1809	-218.78	0.71	0.00	2.48	3.41
141	1809	2337	-220.03	3.84	0.00	2.50	3.45
142	2337	795	-221.28	1.44	0.00	2.51	3.48
143	795	2691	-222.53	0.06	0.00	2.52	3.52
144	2691	8051	-223.78	7.52	0.00	2.54	3.56
145	8051	2043	-225.03	0.26	0.00	2.55	3.59
146	2043	2016	-226.28	0.34	0.00	2.57	3.63
147	2016	1227	-227.53	1.50	0.00	2.58	3.67
148	1227	5056	-228.78	1.12	0.00	2.60	3.70
149	7007	472	1.25	0.00	0.00	0.13	0.05
150	5056	7007	2.50	0.02	0.00	0.26	0.18
151	5056	2344	-231.28	1.01	0.00	2.62	3.78
152	2344	2029	-232.53	10.63	0.00	2.64	3.82
153	2029	2554	-233.78	5.99	0.00	2.65	3.86
154	2554	2203	-235.03	1.32	0.00	2.67	3.89
155	2203	1562	-236.28	0.87	0.00	2.68	3.93
156	1562	5048	-237.53	0.37	0.00	2.70	3.97
158	5667	1439	-252.53	1.16	0.00	2.87	4.45
159	1439	5057	-253.78	0.55	0.00	2.88	4.49
160	5057	7008	-253.78	0.11	0.00	2.88	4.49
161	7008	595	-255.03	2.64	0.00	2.89	4.53
162	595	956	-256.28	0.80	0.00	2.91	4.57
163	956	5049	-257.53	9.56	0.00	2.92	4.61
164	5049	1900	-257.53	2.14	0.00	2.92	4.61
165	1900	796	-258.78	8.51	0.00	2.94	4.65
166	796	5050	-260.03	1.88	0.00	2.95	4.70
167	5050	5051	3.75	0.07	0.00	0.25	0.13
168	5051	5052	3.75	0.11	0.00	0.25	0.13
169	5052	5053	3.75	0.13	0.00	0.25	0.13
170	5053	2699	3.75	0.10	0.00	0.25	0.13
171	5058	208	1.25	0.00	0.00	0.08	0.02
172	5058	646	1.25	0.00	0.00	0.08	0.02
174	5059	1942	2.50	0.11	0.00	0.26	0.18
175	1942	2061	1.25	0.00	0.00	0.13	0.05
176	5059	5060	12.50	0.74	0.00	0.82	1.21
177	5060	781	2.50	7.16	0.00	1.02	5.32
178	781	2017	1.25	0.09	0.00	0.51	1.47
179	5060	1006	10.00	0.17	0.00	0.65	0.80
180	1006	5061	8.75	2.80	0.00	0.57	0.62
181	5061	5062	8.75	0.51	0.00	0.57	0.62
182	5062	495	1.25	0.45	0.00	0.51	1.47
183	5062	5063	7.50	2.50	0.00	0.49	0.47
184	5063	7072	2.50	1.99	0.00	1.02	5.32
185	7072	2258	1.25	0.37	0.00	0.51	1.47
186	5063	1067	5.00	0.39	0.00	0.33	0.22
187	1067	1231	3.75	0.25	0.00	0.25	0.13
188	1231	1005	2.50	0.03	0.00	0.16	0.06
189	1005	1578	1.25	0.01	0.00	0.08	0.02
190	5030	423	2.50	0.05	0.00	0.26	0.18

191	423	5066	1.25	0.09	0.00	0.13	0.05
192	5066	2131	1.25	0.66	0.00	0.51	1.47
193	5066	5067	0.00	0.00	0.00	0.00	0.00
194	5030	5068	210.63	0.77	0.00	2.39	3.18
195	5068	2185	208.13	0.67	0.00	2.36	3.11
196	2185	741	206.88	1.28	0.00	2.35	3.07
197	741	414	205.63	1.31	0.00	2.33	3.04
198	414	881	204.38	0.86	0.00	2.32	3.01
199	881	849	203.13	3.27	0.00	2.30	2.97
200	849	347	201.88	1.14	0.00	2.29	2.94
201	347	1472	200.63	48.98	0.00	5.12	20.92
202	1472	5069	199.38	2.28	0.00	5.09	20.68
203	5069	5065	199.38	96.18	0.00	5.09	20.68
204	5064	5065	0.00	0.00	0.00	0.00	0.00
205	5068	5076	2.50	1.36	0.00	0.26	0.18
206	5065	5070	0.00	0.00	0.00	0.00	0.00
207	5065	5071	199.38	17.17	0.00	5.09	20.68
210	1232	5072	83.88	0.08	0.00	0.95	0.58
211	5072	5073	3.75	0.04	0.00	0.38	0.39
212	5073	2078	1.25	0.03	0.00	0.13	0.05
213	5073	1353	2.50	0.14	0.00	0.26	0.18
214	1353	2200	1.25	0.01	0.00	0.13	0.05
215	5072	5074	80.13	0.60	0.00	0.91	0.53
216	5074	1490	80.13	0.64	0.00	0.91	0.53
217	1490	1716	78.88	0.02	0.00	0.89	0.52
218	1716	517	77.63	0.27	0.00	0.88	0.50
219	517	2623	76.38	0.63	0.00	0.87	0.49
220	2623	5075	75.13	0.58	0.00	0.85	0.47
221	5075	5077	2.50	0.02	0.00	0.26	0.18
222	5077	144	2.50	0.11	0.00	0.26	0.18
223	144	466	1.25	0.01	0.00	0.13	0.05
224	5075	558	72.63	0.34	0.00	0.82	0.44
225	558	130	71.38	0.52	0.00	0.81	0.43
226	130	1049	70.13	0.10	0.00	0.80	0.41
227	1049	5078	68.88	0.17	0.00	0.78	0.40
228	5078	1605	18.60	0.06	0.00	0.47	0.26
229	1605	2256	17.35	0.10	0.00	0.44	0.22
230	5078	5079	50.28	0.16	0.00	0.57	0.22
231	5079	5080	20.00	0.52	0.00	0.51	0.29
232	5080	5081	20.00	0.67	0.00	0.51	0.29
233	2256	5082	16.10	0.32	0.00	0.41	0.20
234	5083	5084	30.00	0.35	0.00	0.77	0.62
235	5083	5085	0.28	0.00	0.00	0.03	0.00
236	5085	2210	2.50	0.02	0.00	0.26	0.18
237	2210	1883	1.25	1.08	0.00	0.51	1.47
238	5085	356	-2.22	0.24	0.00	0.23	0.15
239	356	7009	-3.47	0.17	0.00	0.35	0.33
240	7009	1953	-4.72	0.42	0.00	0.48	0.59
241	5082	5086	10.13	0.04	0.00	0.26	0.08
242	5082	1953	5.97	0.02	0.00	0.61	0.91
243	5079	5083	30.28	1.17	0.00	0.77	0.63
244	5086	5088	0.00	0.00	0.00	0.00	0.00
245	5086	394	10.13	0.07	0.00	0.26	0.08
246	394	5087	8.88	0.00	0.00	0.23	0.06
247	5087	677	2.50	0.00	0.00	0.06	0.01
248	5087	1050	6.38	0.02	0.00	0.16	0.04
249	1050	5089	5.13	0.01	0.00	0.13	0.02
250	677	2152	1.25	0.09	0.00	0.13	0.05
251	5081	2028	20.00	0.30	0.00	0.51	0.29
252	2028	1930	18.75	0.01	0.00	0.48	0.26
253	1930	8075	17.50	0.17	0.00	0.45	0.23
254	8075	2325	16.25	0.15	0.00	0.41	0.20
255	2325	107	15.00	0.05	0.00	0.38	0.17
256	107	106	13.75	0.03	0.00	0.35	0.15
257	106	5090	12.50	0.22	0.00	0.32	0.12
258	5090	745	5.00	0.05	0.00	0.51	0.66
259	745	1056	3.75	0.25	0.00	0.38	0.39
260	1056	2031	2.50	0.18	0.00	0.26	0.18
261	2031	1955	1.25	0.04	0.00	0.13	0.05
262	5090	326	7.50	0.36	0.00	0.34	0.19
263	326	363	6.25	0.57	0.00	0.28	0.14

264	363	2532	5.00	0.10	0.00	0.23	0.09
265	2532	7010	3.75	0.05	0.00	0.17	0.05
266	7010	5091	2.50	0.02	0.00	0.11	0.03
267	5091	2316	1.25	0.05	0.00	0.13	0.05
268	5091	5094	1.25	0.01	0.00	0.06	0.01
269	5094	724	1.25	0.00	0.00	0.06	0.01
270	724	5092	0.00	0.00	0.00	0.00	0.00
271	5092	5093	0.00	0.00	0.00	0.00	0.00
272	5084	1284	30.00	0.98	0.00	0.77	0.62
273	1284	5095	28.75	0.46	0.00	0.73	0.57
274	5095	408	6.25	0.04	0.00	0.41	0.33
275	408	5096	5.00	0.22	0.00	0.33	0.22
276	5096	27	1.25	0.01	0.00	0.08	0.02
277	5096	5097	3.75	1.29	0.00	0.38	0.39
278	5097	342	3.75	0.04	0.00	0.38	0.39
279	342	1675	2.50	3.14	0.00	1.02	5.32
280	1675	8032	1.25	0.06	0.00	0.51	1.47
281	5095	1484	22.50	0.81	0.00	1.02	1.48
282	1484	5098	21.25	0.67	0.00	0.96	1.33
283	5098	7011	2.50	0.02	0.00	0.26	0.18
284	7011	1386	1.25	0.01	0.00	0.13	0.05
285	5098	5099	18.75	1.75	0.00	0.85	1.05
286	5099	751	18.75	1.79	0.00	0.85	1.05
287	5100	5101	3.75	0.33	0.00	0.25	0.13
288	5101	8043	3.75	0.36	0.00	0.38	0.39
289	8043	1036	2.50	0.13	0.00	0.26	0.18
290	1036	2314	1.25	0.01	0.00	0.13	0.05
291	751	5100	17.50	2.08	0.00	0.79	0.93
292	5100	7012	13.75	0.08	0.00	0.62	0.59
293	7012	2094	12.50	0.26	0.00	0.57	0.50
294	2094	2355	11.25	0.10	0.00	0.51	0.41
295	2355	5102	10.00	0.15	0.00	0.45	0.33
296	5102	5103	10.00	0.33	0.00	0.45	0.33
297	1899	669	2.50	1.09	0.00	0.26	0.18
298	669	582	1.25	0.08	0.00	0.13	0.05
299	5103	1480	6.25	0.27	0.00	0.41	0.33
300	5103	5104	3.75	0.03	0.00	0.38	0.39
301	5104	1899	3.75	0.02	0.00	0.38	0.39
302	1480	5105	5.00	0.17	0.00	0.33	0.22
303	5105	5106	5.00	0.31	0.00	0.33	0.22
304	5106	2322	5.00	0.63	0.00	0.51	0.66
305	2322	1035	3.75	0.05	0.00	0.38	0.39
306	1035	670	2.50	0.05	0.00	0.26	0.18
307	670	2395	1.25	0.02	0.00	0.13	0.05
308-XX	5104	2659					
309	2659	1966	-1.25	0.01	0.00	0.23	0.20
310	1966	5108	-2.50	2.12	0.00	0.45	0.74
311	5108	712	-2.50	0.58	0.00	0.26	0.18
312	712	1254	-3.75	0.04	0.00	0.38	0.39
313	1254	1422	-5.00	1.32	0.00	0.51	0.66
314	1422	2272	-6.25	0.09	0.00	0.64	0.99
315	2272	1166	-7.50	0.01	0.00	0.19	0.05
316	1166	57	-8.75	0.03	0.00	0.22	0.06
317	57	2234	-10.00	0.03	0.00	0.26	0.08
318	2234	684	-11.25	0.03	0.00	0.29	0.10
319	684	5107	-12.50	0.12	0.00	0.32	0.12
320	5107	1324	7.50	0.09	0.00	0.77	1.39
321	1324	2252	6.25	0.23	0.00	0.64	0.99
322	2252	8047	5.00	0.02	0.00	0.51	0.66
323	8047	872	3.75	0.05	0.00	0.38	0.39
324	872	1193	2.50	0.04	0.00	0.26	0.18
325	1193	2443	1.25	0.03	0.00	0.13	0.05
326	7013	1365	1.25	0.03	0.00	0.23	0.20
327	5107	5109	-20.00	0.01	0.00	0.51	0.29
328	5109	5110	6.25	0.00	0.00	0.16	0.03
329	5109	5111	-26.25	0.15	0.00	0.67	0.48
330	5111	1237	2.50	0.01	0.00	0.11	0.03
331	1237	1179	1.25	0.00	0.00	0.06	0.01
332	5110	5326	3.75	0.25	0.00	0.68	1.56
333	5112	7014	33.75	0.03	0.00	0.38	0.11
334	5111	1621	-28.75	0.18	0.00	0.73	0.57

335	1621	426	-30.00	0.12	0.00	0.77	0.62
336	426	8001	-31.25	0.11	0.00	0.80	0.67
337	8001	5113	-32.50	0.12	0.00	0.83	0.72
338	7014	5114	32.50	0.07	0.00	0.37	0.10
339-XX	5113	5114					
340	5114	5115	32.50	0.04	0.00	0.83	0.72
341	5115	2546	1.25	0.00	0.00	0.03	0.00
342	5115	1534	31.25	0.05	0.00	0.80	0.67
343	1534	1060	30.00	0.04	0.00	0.77	0.62
344	5112	5261	-33.75	0.03	0.00	0.38	0.11
345	5110	7013	2.50	0.01	0.00	0.45	0.74
346	5113	2529	-32.50	0.19	0.00	0.83	0.72
347	2529	1255	-33.75	0.13	0.00	0.86	0.77
348	1255	5116	-35.00	0.10	0.00	0.89	0.82
349	5116	612	2.50	0.01	0.00	0.26	0.18
350	612	1410	1.25	0.01	0.00	0.13	0.05
351	5116	5117	6.25	0.00	0.00	0.16	0.03
352	5117	569	1.25	0.00	0.00	0.03	0.00
353	5117	1253	5.00	2.86	0.00	2.04	19.19
354	1253	1905	3.75	1.01	0.00	1.53	11.27
355	1905	2672	2.50	1.22	0.00	1.02	5.32
356	2672	680	1.25	1.06	0.00	0.51	1.47
357	5116	676	-43.75	0.23	0.00	1.12	1.25
358	676	379	-45.00	0.06	0.00	1.15	1.31
359	379	694	-46.25	0.74	0.00	1.18	1.38
360	694	832	-47.50	0.21	0.00	1.21	1.45
361	832	5118	-48.75	0.14	0.00	1.24	1.52
362	5118	2715	6.25	0.01	0.00	0.16	0.03
363	5114	J-18	0.00	0.00	0.00	0.00	0.00
364	5118	7015	-55.00	0.23	0.00	1.40	1.90
365	7015	5119	-56.25	0.45	0.00	1.44	1.99
366	5119	5121	2.50	0.00	0.00	0.03	0.00
368	5121	435	2.50	0.00	0.00	0.06	0.01
369	435	2072	1.25	0.00	0.00	0.03	0.00
370	5119	1403	133.75	0.24	0.00	1.52	1.37
371	1403	1987	132.50	0.11	0.00	1.50	1.35
372	1987	1986	131.25	0.03	0.00	1.49	1.32
374	2062	J-3	-1.25	0.02	0.00	0.23	0.20
375	1369	7412	7.50	0.11	0.00	1.36	5.65
376	7412	1835	6.25	0.37	0.00	1.13	4.03
377	1835	5122	5.00	0.29	0.00	0.91	2.66
378	5122	1937	5.00	0.18	0.00	0.91	2.66
379	1937	1829	3.75	0.22	0.00	0.68	1.56
380	1829	1973	2.50	0.23	0.00	0.45	0.74
381	1973	2006	1.25	0.02	0.00	0.23	0.20
382	2715	2628	5.00	0.00	0.00	0.13	0.02
383	2628	378	3.75	0.00	0.00	0.10	0.01
384	378	1635	2.50	0.00	0.00	0.06	0.01
385	1635	187	1.25	0.00	0.00	0.03	0.00
386	5132	583	2.50	0.10	0.00	0.45	0.74
387	583	838	1.25	0.01	0.00	0.23	0.20
388	5132	5131	127.50	0.50	0.00	1.45	1.25
389	5131	5130	111.25	0.03	0.00	1.26	0.97
390	5130	5129	30.00	0.10	0.00	0.77	0.62
391	5129	971	2.50	0.00	0.00	0.06	0.01
392	971	7018	1.25	0.00	0.00	0.03	0.00
393	5129	5128	27.50	0.15	0.00	0.70	0.53
394	5128	2414	3.75	0.17	0.00	0.68	1.56
395	2414	928	2.50	0.17	0.00	0.45	0.74
396	928	1413	1.25	0.02	0.00	0.23	0.20
397	5128	1521	23.75	1.27	0.00	2.43	11.76
398	1521	5125	22.50	2.53	0.00	2.30	10.64
399	5125	1140	12.50	0.74	0.00	1.28	3.58
400	1140	5124	11.25	0.16	0.00	1.15	2.95
401	5124	5123	8.75	0.21	0.00	0.89	1.85
402	5123	455	7.50	0.12	0.00	0.77	1.39
403	5123	2232	1.25	0.00	0.00	0.13	0.05
404	455	2453	6.25	0.30	0.00	0.64	0.99
405	2453	696	5.00	0.02	0.00	0.51	0.66
406	696	8064	3.75	0.10	0.00	0.38	0.39
407	8064	7016	2.50	0.04	0.00	0.26	0.18

408	7016	2276	1.25	0.01	0.00	0.13	0.05
409	5124	952	2.50	0.13	0.00	0.45	0.74
410	952	2345	1.25	0.05	0.00	0.23	0.20
411	5125	573	10.00	0.36	0.00	1.02	2.37
412	573	575	8.75	0.06	0.00	0.89	1.85
413	575	5126	7.50	0.12	0.00	0.77	1.39
414	5126	2399	2.50	0.01	0.00	0.26	0.18
415	2399	2269	1.25	0.01	0.00	0.13	0.05
416	5126	5127	5.00	0.04	0.00	0.51	0.66
417	5127	1571	2.50	0.02	0.00	0.26	0.18
418	1571	7017	1.25	0.00	0.00	0.13	0.05
419	5127	2710	2.50	0.04	0.00	0.26	0.18
420	2710	8069	1.25	0.00	0.00	0.13	0.05
421	5119	5120	10.00	0.00	0.00	0.26	0.08
422	1986	5132	130.00	0.11	0.00	1.48	1.30
423	5131	7019	16.25	1.17	0.00	1.66	5.82
424	7019	7020	15.00	0.65	0.00	1.53	5.02
425	7020	7021	13.75	0.54	0.00	1.40	4.27
426	7021	2356	12.50	0.10	0.00	1.28	3.58
427	2356	5133	11.25	0.46	0.00	1.15	2.95
428	5133	1431	6.25	0.52	0.00	1.13	4.03
429	1431	465	5.00	0.25	0.00	0.91	2.66
430	465	5134	3.75	0.05	0.00	0.68	1.56
431	5134	1811	3.75	0.09	0.00	0.68	1.56
432	1811	1435	2.50	0.14	0.00	0.45	0.74
433	1435	2118	1.25	0.01	0.00	0.23	0.20
434	5133	530	5.00	0.84	0.00	0.91	2.66
435	530	1089	3.75	0.32	0.00	0.68	1.56
436	1089	5135	2.50	0.22	0.00	0.45	0.74
437	5135	579	2.50	0.52	0.00	0.45	0.74
438	579	2694	1.25	0.00	0.00	0.23	0.20
439	5130	2436	81.25	0.62	0.00	2.07	3.92
440	2436	1351	80.00	1.15	0.00	2.04	3.81
441	1351	2580	78.75	0.69	0.00	2.01	3.70
442	2580	7022	77.50	1.16	0.00	1.98	3.59
443	7022	1273	76.25	0.72	0.00	1.95	3.49
444	1273	5136	75.00	0.29	0.00	1.91	3.38
445	5136	5137	15.00	0.08	0.00	0.38	0.17
446-XX	5137	5138					
447	5138	1251	2.50	0.00	0.00	0.06	0.01
448	1251	2679	1.25	0.00	0.00	0.03	0.00
449	5138	189	21.25	0.91	0.00	2.17	9.57
450	189	398	20.00	0.78	0.00	2.04	8.55
451	398	1378	18.75	2.57	0.00	1.91	7.59
452	5137	5139	15.00	1.54	0.00	1.53	5.02
453	5139	5140	15.00	0.43	0.00	1.53	5.02
454	5140	1418	1.25	0.01	0.00	0.13	0.05
455	5140	554	1.25	0.00	0.00	0.13	0.05
456	5140	452	8.75	0.06	0.00	0.89	1.85
457	5140	2223	3.75	0.04	0.00	0.38	0.39
458	2223	1256	2.50	0.27	0.00	0.45	0.74
459	1256	2217	1.25	0.06	0.00	0.23	0.20
460	1378	1564	17.50	1.72	0.00	1.79	6.68
461	1564	2521	16.25	7.91	0.00	1.66	5.82
462	2521	914	15.00	3.03	0.00	1.53	5.02
463	1714	723	12.50	0.09	0.00	1.28	3.58
464	914	1714	13.75	3.79	0.00	1.40	4.27
465	8072	5141	10.00	13.51	0.00	1.82	9.62
466	5141	941	10.00	3.61	0.00	1.82	9.62
467	941	1079	8.75	0.23	0.00	1.59	7.51
468	723	8072	11.25	1.02	0.00	1.15	2.95
469	1079	5152	7.50	4.51	0.00	1.36	5.65
470	1529	1756	1.25	0.01	0.00	0.23	0.20
471	5152	1069	5.00	0.51	0.00	0.91	2.66
472	1069	5153	3.75	1.72	0.00	0.68	1.56
473	2324	2115	1.25	0.00	0.00	0.23	0.20
474	5153	965	1.25	0.05	0.00	0.23	0.20
475	452	7023	7.50	0.54	0.00	0.77	1.39
476	7023	5143	6.25	0.39	0.00	0.64	0.99
477	5143	1202	6.25	0.03	0.00	0.64	0.99
478	1202	5144	5.00	0.05	0.00	0.51	0.66

479	5144	5151	2.50	0.01	0.00	0.26	0.18
480	1285	1414	1.25	0.00	0.00	0.13	0.05
481	5144	2052	2.50	0.03	0.00	0.26	0.18
482	2052	2724	1.25	0.01	0.00	0.13	0.05
483	5136	5145	33.75	0.02	0.00	0.86	0.77
484	5145	7024	2.50	0.04	0.00	0.26	0.18
485	7024	2706	1.25	0.02	0.00	0.13	0.05
486	5145	1258	31.25	0.14	0.00	0.80	0.67
487	1258	1595	30.00	0.13	0.00	0.77	0.62
488	5149	5146	23.75	0.13	0.00	0.61	0.40
489	5148	7026	18.75	0.11	0.00	0.48	0.26
490	7026	1717	17.50	0.06	0.00	0.45	0.23
491	1717	5147	16.25	0.04	0.00	0.41	0.20
492	5147	2341	5.00	0.30	0.00	0.51	0.66
493	2341	2459	3.75	1.10	0.00	0.68	1.56
494	2459	1367	2.50	0.13	0.00	0.45	0.74
495	1367	1320	1.25	0.17	0.00	0.23	0.20
496	5147	7027	10.00	0.83	0.00	1.82	9.62
497	7027	2244	8.75	0.21	0.00	1.59	7.51
498	2244	673	7.50	2.36	0.00	1.36	5.65
499	673	1553	6.25	0.48	0.00	1.13	4.03
500	412	1553	-5.00	0.14	0.00	0.91	2.66
501	412	454	3.75	0.20	0.00	0.68	1.56
502	454	439	2.50	0.42	0.00	0.45	0.74
503	439	1090	1.25	0.06	0.00	0.23	0.20
504	5146	5148	23.75	0.22	0.00	0.61	0.40
505	1595	5149	28.75	0.04	0.00	0.73	0.57
506	7025	581	1.25	0.00	0.00	0.03	0.00
507	5149	7025	5.00	0.00	0.00	0.13	0.02
508	7025	1130	2.50	0.01	0.00	0.06	0.01
509	1130	2633	1.25	0.00	0.00	0.03	0.00
510	5148	1576	1.25	0.00	0.00	0.03	0.00
511	5148	5150	3.75	0.00	0.00	0.10	0.01
512	5150	873	1.25	0.00	0.00	0.03	0.00
513	5150	750	1.25	0.00	0.00	0.03	0.00
514	5150	8005	1.25	0.00	0.00	0.03	0.00
515	5147	1002	1.25	0.00	0.00	0.03	0.00
516	5138	2444	-23.75	3.93	0.00	2.43	11.76
517	5334	1436	1.25	0.01	0.00	0.13	0.05
518	5151	1285	2.50	0.00	0.00	0.26	0.18
519	5152	1529	2.50	0.35	0.00	0.45	0.74
521	5153	2324	2.50	0.10	0.00	0.45	0.74
522	1294	2427	-1.25	0.02	0.00	0.13	0.05
523	2427	1940	-2.50	0.13	0.00	0.26	0.18
524	1940	732	-3.75	0.59	0.00	0.38	0.39
525	732	5142	-5.00	1.09	0.00	0.51	0.66
526	5142	5154	-5.00	0.57	0.00	0.51	0.66
527	5154	5155	-5.00	0.30	0.00	0.33	0.22
528	5155	155	1.25	0.04	0.00	0.13	0.05
529	5155	748	-6.25	0.35	0.00	0.41	0.33
530	748	5156	-7.50	0.43	0.00	0.49	0.47
531	5156	1488	-7.50	0.34	0.00	0.34	0.19
532	1488	5157	-8.75	0.13	0.00	0.40	0.26
533	5157	1391	-8.75	0.02	0.00	0.40	0.26
534	1391	1275	-10.00	0.52	0.00	0.45	0.33
535	1275	1153	-11.25	0.96	0.00	0.51	0.41
536	1153	1957	-12.50	1.27	0.00	0.57	0.50
537	1957	206	-13.75	0.20	0.00	0.62	0.59
538	206	1317	-15.00	0.32	0.00	0.68	0.70
539	1317	2222	-16.25	0.48	0.00	0.74	0.81
540	2222	853	-17.50	0.05	0.00	0.79	0.93
541	853	5158	-18.75	2.61	0.00	0.85	1.05
542	5158	5159	0.00	0.00	0.00	0.00	0.00
543	5159	5160	0.00	0.00	0.00	0.00	0.00
544	5158	747	-18.75	0.51	0.00	0.85	1.05
545	747	1244	-20.00	0.72	0.00	0.91	1.19
546	1244	5161	-21.25	2.16	0.00	0.96	1.33
547	5161	5162	-21.25	4.75	0.00	0.96	1.33
548	5162	697	3.75	0.54	0.00	0.38	0.39
549	697	618	2.50	0.29	0.00	0.26	0.18
550	618	1651	1.25	0.01	0.00	0.13	0.05

551	5162	1380	-25.00	0.18	0.00	0.64	0.44
552	1380	185	-26.25	0.80	0.00	0.67	0.48
553	185	1323	-27.50	0.48	0.00	0.70	0.53
554	1323	5163	-28.75	0.83	0.00	0.73	0.57
555	5163	5164	-28.75	1.08	0.00	0.73	0.57
556	5164	890	-28.75	0.58	0.00	0.73	0.57
557	890	5165	-30.00	2.49	0.00	0.77	0.62
558	5165	5166	-140.00	0.86	0.00	3.57	10.75
559	5166	5167	0.00	0.00	0.00	0.00	0.00
560	5166	5168	0.00	0.00	0.00	0.00	0.00
561	5166	5169	-140.00	1.28	0.00	1.59	1.49
562	5169	5170	-140.00	1.18	0.00	1.59	1.49
563	5170	984	-140.00	4.49	0.00	1.59	1.49
564	984	620	-141.25	0.41	0.00	1.60	1.52
565	620	5171	-142.50	0.16	0.00	1.62	1.54
566	5165	1387	110.00	14.93	0.00	2.81	6.87
567	1387	1388	108.75	0.61	0.00	2.78	6.73
568	1388	1689	107.50	2.31	0.00	2.74	6.59
569	1689	5172	106.25	0.90	0.00	2.71	6.45
570	5172	112	3.75	1.46	0.00	1.53	11.27
571	112	1681	2.50	0.78	0.00	1.02	5.32
572	1681	1818	1.25	0.14	0.00	0.51	1.47
573	5173	1959	1.25	0.00	0.00	0.03	0.00
574	5174	5175	0.00	0.00	0.00	0.00	0.00
575	5174	672	101.25	2.14	0.00	2.58	5.90
576	672	2253	100.00	1.45	0.00	2.55	5.76
577	5173	5174	101.25	0.47	0.00	2.58	5.90
578	5172	5173	102.50	14.55	0.00	2.62	6.03
579	2253	5176	98.75	1.01	0.00	2.52	5.63
580	5176	1427	12.50	1.35	0.00	1.28	3.58
581	1427	1408	11.25	0.39	0.00	1.15	2.95
582	1408	5177	10.00	1.16	0.00	1.02	2.37
583	5177	656	1.25	0.00	0.00	0.13	0.05
584	5177	651	1.25	0.00	0.00	0.13	0.05
585	5177	1383	7.50	0.22	0.00	0.77	1.39
586	1383	1504	6.25	0.07	0.00	0.64	0.99
587	1504	1382	5.00	0.89	0.00	0.51	0.66
588	1382	2247	3.75	0.03	0.00	0.38	0.39
589	2247	7028	2.50	0.32	0.00	0.26	0.18
590	7028	1189	1.25	0.00	0.00	0.13	0.05
591	5176	5179	86.25	0.14	0.00	2.20	4.38
592	5179	5178	0.00	0.00	0.00	0.00	0.00
593	5179	728	86.25	1.56	0.00	2.20	4.38
594	728	5180	85.00	2.70	0.00	2.17	4.26
595	5180	5181	0.00	0.00	0.00	0.00	0.00
596	5180	5182	85.00	1.69	0.00	2.17	4.26
597	5182	267	3.75	0.54	0.00	0.38	0.39
598	267	1906	2.50	0.01	0.00	0.26	0.18
599	1906	2190	1.25	0.00	0.00	0.13	0.05
600	5182	5183	81.25	1.51	0.00	2.07	3.92
601	5183	5184	80.00	0.11	0.00	2.04	3.81
602	5184	1745	3.75	0.02	0.00	0.38	0.39
603	1745	406	2.50	2.08	0.00	1.02	5.32
604	406	2228	1.25	0.81	0.00	0.51	1.47
605	5183	81	1.25	0.01	0.00	0.13	0.05
606	5184	5185	76.25	2.71	0.00	1.95	3.49
607	5185	5186	16.25	0.02	0.00	1.06	1.96
608	5185	7029	6.25	0.15	0.00	0.64	0.99
609	7029	933	5.00	0.06	0.00	0.51	0.66
610	933	5187	3.75	0.02	0.00	0.38	0.39
611	5187	1201	2.50	0.01	0.00	0.26	0.18
612	1201	94	1.25	0.02	0.00	0.13	0.05
613	5187	742	1.25	0.03	0.00	0.13	0.05
614	5186	2578	16.25	0.77	0.00	1.06	1.96
615	5185	5188	53.75	1.63	0.00	1.37	1.83
616	5188	7030	2.50	0.00	0.00	0.06	0.01
617	7030	294	1.25	0.57	0.00	0.51	1.47
618	2578	1364	15.00	1.63	0.00	0.98	1.69
619	1364	5189	13.75	1.13	0.00	0.90	1.44
620	5188	502	51.25	1.96	0.00	1.31	1.67
621	1205	688	7.50	0.84	0.00	0.77	1.39

622	688	5190	6.25	0.33	0.00	0.64	0.99
623	5189	1684	5.00	0.08	0.00	0.51	0.66
624	1684	1685	3.75	0.04	0.00	0.38	0.39
625	1685	234	2.50	0.01	0.00	0.26	0.18
626	234	565	1.25	0.01	0.00	0.13	0.05
627	5189	1205	8.75	0.10	0.00	0.89	1.85
628	502	7031	50.00	3.60	0.00	1.28	1.60
629	7031	1744	48.75	0.28	0.00	1.24	1.52
630	1744	1774	47.50	1.17	0.00	1.21	1.45
631	1774	2091	46.25	1.00	0.00	1.18	1.38
632	5192	5191	-43.75	0.19	0.00	1.12	1.25
633	5191	2091	-45.00	0.07	0.00	1.15	1.31
634	5191	7032	1.25	0.00	0.00	0.13	0.05
635	5192	5193	43.75	1.93	0.00	1.12	1.25
636	5193	1752	3.75	0.03	0.00	0.38	0.39
637	1752	2426	2.50	0.01	0.00	0.26	0.18
638	2426	1751	1.25	0.00	0.00	0.13	0.05
639	5193	5194	40.00	9.88	0.00	1.02	1.06
640	5194	5195	31.25	0.19	0.00	1.42	2.71
641	5194	2490	8.75	1.22	0.00	0.57	0.62
642	2490	1747	7.50	0.08	0.00	0.49	0.47
643	1747	5196	6.25	0.99	0.00	0.64	0.99
644	5196	5197	2.50	0.01	0.00	0.26	0.18
645	5197	1291	1.25	0.01	0.00	0.13	0.05
646	5197	7033	1.25	0.01	0.00	0.13	0.05
647	5196	1741	3.75	0.17	0.00	0.38	0.39
648	1741	653	2.50	0.28	0.00	0.26	0.18
649	653	1755	1.25	0.03	0.00	0.13	0.05
650	5195	2688	31.25	1.51	0.00	1.42	2.71
651	2688	1749	30.00	1.59	0.00	1.36	2.52
652	1749	1748	28.75	2.52	0.00	1.30	2.33
653	1748	5198	27.50	4.74	0.00	1.25	2.14
654	5198	1740	27.50	0.96	0.00	1.25	2.14
655	1740	1742	26.25	1.18	0.00	1.19	1.96
656	1742	5199	25.00	0.71	0.00	1.13	1.79
657	5199	1753	1.25	0.00	0.00	0.13	0.05
658	5200	1762	6.25	0.26	0.00	0.41	0.33
659	1762	1763	5.00	0.01	0.00	0.33	0.22
660	1763	1760	3.75	0.03	0.00	0.25	0.13
661	1760	701	2.50	0.01	0.00	0.16	0.06
662	701	1750	1.25	0.02	0.00	0.08	0.02
663	5199	5200	23.75	0.35	0.00	2.43	11.76
664	5200	1761	17.50	0.29	0.00	0.79	0.93
665	1761	5201	16.25	0.78	0.00	0.74	0.81
666	5201	5202	16.25	1.71	0.00	1.66	5.82
667	5202	1758	13.75	0.35	0.00	1.40	4.27
668	1758	1780	12.50	0.70	0.00	1.28	3.58
669	1780	5203	11.25	0.29	0.00	1.15	2.95
670	5203	1759	6.54	0.02	0.00	0.67	1.08
671	5203	2305	4.71	0.22	0.00	0.48	0.59
672	2305	5204	3.46	0.03	0.00	0.35	0.33
673	1759	923	5.29	0.17	0.00	0.54	0.73
674	923	1243	4.04	0.01	0.00	0.41	0.44
675	1243	2551	2.79	0.04	0.00	0.28	0.22
676	2551	134	1.54	0.01	0.00	0.16	0.07
677	134	272	0.29	0.00	0.00	0.03	0.00
678	272	5204	-0.96	0.00	0.00	0.10	0.03
679	5204	5205	2.50	0.06	0.00	0.26	0.18
680	5205	109	2.50	0.03	0.00	0.26	0.18
681	109	615	1.25	0.01	0.00	0.13	0.05
682	5202	2127	2.50	0.07	0.00	0.26	0.18
683	2127	482	1.25	0.01	0.00	0.13	0.05
684	5190	310	6.25	1.05	0.00	0.64	0.99
685	310	2089	5.00	0.42	0.00	0.51	0.66
686	2089	1964	3.75	0.19	0.00	0.38	0.39
687	1964	312	2.50	0.06	0.00	0.26	0.18
688	312	309	1.25	0.03	0.00	0.13	0.05
689	1060	5207	28.75	0.54	0.00	0.73	0.57
690	5207	237	3.75	0.30	0.00	0.38	0.39
691	237	1939	2.50	0.02	0.00	0.26	0.18
692	1939	369	1.25	0.02	0.00	0.13	0.05

693	975	641	2.50	0.17	0.00	0.26	0.18
694	5033	1293	285.63	0.64	0.00	3.24	5.59
695	5033	J-11	-285.63	1.92	0.00	3.24	5.59
697	5207	8024	25.00	0.16	0.00	0.64	0.44
698	8024	1228	23.75	0.00	0.00	0.61	0.40
699	1228	2219	22.50	8.31	0.00	2.30	10.64
700	2219	5209	21.25	1.63	0.00	2.17	9.57
701	5209	691	7.50	1.19	0.00	1.36	5.65
702	691	717	6.25	1.01	0.00	1.13	4.03
703	717	1971	5.00	0.27	0.00	0.91	2.66
704	1971	1084	3.75	0.64	0.00	0.68	1.56
705	1084	2680	2.50	0.08	0.00	0.45	0.74
706	2680	1815	1.25	0.02	0.00	0.23	0.20
707	5210	5211	7.50	0.28	0.00	1.36	5.65
708	5209	5210	13.75	3.20	0.00	1.40	4.27
709	5210	807	6.25	0.24	0.00	1.13	4.03
710	5211	374	1.25	0.41	0.00	0.51	1.47
711	5211	831	6.25	0.24	0.00	1.13	4.03
712	807	830	5.00	0.59	0.00	0.91	2.66
713	831	1913	5.00	0.59	0.00	0.91	2.66
714	830	7034	3.75	1.36	0.00	0.68	1.56
715	1913	1805	3.75	1.31	0.00	0.68	1.56
716	7034	1703	2.50	0.30	0.00	0.45	0.74
717	1703	7	1.25	0.00	0.00	0.06	0.01
718	1805	1065	2.50	3.93	0.00	1.02	5.32
719	1065	1555	1.25	0.24	0.00	0.51	1.47
720-XX	1555	5212					
721	5214	5213	-1.25	0.03	0.00	0.13	0.05
722	5213	5212	1.25	0.00	0.00	0.13	0.05
723	5212	2289	1.25	0.00	0.00	0.13	0.05
724	5213	2592	-2.50	0.03	0.00	0.26	0.18
725	2592	271	-3.75	0.21	0.00	0.38	0.39
726	271	5215	-5.00	1.75	0.00	0.51	0.66
727	5215	260	5.00	1.32	0.00	0.51	0.66
728	5215	1831	-10.00	1.84	0.00	0.65	0.80
729	260	1992	3.75	0.01	0.00	0.38	0.39
730	1992	1837	2.50	0.04	0.00	0.26	0.18
731	1831	1647	-11.25	0.75	0.00	0.74	0.99
732	1647	1645	-12.50	0.12	0.00	0.82	1.21
733	1645	1922	-13.75	0.20	0.00	0.90	1.44
734	1922	2696	-15.00	1.54	0.00	0.98	1.69
735	2696	5216	-16.25	0.91	0.00	1.06	1.96
736	5216	2063	6.25	0.25	0.00	0.64	0.99
737	2063	679	5.00	0.19	0.00	0.51	0.66
738	679	2520	3.75	0.16	0.00	0.38	0.39
739	2520	1355	2.50	0.04	0.00	0.26	0.18
740	1355	2400	1.25	0.02	0.00	0.13	0.05
741	5216	2412	-22.50	0.77	0.00	1.02	1.48
742	2412	543	-23.75	0.10	0.00	1.08	1.63
743	543	2403	-25.00	0.65	0.00	1.13	1.79
744	5217	348	21.25	0.29	0.00	2.17	9.57
745	348	305	20.00	0.62	0.00	2.04	8.55
746	305	1509	18.75	2.79	0.00	1.91	7.59
747	1509	1009	17.50	5.42	0.00	1.79	6.68
748	1009	996	16.25	0.62	0.00	1.66	5.82
749	996	313	15.00	3.18	0.00	1.53	5.02
750	313	1904	13.75	0.26	0.00	1.40	4.27
751	1904	1557	12.50	2.53	0.00	1.28	3.58
752	1557	537	11.25	0.73	0.00	1.15	2.95
753	537	1544	10.00	1.41	0.00	1.02	2.37
754	1544	2262	8.75	0.89	0.00	0.89	1.85
755	2262	1908	7.50	0.18	0.00	0.77	1.39
756	1908	1738	6.25	0.00	0.00	0.64	0.99
757	1738	2121	5.00	0.03	0.00	0.51	0.66
758	2121	396	3.75	0.35	0.00	0.38	0.39
759	396	518	2.50	0.00	0.00	0.26	0.18
760	518	1597	1.25	0.01	0.00	0.13	0.05
761	2403	5217	-26.25	0.09	0.00	1.19	1.96
762	5217	5218	-47.50	0.74	0.00	2.16	5.89
765	7035	2229	-206.43	0.35	0.00	2.34	3.06
766	536	2229	207.68	0.74	0.00	2.36	3.10

767	536	2290	-208.93	2.98	0.00	2.37	3.13
768	1461	2290	210.18	0.09	0.00	2.38	3.17
769	1677	1461	211.43	0.38	0.00	2.40	3.20
770	10	1677	212.68	0.65	0.00	2.41	3.24
771	79	10	213.93	1.74	0.00	2.43	3.27
772	1613	79	215.18	3.03	0.00	2.44	3.31
773	2278	1613	216.43	2.20	0.00	2.46	3.34
774	96	2278	217.68	0.24	0.00	2.47	3.38
775	5219	96	218.93	1.39	0.00	2.48	3.41
776	5219	5220	0.00	0.00	0.00	0.00	0.00
778	5221	55	240.00	0.97	0.00	2.72	4.05
779	55	8073	238.75	0.44	0.00	2.71	4.01
780	8073	1334	237.50	5.09	0.00	2.69	3.97
781	1334	450	236.25	1.42	0.00	2.68	3.93
782	450	156	235.00	0.79	0.00	2.67	3.89
783	156	1152	233.75	2.00	0.00	2.65	3.85
784	1152	1713	232.50	2.23	0.00	2.64	3.82
785	1713	218	231.25	1.96	0.00	2.62	3.78
786	218	885	230.00	1.71	0.00	2.61	3.74
787	885	2101	228.75	7.30	0.00	2.60	3.70
788	2101	7036	227.50	1.99	0.00	2.58	3.67
789	7036	1411	226.25	3.90	0.00	2.57	3.63
790	1411	136	225.00	1.25	0.00	2.55	3.59
791	136	1699	223.75	2.49	0.00	2.54	3.55
792	1699	1206	222.50	0.09	0.00	2.52	3.52
793	1206	1549	221.25	1.19	0.00	2.51	3.48
794	1549	2109	220.00	11.25	0.00	2.50	3.45
795	2109	740	218.75	0.58	0.00	2.48	3.41
796	740	8002	217.50	0.91	0.00	2.47	3.37
797	8002	5222	216.25	1.27	0.00	2.45	3.34
798	5222	1661	216.25	1.60	0.00	2.45	3.34
799	1661	5223	215.00	0.08	0.00	2.44	3.30
800	5223	5224	148.75	0.05	0.00	1.69	1.67
801	5224	1163	148.75	0.10	0.00	1.69	1.67
802	1163	377	147.50	0.09	0.00	1.67	1.64
803	377	1938	146.25	0.91	0.00	1.66	1.62
804	1938	5171	145.00	0.02	0.00	1.65	1.59
805	5171	2343	2.50	0.00	0.00	0.06	0.01
806	2343	1263	1.25	0.00	0.00	0.03	0.00
807	5223	32	66.25	0.39	0.00	1.69	2.69
808	32	5225	65.00	1.18	0.00	1.66	2.59
809	5225	169	1.25	0.00	0.00	0.03	0.00
810	5225	5226	62.50	0.07	0.00	1.60	2.41
811	5226	1116	62.50	0.45	0.00	1.60	2.41
812	5225	1098	1.25	0.01	0.00	0.13	0.05
813	1116	1012	61.25	1.15	0.00	1.56	2.32
814	1012	1120	60.00	0.60	0.00	1.53	2.24
815	1122	1120	-58.75	0.47	0.00	1.50	2.15
816	1122	1896	57.50	0.77	0.00	1.47	2.07
817	1896	1097	56.25	0.34	0.00	1.44	1.99
818	5228	2712	55.00	0.16	0.00	1.40	1.90
819	2641	2712	-53.75	0.35	0.00	1.37	1.83
820	2641	2522	52.50	0.25	0.00	1.34	1.75
821	2522	678	51.25	0.41	0.00	1.31	1.67
822	678	5227	50.00	0.14	0.00	1.28	1.60
823	1097	5228	55.00	0.06	0.00	1.40	1.90
824	5227	5229	43.75	0.14	0.00	1.12	1.25
825	5227	1198	6.25	1.03	0.00	0.64	0.99
826	5229	327	43.75	1.69	0.00	1.12	1.25
827	5230	2408	5.00	0.78	0.00	0.51	0.66
828	2408	1338	3.75	0.11	0.00	0.38	0.39
829	1338	2003	2.50	0.07	0.00	0.26	0.18
830	2003	8007	1.25	0.01	0.00	0.13	0.05
831	8006	5231	41.25	3.09	0.00	1.05	1.12
832	5231	749	41.25	1.40	0.00	1.05	1.12
833	749	1533	40.00	0.32	0.00	1.02	1.06
834	1533	1295	38.75	0.05	0.00	0.99	1.00
835	1295	5232	37.50	0.22	0.00	0.96	0.94
836	5232	1299	31.25	0.72	0.00	2.04	6.59
837	1299	1374	30.00	2.84	0.00	1.96	6.11
838	1374	1577	28.75	2.71	0.00	1.88	5.65

839	1577	1660	27.50	3.04	0.00	1.80	5.20
840	1660	1662	26.25	4.55	0.00	1.72	4.77
841	1662	5233	25.00	0.66	0.00	1.63	4.36
842	5233	1838	8.75	0.45	0.00	0.89	1.85
843	1838	1914	7.50	0.10	0.00	0.77	1.39
844	1914	476	6.25	0.10	0.00	0.64	0.99
845	476	2328	5.00	0.53	0.00	0.51	0.66
846	2328	2317	3.75	0.07	0.00	0.38	0.39
847	2317	2372	2.50	0.11	0.00	0.26	0.18
848	2372	1322	1.25	0.11	0.00	0.13	0.05
849	5233	2602	16.25	2.15	0.00	1.66	5.82
850	2602	36	15.00	1.52	0.00	1.53	5.02
851	36	26	13.75	0.04	0.00	1.40	4.27
852	26	8008	12.50	1.98	0.00	1.28	3.58
853	8008	5234	11.25	7.17	0.00	1.15	2.95
854	5234	14	2.50	0.05	0.00	0.26	0.18
855	14	1622	1.25	0.02	0.00	0.13	0.05
856	5234	1624	8.75	0.96	0.00	0.89	1.85
857	1624	1623	7.50	0.49	0.00	0.77	1.39
858	5219	5235	-218.93	12.77	0.00	2.48	3.41
859	5235	1277	3.75	0.35	0.00	0.38	0.39
860	1277	5236	2.50	0.02	0.00	0.26	0.18
861	5236	1700	1.25	0.56	0.00	0.51	1.47
862	5236	773	1.25	0.02	0.00	0.13	0.05
863	1192	5235	222.68	5.15	0.00	2.53	3.52
864	2479	1192	223.93	0.38	0.00	2.54	3.56
865	1144	2479	225.18	1.88	0.00	2.55	3.60
866	2259	1144	226.43	5.67	0.00	2.57	3.63
867	5237	2259	227.68	5.43	0.00	2.58	3.67
868	5237	1960	5.00	1.03	0.00	0.51	0.66
869	1960	1318	3.75	0.05	0.00	0.38	0.39
870	1318	258	2.50	0.03	0.00	0.26	0.18
871	258	800	1.25	0.01	0.00	0.13	0.05
872	5237	2081	3.75	0.12	0.00	0.38	0.39
873	2081	2454	2.50	0.06	0.00	0.26	0.18
874	2454	616	1.25	0.00	0.00	0.13	0.05
875	616	5238	0.00	0.00	0.00	0.00	0.00
876	2387	5237	236.43	0.26	0.00	2.68	3.94
877	5239	2387	237.68	8.04	0.00	2.70	3.98
878	1207	5239	237.68	2.97	0.00	2.70	3.98
879	349	1207	238.93	4.26	0.00	2.71	4.01
880	1070	349	240.18	1.25	0.00	2.73	4.05
881	5240	1070	241.43	0.51	0.00	2.74	4.09
882	5240	763	1.25	0.04	0.00	0.06	0.01
883	8050	5240	242.68	0.82	0.00	2.75	4.13
884	2166	8050	243.93	0.59	0.00	2.77	4.17
885	1552	2166	245.18	2.87	0.00	2.78	4.21
886	2485	1552	246.43	1.91	0.00	2.80	4.25
887	2485	2460	-247.68	0.77	0.00	2.81	4.29
888	2460	5241	-248.93	5.62	0.00	2.82	4.33
889	5241	1312	-248.93	0.31	0.00	2.82	4.33
890	1312	1073	-250.18	10.19	0.00	2.84	4.37
891	1073	1373	-251.43	1.58	0.00	2.85	4.41
892	1373	1608	-252.68	0.20	0.00	2.87	4.45
893	1608	5242	-253.93	0.94	0.00	2.88	4.49
894	5242	5243	2.50	0.05	0.00	0.26	0.18
895	5243	2362	1.25	0.01	0.00	0.13	0.05
896	5242	2606	-256.43	0.76	0.00	2.91	4.58
897	2606	2593	-257.68	1.85	0.00	2.92	4.62
898	5244	339	2.50	0.24	0.00	0.26	0.18
899	339	2639	1.25	0.01	0.00	0.13	0.05
900	5244	5245	-261.43	11.41	0.00	2.97	4.74
901	2593	5244	-258.93	5.11	0.00	2.94	4.66
902	5245	J-52	-321.43	0.35	0.00	3.65	6.95
903	J-52	1264	-322.68	1.27	0.00	3.66	7.00
904	1264	7037	-323.93	0.43	0.00	3.68	7.05
905	7037	1718	-325.18	1.01	0.00	3.69	7.10
906	1718	7038	-326.43	0.72	0.00	3.70	7.15
907	7038	1304	-327.68	2.03	0.00	3.72	7.21
908	1304	5246	-328.93	0.15	0.00	3.73	7.26
909	5246	1965	1.25	0.00	0.00	0.01	0.00

910	5246	154	-330.18	0.24	0.00	3.75	7.31
911	154	157	-331.43	1.46	0.00	3.76	7.36
912	157	766	-332.68	4.76	0.00	3.77	7.41
913	766	1518	-333.93	2.16	0.00	3.79	7.46
914	1518	2567	-335.18	1.48	0.00	3.80	7.51
915	2567	2398	-336.43	5.48	0.00	3.82	7.57
916	2398	1313	-337.68	2.36	0.00	3.83	7.62
917	1313	1239	-338.93	2.81	0.00	3.85	7.67
918	1239	5247	-340.18	0.85	0.00	3.86	7.72
919	5248	64	1.25	0.01	0.00	0.13	0.05
920	5248	333	1.25	0.01	0.00	0.13	0.05
921	5247	5248	2.50	0.75	0.00	0.26	0.18
922	5247	1494	-342.68	4.42	0.00	3.89	7.83
923	1494	5249	-343.93	3.89	0.00	3.90	7.88
924	5249	1561	2.50	0.02	0.00	0.26	0.18
925	1561	2472	1.25	0.01	0.00	0.13	0.05
926	5249	2334	-346.43	2.32	0.00	3.93	7.99
927	2334	2525	-347.68	0.64	0.00	3.94	8.04
928	2525	5250	-348.93	1.46	0.00	3.96	8.09
929	5250	343	1.25	0.00	0.00	0.13	0.05
930	5250	340	1.25	0.00	0.00	0.13	0.05
931	5250	5251	-351.43	4.38	0.00	3.99	8.20
932	5251	7039	-351.43	7.19	0.00	3.99	8.20
933	7039	2428	-352.68	1.30	0.00	4.00	8.26
934	5252	167	2.50	0.04	0.00	0.26	0.18
935	167	2242	1.25	0.01	0.00	0.13	0.05
936	2428	5252	-353.93	0.80	0.00	4.02	8.31
937	1241	33	-357.68	1.43	0.00	4.06	8.47
938	33	1580	-360.18	0.62	0.00	4.09	8.58
939	33	1062	1.25	0.01	0.00	0.13	0.05
940	1545	1580	361.43	11.02	0.00	4.10	8.64
941	1545	1708	-362.68	5.31	0.00	4.12	8.70
942	1708	2527	-363.93	0.71	0.00	4.13	8.75
943	2527	1607	-365.18	0.09	0.00	4.14	8.81
944	1607	1901	2.50	0.00	0.00	0.03	0.00
945	1901	1688	1.25	0.01	0.00	0.13	0.05
946	1607	2647	-368.93	2.71	0.00	4.19	8.97
947	2647	2220	-370.18	2.89	0.00	4.20	9.03
948	2220	761	-371.43	2.23	0.00	4.21	9.09
949	761	1970	-372.68	0.91	0.00	4.23	9.14
950	1970	1694	-373.93	0.92	0.00	4.24	9.20
951	1694	760	-375.18	1.86	0.00	4.26	9.26
952	760	252	1.25	0.00	0.00	0.13	0.05
953	760	1081	-377.68	0.94	0.00	4.29	9.37
954	1081	228	-378.93	1.90	0.00	4.30	9.43
955	228	7040	-380.18	1.06	0.00	4.31	9.49
956	7040	648	-381.43	1.24	0.00	4.33	9.55
957	648	341	-382.68	0.58	0.00	4.34	9.60
958	341	225	-383.93	1.17	0.00	4.36	9.66
959	225	338	-385.18	0.91	0.00	4.37	9.72
960	338	2476	-386.43	1.74	0.00	4.38	9.78
961	2476	1326	-387.68	2.03	0.00	4.40	9.84
962	1326	2070	-388.93	3.47	0.00	4.41	9.90
963	5252	1241	-356.43	4.48	0.00	4.04	8.42
964	5245	710	60.00	0.14	0.00	0.68	0.31
965	710	329	58.75	0.47	0.00	0.67	0.30
966	329	250	57.50	0.01	0.00	0.65	0.29
967	250	249	56.25	1.15	0.00	0.64	0.28
968	249	1980	55.00	0.32	0.00	0.62	0.26
969	1980	5254	53.75	0.03	0.00	0.61	0.25
970	5254	572	1.25	0.01	0.00	0.13	0.05
971	572	5255	0.00	0.00	0.00	0.00	0.00
972	5255	5256	0.00	0.00	0.00	0.00	0.00
973	5255	5257	0.00	0.00	0.00	0.00	0.00
974	5254	5258	52.50	0.40	0.00	0.60	0.24
975	5258	5259	3.75	0.04	0.00	0.38	0.39
976	5259	180	3.75	0.04	0.00	0.38	0.39
977	180	1016	2.50	0.06	0.00	0.26	0.18
978	1016	66	1.25	0.01	0.00	0.13	0.05
979	5260	223	5.00	0.07	0.00	0.51	0.66
980	223	226	3.75	0.42	0.00	0.38	0.39

981	226	752	2.50	0.11	0.00	0.26	0.18
982	752	1416	1.25	0.02	0.00	0.13	0.05
983	5260	8074	43.75	0.69	0.00	0.50	0.17
984	8074	1932	42.50	0.01	0.00	0.48	0.16
985	1932	1525	41.25	0.04	0.00	0.47	0.16
986	1525	1579	1.25	0.00	0.00	0.13	0.05
987	1525	664	38.75	0.14	0.00	0.44	0.14
988	664	782	37.50	0.51	0.00	0.43	0.13
989	782	1363	36.25	0.10	0.00	0.41	0.12
990	1363	926	35.00	0.01	0.00	0.40	0.11
991	5258	J-69	48.75	1.01	0.00	0.55	0.21
992	2070	5253	-390.18	0.60	0.00	4.43	9.96
993	5253	7041	-411.30	9.76	0.00	4.67	10.98
994	7041	1996	-412.55	13.36	0.00	4.68	11.04
995	1996	1454	-413.80	2.29	0.00	4.70	11.10
996	1454	1371	-415.05	11.92	0.00	4.71	11.16
997	1371	1370	-416.30	1.77	0.00	4.72	11.23
998	5253	5262	21.12	0.20	0.00	0.96	1.31
999	5262	514	21.12	2.34	0.00	0.96	1.31
1000	514	5263	19.87	1.69	0.00	0.90	1.17
1001	5263	586	19.87	2.78	0.00	0.90	1.17
1002	586	7042	18.62	0.22	0.00	0.85	1.04
1003	7042	1550	17.37	1.50	0.00	0.79	0.91
1004	1550	5264	16.12	1.98	0.00	0.73	0.80
1005	5264	5265	16.12	1.18	0.00	0.73	0.80
1006	5265	2011	1.25	0.11	0.00	0.13	0.05
1007	5265	5266	14.87	1.19	0.00	0.68	0.69
1008	5266	147	14.87	0.85	0.00	0.68	0.69
1009	147	2145	13.62	1.04	0.00	0.62	0.58
1010	2145	5267	12.37	0.22	0.00	0.56	0.49
1011	5267	2214	1.25	1.29	0.00	0.51	1.47
1012	5267	5268	11.12	1.73	0.00	0.50	0.40
1013	5268	145	1.25	0.00	0.00	0.06	0.01
1014	5268	68	9.87	0.53	0.00	0.45	0.32
1015	68	1687	8.62	0.26	0.00	0.39	0.25
1016	1687	191	7.37	0.08	0.00	0.33	0.19
1017	191	1949	6.12	0.12	0.00	0.28	0.13
1018	1949	5269	4.87	0.38	0.00	0.22	0.09
1019	5269	5270	1.25	0.01	0.00	0.13	0.05
1020	5270	2158	1.25	0.04	0.00	0.13	0.05
1021	5269	767	3.62	0.03	0.00	0.16	0.05
1022	767	1967	2.37	0.16	0.00	0.11	0.02
1023	5089	1967	-1.12	0.03	0.00	0.05	0.01
1024	5089	5271	6.25	0.28	0.00	0.41	0.33
1025	5271	5272	0.00	0.00	0.00	0.00	0.00
1026	5271	2046	6.25	0.30	0.00	0.41	0.33
1027	2046	1209	5.00	0.69	0.00	0.33	0.22
1028	1209	5273	3.75	0.01	0.00	0.25	0.13
1029	5273	2288	3.75	0.08	0.00	0.25	0.13
1030	2288	1164	2.50	0.09	0.00	0.16	0.06
1031	1164	498	1.25	0.10	0.00	0.13	0.05
1032	5274	5275	373.78	1.50	0.00	4.24	9.19
1033	5275	2627	320.03	0.10	0.00	3.63	6.90
1034	2627	2270	318.78	0.59	0.00	3.62	6.85
1035	2270	1812	317.53	1.36	0.00	3.60	6.80
1036	1812	1162	316.28	1.21	0.00	3.59	6.75
1037	1162	492	315.03	5.04	0.00	3.57	6.70
1038	492	2251	313.78	1.99	0.00	3.56	6.65
1039	230	2251	-312.53	1.39	0.00	3.55	6.60
1040	230	2141	311.28	2.75	0.00	3.53	6.55
1041	2141	1633	310.03	0.65	0.00	3.52	6.50
1042	1633	5276	308.78	7.72	0.00	3.50	6.45
1043	5276	925	308.78	14.50	0.00	3.50	6.45
1044	925	1582	307.53	0.47	0.00	3.49	6.41
1045	1582	5277	306.28	2.49	0.00	3.48	6.36
1046	5277	1057	2.50	0.16	0.00	0.26	0.18
1047	1057	857	1.25	0.05	0.00	0.13	0.05
1048	5277	137	303.78	2.00	0.00	3.45	6.26
1049	137	1599	302.53	0.38	0.00	3.43	6.21
1050	1599	494	301.28	3.14	0.00	3.42	6.17
1051	494	2665	300.03	20.76	0.00	3.40	6.12

1052	2665	5278	298.78	4.17	0.00	3.39	6.07
1053	5278	1133	12.50	2.20	0.00	1.28	3.58
1054	1133	5279	11.25	5.40	0.00	1.15	2.95
1055	5279	1034	11.25	4.41	0.00	1.15	2.95
1056	1034	2686	10.00	1.19	0.00	1.02	2.37
1057	5281	1654	8.75	0.88	0.00	0.89	1.85
1058	1654	2545	7.50	0.62	0.00	0.77	1.39
1059	2545	2075	6.25	0.70	0.00	0.64	0.99
1060	2075	2048	5.00	0.14	0.00	0.51	0.66
1061	2048	5280	3.75	0.05	0.00	0.38	0.39
1062	5280	1501	1.25	0.01	0.00	0.13	0.05
1063	5280	1460	2.50	0.10	0.00	0.26	0.18
1064	1460	1641	1.25	0.01	0.00	0.13	0.05
1065	2686	5281	8.75	0.71	0.00	0.89	1.85
1066	5278	1459	286.28	7.46	0.00	3.25	5.61
1067	1459	302	285.03	6.22	0.00	3.23	5.57
1068	302	1979	283.78	14.87	0.00	3.22	5.52
1069	1979	5282	282.53	7.39	0.00	3.21	5.48
1070	5282	1697	282.53	0.59	0.00	3.21	5.48
1071	1697	1151	281.28	2.49	0.00	3.19	5.43
1072	1151	2332	280.03	1.91	0.00	3.18	5.39
1073	2332	5283	278.78	2.99	0.00	3.16	5.34
1074	5321	5284	11.25	1.30	0.00	1.15	2.95
1075	5284	5285	11.25	0.75	0.00	1.15	2.95
1076	5285	1214	11.25	9.51	0.00	1.15	2.95
1077	1214	927	10.00	1.08	0.00	1.02	2.37
1078	927	935	8.75	0.12	0.00	0.89	1.85
1079	935	1216	7.50	0.84	0.00	0.77	1.39
1080	1216	125	6.25	1.11	0.00	0.64	0.99
1081	125	1225	5.00	0.18	0.00	0.51	0.66
1082	1225	5286	3.75	1.75	0.00	0.38	0.39
1083	5286	2056	3.75	0.94	0.00	0.38	0.39
1084	2056	2057	2.50	0.07	0.00	0.26	0.18
1085	2057	2058	1.25	0.00	0.00	0.13	0.05
1086	5050	924	3.75	0.00	0.00	0.04	0.00
1087	924	5287	2.50	0.00	0.00	0.03	0.00
1088	5287	2634	2.50	0.00	0.00	0.03	0.00
1089	2634	1510	1.25	0.00	0.00	0.01	0.00
1090	1010	1492	-52.50	3.06	0.00	1.34	1.75
1091	1010	2698	51.25	0.33	0.00	1.31	1.67
1092	2698	903	50.00	0.08	0.00	1.28	1.60
1093	903	201	48.75	0.46	0.00	1.24	1.52
1094	201	5288	47.50	1.24	0.00	1.21	1.45
1095	5288	2295	1.25	0.00	0.00	0.13	0.05
1096	5288	248	5.00	0.07	0.00	0.51	0.66
1097	248	865	3.75	0.39	0.00	0.38	0.39
1098	865	5289	2.50	0.00	0.00	0.26	0.18
1099	5289	841	1.25	0.01	0.00	0.13	0.05
1100	5289	866	1.25	0.01	0.00	0.13	0.05
1101	5288	1111	41.25	2.22	0.00	1.05	1.12
1102	1111	60	40.00	0.55	0.00	1.02	1.06
1103	60	861	38.75	4.42	0.00	0.99	1.00
1104	861	5290	37.50	0.04	0.00	0.96	0.94
1105	5290	2417	30.00	31.41	0.00	3.06	18.12
1106	2417	5291	28.75	15.01	0.00	2.94	16.75
1107	5291	1841	28.75	24.51	0.00	2.94	16.75
1108	1841	580	27.50	19.18	0.00	2.81	15.43
1109	580	5292	26.25	8.79	0.00	2.68	14.15
1110	5292	1640	26.25	21.36	0.00	2.68	14.15
1111	1640	5293	25.00	0.91	0.00	2.55	12.93
1112	5293	2168	25.00	3.23	0.00	2.55	12.93
1113	2168	2015	23.75	10.45	0.00	2.43	11.76
1114	2015	2431	22.50	7.23	0.00	2.30	10.64
1115	2431	1725	21.25	2.74	0.00	2.17	9.57
1116	1725	5294	20.00	1.77	0.00	2.04	8.55
1117	5294	2402	7.50	1.17	0.00	0.77	1.39
1118	2402	1858	6.25	0.22	0.00	0.64	0.99
1119	1858	2711	5.00	0.18	0.00	0.51	0.66
1120	2711	8003	3.75	0.07	0.00	0.38	0.39
1121	8003	2079	2.50	0.02	0.00	0.26	0.18
1122	2079	8004	1.25	0.00	0.00	0.13	0.05

1123	5294	5295	12.50	10.81	0.00	1.28	3.58
1124	5295	2195	7.50	0.11	0.00	0.77	1.39
1125	2195	2541	6.25	0.30	0.00	0.64	0.99
1126	2541	2333	5.00	0.07	0.00	0.51	0.66
1127	2333	2416	3.75	1.69	0.00	1.53	11.27
1128	2416	2167	2.50	1.33	0.00	1.02	5.32
1129	5295	2033	5.00	0.12	0.00	0.51	0.66
1130	2033	1335	3.75	2.73	0.00	1.53	11.27
1131	1335	2099	2.50	0.11	0.00	1.02	5.32
1132	2099	1696	1.25	0.09	0.00	0.51	1.47
1133	2167	972	1.25	0.41	0.00	0.51	1.47
1134	5290	1329	7.50	2.76	0.00	0.77	1.39
1135	1329	2445	6.25	0.08	0.00	0.64	0.99
1136	2445	2391	5.00	0.11	0.00	0.51	0.66
1137	2391	2703	3.75	0.14	0.00	0.38	0.39
1138	2703	2420	2.50	0.05	0.00	0.26	0.18
1139	2420	1897	1.25	0.01	0.00	0.13	0.05
1140	5274	2008	402.44	3.20	0.00	4.57	10.54
1141	2008	5296	401.19	3.38	0.00	4.55	10.48
1142	5296	754	10.00	0.61	0.00	1.02	2.37
1143	754	5297	8.75	0.45	0.00	0.89	1.85
1144	5297	1121	3.75	0.01	0.00	0.38	0.39
1145	1121	825	2.50	0.01	0.00	0.26	0.18
1146	825	753	1.25	0.00	0.00	0.13	0.05
1147	5297	930	5.00	0.06	0.00	0.51	0.66
1148	930	2001	3.75	0.13	0.00	0.38	0.39
1149	2001	2283	2.50	0.01	0.00	0.26	0.18
1150	2283	2320	1.25	0.01	0.00	0.13	0.05
1151	5296	80	391.19	0.79	0.00	4.44	10.00
1152	80	5298	389.94	2.11	0.00	4.42	9.94
1153	5298	811	1.25	0.02	0.00	0.13	0.05
1154	5298	5299	388.69	24.48	0.00	4.41	9.89
1155	5299	480	2.50	0.14	0.00	0.26	0.18
1156	480	1887	1.25	0.03	0.00	0.13	0.05
1157	5299	473	386.19	0.94	0.00	4.38	9.77
1158	473	7043	384.94	7.18	0.00	4.37	9.71
1159	7043	50	383.69	0.23	0.00	4.35	9.65
1160	50	491	382.44	5.58	0.00	4.34	9.59
1161	491	1054	381.19	7.88	0.00	4.33	9.53
1162	1054	1406	379.94	12.17	0.00	4.31	9.48
1163	1406	48	378.69	18.55	0.00	4.30	9.42
1164	48	238	377.44	9.21	0.00	4.28	9.36
1165	238	5300	376.19	21.15	0.00	4.27	9.30
1166	5300Pipe-Plant		-153.81	0.06	0.00	0.98	0.44
1167	PRV-1	5059	15.00	4.82	0.00	0.98	1.69
1168	5300	5301	530.00	7.42	0.00	3.38	4.32
1169	5302	1261	1.25	0.00	0.00	0.03	0.00
1170	5303	1260	1.25	0.00	0.00	0.03	0.00
1171	5303	1259	1.25	0.00	0.00	0.03	0.00
1172	5302	5303	2.50	0.01	0.00	0.06	0.01
1173	5301	5302	3.75	0.03	0.00	0.10	0.01
1174	5301	7044	526.25	11.81	0.00	3.36	4.27
1175	7044	5304	525.00	5.25	0.00	3.35	4.25
1176	5304	1269	525.00	8.88	0.00	3.35	4.25
1177	1269	1086	523.75	2.57	0.00	3.34	4.23
1178	1086	1919	522.50	1.53	0.00	3.33	4.21
1179	1919	7045	521.25	10.08	0.00	3.33	4.19
1180	7045	224	520.00	1.18	0.00	3.32	4.17
1181	224	5305	518.75	5.61	0.00	3.31	4.16
1182	5305	2010	31.25	2.63	0.00	0.80	0.67
1183	2010	2024	30.00	1.84	0.00	0.77	0.62
1184	2024	5306	28.75	0.14	0.00	0.73	0.57
1185	5306	497	5.00	0.88	0.00	2.04	19.19
1186	497	1985	3.75	6.50	0.00	1.53	11.27
1187	1985	332	2.50	8.26	0.00	1.02	5.32
1188	332	1077	1.25	0.05	0.00	0.51	1.47
1189	5306	5307	23.75	7.52	0.00	1.08	1.63
1190	5307	5308	23.75	2.49	0.00	1.08	1.63
1191	5308	2037	6.25	0.44	0.00	0.64	0.99
1192	2037	2389	5.00	0.21	0.00	0.51	0.66
1193	2389	5311	3.75	0.07	0.00	0.38	0.39

1194	2205	2517	1.25	0.01	0.00	0.13	0.05
1195	5311	2617	1.25	0.01	0.00	0.13	0.05
1196	5308	5309	17.50	0.81	0.00	0.79	0.93
1197	5309	5310	3.75	0.23	0.00	0.38	0.39
1198	5310	2301	1.25	0.00	0.00	0.13	0.05
1199	5310	1851	2.50	0.06	0.00	0.26	0.18
1200	1851	2440	1.25	0.00	0.00	0.13	0.05
1201	5309	2181	13.75	0.28	0.00	1.40	4.27
1202	2181	2246	12.50	0.74	0.00	1.28	3.58
1203	2246	2182	11.25	0.16	0.00	1.15	2.95
1204	2182	1638	10.00	0.14	0.00	1.02	2.37
1205	1638	2463	8.75	0.53	0.00	0.89	1.85
1206	2463	2188	7.50	0.16	0.00	0.77	1.39
1207	2206	1438	5.00	0.11	0.00	0.51	0.66
1208	1438	2183	3.75	0.03	0.00	0.38	0.39
1209	2183	1226	2.50	0.00	0.00	0.26	0.18
1210	1226	2439	1.25	0.00	0.00	0.13	0.05
1211	5305	2110	487.50	0.65	0.00	3.11	3.70
1212	2110	5312	486.25	0.57	0.00	3.10	3.69
1213	5312	1771	10.00	0.74	0.00	1.02	2.37
1214	1771	410	8.75	0.51	0.00	0.89	1.85
1215	410	2215	7.50	0.73	0.00	0.77	1.39
1216	2215	2090	6.25	0.72	0.00	0.64	0.99
1217	2090	2701	5.00	0.40	0.00	0.51	0.66
1218	2701	2248	3.75	0.12	0.00	0.38	0.39
1219	2248	2069	2.50	0.06	0.00	0.26	0.18
1220	2069	2065	1.25	0.02	0.00	0.13	0.05
1221	5312	2236	476.25	3.02	0.00	3.04	3.55
1222	5313	5314	50.00	17.13	0.00	2.27	6.48
1223	5314	1032	3.75	0.19	0.00	0.38	0.39
1224	1032	8048	2.50	0.01	0.00	0.26	0.18
1225	8048	1072	1.25	0.03	0.00	0.13	0.05
1226	5314	1161	46.25	0.46	0.00	2.10	5.61
1227	1161	5315	45.00	21.75	0.00	2.04	5.33
1228	5315	7047	23.41	1.01	0.00	2.39	11.45
1229	7047	7046	22.16	0.33	0.00	2.26	10.34
1230	7046	5316	20.91	2.26	0.00	2.14	9.29
1231	5316	1524	3.75	0.06	0.00	0.38	0.39
1232	1524	161	2.50	0.02	0.00	0.26	0.18
1233	5316	5317	17.16	0.75	0.00	1.75	6.44
1234	5317	311	16.22	0.32	0.00	1.66	5.80
1235	311	5318	14.97	0.70	0.00	1.53	5.00
1236	5318	2261	2.50	0.05	0.00	0.26	0.18
1237	2261	1011	1.25	0.01	0.00	0.13	0.05
1238	5317	1907	0.94	0.00	0.00	0.10	0.03
1239	1907	303	-0.31	0.00	0.00	0.03	0.00
1240	303	324	-1.56	0.00	0.00	0.16	0.08
1241	324	344	-2.81	0.02	0.00	0.29	0.23
1242	344	19	-4.06	0.11	0.00	0.41	0.45
1243	19	5319	-5.31	0.00	0.00	0.14	0.03
1244	5315	7048	21.59	1.44	0.00	2.20	9.86
1245	7048	7049	20.34	1.03	0.00	2.08	8.83
1246	7049	5319	19.09	1.74	0.00	1.95	7.85
1247	5319	56	13.78	0.01	0.00	0.35	0.15
1248	56	203	12.53	0.34	0.00	1.28	3.60
1249	203	268	11.28	1.37	0.00	1.15	2.96
1250	268	7050	10.03	0.02	0.00	1.02	2.38
1251	7050	1975	8.78	0.08	0.00	0.90	1.86
1252	1975	7051	7.53	0.38	0.00	0.77	1.40
1253	7051	265	6.28	0.11	0.00	0.64	1.00
1254	265	160	5.03	0.03	0.00	0.51	0.66
1255	5050	5321	-267.53	0.54	0.00	3.04	4.95
1256	5283	5321	278.78	2.30	0.00	3.16	5.34
1257	2699	5058	2.50	0.04	0.00	0.16	0.06
1258	5275	1492	53.75	0.55	0.00	1.37	1.83
1259	2188	2206	6.25	0.08	0.00	0.64	0.99
1260	160	5320	3.78	0.01	0.00	0.39	0.39
1261	5320	1188	1.28	0.00	0.00	0.13	0.05
1262	1188	490	0.03	0.00	0.00	0.00	0.00
1263	490	1018	-1.22	0.01	0.00	0.12	0.05
1264	1018	337	-2.47	0.09	0.00	0.25	0.18

1265	337	16	-3.72	0.09	0.00	0.38	0.38
1266	16	2339	-4.97	0.00	0.00	0.13	0.02
1267	2339	255	-6.22	0.03	0.00	0.63	0.98
1268	255	213	-7.47	0.01	0.00	0.76	1.38
1269	213	229	-8.72	0.12	0.00	0.89	1.84
1270	229	293	-9.97	0.18	0.00	1.02	2.35
1271	293	259	-11.22	0.05	0.00	1.15	2.93
1272	259	5318	-12.47	0.64	0.00	1.27	3.56
1273	5320	5322	2.50	0.13	0.00	0.26	0.18
1274	5322	1196	1.25	0.01	0.00	0.13	0.05
1275	5322	5323	1.25	0.05	0.00	0.13	0.05
1276	5323	8052	1.25	0.01	0.00	0.13	0.05
1277	5323	5324	0.00	0.00	0.00	0.00	0.00
1278	2236	5313	475.00	0.36	0.00	3.03	3.53
1279	5313	1446	425.00	0.09	0.00	2.71	2.87
1280	1446	2595	423.75	2.33	0.00	2.70	2.86
1281	2595	1449	422.50	0.94	0.00	2.70	2.84
1282	1449	2552	421.25	1.46	0.00	2.69	2.83
1283	2552	791	420.00	0.31	0.00	2.68	2.81
1284	791	2313	418.75	1.81	0.00	2.67	2.80
1285	2313	475	417.50	1.37	0.00	2.66	2.78
1286	475	5325	416.25	6.02	0.00	2.66	2.76
1287	5325	7052	6.25	0.09	0.00	0.64	0.99
1288	7052	7053	5.00	0.06	0.00	0.51	0.66
1289	7053	854	3.75	0.12	0.00	0.38	0.39
1290	854	657	2.50	0.03	0.00	0.26	0.18
1291	657	2004	1.25	0.01	0.00	0.13	0.05
1292	5326	2620	3.75	3.69	0.00	0.68	1.56
1293	2620	2718	2.50	0.01	0.00	0.45	0.74
1294	2718	1507	1.25	0.00	0.00	0.23	0.20
1296	5325	893	410.00	0.62	0.00	2.62	2.69
1297	893	1346	408.75	3.22	0.00	2.61	2.67
1298	1346	5327	407.50	0.19	0.00	2.60	2.66
1299	5327	8038	36.25	1.60	0.00	1.65	3.57
1300	8038	8037	35.00	0.17	0.00	1.59	3.35
1301	8037	2559	33.75	0.90	0.00	1.53	3.13
1302	2559	1704	32.50	1.82	0.00	1.48	2.92
1303	1704	240	31.25	2.42	0.00	1.42	2.71
1304	240	1644	30.00	1.74	0.00	1.36	2.52
1305	1644	1190	28.75	0.26	0.00	1.30	2.33
1306	1190	1903	27.50	0.39	0.00	1.25	2.14
1307	1903	2470	26.25	0.65	0.00	1.19	1.96
1308	2470	7054	25.00	0.14	0.00	1.13	1.79
1309	7054	5328	23.75	0.53	0.00	1.08	1.63
1310	5328	202	8.75	0.14	0.00	0.89	1.85
1311	202	1588	7.50	0.06	0.00	0.77	1.39
1312	1588	1827	6.25	0.11	0.00	0.64	0.99
1313	1827	1423	5.00	0.05	0.00	0.51	0.66
1314	1423	2230	3.75	0.01	0.00	0.38	0.39
1315	2230	1943	2.50	0.01	0.00	0.26	0.18
1316	1943	7055	1.25	0.01	0.00	0.13	0.05
1317	5328	5329	15.00	1.60	0.00	0.68	0.70
1318	5329	1840	2.50	0.07	0.00	0.16	0.06
1319	1840	5330	1.25	0.03	0.00	0.08	0.02
1320	5330	907	1.25	0.06	0.00	0.13	0.05
1321	5329	1984	12.50	0.94	0.00	0.82	1.21
1323	1984	7073	11.25	0.60	0.00	0.74	0.99
1324	5076	2432	2.50	0.56	0.00	0.26	0.18
1325	2432	2055	1.25	0.12	0.00	0.13	0.05
1326	7073	1000	10.00	0.08	0.00	0.65	0.80
1327	1000	1729	8.75	0.56	0.00	0.57	0.62
1328	1729	5331	7.50	1.39	0.00	0.49	0.47
1329	5331	5332	7.50	1.88	0.00	0.49	0.47
1330	5332	2413	7.50	0.13	0.00	0.49	0.47
1331	2413	5333	6.25	0.01	0.00	0.41	0.33
1332	5333	1574	6.25	0.14	0.00	0.41	0.33
1333	1574	2007	5.00	0.08	0.00	0.33	0.22
1334	2007	1270	3.75	0.05	0.00	0.25	0.13
1335	5334	5136	-26.25	0.78	0.00	2.68	14.15
1336	2444	5334	-25.00	0.70	0.00	2.55	12.93

1337	1270	120	2.50	0.07	0.00	0.26	0.18
1338	120	1340	1.25	0.01	0.00	0.13	0.05
1339	1370	J-63	-417.55	20.74	0.00	4.74	11.29
1340-CV	FGN-LLHemphill-T		14449.44	80.00	0.00	163.95	8000.01
1341	716	5336	370.00	15.86	0.00	4.20	9.02
1342	8059	5336	-1.25	0.00	0.00	0.03	0.00
1343	1198	5230	5.00	0.03	0.00	0.51	0.66
1344	327	8006	42.50	3.14	0.00	1.09	1.18
1345	1837	2455	1.25	0.01	0.00	0.13	0.05
1346	5214	1698	1.25	0.00	0.00	0.13	0.05
1347	5261	926	-33.75	0.14	0.00	0.38	0.11
1348	5336	1348	6.25	3.42	0.00	2.55	29.01
1349	1348	1037	3.75	4.59	0.00	1.53	11.27
1350	1037	2265	2.50	0.53	0.00	1.02	5.32
1351	2265	2274	1.25	0.15	0.00	0.51	1.47
1352	1348	1023	1.25	0.08	0.00	0.51	1.47
1353	1017	1336	361.25	0.30	0.00	4.10	8.63
1354	5336	1017	362.50	0.73	0.00	4.11	8.69
1355	1336	5337	360.00	3.18	0.00	4.08	8.58
1356	5337	1728	350.00	1.87	0.00	3.97	8.14
1357	1728	2589	348.75	1.16	0.00	3.96	8.09
1358	2589	5338	347.50	1.78	0.00	3.94	8.03
1359	5337	5339	10.00	2.51	0.00	1.02	2.37
1360	5339	5340	2.50	0.04	0.00	0.26	0.18
1361	5340	1055	2.50	0.04	0.00	0.26	0.18
1362	1055	661	1.25	0.00	0.00	0.13	0.05
1363	5339	2238	7.50	0.07	0.00	0.77	1.39
1364	2238	1720	6.25	0.18	0.00	0.64	0.99
1365	1720	8061	5.00	0.05	0.00	0.51	0.66
1366	8061	1721	3.75	0.06	0.00	0.38	0.39
1367	1721	820	2.50	0.02	0.00	0.26	0.18
1368	820	2555	1.25	0.00	0.00	0.13	0.05
1369	5338	731	347.50	6.56	0.00	3.94	8.03
1370	731	2649	346.25	8.41	0.00	3.93	7.98
1371	2649	5341	345.00	1.66	0.00	3.91	7.93
1372	5341	5342	345.00	15.46	0.00	3.91	7.93
1373	5342	72	275.00	1.36	0.00	3.12	5.21
1374	5344	2108	1.25	0.00	0.00	0.06	0.01
1375	72	8070	228.85	1.93	0.00	2.60	3.71
1376	5344	5345	43.65	2.38	0.00	1.98	5.04
1377	5345	2315	36.15	0.07	0.00	1.64	3.55
1378	5345	5346	7.50	0.08	0.00	0.34	0.19
1379	5346	5343	7.50	0.02	0.00	0.34	0.19
1380	5343	2280	7.50	0.06	0.00	0.34	0.19
1381	2280	1695	6.25	0.01	0.00	0.28	0.14
1382	1695	2282	5.00	0.03	0.00	0.23	0.09
1383	2282	2139	3.75	0.12	0.00	0.38	0.39
1384	2139	2116	2.50	0.01	0.00	0.26	0.18
1385	2116	2268	1.25	0.01	0.00	0.13	0.05
1386	2315	2306	34.90	0.93	0.00	1.58	3.33
1387	8070	1543	227.60	1.64	0.00	2.58	3.67
1388	2306	5347	33.65	1.12	0.00	1.53	3.11
1389	1543	254	226.35	1.84	0.00	2.57	3.63
1390	5347	5348	29.90	0.73	0.00	1.36	2.50
1391	5347	2397	3.75	0.10	0.00	0.38	0.39
1392	2397	2379	2.50	0.04	0.00	0.26	0.18
1393	2379	2330	1.25	0.00	0.00	0.13	0.05
1394	5348	2338	255.00	0.06	0.00	2.89	4.53
1395	2338	478	253.75	1.02	0.00	2.88	4.49
1396	5327	716	371.25	0.89	0.00	4.21	9.08
1397	5344	72	-44.90	0.58	0.00	2.04	5.31
1398	5348	254	-225.10	0.40	0.00	2.55	3.59
1399	478	5350	252.50	1.03	0.00	2.86	4.45
1400	5350	5349	252.50	10.99	0.00	2.86	4.45
1401	5349	2643	251.25	1.23	0.00	2.85	4.41
1402	2643	493	250.00	0.44	0.00	2.84	4.37
1403	493	2013	248.75	0.83	0.00	2.82	4.33
1404	2013	2143	247.50	0.76	0.00	2.81	4.28
1405	2143	2359	246.25	0.14	0.00	2.79	4.24
1406	358	5351	243.75	0.39	0.00	2.77	4.17
1407	5351	1473	1.25	0.00	0.00	0.13	0.05

1408	5351	1508	105.19	0.16	0.00	1.19	0.88
1409	5349	1233	1.25	0.02	0.00	0.13	0.05
1410	2359	358	245.00	0.32	0.00	2.78	4.21
1411	1508	5352	103.94	0.07	0.00	1.18	0.86
1412	5351	2346	137.31	0.76	0.00	3.51	10.37
1413	5352	1917	103.94	0.04	0.00	1.18	0.86
1414	1917	1066	102.69	0.03	0.00	1.17	0.84
1415	1066	51	101.44	0.17	0.00	1.15	0.82
1416	51	1280	100.19	0.25	0.00	1.14	0.80
1417	1280	5353	98.94	0.02	0.00	1.12	0.78
1418	5353	2142	98.94	0.14	0.00	1.12	0.78
1419	2142	1893	97.69	0.13	0.00	1.11	0.77
1420	1893	708	96.44	0.17	0.00	1.09	0.75
1421	708	647	95.19	0.11	0.00	1.08	0.73
1422	647	5354	93.94	0.05	0.00	1.07	0.71
1423	5354	5	3.75	0.00	0.00	0.10	0.01
1424	5	1522	2.50	0.03	0.00	0.26	0.18
1425	1522	1604	1.25	0.00	0.00	0.13	0.05
1426	1522	5355	0.00	0.00	0.00	0.00	0.00
1427	5354	5356	90.19	0.17	0.00	1.02	0.66
1428	5356	1327	17.50	0.55	0.00	0.79	0.93
1429	1327	2042	16.25	0.22	0.00	0.74	0.81
1430	2042	1278	15.00	0.19	0.00	0.68	0.70
1431	1278	2128	13.75	0.33	0.00	0.62	0.59
1432	2128	1951	12.50	0.10	0.00	0.57	0.50
1433	1951	1948	11.25	0.33	0.00	0.51	0.41
1434	1948	1825	10.00	0.07	0.00	0.45	0.33
1435	1825	5357	8.75	0.00	0.00	0.40	0.26
1436	5357	1114	1.25	0.01	0.00	0.06	0.01
1437	5357	864	7.50	0.07	0.00	0.34	0.19
1438	864	1950	6.25	0.08	0.00	0.28	0.14
1439	1950	2170	5.00	0.05	0.00	0.23	0.09
1440	2170	2264	3.75	0.04	0.00	0.17	0.05
1441	2264	5358	2.50	0.02	0.00	0.11	0.03
1442	5358	896	2.50	0.03	0.00	0.11	0.03
1443	896	1443	1.25	0.00	0.00	0.06	0.01
1444	5359	1928	3.75	0.03	0.00	0.38	0.39
1445	1928	2124	2.50	0.01	0.00	0.26	0.18
1446	2124	8009	1.25	0.01	0.00	0.13	0.05
1447	2113	2371	-1.25	0.01	0.00	0.13	0.05
1448	2371	2563	-2.50	0.02	0.00	0.26	0.18
1449	2563	5360	-3.75	0.02	0.00	0.38	0.39
1450	5360	2292	1.25	0.00	0.00	0.13	0.05
1452	858	J-1	-1.25	0.00	0.00	0.13	0.05
1453	5361	746	1.25	0.00	0.00	0.06	0.01
1454	5361	2469	8.94	0.01	0.00	0.41	0.27
1455	2469	1671	7.69	0.01	0.00	0.35	0.20
1456	1671	1581	6.44	0.00	0.00	0.29	0.15
1457	1581	2566	5.19	0.00	0.00	0.24	0.10
1458	2566	5362	3.94	0.00	0.00	0.18	0.06
1459	5362	529	33.75	0.05	0.00	1.53	3.13
1460	529	883	32.50	0.26	0.00	1.48	2.92
1461	883	5363	31.25	0.14	0.00	1.42	2.71
1462	5363	2160	1.25	0.01	0.00	0.13	0.05
1463	5363	1266	30.00	0.14	0.00	1.36	2.52
1464	1266	1616	28.75	0.31	0.00	1.30	2.33
1465	5364	2692	5.00	0.04	0.00	0.51	0.66
1466	2692	5365	3.75	0.02	0.00	0.38	0.39
1467	5365	241	3.75	0.34	0.00	1.53	11.27
1468	241	1727	2.50	0.27	0.00	1.02	5.32
1469	5364	8010	22.50	2.34	0.00	2.30	10.64
1470	8010	1706	21.25	0.69	0.00	2.17	9.57
1471	1727	186	1.25	0.05	0.00	0.51	1.47
1472	1706	1474	20.00	0.43	0.00	2.04	8.55
1473	1474	1495	18.75	0.38	0.00	1.91	7.59
1474	1495	336	17.50	1.16	0.00	1.79	6.68
1475	336	8068	16.25	0.55	0.00	1.66	5.82
1476	8068	1505	15.00	0.20	0.00	1.53	5.02
1477	1505	2564	13.75	0.04	0.00	1.40	4.27
1478	2564	967	12.50	0.33	0.00	1.28	3.58
1479	967	231	11.25	0.10	0.00	1.15	2.95

1480	231	2600	10.00	0.09	0.00	1.02	2.37
1481	2600	2165	8.75	0.04	0.00	0.89	1.85
1482	2165	2448	7.50	0.14	0.00	0.77	1.39
1483	2448	1619	6.25	0.04	0.00	0.64	0.99
1484	1619	2254	5.00	0.04	0.00	0.51	0.66
1485	2254	8011	3.75	0.04	0.00	0.38	0.39
1486	8011	373	2.50	0.01	0.00	0.26	0.18
1487	373	2235	1.25	0.00	0.00	0.13	0.05
1488	288	290	1.25	0.01	0.00	0.13	0.05
1489	5366	288	3.75	0.02	0.00	0.38	0.39
1490	288	479	1.25	0.01	0.00	0.13	0.05
1491	5366	132	-3.75	0.03	0.00	0.38	0.39
1492	132	40	-5.00	0.01	0.00	0.51	0.66
1493	40	2191	-6.25	0.00	0.00	0.16	0.03
1494	2191	2032	-7.50	0.09	0.00	0.77	1.39
1495	5367	1481	38.56	0.99	0.00	1.75	4.01
1496	1481	852	37.31	0.15	0.00	1.69	3.77
1497	852	8013	36.06	0.21	0.00	1.64	3.54
1498	8012	1707	-1.25	0.00	0.00	0.06	0.01
1499	1707	8013	-2.50	0.00	0.00	0.11	0.03
1500	8013	1145	32.31	0.42	0.00	1.47	2.89
1501	5362	236	-29.81	0.23	0.00	1.35	2.49
1502	236	1145	-31.06	0.36	0.00	1.41	2.68
1503	5367	5368	-47.31	1.33	0.00	2.15	5.85
1504	2032	5367	-8.75	0.08	0.00	0.89	1.85
1505	5368	5359	3.75	0.10	0.00	0.38	0.39
1506	5368	5369	-51.06	0.37	0.00	1.30	1.66
1507	5369	2231	5.00	0.08	0.00	0.51	0.66
1508	2231	5370	3.75	0.06	0.00	0.38	0.39
1509	5370	2311	3.75	0.03	0.00	0.38	0.39
1510	2311	777	2.50	0.04	0.00	0.26	0.18
1511	777	910	1.25	0.01	0.00	0.13	0.05
1512	5369	1535	-56.06	0.28	0.00	1.43	1.97
1513	1535	577	-57.31	0.17	0.00	1.46	2.06
1514	577	1091	-58.56	0.03	0.00	1.50	2.14
1515	1091	2111	-59.81	0.17	0.00	1.53	2.22
1516	2111	1169	-61.06	0.26	0.00	1.56	2.31
1517	1169	730	-62.31	0.15	0.00	1.59	2.40
1518	730	433	-63.56	0.12	0.00	1.62	2.49
1519	433	1041	-64.81	0.31	0.00	1.65	2.58
1520	592	541	-67.31	0.10	0.00	1.72	2.77
1521	541	140	-68.56	0.13	0.00	1.75	2.86
1522	140	2407	-69.81	0.03	0.00	1.78	2.96
1523	2407	7056	-71.06	0.23	0.00	1.81	3.06
1524	1041	592	-66.06	0.15	0.00	1.69	2.67
1525	7056	123	-72.31	0.26	0.00	1.85	3.16
1526	123	918	-73.56	0.16	0.00	1.88	3.26
1527	918	1027	-74.81	0.22	0.00	1.91	3.37
1528	1027	997	-76.06	0.07	0.00	1.94	3.47
1529	997	1583	-77.31	0.16	0.00	1.97	3.58
1530	1583	1626	-78.56	0.15	0.00	2.01	3.69
1531	1626	2425	-79.81	0.30	0.00	2.04	3.80
1532	2425	550	-81.06	0.12	0.00	2.07	3.91
1533	550	233	-82.31	0.10	0.00	2.10	4.02
1534	233	383	-83.56	0.21	0.00	2.13	4.13
1535	383	5371	-84.81	0.42	0.00	2.17	4.25
1536	5371	659	1.25	0.00	0.00	0.03	0.00
1537	5371	5372	-86.06	0.13	0.00	2.20	4.36
1538	5372	1972	1.25	0.00	0.00	0.03	0.00
1539	5372	1350	-87.31	0.54	0.00	2.23	4.48
1540	1350	1625	-88.56	0.12	0.00	2.26	4.60
1541	1625	256	-89.81	0.21	0.00	2.29	4.72
1542	256	783	-91.06	0.13	0.00	2.32	4.85
1543	783	1514	-92.31	0.35	0.00	2.36	4.97
1544	1514	1059	-93.56	0.38	0.00	2.39	5.09
1545	1059	2093	-94.81	0.16	0.00	2.42	5.22
1546	2093	8014	-96.06	0.43	0.00	2.45	5.35
1547	8014	526	-97.31	0.79	0.00	2.48	5.48
1548	526	2308	-98.56	0.57	0.00	2.52	5.61
1549	2308	944	-99.81	0.55	0.00	2.55	5.74
1550	944	5373	-101.06	0.72	0.00	2.58	5.88

1551	5373	2493	-126.06	0.54	0.00	3.22	8.85
1552	2493	1600	-127.31	0.82	0.00	3.25	9.01
1553	1600	1892	-128.56	1.06	0.00	3.28	9.18
1554	1892	1458	-129.81	3.29	0.00	3.31	9.34
1555	1458	859	-131.06	0.77	0.00	3.35	9.51
1556	859	888	-132.31	0.71	0.00	3.38	9.68
1557	888	2227	-133.56	0.15	0.00	3.41	9.85
1558	2227	1477	-134.81	2.67	0.00	3.44	10.02
1559	2346	1477	136.06	0.33	0.00	3.47	10.19
1560	5373	124	25.00	0.39	0.00	1.13	1.79
1561	124	5374	23.75	0.11	0.00	1.08	1.63
1562	5374	602	11.87	0.19	0.00	1.21	3.25
1563	602	533	10.62	0.24	0.00	1.08	2.65
1564	533	879	9.37	0.14	0.00	0.96	2.10
1565	879	1978	8.12	0.04	0.00	0.83	1.61
1566	1978	964	6.87	0.06	0.00	0.70	1.18
1567	964	1487	5.62	0.03	0.00	0.57	0.81
1568	1487	834	4.37	0.06	0.00	0.45	0.51
1569	834	2273	3.12	0.03	0.00	0.32	0.27
1570	2273	2169	1.87	0.01	0.00	0.19	0.11
1571	2169	1710	0.62	0.00	0.00	0.06	0.01
1572	1710	1737	-0.63	0.00	0.00	0.06	0.01
1573	1737	980	-1.88	0.01	0.00	0.19	0.11
1574	980	1669	-3.13	0.04	0.00	0.32	0.28
1575	1669	2293	-4.38	0.06	0.00	0.45	0.51
1576	2293	778	-5.63	0.04	0.00	0.58	0.82
1577	778	77	-6.88	0.02	0.00	0.70	1.19
1578	481	779	10.63	0.23	0.00	1.09	2.65
1579	5361	5375	-16.44	0.30	0.00	0.75	0.83
1580	5375	5376	48.75	13.40	0.00	2.21	6.18
1581	5376	405	8.75	0.41	0.00	0.89	1.85
1582	405	2547	7.50	0.17	0.00	0.77	1.39
1583	2547	1921	6.25	0.05	0.00	0.64	0.99
1584	1921	2542	5.00	0.15	0.00	0.51	0.66
1585	2542	2543	3.75	0.04	0.00	0.38	0.39
1586	2543	584	2.50	0.01	0.00	0.26	0.18
1587	584	978	1.25	0.00	0.00	0.13	0.05
1588	5376	235	40.00	0.14	0.00	1.82	4.29
1589	235	42	38.75	0.16	0.00	0.99	1.00
1590	42	2579	37.50	0.39	0.00	1.70	3.80
1591	2579	113	36.25	0.26	0.00	1.65	3.57
1592	113	438	35.00	0.11	0.00	1.59	3.35
1593	438	2473	33.75	0.09	0.00	1.53	3.13
1594	2473	5377	32.50	0.32	0.00	1.48	2.92
1595	5377	5378	22.50	0.79	0.00	1.02	1.48
1596	5378	1031	6.25	0.16	0.00	0.64	0.99
1597	1031	1183	5.00	0.14	0.00	0.51	0.66
1598	1183	1185	3.75	0.12	0.00	0.38	0.39
1599	1185	2625	2.50	0.03	0.00	0.26	0.18
1600	2625	1448	1.25	0.01	0.00	0.13	0.05
1601	5378	8025	16.25	0.08	0.00	0.74	0.81
1602	8025	5379	15.00	0.26	0.00	0.68	0.70
1603	5379	5380	12.50	3.69	0.00	1.28	3.58
1604	5380	35	9.07	0.03	0.00	0.23	0.07
1605	35	1722	7.82	0.06	0.00	0.80	1.50
1606	1722	2613	6.57	0.03	0.00	0.67	1.09
1607	2613	1127	5.32	0.02	0.00	0.54	0.74
1608	1127	1430	4.07	0.07	0.00	0.42	0.45
1609	1430	1733	2.82	0.11	0.00	0.29	0.23
1610	1733	900	1.57	0.00	0.00	0.16	0.08
1611	900	2630	0.32	0.00	0.00	0.03	0.00
1612	2630	2707	-0.93	0.00	0.00	0.10	0.03
1613	2707	5381	-2.18	0.01	0.00	0.22	0.14
1614	5381	2618	1.25	0.00	0.00	0.13	0.05
1615	5381	5380	-3.43	0.32	0.00	0.35	0.33
1616	5379	2104	2.50	0.00	0.00	0.11	0.03
1617	2104	911	1.25	0.00	0.00	0.06	0.01
1618	5342	47	70.00	1.08	0.00	0.79	0.41
1619	47	2538	68.75	0.33	0.00	1.76	2.88
1620	2538	5382	67.50	0.91	0.00	1.72	2.78
1621	5382	5383	43.22	0.48	0.00	1.10	1.22

1622	5383	2747	11.25	0.21	0.00	1.15	2.95
1623	2747	2742	10.00	0.03	0.00	1.02	2.37
1624	2742	2752	8.75	0.07	0.00	0.89	1.85
1625	2752	2771	7.50	0.08	0.00	0.77	1.39
1626	2771	2744	6.25	0.08	0.00	0.64	0.99
1627	2744	7057	5.00	0.06	0.00	0.51	0.66
1628	7057	2733	3.75	0.03	0.00	0.38	0.39
1629	2733	2746	2.50	0.02	0.00	0.26	0.18
1630	2746	2736	1.25	0.00	0.00	0.13	0.05
1631	5383	5384	31.97	0.14	0.00	0.82	0.70
1632	5384	2766	1.25	0.00	0.00	0.03	0.00
1633	5384	2770	2.50	0.00	0.00	0.06	0.01
1634	2770	2760	1.25	0.00	0.00	0.03	0.00
1635	5384	2741	28.22	0.01	0.00	0.72	0.55
1636	2741	2759	26.97	0.02	0.00	0.69	0.51
1637	2759	8071	25.72	0.02	0.00	0.66	0.47
1638	8071	2754	24.47	0.02	0.00	0.62	0.43
1639	2754	2729	23.22	0.02	0.00	0.59	0.39
1640	2729	2732	21.97	0.02	0.00	0.56	0.35
1641	2732	5385	20.72	0.02	0.00	0.53	0.31
1642	5385	2757	17.07	0.01	0.00	0.44	0.22
1643	2757	2737	15.82	0.01	0.00	0.40	0.19
1644	2737	2751	14.57	0.01	0.00	0.37	0.16
1645	2751	7058	13.32	0.00	0.00	0.34	0.14
1646	7058	2728	12.07	0.01	0.00	0.31	0.11
1647	2728	2731	10.82	0.05	0.00	0.28	0.09
1648	2731	2734	9.57	0.00	0.00	0.24	0.07
1649	2734	2735	8.32	0.01	0.00	0.21	0.06
1650	2735	2748	7.07	0.00	0.00	0.18	0.04
1651	2748	2769	5.82	0.00	0.00	0.15	0.03
1652	2769	2726	4.57	0.00	0.00	0.12	0.02
1653	5386	5387	-11.68	0.10	0.00	0.53	0.44
1654	5387	2727	2.60	0.00	0.00	0.12	0.03
1655	2727	7059	1.35	0.00	0.00	0.06	0.01
1656	7059	2764	0.10	0.00	0.00	0.00	0.00
1657	2753	2764	1.15	0.00	0.00	0.05	0.01
1658	2753	43	-2.40	0.00	0.00	0.06	0.01
1659	43	5385	-3.65	0.00	0.00	0.09	0.01
1660	5387	5388	-14.28	0.03	0.00	0.65	0.64
1661	5388	5389	-20.53	0.34	0.00	0.93	1.25
1662	5389	2761	-23.03	0.08	0.00	1.05	1.54
1663	2761	5382	-24.28	0.30	0.00	1.10	1.70
1664	5389	2758	2.50	0.00	0.00	0.11	0.03
1665	2758	2762	1.25	0.00	0.00	0.06	0.01
1666	5388	2739	6.25	0.01	0.00	0.28	0.14
1667	2739	2743	5.00	0.01	0.00	0.23	0.09
1668	2743	2730	3.75	0.00	0.00	0.17	0.05
1669	2730	2756	2.50	0.00	0.00	0.11	0.03
1670	2756	2745	1.25	0.00	0.00	0.06	0.01
1671	5386	2763	15.00	0.09	0.00	0.68	0.70
1672	2763	5390	13.75	0.04	0.00	0.62	0.59
1673	5390	2755	5.00	0.01	0.00	0.23	0.09
1674	2755	1347	3.75	0.01	0.00	0.17	0.05
1675	1347	2749	2.50	0.00	0.00	0.11	0.03
1676	2749	2750	1.25	0.00	0.00	0.06	0.01
1677	5390	2767	8.75	0.26	0.00	0.89	1.85
1678	2767	7060	7.50	0.11	0.00	0.77	1.39
1679	7060	2738	6.25	0.12	0.00	0.64	0.99
1680	2738	7061	5.00	0.07	0.00	0.51	0.66
1681	7061	2765	3.75	0.06	0.00	0.38	0.39
1682	2765	7062	2.50	0.01	0.00	0.26	0.18
1683	7062	2768	1.25	0.01	0.00	0.13	0.05
1684	5386	2726	-3.32	0.00	0.00	0.15	0.04
1685	5274	1547	-776.22	10.88	0.00	4.95	8.77
1686	1547	2437	-777.47	2.12	0.00	4.96	8.79
1687	2437	905	-778.72	0.98	0.00	4.97	8.82
1688	905	5391	-779.97	20.12	0.00	4.98	8.85
1689	5391	5392	-779.97	14.84	0.00	4.98	8.85
1690	5392	902	-781.22	0.71	0.00	4.99	8.87
1691	5392	2393	1.25	0.00	0.00	0.01	0.00
1692	902	5393	-782.47	5.31	0.00	4.99	8.90

1693	5393	904	-782.47	3.06	0.00	4.99	8.90
1694	904	5394	-783.72	0.46	0.00	5.00	8.92
1696	5395	JimNethery	403.79	3.61	0.00	4.58	10.61
1697	5395	2250	-403.79	7.96	0.00	4.58	10.61
1698	2250	5396	-405.04	1.16	0.00	4.60	10.67
1699	5396	2120	8.75	0.41	0.00	0.89	1.85
1700	2120	2360	7.50	0.74	0.00	0.77	1.39
1701	2360	2499	6.25	0.29	0.00	0.64	0.99
1702	2499	2533	5.00	0.40	0.00	0.51	0.66
1703	2533	1349	3.75	0.07	0.00	0.38	0.39
1704	1349	2598	2.50	0.05	0.00	0.26	0.18
1705	2598	2500	1.25	0.02	0.00	0.13	0.05
1706	5396	330	-413.79	4.96	0.00	4.70	11.10
1707	1248	330	415.04	14.88	0.00	4.71	11.16
1708	5397	1248	416.29	56.67	0.00	4.72	11.22
1709	5398	1468	7.50	0.01	0.00	0.09	0.01
1710	1468	1995	6.25	0.00	0.00	0.07	0.00
1711	2405	2367	2.50	0.00	0.00	0.03	0.00
1712	2367	1824	1.25	0.00	0.00	0.01	0.00
1713	5398	5579	416.29	42.99	0.00	4.72	11.22
1714	5398	5399	-423.79	9.24	0.00	4.81	11.60
1715	5399	5400	42.50	13.50	0.00	1.93	4.80
1716	5400	2077	42.50	23.90	0.00	1.93	4.80
1717	2077	5401	41.25	0.15	0.00	1.87	4.54
1718	5401	2442	41.25	1.68	0.00	1.87	4.54
1719	2442	5402	40.00	1.22	0.00	1.82	4.29
1720	5402	2505	13.75	0.25	0.00	1.40	4.27
1721	2505	2296	12.50	1.31	0.00	1.28	3.58
1722	2296	2153	11.25	0.37	0.00	1.15	2.95
1723	2153	5403	10.00	0.45	0.00	1.02	2.37
1724	5403	2129	1.25	0.01	0.00	0.13	0.05
1725	5403	5404	8.75	0.21	0.00	0.89	1.85
1726	5404	5405	2.50	0.01	0.00	0.26	0.18
1727	5405	8016	1.25	0.00	0.00	0.13	0.05
1728	5405	2189	1.25	0.00	0.00	0.13	0.05
1729	5404	2501	6.25	0.04	0.00	0.64	0.99
1730	2501	736	5.00	0.01	0.00	0.51	0.66
1731	736	2683	3.75	0.02	0.00	0.38	0.39
1732	2683	1724	2.50	0.05	0.00	0.26	0.18
1733	1724	1773	1.25	0.00	0.00	0.13	0.05
1734	5402	2565	26.25	0.17	0.00	1.19	1.96
1735	2565	2023	25.00	0.18	0.00	1.13	1.79
1736	2023	5406	23.75	0.16	0.00	1.08	1.63
1737	5406	368	23.75	0.09	0.00	1.08	1.63
1738	368	1433	22.50	0.06	0.00	1.02	1.48
1739	1433	5407	21.25	1.12	0.00	0.96	1.33
1740	5407	1043	18.75	0.38	0.00	1.91	7.59
1741	1043	2535	17.50	0.41	0.00	1.79	6.68
1742	2535	2071	16.25	0.48	0.00	1.66	5.82
1743	2071	2353	15.00	1.95	0.00	1.53	5.02
1744	2353	1876	13.75	1.00	0.00	1.40	4.27
1745	1876	5408	12.50	0.11	0.00	1.28	3.58
1746	5408	2082	11.25	0.17	0.00	1.15	2.95
1747	2082	8045	10.00	0.72	0.00	1.02	2.37
1748	8045	2073	8.75	0.37	0.00	0.89	1.85
1749	2073	1415	7.50	0.03	0.00	0.77	1.39
1750	1415	2700	6.25	0.12	0.00	0.64	0.99
1751	2700	2303	5.00	0.10	0.00	0.51	0.66
1752	2303	846	3.75	0.10	0.00	0.38	0.39
1753	846	1952	2.50	0.02	0.00	0.26	0.18
1754	1952	2241	1.25	0.03	0.00	0.13	0.05
1755	5408	2342	1.25	0.01	0.00	0.13	0.05
1756	5407	634	2.50	0.03	0.00	0.26	0.18
1757	634	2370	1.25	0.01	0.00	0.13	0.05
1758	7063	2080	7.50	0.10	0.00	0.77	1.39
1759	2080	2059	6.25	0.17	0.00	0.64	0.99
1760	2059	8017	5.00	0.08	0.00	0.51	0.66
1761	8017	2221	3.75	0.06	0.00	0.38	0.39
1762	2221	2390	2.50	0.01	0.00	0.26	0.18
1763	2390	2083	1.25	0.03	0.00	0.13	0.05
1764	5409	5399	466.29	8.78	0.00	2.98	3.41

1765	5409	585	-466.29	0.49	0.00	2.98	3.41
1766	585	5410	-467.54	2.88	0.00	2.98	3.43
1767	5410	5411	12.50	0.12	0.00	0.32	0.12
1768	5411	5412	12.50	0.07	0.00	0.32	0.12
1769	5412	1482	6.65	0.05	0.00	0.30	0.15
1770	1482	627	5.40	0.07	0.00	0.25	0.11
1771	627	1569	4.15	0.03	0.00	0.19	0.06
1772	1569	20	2.90	0.00	0.00	0.13	0.03
1773	20	489	1.65	0.00	0.00	0.07	0.01
1774	489	2610	0.40	0.00	0.00	0.02	0.00
1775	2610	2197	-0.85	0.00	0.00	0.04	0.00
1776	5413	31	2.50	0.02	0.00	0.26	0.18
1777	31	1245	1.25	0.00	0.00	0.13	0.05
1778	5413	262	-4.60	0.01	0.00	0.21	0.08
1779	262	5412	-5.85	0.15	0.00	0.27	0.12
1780	2197	5413	-2.10	0.00	0.00	0.10	0.02
1781	5410	5414	-480.04	1.48	0.00	3.06	3.60
1782	5414	5416	-480.04	0.93	0.00	3.06	3.60
1783	5416	5415	-480.04	2.13	0.00	3.06	3.60
1785	5417	5418	75.21	1.33	0.00	1.92	3.40
1786	5418	2599	45.57	0.19	0.00	1.16	1.34
1787	2599	5419	44.32	0.18	0.00	1.13	1.28
1788	5419	5420	44.32	0.85	0.00	1.13	1.28
1789	5420	5421	44.32	0.83	0.00	1.13	1.28
1790	5421	5422	44.32	0.46	0.00	1.13	1.28
1791	5422	5424	16.88	0.97	0.00	0.77	0.87
1792	5424	5425	16.88	0.03	0.00	0.77	0.87
1793	5425	5426	16.88	0.07	0.00	1.72	6.25
1794	5426	8028	17.50	0.40	0.00	1.79	6.68
1795	8028	562	16.25	0.82	0.00	1.66	5.82
1796	562	1025	15.00	0.10	0.00	1.53	5.02
1797	1025	5427	13.75	0.29	0.00	1.40	4.27
1798	5427	947	2.50	0.02	0.00	0.26	0.18
1799	947	1167	1.25	0.00	0.00	0.13	0.05
1800	5427	512	11.25	0.29	0.00	1.15	2.95
1801	512	1271	10.00	0.07	0.00	1.02	2.37
1802	1271	8040	8.75	0.10	0.00	0.89	1.85
1803	8040	8042	7.50	0.04	0.00	0.77	1.39
1804	8042	8041	6.25	0.02	0.00	0.64	0.99
1805	8041	993	5.00	0.11	0.00	0.51	0.66
1806	993	863	3.75	0.02	0.00	0.38	0.39
1807	863	2161	2.50	0.00	0.00	0.26	0.18
1808	2161	1366	1.25	0.00	0.00	0.13	0.05
1809	5428	1123	12.70	0.11	0.00	1.30	3.69
1810	1123	2640	11.45	0.92	0.00	1.17	3.04
1811	2640	1337	10.20	0.14	0.00	1.04	2.46
1812	1337	1042	8.95	0.24	0.00	0.91	1.93
1813	1042	49	7.70	0.11	0.00	0.79	1.46
1814	49	2401	6.45	0.08	0.00	0.66	1.05
1815	2401	1404	5.20	0.04	0.00	0.53	0.71
1816	1404	1211	3.95	0.05	0.00	0.40	0.42
1817	1211	5429	2.70	0.02	0.00	0.28	0.21
1818	5428	415	17.96	0.44	0.00	1.83	7.01
1819	5429	590	1.43	0.02	0.00	0.15	0.06
1820	590	1165	0.18	0.00	0.00	0.02	0.00
1821	1165	540	-1.07	0.00	0.00	0.11	0.04
1822	540	91	-2.32	0.03	0.00	0.24	0.16
1823	91	1918	-3.57	0.02	0.00	0.36	0.35
1824	1918	1033	-4.82	0.17	0.00	0.49	0.61
1825	1033	596	-6.07	0.08	0.00	0.62	0.94
1826	596	5430	-7.32	0.19	0.00	0.75	1.33
1827	5430	5431	-3.46	0.01	0.00	0.35	0.33
1828	5431	5432	-3.46	0.00	0.00	0.35	0.33
1829	5432	645	5.00	0.03	0.00	0.51	0.66
1830	645	2528	3.75	0.02	0.00	0.38	0.39
1831	2528	817	2.50	0.02	0.00	0.26	0.18
1832	817	1357	1.25	0.00	0.00	0.13	0.05
1833	5432	5433	88.75	0.64	0.00	1.01	0.64
1834	5432	5434	-97.21	0.13	0.00	1.10	0.76
1835	5430	5435	-5.11	0.10	0.00	0.52	0.68
1836	5429	2388	1.27	0.01	0.00	0.13	0.05

1837	2388	1603	0.02	0.00	0.00	0.00	0.00
1838	1603	8063	-1.23	0.00	0.00	0.13	0.05
1839	8063	168	-2.48	0.01	0.00	0.25	0.18
1840	168	513	-3.73	0.09	0.00	0.38	0.38
1841	513	2562	-4.98	0.07	0.00	0.51	0.65
1842	2562	90	-6.23	0.25	0.00	0.64	0.99
1843	90	5435	-7.48	0.16	0.00	0.76	1.38
1844	5435	5434	-12.59	0.04	0.00	1.29	3.63
1845	5434	1584	2.95	0.02	0.00	0.30	0.25
1846	1584	1958	1.70	0.02	0.00	0.17	0.09
1847	1958	163	0.45	0.00	0.00	0.05	0.01
1848	163	2064	-0.80	0.01	0.00	0.08	0.02
1849	2064	1310	-2.05	0.02	0.00	0.21	0.13
1850	1310	83	-3.30	0.04	0.00	0.34	0.30
1851	83	560	-4.55	0.10	0.00	0.47	0.55
1852	560	297	-5.80	0.17	0.00	0.59	0.87
1853	5434	5436	-112.75	0.32	0.00	1.28	1.00
1854	297	5437	-7.05	0.02	0.00	0.72	1.24
1855	5437	5438	-8.29	0.09	0.00	0.85	1.68
1856	5438	826	3.10	0.06	0.00	0.32	0.27
1857	826	86	1.85	0.01	0.00	0.19	0.10
1858	86	960	0.60	0.00	0.00	0.06	0.01
1859	960	2329	-0.65	0.01	0.00	0.07	0.02
1860	5439	5440	-6.19	0.13	0.00	0.63	0.97
1861	5439	1594	4.28	0.01	0.00	0.44	0.49
1862	1594	5436	3.03	0.01	0.00	0.31	0.26
1863	5436	1568	8.75	0.12	0.00	0.89	1.85
1864	1568	559	7.50	0.07	0.00	0.77	1.39
1865	559	2652	6.25	0.14	0.00	0.64	0.99
1866	2652	153	5.00	0.07	0.00	0.51	0.66
1867	153	8044	3.75	0.05	0.00	0.38	0.39
1868	8044	1540	2.50	0.02	0.00	0.26	0.18
1869	1540	1441	1.25	0.00	0.00	0.13	0.05
1870	2329	5439	-1.90	0.01	0.00	0.19	0.11
1871	5436	5441	-118.46	0.15	0.00	1.34	1.09
1872	5438	5442	-20.14	0.16	0.00	0.91	1.20
1873	5442	5443	-20.14	0.16	0.00	0.91	1.20
1874	5443	2086	3.75	0.07	0.00	0.38	0.39
1875	2086	436	2.50	0.03	0.00	0.26	0.18
1876	436	8065	1.25	0.01	0.00	0.13	0.05
1877	5443	2299	2.28	0.01	0.00	0.23	0.15
1878	2299	5444	1.03	0.00	0.00	0.11	0.04
1879	5444	5445	7.51	0.17	0.00	0.77	1.39
1880	5445	300	7.51	0.13	0.00	0.77	1.39
1881	300	5446	6.26	0.14	0.00	0.64	1.00
1882	5437	5446	1.24	0.04	0.00	0.13	0.05
1883	5443	5447	-26.17	0.23	0.00	1.19	1.95
1884	5440	1548	6.25	0.09	0.00	0.64	0.99
1885	1548	430	5.00	0.04	0.00	0.51	0.66
1886	430	148	3.75	0.04	0.00	0.38	0.39
1887	148	887	2.50	0.05	0.00	0.26	0.18
1888	887	804	1.25	0.00	0.00	0.13	0.05
1889	5447	5448	-26.17	0.46	0.00	1.19	1.95
1890	5448	5449	-157.07	0.28	0.00	1.78	1.85
1891	5440	5441	-12.44	0.00	0.00	0.14	0.02
1892	5441	5450	-130.90	0.13	0.00	1.49	1.32
1893	5448	5450	130.90	0.81	0.00	1.49	1.32
1894	5449	1008	11.25	0.25	0.00	1.15	2.95
1895	1008	2651	10.00	0.09	0.00	1.02	2.37
1896	2651	939	8.75	0.26	0.00	0.89	1.85
1897	939	7064	7.50	0.14	0.00	0.77	1.39
1898	7064	7065	6.25	0.01	0.00	0.64	0.99
1899	7065	946	5.00	0.11	0.00	0.51	0.66
1900	946	515	3.75	0.00	0.00	0.38	0.39
1901	515	1452	2.50	0.01	0.00	0.26	0.18
1902	1452	8019	1.25	0.00	0.00	0.13	0.05
1903	5449	5451	-174.68	0.28	0.00	1.98	2.25
1904	5451	5452	-174.68	0.36	0.00	1.98	2.25
1905	5452	5454	-174.68	0.04	0.00	1.98	2.25
1906	5454	5453	-198.79	0.08	0.00	2.26	2.86
1907	5455	5456	25.30	0.13	0.00	2.58	13.21

1908	5453	5455	22.12	0.21	0.00	2.26	10.31
1909	5456	30	15.00	1.50	0.00	1.53	5.02
1910	30	8023	13.75	0.21	0.00	1.40	4.27
1911	8023	1014	12.50	0.13	0.00	1.28	3.58
1912	1014	897	11.25	0.16	0.00	1.15	2.95
1913	897	390	10.00	0.14	0.00	1.02	2.37
1914	390	8020	8.75	0.04	0.00	0.89	1.85
1915	8020	8021	7.50	0.05	0.00	0.77	1.39
1916	8021	8027	6.25	0.01	0.00	0.64	0.99
1917	8027	142	5.00	0.07	0.00	0.51	0.66
1918	142	2002	3.75	0.07	0.00	0.38	0.39
1919	2002	1083	1.25	0.00	0.00	0.13	0.05
1920	2002	8049	1.25	0.00	0.00	0.13	0.05
1921	5454	5457	24.12	0.60	0.00	1.09	1.68
1922	5457	5458	24.12	0.57	0.00	1.09	1.68
1923	5458	5428	24.12	0.09	0.00	1.09	1.68
1924	5456	41	10.30	0.10	0.00	1.05	2.50
1925	41	1399	9.05	0.17	0.00	0.92	1.97
1926	1399	1288	7.80	0.35	0.00	0.80	1.49
1927	1288	5428	6.55	0.40	0.00	0.67	1.08
1928	5453	5459	10.13	0.11	0.00	1.03	2.42
1929	5459	5460	10.13	0.18	0.00	1.03	2.42
1930	5460	969	1.25	0.00	0.00	0.13	0.05
1931	5460	2368	8.88	0.32	0.00	0.91	1.90
1932	2368	2588	7.63	0.16	0.00	0.78	1.43
1933	2588	8053	6.38	0.04	0.00	0.65	1.03
1934	8053	5461	5.13	0.08	0.00	0.52	0.69
1935	5449	5461	6.35	0.13	0.00	0.65	1.02
1936	5461	727	11.48	0.15	0.00	1.17	3.06
1937	727	139	10.23	0.06	0.00	1.04	2.47
1938	139	2233	8.98	0.02	0.00	0.92	1.94
1939	2233	814	7.73	0.44	0.00	0.79	1.47
1940	814	5444	6.48	0.18	0.00	0.66	1.06
1941	5446	720	7.50	0.19	0.00	0.77	1.39
1942	720	2260	6.25	0.42	0.00	0.64	0.99
1943	2260	2060	5.00	0.07	0.00	0.51	0.66
1944	2060	5602	3.75	0.26	0.00	0.38	0.39
1945	5602	2518	3.75	0.16	0.00	0.38	0.39
1946	2518	2267	2.50	0.01	0.00	0.26	0.18
1947	2267	2466	1.25	0.00	0.00	0.13	0.05
1948	5415	5417	306.25	0.35	0.00	3.47	6.36
1950	5463	5462	516.44	15.53	0.00	5.86	16.73
1951	5455	5464	-3.17	0.24	0.00	0.32	0.28
1952	5453	5417	-231.04	1.71	0.00	2.62	3.77
1953	5459	5465	0.00	0.00	0.00	0.00	0.00
1954	5418	5464	29.64	0.35	0.00	3.03	17.72
1955	5464	292	13.84	0.52	0.00	1.41	4.32
1956	292	464	12.59	0.04	0.00	1.29	3.63
1957	464	418	11.34	0.96	0.00	1.16	2.99
1958	418	46	10.09	0.64	0.00	1.03	2.41
1959	46	1611	8.84	0.19	0.00	0.90	1.89
1960	1611	507	7.59	0.12	0.00	0.78	1.42
1961	507	5466	6.34	0.24	0.00	0.65	1.02
1962	5466	962	2.34	0.01	0.00	0.24	0.16
1963	962	8034	1.09	0.00	0.00	0.11	0.04
1964	8034	8029	-0.16	0.00	0.00	0.02	0.00
1965	8029	8030	-1.41	0.01	0.00	0.14	0.06
1966	8030	5467	-2.66	0.02	0.00	0.27	0.20
1967	5467	1502	-6.16	0.06	0.00	0.63	0.97
1968	5468	1637	1.25	0.00	0.00	0.13	0.05
1969	5422	5468	8.66	0.33	0.00	0.88	1.82
1970	1502	5468	-7.41	0.12	0.00	0.76	1.36
1971	5467	8036	3.50	0.09	0.00	0.36	0.34
1972	8036	1486	2.25	0.01	0.00	0.23	0.15
1973	1486	534	1.00	0.00	0.00	0.10	0.03
1974	534	8031	-0.25	0.00	0.00	0.03	0.00
1975	8031	2035	-1.50	0.00	0.00	0.15	0.07
1976	2035	994	-2.75	0.03	0.00	0.28	0.22
1977	994	5466	-4.00	0.05	0.00	0.41	0.43
1978	5422	5423	17.52	0.33	0.00	1.79	6.70
1979	5423	607	11.40	0.23	0.00	1.16	3.02

1980	607	2239	10.15	0.12	0.00	1.04	2.44
1981	2239	12	8.90	0.14	0.00	0.91	1.91
1982	12	957	7.65	0.12	0.00	0.78	1.44
1983	957	117	6.40	0.07	0.00	0.65	1.04
1984	117	116	5.15	0.04	0.00	0.53	0.69
1985	116	391	3.90	0.02	0.00	0.40	0.42
1986	391	1417	2.65	0.01	0.00	0.27	0.20
1987	1417	936	1.40	0.00	0.00	0.14	0.06
1988	936	758	0.15	0.00	0.00	0.02	0.00
1989	758	5426	-1.10	0.02	0.00	0.11	0.04
1990	5423	1311	6.12	0.01	0.00	0.62	0.95
1991	1311	457	4.87	0.04	0.00	0.50	0.62
1992	457	973	3.62	0.06	0.00	0.37	0.36
1993	973	38	2.37	0.03	0.00	0.24	0.16
1994	38	738	1.12	0.00	0.00	0.11	0.04
1995	738	934	-0.13	0.00	0.00	0.01	0.00
1996	934	528	-1.38	0.00	0.00	0.14	0.06
1997	528	93	-2.63	0.01	0.00	0.27	0.20
1998	93	1394	-3.88	0.16	0.00	0.40	0.41
1999	1394	806	-5.13	0.10	0.00	0.52	0.69
2000	806	8035	-6.38	0.15	0.00	0.65	1.03
2001	8035	5469	-7.63	0.09	0.00	0.78	1.44
2002	5469	1554	-7.63	0.11	0.00	0.78	1.44
2003	1554	269	-8.88	0.87	0.00	0.91	1.90
2004	269	270	-10.13	0.08	0.00	1.03	2.43
2005	5464	2608	12.63	0.47	0.00	1.29	3.65
2006	270	2608	-11.38	0.58	0.00	1.16	3.01
2007	5433	1358	88.75	0.15	0.00	1.01	0.64
2008	1358	279	87.50	0.12	0.00	0.99	0.62
2009	279	5470	86.25	0.10	0.00	0.98	0.61
2010	5470	101	52.13	0.18	0.00	1.33	1.72
2011	5470	913	16.71	0.45	0.00	1.71	6.13
2012	913	67	15.46	0.23	0.00	1.58	5.31
2013	101	2347	50.88	0.24	0.00	1.30	1.65
2014	67	227	14.21	0.53	0.00	1.45	4.54
2015	227	100	12.96	0.47	0.00	1.32	3.83
2016	100	131	11.71	0.34	0.00	1.20	3.17
2017	131	141	10.46	0.45	0.00	1.07	2.58
2018	2347	600	49.63	0.79	0.00	1.27	1.57
2019	141	649	9.21	0.10	0.00	0.94	2.04
2020	649	551	7.96	0.24	0.00	0.81	1.55
2021	551	1197	6.71	0.14	0.00	0.69	1.13
2022	1197	484	5.46	0.04	0.00	0.56	0.77
2023	484	1570	4.21	0.02	0.00	0.43	0.48
2024	1570	1308	2.96	0.01	0.00	0.30	0.25
2025	1308	1432	1.71	0.02	0.00	0.17	0.09
2026	1432	671	0.46	0.00	0.00	0.05	0.01
2027	600	589	48.38	1.20	0.00	1.24	1.50
2028	671	1328	-0.79	0.00	0.00	0.08	0.02
2029	1328	5471	-2.04	0.03	0.00	0.21	0.12
2030	589	5472	47.13	0.44	0.00	1.20	1.43
2031	5471	5472	-16.30	0.18	0.00	1.66	5.85
2032	5471	1102	14.26	0.06	0.00	1.46	4.57
2033	1102	1095	13.01	0.23	0.00	1.33	3.86
2034	1095	951	11.76	0.10	0.00	1.20	3.20
2035	951	1094	10.51	0.21	0.00	1.07	2.60
2036	1094	874	9.26	0.23	0.00	0.95	2.05
2037	874	624	8.01	0.11	0.00	0.82	1.57
2038	624	827	6.76	0.11	0.00	0.69	1.15
2039	827	705	5.51	0.01	0.00	0.56	0.79
2040	5472	2410	30.83	0.35	0.00	0.79	0.65
2041	2410	640	29.58	0.04	0.00	0.76	0.60
2042	640	5473	28.33	0.02	0.00	0.72	0.56
2043	705	5474	4.26	0.12	0.00	0.44	0.49
2044	5473	1991	1.58	0.00	0.00	0.07	0.01
2045	1991	2609	0.33	0.00	0.00	0.01	0.00
2046	5477	1305	-3.99	0.05	0.00	0.41	0.43
2047	1305	251	-5.24	0.04	0.00	0.53	0.72
2048	251	1497	-6.49	0.05	0.00	0.66	1.06
2049	2609	1870	-0.92	0.00	0.00	0.04	0.00
2050	1870	5475	-2.17	0.00	0.00	0.10	0.02

2051	5475	1668	1.25	0.00	0.00	0.13	0.05
2052	5475	5476	-3.42	0.01	0.00	0.35	0.33
2053	1497	5476	-7.74	0.81	0.00	0.79	1.47
2054	5476	2100	-11.16	0.38	0.00	1.14	2.90
2055	2100	1424	-12.41	0.11	0.00	1.27	3.54
2056	1424	1496	-13.66	0.33	0.00	1.40	4.22
2057	1496	1822	-14.91	1.17	0.00	1.52	4.97
2058	1822	291	-16.16	0.36	0.00	1.65	5.76
2059	291	5470	-17.41	0.89	0.00	1.78	6.62
2060	5474	5477	-0.49	0.00	0.00	0.05	0.01
2061	5474	5478	4.75	0.09	0.00	0.48	0.60
2062	5478	1542	2.50	0.01	0.00	0.26	0.18
2063	1542	2654	1.25	0.00	0.00	0.13	0.05
2064	5478	5483	2.25	0.05	0.00	0.23	0.15
2065	5477	642	3.50	0.14	0.00	0.36	0.34
2066	642	370	2.25	0.01	0.00	0.23	0.15
2067	862	525	5.33	0.15	0.00	0.54	0.74
2068	525	92	4.08	0.25	0.00	0.42	0.45
2069	92	2510	2.83	0.06	0.00	0.29	0.23
2070	2510	1790	1.58	0.00	0.00	0.16	0.08
2071	1790	1341	0.33	0.00	0.00	0.03	0.00
2072	1341	5479	-0.92	0.01	0.00	0.09	0.03
2073	5479	5480	3.75	0.12	0.00	0.38	0.39
2074	5480	1828	3.75	0.00	0.00	0.38	0.39
2075	1828	995	1.25	0.00	0.00	0.13	0.05
2076	1898	1828	-1.25	0.00	0.00	0.13	0.05
2077	5479	5485	-4.67	0.10	0.00	0.48	0.58
2078	1736	209	8.78	0.10	0.00	0.90	1.86
2079	209	282	7.53	0.02	0.00	0.77	1.40
2080	282	354	6.28	0.03	0.00	0.64	1.00
2081	354	1078	5.03	0.05	0.00	0.51	0.66
2082	1078	1044	3.78	0.04	0.00	0.39	0.39
2083	1044	266	2.53	0.01	0.00	0.26	0.19
2084	266	1686	1.28	0.01	0.00	0.13	0.05
2085	1686	729	0.03	0.00	0.00	0.00	0.00
2086	729	813	-1.22	0.01	0.00	0.12	0.05
2087	813	1437	-2.47	0.02	0.00	0.25	0.18
2088	1437	2447	-3.72	0.03	0.00	0.38	0.38
2089	2447	1168	-4.97	0.06	0.00	0.51	0.65
2090	1168	605	-6.22	0.02	0.00	0.64	0.98
2091	605	307	-7.47	0.03	0.00	0.76	1.38
2092	307	5481	-8.72	0.66	0.00	0.89	1.84
2093	370	5481	1.00	0.00	0.00	0.10	0.03
2094	5483	862	6.58	0.06	0.00	0.67	1.09
2095	5473	5482	26.75	1.08	0.00	1.21	2.03
2096	5482	5484	14.70	0.40	0.00	0.67	0.67
2097	5485	1736	10.03	0.17	0.00	1.02	2.38
2098	5481	5482	-7.72	0.01	0.00	0.35	0.20
2099	5482	5483	4.33	0.00	0.00	0.20	0.07
2100	5484	5485	14.70	0.02	0.00	0.67	0.67
2101	5463	2534	-516.44	4.12	0.00	5.86	16.73
2102	2534	999	-517.69	19.40	0.00	5.87	16.81
2103	999	5486	-518.94	3.51	0.00	5.89	16.88
2104	5486	5489	-518.94	43.74	0.00	5.89	16.88
2105	5488	5490	5.47	0.00	0.00	0.14	0.03
2106	5490	5615	-25.78	0.48	0.00	1.17	1.90
2107	5488	5616	-27.97	0.24	0.00	1.27	2.21
2108	5489	5487	-518.94	7.93	0.00	5.89	16.88
2109	5615	5491	-25.78	0.09	0.00	1.17	1.90
2110	5616	5492	-27.97	1.61	0.00	1.27	2.21
2111	5491	5493	-25.78	1.05	0.00	1.17	1.90
2112	5487	5494	-518.94	27.45	0.00	5.89	16.88
2113	5492	5495	-72.50	16.12	0.00	3.29	12.89
2114	5494	5495	72.50	0.00	0.00	0.82	0.44
2115	5614WTMidlake-		295.67	0.11	0.00	3.35	5.96
2116	FGN-AA	5614	591.44	0.65	0.00	6.71	21.51
2117-CV	FGN-TT	5496	0.00	0.00	0.00	0.00	0.00
2118-XX	5494	5617					
2119	5495	5498	0.00	0.00	0.00	0.00	0.00
2120-XX	5498	5497					
2121	5497	2126	102.16	3.80	0.00	1.16	0.83

2122	2126	2019	100.91	0.31	0.00	1.15	0.81
2123	2019	5499	99.66	3.13	0.00	1.13	0.79
2124	5499	2084	2.50	0.17	0.00	0.26	0.18
2125	2084	1994	1.25	0.06	0.00	0.13	0.05
2126	5499	668	97.16	0.54	0.00	1.10	0.76
2127	668	5500	95.91	0.16	0.00	1.09	0.74
2128	5500	1916	3.75	0.03	0.00	0.38	0.39
2129	1916	2678	2.50	0.08	0.00	0.26	0.18
2130	2678	2196	1.25	0.00	0.00	0.13	0.05
2131	5500	5501	92.16	1.07	0.00	1.05	0.69
2132	5502	8022	0.00	0.00	0.00	0.00	0.00
2133	2644	1719	-26.25	0.85	0.00	1.19	1.96
2134	121	8022	89.66	1.05	0.00	1.02	0.65
2135	5503	2644	-25.00	1.92	0.00	1.13	1.79
2136	1719	1911	-27.50	1.61	0.00	1.25	2.14
2137	1911	5661	-28.75	0.28	0.00	1.30	2.33
2139	8022	J-34	88.41	5.55	0.00	2.26	4.59
2143	5506	2481	491.25	6.93	0.00	3.14	3.76
2144	2481	2300	490.00	5.10	0.00	3.13	3.74
2145	2300	1104	488.75	9.31	0.00	3.12	3.72
2146	1104	5507	487.50	6.32	0.00	3.11	3.70
2147	5507	2224	487.50	5.02	0.00	3.11	3.70
2148	2224	5508	486.25	4.43	0.00	3.10	3.69
2149	5508	2662	10.00	0.38	0.00	1.02	2.37
2150	2662	1816	8.75	0.38	0.00	0.89	1.85
2151	1816	2245	7.50	0.17	0.00	0.77	1.39
2152	2245	1052	6.25	0.81	0.00	0.64	0.99
2153	1052	1976	5.00	0.51	0.00	0.51	0.66
2154	1976	462	3.75	0.10	0.00	0.38	0.39
2155	462	1565	2.50	2.01	0.00	1.02	5.32
2156	1565	1519	1.25	0.37	0.00	0.51	1.47
2157	5508	755	476.25	19.55	0.00	3.04	3.55
2158	755	1541	475.00	1.17	0.00	3.03	3.53
2159	1541	2281	473.75	1.43	0.00	3.02	3.51
2160	2281	5509	472.50	7.32	0.00	3.02	3.50
2161	5509	1982	472.50	0.99	0.00	3.02	3.50
2162	1982	5510	471.25	1.90	0.00	3.01	3.48
2163	5510	5621	471.25	1.24	0.00	3.01	3.48
2164	5621	5514	471.25	1.50	0.00	3.01	3.48
2165	5514	5622	33.75	2.48	0.00	3.45	22.54
2166	5511	5623	437.50	0.54	0.00	2.79	3.03
2167	5623	5624	32.50	2.31	0.00	3.32	21.02
2168	5623	5515	405.00	1.36	0.00	2.58	2.63
2169	5514	5511	437.50	0.39	0.00	2.79	3.03
2170	5515	5516	322.50	60.97	0.00	3.66	7.00
2171	5516	5517	322.50	0.46	0.00	3.66	7.00
2172	5517	5518	56.25	13.24	0.00	2.55	8.06
2173	5518	5519	11.25	0.47	0.00	0.51	0.41
2174	5519	5520	6.25	0.11	0.00	0.28	0.14
2175	5520	5521	3.75	0.01	0.00	0.17	0.05
2176	5521	501	1.25	0.00	0.00	0.06	0.01
2177	5521	84	2.50	0.00	0.00	0.11	0.03
2178	84	2544	1.25	0.00	0.00	0.06	0.01
2179	5520	5522	2.50	0.01	0.00	0.11	0.03
2180	5522	75	1.25	0.00	0.00	0.06	0.01
2181	5522	61	1.25	0.00	0.00	0.06	0.01
2182	5519	2685	5.00	0.07	0.00	0.23	0.09
2183	2685	2708	3.75	0.01	0.00	0.17	0.05
2184	2708	2663	2.50	0.00	0.00	0.11	0.03
2185	2663	2240	1.25	0.00	0.00	0.06	0.01
2186	5518	5523	45.00	7.63	0.00	2.04	5.33
2187	5523	843	45.00	16.31	0.00	2.04	5.33
2188	843	2045	43.75	0.21	0.00	1.99	5.06
2189	2045	1672	42.50	0.54	0.00	1.93	4.80
2190	1672	5524	41.25	0.46	0.00	1.87	4.54
2191	5524	178	6.25	0.06	0.00	0.64	0.99
2192	178	2709	5.00	0.03	0.00	0.51	0.66
2193	2709	1664	3.75	0.02	0.00	0.38	0.39
2194	1664	1977	2.50	0.00	0.00	0.26	0.18
2195	1977	110	1.25	0.00	0.00	0.13	0.05
2196	5524	5525	35.00	2.05	0.00	1.59	3.35

2197	5525	5526	7.50	0.02	0.00	0.34	0.19
2198	2587	2285	1.25	0.02	0.00	0.13	0.05
2199	5526	2482	5.00	0.07	0.00	0.51	0.66
2200	2482	1532	3.75	0.01	0.00	0.38	0.39
2201	1532	2354	2.50	0.02	0.00	0.26	0.18
2202	2354	198	1.25	0.01	0.00	0.13	0.05
2203	5525	5527	27.50	0.04	0.00	1.25	2.14
2204	151	2586	1.25	0.10	0.00	0.51	1.47
2205	5527	151	2.50	0.20	0.00	1.02	5.32
2206	5527	5528	25.00	0.35	0.00	1.13	1.79
2207	5528	5529	25.00	1.38	0.00	1.13	1.79
2208	5529	614	25.00	0.53	0.00	1.63	4.36
2209	614	253	23.75	0.71	0.00	1.55	3.97
2210	253	2484	22.50	0.36	0.00	1.47	3.59
2211	2484	2483	21.25	0.42	0.00	1.39	3.23
2212	1945	2483	-20.00	3.81	0.00	1.31	2.89
2213	1945	5530	18.75	0.53	0.00	1.23	2.56
2214	5530	2519	18.75	2.94	0.00	1.91	7.59
2215	2519	2327	17.50	0.55	0.00	1.79	6.68
2216	2327	1333	16.25	0.27	0.00	1.66	5.82
2217	1333	1779	15.00	0.32	0.00	1.53	5.02
2218	1779	2186	13.75	0.39	0.00	1.40	4.27
2219	2186	5531	12.50	0.71	0.00	1.28	3.58
2220	5531	2133	2.50	0.02	0.00	0.26	0.18
2221	2133	1001	1.25	0.01	0.00	0.13	0.05
2222	5531	1655	10.00	0.24	0.00	1.02	2.37
2223	1655	2213	8.75	1.17	0.00	0.89	1.85
2224	2213	2097	7.50	0.26	0.00	0.77	1.39
2225	2097	5532	6.25	0.29	0.00	0.64	0.99
2226	5517	2286	266.25	11.25	0.00	3.02	4.91
2227	2286	823	265.00	0.99	0.00	3.01	4.86
2228	823	5533	263.75	2.15	0.00	2.99	4.82
2229	5533	5534	257.50	0.01	0.00	2.92	0.06
2230	5534	1513	3.75	0.05	0.00	0.38	0.39
2231	1513	320	2.50	0.05	0.00	0.26	0.18
2232	320	2279	1.25	0.01	0.00	0.13	0.05
2233	5534	5535	253.75	0.72	0.00	2.88	4.49
2234	5535	375	5.00	0.38	0.00	0.51	0.66
2235	375	548	3.75	0.02	0.00	0.38	0.39
2236	548	2377	2.50	0.03	0.00	0.26	0.18
2237	2377	2495	1.25	0.02	0.00	0.13	0.05
2238	5533	2208	6.25	0.37	0.00	0.64	0.99
2239	2208	5666	5.00	0.27	0.00	0.51	0.66
2240	5666	1539	5.00	0.94	0.00	0.51	0.66
2241	1539	1589	3.75	0.01	0.00	0.38	0.39
2242	1589	284	2.50	0.08	0.00	0.26	0.18
2243	284	2597	1.25	0.00	0.00	0.13	0.05
2244	5535	5536	248.75	2.03	0.00	2.82	4.33
2245	5536	662	5.00	0.28	0.00	0.51	0.66
2246	662	2621	3.75	0.05	0.00	0.38	0.39
2247	2621	2096	2.50	0.05	0.00	0.26	0.18
2248	2096	663	1.25	0.03	0.00	0.13	0.05
2249	5536	5538	243.75	1.39	0.00	2.77	4.17
2250	5538	5537	243.75	0.82	0.00	2.77	4.17
2251	5539	5540	140.00	19.43	0.00	3.57	10.75
2252	5540	5541	140.00	25.08	0.00	6.35	43.62
2253	5541	5542	140.00	34.24	0.00	6.35	43.62
2254	5505	1934	91.25	19.89	0.00	2.33	4.86
2255	1934	2154	90.00	12.34	0.00	2.30	4.74
2256	2154	2192	88.75	15.58	0.00	2.27	4.62
2257	2192	8066	87.50	0.26	0.00	2.23	4.50
2258	8066	1764	86.25	0.71	0.00	2.20	4.38
2259	1764	5543	85.00	0.18	0.00	2.17	4.26
2260	5543	2336	1.25	0.04	0.00	0.13	0.05
2261	5543	1650	83.75	1.05	0.00	2.14	4.15
2262	1650	1935	82.50	1.84	0.00	2.11	4.04
2263	1935	2357	81.25	2.33	0.00	2.07	3.92
2264	2357	2705	80.00	0.20	0.00	2.04	3.81
2265	2705	5544	78.75	6.75	0.00	2.01	3.70
2266	5544	1768	8.75	0.20	0.00	0.89	1.85
2267	1768	2553	7.50	0.24	0.00	0.77	1.39

2268	2553	1796	6.25	0.15	0.00	0.64	0.99
2269	1796	1793	5.00	0.47	0.00	0.51	0.66
2270	1793	1797	3.75	0.05	0.00	0.38	0.39
2271	1797	5545	2.50	0.06	0.00	0.26	0.18
2272	5545	1783	2.50	0.01	0.00	0.26	0.18
2273	1783	2363	1.25	0.00	0.00	0.13	0.05
2274-XX	5502	5545					
2275	5544	2561	70.00	0.32	0.00	1.79	2.98
2276	2561	2502	68.75	3.60	0.00	1.76	2.88
2277	2502	1734	67.50	0.14	0.00	1.72	2.78
2278	1734	1785	66.25	1.53	0.00	1.69	2.69
2279	1785	2661	65.00	0.07	0.00	1.66	2.59
2280	2661	1444	63.75	1.07	0.00	1.63	2.50
2281	1444	54	62.50	0.42	0.00	1.60	2.41
2282	54	1787	61.25	0.65	0.00	1.56	2.32
2283	1787	5546	60.00	0.18	0.00	1.53	2.24
2284	5546	1810	5.00	0.08	0.00	0.51	0.66
2285	1810	2636	3.75	0.10	0.00	0.38	0.39
2286	2636	2366	2.50	0.01	0.00	0.26	0.18
2287	2366	8046	1.25	0.00	0.00	0.13	0.05
2288	5546	1782	55.00	0.78	0.00	1.40	1.90
2289	1782	1636	53.75	0.10	0.00	1.37	1.83
2290	1636	1795	52.50	0.56	0.00	1.34	1.75
2291	1795	1770	51.25	0.48	0.00	1.31	1.67
2292	1786	5548	-2.50	0.04	0.00	0.26	0.18
2293	1786	1807	1.25	0.02	0.00	0.13	0.05
2294	5547	2375	1.25	0.31	0.00	0.51	1.47
2295	1770	5547	50.00	0.31	0.00	1.28	1.60
2296	5548	1808	1.25	0.00	0.00	0.13	0.05
2297	5547	5548	48.75	0.08	0.00	1.24	1.52
2298	5548	2581	45.00	0.25	0.00	1.15	1.31
2299	2581	487	43.75	0.19	0.00	1.12	1.25
2300	5549	1801	5.00	0.42	0.00	0.51	0.66
2301	1801	2386	3.75	0.10	0.00	0.38	0.39
2302	2386	1806	2.50	0.28	0.00	0.26	0.18
2303	1806	1766	1.25	0.01	0.00	0.13	0.05
2304	5549	5550	36.25	2.46	0.00	1.65	3.57
2305	5550	1791	36.25	0.41	0.00	1.65	3.57
2306	1791	1767	35.00	1.78	0.00	1.59	3.35
2307	1767	1769	33.75	6.31	0.00	1.53	3.13
2308	1769	5551	32.50	0.12	0.00	1.48	2.92
2309	5551	5552	5.00	0.00	0.00	0.23	0.09
2310	5552	1802	1.25	0.00	0.00	0.06	0.01
2311	5552	2157	3.75	0.02	0.00	0.38	0.39
2312	2157	2671	2.50	0.04	0.00	0.26	0.18
2313	2671	1772	1.25	0.01	0.00	0.13	0.05
2314	5551	5553	27.50	1.36	0.00	1.25	2.14
2315	5553	1799	18.75	0.63	0.00	1.23	2.56
2316	1799	315	17.50	1.73	0.00	1.14	2.25
2317	315	1765	16.25	0.47	0.00	1.06	1.96
2318	1765	2138	15.00	0.97	0.00	0.98	1.69
2319	2138	1792	13.75	0.48	0.00	0.90	1.44
2320	1792	1692	12.50	0.55	0.00	1.28	3.58
2321	1692	5554	11.25	0.50	0.00	1.15	2.95
2322	5554	1560	11.25	0.09	0.00	1.15	2.95
2323	1560	1096	10.00	2.55	0.00	1.02	2.37
2324	1096	1135	8.75	0.14	0.00	0.89	1.85
2325	1135	2540	7.50	0.71	0.00	0.77	1.39
2326	2540	1804	6.25	0.31	0.00	0.64	0.99
2327	1804	2287	5.00	0.14	0.00	0.51	0.66
2328	2287	1803	3.75	0.10	0.00	0.38	0.39
2329	1803	1047	2.50	0.01	0.00	0.26	0.18
2330	1047	1789	1.25	0.08	0.00	0.13	0.05
2331	5553	2582	8.75	0.06	0.00	0.40	0.26
2332	2582	5555	7.50	0.02	0.00	0.34	0.19
2333	5555	428	1.25	0.26	0.00	0.51	1.47
2334	5555	2212	6.25	0.24	0.00	0.41	0.33
2335	2212	2601	5.00	0.05	0.00	0.33	0.22
2336	2601	1798	3.75	0.02	0.00	0.25	0.13
2337	1798	5556	2.50	0.03	0.00	0.16	0.06
2338	5556	1778	1.25	0.07	0.00	0.13	0.05

2339	5556	7074	1.25	0.06	0.00	0.13	0.05
2340	487	2635	42.50	0.19	0.00	1.09	1.18
2341	5609	505	52.50	0.43	0.00	0.60	0.24
2342	505	485	51.25	0.01	0.00	0.58	0.23
2343	485	461	50.00	0.02	0.00	0.57	0.22
2344	461	460	48.75	0.02	0.00	0.55	0.21
2345	460	5557	47.50	0.17	0.00	0.54	0.20
2346	5557	1465	47.50	0.02	0.00	0.54	0.20
2347	1465	503	46.25	0.02	0.00	0.52	0.19
2348	503	1061	45.00	0.02	0.00	0.51	0.18
2349	1061	5558	43.75	0.00	0.00	0.50	0.17
2350	5558	5559	40.00	0.12	0.00	1.82	4.29
2351	5558	532	3.75	0.22	0.00	0.38	0.39
2352	532	2068	2.50	0.07	0.00	0.26	0.18
2353	5559	5561	0.00	0.00	0.00	0.00	0.00
2354	5561	5560	0.00	0.00	0.00	0.00	0.00
2355	2068	2491	1.25	0.03	0.00	0.13	0.05
2356	2491	5562	0.00	0.00	0.00	0.00	0.00
2357	5559	1732	40.00	0.84	0.00	1.82	4.29
2358	1732	1895	38.75	3.07	0.00	1.76	4.04
2359	1895	335	37.50	0.19	0.00	1.70	3.80
2360	335	5563	36.25	0.53	0.00	1.65	3.57
2361	161	286	1.25	0.00	0.00	0.13	0.05
2362	5563	5564	3.75	0.03	0.00	0.38	0.39
2363	5564	598	1.25	0.00	0.00	0.13	0.05
2364	5564	304	2.50	0.11	0.00	0.26	0.18
2365	304	25	1.25	0.01	0.00	0.13	0.05
2366	5563	1119	32.50	2.39	0.00	1.48	2.92
2367	1119	1478	31.25	0.40	0.00	1.42	2.71
2368	1478	9	30.00	2.68	0.00	1.36	2.52
2369	9	912	28.75	1.35	0.00	1.30	2.33
2370	912	321	27.50	0.33	0.00	1.25	2.14
2371	321	5565	26.25	0.99	0.00	1.19	1.96
2372	5565	5566	17.50	0.01	0.00	0.45	0.23
2373	5566	833	2.50	0.00	0.00	0.16	0.06
2374	833	1118	1.25	0.00	0.00	0.08	0.02
2375	1118	5567	0.00	0.00	0.00	0.00	0.00
2376	5565	1683	8.75	0.20	0.00	0.89	1.85
2377	1683	1585	7.50	0.48	0.00	0.77	1.39
2378	216	1517	5.00	0.16	0.00	0.51	0.66
2379	1517	2560	3.75	0.12	0.00	0.38	0.39
2380	2560	824	2.50	0.09	0.00	0.26	0.18
2381	824	898	1.25	0.02	0.00	0.13	0.05
2382	1585	216	6.25	0.25	0.00	0.64	0.99
2383	5566	5568	15.00	0.01	0.00	0.38	0.17
2384	5568	5569	15.00	0.63	0.00	0.38	0.17
2385	5569	2568	2.50	0.33	0.00	0.26	0.18
2386	2568	2569	1.25	0.01	0.00	0.13	0.05
2387	5040	1909	13.75	2.83	0.00	0.90	1.44
2388	1909	1112	12.50	0.12	0.00	0.82	1.21
2389	1112	2477	11.25	0.49	0.00	0.74	0.99
2390	2477	1344	10.00	0.48	0.00	0.65	0.80
2391	1344	546	8.75	0.24	0.00	0.57	0.62
2392	546	1836	7.50	0.03	0.00	0.49	0.47
2393	1836	1113	6.25	0.04	0.00	0.41	0.33
2394	1113	1390	5.00	0.02	0.00	0.33	0.22
2395	1390	2626	3.75	0.02	0.00	0.25	0.13
2396	2626	1339	2.50	0.00	0.00	0.16	0.06
2397	1339	2209	1.25	0.00	0.00	0.08	0.02
2398	5570	1156	-134.54	3.48	0.00	3.43	9.98
2399	1156	5040	-135.79	5.39	0.00	3.47	10.16
2400	5040	1467	-149.54	8.63	0.00	3.82	12.14
2401	5375	126	-65.19	1.16	0.00	2.96	10.59
2402	126	1690	-66.44	2.03	0.00	3.02	10.97
2403	1690	2207	-67.69	3.16	0.00	3.07	11.35
2404	2207	2088	-68.94	2.62	0.00	3.13	11.75
2405	2088	1617	-70.19	3.53	0.00	3.19	12.14
2406	1617	1610	-71.44	5.95	0.00	3.24	12.55
2407	1610	5356	-72.69	4.26	0.00	3.30	12.96
2408	5374	481	11.88	0.26	0.00	1.21	3.26
2409	779	547	9.38	0.12	0.00	0.96	2.11

2410	547	77	8.13	0.01	0.00	0.21	0.06
2411	1616	5364	27.50	0.24	0.00	1.25	2.14
2412	5569	195	12.50	0.12	0.00	0.32	0.12
2413	195	2570	11.25	0.09	0.00	0.29	0.10
2414	2570	2572	10.00	0.02	0.00	0.26	0.08
2415	2572	2573	8.75	0.01	0.00	0.22	0.06
2416	2573	2574	7.50	0.01	0.00	0.19	0.05
2417	2574	2575	6.25	0.00	0.00	0.16	0.03
2418	2575	2576	5.00	0.00	0.00	0.13	0.02
2419	2576	2632	3.75	0.00	0.00	0.10	0.01
2420	2632	2693	2.50	0.00	0.00	0.06	0.01
2421	2693	2577	1.25	0.00	0.00	0.03	0.00
2422	2577	5571	0.00	0.00	0.00	0.00	0.00
2423	5572	1961	-118.53	1.13	0.00	1.34	1.10
2424	1961	5573	-119.78	1.22	0.00	1.36	1.12
2425	5574	1099	1.25	0.09	0.00	0.51	1.47
2426	5574	1652	1.25	0.27	0.00	0.51	1.47
2427	5573	5574	2.50	0.58	0.00	1.02	5.32
2428	5573	1281	-122.28	2.18	0.00	3.12	8.36
2429	1281	204	-123.53	1.19	0.00	3.15	8.52
2430	204	1678	-124.78	1.22	0.00	3.19	8.68
2431	1678	5575	-126.03	1.69	0.00	3.22	8.85
2432	5575	790	-143.53	0.12	0.00	1.63	1.56
2433	5575	992	17.50	0.07	0.00	0.45	0.23
2434	790	1040	-144.78	0.51	0.00	1.64	1.59
2435	992	2051	16.25	0.07	0.00	0.41	0.20
2436	2051	5576	15.00	0.03	0.00	0.38	0.17
2437	5576	1833	15.00	0.03	0.00	0.38	0.17
2438	1833	1656	13.75	0.03	0.00	0.35	0.15
2439	1656	5577	12.50	0.07	0.00	0.32	0.12
2440	5577	2284	3.75	0.79	0.00	1.53	11.27
2441	5578	5397	416.29	28.68	0.00	4.72	11.22
2444	1995	1826	5.00	0.00	0.00	0.06	0.00
2445	1826	2405	3.75	0.00	0.00	0.04	0.00
2446	2284	232	2.50	0.90	0.00	1.02	5.32
2447	232	2173	1.25	0.15	0.00	0.51	1.47
2448	5577	1315	8.75	1.14	0.00	0.89	1.85
2449	1315	1520	7.50	0.34	0.00	0.77	1.39
2450	1520	1834	6.25	0.27	0.00	0.64	0.99
2451	1834	2319	5.00	0.03	0.00	0.51	0.66
2452	2319	2667	3.75	0.10	0.00	0.38	0.39
2453	2667	1674	2.50	0.01	0.00	0.26	0.18
2454	1674	2415	1.25	0.03	0.00	0.13	0.05
2455	1040	1963	-146.03	2.96	0.00	1.66	1.61
2456	1963	5580	-147.28	0.78	0.00	1.67	1.64
2457	5580	2039	8.75	0.48	0.00	0.89	1.85
2458	2039	1777	7.50	0.34	0.00	0.77	1.39
2459	1777	188	6.25	0.85	0.00	0.64	0.99
2460	188	2155	5.00	0.04	0.00	0.51	0.66
2461	2155	2103	3.75	0.39	0.00	0.38	0.39
2462	2103	210	2.50	0.36	0.00	0.26	0.18
2463	210	683	1.25	0.03	0.00	0.13	0.05
2464	5581	5580	156.03	5.32	0.00	1.77	1.82
2465	5581	1218	1.25	0.03	0.00	0.13	0.05
2466	5581	1236	-157.28	1.42	0.00	1.78	1.85
2467	1236	2164	-158.53	0.29	0.00	1.80	1.88
2468	2164	5582	-159.78	1.41	0.00	1.81	1.91
2469	5582	1974	-159.78	2.63	0.00	1.81	1.91
2470	1974	2464	-161.03	0.39	0.00	1.83	1.93
2471	2464	1087	-162.28	2.05	0.00	1.84	1.96
2472	1087	650	-163.53	0.81	0.00	1.86	1.99
2473	650	948	-164.78	1.55	0.00	1.87	2.02
2474	948	950	-166.03	1.03	0.00	1.88	2.05
2475	950	949	-167.28	0.31	0.00	1.90	2.07
2476	949	5583	-168.53	8.74	0.00	1.91	2.10
2477	5584	5585	-417.50	0.11	0.00	1.71	0.94
2479	5583	Hwy83	-168.53	0.30	0.00	1.91	2.10
2480	5585	263	7.50	0.23	0.00	0.19	0.05
2481	5586	28	2.50	0.10	0.00	0.16	0.06
2482	28	654	1.25	0.00	0.00	0.08	0.02
2483	5586	1238	3.75	0.17	0.00	0.38	0.39

2484	1238	875	2.50	1.03	0.00	0.26	0.18
2485	875	1015	1.25	0.01	0.00	0.13	0.05
2486	263	5586	6.25	0.02	0.00	0.16	0.03
2487	5584	162	417.50	0.27	0.00	1.71	0.94
2488	162	5587	416.25	2.09	0.00	1.70	0.93
2489	5587	1658	1.25	0.00	0.00	0.03	0.00
2490	5587	5588	415.00	0.75	0.00	1.70	0.93
2491	5588	380	3.75	0.54	0.00	0.38	0.39
2492	380	359	2.50	0.11	0.00	0.26	0.18
2493	359	1657	1.25	0.01	0.00	0.13	0.05
2494	5588	5589	411.25	2.91	0.00	1.68	0.91
2495	5589	1262	411.25	0.21	0.00	1.68	0.91
2496	1262	5590	410.00	0.44	0.00	1.67	0.91
2497	5590	770	2.50	0.00	0.00	0.02	0.00
2498	770	1342	1.25	0.00	0.00	0.01	0.00
2499	5590	2669	407.50	0.18	0.00	1.66	0.90
2500	2669	1223	406.25	0.09	0.00	1.66	0.89
2501	1184	1223	-405.00	0.18	0.00	1.65	0.89
2502	1184	1170	403.75	0.54	0.00	1.65	0.88
2503	1170	2383	1.25	0.00	0.00	0.01	0.00
2504	1170	361	401.25	0.11	0.00	1.64	0.87
2505	361	2340	400.00	0.01	0.00	1.63	0.87
2506	2340	1819	398.75	0.11	0.00	1.63	0.86
2507	1819	1990	397.50	0.02	0.00	1.62	0.86
2508	1990	5591	396.25	0.71	0.00	1.62	0.85
2509	5591	2030	22.50	0.03	0.00	0.14	0.01
2510	2030	610	21.25	0.03	0.00	0.54	0.33
2511	610	407	20.00	0.02	0.00	0.51	0.29
2512	407	982	18.75	0.30	0.00	0.48	0.26
2513	982	1160	17.50	0.07	0.00	0.45	0.23
2514	1160	619	16.25	0.20	0.00	0.41	0.20
2515	619	5592	15.00	1.78	0.00	0.98	1.69
2516	5592	2098	2.50	0.34	0.00	0.26	0.18
2517	2098	1453	1.25	0.00	0.00	0.13	0.05
2518	5592	5593	12.50	3.21	0.00	1.28	3.58
2519	5593	2468	12.50	1.56	0.00	1.28	3.58
2520	2468	2237	11.25	5.66	0.00	1.15	2.95
2521	2237	5594	10.00	1.97	0.00	1.02	2.37
2522	5594	1115	1.25	0.59	0.00	0.51	1.47
2523	5594	1428	8.75	0.27	0.00	0.89	1.85
2524	1428	39	7.50	2.60	0.00	0.77	1.39
2525	355	1679	5.00	0.01	0.00	0.51	0.66
2526	1679	1889	3.75	0.58	0.00	0.38	0.39
2527	1889	2044	2.50	0.18	0.00	0.26	0.18
2528	2044	2365	1.25	0.03	0.00	0.13	0.05
2529	39	355	6.25	0.09	0.00	0.64	0.99
2530	5591	1393	373.75	0.02	0.00	1.06	0.31
2531	1393	5595	372.50	0.62	0.00	1.06	0.31
2532	5595	1419	3.75	0.22	0.00	0.38	0.39
2533	1419	1910	2.50	0.14	0.00	0.26	0.18
2534	1910	5596	1.25	0.00	0.00	0.13	0.05
2535	5596	772	1.25	0.08	0.00	0.51	1.47
2536	5595	644	368.75	0.59	0.00	1.05	0.31
2537	644	89	1.25	0.00	0.00	0.01	0.00
2538	644	1781	366.25	1.12	0.00	1.04	0.30
2539	1781	771	365.00	0.13	0.00	1.04	0.30
2540	771	5597	363.75	0.24	0.00	1.03	0.30
2541	5597	1491	363.75	1.58	0.00	1.03	0.30
2542	1491	2584	362.50	0.02	0.00	1.03	0.30
2543	2584	2021	361.25	0.02	0.00	1.02	0.30
2544	2021	1642	360.00	0.14	0.00	1.02	0.29
2545	1642	1705	358.75	0.02	0.00	1.02	0.29
2546	1705	1839	1.25	0.01	0.00	0.13	0.05
2547	1705	1007	356.25	0.15	0.00	1.01	0.29
2548	1007	2434	355.00	0.08	0.00	1.01	0.29
2549	2434	5598	353.75	0.02	0.00	1.00	0.28
2550	5598	1648	2.50	1.55	0.00	1.02	5.32
2551	1648	127	1.25	0.21	0.00	0.51	1.47
2552	5598	308	351.25	0.50	0.00	1.43	0.68
2553	308	5599	350.00	0.12	0.00	1.43	0.68
2554	5599	1931	2.50	0.58	0.00	1.02	5.32

2555	1931	1680	1.25	0.22	0.00	0.51	1.47
2556	5599	1788	347.50	0.10	0.00	1.42	0.67
2557	1788	5600	346.25	0.33	0.00	1.41	0.66
2558	5600	176	3.75	0.04	0.00	0.38	0.39
2559	176	1029	2.50	2.67	0.00	1.02	5.32
2560	1029	1933	1.25	0.15	0.00	0.51	1.47
2561	5600	625	342.50	0.63	0.00	1.40	0.65
2562	625	5601	341.25	0.05	0.00	1.39	0.65
2563	5601	2014	2.50	0.09	0.00	0.26	0.18
2564	2014	2704	1.25	0.02	0.00	0.13	0.05
2565	1623	2660	6.25	1.59	0.00	0.64	0.99
2566	2660	2411	5.00	0.13	0.00	0.51	0.66
2567	2411	1516	3.75	0.03	0.00	0.38	0.39
2568	1516	1746	2.50	0.06	0.00	0.26	0.18
2569	1746	1506	1.25	0.01	0.00	0.13	0.05
2570	5438	7063	8.75	0.09	0.00	0.89	1.85
2571	415	417	16.71	0.29	0.00	1.71	6.13
2572	417	524	15.46	0.20	0.00	1.58	5.31
2573	524	173	14.21	0.17	0.00	1.45	4.54
2574	173	328	12.96	0.12	0.00	1.32	3.83
2575	328	1601	11.71	0.12	0.00	1.20	3.18
2576	1601	725	10.46	0.12	0.00	1.07	2.58
2577	725	1392	9.21	0.09	0.00	0.94	2.04
2578	1392	217	7.96	0.11	0.00	0.81	1.55
2579	217	389	6.71	0.09	0.00	0.69	1.13
2580	389	220	5.46	0.06	0.00	0.56	0.77
2581	220	7067	4.21	0.02	0.00	0.43	0.48
2582	7067	58	2.96	0.01	0.00	0.30	0.25
2583	58	5426	1.71	0.01	0.00	0.18	0.09
2584	5601	658	338.75	0.11	0.00	1.38	0.64
2585	658	5603	337.50	0.09	0.00	1.38	0.63
2586	5603	1989	5.00	0.47	0.00	0.51	0.66
2587	1989	2677	3.75	0.02	0.00	0.38	0.39
2588	2677	2689	2.50	0.09	0.00	0.26	0.18
2589	2689	2682	1.25	0.00	0.00	0.13	0.05
2590	5603	2	332.50	0.09	0.00	1.36	0.62
2591	2	8062	331.25	0.08	0.00	1.35	0.61
2592	8062	1076	330.00	0.10	0.00	1.35	0.61
2593	1076	5604	328.75	0.27	0.00	1.34	0.60
2594	5604	5665	7.50	0.73	0.00	0.77	1.39
2595	1356	2271	5.00	0.22	0.00	0.51	0.66
2596	2271	1045	3.75	0.11	0.00	0.38	0.39
2597	1045	2199	2.50	0.06	0.00	0.26	0.18
2598	2199	2198	1.25	0.01	0.00	0.13	0.05
2599	5665	2687	1.25	0.01	0.00	0.13	0.05
2600	5604	2430	321.25	0.69	0.00	1.31	0.58
2601	2430	5605	320.00	0.70	0.00	1.31	0.57
2602	5605	5606	303.75	0.07	0.00	0.86	0.21
2603	5606	2255	96.25	2.78	0.00	0.61	0.18
2604	5422	352	1.25	0.00	0.00	0.13	0.05
2605	2255	1735	95.00	0.01	0.00	0.27	0.02
2606	5607	921	1.25	0.05	0.00	0.13	0.05
2607	5608	108	2.50	0.06	0.00	0.26	0.18
2608	108	1187	1.25	0.01	0.00	0.13	0.05
2609	5607	5608	92.50	0.58	0.00	1.05	0.69
2610	5608	9004	73.75	0.03	0.00	0.84	0.46
2611	5243	8039	1.25	0.00	0.00	0.13	0.05
2612	5635	1927	0.48	0.00	0.00	0.05	0.01
2613	289	5644	17.03	0.12	0.00	0.43	0.22
2615	5608	5612	16.25	0.06	0.00	0.10	0.01
2616	5612	5613	16.25	0.37	0.00	0.41	0.20
2617	5613	8056	5.00	0.53	0.00	0.51	0.66
2618	8056	8055	3.75	0.00	0.00	0.38	0.39
2619	8055	8058	2.50	0.02	0.00	0.26	0.18
2620	8058	8057	1.25	0.00	0.00	0.13	0.05
2621	5613	2148	11.25	4.96	0.00	1.15	2.95
2622	2148	2503	10.00	0.62	0.00	1.02	2.37
2623	2503	2178	8.75	0.63	0.00	0.89	1.85
2624	2178	2175	7.50	0.04	0.00	0.77	1.39
2625	2175	2174	6.25	0.47	0.00	0.64	0.99
2626	2174	2177	5.00	0.38	0.00	0.51	0.66

2627	2177	2180	3.75	0.18	0.00	0.38	0.39
2628	2180	2179	2.50	0.08	0.00	0.26	0.18
2629	2179	2176	1.25	0.01	0.00	0.13	0.05
2630	5430	416	1.25	0.00	0.00	0.13	0.05
2631-XX	5496	5502					
2632	5488	9002	22.50	0.04	0.00	0.57	0.36
2633	5490	9001	31.25	0.03	0.00	0.80	0.67
2634	5492	5493	44.53	0.22	0.00	2.02	5.23
2635	5493	9000	18.75	0.04	0.00	0.85	1.05
2636	FGN-BB	J-44	102.16	0.05	0.00	1.16	0.83
2637	5617	5497	102.16	0.05	0.00	1.16	0.83
2638	5618	1572	12.50	0.33	0.00	0.57	0.50
2639	1572	1592	11.25	0.05	0.00	0.51	0.41
2640	1592	1551	10.00	0.00	0.00	0.45	0.33
2641	1551	1593	8.75	0.10	0.00	0.40	0.26
2642	1593	159	7.50	0.05	0.00	0.34	0.19
2643	159	2450	6.25	0.00	0.00	0.28	0.14
2644	2450	932	5.00	0.01	0.00	0.23	0.09
2645	932	98	3.75	0.02	0.00	0.17	0.05
2646	98	1229	2.50	0.01	0.00	0.11	0.03
2647	1229	5619	1.25	0.00	0.00	0.06	0.01
2648	5619	215	1.25	0.00	0.00	0.06	0.01
2649	1384	5620	11.25	0.33	0.00	0.51	0.41
2650	1566	660	7.50	0.03	0.00	0.34	0.19
2651	660	2449	6.25	0.03	0.00	0.28	0.14
2652	2449	714	5.00	0.00	0.00	0.23	0.09
2653	714	1332	3.75	0.01	0.00	0.17	0.05
2654	1332	2498	2.50	0.00	0.00	0.11	0.03
2655	2498	181	1.25	0.00	0.00	0.06	0.01
2656	5501	2331	92.16	0.31	0.00	1.05	0.69
2657	2331	121	90.91	0.05	0.00	1.03	0.67
2658	5618	1384	12.50	0.10	0.00	0.57	0.50
2659	5618	5503	-25.00	1.03	0.00	1.13	1.79
2660	1379	1566	8.75	0.01	0.00	0.40	0.26
2661	5620	1379	10.00	0.15	0.00	0.45	0.33
2662	5620	1511	1.25	0.00	0.00	0.06	0.01
2663	5515	2458	82.50	0.03	0.00	0.94	0.56
2664	2458	1527	81.25	0.24	0.00	0.92	0.54
2666	2144	5513	78.75	0.09	0.00	0.89	0.51
2667	5625	199	15.00	0.62	0.00	1.53	5.02
2668	199	2135	13.75	0.44	0.00	1.40	4.27
2669	2135	2038	12.50	1.28	0.00	1.28	3.58
2670	2038	1475	11.25	0.27	0.00	1.15	2.95
2671	1596	1476	8.75	0.37	0.00	0.89	1.85
2672	5513	5625	78.75	0.38	0.00	0.89	0.51
2673	5537	5626	243.75	4.17	0.00	2.77	4.17
2674	5626	5627	21.25	0.16	0.00	0.54	0.33
2675	5627	8054	21.25	0.04	0.00	0.54	0.33
2676	8054	143	20.00	0.00	0.00	0.51	0.29
2677	143	5628	18.75	0.05	0.00	0.48	0.26
2678	5628	1691	6.25	0.69	0.00	0.64	0.99
2679	1691	840	5.00	0.01	0.00	0.51	0.66
2680	840	739	3.75	0.07	0.00	0.38	0.39
2681	739	8018	2.50	0.05	0.00	0.26	0.18
2682	8018	1372	1.25	0.00	0.00	0.13	0.05
2683	5628	655	12.50	0.21	0.00	1.28	3.58
2684	655	2695	11.25	0.59	0.00	1.15	2.95
2685	2695	639	10.00	0.47	0.00	1.02	2.37
2686	639	13	8.75	0.41	0.00	0.89	1.85
2687	13	5629	7.50	0.17	0.00	0.77	1.39
2688	5629	1080	3.75	0.03	0.00	0.38	0.39
2689	1080	1224	2.50	0.04	0.00	0.26	0.18
2690	1224	759	1.25	0.00	0.00	0.13	0.05
2691	5629	1630	3.75	0.56	0.00	1.53	11.27
2692	1630	1639	2.50	1.22	0.00	1.02	5.32
2693	1639	1063	1.25	0.04	0.00	0.51	1.47
2694	5626	5630	222.50	0.35	0.00	2.52	3.52
2695	5630	5631	82.50	0.06	0.00	0.94	0.56
2696	5631	5632	7.98	0.01	0.00	0.36	0.22
2697	5632	2471	7.98	0.05	0.00	0.36	0.22
2698	2471	5633	6.73	0.04	0.00	0.31	0.16

2699	5633	718	6.73	0.45	0.00	0.69	1.14
2700	718	5634	5.48	0.62	0.00	0.56	0.78
2701	5634	280	5.48	0.12	0.00	0.56	0.78
2702	280	1287	4.23	0.00	0.00	0.43	0.48
2703	1287	5635	2.98	0.04	0.00	0.30	0.25
2704	5635	196	2.50	0.03	0.00	0.26	0.18
2705	196	1915	1.25	0.00	0.00	0.13	0.05
2706	1927	1926	-0.77	0.00	0.00	0.08	0.02
2707	1926	1946	-2.02	0.00	0.00	0.21	0.12
2708	1946	2000	-3.27	0.04	0.00	0.33	0.30
2709	2000	1999	-4.52	0.01	0.00	0.46	0.55
2710	1999	511	-5.77	0.17	0.00	0.59	0.86
2711	511	5636	-7.02	0.94	0.00	0.72	1.23
2712	5636	2204	-7.02	0.01	0.00	0.32	0.17
2713	2204	5637	-8.27	0.01	0.00	0.38	0.23
2714	5637	5640	-4.11	0.09	0.00	0.42	0.46
2715	5637	5638	-4.17	0.09	0.00	0.43	0.47
2716	5638	5639	-4.17	0.00	0.00	0.19	0.07
2717-XX	5638	5632					
2718	5639	5640	61.61	0.00	0.00	0.70	0.33
2719	5639	5641	7.50	0.07	0.00	0.77	1.39
2720	5641	1894	2.50	0.01	0.00	0.26	0.18
2721	1894	711	1.25	0.01	0.00	0.13	0.05
2722	5641	2041	5.00	0.05	0.00	0.51	0.66
2723	2041	447	3.75	0.03	0.00	0.38	0.39
2724	447	17	2.50	0.01	0.00	0.26	0.18
2725	17	2309	1.25	0.01	0.00	0.13	0.05
2726	2433	1420	55.00	0.13	0.00	0.62	0.26
2727	5640	2673	57.50	0.05	0.00	0.65	0.29
2728	2673	2433	56.25	0.02	0.00	0.64	0.28
2729	5631	1556	74.52	0.05	0.00	0.85	0.46
2730	1556	5639	73.27	0.02	0.00	0.83	0.45
2731	5643	289	18.28	0.01	0.00	0.47	0.25
2732	5643	1420	-18.28	0.01	0.00	0.47	0.25
2733	1420	693	35.47	0.00	0.00	0.40	0.12
2734	693	73	34.22	0.01	0.00	0.39	0.11
2735	73	82	32.97	0.01	0.00	0.37	0.10
2736	82	5642	31.72	0.03	0.00	0.36	0.10
2737	5644	1210	3.75	0.00	0.00	0.17	0.05
2738	1210	372	2.50	0.00	0.00	0.11	0.03
2739	372	15	1.25	0.00	0.00	0.03	0.00
2740	5644	5645	13.28	0.11	0.00	0.60	0.56
2741	5645	2140	13.75	0.08	0.00	0.62	0.59
2742	2140	845	12.50	0.03	0.00	0.57	0.50
2743	845	700	11.25	0.01	0.00	0.51	0.41
2744	700	990	10.00	0.03	0.00	0.45	0.33
2745	990	1272	8.75	0.01	0.00	0.40	0.26
2746	1272	221	7.50	0.01	0.00	0.34	0.19
2747	221	23	6.25	0.00	0.00	0.16	0.03
2748	23	1659	5.00	0.01	0.00	0.23	0.09
2749	1659	2107	3.75	0.00	0.00	0.17	0.05
2750	2107	298	2.50	0.00	0.00	0.11	0.03
2751	298	601	1.25	0.00	0.00	0.06	0.01
2752	5645	591	-0.47	0.00	0.00	0.02	0.00
2753	591	483	-1.72	0.00	0.00	0.08	0.01
2754	483	2202	-2.97	0.00	0.00	0.13	0.03
2755	2202	2117	-4.22	0.00	0.00	0.19	0.07
2756	2117	1377	-5.47	0.02	0.00	0.25	0.11
2757	1377	5646	-6.72	0.00	0.00	0.31	0.16
2758	5646	5647	-6.72	0.01	0.00	0.31	0.16
2759	5647	1546	12.13	0.08	0.00	0.55	0.47
2760	1546	1483	10.88	0.00	0.00	0.49	0.38
2761	1483	844	9.63	0.04	0.00	0.44	0.31
2762	844	5648	8.38	0.01	0.00	0.38	0.24
2763	5648	1092	8.38	0.01	0.00	0.38	0.24
2764	1092	5649	7.13	0.04	0.00	0.32	0.18
2765	5649	2684	7.13	0.25	0.00	0.73	1.27
2766	2684	802	5.88	0.01	0.00	0.60	0.89
2767	802	65	4.63	0.06	0.00	0.47	0.57
2768	65	419	3.38	0.00	0.00	0.15	0.04
2769	419	1303	2.13	0.01	0.00	0.22	0.14

2770	1303	1969	0.88	0.00	0.00	0.09	0.03
2771	1969	1375	-0.37	0.00	0.00	0.04	0.01
2772	2172	1375	1.62	0.01	0.00	0.17	0.08
2773	991	2172	2.87	0.02	0.00	0.29	0.23
2774	991	5650	-4.12	0.07	0.00	0.42	0.46
2775	5650	102	-4.12	0.05	0.00	0.42	0.46
2776	102	276	-5.37	0.04	0.00	0.55	0.75
2777	276	1100	-6.62	0.11	0.00	0.68	1.10
2778	1100	182	-7.87	0.08	0.00	0.80	1.52
2779	182	733	-9.12	0.02	0.00	0.93	2.00
2780	733	570	-10.37	0.30	0.00	1.06	2.53
2781	570	219	-11.62	0.00	0.00	0.13	0.01
2782	219	5642	-12.87	0.00	0.00	0.15	0.02
2783	5642	5647	18.86	0.19	0.00	0.48	0.26
2784	5630	5539	140.00	6.98	0.00	3.57	10.75
2785	5542	9003	140.00	2.27	0.00	6.35	43.62
2786	5605	510	16.25	2.04	0.00	1.66	5.82
2787	510	200	15.00	1.26	0.00	1.53	5.02
2788	200	2512	13.75	0.64	0.00	1.40	4.27
2789	2512	2513	12.50	0.54	0.00	1.28	3.58
2790	2513	2537	11.25	0.29	0.00	1.15	2.95
2791	2537	264	10.00	0.47	0.00	1.02	2.37
2792	264	2516	8.75	0.19	0.00	0.89	1.85
2793	2516	2515	7.50	0.01	0.00	0.77	1.39
2794	2515	2514	6.25	0.15	0.00	0.64	0.99
2795	2514	2666	5.00	0.07	0.00	0.51	0.66
2796	2666	2302	3.75	0.10	0.00	0.38	0.39
2797	2302	2506	2.50	0.05	0.00	0.26	0.18
2798	2506	2507	1.25	0.02	0.00	0.13	0.05
2799	5660	5610	61.25	1.16	0.00	1.56	2.32
2800	757	1653	3.75	0.00	0.00	0.38	0.39
2801	1653	1920	2.50	0.01	0.00	0.26	0.18
2802	1920	1150	1.25	0.00	0.00	0.13	0.05
2803	5610	5611	55.00	0.57	0.00	1.40	1.90
2804	5611	1020	2.50	0.03	0.00	0.26	0.18
2805	1020	164	1.25	0.01	0.00	0.13	0.05
2806	5611	1925	52.50	0.09	0.00	1.34	1.75
2807	1925	2452	51.25	0.25	0.00	1.31	1.67
2808	2452	5651	50.00	0.16	0.00	1.28	1.60
2809	5651	606	5.00	0.07	0.00	0.51	0.66
2810	606	6	3.75	0.02	0.00	0.38	0.39
2811	6	322	2.50	0.02	0.00	0.26	0.18
2812	322	172	1.25	0.00	0.00	0.13	0.05
2813	5651	5652	45.00	0.20	0.00	1.15	1.31
2814	5652	5654	21.13	0.03	0.00	0.54	0.32
2815	5654	1268	3.75	0.00	0.00	0.38	0.39
2816	1268	212	2.50	0.02	0.00	0.26	0.18
2817	212	1004	1.25	0.01	0.00	0.13	0.05
2818	5654	5655	17.38	0.03	0.00	0.44	0.23
2819	5655	793	17.38	0.23	0.00	0.79	0.92
2820	793	794	16.13	0.01	0.00	0.73	0.80
2821	794	1499	14.88	0.10	0.00	0.68	0.69
2822	5656	193	6.25	0.20	0.00	0.64	0.99
2823	1499	5656	13.63	0.02	0.00	0.62	0.58
2824	193	471	5.00	0.07	0.00	0.51	0.66
2825	471	283	3.75	0.04	0.00	0.38	0.39
2826	283	1286	2.50	0.02	0.00	0.26	0.18
2827	1286	1149	1.25	0.00	0.00	0.13	0.05
2828	5656	5657	7.38	0.13	0.00	0.75	1.35
2829	5657	88	13.75	0.13	0.00	1.40	4.27
2830	88	175	12.50	0.29	0.00	1.28	3.58
2831	175	441	11.25	0.03	0.00	1.15	2.95
2832	441	1479	10.00	0.19	0.00	1.02	2.37
2833	1479	1537	8.75	0.02	0.00	0.89	1.85
2834	1537	1800	7.50	0.14	0.00	0.77	1.39
2835	1800	706	6.25	0.01	0.00	0.64	0.99
2836	706	1586	5.00	0.03	0.00	0.51	0.66
2837	1586	1503	3.75	0.02	0.00	0.38	0.39
2838	1503	889	2.50	0.01	0.00	0.26	0.18
2839	889	1240	1.25	0.00	0.00	0.13	0.05

2840	5653	699	7.62	0.14	0.00	0.78	1.43
2841	699	5657	6.37	0.41	0.00	0.65	1.03
2842	5653	499	16.25	0.29	0.00	1.66	5.82
2843	499	2674	15.00	0.35	0.00	1.53	5.02
2844	2674	929	13.75	0.21	0.00	1.40	4.27
2845	929	1267	12.50	0.25	0.00	1.28	3.58
2846	1267	545	11.25	0.09	0.00	1.15	2.95
2847	545	1591	10.00	0.09	0.00	1.02	2.37
2848	1591	1093	8.75	0.15	0.00	0.89	1.85
2849	1093	5658	7.50	0.14	0.00	0.77	1.39
2850	5658	5659	2.50	0.04	0.00	0.26	0.18
2851	5659	788	1.25	0.00	0.00	0.13	0.05
2852	5659	789	1.25	0.00	0.00	0.13	0.05
2853	5658	869	5.00	0.03	0.00	0.51	0.66
2854	869	171	3.75	0.02	0.00	0.38	0.39
2855	171	599	2.50	0.04	0.00	0.26	0.18
2856	599	1590	1.25	0.01	0.00	0.13	0.05
2857	5660	821	2.50	0.02	0.00	0.26	0.18
2858	821	1665	1.25	0.00	0.00	0.13	0.05
2859	5610	784	6.25	0.10	0.00	0.64	0.99
2860	1476	621	7.50	1.11	0.00	0.77	1.39
2861	621	2590	6.25	0.99	0.00	0.64	0.99
2862	2590	1775	5.00	0.72	0.00	0.51	0.66
2863	1775	2557	3.75	0.35	0.00	0.38	0.39
2864	2557	860	2.50	0.09	0.00	0.26	0.18
2865	860	2591	1.25	0.00	0.00	0.13	0.05
2866	5622	9005	33.75	0.13	0.00	1.53	3.13
2867	5624	9006	32.50	0.12	0.00	1.48	2.92
2868	1527	5512	80.00	0.02	0.00	0.91	0.53
2869	5606	9007	207.50	0.23	0.00	2.35	3.09
2870	5512	2144	80.00	0.04	0.00	0.91	0.53
2871	5625	5660	63.75	0.63	0.00	1.63	2.50
2872	784	757	5.00	0.00	0.00	0.13	0.02
2873	5652	5653	23.87	0.00	0.00	0.61	0.41
2874	1475	1596	10.00	0.02	0.00	1.02	2.37
2875	2123	5002	-5.00	0.30	0.00	0.51	0.66
2876	1321	5012	-23.75	0.04	0.00	0.61	0.40
2877	808	2702	-152.04	11.19	0.00	3.88	12.52
2878	2702	5041	-153.29	5.86	0.00	3.91	12.71
2879	5526	2587	2.50	0.02	0.00	0.26	0.18
2880	5532	5662	6.25	2.39	0.00	0.64	0.99
2881	5662	2605	6.25	0.97	0.00	0.64	0.99
2882	2605	2583	5.00	0.16	0.00	0.51	0.66
2883	2583	179	3.75	0.10	0.00	0.38	0.39
2884	179	1402	2.50	0.01	0.00	0.26	0.18
2885	1402	281	1.25	0.02	0.00	0.13	0.05
2886	2635	5549	41.25	0.22	0.00	1.05	1.12
2887	5232	388	6.25	0.37	0.00	0.41	0.33
2888	388	1670	5.00	0.06	0.00	0.33	0.22
2889	1670	5663	3.75	0.01	0.00	0.25	0.13
2890	5663	5664	1.25	0.00	0.00	0.13	0.05
2891	5664	432	1.25	0.02	0.00	0.13	0.05
2892	5663	306	2.50	0.03	0.00	0.16	0.06
2893	306	703	1.25	0.00	0.00	0.08	0.02
2894	5377	115	10.00	1.27	0.00	1.02	2.37
2895	115	2066	8.75	0.21	0.00	0.89	1.85
2896	2066	7070	7.50	0.01	0.00	0.77	1.39
2897	7070	2511	6.25	0.01	0.00	0.64	0.99
2898	2511	7071	5.00	0.06	0.00	0.51	0.66
2899	7071	1726	3.75	0.06	0.00	0.38	0.39
2900	1726	197	2.50	0.00	0.00	0.26	0.18
2901	197	2740	1.25	0.00	0.00	0.13	0.05
2903	5665	1356	6.25	0.01	0.00	0.64	0.99
2904	1735	5607	93.75	0.04	0.00	0.27	0.02
2907	62	552	-5.00	0.07	0.00	0.51	0.66
P-1295	5572	R-2	118.53	3.72	0.00	1.34	1.10
P-130	J-11	McMahan-1	-142.82	0.01	0.00	1.62	1.55
P-1322	J-1	5361	-6.25	0.11	0.00	0.64	0.99
P-1451	5120	J-3	10.00	1.22	0.00	1.82	9.62
P-157	5667	Payne-2	126.28	0.02	0.00	1.43	1.23
P-1695	JimNethery	JimNethery	391.86	0.20	0.00	4.45	10.04

P-173	5667	Payne-1	126.26	0.03	0.00	1.43	1.23
P-1784	5661	J-22	-28.75	0.17	0.00	1.30	2.33
P-1949	Hwy83-Plan	Hwy83-2	303.34	1.75	0.00	7.74	44.99
P-208	Tebo	Tebo-1	42.56	0.01	0.00	1.09	1.18
P-209	Tebo	Tebo-2	42.56	0.01	0.00	1.09	1.18
P-2138	J-34	Hwy83-Plan	88.41	0.56	0.00	2.26	4.59
P-2140	Hwy83-Plan	Hwy83-1	307.91	1.62	0.00	7.86	46.26
P-2141	J-37	J-22	28.75	0.03	0.00	1.30	2.33
P-2142	J-37	5505	91.25	0.16	0.00	2.33	4.86
P-2442	J-21	King-2	207.91	0.34	0.00	2.36	3.10
P-2443	J-21	King-1	208.39	0.21	0.00	2.36	3.12
P-2478	7035	CrossRoad-	205.18	1.07	0.00	2.33	3.03
P-2614	Plant-A5	5668	4.09	0.00	0.00	0.05	0.00
P-2665	T-1184	Pump-1	208.80	0.48	0.00	2.37	3.13
P-2902	Hemphill-T	5335	3516.18	44.38	0.00	39.90	583.94
P-2905	Payne-2	5048	126.28	0.02	0.00	1.43	1.23
P-2906	McMahan	J-8	-127.04	0.40	0.00	3.24	8.98
P-2908	5047	Plant-A5	32.08	0.00	0.00	0.36	0.10
P-2909	5668	5047	-9.66	0.00	0.00	0.11	0.01
P-2910	McMahan	5035	0.00	0.00	0.00	0.00	0.00
P-2911	McMahan-1	McMahan	-142.82	0.01	0.00	1.62	1.55
P-2912	McMahan-2	McMahan	-142.82	0.01	0.00	1.62	1.55
P-2913	Payne-1	5048	126.26	0.01	0.00	1.43	1.23
P-2914	5048	PRV-1	15.00	0.01	0.00	0.17	0.02
P-2915	5071	Tebo	199.38	48.19	0.00	5.09	20.68
P-2916	1232	J-29	-85.13	0.76	0.00	0.97	0.59
P-2917	JimNethery	JimNethery	391.86	0.20	0.00	4.45	10.04
P-2918	Tebo-1	J-29	42.56	0.00	0.00	0.48	0.16
P-2919	Tebo-2	J-29	42.56	0.00	0.00	0.48	0.16
P-2920	JimNethery	5394	391.86	0.20	0.00	4.45	10.04
P-2921	JimNethery	5394	391.86	0.20	0.00	4.45	10.04
P-2922	5579	J-21	416.29	1.95	0.00	4.72	11.22
P-2923	King-1	5578	208.39	0.21	0.00	2.36	3.12
P-2924	King-2	5578	207.91	0.31	0.00	2.36	3.10
P-2925	5462	Midlake	516.44	0.50	0.00	5.86	16.73
P-2926	Midlake	Midlake-2	262.08	0.23	0.00	2.97	4.76
P-2927	Midlake	Midlake-1	262.05	0.23	0.00	2.97	4.76
P-2928	J-24	5415	786.29	0.84	0.00	8.92	36.45
P-2929	Midlake-2	J-24	262.08	0.24	0.00	2.97	4.76
P-2930	Midlake-1	J-24	262.05	0.25	0.00	2.97	4.76
P-2931	J-37	5506	491.25	0.09	0.00	3.14	3.76
P-2932	Hwy83-1	J-37	307.91	1.48	0.00	7.86	46.26
P-2933	Hwy83-2	J-37	303.34	1.21	0.00	7.74	44.99
P-2934	5221	J-45	-240.00	0.44	0.00	2.72	4.05
P-2935	J-44	WTHwy83-1	51.07	0.01	0.00	0.58	0.23
P-2936	CrossRoad-	J-45	143.75	0.11	0.00	3.67	11.28
P-2937	Bron-Pump-	Bronson-ES	0.00	0.00	0.00	0.00	0.00
P-2938	CrossRoad-	J-45	143.75	0.11	0.00	3.67	11.28
P-2939	J-53	5617	102.16	0.08	0.00	1.16	0.83
P-2940	WTHwy83-1	J-53	51.07	0.01	0.00	0.58	0.23
P-2941	WTHwy83-2	J-53	51.09	0.00	0.00	0.58	0.23
P-2942	5614	WTMidlake-	295.77	0.09	0.00	3.36	5.96
P-2943	WTMidlake-	5494	295.77	0.10	0.00	3.36	5.96
P-2944	WTMidlake-	5494	295.67	0.15	0.00	3.35	5.96
P-2945	Hwy83	5585	425.00	0.04	0.00	1.74	0.97
P-2946	J-18	Bron-Pump-	0.00	0.00	0.00	0.00	0.00
P-2947	Bronson-ES	BronPump-2	0.00	0.00	0.00	0.00	0.00
P-2948	J-69	5260	48.75	0.64	0.00	0.55	0.21
P-2949	Bronson-ES	5119	202.50	0.04	0.00	2.30	2.95
P-2951	184-Pump-1	J-63	208.80	0.48	0.00	2.37	3.13
P-2952	Midlake	Pump-1	262.16	0.22	0.00	2.97	4.77
P-2953	184-Pump-2	T-1	-208.76	0.53	0.00	2.37	3.13
P-2954	5335	T-1	3516.18	35.62	0.00	39.90	583.94
P-2955	Pump-1	J-24	262.16	0.22	0.00	2.97	4.77
P-2956	184-Pump-2	J-63	208.76	0.45	0.00	2.37	3.13
P-2957	WTHwy83-2	J-44	-51.09	0.00	0.00	0.58	0.23
P-367	BronPump-2	J-18	0.00	0.00	0.00	0.00	0.00
P-373	J-3	1369	8.75	0.27	0.00	1.59	7.51
P-520	J-1	5360	5.00	0.23	0.00	0.51	0.66
P-696	J-11	McMahan-2	-142.82	0.01	0.00	1.62	1.55
P-763	CrossRoad-	CrossRoad-	143.75	0.11	0.00	3.67	11.28

P-764	CrossRoad-CrossRoad-		143.75	0.11	0.00	3.67	11.28
P-777	5218	J-45	-47.50	0.02	0.00	2.16	5.89
P-87	5034	J-8	127.04	2.24	0.00	3.24	8.98
P-88	5609	R-1	-52.50	0.31	0.00	0.60	0.24

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
184-Pump-1	208.80	19.52	323.43	303.9	----	-----	---	----
184-Pump-2	208.76	19.47	323.40	303.9	----	-----	---	----
Device "Bron-Pump-1" is closed								
Device "BronPump-2" is closed								
CrossRoad-	143.75	19.89	190.25	170.4	----	-----	---	----
CrossRoad-	143.75	19.89	190.25	170.4	----	-----	---	----
Hwy83-1	307.91	80.38	265.50	185.1	----	-----	---	----
Hwy83-2	303.34	80.25	261.97	181.7	----	-----	---	----
PUMP JimNethery- IS OPERATING OUT OF RANGE								
JimNethery	391.86	15.80	305.47	289.7	----	-----	---	----
PUMP JimNethery- IS OPERATING OUT OF RANGE								
JimNethery	391.86	15.80	305.47	289.7	----	-----	---	----
King-1	208.39	52.23	245.13	192.9	----	-----	---	----
King-2	207.91	52.10	245.23	193.1	----	-----	---	----
McMahan-1	142.82	9.99	235.43	225.4	----	-----	---	----
McMahan-2	142.82	9.99	235.43	225.4	----	-----	---	----
Midlake-1	262.05	14.77	208.39	193.6	----	-----	---	----
Midlake-2	262.08	14.77	208.38	193.6	----	-----	---	----
Payne-1	126.26	80.41	266.69	186.3	----	-----	---	----
Payne-2	126.28	80.41	266.69	186.3	----	-----	---	----
Pump-1	262.16	14.78	208.36	193.6	----	-----	---	----
Tebo-1	42.56	22.99	244.99	222.0	----	-----	---	----
Tebo-2	42.56	22.99	244.99	222.0	----	-----	---	----
WTHwy83-1	51.07	9.94	208.65	198.7	----	-----	---	----
WTHyw83-2	51.09	9.95	208.65	198.7	----	-----	---	----
WTmidlake-	295.67	9.25	132.33	123.1	----	-----	---	----
WTmidlake-	295.77	9.27	132.28	123.0	----	-----	---	----

E N D N O D E R E S U L T S

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
2		1.25 (1.25)	374.43	190.00	184.43	79.92
4		1.25 (1.25)	436.64	360.00	76.64	33.21
5		1.25 (1.25)	349.05	220.00	129.05	55.92
6		1.25 (1.25)	482.41	190.00	292.41	126.71
7		1.25 (1.25)	455.96	330.00	125.96	54.58
9		1.25 (1.25)	348.76	250.00	98.76	42.79
10		1.25 (1.25)	376.27	330.00	46.27	20.05
12		1.25 (1.25)	387.28	185.00	202.28	87.66
13		1.25 (1.25)	399.26	200.00	199.26	86.35
14		1.25 (1.25)	444.90	300.00	144.90	62.79
15		1.25 (1.25)	400.37	230.00	170.37	73.83
16		1.25 (1.25)	405.27	200.00	205.27	88.95
17		1.25 (1.25)	400.57	215.00	185.57	80.41
19		1.25 (1.25)	407.45	210.00	197.45	85.56
20		1.25 (1.25)	387.43	190.00	197.43	85.55
23		1.25 (1.25)	400.09	230.00	170.09	73.70
25		1.25 (1.25)	354.08	290.00	64.08	27.77
26		1.25 (1.25)	454.11	290.00	164.11	71.12
27		1.25 (1.25)	561.87	280.00	281.87	122.14
28		1.25 (1.25)	389.62	290.00	99.62	43.17

30	1.25 (1.25)	388.40	200.00	188.40	81.64
31	1.25 (1.25)	387.41	190.00	197.41	85.54
32	1.25 (1.25)	488.80	310.00	178.80	77.48
33	1.25 (1.25)	538.21	330.00	208.21	90.22
35	1.25 (1.25)	306.46	200.00	106.46	46.13
36	1.25 (1.25)	454.16	290.00	164.16	71.13
38	1.25 (1.25)	387.64	190.00	197.64	85.64
39	1.25 (1.25)	363.52	230.00	133.52	57.86
40	1.25 (1.25)	328.03	190.00	138.03	59.81
41	1.25 (1.25)	389.80	195.00	194.80	84.41
42	1.25 (1.25)	312.47	220.00	92.47	40.07
43	1.25 (1.25)	371.70	185.00	186.70	80.90
46	1.25 (1.25)	388.12	185.00	203.12	88.02
47	1.25 (1.25)	373.69	190.00	183.69	79.60
48	1.25 (1.25)	540.30	480.00	60.30	26.13
49	1.25 (1.25)	387.37	185.00	202.37	87.69
50	1.25 (1.25)	584.48	425.00	159.48	69.11
51	1.25 (1.25)	349.92	230.00	119.92	51.96
54	1.25 (1.25)	492.34	315.00	177.34	76.85
55	1.25 (1.25)	538.73	350.00	188.73	81.78
56	1.25 (1.25)	407.45	210.00	197.45	85.56
57	1.25 (1.25)	507.61	390.00	117.61	50.96
58	1.25 (1.25)	387.04	185.00	202.04	87.55
60	1.25 (1.25)	616.79	300.00	316.79	137.28
61	1.25 (1.25)	410.90	220.00	190.90	82.72
62	1.25 (1.25)	572.64	410.00	162.64	70.48
64	1.25 (1.25)	505.14	270.00	235.14	101.89
65	1.25 (1.25)	399.78	210.00	189.78	82.24
66	1.25 (1.25)	475.69	330.00	145.69	63.13
67	1.25 (1.25)	385.98	185.00	200.98	87.09
68	1.25 (1.25)	565.68	240.00	325.68	141.13
70	1.25 (1.25)	570.06	390.00	180.06	78.03
71	1.25 (1.25)	570.32	420.00	150.32	65.14
72	1.25 (1.25)	373.42	180.00	193.42	83.81
73	1.25 (1.25)	400.51	215.00	185.51	80.39
74	1.25 (1.25)	570.14	400.00	170.14	73.73
75	1.25 (1.25)	410.90	220.00	190.90	82.72
77	1.25 (1.25)	338.19	200.00	138.19	59.88
79	1.25 (1.25)	378.01	320.00	58.01	25.14
80	1.25 (1.25)	619.41	340.00	279.41	121.08
81	1.25 (1.25)	433.67	265.00	168.67	73.09
82	1.25 (1.25)	400.51	215.00	185.51	80.39
83	1.25 (1.25)	387.82	200.00	187.82	81.39
84	1.25 (1.25)	410.90	210.00	200.90	87.06
86	1.25 (1.25)	388.12	210.00	178.12	77.18
88	1.25 (1.25)	481.61	185.00	296.61	128.53
89	1.25 (1.25)	379.99	280.00	99.99	43.33
90	1.25 (1.25)	387.60	210.00	177.60	76.96
91	1.25 (1.25)	387.19	190.00	197.19	85.45
92	1.25 (1.25)	381.86	185.00	196.86	85.31
93	1.25 (1.25)	387.65	190.00	197.65	85.65
94	1.25 (1.25)	430.60	250.00	180.60	78.26
96	1.25 (1.25)	383.47	320.00	63.47	27.51
98	1.25 (1.25)	554.28	260.00	294.28	127.52
100	1.25 (1.25)	384.98	185.00	199.98	86.66
101	1.25 (1.25)	386.48	185.00	201.48	87.31
102	1.25 (1.25)	399.93	200.00	199.93	86.64
106	1.25 (1.25)	563.21	350.00	213.21	92.39
107	1.25 (1.25)	563.24	350.00	213.24	92.40
108	1.25 (1.25)	369.05	240.00	129.05	55.92
109	1.25 (1.25)	390.93	180.00	210.93	91.40
110	1.25 (1.25)	386.22	230.00	156.22	67.70
111	1.25 (1.25)	571.96	370.00	201.96	87.52
112	1.25 (1.25)	459.43	270.00	189.43	82.08
113	1.25 (1.25)	311.83	220.00	91.83	39.79
115	1.25 (1.25)	310.04	210.00	100.04	43.35
116	1.25 (1.25)	387.06	185.00	202.06	87.56
117	1.25 (1.25)	387.09	185.00	202.09	87.57
120	1.25 (1.25)	414.48	230.00	184.48	79.94
121	1.25 (1.25)	389.15	260.00	129.15	55.97
123	1.25 (1.25)	332.31	190.00	142.31	61.67

124	1.25 (1.25)	338.92	210.00	128.92	55.87
125	1.25 (1.25)	493.63	360.00	133.63	57.91
126	1.25 (1.25)	327.34	210.00	117.34	50.85
127	1.25 (1.25)	374.70	230.00	144.70	62.70
130	1.25 (1.25)	565.54	320.00	245.54	106.40
131	1.25 (1.25)	384.64	185.00	199.64	86.51
132	1.25 (1.25)	328.03	190.00	138.03	59.81
133	1.25 (1.25)	569.91	430.00	139.91	60.63
134	1.25 (1.25)	391.01	180.00	211.01	91.44
136	1.25 (1.25)	508.65	310.00	198.65	86.08
137	1.25 (1.25)	583.00	340.00	243.00	105.30
139	1.25 (1.25)	389.13	210.00	179.13	77.63
140	1.25 (1.25)	331.78	190.00	141.78	61.44
141	1.25 (1.25)	384.19	185.00	199.19	86.31
142	1.25 (1.25)	387.59	200.00	187.59	81.29
143	1.25 (1.25)	401.00	235.00	166.00	71.93
144	1.25 (1.25)	566.26	330.00	236.26	102.38
145	1.25 (1.25)	566.21	230.00	336.21	145.69
147	1.25 (1.25)	569.19	230.00	339.19	146.98
148	1.25 (1.25)	388.09	230.00	158.09	68.51
150	1.25 (1.25)	573.44	400.00	173.44	75.16
151	1.25 (1.25)	384.05	210.00	174.05	75.42
153	1.25 (1.25)	387.71	210.00	177.71	77.01
154	1.25 (1.25)	484.55	300.00	184.55	79.97
155	1.25 (1.25)	457.35	320.00	137.35	59.52
156	1.25 (1.25)	530.99	360.00	170.99	74.09
157	1.25 (1.25)	486.01	300.00	186.01	80.60
159	1.25 (1.25)	554.31	240.00	314.31	136.20
160	1.25 (1.25)	405.10	210.00	195.10	84.54
161	1.25 (1.25)	407.99	220.00	187.99	81.46
162	1.25 (1.25)	389.58	310.00	79.58	34.48
163	1.25 (1.25)	387.75	210.00	177.75	77.03
164	1.25 (1.25)	482.96	190.00	292.96	126.95
167	1.25 (1.25)	532.26	310.00	222.26	96.31
168	1.25 (1.25)	387.19	190.00	197.19	85.45
169	1.25 (1.25)	487.62	310.00	177.62	76.97
171	1.25 (1.25)	480.66	190.00	290.66	125.95
172	1.25 (1.25)	482.39	185.00	297.39	128.87
173	1.25 (1.25)	387.78	185.00	202.78	87.87
174	1.25 (1.25)	572.61	410.00	162.61	70.46
175	1.25 (1.25)	481.32	185.00	296.32	128.41
176	1.25 (1.25)	375.36	210.00	165.36	71.66
178	1.25 (1.25)	386.28	230.00	156.28	67.72
179	1.25 (1.25)	365.41	250.00	115.41	50.01
180	1.25 (1.25)	475.76	320.00	155.76	67.49
181	1.25 (1.25)	554.18	250.00	304.18	131.81
182	1.25 (1.25)	400.15	205.00	195.15	84.57
185	1.25 (1.25)	474.19	280.00	194.19	84.15
186	1.25 (1.25)	323.99	190.00	133.99	58.06
187	1.25 (1.25)	510.27	390.00	120.27	52.12
188	1.25 (1.25)	362.07	260.00	102.07	44.23
189	1.25 (1.25)	499.00	320.00	179.00	77.57
191	1.25 (1.25)	565.34	250.00	315.34	136.65
193	1.25 (1.25)	481.67	185.00	296.67	128.56
194	1.25 (1.25)	626.00	460.00	166.00	71.94
195	1.25 (1.25)	345.32	270.00	75.32	32.64
196	1.25 (1.25)	399.43	190.00	209.43	90.75
197	1.25 (1.25)	309.68	220.00	89.68	38.86
198	1.25 (1.25)	384.16	210.00	174.16	75.47
199	1.25 (1.25)	484.73	200.00	284.73	123.38
200	1.25 (1.25)	369.29	180.00	189.29	82.02
201	1.25 (1.25)	620.81	330.00	290.81	126.02
202	1.25 (1.25)	421.89	270.00	151.89	65.82
203	1.25 (1.25)	407.11	210.00	197.11	85.41
204	1.25 (1.25)	356.45	270.00	86.45	37.46
206	1.25 (1.25)	461.61	300.00	161.61	70.03
208	1.25 (1.25)	507.33	370.00	137.33	59.51
209	1.25 (1.25)	381.64	185.00	196.64	85.21
210	1.25 (1.25)	361.28	190.00	171.28	74.22
212	1.25 (1.25)	482.24	190.00	292.24	126.64

213	1.25 (1.25)	405.32	190.00	215.32	93.30
215	1.25 (1.25)	554.27	264.00	290.27	125.79
216	1.25 (1.25)	345.15	260.00	85.15	36.90
217	1.25 (1.25)	387.22	185.00	202.22	87.63
218	1.25 (1.25)	524.79	360.00	164.79	71.41
219	1.25 (1.25)	400.48	205.00	195.48	84.71
220	1.25 (1.25)	387.08	185.00	202.08	87.57
221	1.25 (1.25)	400.09	230.00	170.09	73.71
223	1.25 (1.25)	474.11	350.00	124.11	53.78
224	1.25 (1.25)	461.22	275.00	186.22	80.70
225	1.25 (1.25)	574.37	310.00	264.37	114.56
226	1.25 (1.25)	473.69	370.00	103.69	44.93
227	1.25 (1.25)	385.45	185.00	200.45	86.86
228	1.25 (1.25)	570.32	310.00	260.32	112.80
229	1.25 (1.25)	405.44	190.00	215.44	93.36
230	1.25 (1.25)	613.59	270.00	343.59	148.89
231	1.25 (1.25)	318.48	190.00	128.48	55.67
232	1.25 (1.25)	357.38	250.00	107.38	46.53
233	1.25 (1.25)	333.58	190.00	143.58	62.22
234	1.25 (1.25)	427.17	250.00	177.17	76.77
235	1.25 (1.25)	312.63	240.00	72.63	31.47
236	1.25 (1.25)	326.08	210.00	116.08	50.30
237	1.25 (1.25)	471.45	360.00	111.45	48.29
238	1.25 (1.25)	531.09	440.00	91.09	39.47
240	1.25 (1.25)	425.74	260.00	165.74	71.82
241	1.25 (1.25)	324.31	190.00	134.31	58.20
248	1.25 (1.25)	619.49	340.00	279.49	121.11
249	1.25 (1.25)	476.59	320.00	156.59	67.86
250	1.25 (1.25)	477.74	320.00	157.74	68.35
251	1.25 (1.25)	382.56	185.00	197.56	85.61
252	1.25 (1.25)	567.48	320.00	247.48	107.24
253	1.25 (1.25)	381.28	210.00	171.28	74.22
254	1.25 (1.25)	368.00	180.00	188.00	81.46
255	1.25 (1.25)	405.30	190.00	215.30	93.30
256	1.25 (1.25)	335.22	200.00	135.22	58.60
258	1.25 (1.25)	415.02	300.00	115.02	49.84
259	1.25 (1.25)	405.66	190.00	215.66	93.45
260	1.25 (1.25)	531.08	310.00	221.08	95.80
262	1.25 (1.25)	387.44	190.00	197.44	85.56
263	1.25 (1.25)	389.73	330.00	59.73	25.88
264	1.25 (1.25)	367.34	190.00	177.34	76.85
265	1.25 (1.25)	405.14	220.00	185.14	80.23
266	1.25 (1.25)	381.49	185.00	196.49	85.15
267	1.25 (1.25)	434.64	260.00	174.64	75.68
268	1.25 (1.25)	405.73	210.00	195.73	84.82
269	1.25 (1.25)	389.14	190.00	199.14	86.29
270	1.25 (1.25)	389.22	190.00	199.22	86.33
271	1.25 (1.25)	530.65	330.00	200.65	86.95
272	1.25 (1.25)	391.01	180.00	211.01	91.44
276	1.25 (1.25)	399.97	200.00	199.97	86.65
279	1.25 (1.25)	386.76	185.00	201.76	87.43
280	1.25 (1.25)	399.50	200.00	199.50	86.45
281	1.25 (1.25)	365.38	230.00	135.38	58.66
282	1.25 (1.25)	381.62	185.00	196.62	85.20
283	1.25 (1.25)	481.57	185.00	296.57	128.51
284	1.25 (1.25)	408.67	200.00	208.67	90.43
286	1.25 (1.25)	407.99	220.00	187.99	81.46
288	1.25 (1.25)	327.98	190.00	137.98	59.79
289	1.25 (1.25)	400.49	215.00	185.49	80.38
290	1.25 (1.25)	327.97	190.00	137.97	59.79
291	1.25 (1.25)	385.77	185.00	200.77	87.00
292	1.25 (1.25)	389.75	190.00	199.75	86.56
293	1.25 (1.25)	405.62	190.00	215.62	93.43
294	1.25 (1.25)	428.66	270.00	158.66	68.75
297	1.25 (1.25)	388.08	200.00	188.08	81.50
298	1.25 (1.25)	400.07	220.00	180.07	78.03
300	1.25 (1.25)	388.20	205.00	183.20	79.39
302	1.25 (1.25)	540.87	320.00	220.87	95.71
303	1.25 (1.25)	407.33	200.00	207.33	89.84
304	1.25 (1.25)	354.08	290.00	64.08	27.77
305	1.25 (1.25)	538.47	340.00	198.47	86.00

306	1.25 (1.25)	471.87	310.00	161.87	70.14
307	1.25 (1.25)	381.66	190.00	191.66	83.05
308	1.25 (1.25)	375.95	220.00	155.95	67.58
309	1.25 (1.25)	424.28	240.00	184.28	79.86
310	1.25 (1.25)	424.97	240.00	184.97	80.16
311	1.25 (1.25)	407.00	200.00	207.00	89.70
312	1.25 (1.25)	424.31	240.00	184.31	79.87
313	1.25 (1.25)	526.46	340.00	186.46	80.80
315	1.25 (1.25)	473.57	260.00	213.57	92.55
320	1.25 (1.25)	410.24	240.00	170.24	73.77
321	1.25 (1.25)	347.07	250.00	97.07	42.07
322	1.25 (1.25)	482.39	195.00	287.39	124.53
324	1.25 (1.25)	407.33	200.00	207.33	89.84
326	1.25 (1.25)	562.62	360.00	202.62	87.80
327	1.25 (1.25)	480.57	300.00	180.57	78.25
328	1.25 (1.25)	387.66	185.00	202.66	87.82
329	1.25 (1.25)	477.75	320.00	157.75	68.36
330	1.25 (1.25)	413.69	310.00	103.69	44.93
332	1.25 (1.25)	435.36	220.00	215.36	93.32
333	1.25 (1.25)	505.14	270.00	235.14	101.89
335	1.25 (1.25)	354.76	285.00	69.76	30.23
336	1.25 (1.25)	319.71	190.00	129.71	56.21
337	1.25 (1.25)	405.19	200.00	205.19	88.91
338	1.25 (1.25)	575.28	310.00	265.28	114.96
339	1.25 (1.25)	466.71	285.00	181.71	78.74
340	1.25 (1.25)	518.63	290.00	228.63	99.07
341	1.25 (1.25)	573.20	310.00	263.20	114.05
342	1.25 (1.25)	560.55	280.00	280.55	121.57
343	1.25 (1.25)	518.63	290.00	228.63	99.07
344	1.25 (1.25)	407.35	200.00	207.35	89.85
345	1.25 (1.25)	573.96	320.00	253.96	110.05
347	1.25 (1.25)	560.80	410.00	150.80	65.35
348	1.25 (1.25)	539.09	340.00	199.09	86.27
349	1.25 (1.25)	431.67	280.00	151.67	65.72
352	1.25 (1.25)	388.11	190.00	198.11	85.85
354	1.25 (1.25)	381.59	185.00	196.59	85.19
355	1.25 (1.25)	363.43	230.00	133.43	57.82
356	1.25 (1.25)	564.18	290.00	274.18	118.81
357	1.25 (1.25)	570.32	430.00	140.32	60.81
358	1.25 (1.25)	350.78	200.00	150.78	65.34
359	1.25 (1.25)	386.08	300.00	86.08	37.30
361	1.25 (1.25)	382.07	290.00	92.07	39.90
363	1.25 (1.25)	562.05	345.00	217.05	94.06
365	1.25 (1.25)	567.81	310.00	257.81	111.72
368	1.25 (1.25)	334.58	185.00	149.58	64.82
369	1.25 (1.25)	471.41	360.00	111.41	48.28
370	1.25 (1.25)	382.32	185.00	197.32	85.51
372	1.25 (1.25)	400.37	230.00	170.37	73.83
373	1.25 (1.25)	318.08	190.00	128.08	55.50
374	1.25 (1.25)	457.75	340.00	117.75	51.02
375	1.25 (1.25)	409.24	220.00	189.24	82.00
377	1.25 (1.25)	488.95	310.00	178.95	77.54
378	1.25 (1.25)	510.27	385.00	125.27	54.28
379	1.25 (1.25)	509.19	360.00	149.19	64.65
380	1.25 (1.25)	386.20	300.00	86.20	37.35
383	1.25 (1.25)	333.79	190.00	143.79	62.31
388	1.25 (1.25)	471.98	300.00	171.98	74.52
389	1.25 (1.25)	387.14	185.00	202.14	87.59
390	1.25 (1.25)	387.76	200.00	187.76	81.36
391	1.25 (1.25)	387.03	185.00	202.03	87.55
394	1.25 (1.25)	564.69	320.00	244.69	106.03
396	1.25 (1.25)	520.06	300.00	220.06	95.36
397	1.25 (1.25)	573.75	340.00	233.75	101.29
398	1.25 (1.25)	498.22	325.00	173.22	75.06
404	1.25 (1.25)	624.92	530.00	94.92	41.13
405	1.25 (1.25)	312.36	220.00	92.36	40.02
406	1.25 (1.25)	431.46	275.00	156.46	67.80
407	1.25 (1.25)	381.13	250.00	131.13	56.82
408	1.25 (1.25)	562.11	285.00	277.11	120.08
409	1.25 (1.25)	573.80	340.00	233.80	101.31
410	1.25 (1.25)	453.15	230.00	223.15	96.70

412	1.25 (1.25)	500.39	340.00	160.39	69.50
414	1.25 (1.25)	566.07	440.00	126.07	54.63
415	1.25 (1.25)	388.45	185.00	203.45	88.16
416	1.25 (1.25)	387.66	200.00	187.66	81.32
417	1.25 (1.25)	388.15	185.00	203.15	88.03
418	1.25 (1.25)	388.75	190.00	198.75	86.13
419	1.25 (1.25)	399.78	210.00	189.78	82.24
423	1.25 (1.25)	570.05	420.00	150.05	65.02
426	1.25 (1.25)	508.24	360.00	148.24	64.24
428	1.25 (1.25)	475.60	260.00	215.60	93.43
430	1.25 (1.25)	388.13	231.00	157.13	68.09
432	1.25 (1.25)	471.88	310.00	161.88	70.15
433	1.25 (1.25)	331.09	190.00	141.09	61.14
434	1.25 (1.25)	425.41	335.00	90.41	39.18
435	1.25 (1.25)	510.96	375.00	135.96	58.92
436	1.25 (1.25)	388.41	220.00	168.41	72.98
438	1.25 (1.25)	311.72	220.00	91.72	39.74
439	1.25 (1.25)	499.77	330.00	169.77	73.57
441	1.25 (1.25)	481.29	185.00	296.29	128.39
443	1.25 (1.25)	625.99	470.00	155.99	67.60
444	1.25 (1.25)	571.72	390.00	181.72	78.75
447	1.25 (1.25)	400.58	215.00	185.58	80.42
450	1.25 (1.25)	531.78	360.00	171.78	74.44
452	1.25 (1.25)	503.20	325.00	178.20	77.22
454	1.25 (1.25)	500.19	340.00	160.19	69.42
455	1.25 (1.25)	504.66	330.00	174.66	75.69
457	1.25 (1.25)	387.73	190.00	197.73	85.68
460	1.25 (1.25)	359.22	295.00	64.22	27.83
461	1.25 (1.25)	359.24	295.00	64.24	27.84
462	1.25 (1.25)	521.22	290.00	231.22	100.19
464	1.25 (1.25)	389.71	190.00	199.71	86.54
465	1.25 (1.25)	506.28	360.00	146.28	63.39
466	1.25 (1.25)	566.25	330.00	236.25	102.38
468	1.25 (1.25)	628.73	460.00	168.73	73.12
471	1.25 (1.25)	481.61	185.00	296.61	128.53
472	1.25 (1.25)	646.46	445.00	201.46	87.30
473	1.25 (1.25)	591.89	390.00	201.89	87.49
474	1.25 (1.25)	436.44	400.00	36.44	15.79
475	1.25 (1.25)	442.71	250.00	192.71	83.51
476	1.25 (1.25)	457.17	270.00	187.17	81.11
478	1.25 (1.25)	366.52	180.00	186.52	80.83
479	1.25 (1.25)	327.97	190.00	137.97	59.79
480	1.25 (1.25)	592.69	400.00	192.69	83.50
481	1.25 (1.25)	338.55	210.00	128.55	55.70
482	1.25 (1.25)	392.53	180.00	212.53	92.10
483	1.25 (1.25)	400.26	240.00	160.26	69.45
484	1.25 (1.25)	383.66	185.00	198.66	86.09
485	1.25 (1.25)	359.25	295.00	64.25	27.84
487	1.25 (1.25)	488.78	300.00	188.78	81.80
489	1.25 (1.25)	387.43	190.00	197.43	85.55
490	1.25 (1.25)	405.09	200.00	205.09	88.87
491	1.25 (1.25)	578.89	430.00	148.89	64.52
492	1.25 (1.25)	616.98	280.00	336.98	146.02
493	1.25 (1.25)	352.83	210.00	142.83	61.89
494	1.25 (1.25)	579.49	320.00	259.49	112.44
495	1.25 (1.25)	657.17	335.00	322.17	139.61
497	1.25 (1.25)	450.12	265.00	185.12	80.22
498	1.25 (1.25)	563.11	306.00	257.11	111.42
499	1.25 (1.25)	482.00	190.00	292.00	126.53
501	1.25 (1.25)	410.90	210.00	200.90	87.06
502	1.25 (1.25)	427.27	260.00	167.27	72.48
503	1.25 (1.25)	359.01	290.00	69.01	29.90
505	1.25 (1.25)	359.26	295.00	64.26	27.85
506	1.25 (1.25)	626.31	470.00	156.31	67.74
507	1.25 (1.25)	387.81	185.00	202.81	87.89
510	1.25 (1.25)	370.54	190.00	180.54	78.23
511	1.25 (1.25)	399.68	200.00	199.68	86.53
512	1.25 (1.25)	385.15	185.00	200.15	86.73
513	1.25 (1.25)	387.28	200.00	187.28	81.16
514	1.25 (1.25)	580.58	285.00	295.58	128.08
515	1.25 (1.25)	388.63	220.00	168.63	73.07

517	1.25 (1.25)	567.62	300.00	267.62	115.97
518	1.25 (1.25)	520.06	300.00	220.06	95.36
524	1.25 (1.25)	387.95	185.00	202.95	87.95
525	1.25 (1.25)	382.11	185.00	197.11	85.41
526	1.25 (1.25)	337.47	200.00	137.47	59.57
528	1.25 (1.25)	387.64	190.00	197.64	85.64
529	1.25 (1.25)	325.79	200.00	125.79	54.51
530	1.25 (1.25)	506.21	360.00	146.21	63.36
532	1.25 (1.25)	358.76	290.00	68.76	29.80
533	1.25 (1.25)	338.39	210.00	128.39	55.63
534	1.25 (1.25)	387.49	190.00	197.49	85.58
536	1.25 (1.25)	372.16	345.00	27.16	11.77
537	1.25 (1.25)	522.94	310.00	212.94	92.27
540	1.25 (1.25)	387.16	185.00	202.16	87.60
541	1.25 (1.25)	331.65	190.00	141.65	61.38
543	1.25 (1.25)	538.64	340.00	198.64	86.08
545	1.25 (1.25)	481.09	190.00	291.09	126.14
546	1.25 (1.25)	468.60	370.00	98.60	42.73
547	1.25 (1.25)	338.20	210.00	128.20	55.55
548	1.25 (1.25)	409.22	220.00	189.22	81.99
549	1.25 (1.25)	628.75	380.00	248.75	107.79
550	1.25 (1.25)	333.49	190.00	143.49	62.18
551	1.25 (1.25)	383.84	185.00	198.84	86.16
552	1.25 (1.25)	572.71	410.00	162.71	70.51
554	1.25 (1.25)	503.26	325.00	178.26	77.25
558	1.25 (1.25)	566.06	340.00	226.06	97.96
559	1.25 (1.25)	387.93	220.00	167.93	72.77
560	1.25 (1.25)	387.92	200.00	187.92	81.43
562	1.25 (1.25)	385.82	185.00	200.82	87.02
565	1.25 (1.25)	427.15	250.00	177.15	76.77
569	1.25 (1.25)	508.89	360.00	148.89	64.52
570	1.25 (1.25)	400.48	205.00	195.48	84.71
572	1.25 (1.25)	476.23	330.00	146.23	63.37
573	1.25 (1.25)	505.54	345.00	160.54	69.57
575	1.25 (1.25)	505.47	345.00	160.47	69.54
577	1.25 (1.25)	330.35	190.00	140.35	60.82
579	1.25 (1.25)	505.15	390.00	115.15	49.90
580	1.25 (1.25)	522.23	250.00	272.23	117.97
581	1.25 (1.25)	504.98	310.00	194.98	84.49
582	1.25 (1.25)	552.93	350.00	202.93	87.94
583	1.25 (1.25)	510.38	370.00	140.38	60.83
584	1.25 (1.25)	311.94	220.00	91.94	39.84
585	1.25 (1.25)	384.89	210.00	174.89	75.79
586	1.25 (1.25)	576.12	290.00	286.12	123.98
588	1.25 (1.25)	572.98	340.00	232.98	100.96
589	1.25 (1.25)	384.26	185.00	199.26	86.35
590	1.25 (1.25)	387.16	185.00	202.16	87.60
591	1.25 (1.25)	400.26	240.00	160.26	69.45
592	1.25 (1.25)	331.55	190.00	141.55	61.34
595	1.25 (1.25)	484.90	390.00	94.90	41.12
596	1.25 (1.25)	387.47	200.00	187.47	81.24
598	1.25 (1.25)	354.19	280.00	74.19	32.15
599	1.25 (1.25)	480.62	190.00	290.62	125.94
600	1.25 (1.25)	385.46	185.00	200.46	86.86
601	1.25 (1.25)	400.07	220.00	180.07	78.03
602	1.25 (1.25)	338.63	210.00	128.63	55.74
605	1.25 (1.25)	381.62	190.00	191.62	83.04
606	1.25 (1.25)	482.43	190.00	292.43	126.72
607	1.25 (1.25)	387.55	190.00	197.55	85.60
610	1.25 (1.25)	381.15	250.00	131.15	56.83
611	1.25 (1.25)	571.18	430.00	141.18	61.18
612	1.25 (1.25)	508.89	360.00	148.89	64.52
614	1.25 (1.25)	381.99	210.00	171.99	74.53
615	1.25 (1.25)	390.92	180.00	210.92	91.40
616	1.25 (1.25)	415.96	280.00	135.96	58.91
618	1.25 (1.25)	472.38	250.00	222.38	96.37
619	1.25 (1.25)	380.56	240.00	140.56	60.91
620	1.25 (1.25)	487.86	300.00	187.86	81.41
621	1.25 (1.25)	481.23	220.00	261.23	113.20
624	1.25 (1.25)	382.71	185.00	197.71	85.67
625	1.25 (1.25)	374.78	200.00	174.78	75.74

627	1.25 (1.25)	387.46	190.00	197.46	85.57
629	1.25 (1.25)	572.50	420.00	152.50	66.08
630	1.25 (1.25)	567.03	420.00	147.03	63.71
631	1.25 (1.25)	567.04	420.00	147.04	63.72
634	1.25 (1.25)	333.36	185.00	148.36	64.29
639	1.25 (1.25)	399.67	215.00	184.67	80.02
640	1.25 (1.25)	383.43	185.00	198.43	85.99
641	1.25 (1.25)	571.89	390.00	181.89	78.82
642	1.25 (1.25)	382.33	185.00	197.33	85.51
644	1.25 (1.25)	379.99	280.00	99.99	43.33
645	1.25 (1.25)	387.63	200.00	187.63	81.31
646	1.25 (1.25)	507.33	370.00	137.33	59.51
647	1.25 (1.25)	349.10	220.00	129.10	55.94
648	1.25 (1.25)	572.62	320.00	252.62	109.47
649	1.25 (1.25)	384.09	185.00	199.09	86.27
650	1.25 (1.25)	378.07	230.00	148.07	64.16
651	1.25 (1.25)	438.36	280.00	158.36	68.62
653	1.25 (1.25)	406.40	205.00	201.40	87.27
654	1.25 (1.25)	389.61	290.00	99.61	43.17
655	1.25 (1.25)	400.73	235.00	165.73	71.82
656	1.25 (1.25)	438.36	280.00	158.36	68.62
657	1.25 (1.25)	436.37	210.00	226.37	98.10
658	1.25 (1.25)	374.61	200.00	174.61	75.67
659	1.25 (1.25)	334.22	190.00	144.22	62.49
660	1.25 (1.25)	554.23	290.00	264.23	114.50
661	1.25 (1.25)	409.08	230.00	179.08	77.60
662	1.25 (1.25)	407.30	245.00	162.30	70.33
663	1.25 (1.25)	407.16	230.00	177.16	76.77
664	1.25 (1.25)	473.30	360.00	113.30	49.10
668	1.25 (1.25)	390.75	290.00	100.75	43.66
669	1.25 (1.25)	553.02	350.00	203.02	87.97
670	1.25 (1.25)	552.68	320.00	232.68	100.83
671	1.25 (1.25)	383.62	185.00	198.62	86.07
672	1.25 (1.25)	443.73	300.00	143.73	62.28
673	1.25 (1.25)	501.01	340.00	161.01	69.77
676	1.25 (1.25)	509.13	360.00	149.13	64.62
677	1.25 (1.25)	564.68	320.00	244.68	106.03
678	1.25 (1.25)	482.54	290.00	192.54	83.43
679	1.25 (1.25)	537.33	340.00	197.33	85.51
680	1.25 (1.25)	502.74	350.00	152.74	66.19
682	1.25 (1.25)	570.10	400.00	170.10	73.71
683	1.25 (1.25)	361.26	215.00	146.26	63.38
684	1.25 (1.25)	507.67	390.00	117.67	50.99
688	1.25 (1.25)	426.36	240.00	186.36	80.75
691	1.25 (1.25)	460.46	345.00	115.46	50.03
693	1.25 (1.25)	400.52	215.00	185.52	80.39
694	1.25 (1.25)	509.93	360.00	149.93	64.97
696	1.25 (1.25)	504.34	320.00	184.34	79.88
697	1.25 (1.25)	472.67	260.00	212.67	92.16
699	1.25 (1.25)	482.15	190.00	292.15	126.60
700	1.25 (1.25)	400.14	240.00	160.14	69.39
701	1.25 (1.25)	395.09	200.00	195.09	84.54
703	1.25 (1.25)	471.87	310.00	161.87	70.14
705	1.25 (1.25)	382.58	185.00	197.58	85.62
706	1.25 (1.25)	480.93	185.00	295.93	128.24
708	1.25 (1.25)	349.21	210.00	139.21	60.32
710	1.25 (1.25)	478.22	320.00	158.22	68.56
711	1.25 (1.25)	400.63	225.00	175.63	76.11
712	1.25 (1.25)	506.12	388.00	118.12	51.19
714	1.25 (1.25)	554.20	280.00	274.20	118.82
715	1.25 (1.25)	625.86	500.00	125.86	54.54
716	1.25 (1.25)	431.76	240.00	191.76	83.10
717	1.25 (1.25)	459.44	340.00	119.44	51.76
718	1.25 (1.25)	400.23	230.00	170.23	73.77
720	1.25 (1.25)	387.87	210.00	177.87	77.08
723	1.25 (1.25)	479.11	330.00	149.11	64.61
724	1.25 (1.25)	561.87	370.00	191.87	83.15
725	1.25 (1.25)	387.42	185.00	202.42	87.72
727	1.25 (1.25)	389.20	210.00	179.20	77.65
728	1.25 (1.25)	439.57	290.00	149.57	64.81
729	1.25 (1.25)	381.48	190.00	191.48	82.98

730	1.25 (1.25)	330.97	190.00	140.97	61.09
731	1.25 (1.25)	400.31	220.00	180.31	78.13
732	1.25 (1.25)	455.43	310.00	145.43	63.02
733	1.25 (1.25)	400.17	205.00	195.17	84.58
736	1.25 (1.25)	332.54	185.00	147.54	63.93
738	1.25 (1.25)	387.64	190.00	197.64	85.64
739	1.25 (1.25)	400.17	220.00	180.17	78.07
740	1.25 (1.25)	493.05	310.00	183.05	79.32
741	1.25 (1.25)	567.38	470.00	97.38	42.20
742	1.25 (1.25)	430.61	250.00	180.61	78.26
745	1.25 (1.25)	562.94	360.00	202.94	87.94
746	1.25 (1.25)	325.87	210.00	115.87	50.21
747	1.25 (1.25)	465.58	270.00	195.58	84.75
748	1.25 (1.25)	457.74	310.00	147.74	64.02
749	1.25 (1.25)	472.94	240.00	232.94	100.94
750	1.25 (1.25)	504.62	360.00	144.62	62.67
751	1.25 (1.25)	557.14	300.00	257.14	111.43
752	1.25 (1.25)	473.57	380.00	93.57	40.55
753	1.25 (1.25)	619.12	320.00	299.12	129.62
754	1.25 (1.25)	619.59	345.00	274.59	118.99
755	1.25 (1.25)	504.01	225.00	279.01	120.91
757	1.25 (1.25)	483.46	195.00	288.46	125.00
758	1.25 (1.25)	387.02	185.00	202.02	87.54
759	1.25 (1.25)	399.02	200.00	199.02	86.24
760	1.25 (1.25)	567.49	320.00	247.49	107.24
761	1.25 (1.25)	563.79	330.00	233.79	101.31
763	1.25 (1.25)	433.40	300.00	133.40	57.80
766	1.25 (1.25)	490.76	300.00	190.76	82.66
767	1.25 (1.25)	564.85	302.00	262.85	113.90
770	1.25 (1.25)	383.17	280.00	103.17	44.71
771	1.25 (1.25)	378.73	240.00	138.73	60.12
772	1.25 (1.25)	380.13	290.00	90.13	39.06
773	1.25 (1.25)	397.24	260.00	137.24	59.47
777	1.25 (1.25)	329.70	230.00	99.70	43.20
778	1.25 (1.25)	338.16	200.00	138.16	59.87
779	1.25 (1.25)	338.31	210.00	128.31	55.60
781	1.25 (1.25)	653.94	380.00	273.94	118.71
782	1.25 (1.25)	472.80	360.00	112.80	48.88
783	1.25 (1.25)	335.35	200.00	135.35	58.65
784	1.25 (1.25)	483.46	195.00	288.46	125.00
788	1.25 (1.25)	480.68	190.00	290.68	125.96
789	1.25 (1.25)	480.68	190.00	290.68	125.96
790	1.25 (1.25)	359.48	270.00	89.48	38.78
791	1.25 (1.25)	445.89	200.00	245.89	106.55
792	1.25 (1.25)	619.73	380.00	239.73	103.88
793	1.25 (1.25)	482.00	185.00	297.00	128.70
794	1.25 (1.25)	481.99	185.00	296.99	128.70
795	1.25 (1.25)	635.68	480.00	155.68	67.46
796	1.25 (1.25)	505.90	360.00	145.90	63.23
800	1.25 (1.25)	415.02	300.00	115.02	49.84
801	1.25 (1.25)	423.21	340.00	83.21	36.06
802	1.25 (1.25)	399.84	210.00	189.84	82.26
804	1.25 (1.25)	388.04	215.00	173.04	74.99
806	1.25 (1.25)	387.91	195.00	192.91	83.60
807	1.25 (1.25)	458.20	330.00	128.20	55.55
808	1.25 (1.25)	499.79	320.00	179.79	77.91
811	1.25 (1.25)	617.29	350.00	267.29	115.82
813	1.25 (1.25)	381.49	190.00	191.49	82.98
814	1.25 (1.25)	388.67	210.00	178.67	77.43
817	1.25 (1.25)	387.59	195.00	192.59	83.46
820	1.25 (1.25)	408.79	235.00	173.79	75.31
821	1.25 (1.25)	484.70	195.00	289.70	125.54
823	1.25 (1.25)	412.49	250.00	162.49	70.41
824	1.25 (1.25)	344.78	260.00	84.78	36.74
825	1.25 (1.25)	619.12	330.00	289.12	125.29
826	1.25 (1.25)	388.13	205.00	183.13	79.36
827	1.25 (1.25)	382.60	185.00	197.60	85.63
830	1.25 (1.25)	457.61	320.00	137.61	59.63
831	1.25 (1.25)	457.92	330.00	127.92	55.43
832	1.25 (1.25)	510.14	370.00	140.14	60.73
833	1.25 (1.25)	346.08	260.00	86.08	37.30

834	1.25 (1.25)	338.06	210.00	128.06	55.49
838	1.25 (1.25)	510.36	370.00	140.36	60.82
840	1.25 (1.25)	400.24	220.00	180.24	78.11
841	1.25 (1.25)	619.09	300.00	319.09	138.27
842	1.25 (1.25)	597.34	280.00	317.34	137.51
843	1.25 (1.25)	387.54	240.00	147.54	63.93
844	1.25 (1.25)	400.17	230.00	170.17	73.74
845	1.25 (1.25)	400.15	240.00	160.15	69.40
846	1.25 (1.25)	327.45	185.00	142.45	61.73
847	1.25 (1.25)	607.91	340.00	267.91	116.10
848	1.25 (1.25)	573.96	320.00	253.96	110.05
849	1.25 (1.25)	561.94	430.00	131.94	57.17
852	1.25 (1.25)	327.07	200.00	127.07	55.06
853	1.25 (1.25)	462.46	290.00	172.46	74.73
854	1.25 (1.25)	436.41	210.00	226.41	98.11
857	1.25 (1.25)	584.80	350.00	234.80	101.75
858	1.25 (1.25)	325.75	210.00	115.75	50.16
859	1.25 (1.25)	345.79	200.00	145.79	63.17
860	1.25 (1.25)	479.08	185.00	294.08	127.43
861	1.25 (1.25)	612.37	282.00	330.37	143.16
862	1.25 (1.25)	382.26	185.00	197.26	85.48
863	1.25 (1.25)	384.79	185.00	199.79	86.58
864	1.25 (1.25)	347.02	220.00	127.02	55.04
865	1.25 (1.25)	619.10	300.00	319.10	138.28
866	1.25 (1.25)	619.09	300.00	319.09	138.27
869	1.25 (1.25)	480.68	190.00	290.68	125.96
870	1.25 (1.25)	625.90	430.00	195.90	84.89
872	1.25 (1.25)	507.39	390.00	117.39	50.87
873	1.25 (1.25)	504.62	360.00	144.62	62.67
874	1.25 (1.25)	382.82	185.00	197.82	85.72
875	1.25 (1.25)	388.51	250.00	138.51	60.02
879	1.25 (1.25)	338.24	210.00	128.24	55.57
880	1.25 (1.25)	571.95	370.00	201.95	87.51
881	1.25 (1.25)	565.21	420.00	145.21	62.92
883	1.25 (1.25)	325.53	200.00	125.53	54.40
885	1.25 (1.25)	523.08	360.00	163.08	70.67
887	1.25 (1.25)	388.05	215.00	173.05	74.99
888	1.25 (1.25)	346.49	200.00	146.49	63.48
889	1.25 (1.25)	480.88	185.00	295.88	128.21
890	1.25 (1.25)	477.15	260.00	217.15	94.10
893	1.25 (1.25)	436.06	210.00	226.06	97.96
896	1.25 (1.25)	346.80	240.00	106.80	46.28
897	1.25 (1.25)	387.90	200.00	187.90	81.42
898	1.25 (1.25)	344.76	260.00	84.76	36.73
900	1.25 (1.25)	306.16	210.00	96.16	41.67
902	1.25 (1.25)	676.44	365.00	311.44	134.96
903	1.25 (1.25)	621.27	322.00	299.27	129.68
904	1.25 (1.25)	684.81	390.00	294.81	127.75
905	1.25 (1.25)	640.76	340.00	300.76	130.33
907	1.25 (1.25)	420.26	270.00	150.26	65.11
908	1.25 (1.25)	567.18	380.00	187.18	81.11
910	1.25 (1.25)	329.69	230.00	99.69	43.20
911	1.25 (1.25)	310.18	190.00	120.18	52.08
912	1.25 (1.25)	347.41	250.00	97.41	42.21
913	1.25 (1.25)	386.21	185.00	201.21	87.19
914	1.25 (1.25)	482.99	320.00	162.99	70.63
917	1.25 (1.25)	624.97	540.00	84.97	36.82
918	1.25 (1.25)	332.47	190.00	142.47	61.74
921	1.25 (1.25)	369.64	240.00	129.64	56.18
923	1.25 (1.25)	391.07	180.00	211.07	91.46
924	1.25 (1.25)	507.78	350.00	157.78	68.37
925	1.25 (1.25)	587.97	340.00	247.97	107.45
926	1.25 (1.25)	472.68	360.00	112.68	48.83
927	1.25 (1.25)	495.70	370.00	125.70	54.47
928	1.25 (1.25)	509.36	360.00	149.36	64.72
929	1.25 (1.25)	481.43	190.00	291.43	126.29
930	1.25 (1.25)	619.09	340.00	279.09	120.94
932	1.25 (1.25)	554.30	230.00	324.30	140.53
933	1.25 (1.25)	430.65	270.00	160.65	69.62
934	1.25 (1.25)	387.64	190.00	197.64	85.64
935	1.25 (1.25)	495.58	370.00	125.58	54.42

936	1.25 (1.25)	387.02	185.00	202.02	87.54
938	1.25 (1.25)	572.50	415.00	157.50	68.25
939	1.25 (1.25)	388.89	220.00	168.89	73.19
941	1.25 (1.25)	460.97	300.00	160.97	69.75
944	1.25 (1.25)	338.59	200.00	138.59	60.06
946	1.25 (1.25)	388.63	220.00	168.63	73.07
947	1.25 (1.25)	385.41	185.00	200.41	86.85
948	1.25 (1.25)	379.62	250.00	129.62	56.17
949	1.25 (1.25)	380.96	250.00	130.96	56.75
950	1.25 (1.25)	380.65	250.00	130.65	56.61
951	1.25 (1.25)	383.26	185.00	198.26	85.91
952	1.25 (1.25)	504.87	330.00	174.87	75.78
956	1.25 (1.25)	485.70	390.00	95.70	41.47
957	1.25 (1.25)	387.16	185.00	202.16	87.60
960	1.25 (1.25)	388.11	210.00	178.11	77.18
962	1.25 (1.25)	387.56	190.00	197.56	85.61
964	1.25 (1.25)	338.14	210.00	128.14	55.53
965	1.25 (1.25)	453.95	340.00	113.95	49.38
966	1.25 (1.25)	576.55	350.00	226.55	98.17
967	1.25 (1.25)	318.58	190.00	128.58	55.72
969	1.25 (1.25)	389.94	195.00	194.94	84.48
971	1.25 (1.25)	509.85	370.00	139.85	60.60
972	1.25 (1.25)	451.03	190.00	261.03	113.11
973	1.25 (1.25)	387.67	190.00	197.67	85.66
975	1.25 (1.25)	572.06	390.00	182.06	78.89
976	1.25 (1.25)	571.63	390.00	181.63	78.70
977	1.25 (1.25)	625.84	510.00	115.84	50.20
978	1.25 (1.25)	311.93	220.00	91.93	39.84
979	1.25 (1.25)	571.03	420.00	151.03	65.44
980	1.25 (1.25)	338.03	200.00	138.03	59.81
982	1.25 (1.25)	380.83	240.00	140.83	61.03
984	1.25 (1.25)	487.45	300.00	187.45	81.23
990	1.25 (1.25)	400.10	240.00	160.10	69.38
991	1.25 (1.25)	399.81	210.00	189.81	82.25
992	1.25 (1.25)	359.29	270.00	89.29	38.69
993	1.25 (1.25)	384.82	185.00	199.82	86.59
994	1.25 (1.25)	387.52	190.00	197.52	85.59
995	1.25 (1.25)	381.68	185.00	196.68	85.23
996	1.25 (1.25)	529.64	330.00	199.64	86.51
997	1.25 (1.25)	332.76	190.00	142.76	61.86
999	1.25 (1.25)	239.54	185.00	54.54	23.63
1000	1.25 (1.25)	418.80	230.00	188.80	81.81
1001	1.25 (1.25)	370.95	200.00	170.95	74.08
1002	1.25 (1.25)	504.41	350.00	154.41	66.91
1004	1.25 (1.25)	482.23	185.00	297.23	128.80
1005	1.25 (1.25)	654.45	350.00	304.45	131.93
1006	1.25 (1.25)	660.93	370.00	290.93	126.07
1007	1.25 (1.25)	376.55	230.00	146.55	63.51
1008	1.25 (1.25)	389.24	210.00	179.24	77.67
1009	1.25 (1.25)	530.26	330.00	200.26	86.78
1010	1.25 (1.25)	621.68	322.00	299.68	129.86
1011	1.25 (1.25)	406.25	200.00	206.25	89.37
1012	1.25 (1.25)	485.95	310.00	175.95	76.25
1013	1.25 (1.25)	624.40	560.00	64.40	27.91
1014	1.25 (1.25)	388.06	200.00	188.06	81.49
1015	1.25 (1.25)	388.50	250.00	138.50	60.02
1016	1.25 (1.25)	475.70	320.00	155.70	67.47
1017	1.25 (1.25)	415.17	230.00	185.17	80.24
1018	1.25 (1.25)	405.10	200.00	205.10	88.88
1020	1.25 (1.25)	482.96	190.00	292.96	126.95
1023	1.25 (1.25)	412.40	240.00	172.40	74.70
1025	1.25 (1.25)	385.72	185.00	200.72	86.98
1027	1.25 (1.25)	332.69	190.00	142.69	61.83
1029	1.25 (1.25)	372.69	210.00	162.69	70.50
1031	1.25 (1.25)	310.36	200.00	110.36	47.82
1032	1.25 (1.25)	433.69	240.00	193.69	83.93
1033	1.25 (1.25)	387.39	200.00	187.39	81.20
1034	1.25 (1.25)	542.54	320.00	222.54	96.43
1035	1.25 (1.25)	552.73	320.00	232.73	100.85
1036	1.25 (1.25)	554.24	330.00	224.24	97.17
1037	1.25 (1.25)	407.89	230.00	177.89	77.08

1040	1.25 (1.25)	359.99	270.00	89.99	39.00
1041	1.25 (1.25)	331.40	190.00	141.40	61.27
1042	1.25 (1.25)	387.47	185.00	202.47	87.74
1043	1.25 (1.25)	333.01	185.00	148.01	64.14
1044	1.25 (1.25)	381.50	185.00	196.50	85.15
1045	1.25 (1.25)	372.91	190.00	182.91	79.26
1047	1.25 (1.25)	466.56	240.00	226.56	98.18
1049	1.25 (1.25)	565.45	320.00	245.45	106.36
1050	1.25 (1.25)	564.67	310.00	254.67	110.36
1052	1.25 (1.25)	521.82	300.00	221.82	96.12
1054	1.25 (1.25)	571.02	440.00	131.02	56.77
1055	1.25 (1.25)	409.09	230.00	179.09	77.60
1056	1.25 (1.25)	562.69	340.00	222.69	96.50
1057	1.25 (1.25)	584.85	340.00	244.85	106.10
1059	1.25 (1.25)	336.08	200.00	136.08	58.97
1060	1.25 (1.25)	472.29	370.00	102.29	44.32
1061	1.25 (1.25)	358.99	290.00	68.99	29.89
1062	1.25 (1.25)	538.21	330.00	208.21	90.22
1063	1.25 (1.25)	397.26	200.00	197.26	85.48
1065	1.25 (1.25)	452.08	330.00	122.08	52.90
1066	1.25 (1.25)	350.08	220.00	130.08	56.37
1067	1.25 (1.25)	654.73	370.00	284.73	123.38
1069	1.25 (1.25)	455.72	330.00	125.72	54.48
1070	1.25 (1.25)	432.92	280.00	152.92	66.27
1072	1.25 (1.25)	433.65	200.00	233.65	101.25
1073	1.25 (1.25)	456.51	250.00	206.51	89.49
1076	1.25 (1.25)	374.24	190.00	184.24	79.84
1077	1.25 (1.25)	435.31	220.00	215.31	93.30
1078	1.25 (1.25)	381.54	185.00	196.54	85.17
1079	1.25 (1.25)	460.73	300.00	160.73	69.65
1080	1.25 (1.25)	399.06	200.00	199.06	86.26
1081	1.25 (1.25)	568.42	320.00	248.42	107.65
1083	1.25 (1.25)	387.52	205.00	182.52	79.09
1084	1.25 (1.25)	458.53	340.00	118.53	51.36
1086	1.25 (1.25)	474.02	320.00	154.02	66.74
1087	1.25 (1.25)	377.26	220.00	157.26	68.15
1089	1.25 (1.25)	505.89	360.00	145.89	63.22
1090	1.25 (1.25)	499.71	350.00	149.71	64.87
1091	1.25 (1.25)	330.39	190.00	140.39	60.83
1092	1.25 (1.25)	400.15	230.00	170.15	73.73
1093	1.25 (1.25)	480.85	190.00	290.85	126.04
1094	1.25 (1.25)	383.05	185.00	198.05	85.82
1095	1.25 (1.25)	383.36	185.00	198.36	85.95
1096	1.25 (1.25)	467.96	270.00	197.96	85.78
1097	1.25 (1.25)	483.76	290.00	193.76	83.96
1098	1.25 (1.25)	487.60	310.00	177.60	76.96
1099	1.25 (1.25)	352.41	270.00	82.41	35.71
1100	1.25 (1.25)	400.08	200.00	200.08	86.70
1102	1.25 (1.25)	383.59	185.00	198.59	86.05
1104	1.25 (1.25)	539.33	292.00	247.33	107.18
1107	1.25 (1.25)	441.98	300.00	141.98	61.53
1111	1.25 (1.25)	617.34	323.00	294.34	127.55
1112	1.25 (1.25)	469.80	340.00	129.80	56.25
1113	1.25 (1.25)	468.53	380.00	88.53	38.36
1114	1.25 (1.25)	347.09	180.00	167.09	72.40
1115	1.25 (1.25)	365.79	230.00	135.79	58.84
1116	1.25 (1.25)	487.10	310.00	177.10	76.74
1118	1.25 (1.25)	346.08	260.00	86.08	37.30
1119	1.25 (1.25)	351.84	250.00	101.84	44.13
1120	1.25 (1.25)	485.35	310.00	175.35	75.98
1121	1.25 (1.25)	619.14	340.00	279.14	120.96
1122	1.25 (1.25)	484.87	300.00	184.87	80.11
1123	1.25 (1.25)	388.77	185.00	203.77	88.30
1126	1.25 (1.25)	625.23	530.00	95.23	41.26
1127	1.25 (1.25)	306.35	200.00	106.35	46.09
1130	1.25 (1.25)	504.97	335.00	169.97	73.65
1133	1.25 (1.25)	552.36	325.00	227.36	98.52
1134	1.25 (1.25)	624.94	520.00	104.94	45.47
1135	1.25 (1.25)	467.82	270.00	197.82	85.72
1138	1.25 (1.25)	573.91	340.00	233.91	101.36
1140	1.25 (1.25)	505.15	335.00	170.15	73.73

1142	1.25 (1.25)	624.40	560.00	64.40	27.91
1144	1.25 (1.25)	405.05	280.00	125.05	54.19
1145	1.25 (1.25)	326.44	210.00	116.44	50.46
1149	1.25 (1.25)	481.55	185.00	296.55	128.50
1150	1.25 (1.25)	483.45	195.00	288.45	124.99
1151	1.25 (1.25)	515.53	330.00	185.53	80.40
1152	1.25 (1.25)	528.98	360.00	168.98	73.23
1153	1.25 (1.25)	460.14	300.00	160.14	69.40
1156	1.25 (1.25)	467.37	310.00	157.37	68.19
1160	1.25 (1.25)	380.76	240.00	140.76	61.00
1161	1.25 (1.25)	433.42	250.00	183.42	79.48
1162	1.25 (1.25)	622.02	300.00	322.02	139.54
1163	1.25 (1.25)	489.04	310.00	179.04	77.58
1164	1.25 (1.25)	563.22	250.00	313.22	135.73
1165	1.25 (1.25)	387.16	185.00	202.16	87.60
1166	1.25 (1.25)	507.58	410.00	97.58	42.29
1167	1.25 (1.25)	385.41	185.00	200.41	86.84
1168	1.25 (1.25)	381.60	190.00	191.60	83.03
1169	1.25 (1.25)	330.81	190.00	140.81	61.02
1170	1.25 (1.25)	382.18	280.00	102.18	44.28
1179	1.25 (1.25)	507.94	370.00	137.94	59.78
1183	1.25 (1.25)	310.22	200.00	110.22	47.76
1184	1.25 (1.25)	382.73	280.00	102.73	44.51
1185	1.25 (1.25)	310.10	190.00	120.10	52.04
1187	1.25 (1.25)	369.03	240.00	129.03	55.92
1188	1.25 (1.25)	405.09	200.00	205.09	88.87
1189	1.25 (1.25)	436.84	290.00	146.84	63.63
1190	1.25 (1.25)	423.74	260.00	163.74	70.95
1192	1.25 (1.25)	402.78	300.00	102.78	44.54
1193	1.25 (1.25)	507.35	390.00	117.35	50.85
1196	1.25 (1.25)	404.94	210.00	194.94	84.48
1197	1.25 (1.25)	383.71	185.00	198.71	86.11
1198	1.25 (1.25)	481.37	300.00	181.37	78.59
1201	1.25 (1.25)	430.62	260.00	170.62	73.94
1202	1.25 (1.25)	502.24	310.00	192.24	83.30
1205	1.25 (1.25)	427.20	240.00	187.20	81.12
1206	1.25 (1.25)	506.07	310.00	196.07	84.96
1207	1.25 (1.25)	427.41	260.00	167.41	72.55
1209	1.25 (1.25)	563.39	273.00	290.39	125.84
1210	1.25 (1.25)	400.37	240.00	160.37	69.49
1211	1.25 (1.25)	387.20	185.00	202.20	87.62
1214	1.25 (1.25)	496.78	370.00	126.78	54.94
1216	1.25 (1.25)	494.74	365.00	129.74	56.22
1218	1.25 (1.25)	369.03	235.00	134.03	58.08
1223	1.25 (1.25)	382.91	280.00	102.91	44.59
1224	1.25 (1.25)	399.02	200.00	199.02	86.24
1225	1.25 (1.25)	493.45	350.00	143.45	62.16
1226	1.25 (1.25)	437.93	190.00	247.93	107.44
1227	1.25 (1.25)	645.36	450.00	195.36	84.66
1228	1.25 (1.25)	471.58	360.00	111.58	48.35
1229	1.25 (1.25)	554.27	260.00	294.27	127.52
1231	1.25 (1.25)	654.48	320.00	334.48	144.94
1232	1.25 (1.25)	569.23	320.00	249.23	108.00
1233	1.25 (1.25)	354.48	190.00	164.48	71.28
1236	1.25 (1.25)	370.49	190.00	180.49	78.21
1237	1.25 (1.25)	507.95	365.00	142.95	61.94
1238	1.25 (1.25)	389.54	320.00	69.54	30.13
1239	1.25 (1.25)	505.06	300.00	205.06	88.86
1240	1.25 (1.25)	480.87	185.00	295.87	128.21
1241	1.25 (1.25)	536.78	330.00	206.78	89.60
1243	1.25 (1.25)	391.06	180.00	211.06	91.46
1244	1.25 (1.25)	466.30	280.00	186.30	80.73
1245	1.25 (1.25)	387.41	190.00	197.41	85.54
1248	1.25 (1.25)	428.57	330.00	98.57	42.71
1251	1.25 (1.25)	499.91	325.00	174.91	75.79
1253	1.25 (1.25)	506.04	350.00	156.04	67.62
1254	1.25 (1.25)	506.16	388.00	118.16	51.20
1255	1.25 (1.25)	508.80	360.00	148.80	64.48
1256	1.25 (1.25)	502.96	320.00	182.96	79.28
1258	1.25 (1.25)	505.15	320.00	185.15	80.23
1259	1.25 (1.25)	502.49	350.00	152.49	66.08

1260	1.25(1.25)	502.49	350.00	152.49	66.08
1261	1.25(1.25)	502.49	380.00	122.49	53.08
1262	1.25(1.25)	383.62	280.00	103.62	44.90
1263	1.25(1.25)	488.02	320.00	168.02	72.81
1264	1.25(1.25)	479.97	310.00	169.97	73.66
1266	1.25(1.25)	325.26	200.00	125.26	54.28
1267	1.25(1.25)	481.18	190.00	291.18	126.18
1268	1.25(1.25)	482.26	190.00	292.26	126.65
1269	1.25(1.25)	476.58	325.00	151.58	65.69
1270	1.25(1.25)	414.55	220.00	194.55	84.31
1271	1.25(1.25)	385.08	185.00	200.08	86.70
1272	1.25(1.25)	400.10	230.00	170.10	73.71
1273	1.25(1.25)	505.61	320.00	185.61	80.43
1275	1.25(1.25)	459.19	280.00	179.19	77.65
1276	1.25(1.25)	628.75	380.00	248.75	107.79
1277	1.25(1.25)	397.28	300.00	97.28	42.15
1278	1.25(1.25)	347.92	220.00	127.92	55.43
1280	1.25(1.25)	349.67	230.00	119.67	51.86
1281	1.25(1.25)	355.26	270.00	85.26	36.95
1284	1.25(1.25)	562.61	280.00	282.61	122.46
1285	1.25(1.25)	502.18	310.00	192.18	83.28
1286	1.25(1.25)	481.55	185.00	296.55	128.50
1287	1.25(1.25)	399.49	200.00	199.49	86.45
1288	1.25(1.25)	389.29	190.00	199.29	86.36
1291	1.25(1.25)	406.83	202.00	204.83	88.76
1293	1.25(1.25)	632.86	400.00	232.86	100.91
1294	1.25(1.25)	454.69	340.00	114.69	49.70
1295	1.25(1.25)	472.57	270.00	202.57	87.78
1299	1.25(1.25)	471.63	280.00	191.63	83.04
1303	1.25(1.25)	399.77	210.00	189.77	82.24
1304	1.25(1.25)	484.17	300.00	184.17	79.81
1305	1.25(1.25)	382.52	185.00	197.52	85.59
1308	1.25(1.25)	383.63	185.00	198.63	86.07
1310	1.25(1.25)	387.78	200.00	187.78	81.37
1311	1.25(1.25)	387.77	190.00	197.77	85.70
1312	1.25(1.25)	446.32	260.00	186.32	80.74
1313	1.25(1.25)	502.24	300.00	202.24	87.64
1315	1.25(1.25)	357.92	250.00	107.92	46.77
1317	1.25(1.25)	461.93	290.00	171.93	74.50
1318	1.25(1.25)	415.06	300.00	115.06	49.86
1320	1.25(1.25)	502.72	360.00	142.72	61.84
1321	1.25(1.25)	572.14	420.00	152.14	65.93
1322	1.25(1.25)	456.36	260.00	196.36	85.09
1323	1.25(1.25)	474.66	275.00	199.66	86.52
1324	1.25(1.25)	507.70	380.00	127.70	55.33
1326	1.25(1.25)	579.05	310.00	269.05	116.59
1327	1.25(1.25)	348.34	230.00	118.34	51.28
1328	1.25(1.25)	383.62	185.00	198.62	86.07
1329	1.25(1.25)	609.57	270.00	339.57	147.15
1332	1.25(1.25)	554.19	270.00	284.19	123.15
1333	1.25(1.25)	372.40	200.00	172.40	74.71
1334	1.25(1.25)	533.20	340.00	193.20	83.72
1335	1.25(1.25)	452.09	190.00	262.09	113.57
1336	1.25(1.25)	414.86	230.00	184.86	80.11
1337	1.25(1.25)	387.71	185.00	202.71	87.84
1338	1.25(1.25)	480.45	290.00	190.45	82.53
1339	1.25(1.25)	468.49	400.00	68.49	29.68
1340	1.25(1.25)	414.47	260.00	154.47	66.94
1341	1.25(1.25)	381.80	185.00	196.80	85.28
1342	1.25(1.25)	383.17	280.00	103.17	44.71
1344	1.25(1.25)	468.84	340.00	128.84	55.83
1346	1.25(1.25)	432.84	240.00	192.84	83.57
1347	1.25(1.25)	371.45	190.00	181.45	78.63
1348	1.25(1.25)	412.47	240.00	172.47	74.74
1349	1.25(1.25)	406.81	330.00	76.81	33.29
1350	1.25(1.25)	334.89	200.00	134.89	58.45
1351	1.25(1.25)	508.17	340.00	168.17	72.88
1352	1.25(1.25)	576.83	350.00	226.83	98.29
1353	1.25(1.25)	568.97	320.00	248.97	107.89
1355	1.25(1.25)	537.13	340.00	197.13	85.42
1356	1.25(1.25)	373.23	190.00	183.23	79.40

1357	1.25(1.25)	387.59	195.00	192.59	83.46
1358	1.25(1.25)	386.88	185.00	201.88	87.48
1363	1.25(1.25)	472.70	360.00	112.70	48.83
1364	1.25(1.25)	428.43	270.00	158.43	68.65
1365	1.25(1.25)	507.77	370.00	137.77	59.70
1366	1.25(1.25)	384.78	185.00	199.78	86.57
1367	1.25(1.25)	502.89	330.00	172.89	74.92
1369	1.25(1.25)	509.47	380.00	129.47	56.10
1370	1.25(1.25)	622.22	320.00	302.22	130.96
1371	1.25(1.25)	620.44	320.00	300.44	130.19
1372	1.25(1.25)	400.11	220.00	180.11	78.05
1373	1.25(1.25)	458.09	260.00	198.09	85.84
1374	1.25(1.25)	468.79	280.00	188.79	81.81
1375	1.25(1.25)	399.77	210.00	189.77	82.23
1377	1.25(1.25)	400.28	240.00	160.28	69.46
1378	1.25(1.25)	495.65	320.00	175.65	76.11
1379	1.25(1.25)	554.27	290.00	264.27	114.52
1380	1.25(1.25)	473.39	270.00	203.39	88.13
1382	1.25(1.25)	437.19	300.00	137.19	59.45
1383	1.25(1.25)	438.14	290.00	148.14	64.20
1384	1.25(1.25)	554.75	260.00	294.75	127.73
1386	1.25(1.25)	560.65	280.00	280.65	121.61
1387	1.25(1.25)	464.71	270.00	194.71	84.37
1388	1.25(1.25)	464.10	270.00	194.10	84.11
1390	1.25(1.25)	468.51	390.00	78.51	34.02
1391	1.25(1.25)	458.67	270.00	188.67	81.76
1392	1.25(1.25)	387.33	185.00	202.33	87.68
1393	1.25(1.25)	381.19	290.00	91.19	39.52
1394	1.25(1.25)	387.81	195.00	192.81	83.55
1397	1.25(1.25)	621.74	320.00	301.74	130.75
1399	1.25(1.25)	389.63	195.00	194.63	84.34
1402	1.25(1.25)	365.40	230.00	135.40	58.67
1403	1.25(1.25)	510.72	380.00	130.72	56.65
1404	1.25(1.25)	387.25	185.00	202.25	87.64
1406	1.25(1.25)	558.85	480.00	78.85	34.17
1408	1.25(1.25)	439.53	300.00	139.53	60.46
1409	1.25(1.25)	436.46	400.00	36.46	15.80
1410	1.25(1.25)	508.88	370.00	138.88	60.18
1411	1.25(1.25)	509.90	310.00	199.90	86.62
1413	1.25(1.25)	509.34	360.00	149.34	64.71
1414	1.25(1.25)	502.17	310.00	192.17	83.28
1415	1.25(1.25)	327.77	185.00	142.77	61.87
1416	1.25(1.25)	473.55	380.00	93.55	40.54
1417	1.25(1.25)	387.02	185.00	202.02	87.54
1418	1.25(1.25)	503.25	320.00	183.25	79.41
1419	1.25(1.25)	380.36	290.00	90.36	39.15
1420	1.25(1.25)	400.52	215.00	185.52	80.39
1422	1.25(1.25)	507.48	410.00	97.48	42.24
1423	1.25(1.25)	421.67	270.00	151.67	65.73
1424	1.25(1.25)	383.91	190.00	193.91	84.03
1427	1.25(1.25)	439.92	300.00	139.92	60.63
1428	1.25(1.25)	366.11	220.00	146.11	63.32
1430	1.25(1.25)	306.28	200.00	106.28	46.05
1431	1.25(1.25)	506.53	360.00	146.53	63.50
1432	1.25(1.25)	383.62	185.00	198.62	86.07
1433	1.25(1.25)	334.51	185.00	149.51	64.79
1434	1.25(1.25)	625.91	460.00	165.91	71.89
1435	1.25(1.25)	506.01	350.00	156.01	67.60
1436	1.25(1.25)	504.52	325.00	179.52	77.79
1437	1.25(1.25)	381.51	190.00	191.51	82.99
1438	1.25(1.25)	437.97	190.00	247.97	107.45
1439	1.25(1.25)	481.60	400.00	81.60	35.36
1441	1.25(1.25)	387.63	195.00	192.63	83.47
1443	1.25(1.25)	346.80	247.00	99.80	43.24
1444	1.25(1.25)	492.76	315.00	177.76	77.03
1446	1.25(1.25)	450.93	248.00	202.93	87.94
1448	1.25(1.25)	310.05	210.00	100.05	43.35
1449	1.25(1.25)	447.66	200.00	247.66	107.32
1452	1.25(1.25)	388.62	220.00	168.62	73.07
1453	1.25(1.25)	378.44	220.00	158.44	68.66
1454	1.25(1.25)	608.52	320.00	288.52	125.03

1458	1.25(1.25)	345.02	200.00	145.02	62.84
1459	1.25(1.25)	547.09	320.00	227.09	98.41
1460	1.25(1.25)	538.15	300.00	238.15	103.20
1461	1.25(1.25)	375.23	330.00	45.23	19.60
1464	1.25(1.25)	575.72	370.00	205.72	89.14
1465	1.25(1.25)	359.02	290.00	69.02	29.91
1467	1.25(1.25)	481.39	290.00	191.39	82.94
1468	1.25(1.25)	366.38	200.00	166.38	72.10
1472	1.25(1.25)	511.82	340.00	171.82	74.45
1473	1.25(1.25)	350.39	210.00	140.39	60.83
1474	1.25(1.25)	321.25	190.00	131.25	56.87
1475	1.25(1.25)	482.73	200.00	282.73	122.52
1476	1.25(1.25)	482.34	200.00	282.34	122.35
1477	1.25(1.25)	349.31	250.00	99.31	43.03
1478	1.25(1.25)	351.43	250.00	101.43	43.95
1479	1.25(1.25)	481.10	185.00	296.10	128.31
1480	1.25(1.25)	553.89	280.00	273.89	118.68
1481	1.25(1.25)	327.21	200.00	127.21	55.13
1482	1.25(1.25)	387.53	202.00	185.53	80.40
1483	1.25(1.25)	400.21	230.00	170.21	73.76
1484	1.25(1.25)	561.34	280.00	281.34	121.92
1486	1.25(1.25)	387.49	190.00	197.49	85.58
1487	1.25(1.25)	338.11	210.00	128.11	55.52
1488	1.25(1.25)	458.51	260.00	198.51	86.02
1490	1.25(1.25)	567.90	280.00	287.90	124.76
1491	1.25(1.25)	376.91	250.00	126.91	55.00
1492	1.25(1.25)	624.74	300.00	324.74	140.72
1494	1.25(1.25)	510.32	320.00	190.32	82.47
1495	1.25(1.25)	320.87	190.00	130.87	56.71
1496	1.25(1.25)	384.24	190.00	194.24	84.17
1497	1.25(1.25)	382.61	185.00	197.61	85.63
1499	1.25(1.25)	481.89	185.00	296.89	128.65
1501	1.25(1.25)	538.23	280.00	258.23	111.90
1502	1.25(1.25)	387.65	190.00	197.65	85.65
1503	1.25(1.25)	480.89	185.00	295.89	128.22
1504	1.25(1.25)	438.07	290.00	148.07	64.17
1505	1.25(1.25)	318.96	190.00	128.96	55.88
1506	1.25(1.25)	441.69	270.00	171.69	74.40
1507	1.25(1.25)	503.84	360.00	143.84	62.33
1508	1.25(1.25)	350.23	210.00	140.23	60.76
1509	1.25(1.25)	535.68	340.00	195.68	84.80
1510	1.25(1.25)	507.78	340.00	167.78	72.70
1511	1.25(1.25)	554.42	310.00	244.42	105.91
1513	1.25(1.25)	410.29	240.00	170.29	73.79
1514	1.25(1.25)	335.70	200.00	135.70	58.80
1516	1.25(1.25)	441.75	270.00	171.75	74.43
1517	1.25(1.25)	344.99	260.00	84.99	36.83
1518	1.25(1.25)	492.92	300.00	192.92	83.60
1519	1.25(1.25)	518.83	300.00	218.83	94.83
1520	1.25(1.25)	357.58	250.00	107.58	46.62
1521	1.25(1.25)	508.43	355.00	153.43	66.49
1522	1.25(1.25)	349.03	220.00	129.03	55.91
1524	1.25(1.25)	408.02	220.00	188.02	81.47
1525	1.25(1.25)	473.44	370.00	103.44	44.83
1527	1.25(1.25)	485.89	190.00	295.89	128.22
1529	1.25(1.25)	455.88	330.00	125.88	54.55
1532	1.25(1.25)	384.19	210.00	174.19	75.48
1533	1.25(1.25)	472.62	270.00	202.62	87.80
1534	1.25(1.25)	472.32	370.00	102.32	44.34
1535	1.25(1.25)	330.18	190.00	140.18	60.75
1537	1.25(1.25)	481.08	185.00	296.08	128.30
1539	1.25(1.25)	408.77	220.00	188.77	81.80
1540	1.25(1.25)	387.64	200.00	187.64	81.31
1541	1.25(1.25)	502.84	225.00	277.84	120.40
1542	1.25(1.25)	382.36	185.00	197.36	85.52
1543	1.25(1.25)	369.84	190.00	179.84	77.93
1544	1.25(1.25)	521.52	305.00	216.52	93.83
1545	1.25(1.25)	549.85	330.00	219.85	95.27
1546	1.25(1.25)	400.22	230.00	170.22	73.76
1547	1.25(1.25)	637.66	340.00	297.66	128.99
1548	1.25(1.25)	388.17	231.00	157.17	68.11

1549	1.25(1.25)	504.88	310.00	194.88	84.45
1550	1.25(1.25)	574.39	285.00	289.39	125.40
1551	1.25(1.25)	554.47	240.00	314.47	136.27
1552	1.25(1.25)	437.71	290.00	147.71	64.01
1553	1.25(1.25)	500.53	340.00	160.53	69.56
1554	1.25(1.25)	388.27	195.00	193.27	83.75
1555	1.25(1.25)	451.85	330.00	121.85	52.80
1556	1.25(1.25)	400.75	225.00	175.75	76.16
1557	1.25(1.25)	523.67	310.00	213.67	92.59
1560	1.25(1.25)	470.51	225.00	245.51	106.39
1561	1.25(1.25)	514.19	300.00	214.19	92.82
1562	1.25(1.25)	666.31	400.00	266.31	115.40
1564	1.25(1.25)	493.92	320.00	173.92	75.37
1565	1.25(1.25)	519.21	290.00	229.21	99.32
1566	1.25(1.25)	554.26	290.00	264.26	114.51
1568	1.25(1.25)	388.00	220.00	168.00	72.80
1569	1.25(1.25)	387.43	190.00	197.43	85.55
1570	1.25(1.25)	383.64	185.00	198.64	86.08
1571	1.25(1.25)	505.29	340.00	165.29	71.63
1572	1.25(1.25)	554.52	240.00	314.52	136.29
1574	1.25(1.25)	414.69	210.00	204.69	88.70
1576	1.25(1.25)	504.62	360.00	144.62	62.67
1577	1.25(1.25)	466.07	280.00	186.07	80.63
1578	1.25(1.25)	654.45	380.00	274.45	118.93
1579	1.25(1.25)	473.44	370.00	103.44	44.82
1580	1.25(1.25)	538.83	330.00	208.83	90.49
1581	1.25(1.25)	325.85	210.00	115.85	50.20
1582	1.25(1.25)	587.49	340.00	247.49	107.25
1583	1.25(1.25)	332.92	190.00	142.92	61.93
1584	1.25(1.25)	387.78	210.00	177.78	77.04
1585	1.25(1.25)	345.40	260.00	85.40	37.01
1586	1.25(1.25)	480.90	185.00	295.90	128.22
1588	1.25(1.25)	421.83	270.00	151.83	65.79
1589	1.25(1.25)	408.76	220.00	188.76	81.80
1590	1.25(1.25)	480.62	190.00	290.62	125.94
1591	1.25(1.25)	481.00	190.00	291.00	126.10
1592	1.25(1.25)	554.47	240.00	314.47	136.27
1593	1.25(1.25)	554.36	250.00	304.36	131.89
1594	1.25(1.25)	388.12	231.00	157.12	68.09
1595	1.25(1.25)	505.02	320.00	185.02	80.18
1596	1.25(1.25)	482.71	100.00	382.71	165.84
1597	1.25(1.25)	520.05	300.00	220.05	95.36
1599	1.25(1.25)	582.63	340.00	242.63	105.14
1600	1.25(1.25)	340.67	200.00	140.67	60.96
1601	1.25(1.25)	387.54	185.00	202.54	87.77
1603	1.25(1.25)	387.17	185.00	202.17	87.61
1604	1.25(1.25)	349.02	220.00	129.02	55.91
1605	1.25(1.25)	565.21	310.00	255.21	110.59
1607	1.25(1.25)	555.96	330.00	225.96	97.92
1608	1.25(1.25)	458.29	280.00	178.29	77.26
1610	1.25(1.25)	344.62	210.00	134.62	58.34
1611	1.25(1.25)	387.93	185.00	202.93	87.94
1613	1.25(1.25)	381.04	320.00	61.04	26.45
1616	1.25(1.25)	324.95	200.00	124.95	54.14
1617	1.25(1.25)	338.67	190.00	148.67	64.43
1619	1.25(1.25)	318.17	190.00	128.17	55.54
1621	1.25(1.25)	508.13	355.00	153.13	66.36
1622	1.25(1.25)	444.88	300.00	144.88	62.78
1623	1.25(1.25)	443.51	280.00	163.51	70.85
1624	1.25(1.25)	444.00	280.00	164.00	71.07
1625	1.25(1.25)	335.01	200.00	135.01	58.50
1626	1.25(1.25)	333.07	190.00	143.07	62.00
1630	1.25(1.25)	398.53	200.00	198.53	86.03
1633	1.25(1.25)	610.19	270.00	340.19	147.41
1635	1.25(1.25)	510.27	385.00	125.27	54.28
1636	1.25(1.25)	490.64	310.00	180.64	78.28
1637	1.25(1.25)	387.77	190.00	197.77	85.70
1638	1.25(1.25)	438.85	200.00	238.85	103.50
1639	1.25(1.25)	397.31	200.00	197.31	85.50
1640	1.25(1.25)	492.08	300.00	192.08	83.24
1641	1.25(1.25)	538.13	300.00	238.13	103.19

1642	1.25 (1.25)	376.73	250.00	126.73	54.91
1644	1.25 (1.25)	424.00	260.00	164.00	71.07
1645	1.25 (1.25)	535.12	340.00	195.12	84.55
1646	1.25 (1.25)	625.22	530.00	95.22	41.26
1647	1.25 (1.25)	534.99	340.00	194.99	84.50
1648	1.25 (1.25)	374.91	230.00	144.91	62.79
1650	1.25 (1.25)	510.60	310.00	200.60	86.92
1651	1.25 (1.25)	472.38	250.00	222.38	96.36
1652	1.25 (1.25)	352.23	260.00	92.23	39.97
1653	1.25 (1.25)	483.46	195.00	288.46	125.00
1654	1.25 (1.25)	539.76	260.00	279.76	121.23
1655	1.25 (1.25)	370.74	200.00	170.74	73.99
1656	1.25 (1.25)	359.13	270.00	89.13	38.62
1657	1.25 (1.25)	386.07	300.00	86.07	37.30
1658	1.25 (1.25)	387.49	300.00	87.49	37.91
1659	1.25 (1.25)	400.07	220.00	180.07	78.03
1660	1.25 (1.25)	463.04	280.00	183.04	79.32
1661	1.25 (1.25)	489.27	300.00	189.27	82.02
1662	1.25 (1.25)	458.48	270.00	188.48	81.68
1664	1.25 (1.25)	386.23	230.00	156.23	67.70
1665	1.25 (1.25)	484.70	195.00	289.70	125.54
1668	1.25 (1.25)	383.41	190.00	193.41	83.81
1669	1.25 (1.25)	338.06	200.00	138.06	59.83
1670	1.25 (1.25)	471.92	310.00	161.92	70.17
1671	1.25 (1.25)	325.85	210.00	115.85	50.20
1672	1.25 (1.25)	386.79	240.00	146.79	63.61
1674	1.25 (1.25)	357.17	230.00	127.17	55.11
1675	1.25 (1.25)	557.41	300.00	257.41	111.54
1677	1.25 (1.25)	375.61	330.00	45.61	19.77
1678	1.25 (1.25)	357.67	270.00	87.67	37.99
1679	1.25 (1.25)	363.41	230.00	133.41	57.81
1680	1.25 (1.25)	375.02	220.00	155.02	67.18
1681	1.25 (1.25)	458.65	270.00	188.65	81.75
1683	1.25 (1.25)	345.88	260.00	85.88	37.22
1684	1.25 (1.25)	427.21	250.00	177.21	76.79
1685	1.25 (1.25)	427.17	250.00	177.17	76.78
1686	1.25 (1.25)	381.48	185.00	196.48	85.14
1687	1.25 (1.25)	565.43	245.00	320.43	138.85
1688	1.25 (1.25)	555.96	330.00	225.96	97.91
1689	1.25 (1.25)	461.79	270.00	191.79	83.11
1690	1.25 (1.25)	329.37	200.00	129.37	56.06
1691	1.25 (1.25)	400.25	220.00	180.25	78.11
1692	1.25 (1.25)	471.09	240.00	231.09	100.14
1693	1.25 (1.25)	574.15	340.00	234.15	101.46
1694	1.25 (1.25)	565.63	330.00	235.63	102.10
1695	1.25 (1.25)	370.28	180.00	190.28	82.46
1696	1.25 (1.25)	451.89	190.00	261.89	113.49
1697	1.25 (1.25)	518.01	330.00	188.01	81.47
1698	1.25 (1.25)	530.37	330.00	200.37	86.83
1699	1.25 (1.25)	506.16	310.00	196.16	85.00
1700	1.25 (1.25)	396.70	300.00	96.70	41.90
1703	1.25 (1.25)	455.96	330.00	125.96	54.58
1704	1.25 (1.25)	428.16	260.00	168.16	72.87
1705	1.25 (1.25)	376.71	250.00	126.71	54.91
1706	1.25 (1.25)	321.68	190.00	131.68	57.06
1707	1.25 (1.25)	326.86	210.00	116.86	50.64
1708	1.25 (1.25)	555.17	330.00	225.17	97.57
1710	1.25 (1.25)	338.01	210.00	128.01	55.47
1713	1.25 (1.25)	526.75	360.00	166.75	72.26
1714	1.25 (1.25)	479.19	330.00	149.19	64.65
1716	1.25 (1.25)	567.88	280.00	287.88	124.75
1717	1.25 (1.25)	504.45	350.00	154.45	66.93
1718	1.25 (1.25)	481.41	310.00	171.41	74.28
1719	1.25 (1.25)	558.66	300.00	258.66	112.09
1720	1.25 (1.25)	408.92	220.00	188.92	81.87
1721	1.25 (1.25)	408.81	230.00	178.81	77.48
1722	1.25 (1.25)	306.40	200.00	106.40	46.11
1724	1.25 (1.25)	332.47	185.00	147.47	63.90
1725	1.25 (1.25)	467.52	250.00	217.52	94.26
1726	1.25 (1.25)	309.68	220.00	89.68	38.86
1727	1.25 (1.25)	324.04	190.00	134.04	58.09

1728	1.25 (1.25)	409.81	220.00	189.81	82.25
1729	1.25 (1.25)	418.24	180.00	238.24	103.24
1732	1.25 (1.25)	358.02	290.00	68.02	29.48
1733	1.25 (1.25)	306.17	210.00	96.17	41.67
1734	1.25 (1.25)	495.43	315.00	180.43	78.18
1735	1.25 (1.25)	369.72	240.00	129.72	56.21
1736	1.25 (1.25)	381.74	185.00	196.74	85.25
1737	1.25 (1.25)	338.02	200.00	138.02	59.81
1738	1.25 (1.25)	520.44	300.00	220.44	95.52
1740	1.25 (1.25)	397.63	190.00	207.63	89.97
1741	1.25 (1.25)	406.68	205.00	201.68	87.39
1742	1.25 (1.25)	396.45	190.00	206.45	89.46
1744	1.25 (1.25)	423.38	220.00	203.38	88.13
1745	1.25 (1.25)	433.54	265.00	168.54	73.03
1746	1.25 (1.25)	441.69	270.00	171.69	74.40
1747	1.25 (1.25)	407.83	210.00	197.83	85.73
1748	1.25 (1.25)	403.33	200.00	203.33	88.11
1749	1.25 (1.25)	405.84	210.00	195.84	84.87
1750	1.25 (1.25)	395.07	200.00	195.07	84.53
1751	1.25 (1.25)	418.98	220.00	198.98	86.22
1752	1.25 (1.25)	418.99	220.00	198.99	86.23
1753	1.25 (1.25)	395.74	180.00	215.74	93.49
1755	1.25 (1.25)	406.37	205.00	201.37	87.26
1756	1.25 (1.25)	455.87	330.00	125.87	54.54
1758	1.25 (1.25)	392.26	180.00	212.26	91.98
1759	1.25 (1.25)	391.24	180.00	211.24	91.54
1760	1.25 (1.25)	395.10	190.00	205.10	88.87
1761	1.25 (1.25)	395.10	180.00	215.10	93.21
1762	1.25 (1.25)	395.13	190.00	205.13	88.89
1763	1.25 (1.25)	395.12	190.00	205.12	88.89
1764	1.25 (1.25)	511.83	310.00	201.83	87.46
1765	1.25 (1.25)	473.10	260.00	213.10	92.34
1766	1.25 (1.25)	487.56	280.00	207.56	89.94
1767	1.25 (1.25)	483.72	290.00	193.72	83.95
1768	1.25 (1.25)	499.28	315.00	184.28	79.86
1769	1.25 (1.25)	477.41	280.00	197.41	85.55
1770	1.25 (1.25)	489.60	300.00	189.60	82.16
1771	1.25 (1.25)	453.66	240.00	213.66	92.58
1772	1.25 (1.25)	477.23	280.00	197.23	85.47
1773	1.25 (1.25)	332.47	185.00	147.47	63.90
1774	1.25 (1.25)	422.21	200.00	222.21	96.29
1775	1.25 (1.25)	479.51	200.00	279.51	121.12
1777	1.25 (1.25)	362.91	250.00	112.91	48.93
1778	1.25 (1.25)	475.45	270.00	205.45	89.03
1779	1.25 (1.25)	372.08	200.00	172.08	74.57
1780	1.25 (1.25)	391.56	180.00	211.56	91.67
1781	1.25 (1.25)	378.86	240.00	138.86	60.17
1782	1.25 (1.25)	490.74	310.00	180.74	78.32
1783	1.25 (1.25)	498.30	310.00	188.30	81.60
1785	1.25 (1.25)	493.90	315.00	178.90	77.52
1786	1.25 (1.25)	489.18	300.00	189.18	81.98
1787	1.25 (1.25)	491.69	315.00	176.69	76.57
1788	1.25 (1.25)	375.73	220.00	155.73	67.48
1789	1.25 (1.25)	466.48	280.00	186.48	80.81
1790	1.25 (1.25)	381.80	185.00	196.80	85.28
1791	1.25 (1.25)	485.50	295.00	190.50	82.55
1792	1.25 (1.25)	471.64	240.00	231.64	100.38
1793	1.25 (1.25)	498.42	310.00	188.42	81.65
1794	1.25 (1.25)	570.40	440.00	130.40	56.51
1795	1.25 (1.25)	490.08	310.00	180.08	78.04
1796	1.25 (1.25)	498.89	315.00	183.89	79.68
1797	1.25 (1.25)	498.37	310.00	188.37	81.63
1798	1.25 (1.25)	475.55	260.00	215.55	93.41
1799	1.25 (1.25)	475.30	280.00	195.30	84.63
1800	1.25 (1.25)	480.94	185.00	295.94	128.24
1801	1.25 (1.25)	487.95	295.00	192.95	83.61
1802	1.25 (1.25)	477.29	280.00	197.29	85.49
1803	1.25 (1.25)	466.56	240.00	226.56	98.18
1804	1.25 (1.25)	466.80	250.00	216.80	93.95
1805	1.25 (1.25)	456.02	330.00	126.02	54.61
1806	1.25 (1.25)	487.57	290.00	197.57	85.61

1807	1.25 (1.25)	489.16	310.00	179.16	77.64
1808	1.25 (1.25)	489.22	300.00	189.22	81.99
1809	1.25 (1.25)	630.40	460.00	170.40	73.84
1810	1.25 (1.25)	491.43	315.00	176.43	76.45
1811	1.25 (1.25)	506.15	360.00	146.15	63.33
1812	1.25 (1.25)	623.23	310.00	313.23	135.73
1815	1.25 (1.25)	458.44	340.00	118.44	51.32
1816	1.25 (1.25)	522.80	300.00	222.80	96.55
1818	1.25 (1.25)	458.51	270.00	188.51	81.69
1819	1.25 (1.25)	381.94	290.00	91.94	39.84
1822	1.25 (1.25)	385.41	190.00	195.41	84.68
1824	1.25 (1.25)	366.37	190.00	176.37	76.43
1825	1.25 (1.25)	347.10	220.00	127.10	55.08
1826	1.25 (1.25)	366.37	195.00	171.37	74.26
1827	1.25 (1.25)	421.72	270.00	151.72	65.75
1828	1.25 (1.25)	381.68	185.00	196.68	85.23
1829	1.25 (1.25)	508.29	340.00	168.29	72.92
1831	1.25 (1.25)	534.24	340.00	194.24	84.17
1833	1.25 (1.25)	359.16	270.00	89.16	38.64
1834	1.25 (1.25)	357.31	250.00	107.31	46.50
1835	1.25 (1.25)	508.98	360.00	148.98	64.56
1836	1.25 (1.25)	468.57	370.00	98.57	42.71
1837	1.25 (1.25)	531.03	300.00	231.03	100.11
1838	1.25 (1.25)	457.37	270.00	187.37	81.20
1839	1.25 (1.25)	376.70	250.00	126.70	54.90
1840	1.25 (1.25)	420.34	250.00	170.34	73.82
1841	1.25 (1.25)	541.41	290.00	251.41	108.94
1851	1.25 (1.25)	439.89	210.00	229.89	99.62
1858	1.25 (1.25)	464.36	280.00	184.36	79.89
1870	1.25 (1.25)	383.41	190.00	193.41	83.81
1876	1.25 (1.25)	329.17	185.00	144.17	62.47
1883	1.25 (1.25)	562.84	280.00	282.84	122.57
1884	1.25 (1.25)	619.73	360.00	259.73	112.55
1885	1.25 (1.25)	624.45	560.00	64.45	27.93
1887	1.25 (1.25)	592.66	420.00	172.66	74.82
1888	1.25 (1.25)	568.40	330.00	238.40	103.31
1889	1.25 (1.25)	362.83	230.00	132.83	57.56
1892	1.25 (1.25)	341.73	200.00	141.73	61.42
1893	1.25 (1.25)	349.38	220.00	129.38	56.06
1894	1.25 (1.25)	400.64	225.00	175.64	76.11
1895	1.25 (1.25)	354.95	290.00	64.95	28.14
1896	1.25 (1.25)	484.10	290.00	194.10	84.11
1897	1.25 (1.25)	609.18	270.00	339.18	146.98
1898	1.25 (1.25)	381.68	185.00	196.68	85.23
1899	1.25 (1.25)	554.11	292.00	262.11	113.58
1900	1.25 (1.25)	497.40	420.00	77.40	33.54
1901	1.25 (1.25)	555.96	340.00	215.96	93.58
1903	1.25 (1.25)	423.35	260.00	163.35	70.78
1904	1.25 (1.25)	526.19	340.00	186.19	80.68
1905	1.25 (1.25)	505.02	360.00	145.02	62.84
1906	1.25 (1.25)	434.63	260.00	174.63	75.67
1907	1.25 (1.25)	407.33	200.00	207.33	89.84
1908	1.25 (1.25)	520.45	300.00	220.45	95.53
1909	1.25 (1.25)	469.93	340.00	129.93	56.30
1910	1.25 (1.25)	380.22	290.00	90.22	39.09
1911	1.25 (1.25)	560.27	300.00	260.27	112.78
1912	1.25 (1.25)	575.77	390.00	185.77	80.50
1913	1.25 (1.25)	457.33	320.00	137.33	59.51
1914	1.25 (1.25)	457.27	270.00	187.27	81.15
1915	1.25 (1.25)	399.43	190.00	209.43	90.75
1916	1.25 (1.25)	390.56	260.00	130.56	56.57
1917	1.25 (1.25)	350.11	210.00	140.11	60.72
1918	1.25 (1.25)	387.21	190.00	197.21	85.46
1919	1.25 (1.25)	472.48	294.00	178.48	77.34
1920	1.25 (1.25)	483.45	195.00	288.45	124.99
1921	1.25 (1.25)	312.13	220.00	92.13	39.93
1922	1.25 (1.25)	535.32	340.00	195.32	84.64
1925	1.25 (1.25)	482.90	190.00	292.90	126.92
1926	1.25 (1.25)	399.46	200.00	199.46	86.43
1927	1.25 (1.25)	399.46	200.00	199.46	86.43
1928	1.25 (1.25)	329.40	200.00	129.40	56.08

1930	1.25 (1.25)	563.61	315.00	248.61	107.73
1931	1.25 (1.25)	375.24	220.00	155.24	67.27
1932	1.25 (1.25)	473.49	370.00	103.49	44.84
1933	1.25 (1.25)	372.54	210.00	162.54	70.44
1934	1.25 (1.25)	540.71	310.00	230.71	99.97
1935	1.25 (1.25)	508.76	310.00	198.76	86.13
1937	1.25 (1.25)	508.51	340.00	168.51	73.02
1938	1.25 (1.25)	488.04	300.00	188.04	81.48
1939	1.25 (1.25)	471.42	360.00	111.42	48.28
1940	1.25 (1.25)	454.85	310.00	144.85	62.77
1942	1.25 (1.25)	661.74	360.00	301.74	130.75
1943	1.25 (1.25)	421.65	270.00	151.65	65.71
1945	1.25 (1.25)	376.69	200.00	176.69	76.57
1946	1.25 (1.25)	399.46	200.00	199.46	86.43
1948	1.25 (1.25)	347.16	220.00	127.16	55.10
1949	1.25 (1.25)	565.22	280.00	285.22	123.60
1950	1.25 (1.25)	346.94	230.00	116.94	50.67
1951	1.25 (1.25)	347.49	190.00	157.49	68.24
1952	1.25 (1.25)	327.43	185.00	142.43	61.72
1953	1.25 (1.25)	564.77	310.00	254.77	110.40
1955	1.25 (1.25)	562.47	310.00	252.47	109.40
1957	1.25 (1.25)	461.42	300.00	161.42	69.95
1958	1.25 (1.25)	387.76	210.00	177.76	77.03
1959	1.25 (1.25)	446.34	290.00	156.34	67.75
1960	1.25 (1.25)	415.11	300.00	115.11	49.88
1961	1.25 (1.25)	351.86	260.00	91.86	39.80
1963	1.25 (1.25)	362.96	246.00	116.96	50.68
1964	1.25 (1.25)	424.37	230.00	194.37	84.23
1965	1.25 (1.25)	484.31	300.00	184.31	79.87
1966	1.25 (1.25)	503.42	340.00	163.42	70.82
1967	1.25 (1.25)	564.68	300.00	264.68	114.70
1968	1.25 (1.25)	571.07	390.00	181.07	78.46
1969	1.25 (1.25)	399.77	210.00	189.77	82.23
1970	1.25 (1.25)	564.70	330.00	234.70	101.71
1971	1.25 (1.25)	459.17	340.00	119.17	51.64
1972	1.25 (1.25)	334.35	190.00	144.35	62.55
1973	1.25 (1.25)	508.05	340.00	168.05	72.82
1974	1.25 (1.25)	374.82	200.00	174.82	75.76
1975	1.25 (1.25)	405.63	220.00	185.63	80.44
1976	1.25 (1.25)	521.31	290.00	231.31	100.24
1977	1.25 (1.25)	386.23	230.00	156.23	67.70
1978	1.25 (1.25)	338.20	210.00	128.20	55.55
1979	1.25 (1.25)	526.00	330.00	196.00	84.93
1980	1.25 (1.25)	476.27	325.00	151.27	65.55
1981	1.25 (1.25)	572.06	400.00	172.06	74.56
1982	1.25 (1.25)	493.10	212.00	281.10	121.81
1984	1.25 (1.25)	419.47	260.00	159.47	69.11
1985	1.25 (1.25)	443.62	240.00	203.62	88.24
1986	1.25 (1.25)	510.58	340.00	170.58	73.92
1987	1.25 (1.25)	510.61	340.00	170.61	73.93
1989	1.25 (1.25)	374.05	190.00	184.05	79.76
1990	1.25 (1.25)	381.92	290.00	91.92	39.83
1991	1.25 (1.25)	383.41	185.00	198.41	85.98
1992	1.25 (1.25)	531.07	310.00	221.07	95.80
1994	1.25 (1.25)	391.06	290.00	101.06	43.79
1995	1.25 (1.25)	366.37	200.00	166.37	72.10
1996	1.25 (1.25)	606.23	320.00	286.23	124.04
1999	1.25 (1.25)	399.51	200.00	199.51	86.45
2000	1.25 (1.25)	399.50	200.00	199.50	86.45
2001	1.25 (1.25)	618.95	320.00	298.95	129.55
2002	1.25 (1.25)	387.52	200.00	187.52	81.26
2003	1.25 (1.25)	480.38	290.00	190.38	82.50
2004	1.25 (1.25)	436.36	200.00	236.36	102.42
2006	1.25 (1.25)	508.03	330.00	178.03	77.15
2007	1.25 (1.25)	414.61	210.00	204.61	88.66
2008	1.25 (1.25)	623.58	330.00	293.58	127.22
2009	1.25 (1.25)	579.73	355.00	224.73	97.38
2010	1.25 (1.25)	452.99	270.00	182.99	79.29
2011	1.25 (1.25)	571.12	220.00	351.12	152.15
2013	1.25 (1.25)	352.00	210.00	142.00	61.53
2014	1.25 (1.25)	374.64	200.00	174.64	75.68

2015	1.25 (1.25)	477.49	280.00	197.49	85.58
2016	1.25 (1.25)	643.86	448.00	195.86	84.87
2017	1.25 (1.25)	653.85	380.00	273.85	118.67
2019	1.25 (1.25)	394.42	230.00	164.42	71.25
2021	1.25 (1.25)	376.87	250.00	126.87	54.98
2023	1.25 (1.25)	334.82	185.00	149.82	64.92
2024	1.25 (1.25)	451.15	265.00	186.15	80.66
2025	1.25 (1.25)	624.60	540.00	84.60	36.66
2028	1.25 (1.25)	563.62	315.00	248.62	107.74
2029	1.25 (1.25)	658.12	410.00	248.12	107.52
2030	1.25 (1.25)	381.18	250.00	131.18	56.84
2031	1.25 (1.25)	562.51	330.00	232.51	100.75
2032	1.25 (1.25)	328.13	190.00	138.13	59.86
2033	1.25 (1.25)	454.82	190.00	264.82	114.76
2035	1.25 (1.25)	387.50	190.00	197.50	85.58
2037	1.25 (1.25)	440.55	220.00	220.55	95.57
2038	1.25 (1.25)	483.00	200.00	283.00	122.63
2039	1.25 (1.25)	363.25	250.00	113.25	49.08
2040	1.25 (1.25)	625.80	470.00	155.80	67.51
2041	1.25 (1.25)	400.61	215.00	185.61	80.43
2042	1.25 (1.25)	348.11	230.00	118.11	51.18
2043	1.25 (1.25)	643.52	448.00	195.52	84.72
2044	1.25 (1.25)	362.65	230.00	132.65	57.48
2045	1.25 (1.25)	387.33	240.00	147.33	63.84
2046	1.25 (1.25)	564.08	300.00	264.08	114.43
2048	1.25 (1.25)	538.30	280.00	258.30	111.93
2051	1.25 (1.25)	359.22	270.00	89.22	38.66
2052	1.25 (1.25)	502.17	310.00	192.17	83.27
2055	1.25 (1.25)	567.29	350.00	217.29	94.16
2056	1.25 (1.25)	490.77	290.00	200.77	87.00
2057	1.25 (1.25)	490.70	280.00	210.70	91.30
2058	1.25 (1.25)	490.69	270.00	220.69	95.63
2059	1.25 (1.25)	387.83	185.00	202.83	87.89
2060	1.25 (1.25)	387.38	210.00	177.38	76.86
2061	1.25 (1.25)	661.74	360.00	301.74	130.75
2062	1.25 (1.25)	509.72	360.00	149.72	64.88
2063	1.25 (1.25)	537.52	340.00	197.52	85.59
2064	1.25 (1.25)	387.77	200.00	187.77	81.37
2065	1.25 (1.25)	451.10	190.00	261.10	113.14
2066	1.25 (1.25)	309.83	200.00	109.83	47.59
2067	1.25 (1.25)	625.80	470.00	155.80	67.51
2068	1.25 (1.25)	358.69	290.00	68.69	29.77
2069	1.25 (1.25)	451.12	210.00	241.12	104.48
2070	1.25 (1.25)	582.52	310.00	272.52	118.09
2071	1.25 (1.25)	332.12	185.00	147.12	63.75
2072	1.25 (1.25)	510.96	370.00	140.96	61.08
2073	1.25 (1.25)	327.80	185.00	142.80	61.88
2075	1.25 (1.25)	538.44	300.00	238.44	103.32
2077	1.25 (1.25)	338.22	187.00	151.22	65.53
2078	1.25 (1.25)	569.08	310.00	259.08	112.27
2079	1.25 (1.25)	464.09	290.00	174.09	75.44
2080	1.25 (1.25)	388.00	185.00	203.00	87.97
2081	1.25 (1.25)	416.02	280.00	136.02	58.94
2082	1.25 (1.25)	328.89	185.00	143.89	62.35
2083	1.25 (1.25)	387.66	185.00	202.66	87.82
2084	1.25 (1.25)	391.12	270.00	121.12	52.49
2086	1.25 (1.25)	388.44	215.00	173.44	75.16
2088	1.25 (1.25)	335.14	190.00	145.14	62.89
2089	1.25 (1.25)	424.56	230.00	194.56	84.31
2090	1.25 (1.25)	451.70	250.00	201.70	87.40
2091	1.25 (1.25)	421.22	214.00	207.22	89.79
2093	1.25 (1.25)	336.24	200.00	136.24	59.04
2094	1.25 (1.25)	554.72	310.00	244.72	106.05
2096	1.25 (1.25)	407.19	230.00	177.19	76.78
2097	1.25 (1.25)	369.31	260.00	109.31	47.37
2098	1.25 (1.25)	378.45	220.00	158.45	68.66
2099	1.25 (1.25)	451.98	190.00	261.98	113.53
2100	1.25 (1.25)	383.80	190.00	193.80	83.98
2101	1.25 (1.25)	515.79	320.00	195.79	84.84
2103	1.25 (1.25)	361.64	230.00	131.64	57.04
2104	1.25 (1.25)	310.18	190.00	120.18	52.08

2107	1.25(1.25)	400.07	220.00	180.07	78.03
2108	1.25(1.25)	372.83	180.00	192.83	83.56
2109	1.25(1.25)	493.63	310.00	183.63	79.57
2110	1.25(1.25)	454.96	280.00	174.96	75.82
2111	1.25(1.25)	330.55	190.00	140.55	60.91
2112	1.25(1.25)	623.84	315.00	308.84	133.83
2113	1.25(1.25)	325.48	190.00	135.48	58.71
2115	1.25(1.25)	453.90	340.00	113.90	49.36
2116	1.25(1.25)	370.13	180.00	190.13	82.39
2117	1.25(1.25)	400.27	240.00	160.27	69.45
2118	1.25(1.25)	506.00	340.00	166.00	71.93
2120	1.25(1.25)	408.32	320.00	88.32	38.27
2121	1.25(1.25)	520.41	300.00	220.41	95.51
2123	1.25(1.25)	570.70	420.00	150.70	65.30
2124	1.25(1.25)	329.40	210.00	119.40	51.74
2126	1.25(1.25)	394.72	230.00	164.72	71.38
2127	1.25(1.25)	392.54	180.00	212.54	92.10
2128	1.25(1.25)	347.59	190.00	157.59	68.29
2129	1.25(1.25)	332.79	185.00	147.79	64.04
2131	1.25(1.25)	569.29	400.00	169.29	73.36
2133	1.25(1.25)	370.96	200.00	170.96	74.08
2135	1.25(1.25)	484.28	200.00	284.28	123.19
2138	1.25(1.25)	472.13	240.00	232.13	100.59
2139	1.25(1.25)	370.14	180.00	190.14	82.39
2140	1.25(1.25)	400.18	240.00	160.18	69.41
2141	1.25(1.25)	610.84	270.00	340.84	147.70
2142	1.25(1.25)	349.51	220.00	129.51	56.12
2143	1.25(1.25)	351.24	200.00	151.24	65.54
2144	1.25(1.25)	485.82	190.00	295.82	128.19
2145	1.25(1.25)	568.15	230.00	338.15	146.53
2147	1.25(1.25)	620.94	330.00	290.94	126.07
2148	1.25(1.25)	363.73	190.00	173.73	75.28
2152	1.25(1.25)	564.59	320.00	244.59	105.99
2153	1.25(1.25)	333.24	185.00	148.24	64.24
2154	1.25(1.25)	528.37	300.00	228.37	98.96
2155	1.25(1.25)	362.03	260.00	102.03	44.21
2157	1.25(1.25)	477.28	280.00	197.28	85.49
2158	1.25(1.25)	564.83	300.00	264.83	114.76
2160	1.25(1.25)	325.39	200.00	125.39	54.33
2161	1.25(1.25)	384.79	185.00	199.79	86.57
2164	1.25(1.25)	370.77	190.00	180.77	78.34
2165	1.25(1.25)	318.35	190.00	128.35	55.62
2166	1.25(1.25)	434.84	280.00	154.84	67.10
2167	1.25(1.25)	451.44	190.00	261.44	113.29
2168	1.25(1.25)	487.95	300.00	187.95	81.44
2169	1.25(1.25)	338.02	210.00	128.02	55.47
2170	1.25(1.25)	346.89	230.00	116.89	50.65
2172	1.25(1.25)	399.78	210.00	189.78	82.24
2173	1.25(1.25)	357.23	250.00	107.23	46.47
2174	1.25(1.25)	361.97	190.00	171.97	74.52
2175	1.25(1.25)	362.44	190.00	172.44	74.72
2176	1.25(1.25)	361.31	190.00	171.31	74.24
2177	1.25(1.25)	361.58	190.00	171.58	74.35
2178	1.25(1.25)	362.48	190.00	172.48	74.74
2179	1.25(1.25)	361.32	190.00	171.32	74.24
2180	1.25(1.25)	361.40	190.00	171.40	74.27
2181	1.25(1.25)	439.89	200.00	239.89	103.95
2182	1.25(1.25)	438.99	200.00	238.99	103.56
2183	1.25(1.25)	437.94	190.00	247.94	107.44
2185	1.25(1.25)	568.66	450.00	118.66	51.42
2186	1.25(1.25)	371.69	200.00	171.69	74.40
2188	1.25(1.25)	438.16	190.00	248.16	107.54
2189	1.25(1.25)	332.58	185.00	147.58	63.95
2190	1.25(1.25)	434.63	260.00	174.63	75.67
2191	1.25(1.25)	328.03	190.00	138.03	59.81
2192	1.25(1.25)	512.79	310.00	202.79	87.88
2195	1.25(1.25)	454.83	190.00	264.83	114.76
2196	1.25(1.25)	390.47	260.00	130.47	56.54
2197	1.25(1.25)	387.43	190.00	197.43	85.55
2198	1.25(1.25)	372.83	190.00	182.83	79.23
2199	1.25(1.25)	372.84	190.00	182.84	79.23

2200	1.25 (1.25)	568.96	320.00	248.96	107.88
2202	1.25 (1.25)	400.26	240.00	160.26	69.45
2203	1.25 (1.25)	665.44	400.00	265.44	115.02
2204	1.25 (1.25)	400.62	210.00	190.62	82.60
2205	1.25 (1.25)	440.26	220.00	220.26	95.45
2206	1.25 (1.25)	438.08	190.00	248.08	107.50
2207	1.25 (1.25)	332.52	200.00	132.52	57.43
2208	1.25 (1.25)	409.98	230.00	179.98	77.99
2209	1.25 (1.25)	468.49	400.00	68.49	29.68
2210	1.25 (1.25)	563.92	280.00	283.92	123.03
2212	1.25 (1.25)	475.62	260.00	215.62	93.44
2213	1.25 (1.25)	369.57	260.00	109.57	47.48
2214	1.25 (1.25)	566.64	230.00	336.64	145.88
2215	1.25 (1.25)	452.42	230.00	222.42	96.38
2217	1.25 (1.25)	502.90	310.00	192.90	83.59
2219	1.25 (1.25)	463.27	351.00	112.27	48.65
2220	1.25 (1.25)	561.56	340.00	221.56	96.01
2221	1.25 (1.25)	387.69	185.00	202.69	87.83
2222	1.25 (1.25)	462.41	290.00	172.41	74.71
2223	1.25 (1.25)	503.22	325.00	178.22	77.23
2224	1.25 (1.25)	527.99	300.00	227.99	98.80
2227	1.25 (1.25)	346.64	210.00	136.64	59.21
2228	1.25 (1.25)	430.65	275.00	155.65	67.45
2229	1.25 (1.25)	371.41	345.00	26.41	11.45
2230	1.25 (1.25)	421.66	270.00	151.66	65.72
2231	1.25 (1.25)	329.83	190.00	139.83	60.59
2232	1.25 (1.25)	504.78	330.00	174.78	75.74
2233	1.25 (1.25)	389.12	210.00	179.12	77.62
2234	1.25 (1.25)	507.64	390.00	117.64	50.98
2235	1.25 (1.25)	318.07	190.00	128.07	55.50
2236	1.25 (1.25)	451.37	248.00	203.37	88.13
2237	1.25 (1.25)	368.36	230.00	138.36	59.96
2238	1.25 (1.25)	409.10	220.00	189.10	81.94
2239	1.25 (1.25)	387.43	185.00	202.43	87.72
2240	1.25 (1.25)	410.94	185.00	225.94	97.91
2241	1.25 (1.25)	327.40	185.00	142.40	61.71
2242	1.25 (1.25)	532.25	310.00	222.25	96.31
2244	1.25 (1.25)	503.37	350.00	153.37	66.46
2245	1.25 (1.25)	522.63	300.00	222.63	96.47
2246	1.25 (1.25)	439.15	200.00	239.15	103.63
2247	1.25 (1.25)	437.16	300.00	137.16	59.44
2248	1.25 (1.25)	451.18	220.00	231.18	100.18
2249	1.25 (1.25)	571.79	440.00	131.79	57.11
2250	1.25 (1.25)	407.56	340.00	67.56	29.28
2251	1.25 (1.25)	614.98	270.00	344.98	149.49
2252	1.25 (1.25)	507.46	380.00	127.46	55.23
2253	1.25 (1.25)	442.28	300.00	142.28	61.65
2254	1.25 (1.25)	318.13	190.00	128.13	55.52
2255	1.25 (1.25)	369.73	240.00	129.73	56.21
2256	1.25 (1.25)	565.11	300.00	265.11	114.88
2258	1.25 (1.25)	652.76	380.00	272.76	118.20
2259	1.25 (1.25)	410.71	280.00	130.71	56.64
2260	1.25 (1.25)	387.45	210.00	177.45	76.89
2261	1.25 (1.25)	406.25	200.00	206.25	89.38
2262	1.25 (1.25)	520.63	300.00	220.63	95.61
2264	1.25 (1.25)	346.84	240.00	106.84	46.30
2265	1.25 (1.25)	407.36	230.00	177.36	76.85
2267	1.25 (1.25)	386.95	190.00	196.95	85.35
2268	1.25 (1.25)	370.12	180.00	190.12	82.39
2269	1.25 (1.25)	505.34	330.00	175.34	75.98
2270	1.25 (1.25)	624.59	310.00	314.59	136.32
2271	1.25 (1.25)	373.02	190.00	183.02	79.31
2272	1.25 (1.25)	507.58	410.00	97.58	42.28
2273	1.25 (1.25)	338.02	210.00	128.02	55.48
2274	1.25 (1.25)	407.21	230.00	177.21	76.79
2276	1.25 (1.25)	504.20	320.00	184.20	79.82
2278	1.25 (1.25)	383.23	320.00	63.23	27.40
2279	1.25 (1.25)	410.23	240.00	170.23	73.77
2280	1.25 (1.25)	370.29	180.00	190.29	82.46
2281	1.25 (1.25)	501.41	225.00	276.41	119.78
2282	1.25 (1.25)	370.26	180.00	190.26	82.44

2283	1.25 (1.25)	618.94	320.00	298.94	129.54
2284	1.25 (1.25)	358.28	250.00	108.28	46.92
2285	1.25 (1.25)	384.24	200.00	184.24	79.84
2286	1.25 (1.25)	413.48	250.00	163.48	70.84
2287	1.25 (1.25)	466.66	240.00	226.66	98.22
2288	1.25 (1.25)	563.30	260.00	303.30	131.43
2289	1.25 (1.25)	530.40	330.00	200.40	86.84
2290	1.25 (1.25)	375.14	330.00	45.14	19.56
2292	1.25 (1.25)	325.53	210.00	115.53	50.06
2293	1.25 (1.25)	338.13	200.00	138.13	59.85
2295	1.25 (1.25)	619.56	340.00	279.56	121.14
2296	1.25 (1.25)	333.61	185.00	148.61	64.40
2299	1.25 (1.25)	388.50	210.00	178.50	77.35
2300	1.25 (1.25)	548.64	280.00	268.64	116.41
2301	1.25 (1.25)	439.95	200.00	239.95	103.98
2302	1.25 (1.25)	366.83	220.00	146.83	63.63
2303	1.25 (1.25)	327.55	185.00	142.55	61.77
2305	1.25 (1.25)	391.05	180.00	211.05	91.45
2306	1.25 (1.25)	369.45	180.00	189.45	82.09
2308	1.25 (1.25)	338.04	200.00	138.04	59.82
2309	1.25 (1.25)	400.56	215.00	185.56	80.41
2311	1.25 (1.25)	329.74	210.00	119.74	51.89
2313	1.25 (1.25)	444.08	220.00	224.08	97.10
2314	1.25 (1.25)	554.23	330.00	224.23	97.17
2315	1.25 (1.25)	370.38	180.00	190.38	82.50
2316	1.25 (1.25)	561.83	370.00	191.83	83.13
2317	1.25 (1.25)	456.57	260.00	196.57	85.18
2319	1.25 (1.25)	357.28	240.00	117.28	50.82
2320	1.25 (1.25)	618.93	320.00	298.93	129.54
2322	1.25 (1.25)	552.77	320.00	232.77	100.87
2324	1.25 (1.25)	453.91	340.00	113.91	49.36
2325	1.25 (1.25)	563.29	340.00	223.29	96.76
2327	1.25 (1.25)	372.67	200.00	172.67	74.82
2328	1.25 (1.25)	456.64	260.00	196.64	85.21
2329	1.25 (1.25)	388.12	231.00	157.12	68.09
2330	1.25 (1.25)	368.19	180.00	188.19	81.55
2331	1.25 (1.25)	389.20	250.00	139.20	60.32
2332	1.25 (1.25)	513.62	330.00	183.62	79.57
2333	1.25 (1.25)	454.46	190.00	264.46	114.60
2334	1.25 (1.25)	516.53	300.00	216.53	93.83
2336	1.25 (1.25)	511.61	310.00	201.61	87.36
2337	1.25 (1.25)	634.24	460.00	174.24	75.50
2338	1.25 (1.25)	367.54	180.00	187.54	81.27
2339	1.25 (1.25)	405.28	200.00	205.28	88.95
2340	1.25 (1.25)	382.06	280.00	102.06	44.22
2341	1.25 (1.25)	504.11	340.00	164.11	71.12
2342	1.25 (1.25)	329.05	185.00	144.05	62.42
2343	1.25 (1.25)	488.02	310.00	178.02	77.14
2344	1.25 (1.25)	647.50	445.00	202.50	87.75
2345	1.25 (1.25)	504.82	325.00	179.82	77.92
2346	1.25 (1.25)	349.63	210.00	139.63	60.51
2347	1.25 (1.25)	386.24	185.00	201.24	87.21
2353	1.25 (1.25)	330.17	185.00	145.17	62.91
2354	1.25 (1.25)	384.17	210.00	174.17	75.48
2355	1.25 (1.25)	554.63	300.00	254.63	110.34
2356	1.25 (1.25)	507.51	360.00	147.51	63.92
2357	1.25 (1.25)	506.43	310.00	196.43	85.12
2359	1.25 (1.25)	351.10	200.00	151.10	65.48
2360	1.25 (1.25)	407.57	320.00	87.57	37.95
2362	1.25 (1.25)	459.17	280.00	179.17	77.64
2363	1.25 (1.25)	498.30	310.00	188.30	81.60
2365	1.25 (1.25)	362.62	230.00	132.62	57.47
2366	1.25 (1.25)	491.32	315.00	176.32	76.41
2367	1.25 (1.25)	366.37	190.00	176.37	76.43
2368	1.25 (1.25)	389.62	205.00	184.62	80.00
2370	1.25 (1.25)	333.35	185.00	148.35	64.29
2371	1.25 (1.25)	325.49	200.00	125.49	54.38
2372	1.25 (1.25)	456.46	250.00	206.46	89.47
2375	1.25 (1.25)	488.99	300.00	188.99	81.89
2377	1.25 (1.25)	409.18	230.00	179.18	77.65
2379	1.25 (1.25)	368.19	180.00	188.19	81.55

2381	1.25 (1.25)	582.26	360.00	222.26	96.31
2383	1.25 (1.25)	382.18	280.00	102.18	44.28
2386	1.25 (1.25)	487.85	295.00	192.85	83.57
2387	1.25 (1.25)	416.40	280.00	136.40	59.11
2388	1.25 (1.25)	387.17	185.00	202.17	87.61
2389	1.25 (1.25)	440.34	230.00	210.34	91.15
2390	1.25 (1.25)	387.68	185.00	202.68	87.83
2391	1.25 (1.25)	609.38	270.00	339.38	147.06
2393	1.25 (1.25)	675.73	350.00	325.73	141.15
2395	1.25 (1.25)	552.66	320.00	232.66	100.82
2397	1.25 (1.25)	368.23	180.00	188.23	81.57
2398	1.25 (1.25)	499.88	300.00	199.88	86.62
2399	1.25 (1.25)	505.35	345.00	160.35	69.48
2400	1.25 (1.25)	537.11	340.00	197.11	85.42
2401	1.25 (1.25)	387.29	185.00	202.29	87.66
2402	1.25 (1.25)	464.58	270.00	194.58	84.32
2403	1.25 (1.25)	539.29	345.00	194.29	84.19
2405	1.25 (1.25)	366.37	195.00	171.37	74.26
2407	1.25 (1.25)	331.81	190.00	141.81	61.45
2408	1.25 (1.25)	480.56	315.00	165.56	71.74
2410	1.25 (1.25)	383.47	185.00	198.47	86.01
2411	1.25 (1.25)	441.78	270.00	171.78	74.44
2412	1.25 (1.25)	538.54	340.00	198.54	86.03
2413	1.25 (1.25)	414.84	210.00	204.84	88.76
2414	1.25 (1.25)	509.53	360.00	149.53	64.80
2415	1.25 (1.25)	357.14	212.00	145.14	62.89
2416	1.25 (1.25)	452.77	190.00	262.77	113.87
2417	1.25 (1.25)	580.92	250.00	330.92	143.40
2420	1.25 (1.25)	609.19	270.00	339.19	146.98
2425	1.25 (1.25)	333.37	190.00	143.37	62.13
2426	1.25 (1.25)	418.98	220.00	198.98	86.22
2427	1.25 (1.25)	454.71	340.00	114.71	49.71
2428	1.25 (1.25)	531.50	310.00	221.50	95.98
2430	1.25 (1.25)	373.28	210.00	163.28	70.76
2431	1.25 (1.25)	470.26	270.00	200.26	86.78
2432	1.25 (1.25)	567.41	350.00	217.41	94.21
2433	1.25 (1.25)	400.65	215.00	185.65	80.45
2434	1.25 (1.25)	376.47	230.00	146.47	63.47
2436	1.25 (1.25)	509.32	350.00	159.32	69.04
2437	1.25 (1.25)	639.78	340.00	299.78	129.91
2439	1.25 (1.25)	437.93	190.00	247.93	107.44
2440	1.25 (1.25)	439.89	190.00	249.89	108.28
2442	1.25 (1.25)	336.38	185.00	151.38	65.60
2443	1.25 (1.25)	507.32	370.00	137.32	59.50
2444	1.25 (1.25)	503.83	310.00	193.83	83.99
2445	1.25 (1.25)	609.49	270.00	339.49	147.11
2447	1.25 (1.25)	381.54	190.00	191.54	83.00
2448	1.25 (1.25)	318.21	190.00	128.21	55.56
2449	1.25 (1.25)	554.20	290.00	264.20	114.49
2450	1.25 (1.25)	554.31	240.00	314.31	136.20
2452	1.25 (1.25)	482.65	190.00	292.65	126.82
2453	1.25 (1.25)	504.36	320.00	184.36	79.89
2454	1.25 (1.25)	415.96	280.00	135.96	58.92
2455	1.25 (1.25)	531.02	290.00	241.02	104.44
2458	1.25 (1.25)	486.12	190.00	296.12	128.32
2459	1.25 (1.25)	503.01	330.00	173.01	74.97
2460	1.25 (1.25)	440.39	280.00	160.39	69.50
2463	1.25 (1.25)	438.32	200.00	238.32	103.27
2464	1.25 (1.25)	375.21	200.00	175.21	75.93
2466	1.25 (1.25)	386.95	190.00	196.95	85.35
2468	1.25 (1.25)	374.01	240.00	134.01	58.07
2469	1.25 (1.25)	325.86	210.00	115.86	50.21
2470	1.25 (1.25)	422.70	260.00	162.70	70.50
2471	1.25 (1.25)	400.73	215.00	185.73	80.48
2472	1.25 (1.25)	514.19	300.00	214.19	92.81
2473	1.25 (1.25)	311.62	210.00	101.62	44.04
2476	1.25 (1.25)	577.02	310.00	267.02	115.71
2477	1.25 (1.25)	469.32	340.00	129.32	56.04
2479	1.25 (1.25)	403.17	300.00	103.17	44.71
2480	1.25 (1.25)	624.97	540.00	84.97	36.82
2481	1.25 (1.25)	553.74	290.00	263.74	114.29

2482	1.25 (1.25)	384.20	210.00	174.20	75.49
2483	1.25 (1.25)	380.50	210.00	170.50	73.88
2484	1.25 (1.25)	380.92	210.00	170.92	74.07
2485	1.25 (1.25)	439.62	280.00	159.62	69.17
2490	1.25 (1.25)	407.92	210.00	197.92	85.76
2491	1.25 (1.25)	358.66	290.00	68.66	29.75
2493	1.25 (1.25)	339.85	190.00	149.85	64.94
2495	1.25 (1.25)	409.17	230.00	179.17	77.64
2498	1.25 (1.25)	554.19	270.00	284.19	123.15
2499	1.25 (1.25)	407.29	320.00	87.29	37.82
2500	1.25 (1.25)	406.74	310.00	96.74	41.92
2501	1.25 (1.25)	332.55	185.00	147.55	63.94
2502	1.25 (1.25)	495.56	315.00	180.56	78.24
2503	1.25 (1.25)	363.11	190.00	173.11	75.01
2505	1.25 (1.25)	334.91	185.00	149.91	64.96
2506	1.25 (1.25)	366.77	220.00	146.77	63.60
2507	1.25 (1.25)	366.76	220.00	146.76	63.60
2510	1.25 (1.25)	381.80	185.00	196.80	85.28
2511	1.25 (1.25)	309.80	200.00	109.80	47.58
2512	1.25 (1.25)	368.64	190.00	178.64	77.41
2513	1.25 (1.25)	368.11	190.00	178.11	77.18
2514	1.25 (1.25)	366.99	200.00	166.99	72.36
2515	1.25 (1.25)	367.14	190.00	177.14	76.76
2516	1.25 (1.25)	367.15	190.00	177.15	76.77
2517	1.25 (1.25)	440.25	210.00	230.25	99.78
2518	1.25 (1.25)	386.96	190.00	196.96	85.35
2519	1.25 (1.25)	373.21	200.00	173.21	75.06
2520	1.25 (1.25)	537.18	340.00	197.18	85.44
2521	1.25 (1.25)	486.02	330.00	156.02	67.61
2522	1.25 (1.25)	482.95	300.00	182.95	79.28
2525	1.25 (1.25)	517.18	290.00	227.18	98.44
2527	1.25 (1.25)	555.88	330.00	225.88	97.88
2528	1.25 (1.25)	387.61	200.00	187.61	81.30
2529	1.25 (1.25)	508.67	360.00	148.67	64.42
2532	1.25 (1.25)	561.95	390.00	171.95	74.51
2533	1.25 (1.25)	406.89	330.00	76.89	33.32
2534	1.25 (1.25)	220.15	190.00	30.15	13.06
2535	1.25 (1.25)	332.60	185.00	147.60	63.96
2537	1.25 (1.25)	367.81	190.00	177.81	77.05
2538	1.25 (1.25)	373.36	190.00	183.36	79.45
2539	1.25 (1.25)	624.98	540.00	84.98	36.82
2540	1.25 (1.25)	467.11	270.00	197.11	85.41
2541	1.25 (1.25)	454.53	190.00	264.53	114.63
2542	1.25 (1.25)	311.98	220.00	91.98	39.86
2543	1.25 (1.25)	311.94	220.00	91.94	39.84
2544	1.25 (1.25)	410.90	210.00	200.90	87.06
2545	1.25 (1.25)	539.14	250.00	289.14	125.29
2546	1.25 (1.25)	472.37	370.00	102.37	44.36
2547	1.25 (1.25)	312.19	220.00	92.19	39.95
2550	1.25 (1.25)	625.93	480.00	145.93	63.24
2551	1.25 (1.25)	391.02	180.00	211.02	91.44
2552	1.25 (1.25)	446.20	200.00	246.20	106.69
2553	1.25 (1.25)	499.04	315.00	184.04	79.75
2554	1.25 (1.25)	664.12	400.00	264.12	114.45
2555	1.25 (1.25)	408.79	230.00	178.79	77.47
2557	1.25 (1.25)	479.17	185.00	294.17	127.47
2559	1.25 (1.25)	429.98	260.00	169.98	73.66
2560	1.25 (1.25)	344.87	260.00	84.87	36.78
2561	1.25 (1.25)	499.16	315.00	184.16	79.80
2562	1.25 (1.25)	387.36	210.00	177.36	76.85
2563	1.25 (1.25)	325.51	210.00	115.51	50.05
2564	1.25 (1.25)	318.92	190.00	128.92	55.86
2565	1.25 (1.25)	335.00	185.00	150.00	65.00
2566	1.25 (1.25)	325.85	210.00	115.85	50.20
2567	1.25 (1.25)	494.40	300.00	194.40	84.24
2568	1.25 (1.25)	345.11	224.00	121.11	52.48
2569	1.25 (1.25)	345.11	224.00	121.11	52.48
2570	1.25 (1.25)	345.23	260.00	85.23	36.93
2572	1.25 (1.25)	345.21	260.00	85.21	36.92
2573	1.25 (1.25)	345.20	260.00	85.20	36.92
2574	1.25 (1.25)	345.18	220.00	125.18	54.25

2575	1.25 (1.25)	345.18	220.00	125.18	54.25
2576	1.25 (1.25)	345.18	210.00	135.18	58.58
2577	1.25 (1.25)	345.17	195.00	150.17	65.08
2578	1.25 (1.25)	430.06	270.00	160.06	69.36
2579	1.25 (1.25)	312.09	220.00	92.09	39.90
2580	1.25 (1.25)	507.48	330.00	177.48	76.91
2581	1.25 (1.25)	488.97	300.00	188.97	81.89
2582	1.25 (1.25)	475.88	260.00	215.88	93.55
2583	1.25 (1.25)	365.51	280.00	85.51	37.05
2584	1.25 (1.25)	376.89	250.00	126.89	54.99
2586	1.25 (1.25)	383.95	210.00	173.95	75.38
2587	1.25 (1.25)	384.26	200.00	184.26	79.84
2588	1.25 (1.25)	389.46	205.00	184.46	79.93
2589	1.25 (1.25)	408.65	220.00	188.65	81.75
2590	1.25 (1.25)	480.24	220.00	260.24	112.77
2591	1.25 (1.25)	479.08	185.00	294.08	127.43
2592	1.25 (1.25)	530.44	330.00	200.44	86.86
2593	1.25 (1.25)	461.84	290.00	171.84	74.47
2595	1.25 (1.25)	448.60	220.00	228.60	99.06
2597	1.25 (1.25)	408.67	200.00	208.67	90.42
2598	1.25 (1.25)	406.76	320.00	86.76	37.60
2599	1.25 (1.25)	390.43	190.00	200.43	86.85
2600	1.25 (1.25)	318.39	190.00	128.39	55.64
2601	1.25 (1.25)	475.57	260.00	215.57	93.41
2602	1.25 (1.25)	455.67	290.00	165.67	71.79
2605	1.25 (1.25)	365.67	280.00	85.67	37.12
2606	1.25 (1.25)	459.99	290.00	169.99	73.66
2608	1.25 (1.25)	389.80	190.00	199.80	86.58
2609	1.25 (1.25)	383.41	185.00	198.41	85.98
2610	1.25 (1.25)	387.43	190.00	197.43	85.55
2613	1.25 (1.25)	306.37	200.00	106.37	46.09
2617	1.25 (1.25)	440.25	210.00	230.25	99.78
2618	1.25 (1.25)	306.17	210.00	96.17	41.67
2620	1.25 (1.25)	503.86	360.00	143.86	62.34
2621	1.25 (1.25)	407.25	240.00	167.25	72.47
2623	1.25 (1.25)	566.98	290.00	276.98	120.03
2625	1.25 (1.25)	310.06	190.00	120.06	52.03
2626	1.25 (1.25)	468.49	400.00	68.49	29.68
2627	1.25 (1.25)	625.18	310.00	315.18	136.58
2628	1.25 (1.25)	510.27	385.00	125.27	54.28
2630	1.25 (1.25)	306.16	210.00	96.16	41.67
2632	1.25 (1.25)	345.18	200.00	145.18	62.91
2633	1.25 (1.25)	504.97	335.00	169.97	73.65
2634	1.25 (1.25)	507.78	340.00	167.78	72.70
2635	1.25 (1.25)	488.59	300.00	188.59	81.72
2636	1.25 (1.25)	491.33	315.00	176.33	76.41
2639	1.25 (1.25)	466.70	280.00	186.70	80.90
2640	1.25 (1.25)	387.85	185.00	202.85	87.90
2641	1.25 (1.25)	483.20	300.00	183.20	79.39
2643	1.25 (1.25)	353.27	210.00	143.27	62.08
2644	1.25 (1.25)	557.81	300.00	257.81	111.72
2646	1.25 (1.25)	629.69	460.00	169.69	73.53
2647	1.25 (1.25)	558.67	330.00	228.67	99.09
2649	1.25 (1.25)	391.90	197.00	194.90	84.46
2651	1.25 (1.25)	389.15	210.00	179.15	77.63
2652	1.25 (1.25)	387.78	220.00	167.78	72.70
2654	1.25 (1.25)	382.36	185.00	197.36	85.52
2659	1.25 (1.25)	503.42	340.00	163.42	70.81
2660	1.25 (1.25)	441.92	270.00	171.92	74.50
2661	1.25 (1.25)	493.83	315.00	178.83	77.49
2662	1.25 (1.25)	523.18	280.00	243.18	105.38
2663	1.25 (1.25)	410.95	190.00	220.95	95.74
2665	1.25 (1.25)	558.73	325.00	233.73	101.28
2666	1.25 (1.25)	366.93	200.00	166.93	72.33
2667	1.25 (1.25)	357.18	230.00	127.18	55.11
2669	1.25 (1.25)	383.00	280.00	103.00	44.63
2671	1.25 (1.25)	477.24	280.00	197.24	85.47
2672	1.25 (1.25)	503.80	350.00	153.80	66.65
2673	1.25 (1.25)	400.68	215.00	185.68	80.46
2674	1.25 (1.25)	481.65	190.00	291.65	126.38
2675	1.25 (1.25)	569.85	440.00	129.85	56.27

2677	1.25 (1.25)	374.03	190.00	184.03	79.75
2678	1.25 (1.25)	390.48	260.00	130.48	56.54
2679	1.25 (1.25)	499.91	325.00	174.91	75.79
2680	1.25 (1.25)	458.46	340.00	118.46	51.33
2682	1.25 (1.25)	373.94	190.00	183.94	79.71
2683	1.25 (1.25)	332.52	185.00	147.52	63.92
2684	1.25 (1.25)	399.85	210.00	189.85	82.27
2685	1.25 (1.25)	410.95	221.00	189.95	82.31
2686	1.25 (1.25)	541.35	300.00	241.35	104.58
2687	1.25 (1.25)	373.24	190.00	183.24	79.40
2688	1.25 (1.25)	407.43	220.00	187.43	81.22
2689	1.25 (1.25)	373.94	190.00	183.94	79.71
2691	1.25 (1.25)	635.74	470.00	165.74	71.82
2692	1.25 (1.25)	324.66	190.00	134.66	58.35
2693	1.25 (1.25)	345.17	200.00	145.17	62.91
2694	1.25 (1.25)	505.14	390.00	115.14	49.90
2695	1.25 (1.25)	400.14	220.00	180.14	78.06
2696	1.25 (1.25)	536.86	340.00	196.86	85.31
2698	1.25 (1.25)	621.35	322.00	299.35	129.72
2699	1.25 (1.25)	507.37	350.00	157.37	68.19
2700	1.25 (1.25)	327.65	185.00	142.65	61.82
2701	1.25 (1.25)	451.30	250.00	201.30	87.23
2702	1.25 (1.25)	510.98	380.00	130.98	56.76
2703	1.25 (1.25)	609.23	270.00	339.23	147.00
2704	1.25 (1.25)	374.62	200.00	174.62	75.67
2705	1.25 (1.25)	506.23	310.00	196.23	85.03
2706	1.25 (1.25)	505.23	300.00	205.23	88.94
2707	1.25 (1.25)	306.17	210.00	96.17	41.67
2708	1.25 (1.25)	410.95	210.00	200.95	87.08
2709	1.25 (1.25)	386.24	230.00	156.24	67.71
2710	1.25 (1.25)	505.27	350.00	155.27	67.28
2711	1.25 (1.25)	464.18	280.00	184.18	79.81
2712	1.25 (1.25)	483.55	290.00	193.55	83.87
2715	1.25 (1.25)	510.27	385.00	125.27	54.28
2718	1.25 (1.25)	503.85	360.00	143.85	62.33
2721	1.25 (1.25)	629.10	460.00	169.10	73.27
2724	1.25 (1.25)	502.15	310.00	192.15	83.27
2726	1.25 (1.25)	371.60	190.00	181.60	78.69
2727	1.25 (1.25)	371.70	185.00	186.70	80.90
2728	1.25 (1.25)	371.66	185.00	186.66	80.89
2729	1.25 (1.25)	371.74	185.00	186.74	80.92
2730	1.25 (1.25)	371.71	190.00	181.71	78.74
2731	1.25 (1.25)	371.61	185.00	186.61	80.86
2732	1.25 (1.25)	371.72	185.00	186.72	80.91
2733	1.25 (1.25)	371.41	185.00	186.41	80.78
2734	1.25 (1.25)	371.61	185.00	186.61	80.86
2735	1.25 (1.25)	371.60	185.00	186.60	80.86
2736	1.25 (1.25)	371.39	185.00	186.39	80.77
2737	1.25 (1.25)	371.68	185.00	186.68	80.90
2738	1.25 (1.25)	370.98	185.00	185.98	80.59
2739	1.25 (1.25)	371.72	190.00	181.72	78.74
2740	1.25 (1.25)	309.68	220.00	89.68	38.86
2741	1.25 (1.25)	371.82	185.00	186.82	80.95
2742	1.25 (1.25)	371.73	190.00	181.73	78.75
2743	1.25 (1.25)	371.71	190.00	181.71	78.74
2744	1.25 (1.25)	371.50	185.00	186.50	80.82
2745	1.25 (1.25)	371.71	190.00	181.71	78.74
2746	1.25 (1.25)	371.39	185.00	186.39	80.77
2747	1.25 (1.25)	371.76	190.00	181.76	78.76
2748	1.25 (1.25)	371.60	185.00	186.60	80.86
2749	1.25 (1.25)	371.45	190.00	181.45	78.63
2750	1.25 (1.25)	371.45	190.00	181.45	78.63
2751	1.25 (1.25)	371.67	185.00	186.67	80.89
2752	1.25 (1.25)	371.66	185.00	186.66	80.89
2753	1.25 (1.25)	371.70	185.00	186.70	80.90
2754	1.25 (1.25)	371.75	185.00	186.75	80.93
2755	1.25 (1.25)	371.46	190.00	181.46	78.63
2756	1.25 (1.25)	371.71	190.00	181.71	78.74
2757	1.25 (1.25)	371.69	185.00	186.69	80.90
2758	1.25 (1.25)	372.06	185.00	187.06	81.06
2759	1.25 (1.25)	371.79	185.00	186.79	80.94

2760	1.25 (1.25)	371.83	185.00	186.83	80.96
2761	1.25 (1.25)	372.15	185.00	187.15	81.10
2762	1.25 (1.25)	372.06	185.00	187.06	81.06
2763	1.25 (1.25)	371.51	190.00	181.51	78.65
2764	1.25 (1.25)	371.70	185.00	186.70	80.90
2765	1.25 (1.25)	370.84	185.00	185.84	80.53
2766	1.25 (1.25)	371.83	185.00	186.83	80.96
2767	1.25 (1.25)	371.21	190.00	181.21	78.52
2768	1.25 (1.25)	370.83	185.00	185.83	80.53
2769	1.25 (1.25)	371.60	190.00	181.60	78.69
2770	1.25 (1.25)	371.83	185.00	186.83	80.96
2771	1.25 (1.25)	371.58	185.00	186.58	80.85
5001	0.00	570.08	433.00	137.08	59.40
5002	0.00	571.00	420.00	151.00	65.44
5003	0.00	570.43	430.00	140.43	60.85
5004	0.00	568.03	300.00	268.03	116.15
5005	0.00	567.74	315.00	252.74	109.52
5006	0.00	567.74	320.00	247.74	107.36
5007	0.00	567.69	325.00	242.69	105.17
5008	0.00	567.30	300.00	267.30	115.83
5009	0.00	567.12	400.00	167.12	72.42
5010	0.00	571.22	430.00	141.22	61.20
5011	0.00	569.97	380.00	189.97	82.32
5012	0.00	572.17	420.00	152.17	65.94
5013	0.00	575.78	374.00	201.78	87.44
5014	0.00	574.70	279.00	295.70	128.14
5015	0.00	574.15	334.00	240.15	104.06
5016	0.00	573.88	323.00	250.88	108.72
5017	0.00	573.65	336.00	237.65	102.98
5018	0.00	573.25	340.00	233.25	101.08
5019	0.00	572.37	370.00	202.37	87.70
5020	0.00	572.15	375.00	197.15	85.43
5021	0.00	572.11	390.00	182.11	78.91
5022	0.00	572.05	380.00	192.05	83.22
5023	0.00	575.89	380.00	195.89	84.89
5024	0.00	572.07	390.00	182.07	78.90
5025	0.00	575.72	312.00	263.72	114.28
5026	0.00	575.72	360.00	215.72	93.48
5027	0.00	577.17	350.00	227.17	98.44
5028	0.00	628.19	390.00	238.19	103.22
5029	0.00	628.88	390.00	238.88	103.51
5030	0.00	570.10	420.00	150.10	65.04
5031	0.00	595.11	270.00	325.11	140.88
5032	0.00	619.77	380.00	239.77	103.90
5033	0.00	633.50	394.00	239.50	103.78
5034	0.00	412.64	400.00	12.64	5.48
5035	0.00	410.00	400.00	10.00	4.33
5036	0.00	410.00	400.00	10.00	4.33
5037	0.00	438.22	340.00	98.22	42.56
5038	0.00	436.48	390.00	46.48	20.14
5039	0.00	442.01	320.00	122.01	52.87
5040	0.00	472.76	300.00	172.76	74.86
5041	0.00	516.84	371.00	145.84	63.20
5042	0.00	555.28	305.00	250.28	108.45
5043	0.00	626.46	430.00	196.46	85.13
5044	0.00	626.11	469.00	157.11	68.08
5045	0.00	626.07	460.00	166.07	71.96
5046	0.00	625.32	534.00	91.32	39.57
5047	0.00	625.00	560.00	65.00	28.17
5048	0.00	666.67	400.00	266.67	115.56
5049	0.00	495.25	420.00	75.25	32.61
5050	0.00	507.78	323.00	184.78	80.07
5051	0.00	507.72	320.00	187.72	81.34
5052	0.00	507.60	310.00	197.60	85.63
5053	0.00	507.47	350.00	157.47	68.24
5054	0.00	625.85	470.00	155.85	67.54
5055	0.00	625.80	470.00	155.80	67.52
5056	0.00	646.48	445.00	201.48	87.31
5057	0.00	482.15	400.00	82.15	35.60
5058	0.00	507.33	370.00	137.33	59.51
5059	0.00	661.85	370.00	291.85	126.47

5060	0.00	661.11	370.00	291.11	126.15
5061	0.00	658.14	300.00	358.14	155.19
5062	0.00	657.62	335.00	322.62	139.80
5063	0.00	655.12	380.00	275.12	119.22
5064	0.00	413.36	350.00	63.36	27.46
5065	0.00	413.36	336.00	77.36	33.52
5066	0.00	569.95	400.00	169.95	73.65
5067	0.00	569.95	400.00	169.95	73.65
5068	0.00	569.33	420.00	149.33	64.71
5069	0.00	509.54	340.00	169.54	73.47
5070	0.00	413.36	330.00	83.36	36.12
5071	0.00	396.19	330.00	66.19	28.68
5072	0.00	569.15	320.00	249.15	107.96
5073	0.00	569.11	320.00	249.11	107.95
5074	0.00	568.55	320.00	248.55	107.70
5075	0.00	566.40	321.00	245.40	106.34
5076	0.00	567.96	475.00	92.96	40.28
5077	0.00	566.38	321.00	245.38	106.33
5078	0.00	565.27	310.00	255.27	110.62
5079	0.00	565.11	300.00	265.11	114.88
5080	0.00	564.59	250.00	314.59	136.32
5081	0.00	563.92	299.00	264.92	114.80
5082	0.00	564.79	310.00	254.79	110.41
5083	0.00	563.94	264.00	299.94	129.98
5084	0.00	563.59	250.00	313.59	135.89
5085	0.00	563.94	280.00	283.94	123.04
5086	0.00	564.75	304.00	260.75	112.99
5087	0.00	564.68	320.00	244.68	106.03
5088	0.00	564.75	280.00	284.75	123.39
5089	0.00	564.66	310.00	254.66	110.35
5090	0.00	562.99	362.00	200.99	87.10
5091	0.00	561.89	388.00	173.89	75.35
5092	0.00	561.87	340.00	221.87	96.15
5093	0.00	561.87	360.00	201.87	87.48
5094	0.00	561.87	370.00	191.87	83.15
5095	0.00	562.15	285.00	277.15	120.10
5096	0.00	561.88	280.00	281.88	122.15
5097	0.00	560.59	280.00	280.59	121.59
5098	0.00	560.68	280.00	280.68	121.63
5099	0.00	558.93	260.00	298.93	129.54
5100	0.00	555.06	290.00	265.06	114.86
5101	0.00	554.73	330.00	224.73	97.38
5102	0.00	554.48	270.00	284.48	123.27
5103	0.00	554.15	292.00	262.15	113.60
5104	0.00	554.12	292.00	262.12	113.59
5105	0.00	553.72	270.00	283.72	122.94
5106	0.00	553.40	294.00	259.40	112.41
5107	0.00	507.79	365.00	142.79	61.88
5108	0.00	505.54	360.00	145.54	63.07
5109	0.00	507.80	365.00	142.80	61.88
5110	0.00	507.80	365.00	142.80	61.88
5111	0.00	507.95	365.00	142.95	61.95
5112	0.00	472.51	365.00	107.51	46.59
5113	0.00	508.48	370.00	138.48	60.01
5114	0.00	472.40	370.00	102.40	44.38
5115	0.00	472.37	370.00	102.37	44.36
5116	0.00	508.90	360.00	148.90	64.52
5117	0.00	508.90	360.00	148.90	64.52
5118	0.00	510.28	375.00	135.28	58.62
5119	0.00	510.96	390.00	120.96	52.42
5120	0.00	510.96	390.00	120.96	52.42
5121	0.00	510.96	390.00	120.96	52.42
5122	0.00	508.69	360.00	148.69	64.43
5123	0.00	504.78	330.00	174.78	75.74
5124	0.00	504.99	330.00	174.99	75.83
5125	0.00	505.90	350.00	155.90	67.55
5126	0.00	505.35	345.00	160.35	69.49
5127	0.00	505.31	345.00	160.31	69.47
5128	0.00	509.70	360.00	149.70	64.87
5129	0.00	509.85	370.00	139.85	60.60
5130	0.00	509.95	360.00	149.95	64.98

5131	0.00	509.98	360.00	149.98	64.99
5132	0.00	510.47	375.00	135.47	58.71
5133	0.00	507.05	365.00	142.05	61.55
5134	0.00	506.23	360.00	146.23	63.37
5135	0.00	505.67	365.00	140.67	60.96
5136	0.00	505.31	310.00	195.31	84.63
5137	0.00	505.24	320.00	185.24	80.27
5138	0.00	499.91	320.00	179.91	77.96
5139	0.00	503.69	325.00	178.69	77.43
5140	0.00	503.26	325.00	178.26	77.25
5141	0.00	464.57	290.00	174.57	75.65
5142	0.00	456.52	320.00	136.52	59.16
5143	0.00	502.27	290.00	212.27	91.98
5144	0.00	502.19	310.00	192.19	83.28
5145	0.00	505.30	310.00	195.30	84.63
5146	0.00	504.85	305.00	199.85	86.60
5147	0.00	504.41	350.00	154.41	66.91
5148	0.00	504.62	360.00	144.62	62.67
5149	0.00	504.98	310.00	194.98	84.49
5150	0.00	504.62	360.00	144.62	62.67
5151	0.00	502.18	310.00	192.18	83.28
5152	0.00	456.23	310.00	146.23	63.37
5153	0.00	454.00	340.00	114.00	49.40
5154	0.00	457.09	330.00	127.09	55.07
5155	0.00	457.39	315.00	142.39	61.70
5156	0.00	458.17	290.00	168.17	72.88
5157	0.00	458.64	260.00	198.64	86.08
5158	0.00	465.07	240.00	225.07	97.53
5159	0.00	465.07	240.00	225.07	97.53
5160	0.00	465.07	285.00	180.07	78.03
5161	0.00	468.46	222.00	246.46	106.80
5162	0.00	473.21	265.00	208.21	90.22
5163	0.00	475.49	235.00	240.49	104.21
5164	0.00	476.57	258.00	218.57	94.71
5165	0.00	479.64	300.00	179.64	77.84
5166	0.00	480.50	300.00	180.50	78.22
5167	0.00	480.50	300.00	180.50	78.22
5168	0.00	480.50	300.00	180.50	78.22
5169	0.00	481.78	250.00	231.78	100.44
5170	0.00	482.96	250.00	232.96	100.95
5171	0.00	488.02	300.00	188.02	81.48
5172	0.00	460.89	270.00	190.89	82.72
5173	0.00	446.34	290.00	156.34	67.75
5174	0.00	445.87	290.00	155.87	67.54
5175	0.00	445.87	270.00	175.87	76.21
5176	0.00	441.27	300.00	141.27	61.22
5177	0.00	438.37	280.00	158.37	68.63
5178	0.00	441.13	240.00	201.13	87.16
5179	0.00	441.13	300.00	141.13	61.16
5180	0.00	436.87	280.00	156.87	67.98
5181	0.00	436.87	280.00	156.87	67.98
5182	0.00	435.18	275.00	160.18	69.41
5183	0.00	433.67	265.00	168.67	73.09
5184	0.00	433.56	265.00	168.56	73.04
5185	0.00	430.85	264.00	166.85	72.30
5186	0.00	430.83	264.00	166.83	72.29
5187	0.00	430.63	260.00	170.63	73.94
5188	0.00	429.22	270.00	159.22	69.00
5189	0.00	427.30	260.00	167.30	72.49
5190	0.00	426.02	229.00	197.02	85.38
5191	0.00	421.15	214.00	207.15	89.76
5192	0.00	420.96	214.00	206.96	89.68
5193	0.00	419.02	220.00	199.02	86.24
5194	0.00	409.14	216.00	193.14	83.69
5195	0.00	408.95	216.00	192.95	83.61
5196	0.00	406.85	202.00	204.85	88.77
5197	0.00	406.83	202.00	204.83	88.76
5198	0.00	398.59	181.00	217.59	94.29
5199	0.00	395.74	186.00	209.74	90.89
5200	0.00	395.39	186.00	209.39	90.74
5201	0.00	394.32	180.00	214.32	92.87

5202	0.00	392.61	180.00	212.61	92.13
5203	0.00	391.26	180.00	211.26	91.55
5204	0.00	391.01	180.00	211.01	91.44
5205	0.00	390.96	180.00	210.96	91.41
5207	0.00	471.74	360.00	111.74	48.42
5209	0.00	461.64	351.00	110.64	47.94
5210	0.00	458.44	340.00	118.44	51.32
5211	0.00	458.16	340.00	118.16	51.20
5212	0.00	530.40	330.00	200.40	86.84
5213	0.00	530.40	330.00	200.40	86.84
5214	0.00	530.37	330.00	200.37	86.83
5215	0.00	532.40	335.00	197.40	85.54
5216	0.00	537.77	340.00	197.77	85.70
5217	0.00	539.38	345.00	194.38	84.23
5218	0.00	540.12	350.00	190.12	82.38
5219	0.00	384.86	314.00	70.86	30.71
5220	0.00	384.86	300.00	84.86	36.77
5221	0.00	539.69	350.00	189.69	82.20
5222	0.00	490.87	310.00	180.87	78.38
5223	0.00	489.19	310.00	179.19	77.65
5224	0.00	489.14	310.00	179.14	77.63
5225	0.00	487.62	310.00	177.62	76.97
5226	0.00	487.55	310.00	177.55	76.94
5227	0.00	482.40	290.00	192.40	83.37
5228	0.00	483.71	290.00	193.71	83.94
5229	0.00	482.26	290.00	192.26	83.31
5230	0.00	481.34	300.00	181.34	78.58
5231	0.00	474.34	260.00	214.34	92.88
5232	0.00	472.35	270.00	202.35	87.68
5233	0.00	457.82	270.00	187.82	81.39
5234	0.00	444.96	280.00	164.96	71.48
5235	0.00	397.63	300.00	97.63	42.31
5236	0.00	397.26	300.00	97.26	42.14
5237	0.00	416.14	280.00	136.14	58.99
5238	0.00	415.96	280.00	135.96	58.91
5239	0.00	424.44	242.00	182.44	79.06
5240	0.00	433.43	280.00	153.43	66.49
5241	0.00	446.01	240.00	206.01	89.27
5242	0.00	459.23	290.00	169.23	73.33
5243	0.00	459.18	290.00	169.18	73.31
5244	0.00	466.95	295.00	171.95	74.51
5245	0.00	478.36	312.00	166.36	72.09
5246	0.00	484.31	300.00	184.31	79.87
5247	0.00	505.91	296.00	209.91	90.96
5248	0.00	505.15	270.00	235.15	101.90
5249	0.00	514.22	302.00	212.22	91.96
5250	0.00	518.63	290.00	228.63	99.07
5251	0.00	523.01	270.00	253.01	109.64
5252	0.00	532.30	310.00	222.30	96.33
5253	0.00	583.12	310.00	273.12	118.35
5254	0.00	476.24	330.00	146.24	63.37
5255	0.00	476.23	320.00	156.23	67.70
5256	0.00	476.23	320.00	156.23	67.70
5257	0.00	476.23	270.00	206.23	89.37
5258	0.00	475.84	320.00	155.84	67.53
5259	0.00	475.80	320.00	155.80	67.51
5260	0.00	474.19	350.00	124.19	53.81
5261	0.00	472.54	360.00	112.54	48.77
5262	0.00	582.92	310.00	272.92	118.27
5263	0.00	578.89	245.00	333.89	144.69
5264	0.00	572.41	186.00	386.41	167.44
5265	0.00	571.23	212.00	359.23	155.67
5266	0.00	570.04	219.00	351.04	152.12
5267	0.00	567.94	225.00	342.94	148.61
5268	0.00	566.21	230.00	336.21	145.69
5269	0.00	564.88	300.00	264.88	114.78
5270	0.00	564.87	300.00	264.87	114.78
5271	0.00	564.38	320.00	244.38	105.90
5272	0.00	564.38	320.00	244.38	105.90
5273	0.00	563.38	273.00	290.38	125.83
5274	0.00	626.78	319.00	307.78	133.37

5275	0.00	625.29	319.00	306.29	132.72
5276	0.00	602.47	235.00	367.47	159.24
5277	0.00	585.01	331.00	254.01	110.07
5278	0.00	554.55	340.00	214.55	92.97
5279	0.00	546.95	250.00	296.95	128.68
5280	0.00	538.24	286.00	252.24	109.31
5281	0.00	540.64	273.00	267.64	115.98
5282	0.00	518.61	310.00	208.61	90.40
5283	0.00	510.63	323.00	187.63	81.31
5284	0.00	507.03	320.00	187.03	81.05
5285	0.00	506.28	300.00	206.28	89.39
5286	0.00	491.70	300.00	191.70	83.07
5287	0.00	507.78	320.00	187.78	81.37
5288	0.00	619.57	340.00	279.57	121.15
5289	0.00	619.10	300.00	319.10	138.28
5290	0.00	612.33	282.00	330.33	143.14
5291	0.00	565.91	210.00	355.91	154.23
5292	0.00	513.44	200.00	313.44	135.82
5293	0.00	491.18	300.00	191.18	82.84
5294	0.00	465.75	250.00	215.75	93.49
5295	0.00	454.94	190.00	264.94	114.81
5296	0.00	620.20	340.00	280.20	121.42
5297	0.00	619.14	340.00	279.14	120.96
5298	0.00	617.30	340.00	277.30	120.17
5299	0.00	592.83	390.00	202.83	87.89
5300	0.00	509.94	437.00	72.94	31.61
5301	0.00	502.52	457.00	45.52	19.73
5302	0.00	502.49	360.00	142.49	61.75
5303	0.00	502.49	350.00	152.49	66.08
5304	0.00	485.47	397.00	88.47	38.33
5305	0.00	455.61	260.00	195.61	84.77
5306	0.00	451.00	265.00	186.00	80.60
5307	0.00	443.48	240.00	203.48	88.18
5308	0.00	440.99	220.00	220.99	95.76
5309	0.00	440.17	200.00	240.17	104.08
5310	0.00	439.95	210.00	229.95	99.64
5311	0.00	440.26	230.00	210.26	91.11
5312	0.00	454.39	280.00	174.39	75.57
5313	0.00	451.01	248.00	203.01	87.97
5314	0.00	433.88	241.00	192.88	83.58
5315	0.00	411.67	211.00	200.67	86.96
5316	0.00	408.08	205.00	203.08	88.00
5317	0.00	407.33	200.00	207.33	89.84
5318	0.00	406.30	200.00	206.30	89.40
5319	0.00	407.46	210.00	197.46	85.57
5320	0.00	405.09	200.00	205.09	88.87
5321	0.00	508.33	323.00	185.33	80.31
5322	0.00	404.96	210.00	194.96	84.48
5323	0.00	404.91	220.00	184.91	80.13
5324	0.00	404.91	220.00	184.91	80.13
5325	0.00	436.68	215.00	221.68	96.06
5326	0.00	507.55	365.00	142.55	61.77
5327	0.00	432.65	240.00	192.65	83.48
5328	0.00	422.02	270.00	152.02	65.88
5329	0.00	420.42	252.00	168.42	72.98
5330	0.00	420.32	271.00	149.32	64.70
5331	0.00	416.85	300.00	116.85	50.63
5332	0.00	414.97	185.00	229.97	99.65
5333	0.00	414.83	207.00	207.83	90.06
5334	0.00	504.53	310.00	194.53	84.30
5335	0.00	375.62	320.00	55.62	24.10
5336	0.00	415.90	240.00	175.90	76.22
5337	0.00	411.68	230.00	181.68	78.73
5338	0.00	406.86	216.00	190.86	82.71
5339	0.00	409.17	220.00	189.17	81.97
5340	0.00	409.13	230.00	179.13	77.62
5341	0.00	390.24	197.00	193.24	83.74
5342	0.00	374.77	179.00	195.77	84.84
5343	0.00	370.35	180.00	190.35	82.49
5344	0.00	372.83	180.00	192.83	83.56
5345	0.00	370.45	180.00	190.45	82.53

5346	0.00	370.37	180.00	190.37	82.49
5347	0.00	368.33	190.00	178.33	77.28
5348	0.00	367.60	180.00	187.60	81.29
5349	0.00	354.50	190.00	164.50	71.28
5350	0.00	365.50	180.00	185.50	80.38
5351	0.00	350.39	210.00	140.39	60.84
5352	0.00	350.15	210.00	140.15	60.73
5353	0.00	349.65	230.00	119.65	51.85
5354	0.00	349.05	220.00	129.05	55.92
5355	0.00	349.03	215.00	134.03	58.08
5356	0.00	348.88	230.00	118.88	51.52
5357	0.00	347.09	220.00	127.09	55.07
5358	0.00	346.82	220.00	126.82	54.96
5359	0.00	329.44	200.00	129.44	56.09
5360	0.00	325.53	210.00	115.53	50.06
5361	0.00	325.87	210.00	115.87	50.21
5362	0.00	325.84	210.00	115.84	50.20
5363	0.00	325.40	200.00	125.40	54.34
5364	0.00	324.71	200.00	124.71	54.04
5365	0.00	324.65	190.00	134.65	58.35
5366	0.00	328.00	190.00	138.00	59.80
5367	0.00	328.20	190.00	138.20	59.89
5368	0.00	329.54	190.00	139.54	60.47
5369	0.00	329.91	190.00	139.91	60.63
5370	0.00	329.77	200.00	129.77	56.23
5371	0.00	334.22	190.00	144.22	62.49
5372	0.00	334.35	190.00	144.35	62.55
5373	0.00	339.31	190.00	149.31	64.70
5374	0.00	338.81	210.00	128.81	55.82
5375	0.00	326.17	210.00	116.17	50.34
5376	0.00	312.77	240.00	72.77	31.53
5377	0.00	311.31	214.00	97.31	42.17
5378	0.00	310.52	205.00	105.52	45.72
5379	0.00	310.18	190.00	120.18	52.08
5380	0.00	306.49	200.00	106.49	46.15
5381	0.00	306.17	210.00	96.17	41.68
5382	0.00	372.44	186.00	186.44	80.79
5383	0.00	371.97	190.00	181.97	78.85
5384	0.00	371.83	185.00	186.83	80.96
5385	0.00	371.70	185.00	186.70	80.90
5386	0.00	371.60	190.00	181.60	78.69
5387	0.00	371.70	185.00	186.70	80.90
5388	0.00	371.73	185.00	186.73	80.92
5389	0.00	372.07	185.00	187.07	81.06
5390	0.00	371.47	190.00	181.47	78.64
5391	0.00	660.89	270.00	390.89	169.38
5392	0.00	675.73	365.00	310.73	134.65
5393	0.00	681.75	350.00	331.75	143.76
5394	0.00	685.27	380.00	305.27	132.28
5395	0.00	399.61	350.00	49.61	21.50
5396	0.00	408.73	321.00	87.73	38.01
5397	0.00	485.24	210.00	275.24	119.27
5398	0.00	366.38	207.00	159.38	69.07
5399	0.00	375.62	205.00	170.62	73.93
5400	0.00	362.11	193.00	169.11	73.28
5401	0.00	338.06	187.00	151.06	65.46
5402	0.00	335.17	185.00	150.17	65.07
5403	0.00	332.80	185.00	147.80	64.04
5404	0.00	332.59	185.00	147.59	63.96
5405	0.00	332.58	185.00	147.58	63.95
5406	0.00	334.66	185.00	149.66	64.85
5407	0.00	333.39	185.00	148.39	64.30
5408	0.00	329.06	185.00	144.06	62.43
5409	0.00	384.40	205.00	179.40	77.74
5410	0.00	387.77	200.00	187.77	81.37
5411	0.00	387.65	202.00	185.65	80.45
5412	0.00	387.59	202.00	185.59	80.42
5413	0.00	387.43	190.00	197.43	85.55
5414	0.00	389.25	195.00	194.25	84.17
5415	0.00	392.30	185.00	207.30	89.83
5416	0.00	390.17	190.00	200.17	86.74

5417	0.00	391.95	185.00	206.95	89.68
5418	0.00	390.62	190.00	200.62	86.94
5419	0.00	390.25	190.00	200.25	86.77
5420	0.00	389.40	195.00	194.40	84.24
5421	0.00	388.57	190.00	198.57	86.05
5422	0.00	388.11	190.00	198.11	85.85
5423	0.00	387.78	190.00	197.78	85.70
5424	0.00	387.14	185.00	202.14	87.59
5425	0.00	387.11	185.00	202.11	87.58
5426	0.00	387.04	185.00	202.04	87.55
5427	0.00	385.43	185.00	200.43	86.85
5428	0.00	388.89	185.00	203.89	88.35
5429	0.00	387.18	185.00	202.18	87.61
5430	0.00	387.66	200.00	187.66	81.32
5431	0.00	387.67	200.00	187.67	81.32
5432	0.00	387.67	200.00	187.67	81.32
5433	0.00	387.03	185.00	202.03	87.55
5434	0.00	387.79	210.00	177.79	77.04
5435	0.00	387.76	210.00	177.76	77.03
5436	0.00	388.11	231.00	157.11	68.08
5437	0.00	388.10	200.00	188.10	81.51
5438	0.00	388.19	200.00	188.19	81.55
5439	0.00	388.13	231.00	157.13	68.09
5440	0.00	388.26	231.00	157.26	68.15
5441	0.00	388.26	231.00	157.26	68.15
5442	0.00	388.35	205.00	183.35	79.45
5443	0.00	388.51	210.00	178.51	77.35
5444	0.00	388.50	210.00	178.50	77.35
5445	0.00	388.33	205.00	183.33	79.44
5446	0.00	388.06	205.00	183.06	79.33
5447	0.00	388.74	210.00	178.74	77.45
5448	0.00	389.20	210.00	179.20	77.65
5449	0.00	389.48	210.00	179.48	77.78
5450	0.00	388.39	220.00	168.39	72.97
5451	0.00	389.76	205.00	184.76	80.06
5452	0.00	390.12	195.00	195.12	84.55
5453	0.00	390.24	195.00	195.24	84.60
5454	0.00	390.16	195.00	195.16	84.57
5455	0.00	390.03	195.00	195.03	84.51
5456	0.00	389.90	195.00	194.90	84.46
5457	0.00	389.55	195.00	194.55	84.31
5458	0.00	388.98	185.00	203.98	88.39
5459	0.00	390.13	195.00	195.13	84.56
5460	0.00	389.95	195.00	194.95	84.48
5461	0.00	389.35	210.00	179.35	77.72
5462	0.00	200.50	185.00	15.50	6.72
5463	0.00	216.03	190.00	26.03	11.28
5464	0.00	390.27	190.00	200.27	86.78
5465	0.00	390.13	185.00	205.13	88.89
5466	0.00	387.57	190.00	197.57	85.61
5467	0.00	387.59	190.00	197.59	85.62
5468	0.00	387.78	190.00	197.78	85.70
5469	0.00	388.16	195.00	193.16	83.70
5470	0.00	386.66	185.00	201.66	87.39
5471	0.00	383.65	185.00	198.65	86.08
5472	0.00	383.82	185.00	198.82	86.16
5473	0.00	383.41	185.00	198.41	85.98
5474	0.00	382.47	185.00	197.47	85.57
5475	0.00	383.41	190.00	193.41	83.81
5476	0.00	383.42	190.00	193.42	83.82
5477	0.00	382.47	185.00	197.47	85.57
5478	0.00	382.38	185.00	197.38	85.53
5479	0.00	381.81	185.00	196.81	85.28
5480	0.00	381.69	185.00	196.69	85.23
5481	0.00	382.32	185.00	197.32	85.51
5482	0.00	382.33	185.00	197.33	85.51
5483	0.00	382.33	185.00	197.33	85.51
5484	0.00	381.93	185.00	196.93	85.34
5485	0.00	381.91	185.00	196.91	85.33
5486	0.00	243.05	185.00	58.05	25.16
5487	0.00	294.73	185.00	109.73	47.55

5488	0.00	304.21	185.00	119.21	51.66
5489	0.00	286.80	185.00	101.80	44.11
5490	0.00	304.21	185.00	119.21	51.66
5491	0.00	304.79	185.00	119.79	51.91
5492	0.00	306.06	195.00	111.06	48.13
5493	0.00	305.83	195.00	110.83	48.03
5494	0.00	322.18	190.00	132.18	57.28
5495	0.00	322.18	190.00	132.18	57.28
5496	0.00	455.00	190.00	265.00	114.83
5497	0.00	398.52	190.00	208.52	90.36
5498	0.00	322.18	190.00	132.18	57.28
5499	0.00	391.29	260.00	131.29	56.89
5500	0.00	390.59	290.00	100.59	43.59
5501	0.00	389.52	250.00	139.52	60.46
5502	0.00	388.10	300.00	88.10	38.18
5503	0.00	555.89	280.00	275.89	119.55
5505	0.00	560.60	300.00	260.60	112.93
5506	0.00	560.67	300.00	260.67	112.96
5507	0.00	533.01	319.00	214.01	92.74
5508	0.00	523.56	208.00	315.56	136.74
5509	0.00	494.09	212.00	282.09	122.24
5510	0.00	491.20	175.00	316.20	137.02
5511	0.00	488.06	180.00	308.06	133.49
5512	0.00	485.86	190.00	295.86	128.21
5513	0.00	485.73	200.00	285.73	123.82
5514	0.00	488.46	180.00	308.46	133.66
5515	0.00	486.16	180.00	306.16	132.67
5516	0.00	425.19	240.00	185.19	80.25
5517	0.00	424.73	240.00	184.73	80.05
5518	0.00	411.49	281.00	130.49	56.54
5519	0.00	411.02	221.00	190.02	82.34
5520	0.00	410.91	220.00	190.91	82.73
5521	0.00	410.90	210.00	200.90	87.06
5522	0.00	410.90	220.00	190.90	82.72
5523	0.00	403.85	270.00	133.85	58.00
5524	0.00	386.34	230.00	156.34	67.75
5525	0.00	384.29	210.00	174.29	75.53
5526	0.00	384.28	210.00	174.28	75.52
5527	0.00	384.25	210.00	174.25	75.51
5528	0.00	383.90	210.00	173.90	75.36
5529	0.00	382.52	200.00	182.52	79.09
5530	0.00	376.16	210.00	166.16	72.00
5531	0.00	370.98	210.00	160.98	69.76
5532	0.00	369.02	210.00	159.02	68.91
5533	0.00	410.34	240.00	170.34	73.82
5534	0.00	410.33	240.00	170.33	73.81
5535	0.00	409.62	240.00	169.62	73.50
5536	0.00	407.58	250.00	157.58	68.29
5537	0.00	405.37	250.00	155.37	67.33
5538	0.00	406.20	250.00	156.20	67.69
5539	0.00	393.87	240.00	153.87	66.68
5540	0.00	374.44	200.00	174.44	75.59
5541	0.00	349.36	190.00	159.36	69.06
5542	0.00	315.12	190.00	125.12	54.22
5543	0.00	511.65	310.00	201.65	87.38
5544	0.00	499.48	315.00	184.48	79.94
5545	0.00	498.31	310.00	188.31	81.60
5546	0.00	491.51	315.00	176.51	76.49
5547	0.00	489.30	300.00	189.30	82.03
5548	0.00	489.22	300.00	189.22	82.00
5549	0.00	488.37	295.00	193.37	83.79
5550	0.00	485.91	295.00	190.91	82.73
5551	0.00	477.30	280.00	197.30	85.50
5552	0.00	477.29	280.00	197.29	85.49
5553	0.00	475.94	280.00	195.94	84.91
5554	0.00	470.60	225.00	245.60	106.43
5555	0.00	475.86	260.00	215.86	93.54
5556	0.00	475.52	270.00	205.52	89.06
5557	0.00	359.05	290.00	69.05	29.92
5558	0.00	358.98	290.00	68.98	29.89
5559	0.00	358.86	290.00	68.86	29.84

5560	0.00	358.86	290.00	68.86	29.84
5561	0.00	358.86	290.00	68.86	29.84
5562	0.00	358.66	290.00	68.66	29.75
5563	0.00	354.23	280.00	74.23	32.16
5564	0.00	354.19	280.00	74.19	32.15
5565	0.00	346.09	260.00	86.09	37.30
5566	0.00	346.08	260.00	86.08	37.30
5567	0.00	346.08	260.00	86.08	37.30
5568	0.00	346.07	260.00	86.07	37.30
5569	0.00	345.44	260.00	85.44	37.03
5570	0.00	463.88	264.00	199.88	86.62
5571	0.00	345.17	195.00	150.17	65.08
5572	0.00	350.72	260.00	90.72	39.31
5573	0.00	353.08	270.00	83.08	36.00
5574	0.00	352.49	260.00	92.49	40.08
5575	0.00	359.36	270.00	89.36	38.72
5576	0.00	359.19	270.00	89.19	38.65
5577	0.00	359.07	250.00	109.07	47.26
5578	0.00	513.92	269.00	244.92	106.13
5579	0.00	323.39	269.00	54.39	23.57
5580	0.00	363.74	250.00	113.74	49.29
5581	0.00	369.06	215.00	154.06	66.76
5582	0.00	372.19	190.00	182.19	78.95
5583	0.00	389.70	310.00	79.70	34.54
5584	0.00	389.85	310.00	79.85	34.60
5585	0.00	389.96	310.00	79.96	34.65
5586	0.00	389.72	318.00	71.72	31.08
5587	0.00	387.49	300.00	87.49	37.91
5588	0.00	386.74	300.00	86.74	37.59
5589	0.00	383.83	280.00	103.83	44.99
5590	0.00	383.17	280.00	103.17	44.71
5591	0.00	381.21	290.00	91.21	39.52
5592	0.00	378.78	212.00	166.78	72.27
5593	0.00	375.57	191.00	184.57	79.98
5594	0.00	366.38	216.00	150.38	65.17
5595	0.00	380.58	290.00	90.58	39.25
5596	0.00	380.22	290.00	90.22	39.09
5597	0.00	378.49	187.00	191.49	82.98
5598	0.00	376.45	230.00	146.45	63.46
5599	0.00	375.83	220.00	155.83	67.53
5600	0.00	375.40	210.00	165.40	71.68
5601	0.00	374.73	200.00	174.73	75.71
5602	0.00	387.12	190.00	197.12	85.42
5603	0.00	374.52	200.00	174.52	75.62
5604	0.00	373.97	190.00	183.97	79.72
5605	0.00	372.58	185.00	187.58	81.28
5606	0.00	372.51	200.00	172.51	74.75
5607	0.00	369.68	240.00	129.68	56.20
5608	0.00	369.11	248.00	121.11	52.48
5609	0.00	359.69	261.00	98.69	42.76
5610	0.00	483.56	195.00	288.56	125.04
5611	0.00	482.99	190.00	292.99	126.96
5612	0.00	369.05	240.00	129.05	55.92
5613	0.00	368.68	210.00	158.68	68.76
5614	0.00	199.35	190.00	9.35	4.05
5615	0.00	304.70	185.00	119.70	51.87
5616	0.00	304.45	185.00	119.45	51.76
5617	0.00	398.57	190.00	208.57	90.38
5618	0.00	554.86	260.00	294.86	127.77
5619	0.00	554.27	260.00	294.27	127.52
5620	0.00	554.42	290.00	264.42	114.58
5621	0.00	489.96	180.00	309.96	134.32
5622	0.00	485.98	180.00	305.98	132.59
5623	0.00	487.52	180.00	307.52	133.26
5624	0.00	485.21	180.00	305.21	132.26
5625	0.00	485.35	200.00	285.35	123.65
5626	0.00	401.21	225.00	176.21	76.36
5627	0.00	401.04	235.00	166.04	71.95
5628	0.00	400.95	235.00	165.95	71.91
5629	0.00	399.09	200.00	199.09	86.27
5630	0.00	400.85	225.00	175.85	76.20

5631	0.00	400.80	225.00	175.80	76.18
5632	0.00	400.79	225.00	175.79	76.17
5633	0.00	400.69	220.00	180.69	78.30
5634	0.00	399.61	210.00	189.61	82.17
5635	0.00	399.46	200.00	199.46	86.43
5636	0.00	400.61	210.00	190.61	82.60
5637	0.00	400.63	210.00	190.63	82.61
5638	0.00	400.72	215.00	185.72	80.48
5639	0.00	400.72	215.00	185.72	80.48
5640	0.00	400.72	215.00	185.72	80.48
5641	0.00	400.65	215.00	185.65	80.45
5642	0.00	400.48	210.00	190.48	82.54
5643	0.00	400.51	215.00	185.51	80.39
5644	0.00	400.37	240.00	160.37	69.49
5645	0.00	400.26	240.00	160.26	69.45
5646	0.00	400.28	240.00	160.28	69.46
5647	0.00	400.29	240.00	160.29	69.46
5648	0.00	400.16	230.00	170.16	73.74
5649	0.00	400.10	210.00	190.10	82.38
5650	0.00	399.87	200.00	199.87	86.61
5651	0.00	482.49	190.00	292.49	126.75
5652	0.00	482.29	190.00	292.29	126.66
5653	0.00	482.29	190.00	292.29	126.66
5654	0.00	482.26	190.00	292.26	126.65
5655	0.00	482.23	190.00	292.23	126.63
5656	0.00	481.87	185.00	296.87	128.64
5657	0.00	481.74	185.00	296.74	128.59
5658	0.00	480.71	190.00	290.71	125.98
5659	0.00	480.68	190.00	290.68	125.96
5660	0.00	484.72	195.00	289.72	125.55
5661	0.00	560.55	300.00	260.55	112.91
5662	0.00	366.64	280.00	86.64	37.54
5663	0.00	471.91	300.00	171.91	74.49
5664	0.00	471.90	310.00	161.90	70.16
5665	0.00	373.25	190.00	183.25	79.41
5666	0.00	409.71	230.00	179.71	77.87
5667	0.00	480.44	400.00	80.44	34.86
5668	0.00	625.00	560.00	65.00	28.17
7000	1.25 (1.25)	571.24	430.00	141.24	61.20
7001	1.25 (1.25)	571.81	410.00	161.81	70.12
7002	1.25 (1.25)	574.57	380.00	194.57	84.31
7003	1.25 (1.25)	575.83	410.00	165.83	71.86
7004	1.25 (1.25)	619.85	400.00	219.85	95.27
7005	1.25 (1.25)	624.83	530.00	94.83	41.09
7006	1.25 (1.25)	624.76	540.00	84.76	36.73
7007	1.25 (1.25)	646.46	445.00	201.46	87.30
7008	1.25 (1.25)	482.26	400.00	82.26	35.65
7009	1.25 (1.25)	564.34	300.00	264.34	114.55
7010	1.25 (1.25)	561.91	390.00	171.91	74.49
7011	1.25 (1.25)	560.66	280.00	280.66	121.62
7012	1.25 (1.25)	554.99	310.00	244.99	106.16
7013	1.25 (1.25)	507.79	365.00	142.79	61.88
7014	1.25 (1.25)	472.48	360.00	112.48	48.74
7015	1.25 (1.25)	510.51	380.00	130.51	56.55
7016	1.25 (1.25)	504.20	320.00	184.20	79.82
7017	1.25 (1.25)	505.29	340.00	165.29	71.63
7018	1.25 (1.25)	509.85	370.00	139.85	60.60
7019	1.25 (1.25)	508.81	360.00	148.81	64.48
7020	1.25 (1.25)	508.15	360.00	148.15	64.20
7021	1.25 (1.25)	507.61	360.00	147.61	63.97
7022	1.25 (1.25)	506.33	320.00	186.33	80.74
7023	1.25 (1.25)	502.66	310.00	192.66	83.49
7024	1.25 (1.25)	505.25	305.00	200.25	86.78
7025	1.25 (1.25)	504.98	310.00	194.98	84.49
7026	1.25 (1.25)	504.51	360.00	144.51	62.62
7027	1.25 (1.25)	503.58	350.00	153.58	66.55
7028	1.25 (1.25)	436.84	290.00	146.84	63.63
7029	1.25 (1.25)	430.71	260.00	170.71	73.97
7030	1.25 (1.25)	429.22	270.00	159.22	69.00
7031	1.25 (1.25)	423.66	220.00	203.66	88.25
7032	1.25 (1.25)	421.15	214.00	207.15	89.76

7033	1.25 (1.25)	406.83	202.00	204.83	88.76
7034	1.25 (1.25)	456.26	330.00	126.26	54.71
7035	1.25 (1.25)	371.07	345.00	26.07	11.30
7036	1.25 (1.25)	513.80	326.00	187.80	81.38
7037	1.25 (1.25)	480.40	310.00	170.40	73.84
7038	1.25 (1.25)	482.13	300.00	182.13	78.93
7039	1.25 (1.25)	530.20	300.00	230.20	99.75
7040	1.25 (1.25)	571.38	320.00	251.38	108.93
7041	1.25 (1.25)	592.88	290.00	302.88	131.25
7042	1.25 (1.25)	575.89	290.00	285.89	123.89
7043	1.25 (1.25)	584.71	425.00	159.71	69.21
7044	1.25 (1.25)	490.72	470.00	20.72	8.98
7045	1.25 (1.25)	462.40	275.00	187.40	81.21
7046	1.25 (1.25)	410.33	215.00	195.33	84.64
7047	1.25 (1.25)	410.66	215.00	195.66	84.79
7048	1.25 (1.25)	410.23	210.00	200.23	86.77
7049	1.25 (1.25)	409.20	210.00	199.20	86.32
7050	1.25 (1.25)	405.71	210.00	195.71	84.81
7051	1.25 (1.25)	405.24	225.00	180.24	78.11
7052	1.25 (1.25)	436.59	215.00	221.59	96.02
7053	1.25 (1.25)	436.53	215.00	221.53	96.00
7054	1.25 (1.25)	422.55	260.00	162.55	70.44
7055	1.25 (1.25)	421.64	270.00	151.64	65.71
7056	1.25 (1.25)	332.04	190.00	142.04	61.55
7057	1.25 (1.25)	371.44	185.00	186.44	80.79
7058	1.25 (1.25)	371.67	185.00	186.67	80.89
7059	1.25 (1.25)	371.70	185.00	186.70	80.90
7060	1.25 (1.25)	371.10	185.00	186.10	80.64
7061	1.25 (1.25)	370.91	185.00	185.91	80.56
7062	1.25 (1.25)	370.83	185.00	185.83	80.53
7063	1.25 (1.25)	388.10	200.00	188.10	81.51
7064	1.25 (1.25)	388.75	220.00	168.75	73.13
7065	1.25 (1.25)	388.74	220.00	168.74	73.12
7067	1.25 (1.25)	387.06	185.00	202.06	87.56
7070	1.25 (1.25)	309.81	200.00	109.81	47.59
7071	1.25 (1.25)	309.74	220.00	89.74	38.89
7072	1.25 (1.25)	653.13	380.00	273.13	118.36
7073	1.25 (1.25)	418.88	230.00	188.88	81.85
7074	1.25 (1.25)	475.46	260.00	215.46	93.37
7412	1.25 (1.25)	509.36	370.00	139.36	60.39
8001	1.25 (1.25)	508.35	360.00	148.35	64.29
8002	1.25 (1.25)	492.14	310.00	182.14	78.93
8003	1.25 (1.25)	464.11	290.00	174.11	75.45
8004	1.25 (1.25)	464.09	290.00	174.09	75.44
8005	1.25 (1.25)	504.62	360.00	144.62	62.67
8006	1.25 (1.25)	477.43	300.00	177.43	76.89
8007	1.25 (1.25)	480.37	290.00	190.37	82.50
8008	1.25 (1.25)	452.13	290.00	162.13	70.26
8009	1.25 (1.25)	329.39	210.00	119.39	51.74
8010	1.25 (1.25)	322.36	190.00	132.36	57.36
8011	1.25 (1.25)	318.09	190.00	128.09	55.51
8012	1.25 (1.25)	326.86	210.00	116.86	50.64
8013	1.25 (1.25)	326.86	210.00	116.86	50.64
8014	1.25 (1.25)	336.68	200.00	136.68	59.23
8016	1.25 (1.25)	332.58	185.00	147.58	63.95
8017	1.25 (1.25)	387.75	185.00	202.75	87.86
8018	1.25 (1.25)	400.12	220.00	180.12	78.05
8019	1.25 (1.25)	388.62	220.00	168.62	73.07
8020	1.25 (1.25)	387.72	200.00	187.72	81.35
8021	1.25 (1.25)	387.67	200.00	187.67	81.32
8022	1.25 (1.25)	388.10	298.00	90.10	39.04
8023	1.25 (1.25)	388.18	200.00	188.18	81.55
8024	1.25 (1.25)	471.58	360.00	111.58	48.35
8025	1.25 (1.25)	310.44	200.00	110.44	47.86
8027	1.25 (1.25)	387.66	200.00	187.66	81.32
8028	1.25 (1.25)	386.64	185.00	201.64	87.38
8029	1.25 (1.25)	387.56	190.00	197.56	85.61
8030	1.25 (1.25)	387.57	190.00	197.57	85.61
8031	1.25 (1.25)	387.49	190.00	197.49	85.58
8032	1.25 (1.25)	557.35	300.00	257.35	111.52
8034	1.25 (1.25)	387.56	190.00	197.56	85.61

8035		1.25 (1.25)	388.07	195.00	193.07	83.66
8036		1.25 (1.25)	387.50	190.00	197.50	85.58
8037		1.25 (1.25)	430.88	260.00	170.88	74.05
8038		1.25 (1.25)	431.05	260.00	171.05	74.12
8039		1.25 (1.25)	459.18	290.00	169.18	73.31
8040		1.25 (1.25)	384.98	185.00	199.98	86.66
8041		1.25 (1.25)	384.92	185.00	199.92	86.63
8042		1.25 (1.25)	384.94	185.00	199.94	86.64
8043		1.25 (1.25)	554.37	330.00	224.37	97.23
8044		1.25 (1.25)	387.66	200.00	187.66	81.32
8045		1.25 (1.25)	328.17	185.00	143.17	62.04
8046		1.25 (1.25)	491.32	315.00	176.32	76.40
8047		1.25 (1.25)	507.44	390.00	117.44	50.89
8048		1.25 (1.25)	433.68	240.00	193.68	83.93
8049		1.25 (1.25)	387.52	200.00	187.52	81.26
8050		1.25 (1.25)	434.25	280.00	154.25	66.84
8051		1.25 (1.25)	643.26	448.00	195.26	84.61
8052		1.25 (1.25)	404.90	220.00	184.90	80.12
8053		1.25 (1.25)	389.43	205.00	184.43	79.92
8054		1.25 (1.25)	401.00	235.00	166.00	71.93
8055		1.25 (1.25)	368.15	190.00	178.15	77.20
8056		1.25 (1.25)	368.15	190.00	178.15	77.20
8057		1.25 (1.25)	368.12	190.00	178.12	77.19
8058		1.25 (1.25)	368.13	190.00	178.13	77.19
8059		1.25 (1.25)	415.90	240.00	175.90	76.22
8060		1.25 (1.25)	625.80	470.00	155.80	67.51
8061		1.25 (1.25)	408.87	220.00	188.87	81.85
8062		1.25 (1.25)	374.35	190.00	184.35	79.88
8063		1.25 (1.25)	387.18	185.00	202.18	87.61
8064		1.25 (1.25)	504.24	320.00	184.24	79.84
8065		1.25 (1.25)	388.41	220.00	168.41	72.98
8066		1.25 (1.25)	512.53	310.00	202.53	87.76
8067		1.25 (1.25)	625.83	460.00	165.83	71.86
8068		1.25 (1.25)	319.16	190.00	129.16	55.97
8069		1.25 (1.25)	505.27	350.00	155.27	67.28
8070		1.25 (1.25)	371.48	180.00	191.48	82.98
8071		1.25 (1.25)	371.77	185.00	186.77	80.94
8072		1.25 (1.25)	478.09	330.00	148.09	64.17
8073		1.25 (1.25)	538.29	350.00	188.29	81.59
8074		1.25 (1.25)	473.50	370.00	103.50	44.85
8075		1.25 (1.25)	563.44	330.00	233.44	101.16
9000		18.75 (1.25)	305.79	220.00	85.79	37.18
9001		31.25 (1.25)	304.18	220.00	84.18	36.48
9002		22.50 (1.25)	304.17	190.00	114.17	49.48
9003		140.00 (1.25)	312.85	190.00	122.85	53.23
9004		73.75 (1.25)	369.08	248.00	121.08	52.47
9005		33.75 (1.25)	485.85	180.00	305.85	132.54
9006		32.50 (1.25)	485.09	180.00	305.09	132.21
9007		207.50 (1.25)	372.28	200.00	172.28	74.66
184 - Pump-1		0.00	339.52	320.00	19.52	8.46
184 - Pump-2		0.00	339.47	320.00	19.47	8.44
Bron - Pump-		0.00	472.40	390.00	82.40	35.71
BronPump-2		0.00	472.40	390.00	82.40	35.71
Bronson-ES		----	511.00	390.00	121.00	52.43
CrossRoad-		0.00	369.89	350.00	19.89	8.62
CrossRoad-		0.00	369.89	350.00	19.89	8.62
CrossRoad-		----	370.00	350.00	20.00	8.67
FGN-AA	Mn<MdlD-455/	----	200.00	190.00	10.00	4.33
FGN-BB	Mn<83-D-455/	----	200.00	190.00	10.00	4.33
FGN-LL	184---D-500/	----	500.00	320.00	180.00	78.00
FGN-TT	Mn<CtyD-455/	----	455.00	190.00	265.00	114.83
Hemphill-T		----	420.00	280.00	140.00	60.67
Hwy83	CLM---S-380/	----	390.00	310.00	80.00	34.67
Hwy83-1		0.00	565.50	300.00	265.50	115.05
Hwy83-2		0.00	561.97	300.00	261.97	113.52
Hwy83-Plan		----	382.00	300.00	82.00	35.53
J-1		0.00	325.76	210.00	115.76	50.16
J-11		0.00	635.42	400.00	235.42	102.01
J-18		0.00	472.40	390.00	82.40	35.71
J-21		0.00	321.44	269.00	52.44	22.72
J-22		0.00	560.72	300.00	260.72	112.98

J-24		0.00	393.14	185.00	208.14	90.19
J-29		0.00	569.99	325.00	244.99	106.16
J-3		0.00	509.74	390.00	119.74	51.89
J-34		0.00	382.56	300.00	82.56	35.77
J-37		0.00	560.76	300.00	260.76	112.99
J-44		0.00	199.95	190.00	9.95	4.31
J-45		0.00	540.14	350.00	190.14	82.39
J-52		1.25 (1.25)	478.71	320.00	158.71	68.77
J-53		0.00	398.65	190.00	208.65	90.41
J-63		0.00	642.95	320.00	322.95	139.95
J-69		0.00	474.83	340.00	134.83	58.43
J-8		0.00	410.40			
JimNethery		----	396.00	380.00	16.00	6.93
JimNethery		0.00	685.47	380.00	305.47	132.37
JimNethery		0.00	685.47	380.00	305.47	132.37
King-1		0.00	321.23	269.00	52.23	22.63
King-2		0.00	321.10	269.00	52.10	22.58
McMahan		----	410.00	400.00	10.00	4.33
McMahan-1		0.00	409.99	400.00	9.99	4.33
McMahan-2		0.00	409.99	400.00	9.99	4.33
Midlake		----	200.00	185.00	15.00	6.50
Midlake-1		0.00	393.39	185.00	208.39	90.30
Midlake-2		0.00	393.38	185.00	208.38	90.30
Payne-1		0.00	666.69	400.00	266.69	115.57
Payne-2		0.00	480.41	400.00	80.41	34.85
Pipe-Plant	RdH-S/D-510/	----	510.00	440.00	70.00	30.33
Plant-A5		----	625.00	560.00	65.00	28.17
PRV-1		0.00	666.67	400.00	266.67	115.56
Pump-1		0.00	393.36	185.00	208.36	90.29
R-1		----	360.00	261.00	99.00	42.90
R-2		----	347.00	261.00	86.00	37.27
T-1		----	340.00	320.00	20.00	8.67
Tebo		----	348.00	325.00	23.00	9.97
Tebo-1		0.00	569.99	325.00	244.99	106.16
Tebo-2		0.00	569.99	325.00	244.99	106.16
WTHwy83-1		0.00	199.94	190.00	9.94	4.31
WTHyw83-2		0.00	199.95	190.00	9.95	4.31
WTMidlake-		0.00	199.25	190.00	9.25	4.01
WTMidlake-		0.00	199.27	190.00	9.27	4.01
184-Pump-1		0.00	643.43	320.00	323.43	140.15
184-Pump-2		0.00	643.40	320.00	323.40	140.14
Bron-Pump-		0.00	511.00	390.00	121.00	52.43
BronPump-2		0.00	511.00	390.00	121.00	52.43
CrossRoad-		0.00	540.25	350.00	190.25	82.44
CrossRoad-		0.00	540.25	350.00	190.25	82.44
Hwy83-1		0.00	380.38	300.00	80.38	34.83
Hwy83-2		0.00	380.25	300.00	80.25	34.77
JimNethery		0.00	395.80	380.00	15.80	6.85
JimNethery		0.00	395.80	380.00	15.80	6.85
King-1		0.00	514.13	269.00	245.13	106.22
King-2		0.00	514.23	269.00	245.23	106.27
McMahan-1		0.00	635.43	400.00	235.43	102.02
McMahan-2		0.00	635.43	400.00	235.43	102.02
Midlake-1		0.00	199.77	185.00	14.77	6.40
Midlake-2		0.00	199.77	185.00	14.77	6.40
Payne-1		0.00	480.41	400.00	80.41	34.84
Payne-2		0.00	666.69	400.00	266.69	115.57
PRV-1		----	666.67	400.00	266.67	115.56
Pump-1		0.00	199.78	185.00	14.78	6.40
Tebo-1		0.00	347.99	325.00	22.99	9.96
Tebo-2		0.00	347.99	325.00	22.99	9.96
WTHwy83-1		0.00	398.65	190.00	208.65	90.42
WTHyw83-2		0.00	398.65	190.00	208.65	90.41
WTMidlake-		0.00	322.33	190.00	132.33	57.34
WTMidlake-		0.00	322.28	190.00	132.28	57.32

MAXIMUM AND MINIMUM VALUES

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
5391	169.38	WTMidlake-1	4.01
5264	167.44	WTMidlake-2	4.01
1596	165.84	5614	4.05
5276	159.24	WTHwy83-1	4.31
5265	155.67	WTHwy83-2	4.31
5061	155.19	J-44	4.31
5291	154.23	McMahan-1	4.33
2011	152.15	McMahan-2	4.33
5266	152.12	5035	4.33
2251	149.49	5036	4.33
230	148.89	FGN-AA	4.33
5267	148.61	FGN-BB	4.33
2141	147.70	McMahan	4.33
1633	147.41	5034	5.48
1329	147.15	Midlake-2	6.40
2445	147.11	Midlake-1	6.40
2391	147.06	Pump-1	6.40
2703	147.00	Midlake	6.50
147	146.98	5462	6.72
2420	146.98	JimNethery-	6.85

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
1340	163.95	1837	0.00
P-2902	39.90	2085	0.00
P-2954	39.90	1262	0.00
P-2928	8.92	1656	0.00
P-2140	7.86	2498	0.01
P-2932	7.86	2503	0.01
P-1949	7.74	2537	0.01
P-2933	7.74	1995	0.01
2116	6.71	909	0.01
2252	6.35	1089	0.01
2253	6.35	1691	0.01
2785	6.35	1712	0.01
2103	5.89	2045	0.01
2104	5.89	1988	0.02
2108	5.89	2497	0.02
2112	5.89	1964	0.02
2102	5.87	1774	0.02
1950	5.86	1820	0.02
2101	5.86	2752	0.02
P-2925	5.86	1974	0.03

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
1340	8000.01	1837	0.00
P-2954	583.94	2085	0.00
P-2902	583.94	2498	0.00
P-2140	46.26	2503	0.00
P-2932	46.26	2537	0.00
P-1949	44.99	1262	0.00
P-2933	44.99	1656	0.00
2252	43.62	2497	0.00
2253	43.62	1691	0.00
2785	43.62	909	0.00
P-2928	36.45	1089	0.00

1348	29.01	1712	0.00
2165	22.54	2045	0.00
2116	21.51	1995	0.00
2167	21.02	1774	0.00
201	20.92	944	0.00
203	20.68	1087	0.00
207	20.68	366	0.00
P-2915	20.68	1088	0.00
202	20.68	1711	0.00

REGULATING VALVE REPORT

VALVE LABEL	VALVE TYPE	VALVE SETTING (psi or gpm)	VALVE STATUS	UPSTREAM PRESSURE (psi)	DOWNSTREAM PRESSURE (psi)	THROUGH FLOW (gpm)
PRV-1	PSV	20.00	WIDE OPEN	115.56	115.56	15.00

SUMMARY OF INFLOWS AND OUTFLOWS

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
Bronson-EST	202.50	
CrossRoad-T	82.32	
FGN-AA	591.44	Mn<MdlD-455/
FGN-BB	102.16	Mn<83-D-455/
FGN-LL	14449.44	184---D-500/
FGN-TT	0.00	Mn<CtyD-455/
Hemphill-Ta	-10933.26	
Hwy83	593.53	CLM---S-380/
Hwy83-Plant	522.84	
JimNethery	379.92	
McMahan	158.59	
Midlake	269.86	
Pipe-Plant-	153.81	RdH-S/D-510/
Plant-A5	-27.99	
R-1	52.50	
R-2	-118.53	
T-1	-3098.62	
Tebo	-114.26	

NET SYSTEM INFLOW = 17558.91
 NET SYSTEM OUTFLOW = -14292.66
 NET SYSTEM DEMAND = 3266.25

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
*
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*
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INPUT DATA FILENAME ----- C:\JENNIF~1\JULYMO~1\BEECHW~2.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF~1\JULYMO~1\BEECHW~2.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF~1\JULYMO~1\BEECHW~2.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-8	279.18	3.00	100.0000	0.00
P-10	J-128	J-11	1305.98	4.00	100.0000	0.00
P-100	J-705	J-737	592.37	4.00	100.0000	0.00
P-101	J-737	J-20	572.90	4.00	100.0000	0.00
P-102	J-760	J-763	348.92	4.00	100.0000	0.00
P-103	J-760	J-764	300.37	2.00	100.0000	0.00
P-104	J-559	J-765	383.94	4.00	100.0000	0.00
P-105	J-765	J-579	386.75	4.00	100.0000	0.00
P-106	J-765	J-779	64.90	1.50	100.0000	0.00
P-107	J-1	J-69	1254.50	3.00	100.0000	0.00
P-108	J-3	J-4	831.73	6.00	100.0000	0.00
P-109	J-4	J-5	2361.50	6.00	100.0000	0.00
P-11	J-142	J-146	220.39	4.00	100.0000	0.00
P-110	J-5	J-121	830.70	6.00	100.0000	0.00
P-111	J-313	J-316	1241.69	3.00	100.0000	0.00
P-112	J-7	J-9	576.93	4.00	100.0000	0.00
P-113	J-9	J-10	873.19	4.00	100.0000	0.00
P-114	J-10	J-221	394.93	4.00	100.0000	0.00
P-115	J-11	J-142	357.81	4.00	100.0000	0.00
P-116-XX	Pump-3	J-12	20.00	6.00	100.0000	0.00
P-117	J-128	J-146	1543.56	4.00	100.0000	0.00
P-118-XX	R-1	J-383	40.00	6.00	100.0000	0.00
P-119	J-15	J-45	2506.73	2.00	100.0000	0.00
P-12	J-142	J-128	968.56	4.00	100.0000	0.00
P-120	J-16	J-45	436.42	2.00	100.0000	0.00
P-121	J-730	J-18	1227.49	2.00	100.0000	0.00
P-122-XX	Pump-4	J-12	20.00	6.00	100.0000	0.00
P-123	J-19	J-18	354.38	2.00	100.0000	0.00
P-124	J-20	J-760	1041.86	4.00	100.0000	0.00
P-125	J-21	J-610	698.57	3.00	100.0000	0.00
P-126	J-22	J-526	392.31	2.00	100.0000	0.00
P-127	J-23	J-22	486.37	2.00	100.0000	0.00
P-128	J-25	J-525	152.16	4.00	100.0000	0.00
P-129	J-26	J-440	295.75	3.00	100.0000	0.00

P-13	J-6	J-127	398.66	6.00	100.0000	0.00
P-130	J-27	J-26	870.01	3.00	100.0000	0.00
P-131	J-28	J-29	365.95	3.00	100.0000	0.00
P-132	J-29	J-479	974.20	3.00	100.0000	0.00
P-133-XX	J-383	Pump-5	55.43	6.00	100.0000	0.00
P-134-XX	Pump-5	J-12	53.31	6.00	100.0000	0.00
P-135-XX	J-383	Pump-6	42.38	6.00	100.0000	0.00
P-136-XX	Pump-6	J-12	39.67	6.00	100.0000	0.00
P-137	J-17	J-436	1446.28	6.00	100.0000	0.00
P-138	T-1	J-31	40.00	8.00	100.0000	0.00
P-139	T-3	J-31	40.00	8.00	100.0000	0.00
P-14	J-167	J-146	260.58	4.00	100.0000	0.00
P-140	T-2	J-31	40.00	8.00	100.0000	0.00
P-141	J-32	J-167	445.40	4.00	100.0000	0.00
P-142	Pump-2	J-30	30.00	8.00	100.0000	0.00
P-143	J-17	J-32	227.46	4.00	100.0000	0.00
P-144	J-688	J-33	751.20	3.00	100.0000	0.00
P-145	J-688	J-34	317.00	6.00	100.0000	0.00
P-146	J-34	J-35	384.00	4.00	100.0000	0.00
P-147	J-34	J-38	1087.00	4.00	100.0000	0.00
P-148	J-38	J-37	942.28	4.00	100.0000	0.00
P-149	J-38	J-37	547.00	4.00	100.0000	0.00
P-15	J-167	J-175	530.41	2.00	100.0000	0.00
P-150	J-37	J-42	502.00	4.00	100.0000	0.00
P-151	J-39	J-35	1142.00	4.00	100.0000	0.00
P-152	J-39	J-41	327.00	3.00	100.0000	0.00
P-153	J-41	J-40	402.00	3.00	100.0000	0.00
P-154	J-41	J-42	969.00	3.00	100.0000	0.00
P-155	J-42	J-39	327.00	3.00	100.0000	0.00
P-156	J-688	J-43	1362.95	4.00	100.0000	0.00
P-157	J-44	J-687	63.77	4.00	100.0000	0.00
P-158	J-44	J-46	242.50	4.00	100.0000	0.00
P-159	J-45	J-15	429.53	2.00	100.0000	0.00
P-16	J-176	J-179	267.62	2.00	100.0000	0.00
P-17	J-127	J-182	77.07	6.00	100.0000	0.00
P-18	J-182	J-176	228.42	6.00	100.0000	0.00
P-19	J-187	J-7	753.42	4.00	100.0000	0.00
P-2	J-8	J-24	1025.69	3.00	100.0000	0.00
P-20	J-221	J-187	253.73	4.00	100.0000	0.00
P-21	J-221	J-228	529.90	2.00	100.0000	0.00
P-22	J-229	J-187	431.44	4.00	100.0000	0.00
P-23	J-229	J-234	272.81	2.00	100.0000	0.00
P-24	J-235	J-239	133.38	4.00	100.0000	0.00
P-25	J-229	J-239	539.17	4.00	100.0000	0.00
P-26	J-182	J-245	338.81	4.00	100.0000	0.00
P-27	J-245	J-229	657.13	4.00	100.0000	0.00
P-28	J-245	J-259	392.55	2.00	100.0000	0.00
P-29	J-260	J-32	103.54	6.00	100.0000	0.00
P-3	J-24	J-36	817.86	2.00	100.0000	0.00
P-30	J-260	J-273	192.23	2.00	100.0000	0.00
P-31	J-274	J-276	316.08	2.00	100.0000	0.00
P-32	J-276	J-279	142.51	2.00	100.0000	0.00
P-33	J-279	J-283	111.65	1.00	100.0000	0.00
P-34	J-274	J-288	729.21	2.00	100.0000	0.00
P-35	J-288	J-291	103.15	1.00	100.0000	0.00
P-36	J-276	J-294	374.41	2.00	100.0000	0.00
P-37	J-294	J-297	94.10	1.00	100.0000	0.00
P-38-XX	J-298	T-1	40.00	6.00	100.0000	0.00
P-39	J-304	J-305	305.82	4.00	100.0000	0.00
P-4	J-8	J-1	447.42	3.00	100.0000	0.00
P-40	J-306	J-304	331.83	2.00	100.0000	0.00
P-41	J-304	J-313	263.35	3.00	100.0000	0.00
P-42	J-314	J-316	270.35	3.00	100.0000	0.00
P-43-XX	J-298	T-2	40.00	6.00	100.0000	0.00
P-44	J-313	J-331	335.08	3.00	100.0000	0.00
P-45	J-331	J-316	369.36	3.00	100.0000	0.00
P-46	J-331	J-339	226.40	2.00	100.0000	0.00
P-47	J-340	J-304	1305.53	4.00	100.0000	0.00
P-48	J-340	J-354	253.54	2.00	100.0000	0.00
P-49	J-13	J-14	269.54	4.00	100.0000	0.00
P-5	J-69	J-24	690.49	3.00	100.0000	0.00

P-50	J-305	J-314	1095.48	4.00	100.0000	0.00
P-51	J-176	J-370	499.52	6.00	100.0000	0.00
P-52	J-370	J-260	40.49	6.00	100.0000	0.00
P-53	J-31	Pump-1	30.00	8.00	100.0000	0.00
P-54	J-14	J-17	205.97	4.00	100.0000	0.00
P-55	J-314	J-374	119.40	4.00	100.0000	0.00
P-56	J-374	J-340	1102.33	4.00	100.0000	0.00
P-57	J-31	Pump-2	30.00	8.00	100.0000	0.00
P-58	J-274	J-14	200.25	4.00	100.0000	0.00
P-59	J-305	J-13	367.20	4.00	100.0000	0.00
P-6	J-69	J-87	528.61	2.00	100.0000	0.00
P-60-XX	J-298	T-3	40.00	6.00	100.0000	0.00
P-61-XX	J-383	Pump-4	20.00	6.00	100.0000	0.00
P-62	J-399	J-401	256.39	6.00	100.0000	0.00
P-63	Pump-1	J-30	30.00	8.00	100.0000	0.00
P-64	J-239	J-401	1051.03	4.00	100.0000	0.00
P-65	J-401	J-127	196.59	6.00	100.0000	0.00
P-66	J-399	J-13	1139.48	6.00	100.0000	0.00
P-67-XX	J-12	J-298	2746.32	6.00	100.0000	0.00
P-68	J-30	J-399	50.00	10.00	100.0000	0.00
P-69-XX	J-383	Pump-3	20.00	6.00	100.0000	0.00
P-7	J-2	J-3	1841.70	6.00	100.0000	0.00
P-70	J-437	J-439	44.75	4.00	100.0000	0.00
P-71	J-437	J-440	314.61	4.00	100.0000	0.00
P-72	J-440	J-28	411.08	3.00	100.0000	0.00
P-73	J-479	J-27	281.17	3.00	100.0000	0.00
P-74	J-507	J-479	152.55	2.00	100.0000	0.00
P-75	J-508	J-25	953.75	4.00	100.0000	0.00
P-76	J-526	J-23	445.08	2.00	100.0000	0.00
P-77	J-525	J-557	154.80	3.00	100.0000	0.00
P-78	J-557	J-526	121.61	3.00	100.0000	0.00
P-79	J-436	J-559	243.73	6.00	100.0000	0.00
P-8	J-121	J-122	145.50	2.00	100.0000	0.00
P-80	J-559	J-437	298.02	6.00	100.0000	0.00
P-81	J-560	J-565	368.10	2.00	100.0000	0.00
P-82	J-566	J-560	114.84	1.50	100.0000	0.00
P-83	J-567	J-560	604.29	3.00	100.0000	0.00
P-84	J-567	J-577	97.63	1.50	100.0000	0.00
P-85	J-578	J-579	217.02	2.00	100.0000	0.00
P-86	J-580	J-578	246.14	1.50	100.0000	0.00
P-87	J-578	J-594	222.04	1.50	100.0000	0.00
P-88	J-525	J-21	180.29	3.00	100.0000	0.00
P-89	J-610	J-508	471.68	3.00	100.0000	0.00
P-9	J-121	J-6	1314.82	6.00	100.0000	0.00
P-90	J-579	J-625	188.31	4.00	100.0000	0.00
P-91	J-625	J-567	358.28	3.00	100.0000	0.00
P-92	J-625	J-610	300.04	3.00	100.0000	0.00
P-93	J-436	J-629	562.05	6.00	100.0000	0.00
P-94	J-629	J-16	500.84	2.00	100.0000	0.00
P-95	J-629	J-687	838.24	6.00	100.0000	0.00
P-96	J-688	J-44	1065.45	4.00	100.0000	0.00
P-97	J-687	J-705	100.98	2.00	100.0000	0.00
P-98	J-705	J-19	2216.98	2.00	100.0000	0.00
P-99	J-731	J-737	907.22	2.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 4)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
161.54	0.00	1.00
115.38	500.00	1.00
75.00	750.00	1.00

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 5)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
161.54	0.00	1.00
115.38	500.00	1.00
75.00	750.00	1.00

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
140.00	0.00	75.00 (Default)
120.00	360.00	75.00 (Default)
102.00	500.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-4 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
140.00	0.00	75.00 (Default)
120.00	360.00	75.00 (Default)
102.00	500.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-5 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
41.00	45.00	75.00 (Default)
20.00	540.00	75.00 (Default)
16.00	615.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-6 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
41.00	45.00	75.00 (Default)
20.00	540.00	75.00 (Default)
16.00	615.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

END NODE DATA

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		21.00	195.00	
J-10		0.00	205.00	
J-11		0.00	245.00	
J-12		0.00	191.00	
J-121		0.00	240.00	
J-122		0.00	245.00	
J-127		0.00	250.00	
J-128		32.00	233.00	
J-13		23.00	260.00	

J-14	0.00	260.00
J-142	28.00	264.00
J-146	28.00	236.00
J-15	9.00	255.00
J-16	0.00	275.00
J-167	8.00	232.00
J-17	0.00	240.00
J-175	5.00	250.00
J-176	5.00	240.00
J-179	5.00	205.00
J-18	0.00	195.00
J-182	6.00	243.00
J-187	27.00	212.00
J-19	22.00	205.00
J-2	4.00	210.00
J-20	0.00	262.00
J-21	13.00	195.00
J-22	17.00	180.00
J-221	28.00	204.00
J-228	13.00	230.00
J-229	6.00	210.00
J-23	0.00	193.00
J-234	6.00	200.00
J-235	5.00	200.00
J-239	10.00	205.00
J-24	17.00	195.00
J-245	13.00	214.00
J-25	15.00	220.00
J-259	9.00	210.00
J-26	16.00	260.00
J-260	11.00	230.00
J-27	0.00	198.00
J-273	4.00	220.00
J-274	18.00	270.00
J-276	8.00	246.00
J-279	0.00	245.00
J-28	0.00	205.00
J-283	2.00	234.00
J-288	0.00	243.00
J-29	13.00	210.00
J-291	4.00	236.00
J-294	0.00	218.00
J-297	3.00	218.00
J-298	0.00	280.00
J-3	0.00	270.00
J-30	0.00	280.00
J-304	32.00	255.00
J-305	4.00	238.00
J-306	3.00	250.00
J-31	0.00	280.00
J-313	18.00	250.00
J-314	30.00	210.00
J-316	14.00	228.00
J-32	0.00	230.00
J-33	0.00	210.00
J-331	3.00	250.00
J-339	4.00	250.00
J-34	0.00	268.00
J-340	4.00	214.00
J-35	0.00	265.00
J-354	4.00	193.00
J-36	1.00	180.00
J-37	0.00	220.00
J-370	0.00	223.00
J-374	24.00	208.00
J-38	0.00	233.00
J-383	0.00	191.00
J-39	0.00	262.00
J-399	0.00	280.00
J-4	0.00	210.00
J-40	0.00	225.00

J-401	20.00	250.00	
J-41	0.00	225.00	
J-42	0.00	210.00	
J-43	0.00	188.00	
J-436	0.00	242.00	
J-437	0.00	250.00	
J-439	0.00	250.00	
J-44	0.00	285.00	
J-440	18.00	260.00	
J-45	0.00	265.00	
J-46	0.00	280.00	
J-479	27.00	198.00	
J-5	0.00	220.00	
J-507	0.00	198.00	
J-508	16.00	251.00	
J-525	0.00	215.00	
J-526	14.00	200.00	
J-557	0.00	200.00	
J-559	11.00	255.00	
J-560	13.00	208.00	
J-565	6.00	191.00	
J-566	4.00	224.00	
J-567	14.00	220.00	
J-577	4.00	238.00	
J-578	10.00	265.00	
J-579	8.00	245.00	
J-580	5.00	260.00	
J-594	4.00	275.00	
J-6	0.00	280.00	
J-610	14.00	218.00	
J-625	12.00	233.00	
J-629	0.00	270.00	
J-687	0.00	288.00	
J-688	12.00	270.00	
J-69	6.00	195.00	
J-7	0.00	204.00	
J-705	0.00	285.00	
J-730	0.00	175.00	
J-731	1.00	252.00	
J-737	5.00	260.00	
J-760	10.00	210.00	
J-763	0.00	190.00	
J-764	0.00	195.00	
J-765	0.00	252.00	
J-779	4.00	246.00	
J-8	17.00	205.00	
J-87	4.00	180.00	
J-9	0.00	194.00	
Pump-1	0.00	280.00	
Pump-2	0.00	280.00	
Pump-3	0.00	191.00	
Pump-4	0.00	191.00	
Pump-5	0.00	191.00	
Pump-6	0.00	191.00	
R-1	----	191.00	195.00
T-1	----	280.00	292.00
T-2	----	280.00	292.00
T-3	----	280.00	292.00

O U T P U T O P T I O N D A T A

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 10
 MAXIMUM AND MINIMUM VELOCITIES = 10
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 10

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 159
 NUMBER OF END NODES(j) = 134
 NUMBER OF PRIMARY LOOPS(l) = 22
 NUMBER OF SUPPLY NODES(f) = 4
 NUMBER OF SUPPLY ZONES(z) = 1

=====
 CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

*** WARNING ***

DUE TO SPECIFIED DEMANDS THE PUMP IN LINE ~@Pump-6 IS FORCED TO OPERATE
 AT ZERO FLOW. THIS MAY CAUSE PROBLEMS CALCULATING THE HGLs IN THE
 VICINITY OF THE PUMP. TRY CLOSING LINE ~@Pump-6 AND RERUN THE SIMULATION.

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00002

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS #1	NODE NUMBERS #2	FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
P-1	J-2	J-8	29.11	1.41	0.00	1.32	5.04
P-10	J-128	J-11	-2.86	0.02	0.00	0.07	0.02
P-100	J-705	J-737	7.06	0.05	0.00	0.18	0.09
P-101	J-737	J-20	4.41	0.02	0.00	0.11	0.04
P-102	J-760	J-763	0.00	0.00	0.00	0.00	0.00
P-103	J-760	J-764	0.00	0.00	0.00	0.00	0.00
P-104	J-559	J-765	76.29	2.84	0.00	1.95	7.40
P-105	J-765	J-579	74.53	2.74	0.00	1.90	7.08
P-106	J-765	J-779	1.76	0.05	0.00	0.32	0.82
P-107	J-1	J-69	3.35	0.12	0.00	0.15	0.09
P-108	J-3	J-4	-30.87	0.16	0.00	0.35	0.19
P-109	J-4	J-5	-30.87	0.45	0.00	0.35	0.19
P-11	J-142	J-146	-19.03	0.12	0.00	0.49	0.57
P-110	J-5	J-121	-30.87	0.16	0.00	0.35	0.19
P-111	J-313	J-316	1.52	0.03	0.00	0.07	0.02
P-112	J-7	J-9	4.01	0.02	0.00	0.10	0.03
P-113	J-9	J-10	4.01	0.03	0.00	0.10	0.03
P-114	J-10	J-221	4.01	0.01	0.00	0.10	0.03
P-115	J-11	J-142	-2.86	0.01	0.00	0.07	0.02
P-116	Pump-3	J-12	0.00	0.00	0.00	0.00	0.00
P-117	J-128	J-146	-7.43	0.15	0.00	0.19	0.10
P-118	R-1	J-383	0.00	0.00	0.00	0.00	0.00
P-119	J-15	J-45	-1.10	0.21	0.00	0.11	0.08
P-12	J-142	J-128	3.83	0.03	0.00	0.10	0.03
P-120	J-16	J-45	3.97	0.40	0.00	0.41	0.91
P-121	J-730	J-18	0.00	0.00	0.00	0.00	0.00
P-122	Pump-4	J-12	0.00	0.00	0.00	0.00	0.00
P-123	J-19	J-18	0.00	0.00	0.00	0.00	0.00
P-124	J-20	J-760	4.41	0.04	0.00	0.11	0.04
P-125	J-21	J-610	-15.16	1.05	0.00	0.69	1.51
P-126	J-22	J-526	-4.61	0.47	0.00	0.47	1.20
P-127	J-23	J-22	2.89	0.24	0.00	0.30	0.50
P-128	J-25	J-525	4.25	0.01	0.00	0.11	0.04
P-129	J-26	J-440	-14.02	0.39	0.00	0.64	1.30

P-13	J-6	J-127	-30.87	0.08	0.00	0.35	0.19
P-130	J-27	J-26	-6.96	0.31	0.00	0.32	0.36
P-131	J-28	J-29	10.68	0.29	0.00	0.48	0.79
P-132	J-29	J-479	4.94	0.18	0.00	0.22	0.19
P-133	J-383	Pump-5	0.00	0.00	0.00	0.00	0.00
P-134	Pump-5	J-12	0.00	0.00	0.00	0.00	0.00
P-135	J-383	Pump-6	0.00	0.00	0.00	0.00	0.00
P-136-XX	Pump-6	J-12					
P-137	J-17	J-436	139.80	4.56	0.00	1.59	3.15
P-138	T-1	J-31	125.54	0.03	0.00	0.80	0.64
P-139	T-3	J-31	125.54	0.03	0.00	0.80	0.64
P-14	J-167	J-146	38.81	0.55	0.00	0.99	2.12
P-140	T-2	J-31	125.54	0.03	0.00	0.80	0.64
P-141	J-32	J-167	44.54	1.22	0.00	1.14	2.73
P-142	Pump-2	J-30	188.31	0.04	0.00	1.20	1.35
P-143	J-17	J-32	-76.30	1.68	0.00	1.95	7.40
P-144	J-688	J-33	0.00	0.00	0.00	0.00	0.00
P-145	J-688	J-34	0.00	0.00	0.00	0.00	0.00
P-146	J-34	J-35	-0.01	0.00	0.00	0.00	0.00
P-147	J-34	J-38	0.01	0.00	0.00	0.00	0.00
P-148	J-38	J-37	0.01	0.00	0.00	0.00	0.00
P-149	J-38	J-37	0.00	0.00	0.00	0.00	0.00
P-15	J-167	J-175	2.20	0.16	0.00	0.23	0.31
P-150	J-37	J-42	0.01	0.00	0.00	0.00	0.00
P-151	J-39	J-35	0.01	0.00	0.00	0.00	0.00
P-152	J-39	J-41	0.01	0.00	0.00	0.00	0.00
P-153	J-41	J-40	0.00	0.00	0.00	0.00	0.00
P-154	J-41	J-42	0.01	0.00	0.00	0.00	0.00
P-155	J-42	J-39	0.02	0.00	0.00	0.00	0.00
P-156	J-688	J-43	0.00	0.00	0.00	0.00	0.00
P-157	J-44	J-687	-5.29	0.00	0.00	0.14	0.05
P-158	J-44	J-46	0.00	0.00	0.00	0.00	0.00
P-159	J-45	J-15	2.86	0.21	0.00	0.29	0.50
P-16	J-176	J-179	2.20	0.08	0.00	0.23	0.31
P-17	J-127	J-182	156.49	0.30	0.00	1.78	3.88
P-18	J-182	J-176	131.86	0.65	0.00	1.50	2.83
P-19	J-187	J-7	4.01	0.02	0.00	0.10	0.03
P-2	J-8	J-24	8.99	0.59	0.00	0.41	0.57
P-20	J-221	J-187	-14.07	0.08	0.00	0.36	0.32
P-21	J-221	J-228	5.73	0.95	0.00	0.59	1.79
P-22	J-229	J-187	29.99	0.57	0.00	0.77	1.31
P-23	J-229	J-234	2.65	0.12	0.00	0.27	0.43
P-24	J-235	J-239	-2.20	0.00	0.00	0.06	0.01
P-25	J-229	J-239	-23.00	0.43	0.00	0.59	0.80
P-26	J-182	J-245	21.98	0.25	0.00	0.56	0.74
P-27	J-245	J-229	12.28	0.17	0.00	0.31	0.25
P-28	J-245	J-259	3.97	0.36	0.00	0.41	0.91
P-29	J-260	J-32	120.84	0.25	0.00	1.37	2.41
P-3	J-24	J-36	0.44	0.01	0.00	0.05	0.02
P-30	J-260	J-273	1.76	0.04	0.00	0.18	0.20
P-31	J-274	J-276	5.73	0.57	0.00	0.59	1.79
P-32	J-276	J-279	0.88	0.01	0.00	0.09	0.06
P-33	J-279	J-283	0.88	0.18	0.00	0.36	1.64
P-34	J-274	J-288	1.76	0.15	0.00	0.18	0.20
P-35	J-288	J-291	1.76	0.61	0.00	0.72	5.91
P-36	J-276	J-294	1.32	0.04	0.00	0.14	0.12
P-37	J-294	J-297	1.32	0.33	0.00	0.54	3.47
P-38	J-298	T-1	0.00	0.00	0.00	0.00	0.00
P-39	J-304	J-305	-37.27	0.60	0.00	0.95	1.96
P-4	J-8	J-1	12.61	0.48	0.00	0.57	1.07
P-40	J-306	J-304	-1.32	0.04	0.00	0.14	0.12
P-41	J-304	J-313	12.53	0.28	0.00	0.57	1.06
P-42	J-314	J-316	4.67	0.05	0.00	0.21	0.17
P-43-XX	J-298	T-2					
P-44	J-313	J-331	3.08	0.03	0.00	0.14	0.08
P-45	J-331	J-316	-0.01	0.00	0.00	0.00	0.00
P-46	J-331	J-339	1.76	0.05	0.00	0.18	0.20
P-47	J-340	J-304	-9.30	0.20	0.00	0.24	0.15
P-48	J-340	J-354	1.76	0.05	0.00	0.18	0.20
P-49	J-13	J-14	78.93	2.12	0.00	2.02	7.88
P-5	J-69	J-24	-1.06	0.01	0.00	0.05	0.01

P-50	J-305	J-314	22.71	0.86	0.00	0.58	0.78
P-51	J-176	J-370	127.45	1.33	0.00	1.45	2.66
P-52	J-370	J-260	127.45	0.11	0.00	1.45	2.66
P-53	J-31	Pump-1	188.31	0.04	0.00	1.20	1.35
P-54	J-14	J-17	63.50	1.08	0.00	1.62	5.27
P-55	J-314	J-374	4.81	0.01	0.00	0.12	0.04
P-56	J-374	J-340	-5.77	0.07	0.00	0.15	0.06
P-57	J-31	Pump-2	188.31	0.04	0.00	1.20	1.35
P-58	J-274	J-14	-15.44	0.08	0.00	0.39	0.38
P-59	J-305	J-13	-61.74	1.84	0.00	1.58	5.00
P-6	J-69	J-87	1.76	0.11	0.00	0.18	0.20
P-60-XX	J-298	T-3					
P-61-XX	J-383	Pump-4					
P-62	J-399	J-401	225.80	1.96	0.00	2.56	7.66
P-63	Pump-1	J-30	188.31	0.04	0.00	1.20	1.35
P-64	J-239	J-401	-29.61	1.35	0.00	0.76	1.28
P-65	J-401	J-127	187.36	1.07	0.00	2.13	5.42
P-66	J-399	J-13	150.82	4.13	0.00	1.71	3.63
P-67-XX	J-12	J-298					
P-68	J-30	J-399	376.61	0.08	0.00	1.54	1.64
P-69-XX	J-383	Pump-3					
P-7	J-2	J-3	-30.87	0.35	0.00	0.35	0.19
P-70	J-437	J-439	0.00	0.00	0.00	0.00	0.00
P-71	J-437	J-440	32.63	0.48	0.00	0.83	1.53
P-72	J-440	J-28	10.68	0.32	0.00	0.48	0.79
P-73	J-479	J-27	-6.96	0.10	0.00	0.32	0.36
P-74	J-507	J-479	0.00	0.00	0.00	0.00	0.00
P-75	J-508	J-25	10.86	0.19	0.00	0.28	0.20
P-76	J-526	J-23	2.89	0.22	0.00	0.30	0.50
P-77	J-525	J-557	13.67	0.19	0.00	0.62	1.24
P-78	J-557	J-526	13.67	0.15	0.00	0.62	1.24
P-79	J-436	J-559	113.78	0.52	0.00	1.29	2.15
P-8	J-121	J-122	0.00	0.00	0.00	0.00	0.00
P-80	J-559	J-437	32.63	0.06	0.00	0.37	0.21
P-81	J-560	J-565	2.65	0.16	0.00	0.27	0.43
P-82	J-566	J-560	-1.76	0.09	0.00	0.32	0.82
P-83	J-567	J-560	10.14	0.43	0.00	0.46	0.72
P-84	J-567	J-577	1.76	0.08	0.00	0.32	0.82
P-85	J-578	J-579	-8.38	0.79	0.00	0.86	3.62
P-86	J-580	J-578	-2.20	0.31	0.00	0.40	1.24
P-87	J-578	J-594	1.76	0.18	0.00	0.32	0.82
P-88	J-525	J-21	-9.42	0.11	0.00	0.43	0.62
P-89	J-610	J-508	17.92	0.97	0.00	0.81	2.05
P-9	J-121	J-6	-30.87	0.25	0.00	0.35	0.19
P-90	J-579	J-625	62.62	0.97	0.00	1.60	5.13
P-91	J-625	J-567	18.08	0.75	0.00	0.82	2.09
P-92	J-625	J-610	39.25	2.63	0.00	1.78	8.77
P-93	J-436	J-629	26.02	0.08	0.00	0.30	0.14
P-94	J-629	J-16	3.97	0.45	0.00	0.41	0.91
P-95	J-629	J-687	22.05	0.09	0.00	0.25	0.10
P-96	J-688	J-44	-5.29	0.06	0.00	0.14	0.05
P-97	J-687	J-705	16.76	1.32	0.00	1.71	13.06
P-98	J-705	J-19	9.70	10.52	0.00	0.99	4.75
P-99	J-731	J-737	-0.44	0.01	0.00	0.05	0.02

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	188.31	11.93	163.32	151.4	----	-----	---	----
Pump-2	188.31	11.93	163.32	151.4	----	-----	---	----
Pump-3	0.00	-76.19	37.21	113.4	----	-----	---	----
Pump-4	0.00	-76.19	37.21	113.4	----	-----	---	----
Pump-5	0.00	4.00	37.21	33.2	----	-----	---	----
Pump-6	0.00	4.00	37.21	33.2	----	-----	---	----

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		9.26 (0.44)	436.82	195.00	241.82	104.79
J-10		0.00	438.81	205.00	233.81	101.32
J-11		0.00	435.64	245.00	190.64	82.61
J-12		0.00	228.21	191.00	37.21	16.12
J-121		0.00	439.84	240.00	199.84	86.60
J-122		0.00	439.84	245.00	194.84	84.43
J-127		0.00	440.16	250.00	190.16	82.40
J-128		14.11 (0.44)	435.62	233.00	202.62	87.80
J-13		10.14 (0.44)	439.06	260.00	179.06	77.59
J-14		0.00	436.94	260.00	176.94	76.67
J-142		12.35 (0.44)	435.64	264.00	171.64	74.38
J-146		12.35 (0.44)	435.77	236.00	199.77	86.57
J-15		3.97 (0.44)	430.15	255.00	175.15	75.90
J-16		0.00	430.76	275.00	155.76	67.50
J-167		3.53 (0.44)	436.32	232.00	204.32	88.54
J-17		0.00	435.85	240.00	195.85	84.87
J-175		2.20 (0.44)	436.16	250.00	186.16	80.67
J-176		2.20 (0.44)	439.22	240.00	199.22	86.33
J-179		2.20 (0.44)	439.14	205.00	234.14	101.46
J-18		0.00	419.29	195.00	224.29	97.19
J-182		2.65 (0.44)	439.87	243.00	196.87	85.31
J-187		11.91 (0.44)	438.88	212.00	226.88	98.32
J-19		9.70 (0.44)	419.29	205.00	214.29	92.86
J-2		1.76 (0.44)	438.71	210.00	228.71	99.11
J-20		0.00	429.73	262.00	167.73	72.68
J-21		5.73 (0.44)	420.54	195.00	225.54	97.73
J-22		7.50 (0.44)	419.61	180.00	239.61	103.83
J-221		12.35 (0.44)	438.80	204.00	234.80	101.75
J-228		5.73 (0.44)	437.85	230.00	207.85	90.07
J-229		2.65 (0.44)	439.45	210.00	229.45	99.43
J-23		0.00	419.86	193.00	226.86	98.31
J-234		2.65 (0.44)	439.33	200.00	239.33	103.71
J-235		2.20 (0.44)	439.88	200.00	239.88	103.95
J-239		4.41 (0.44)	439.88	205.00	234.88	101.78
J-24		7.50 (0.44)	436.71	195.00	241.71	104.74
J-245		5.73 (0.44)	439.61	214.00	225.61	97.77
J-25		6.61 (0.44)	420.43	220.00	200.43	86.85
J-259		3.97 (0.44)	439.26	210.00	229.26	99.35
J-26		7.06 (0.44)	429.84	260.00	169.84	73.60
J-260		4.85 (0.44)	437.78	230.00	207.78	90.04
J-27		0.00	429.53	198.00	231.53	100.33
J-273		1.76 (0.44)	437.75	220.00	217.75	94.36
J-274		7.94 (0.44)	436.86	270.00	166.86	72.31
J-276		3.53 (0.44)	436.29	246.00	190.29	82.46
J-279		0.00	436.29	245.00	191.29	82.89
J-28		0.00	429.90	205.00	224.90	97.46
J-283		0.88 (0.44)	436.10	234.00	202.10	87.58
J-288		0.00	436.71	243.00	193.71	83.94
J-29		5.73 (0.44)	429.61	210.00	219.61	95.16
J-291		1.76 (0.44)	436.10	236.00	200.10	86.71
J-294		0.00	436.25	218.00	218.25	94.57
J-297		1.32 (0.44)	435.92	218.00	217.92	94.43
J-298		0.00	292.00	280.00	12.00	5.20
J-3		0.00	439.06	270.00	169.06	73.26
J-30		0.00	443.28	280.00	163.28	70.75
J-304		14.11 (0.44)	436.62	255.00	181.62	78.70
J-305		1.76 (0.44)	437.22	238.00	199.22	86.33
J-306		1.32 (0.44)	436.59	250.00	186.59	80.85
J-31		0.00	291.97	280.00	11.97	5.19
J-313		7.94 (0.44)	436.35	250.00	186.35	80.75
J-314		13.23 (0.44)	436.37	210.00	226.37	98.09
J-316		6.17 (0.44)	436.32	228.00	208.32	90.27

J-32	0.00	437.54	230.00	207.54	89.93
J-33	0.00	431.07	210.00	221.07	95.80
J-331	1.32 (0.44)	436.32	250.00	186.32	80.74
J-339	1.76 (0.44)	436.27	250.00	186.27	80.72
J-34	0.00	431.07	268.00	163.07	70.66
J-340	1.76 (0.44)	436.43	214.00	222.43	96.39
J-35	0.00	431.07	265.00	166.07	71.96
J-354	1.76 (0.44)	436.38	193.00	243.38	105.46
J-36	0.44 (0.44)	436.70	180.00	256.70	111.24
J-37	0.00	431.07	220.00	211.07	91.46
J-370	0.00	437.89	223.00	214.89	93.12
J-374	10.58 (0.44)	436.36	208.00	228.36	98.96
J-38	0.00	431.07	233.00	198.07	85.83
J-383	0.00	195.00	191.00	4.00	1.73
J-39	0.00	431.07	262.00	169.07	73.26
J-399	0.00	443.19	280.00	163.19	70.72
J-4	0.00	439.22	210.00	229.22	99.33
J-40	0.00	431.07	225.00	206.07	89.30
J-401	8.82 (0.44)	441.23	250.00	191.23	82.87
J-41	0.00	431.07	225.00	206.07	89.30
J-42	0.00	431.07	210.00	221.07	95.80
J-43	0.00	431.07	188.00	243.07	105.33
J-436	0.00	431.29	242.00	189.29	82.03
J-437	0.00	430.71	250.00	180.71	78.31
J-439	0.00	430.71	250.00	180.71	78.31
J-44	0.00	431.12	285.00	146.12	63.32
J-440	7.94 (0.44)	430.22	260.00	170.22	73.76
J-45	0.00	430.36	265.00	165.36	71.66
J-46	0.00	431.12	280.00	151.12	65.49
J-479	11.91 (0.44)	429.43	198.00	231.43	100.28
J-5	0.00	439.68	220.00	219.68	95.19
J-507	0.00	429.43	198.00	231.43	100.28
J-508	7.06 (0.44)	420.62	251.00	169.62	73.50
J-525	0.00	420.43	215.00	205.43	89.02
J-526	6.17 (0.44)	420.08	200.00	220.08	95.37
J-557	0.00	420.23	200.00	220.23	95.43
J-559	4.85 (0.44)	430.77	255.00	175.77	76.17
J-560	5.73 (0.44)	423.04	208.00	215.04	93.18
J-565	2.65 (0.44)	422.88	191.00	231.88	100.48
J-566	1.76 (0.44)	422.95	224.00	198.95	86.21
J-567	6.17 (0.44)	423.47	220.00	203.47	88.17
J-577	1.76 (0.44)	423.39	238.00	185.39	80.34
J-578	4.41 (0.44)	424.40	265.00	159.40	69.07
J-579	3.53 (0.44)	425.19	245.00	180.19	78.08
J-580	2.20 (0.44)	424.10	260.00	164.10	71.11
J-594	1.76 (0.44)	424.22	275.00	149.22	64.66
J-6	0.00	440.09	280.00	160.09	69.37
J-610	6.17 (0.44)	421.59	218.00	203.59	88.22
J-625	5.29 (0.44)	424.22	233.00	191.22	82.86
J-629	0.00	431.21	270.00	161.21	69.86
J-687	0.00	431.13	288.00	143.13	62.02
J-688	5.29 (0.44)	431.07	270.00	161.07	69.80
J-69	2.65 (0.44)	436.71	195.00	241.71	104.74
J-7	0.00	438.86	204.00	234.86	101.77
J-705	0.00	429.81	285.00	144.81	62.75
J-730	0.00	419.29	175.00	244.29	105.86
J-731	0.44 (0.44)	429.74	252.00	177.74	77.02
J-737	2.20 (0.44)	429.76	260.00	169.76	73.56
J-760	4.41 (0.44)	429.69	210.00	219.69	95.20
J-763	0.00	429.69	190.00	239.69	103.87
J-764	0.00	429.69	195.00	234.69	101.70
J-765	0.00	427.93	252.00	175.93	76.24
J-779	1.76 (0.44)	427.88	246.00	181.88	78.81
J-8	7.50 (0.44)	437.30	205.00	232.30	100.66
J-87	1.76 (0.44)	436.60	180.00	256.60	111.19
J-9	0.00	438.84	194.00	244.84	106.10
Pump-1	0.00	443.32	280.00	163.32	70.77
Pump-2	0.00	443.32	280.00	163.32	70.77
Pump-3	0.00	228.21	191.00	37.21	16.12
Pump-4	0.00	228.21	191.00	37.21	16.12
Pump-5	0.00	228.21	191.00	37.21	16.12

Pump-6	0.00	228.21	191.00	37.21	16.12
R-1	----	195.00	191.00	4.00	1.73
T-1	----	292.00	280.00	12.00	5.20
T-2	----	292.00	280.00	12.00	5.20
T-3	----	292.00	280.00	12.00	5.20
Pump-1	0.00	291.93	280.00	11.93	5.17
Pump-2	0.00	291.93	280.00	11.93	5.17
Pump-3	0.00	114.81	191.00	-76.19	-33.02
Pump-4	0.00	114.81	191.00	-76.19	-33.02
Pump-5	0.00	195.00	191.00	4.00	1.73
Pump-6	0.00	195.00	191.00	4.00	1.73

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-36	111.24	Pump-3	-33.02
J-87	111.19	Pump-4	-33.02
J-9	106.10	J-383	1.73
J-730	105.86	R-1	1.73
J-354	105.46	Pump-5	1.73
J-43	105.33	Pump-6	1.73
J-1	104.79	Pump-1	5.17
J-24	104.74	Pump-2	5.17
J-69	104.74	J-31	5.19
J-235	103.95	J-298	5.20

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-62	2.56	P-145	0.00
P-65	2.13	P-149	0.00
P-49	2.02	P-148	0.00
P-143	1.95	P-152	0.00
P-104	1.95	P-154	0.00
P-105	1.90	P-146	0.00
P-92	1.78	P-147	0.00
P-17	1.78	P-150	0.00
P-97	1.71	P-151	0.00
P-66	1.71	P-45	0.00

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-97	13.06	P-145	0.00
P-92	8.77	P-149	0.00
P-49	7.88	P-148	0.00
P-62	7.66	P-146	0.00
P-143	7.40	P-147	0.00
P-104	7.40	P-151	0.00
P-105	7.08	P-150	0.00
P-35	5.91	P-152	0.00
P-65	5.42	P-154	0.00
P-54	5.27	P-45	0.00

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
(-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
R-1	0.00	
T-1	125.54	
T-2	125.54	
T-3	125.54	

NET SYSTEM INFLOW =	376.61	
NET SYSTEM OUTFLOW =	0.00	
NET SYSTEM DEMAND =	376.61	

***** HYDRAULIC ANALYSIS COMPLETED *****


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* * * * * K Y P I P E 4 * * * * *
*
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*
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\BEECHW-4.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\BEECHW-4.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\BEECHW-4.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-8	279.18	4.00	100.0000	0.00
P-10	J-128	J-11	1305.98	4.00	100.0000	0.00
P-100	J-705	J-737	592.37	4.00	100.0000	0.00
P-101	J-737	J-20	572.90	4.00	100.0000	0.00
P-102	J-760	J-763	348.92	4.00	100.0000	0.00
P-103	J-760	J-764	300.37	2.00	100.0000	0.00
P-104	J-559	J-765	383.94	6.00	100.0000	0.00
P-105	J-765	J-579	386.75	6.00	100.0000	0.00
P-106	J-765	J-779	64.90	1.50	100.0000	0.00
P-107	J-1	J-69	1254.50	3.00	100.0000	0.00
P-108	J-3	J-4	831.73	6.00	100.0000	0.00
P-109	J-4	J-5	2361.50	6.00	100.0000	0.00
P-11	J-142	J-146	220.39	4.00	100.0000	0.00
P-110	J-5	J-47	602.25	6.00	100.0000	0.00
P-111	J-313	J-316	1241.69	3.00	100.0000	0.00
P-112	J-7	J-9	576.93	4.00	100.0000	0.00
P-113	J-9	J-10	873.19	4.00	100.0000	0.00
P-114	J-10	J-221	394.93	4.00	100.0000	0.00
P-115	J-11	J-142	357.81	4.00	100.0000	0.00
P-116-XX	Pump-3	J-12	20.00	6.00	100.0000	0.00
P-117	J-128	J-146	1543.56	4.00	100.0000	0.00
P-118-XX	R-1	J-383	40.00	6.00	100.0000	0.00
P-119	J-15	J-45	2506.73	2.00	100.0000	0.00
P-12	J-142	J-128	968.56	4.00	100.0000	0.00
P-120	J-16	J-45	436.42	3.00	100.0000	0.00
P-121	J-730	J-18	1227.49	2.00	100.0000	0.00
P-122-XX	Pump-4	J-12	20.00	6.00	100.0000	0.00
P-123	J-19	J-18	354.38	4.00	100.0000	0.00
P-124	J-20	J-760	1041.86	4.00	100.0000	0.00
P-125	J-21	J-610	698.57	3.00	100.0000	0.00
P-126	J-22	J-526	392.31	2.00	100.0000	0.00
P-127	J-23	J-22	486.37	2.00	100.0000	0.00
P-128	J-25	J-525	152.16	4.00	100.0000	0.00
P-129	J-26	J-440	295.75	3.00	100.0000	0.00

P-13	J-6	J-127	398.66	6.00	100.0000	0.00
P-130	J-27	J-26	870.01	3.00	100.0000	0.00
P-131	J-28	J-29	365.95	3.00	100.0000	0.00
P-132	J-29	J-479	974.20	3.00	100.0000	0.00
P-133-XX	J-383	Pump-5	55.43	6.00	100.0000	0.00
P-134-XX	Pump-5	J-12	53.31	6.00	100.0000	0.00
P-135-XX	J-383	Pump-6	42.38	6.00	100.0000	0.00
P-136-XX	Pump-6	J-12	39.67	6.00	100.0000	0.00
P-137	J-17	J-436	1446.28	8.00	100.0000	0.00
P-138	T-1	J-31	40.00	8.00	100.0000	0.00
P-139	T-3	J-31	40.00	8.00	100.0000	0.00
P-14	J-167	J-146	260.58	4.00	100.0000	0.00
P-140	T-2	J-31	40.00	8.00	100.0000	0.00
P-141	J-32	J-167	445.40	4.00	100.0000	0.00
P-142	Pump-2	J-30	30.00	8.00	100.0000	0.00
P-143	J-17	J-32	227.46	6.00	100.0000	0.00
P-144	J-688	J-33	751.20	3.00	100.0000	0.00
P-145	J-688	J-34	317.00	6.00	100.0000	0.00
P-146	J-34	J-35	384.00	4.00	100.0000	0.00
P-147	J-34	J-38	1087.00	4.00	100.0000	0.00
P-148	J-38	J-37	942.28	4.00	100.0000	0.00
P-149	J-38	J-37	547.00	4.00	100.0000	0.00
P-15	J-167	J-175	530.41	2.00	100.0000	0.00
P-150	J-37	J-42	502.00	4.00	100.0000	0.00
P-151	J-39	J-35	1142.00	4.00	100.0000	0.00
P-152	J-39	J-41	327.00	3.00	100.0000	0.00
P-153	J-41	J-40	402.00	3.00	100.0000	0.00
P-154	J-41	J-42	969.00	3.00	100.0000	0.00
P-155	J-42	J-39	327.00	3.00	100.0000	0.00
P-156	J-688	J-43	1362.95	4.00	100.0000	0.00
P-157	J-44	J-687	63.77	4.00	100.0000	0.00
P-158	J-44	J-46	242.50	4.00	100.0000	0.00
P-159	J-45	J-15	429.53	2.00	100.0000	0.00
P-16	J-176	J-179	267.62	2.00	100.0000	0.00
P-160	J-47	J-121	228.45	6.00	100.0000	0.00
P-17	J-127	J-182	77.07	8.00	100.0000	0.00
P-18	J-182	J-176	228.42	8.00	100.0000	0.00
P-19	J-187	J-7	753.42	4.00	100.0000	0.00
P-2	J-8	J-24	1025.69	3.00	100.0000	0.00
P-20	J-221	J-187	253.73	4.00	100.0000	0.00
P-21	J-221	J-228	529.90	2.00	100.0000	0.00
P-22	J-229	J-187	431.44	4.00	100.0000	0.00
P-23	J-229	J-234	272.81	2.00	100.0000	0.00
P-24	J-235	J-239	133.38	4.00	100.0000	0.00
P-25	J-229	J-239	539.17	4.00	100.0000	0.00
P-26	J-182	J-245	338.81	4.00	100.0000	0.00
P-27	J-245	J-229	657.13	4.00	100.0000	0.00
P-28	J-245	J-259	392.55	2.00	100.0000	0.00
P-29	J-260	J-32	103.54	6.00	100.0000	0.00
P-3	J-24	J-36	817.86	2.00	100.0000	0.00
P-30	J-260	J-273	192.23	2.00	100.0000	0.00
P-31	J-274	J-276	316.08	2.00	100.0000	0.00
P-32	J-276	J-279	142.51	2.00	100.0000	0.00
P-33	J-279	J-283	111.65	1.00	100.0000	0.00
P-34	J-274	J-288	729.21	2.00	100.0000	0.00
P-35	J-288	J-291	103.15	2.00	100.0000	0.00
P-36	J-276	J-294	374.41	2.00	100.0000	0.00
P-37	J-294	J-297	94.10	1.00	100.0000	0.00
P-38-XX	J-298	T-1	40.00	6.00	100.0000	0.00
P-39	J-304	J-305	305.82	4.00	100.0000	0.00
P-4	J-8	J-1	447.42	3.00	100.0000	0.00
P-40	J-306	J-304	331.83	2.00	100.0000	0.00
P-41	J-304	J-313	263.35	3.00	100.0000	0.00
P-42	J-314	J-316	270.35	3.00	100.0000	0.00
P-43-XX	J-298	T-2	40.00	6.00	100.0000	0.00
P-44	J-313	J-331	335.08	3.00	100.0000	0.00
P-45	J-331	J-316	369.36	3.00	100.0000	0.00
P-46	J-331	J-339	226.40	2.00	100.0000	0.00
P-47	J-340	J-304	1305.53	4.00	100.0000	0.00
P-48	J-340	J-354	253.54	2.00	100.0000	0.00
P-49	J-13	J-14	269.54	6.00	100.0000	0.00

P-5	J-69	J-24	690.49	3.00	100.0000	0.00
P-50	J-305	J-314	1095.48	4.00	100.0000	0.00
P-51	J-176	J-370	499.52	6.00	100.0000	0.00
P-52	J-370	J-260	40.49	6.00	100.0000	0.00
P-53	J-31	Pump-1	30.00	8.00	100.0000	0.00
P-54	J-14	J-17	205.97	6.00	100.0000	0.00
P-55	J-314	J-374	119.40	4.00	100.0000	0.00
P-56	J-374	J-340	1102.33	4.00	100.0000	0.00
P-57	J-31	Pump-2	30.00	8.00	100.0000	0.00
P-58	J-274	J-14	200.25	4.00	100.0000	0.00
P-59	J-305	J-13	367.20	4.00	100.0000	0.00
P-6	J-69	J-87	528.61	2.00	100.0000	0.00
P-60-XX	J-298	T-3	40.00	6.00	100.0000	0.00
P-61-XX	J-383	Pump-4	20.00	6.00	100.0000	0.00
P-62	J-399	J-401	256.39	8.00	100.0000	0.00
P-63	Pump-1	J-30	30.00	8.00	100.0000	0.00
P-64	J-239	J-401	1051.03	4.00	100.0000	0.00
P-65	J-401	J-127	196.59	8.00	100.0000	0.00
P-66	J-399	J-13	1139.48	8.00	100.0000	0.00
P-67-XX	J-12	J-298	2746.32	6.00	100.0000	0.00
P-68	J-30	J-399	50.00	10.00	100.0000	0.00
P-69-XX	J-383	Pump-3	20.00	6.00	100.0000	0.00
P-7	J-2	J-3	1841.70	6.00	100.0000	0.00
P-70	J-437	J-439	44.75	4.00	100.0000	0.00
P-71	J-437	J-440	314.61	4.00	100.0000	0.00
P-72	J-440	J-28	411.08	3.00	100.0000	0.00
P-73	J-479	J-27	281.17	3.00	100.0000	0.00
P-74	J-507	J-479	152.55	2.00	100.0000	0.00
P-75	J-508	J-25	953.75	4.00	100.0000	0.00
P-76	J-526	J-23	445.08	2.00	100.0000	0.00
P-77	J-525	J-557	154.80	3.00	100.0000	0.00
P-78	J-557	J-526	121.61	3.00	100.0000	0.00
P-79	J-436	J-559	243.73	6.00	100.0000	0.00
P-8	J-121	J-122	145.50	2.00	100.0000	0.00
P-80	J-559	J-437	298.02	6.00	100.0000	0.00
P-81	J-560	J-565	368.10	2.00	100.0000	0.00
P-82	J-566	J-560	114.84	1.50	100.0000	0.00
P-83	J-567	J-560	604.29	3.00	100.0000	0.00
P-84	J-567	J-577	97.63	1.50	100.0000	0.00
P-85	J-578	J-579	217.02	2.00	100.0000	0.00
P-86	J-580	J-578	246.14	1.50	100.0000	0.00
P-87	J-578	J-594	222.04	1.50	100.0000	0.00
P-88	J-525	J-21	180.29	3.00	100.0000	0.00
P-89	J-610	J-508	471.68	3.00	100.0000	0.00
P-9	J-121	J-6	1314.82	6.00	100.0000	0.00
P-90	J-579	J-625	188.31	6.00	100.0000	0.00
P-91	J-625	J-567	358.28	3.00	100.0000	0.00
P-92	J-625	J-610	300.04	4.00	100.0000	0.00
P-93	J-436	J-629	562.05	6.00	100.0000	0.00
P-94	J-629	J-16	500.84	3.00	100.0000	0.00
P-95	J-629	J-687	838.24	6.00	100.0000	0.00
P-96	J-688	J-44	1065.45	4.00	100.0000	0.00
P-97	J-687	J-705	100.98	4.00	100.0000	0.00
P-98	J-705	J-19	2216.98	4.00	100.0000	0.00
P-99	J-731	J-737	907.22	2.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 4)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
161.54	0.00	1.00
115.38	500.00	1.00
75.00	750.00	1.00

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 5)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
161.54	0.00	1.00
115.38	500.00	1.00
75.00	750.00	1.00

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
140.00	0.00	75.00 (Default)
120.00	360.00	75.00 (Default)
102.00	500.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-4 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
140.00	0.00	75.00 (Default)
120.00	360.00	75.00 (Default)
102.00	500.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-5 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
41.00	45.00	75.00 (Default)
20.00	540.00	75.00 (Default)
16.00	615.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-6 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
41.00	45.00	75.00 (Default)
20.00	540.00	75.00 (Default)
16.00	615.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		21.00	195.00	
J-10		0.00	205.00	
J-11		0.00	245.00	
J-12		0.00	191.00	
J-121		0.00	240.00	
J-122		0.00	245.00	
J-127		0.00	250.00	
J-128		32.00	233.00	
J-13		23.00	260.00	
J-14		0.00	260.00	
J-142		28.00	264.00	

J-146	28.00	236.00
J-15	9.00	255.00
J-16	0.00	275.00
J-167	8.00	232.00
J-17	0.00	240.00
J-175	5.00	250.00
J-176	5.00	240.00
J-179	5.00	205.00
J-18	40.00	195.00
J-182	6.00	243.00
J-187	27.00	212.00
J-19	22.00	205.00
J-2	4.00	210.00
J-20	0.00	262.00
J-21	13.00	195.00
J-22	17.00	180.00
J-221	28.00	204.00
J-228	13.00	230.00
J-229	6.00	210.00
J-23	0.00	193.00
J-234	6.00	200.00
J-235	5.00	200.00
J-239	10.00	205.00
J-24	17.00	195.00
J-245	13.00	214.00
J-25	15.00	220.00
J-259	9.00	210.00
J-26	16.00	260.00
J-260	11.00	230.00
J-27	0.00	198.00
J-273	4.00	220.00
J-274	18.00	270.00
J-276	8.00	246.00
J-279	0.00	245.00
J-28	0.00	205.00
J-283	2.00	234.00
J-288	0.00	243.00
J-29	13.00	210.00
J-291	4.00	236.00
J-294	0.00	218.00
J-297	3.00	218.00
J-298	0.00	280.00
J-3	52.00	270.00
J-30	0.00	280.00
J-304	32.00	255.00
J-305	4.00	238.00
J-306	3.00	250.00
J-31	0.00	280.00
J-313	18.00	250.00
J-314	30.00	210.00
J-316	14.00	228.00
J-32	0.00	230.00
J-33	0.00	210.00
J-331	3.00	250.00
J-339	4.00	250.00
J-34	11.00	268.00
J-340	4.00	214.00
J-35	20.00	265.00
J-354	4.00	193.00
J-36	1.00	180.00
J-37	0.00	220.00
J-370	0.00	223.00
J-374	24.00	208.00
J-38	20.00	233.00
J-383	0.00	191.00
J-39	50.00	262.00
J-399	0.00	280.00
J-4	0.00	210.00
J-40	0.00	225.00
J-401	20.00	250.00
J-41	20.00	225.00

J-42	0.00	210.00	
J-43	0.00	188.00	
J-436	0.00	242.00	
J-437	0.00	250.00	
J-439	0.00	250.00	
J-44	0.00	285.00	
J-440	18.00	260.00	
J-45	53.00	265.00	
J-46	0.00	280.00	
J-47	106.00	260.00	
J-479	27.00	198.00	
J-5	0.00	220.00	
J-507	0.00	198.00	
J-508	16.00	251.00	
J-525	0.00	215.00	
J-526	14.00	200.00	
J-557	0.00	200.00	
J-559	11.00	255.00	
J-560	13.00	208.00	
J-565	6.00	191.00	
J-566	4.00	224.00	
J-567	14.00	220.00	
J-577	4.00	238.00	
J-578	10.00	265.00	
J-579	8.00	245.00	
J-580	5.00	260.00	
J-594	4.00	275.00	
J-6	0.00	280.00	
J-610	14.00	218.00	
J-625	12.00	233.00	
J-629	0.00	270.00	
J-687	0.00	288.00	
J-688	12.00	270.00	
J-69	6.00	195.00	
J-7	0.00	204.00	
J-705	0.00	285.00	
J-730	13.00	175.00	
J-731	1.00	252.00	
J-737	5.00	260.00	
J-760	10.00	210.00	
J-763	0.00	190.00	
J-764	0.00	195.00	
J-765	0.00	252.00	
J-779	4.00	246.00	
J-8	17.00	205.00	
J-87	4.00	180.00	
J-9	0.00	194.00	
Pump-1	0.00	280.00	
Pump-2	0.00	280.00	
Pump-3	0.00	191.00	
Pump-4	0.00	191.00	
Pump-5	0.00	191.00	
Pump-6	0.00	191.00	
R-1	----	191.00	195.00
T-1	----	280.00	292.00
T-2	----	280.00	292.00
T-3	----	280.00	292.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 10
 MAXIMUM AND MINIMUM VELOCITIES = 10
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 10

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 160
 NUMBER OF END NODES(j) = 135
 NUMBER OF PRIMARY LOOPS(l) = 22
 NUMBER OF SUPPLY NODES(f) = 4
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

*** WARNING ***

DUE TO SPECIFIED DEMANDS THE PUMP IN LINE ~@Pump-6 IS FORCED TO OPERATE AT ZERO FLOW. THIS MAY CAUSE PROBLEMS CALCULATING THE HGLs IN THE VICINITY OF THE PUMP. TRY CLOSING LINE ~@Pump-6 AND RERUN THE SIMULATION.

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00000

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS #1	NODE NUMBERS #2	FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/1000 (ft/ft)
P-1	J-2	J-8	29.11	0.35	0.00	0.74	1.24
P-10	J-128	J-11	-2.86	0.02	0.00	0.07	0.02
P-100	J-705	J-737	7.06	0.05	0.00	0.18	0.09
P-101	J-737	J-20	4.41	0.02	0.00	0.11	0.04
P-102	J-760	J-763	0.00	0.00	0.00	0.00	0.00
P-103	J-760	J-764	0.00	0.00	0.00	0.00	0.00
P-104	J-559	J-765	76.29	0.39	0.00	0.87	1.03
P-105	J-765	J-579	74.53	0.38	0.00	0.85	0.98
P-106	J-765	J-779	1.76	0.05	0.00	0.32	0.82
P-107	J-1	J-69	3.35	0.12	0.00	0.15	0.09
P-108	J-3	J-4	-53.80	0.45	0.00	0.61	0.54
P-109	J-4	J-5	-53.80	1.27	0.00	0.61	0.54
P-11	J-142	J-146	-19.03	0.12	0.00	0.49	0.57
P-110	J-5	J-47	-53.80	0.32	0.00	0.61	0.54
P-111	J-313	J-316	1.52	0.03	0.00	0.07	0.02
P-112	J-7	J-9	4.01	0.02	0.00	0.10	0.03
P-113	J-9	J-10	4.01	0.03	0.00	0.10	0.03
P-114	J-10	J-221	4.01	0.01	0.00	0.10	0.03
P-115	J-11	J-142	-2.86	0.01	0.00	0.07	0.02
P-116	Pump-3	J-12	0.00	0.00	0.00	0.00	0.00
P-117	J-128	J-146	-7.43	0.15	0.00	0.19	0.10
P-118	R-1	J-383	0.00	0.00	0.00	0.00	0.00
P-119	J-15	J-45	-1.10	0.21	0.00	0.11	0.08
P-12	J-142	J-128	3.83	0.03	0.00	0.10	0.03
P-120	J-16	J-45	27.34	1.96	0.00	1.24	4.49
P-121	J-730	J-18	-5.73	2.20	0.00	0.59	1.79
P-122	Pump-4	J-12	0.00	0.00	0.00	0.00	0.00
P-123	J-19	J-18	23.37	0.29	0.00	0.60	0.83
P-124	J-20	J-760	4.41	0.04	0.00	0.11	0.04
P-125	J-21	J-610	-15.16	1.05	0.00	0.69	1.51
P-126	J-22	J-526	-4.61	0.47	0.00	0.47	1.20
P-127	J-23	J-22	2.89	0.24	0.00	0.30	0.50
P-128	J-25	J-525	4.25	0.01	0.00	0.11	0.04
P-129	J-26	J-440	-14.02	0.39	0.00	0.64	1.30

P-13	J-6	J-127	-100.55	0.68	0.00	1.14	1.71
P-130	J-27	J-26	-6.96	0.31	0.00	0.32	0.36
P-131	J-28	J-29	10.68	0.29	0.00	0.48	0.79
P-132	J-29	J-479	4.94	0.18	0.00	0.22	0.19
P-133	J-383	Pump-5	0.00	0.00	0.00	0.00	0.00
P-134	Pump-5	J-12	0.00	0.00	0.00	0.00	0.00
P-135	J-383	Pump-6	0.00	0.00	0.00	0.00	0.00
P-136-XX	Pump-6	J-12					
P-137	J-17	J-436	239.90	3.05	0.00	1.53	2.11
P-138	T-1	J-31	182.13	0.05	0.00	1.16	1.27
P-139	T-3	J-31	182.13	0.05	0.00	1.16	1.27
P-14	J-167	J-146	38.81	0.55	0.00	0.99	2.12
P-140	T-2	J-31	182.13	0.05	0.00	1.16	1.27
P-141	J-32	J-167	44.54	1.22	0.00	1.14	2.73
P-142	Pump-2	J-30	273.20	0.08	0.00	1.74	2.69
P-143	J-17	J-32	-92.52	0.33	0.00	1.05	1.47
P-144	J-688	J-33	0.00	0.00	0.00	0.00	0.00
P-145	J-688	J-34	53.36	0.17	0.00	0.61	0.53
P-146	J-34	J-35	27.44	0.43	0.00	0.70	1.11
P-147	J-34	J-38	21.07	0.74	0.00	0.54	0.68
P-148	J-38	J-37	5.23	0.05	0.00	0.13	0.05
P-149	J-38	J-37	7.02	0.05	0.00	0.18	0.09
P-15	J-167	J-175	2.20	0.16	0.00	0.23	0.31
P-150	J-37	J-42	12.25	0.13	0.00	0.31	0.25
P-151	J-39	J-35	-18.62	0.62	0.00	0.48	0.54
P-152	J-39	J-41	4.01	0.04	0.00	0.18	0.13
P-153	J-41	J-40	0.00	0.00	0.00	0.00	0.00
P-154	J-41	J-42	-4.81	0.17	0.00	0.22	0.18
P-155	J-42	J-39	7.44	0.13	0.00	0.34	0.40
P-156	J-688	J-43	0.00	0.00	0.00	0.00	0.00
P-157	J-44	J-687	-58.65	0.29	0.00	1.50	4.55
P-158	J-44	J-46	0.00	0.00	0.00	0.00	0.00
P-159	J-45	J-15	2.86	0.21	0.00	0.29	0.50
P-16	J-176	J-179	2.20	0.08	0.00	0.23	0.31
P-160	J-47	J-121	-100.55	0.39	0.00	1.14	1.71
P-17	J-127	J-182	177.20	0.09	0.00	1.13	1.20
P-18	J-182	J-176	148.09	0.20	0.00	0.95	0.86
P-19	J-187	J-7	4.01	0.02	0.00	0.10	0.03
P-2	J-8	J-24	8.99	0.59	0.00	0.41	0.57
P-20	J-221	J-187	-14.07	0.08	0.00	0.36	0.32
P-21	J-221	J-228	5.73	0.95	0.00	0.59	1.79
P-22	J-229	J-187	29.99	0.57	0.00	0.77	1.31
P-23	J-229	J-234	2.65	0.12	0.00	0.27	0.43
P-24	J-235	J-239	-2.20	0.00	0.00	0.06	0.01
P-25	J-229	J-239	-18.51	0.29	0.00	0.47	0.54
P-26	J-182	J-245	26.47	0.35	0.00	0.68	1.04
P-27	J-245	J-229	16.77	0.29	0.00	0.43	0.45
P-28	J-245	J-259	3.97	0.36	0.00	0.41	0.91
P-29	J-260	J-32	137.06	0.31	0.00	1.56	3.04
P-3	J-24	J-36	0.44	0.01	0.00	0.05	0.02
P-30	J-260	J-273	1.76	0.04	0.00	0.18	0.20
P-31	J-274	J-276	5.73	0.57	0.00	0.59	1.79
P-32	J-276	J-279	0.88	0.01	0.00	0.09	0.06
P-33	J-279	J-283	0.88	0.18	0.00	0.36	1.64
P-34	J-274	J-288	1.76	0.15	0.00	0.18	0.20
P-35	J-288	J-291	1.76	0.02	0.00	0.18	0.20
P-36	J-276	J-294	1.32	0.04	0.00	0.14	0.12
P-37	J-294	J-297	1.32	0.33	0.00	0.54	3.47
P-38	J-298	T-1	0.00	0.00	0.00	0.00	0.00
P-39	J-304	J-305	-37.27	0.60	0.00	0.95	1.96
P-4	J-8	J-1	12.61	0.48	0.00	0.57	1.07
P-40	J-306	J-304	-1.32	0.04	0.00	0.14	0.12
P-41	J-304	J-313	12.53	0.28	0.00	0.57	1.06
P-42	J-314	J-316	4.67	0.05	0.00	0.21	0.17
P-43-XX	J-298	T-2					
P-44	J-313	J-331	3.08	0.03	0.00	0.14	0.08
P-45	J-331	J-316	-0.01	0.00	0.00	0.00	0.00
P-46	J-331	J-339	1.76	0.05	0.00	0.18	0.20
P-47	J-340	J-304	-9.30	0.20	0.00	0.24	0.15
P-48	J-340	J-354	1.76	0.05	0.00	0.18	0.20
P-49	J-13	J-14	162.82	1.13	0.00	1.85	4.18

P-5	J-69	J-24	-1.06	0.01	0.00	0.05	0.01
P-50	J-305	J-314	22.71	0.86	0.00	0.58	0.78
P-51	J-176	J-370	143.68	1.66	0.00	1.63	3.32
P-52	J-370	J-260	143.68	0.13	0.00	1.63	3.32
P-53	J-31	Pump-1	273.20	0.08	0.00	1.74	2.69
P-54	J-14	J-17	147.38	0.72	0.00	1.67	3.48
P-55	J-314	J-374	4.81	0.01	0.00	0.12	0.04
P-56	J-374	J-340	-5.77	0.07	0.00	0.15	0.06
P-57	J-31	Pump-2	273.20	0.08	0.00	1.74	2.69
P-58	J-274	J-14	-15.44	0.08	0.00	0.39	0.38
P-59	J-305	J-13	-61.74	1.84	0.00	1.58	5.00
P-6	J-69	J-87	1.76	0.11	0.00	0.18	0.20
P-60-XX	J-298	T-3					
P-61-XX	J-383	Pump-4					
P-62	J-399	J-401	311.70	0.88	0.00	1.99	3.43
P-63	Pump-1	J-30	273.20	0.08	0.00	1.74	2.69
P-64	J-239	J-401	-25.13	0.99	0.00	0.64	0.95
P-65	J-401	J-127	277.75	0.54	0.00	1.77	2.77
P-66	J-399	J-13	234.70	2.31	0.00	1.50	2.03
P-67-XX	J-12	J-298					
P-68	J-30	J-399	546.40	0.16	0.00	2.23	3.27
P-69-XX	J-383	Pump-3					
P-7	J-2	J-3	-30.87	0.35	0.00	0.35	0.19
P-70	J-437	J-439	0.00	0.00	0.00	0.00	0.00
P-71	J-437	J-440	32.63	0.48	0.00	0.83	1.53
P-72	J-440	J-28	10.68	0.32	0.00	0.48	0.79
P-73	J-479	J-27	-6.96	0.10	0.00	0.32	0.36
P-74	J-507	J-479	0.00	0.00	0.00	0.00	0.00
P-75	J-508	J-25	10.86	0.19	0.00	0.28	0.20
P-76	J-526	J-23	2.89	0.22	0.00	0.30	0.50
P-77	J-525	J-557	13.67	0.19	0.00	0.62	1.24
P-78	J-557	J-526	13.67	0.15	0.00	0.62	1.24
P-79	J-436	J-559	113.78	0.52	0.00	1.29	2.15
P-8	J-121	J-122	0.00	0.00	0.00	0.00	0.00
P-80	J-559	J-437	32.63	0.06	0.00	0.37	0.21
P-81	J-560	J-565	2.65	0.16	0.00	0.27	0.43
P-82	J-566	J-560	-1.76	0.09	0.00	0.32	0.82
P-83	J-567	J-560	10.14	0.43	0.00	0.46	0.72
P-84	J-567	J-577	1.76	0.08	0.00	0.32	0.82
P-85	J-578	J-579	-8.38	0.79	0.00	0.86	3.62
P-86	J-580	J-578	-2.20	0.31	0.00	0.40	1.24
P-87	J-578	J-594	1.76	0.18	0.00	0.32	0.82
P-88	J-525	J-21	-9.42	0.11	0.00	0.43	0.62
P-89	J-610	J-508	17.92	0.97	0.00	0.81	2.05
P-9	J-121	J-6	-100.55	2.25	0.00	1.14	1.71
P-90	J-579	J-625	62.62	0.13	0.00	0.71	0.71
P-91	J-625	J-567	18.08	0.75	0.00	0.82	2.09
P-92	J-625	J-610	39.25	0.65	0.00	1.00	2.16
P-93	J-436	J-629	126.13	1.46	0.00	1.43	2.61
P-94	J-629	J-16	27.34	2.25	0.00	1.24	4.49
P-95	J-629	J-687	98.78	1.39	0.00	1.12	1.66
P-96	J-688	J-44	-58.65	4.84	0.00	1.50	4.55
P-97	J-687	J-705	40.13	0.23	0.00	1.02	2.25
P-98	J-705	J-19	33.08	3.49	0.00	0.84	1.57
P-99	J-731	J-737	-0.44	0.01	0.00	0.05	0.02

P U M P / L O S S E L E M E N T R E S U L T S

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	273.20	11.87	155.32	143.5	----	-----	---	-----
Pump-2	273.20	11.87	155.32	143.5	----	-----	---	-----
Pump-3	0.00	-76.19	37.21	113.4	----	-----	---	-----
Pump-4	0.00	-76.19	37.21	113.4	----	-----	---	-----
Pump-5	0.00	4.00	37.21	33.2	----	-----	---	-----
Pump-6	0.00	4.00	37.21	33.2	----	-----	---	-----

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		9.26 (0.44)	427.11	195.00	232.11	100.58
J-10		0.00	432.28	205.00	227.28	98.49
J-11		0.00	429.36	245.00	184.36	79.89
J-12		0.00	228.21	191.00	37.21	16.12
J-121		0.00	430.72	240.00	190.72	82.65
J-122		0.00	430.72	245.00	185.72	80.48
J-127		0.00	433.66	250.00	183.66	79.58
J-128		14.11 (0.44)	429.34	233.00	196.34	85.08
J-13		10.14 (0.44)	432.77	260.00	172.77	74.87
J-14		0.00	431.64	260.00	171.64	74.38
J-142		12.35 (0.44)	429.37	264.00	165.37	71.66
J-146		12.35 (0.44)	429.49	236.00	193.49	83.85
J-15		3.97 (0.44)	421.99	255.00	166.99	72.36
J-16		0.00	424.16	275.00	149.16	64.64
J-167		3.53 (0.44)	430.05	232.00	198.05	85.82
J-17		0.00	430.93	240.00	190.93	82.74
J-175		2.20 (0.44)	429.88	250.00	179.88	77.95
J-176		2.20 (0.44)	433.37	240.00	193.37	83.79
J-179		2.20 (0.44)	433.29	205.00	228.29	98.92
J-18		17.64 (0.44)	421.01	195.00	226.01	97.94
J-182		2.65 (0.44)	433.56	243.00	190.56	82.58
J-187		11.91 (0.44)	432.35	212.00	220.35	95.49
J-19		9.70 (0.44)	421.31	205.00	216.31	93.73
J-2		1.76 (0.44)	427.94	210.00	217.94	94.44
J-20		0.00	424.72	262.00	162.72	70.51
J-21		5.73 (0.44)	424.74	195.00	229.74	99.55
J-22		7.50 (0.44)	423.82	180.00	243.82	105.65
J-221		12.35 (0.44)	432.27	204.00	228.27	98.92
J-228		5.73 (0.44)	431.32	230.00	201.32	87.24
J-229		2.65 (0.44)	432.92	210.00	222.92	96.60
J-23		0.00	424.06	193.00	231.06	100.13
J-234		2.65 (0.44)	432.80	200.00	232.80	100.88
J-235		2.20 (0.44)	433.21	200.00	233.21	101.06
J-239		4.41 (0.44)	433.21	205.00	228.21	98.89
J-24		7.50 (0.44)	427.00	195.00	232.00	100.53
J-245		5.73 (0.44)	433.21	214.00	219.21	94.99
J-25		6.61 (0.44)	424.63	220.00	204.63	88.67
J-259		3.97 (0.44)	432.86	210.00	222.86	96.57
J-26		7.06 (0.44)	426.42	260.00	166.42	72.11
J-260		4.85 (0.44)	431.58	230.00	201.58	87.35
J-27		0.00	426.11	198.00	228.11	98.85
J-273		1.76 (0.44)	431.54	220.00	211.54	91.67
J-274		7.94 (0.44)	431.57	270.00	161.57	70.01
J-276		3.53 (0.44)	431.00	246.00	185.00	80.17
J-279		0.00	430.99	245.00	185.99	80.60
J-28		0.00	426.48	205.00	221.48	95.97
J-283		0.88 (0.44)	430.81	234.00	196.81	85.28
J-288		0.00	431.42	243.00	188.42	81.65
J-29		5.73 (0.44)	426.19	210.00	216.19	93.68
J-291		1.76 (0.44)	431.40	236.00	195.40	84.67
J-294		0.00	430.96	218.00	212.96	92.28
J-297		1.32 (0.44)	430.63	218.00	212.63	92.14
J-298		0.00	292.00	280.00	12.00	5.20
J-3		22.93 (0.44)	428.29	270.00	158.29	68.59
J-30		0.00	435.24	280.00	155.24	67.27
J-304		14.11 (0.44)	430.33	255.00	175.33	75.98
J-305		1.76 (0.44)	430.93	238.00	192.93	83.61
J-306		1.32 (0.44)	430.30	250.00	180.30	78.13
J-31		0.00	291.95	280.00	11.95	5.18
J-313		7.94 (0.44)	430.06	250.00	180.06	78.02
J-314		13.23 (0.44)	430.08	210.00	220.08	95.37
J-316		6.17 (0.44)	430.03	228.00	202.03	87.55
J-32		0.00	431.26	230.00	201.26	87.21

J-33	0.00	419.89	210.00	209.89	90.95
J-331	1.32(0.44)	430.03	250.00	180.03	78.01
J-339	1.76(0.44)	429.98	250.00	179.98	77.99
J-34	4.85(0.44)	419.72	268.00	151.72	65.75
J-340	1.76(0.44)	430.14	214.00	216.14	93.66
J-35	8.82(0.44)	419.29	265.00	154.29	66.86
J-354	1.76(0.44)	430.09	193.00	237.09	102.74
J-36	0.44(0.44)	426.99	180.00	246.99	107.03
J-37	0.00	418.93	220.00	198.93	86.20
J-370	0.00	431.71	223.00	208.71	90.44
J-374	10.58(0.44)	430.07	208.00	222.07	96.23
J-38	8.82(0.44)	418.98	233.00	185.98	80.59
J-383	0.00	195.00	191.00	4.00	1.73
J-39	22.05(0.44)	418.67	262.00	156.67	67.89
J-399	0.00	435.08	280.00	155.08	67.20
J-4	0.00	428.74	210.00	218.74	94.79
J-40	0.00	418.63	225.00	193.63	83.91
J-401	8.82(0.44)	434.20	250.00	184.20	79.82
J-41	8.82(0.44)	418.63	225.00	193.63	83.91
J-42	0.00	418.80	210.00	208.80	90.48
J-43	0.00	419.89	188.00	231.89	100.48
J-436	0.00	427.87	242.00	185.87	80.55
J-437	0.00	427.29	250.00	177.29	76.82
J-439	0.00	427.29	250.00	177.29	76.82
J-44	0.00	424.73	285.00	139.73	60.55
J-440	7.94(0.44)	426.80	260.00	166.80	72.28
J-45	23.37(0.44)	422.20	265.00	157.20	68.12
J-46	0.00	424.73	280.00	144.73	62.72
J-47	46.75(0.44)	430.33	260.00	170.33	73.81
J-479	11.91(0.44)	426.01	198.00	228.01	98.80
J-5	0.00	430.01	220.00	210.01	91.00
J-507	0.00	426.01	198.00	228.01	98.80
J-508	7.06(0.44)	424.82	251.00	173.82	75.32
J-525	0.00	424.63	215.00	209.63	90.84
J-526	6.17(0.44)	424.28	200.00	224.28	97.19
J-557	0.00	424.44	200.00	224.44	97.26
J-559	4.85(0.44)	427.35	255.00	172.35	74.68
J-560	5.73(0.44)	425.26	208.00	217.26	94.15
J-565	2.65(0.44)	425.10	191.00	234.10	101.44
J-566	1.76(0.44)	425.17	224.00	201.17	87.17
J-567	6.17(0.44)	425.69	220.00	205.69	89.13
J-577	1.76(0.44)	425.61	238.00	187.61	81.30
J-578	4.41(0.44)	425.79	265.00	160.79	69.68
J-579	3.53(0.44)	426.57	245.00	181.57	78.68
J-580	2.20(0.44)	425.48	260.00	165.48	71.71
J-594	1.76(0.44)	425.61	275.00	150.61	65.26
J-6	0.00	432.97	280.00	152.97	66.29
J-610	6.17(0.44)	425.79	218.00	207.79	90.04
J-625	5.29(0.44)	426.44	233.00	193.44	83.82
J-629	0.00	426.41	270.00	156.41	67.78
J-687	0.00	425.02	288.00	137.02	59.38
J-688	5.29(0.44)	419.89	270.00	149.89	64.95
J-69	2.65(0.44)	427.00	195.00	232.00	100.53
J-7	0.00	432.33	204.00	228.33	98.94
J-705	0.00	424.79	285.00	139.79	60.58
J-730	5.73(0.44)	418.81	175.00	243.81	105.65
J-731	0.44(0.44)	424.73	252.00	172.73	74.85
J-737	2.20(0.44)	424.74	260.00	164.74	71.39
J-760	4.41(0.44)	424.68	210.00	214.68	93.03
J-763	0.00	424.68	190.00	234.68	101.69
J-764	0.00	424.68	195.00	229.68	99.53
J-765	0.00	426.96	252.00	174.96	75.81
J-779	1.76(0.44)	426.90	246.00	180.90	78.39
J-8	7.50(0.44)	427.59	205.00	222.59	96.46
J-87	1.76(0.44)	426.89	180.00	246.89	106.99
J-9	0.00	432.31	194.00	238.31	103.27
Pump-1	0.00	435.32	280.00	155.32	67.31
Pump-2	0.00	435.32	280.00	155.32	67.31
Pump-3	0.00	228.21	191.00	37.21	16.12
Pump-4	0.00	228.21	191.00	37.21	16.12
Pump-5	0.00	228.21	191.00	37.21	16.12

Pump-6	0.00	228.21	191.00	37.21	16.12
R-1	----	195.00	191.00	4.00	1.73
T-1	----	292.00	280.00	12.00	5.20
T-2	----	292.00	280.00	12.00	5.20
T-3	----	292.00	280.00	12.00	5.20
Pump-1	0.00	291.87	280.00	11.87	5.14
Pump-2	0.00	291.87	280.00	11.87	5.14
Pump-3	0.00	114.81	191.00	-76.19	-33.02
Pump-4	0.00	114.81	191.00	-76.19	-33.02
Pump-5	0.00	195.00	191.00	4.00	1.73
Pump-6	0.00	195.00	191.00	4.00	1.73

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-36	107.03	Pump-3	-33.02
J-87	106.99	Pump-4	-33.02
J-22	105.65	J-383	1.73
J-730	105.65	R-1	1.73
J-9	103.27	Pump-5	1.73
J-354	102.74	Pump-6	1.73
J-763	101.69	Pump-1	5.14
J-565	101.44	Pump-2	5.14
J-235	101.06	J-31	5.18
J-234	100.88	J-298	5.20

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-68	2.23	P-45	0.00
P-62	1.99	P-3	0.05
P-49	1.85	P-99	0.05
P-65	1.77	P-5	0.05
P-142	1.74	P-24	0.06
P-53	1.74	P-111	0.07
P-57	1.74	P-10	0.07
P-63	1.74	P-115	0.07
P-54	1.67	P-32	0.09
P-51	1.63	P-12	0.10

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-59	5.00	P-45	0.00
P-157	4.55	P-24	0.01
P-96	4.55	P-5	0.01
P-120	4.49	P-99	0.02
P-94	4.49	P-3	0.02
P-49	4.18	P-10	0.02
P-85	3.62	P-115	0.02
P-54	3.48	P-111	0.02
P-37	3.47	P-12	0.03
P-62	3.43	P-112	0.03

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
(-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
R-1	0.00	
T-1	182.13	
T-2	182.13	
T-3	182.13	

NET SYSTEM INFLOW = 546.40
NET SYSTEM OUTFLOW = 0.00
NET SYSTEM DEMAND = 546.40

***** HYDRAULIC ANALYSIS COMPLETED *****

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* * * * * K Y P I P E 4 * * * * *
*
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*
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*   Version 1.200 - 01/26/2000
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\SOUTHS-1.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\SOUTHS-1.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\SOUTHS-1.RS2

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*****
S U M M A R Y   O F   O R I G I N A L   D A T A
*****

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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	R-1	J-17	1097.63	12.00	100.0000	0.00
P-10	J-83	J-84	1235.43	6.00	100.0000	0.00
P-100	J-169	J-391	1304.99	3.00	100.0000	0.00
P-101	J-392	J-169	450.76	2.00	100.0000	0.00
P-102	J-123	T-1	4541.81	14.00	100.0000	0.00
P-103	J-343	J-432	1350.37	8.00	100.0000	0.00
P-104	J-432	J-296	1367.34	6.00	100.0000	0.00
P-105	J-440	J-449	652.39	2.00	100.0000	0.00
P-106	J-450	J-472	1559.64	2.00	100.0000	0.00
P-107	J-473	J-481	975.76	3.00	100.0000	0.00
P-108	J-481	J-499	1087.08	2.00	100.0000	0.00
P-109	J-481	J-506	528.26	3.00	100.0000	0.00
P-111	J-76	J-89	279.53	4.00	100.0000	0.00
P-110	J-506	J-512	425.70	2.00	100.0000	0.00
P-111	J-513	J-515	811.19	6.00	100.0000	0.00
P-112	J-516	J-518	525.66	2.00	100.0000	0.00
P-113	J-513	J-516	221.20	3.00	100.0000	0.00
P-114	J-519	J-513	309.94	6.00	100.0000	0.00
P-115	J-519	J-522	307.47	3.00	100.0000	0.00
P-116	J-522	J-523	230.65	1.30	100.0000	0.00
P-117	J-522	J-526	476.49	2.00	100.0000	0.00
P-118	J-527	J-526	232.74	2.00	100.0000	0.00
P-119	J-123	J-529	22.60	3.00	100.0000	0.00
P-12	J-62	J-93	564.76	10.00	100.0000	0.00
P-120	J-530	J-532	140.27	1.00	100.0000	0.00
P-121	J-533	J-534	278.03	2.00	100.0000	0.00
P-122	J-534	J-516	749.89	2.00	100.0000	0.00
P-123	J-526	J-539	476.86	2.00	100.0000	0.00
P-124	J-539	J-530	466.18	2.00	100.0000	0.00
P-125	J-539	J-534	122.02	2.00	100.0000	0.00
P-126	J-542	J-519	296.17	6.00	100.0000	0.00
P-127	J-542	J-550	223.95	1.00	100.0000	0.00
P-128	J-154	J-161	5256.64	10.00	100.0000	0.00
P-129	J-168	J-580	2141.63	8.00	100.0000	0.00
P-13	J-19	J-96	264.80	2.00	100.0000	0.00
P-130	J-580	J-343	2834.74	8.00	100.0000	0.00
P-131	J-580	J-591	1894.87	4.00	100.0000	0.00

P-132	J-591	J-592	134.71	4.00	100.0000	0.00
P-133	J-592	J-608	1037.55	4.00	100.0000	0.00
P-134	J-592	J-601	1137.64	3.00	100.0000	0.00
P-135	J-601	J-607	815.62	3.00	100.0000	0.00
P-137	J-608	J-616	536.85	2.00	100.0000	0.00
P-138	J-608	J-620	645.96	4.00	100.0000	0.00
P-139	J-620	J-626	705.40	2.00	100.0000	0.00
P-14	J-93	J-80	301.18	10.00	100.0000	0.00
P-140	J-620	J-639	2485.66	3.00	100.0000	0.00
P-141	J-639	J-648	1349.12	3.00	100.0000	0.00
P-142	J-529	J-667	2353.16	2.50	100.0000	0.00
P-143	J-667	J-686	1682.67	2.50	100.0000	0.00
P-144	J-667	J-698	3561.96	2.50	100.0000	0.00
P-145	J-699	J-706	1673.48	2.00	100.0000	0.00
P-146	J-228	J-710	2400.15	8.00	100.0000	0.00
P-147	J-710	J-192	3940.67	8.00	100.0000	0.00
P-148	J-710	J-24	499.04	3.00	100.0000	0.00
P-149	J-515	J-747	622.46	3.00	100.0000	0.00
P-15	J-82	J-98	304.34	6.00	100.0000	0.00
P-150	J-747	J-440	284.33	3.00	100.0000	0.00
P-151	J-747	J-23	616.67	2.00	100.0000	0.00
P-152	J-450	J-760	252.33	6.00	100.0000	0.00
P-153	J-760	J-542	799.00	6.00	100.0000	0.00
P-154	J-760	J-770	266.75	4.00	100.0000	0.00
P-155	J-770	J-16	412.15	2.00	100.0000	0.00
P-156	J-770	J-21	577.34	3.00	100.0000	0.00
P-157	J-473	J-787	482.34	6.00	100.0000	0.00
P-158	J-787	J-450	1207.96	6.00	100.0000	0.00
P-159	J-787	J-11	717.31	3.00	100.0000	0.00
P-16	J-98	J-69	263.71	6.00	100.0000	0.00
P-160	J-811	J-10	598.67	2.00	100.0000	0.00
P-161	J-816	J-9	138.02	2.00	100.0000	0.00
P-162	J-432	J-821	240.75	6.00	100.0000	0.00
P-163	J-822	J-816	573.01	6.00	100.0000	0.00
P-164	J-822	J-1	969.37	3.00	100.0000	0.00
P-165	J-837	J-3	618.21	3.00	100.0000	0.00
P-166	J-837	J-849	512.87	3.00	100.0000	0.00
P-167	J-821	J-850	198.74	6.00	100.0000	0.00
P-168	J-850	J-851	216.85	6.00	100.0000	0.00
P-169	J-851	J-822	156.93	6.00	100.0000	0.00
P-17	J-82	J-102	1608.55	4.00	100.0000	0.00
P-170	J-851	J-4	679.04	3.00	100.0000	0.00
P-171	J-816	J-866	918.56	6.00	100.0000	0.00
P-172	J-866	J-473	2101.57	6.00	100.0000	0.00
P-173	J-866	J-15	242.14	4.00	100.0000	0.00
P-174	J-1	J-837	744.24	3.00	100.0000	0.00
P-175	J-3	J-821	1013.29	3.00	100.0000	0.00
P-176	J-4	J-6	648.41	3.00	100.0000	0.00
P-177	J-5	J-850	591.59	3.00	100.0000	0.00
P-178	J-6	J-5	621.47	3.00	100.0000	0.00
P-179	J-7	J-820	165.70	2.00	100.0000	0.00
P-18	J-84	J-107	1616.93	6.00	100.0000	0.00
P-180	J-8	J-7	301.37	2.00	100.0000	0.00
P-181	J-9	J-8	237.74	2.00	100.0000	0.00
P-182	J-10	J-815	424.90	2.00	100.0000	0.00
P-183	J-11	J-12	919.31	3.00	100.0000	0.00
P-184	J-12	J-13	648.71	3.00	100.0000	0.00
P-185	J-13	J-811	410.86	3.00	100.0000	0.00
P-186	J-14	J-811	377.50	4.00	100.0000	0.00
P-187	J-15	J-14	431.73	4.00	100.0000	0.00
P-188	J-16	J-775	300.59	2.00	100.0000	0.00
P-189	J-21	J-22	304.95	2.00	100.0000	0.00
P-19	J-93	J-98	1236.32	4.00	100.0000	0.00
P-190	J-22	J-781	196.08	2.00	100.0000	0.00
P-191	J-23	J-756	487.45	2.00	100.0000	0.00
P-192	J-24	J-25	781.45	3.00	100.0000	0.00
P-193	J-25	J-26	705.32	3.00	100.0000	0.00
P-194	J-26	J-27	1070.72	3.00	100.0000	0.00
P-195	J-27	J-743	684.89	3.00	100.0000	0.00
P-196	J-698	J-699	25.54	2.00	100.0000	0.00
P-2	J-18	J-19	23.17	2.00	100.0000	0.00

P-20	J-98	J-89	1156.93	4.00	100.0000	0.00
P-21	J-89	J-102	740.82	4.00	100.0000	0.00
P-22	J-102	J-107	294.84	6.00	100.0000	0.00
P-23	J-118	J-84	241.77	6.00	100.0000	0.00
P-24	J-20	J-123	370.72	12.00	100.0000	0.00
P-25	J-107	J-127	316.56	4.00	100.0000	0.00
P-26	J-127	J-141	1829.62	3.00	100.0000	0.00
P-27	J-141	J-142	249.66	4.00	100.0000	0.00
P-28	J-142	J-118	590.01	4.00	100.0000	0.00
P-29	J-142	J-143	587.34	2.00	100.0000	0.00
P-3	J-20	J-62	2923.19	12.00	100.0000	0.00
P-30	J-127	J-144	705.59	4.00	100.0000	0.00
P-31	J-144	J-141	274.49	4.00	100.0000	0.00
P-32	J-144	J-145	235.87	2.00	100.0000	0.00
P-33	J-83	J-146	274.29	10.00	100.0000	0.00
P-34	J-147	J-118	38.10	4.00	100.0000	0.00
P-35	J-19	J-20	125.59	8.00	100.0000	0.00
P-36	J-147	J-146	1234.99	4.00	100.0000	0.00
P-37	J-146	J-151	271.81	10.00	100.0000	0.00
P-38	J-152	J-147	272.23	4.00	100.0000	0.00
P-39	J-152	J-151	1233.53	3.00	100.0000	0.00
P-4	J-62	J-69	1371.60	3.00	100.0000	0.00
P-40	J-151	J-153	283.34	10.00	100.0000	0.00
P-41	J-153	J-154	305.43	10.00	100.0000	0.00
P-42	J-154	J-157	1540.36	3.00	100.0000	0.00
P-43	J-157	J-152	274.94	3.00	100.0000	0.00
P-44	J-157	J-153	1230.89	3.00	100.0000	0.00
P-45	J-159	J-160	240.99	2.00	100.0000	0.00
P-46	J-161	J-168	2758.71	10.00	100.0000	0.00
P-47	J-159	J-169	151.29	3.00	100.0000	0.00
P-48	J-170	J-171	352.24	2.00	100.0000	0.00
P-49	J-161	J-182	2004.65	4.00	100.0000	0.00
P-5	J-69	J-76	1171.78	3.00	100.0000	0.00
P-50	J-182	J-170	839.08	3.00	100.0000	0.00
P-51	J-186	J-191	263.74	4.00	100.0000	0.00
P-52	J-192	J-186	1054.83	4.00	100.0000	0.00
P-53	J-17	R-2	164.72	12.00	100.0000	0.00
P-54	J-192	J-205	399.77	6.00	100.0000	0.00
P-55	J-205	J-210	1224.25	2.00	100.0000	0.00
P-56	J-205	J-218	1383.79	3.00	100.0000	0.00
P-57	J-219	J-218	271.60	3.00	100.0000	0.00
P-58	J-218	J-220	411.12	3.00	100.0000	0.00
P-59	J-191	J-222	274.42	3.00	100.0000	0.00
P-6	J-77	J-76	333.23	3.00	100.0000	0.00
P-60	J-222	J-223	520.88	2.00	100.0000	0.00
P-61	J-222	J-224	196.07	3.00	100.0000	0.00
P-62	J-224	J-225	480.30	2.00	100.0000	0.00
P-63	J-224	J-226	179.85	3.00	100.0000	0.00
P-64	J-227	J-228	755.52	8.00	100.0000	0.00
P-65	J-226	J-237	1389.38	3.00	100.0000	0.00
P-66	J-226	J-238	634.10	2.00	100.0000	0.00
P-67	J-186	J-239	170.77	2.00	100.0000	0.00
P-68	J-239	J-242	502.82	2.00	100.0000	0.00
P-69	J-239	J-246	374.70	2.00	100.0000	0.00
P-7	J-80	J-82	1235.93	4.00	100.0000	0.00
P-70	J-246	J-191	800.14	2.00	100.0000	0.00
P-71	J-246	J-259	586.49	2.00	100.0000	0.00
P-72	J-260	J-264	284.00	2.00	100.0000	0.00
P-73	J-265	J-260	1288.46	4.00	100.0000	0.00
P-74	J-17	J-295	6356.67	14.00	100.0000	0.00
P-75	J-296	J-265	127.42	6.00	100.0000	0.00
P-76	J-300	J-307	275.17	2.00	100.0000	0.00
P-77	J-308	J-300	327.58	2.00	100.0000	0.00
P-78	J-314	J-300	266.92	3.00	100.0000	0.00
P-79	J-317	J-314	258.85	2.00	100.0000	0.00
P-8	J-80	J-83	282.30	10.00	100.0000	0.00
P-80	J-296	J-327	1171.91	4.00	100.0000	0.00
P-81	J-328	J-327	257.54	2.00	100.0000	0.00
P-82	J-327	J-335	134.77	4.00	100.0000	0.00
P-83	J-335	J-314	465.30	3.00	100.0000	0.00
P-84	J-337	J-335	810.11	3.00	100.0000	0.00

P-85	J-342	J-295	69.97	3.00	100.0000	0.00
P-86	J-343	J-356	2694.79	4.00	100.0000	0.00
P-87	J-356	J-361	423.26	2.00	100.0000	0.00
P-88	J-168	J-368	2910.61	8.00	100.0000	0.00
P-89	J-369	J-368	760.22	4.00	100.0000	0.00
P-9	J-84	J-82	281.66	6.00	100.0000	0.00
P-90	J-373	J-375	918.87	2.00	100.0000	0.00
P-91	J-375	J-369	43.16	2.00	100.0000	0.00
P-92	J-375	J-377	652.38	2.00	100.0000	0.00
P-93	J-369	J-382	888.92	3.00	100.0000	0.00
P-94	J-383	J-385	515.26	2.00	100.0000	0.00
P-95	J-295	T-1	87.56	14.00	100.0000	0.00
P-96	J-373	J-382	414.44	3.00	100.0000	0.00
P-97	J-382	J-385	42.39	3.00	100.0000	0.00
P-98	J-368	J-227	1138.24	8.00	100.0000	0.00
P-99	J-228	J-159	423.90	3.00	100.0000	0.00

END NODE DATA

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		9.00	217.85	
J-10		10.00	199.08	
J-102		2.00	190.00	
J-107		4.00	186.95	
J-11		10.00	211.96	
J-118		12.00	212.83	
J-12		10.00	218.95	
J-123		2.00	220.00	
J-127		20.00	190.00	
J-13		10.00	224.77	
J-14		10.00	240.91	
J-141		34.00	202.36	
J-142		14.00	205.87	
J-143		15.00	190.00	
J-144		13.00	195.83	
J-145		6.00	191.49	
J-146		44.00	210.00	
J-147		0.00	211.49	
J-15		10.00	228.55	
J-151		42.00	210.00	
J-152		6.00	193.45	
J-153		42.00	212.86	
J-154		43.00	217.50	
J-157		11.00	186.08	
J-159		0.00	197.29	
J-16		6.00	189.37	
J-160		2.00	196.12	
J-161		26.00	200.00	
J-168		0.00	192.42	
J-169		11.00	192.49	
J-17		0.00	297.52	
J-170		1.00	185.89	
J-171		5.00	204.49	
J-18		0.00	211.06	
J-182		11.00	181.76	
J-186		10.00	210.00	
J-19		2.00	212.37	
J-191		18.00	204.06	
J-192		4.00	260.00	
J-20		0.00	220.00	
J-205		10.00	264.67	
J-21		6.00	220.98	
J-210		17.00	207.47	
J-218		4.00	217.91	
J-219		3.00	208.85	
J-22		6.00	203.68	
J-220		4.00	218.56	

J-222	10.00	197.12
J-223	6.00	182.33
J-224	12.00	193.71
J-225	4.00	182.60
J-226	14.00	193.14
J-227	2.00	194.03
J-228	2.00	208.55
J-23	4.00	182.32
J-237	1.00	179.72
J-238	1.00	178.80
J-239	7.00	205.67
J-24	5.00	211.78
J-242	4.00	189.61
J-246	8.00	189.64
J-25	5.00	206.38
J-259	13.00	183.37
J-26	5.00	198.54
J-260	3.00	190.00
J-264	2.00	181.79
J-265	11.00	180.00
J-27	5.00	180.00
J-295	0.00	356.45
J-296	13.00	180.00
J-3	9.00	208.17
J-300	11.00	180.00
J-307	2.00	180.00
J-308	2.00	180.00
J-314	8.00	180.00
J-317	2.00	180.00
J-327	4.00	184.68
J-328	1.00	180.00
J-335	16.00	183.16
J-337	1.00	191.93
J-342	0.00	354.29
J-343	32.00	194.91
J-356	7.00	180.00
J-361	3.00	180.00
J-368	1.00	194.87
J-369	7.00	190.00
J-373	4.00	182.43
J-375	0.00	190.00
J-377	1.00	180.00
J-382	9.00	188.90
J-383	0.00	180.00
J-385	0.00	189.34
J-391	0.00	176.55
J-392	3.00	189.91
J-4	8.00	224.83
J-432	0.00	207.58
J-440	4.00	196.32
J-449	1.00	190.00
J-450	9.00	223.98
J-472	3.00	180.00
J-473	0.00	239.54
J-481	12.00	196.46
J-499	3.00	174.14
J-5	9.00	218.94
J-506	14.00	184.61
J-512	2.00	180.00
J-513	2.00	216.01
J-515	9.00	239.14
J-516	9.00	209.20
J-518	2.00	186.61
J-519	2.00	203.91
J-522	6.00	180.66
J-523	1.00	176.34
J-526	5.00	185.23
J-527	2.00	180.00
J-529	0.00	220.00
J-530	2.00	180.00
J-532	2.00	175.95

J-533	2.00	179.56	
J-534	3.00	190.00	
J-539	4.00	190.00	
J-542	0.00	208.96	
J-550	0.00	189.62	
J-580	0.00	208.84	
J-591	0.00	232.03	
J-592	0.00	227.95	
J-6	8.00	220.33	
J-601	14.00	200.00	
J-607	14.00	193.46	
J-608	0.00	200.86	
J-616	14.00	172.66	
J-62	53.00	195.66	
J-620	14.00	200.00	
J-626	14.00	180.00	
J-639	14.00	181.25	
J-648	14.00	186.13	
J-667	0.00	180.00	
J-686	19.00	190.00	
J-69	38.00	195.43	
J-698	0.00	200.00	
J-699	0.00	200.00	
J-7	5.00	199.95	
J-706	0.00	203.52	
J-710	0.00	217.47	
J-743	5.00	180.00	
J-747	0.00	210.67	
J-756	2.00	176.92	
J-76	3.00	183.45	
J-760	0.00	230.18	
J-77	7.00	180.00	
J-770	0.00	220.53	
J-775	5.00	175.77	
J-781	5.00	178.50	
J-787	0.00	230.00	
J-8	4.00	205.49	
J-80	40.00	210.00	
J-811	10.00	240.00	
J-815	9.00	182.04	
J-816	0.00	200.00	
J-82	49.00	220.00	
J-820	5.00	192.47	
J-821	0.00	205.88	
J-822	0.00	205.78	
J-83	45.00	210.00	
J-837	8.00	218.45	
J-84	52.00	220.00	
J-849	8.00	190.68	
J-850	0.00	206.32	
J-851	0.00	206.78	
J-866	0.00	222.62	
J-89	15.00	190.00	
J-9	5.00	201.84	
J-93	43.00	210.00	
J-96	0.00	220.00	
J-98	35.00	214.41	
R-1	----	335.39	420.00
R-2	----	291.44	420.00
T-1	----	360.00	380.00

O U T P U T O P T I O N D A T A

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 195
 NUMBER OF END NODES(j) = 175
 NUMBER OF PRIMARY LOOPS(l) = 18
 NUMBER OF SUPPLY NODES(f) = 3
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00003

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	R-1	J-17	486.30	1.19	0.00	1.38	1.08
P-10	J-83	J-84	61.80	0.86	0.00	0.70	0.70
P-100	J-169	J-391	0.00	0.00	0.00	0.00	0.00
P-101	J-392	J-169	-1.41	0.06	0.00	0.14	0.13
P-102	J-123	T-1	-694.19	4.50	0.00	1.45	0.99
P-103	J-343	J-432	172.02	1.54	0.00	1.10	1.14
P-104	J-432	J-296	35.72	0.34	0.00	0.41	0.25
P-105	J-440	J-449	0.47	0.01	0.00	0.05	0.02
P-106	J-450	J-472	1.41	0.21	0.00	0.14	0.13
P-107	J-473	J-481	14.57	1.37	0.00	0.66	1.40
P-108	J-481	J-499	1.41	0.14	0.00	0.14	0.13
P-109	J-481	J-506	7.52	0.22	0.00	0.34	0.41
P-11	J-76	J-89	-0.53	0.00	0.00	0.01	0.00
P-110	J-506	J-512	0.94	0.03	0.00	0.10	0.06
P-111	J-513	J-515	9.40	0.02	0.00	0.11	0.02
P-112	J-516	J-518	0.94	0.03	0.00	0.10	0.06
P-113	J-513	J-516	9.42	0.14	0.00	0.43	0.62
P-114	J-519	J-513	19.76	0.03	0.00	0.22	0.08
P-115	J-519	J-522	8.44	0.16	0.00	0.38	0.51
P-116	J-522	J-523	0.47	0.03	0.00	0.11	0.14
P-117	J-522	J-526	5.15	0.70	0.00	0.53	1.47
P-118	J-527	J-526	-0.94	0.01	0.00	0.10	0.06
P-119	J-123	J-529	8.93	0.01	0.00	0.41	0.57
P-12	J-62	J-93	633.57	2.43	0.00	2.59	4.30
P-120	J-530	J-532	0.94	0.26	0.00	0.38	1.84
P-121	J-533	J-534	-0.94	0.02	0.00	0.10	0.06
P-122	J-534	J-516	-4.25	0.77	0.00	0.43	1.03
P-123	J-526	J-539	1.86	0.11	0.00	0.19	0.22
P-124	J-539	J-530	1.88	0.11	0.00	0.19	0.23
P-125	J-539	J-534	-1.90	0.03	0.00	0.19	0.23
P-126	J-542	J-519	29.14	0.05	0.00	0.33	0.17
P-127	J-542	J-550	0.00	0.00	0.00	0.00	0.00
P-128	J-154	J-161	360.02	7.94	0.00	1.47	1.51
P-129	J-168	J-580	237.82	4.45	0.00	1.52	2.08
P-13	J-19	J-96	0.00	0.00	0.00	0.00	0.00
P-130	J-580	J-343	191.76	3.95	0.00	1.22	1.39
P-131	J-580	J-591	46.06	5.51	0.00	1.18	2.91
P-132	J-591	J-592	46.06	0.39	0.00	1.18	2.91
P-133	J-592	J-608	32.90	1.62	0.00	0.84	1.56
P-134	J-592	J-601	13.16	1.32	0.00	0.60	1.16
P-135	J-601	J-607	6.58	0.26	0.00	0.30	0.32
P-137	J-608	J-616	6.58	1.24	0.00	0.67	2.31
P-138	J-608	J-620	26.32	0.67	0.00	0.67	1.03
P-139	J-620	J-626	6.58	1.63	0.00	0.67	2.31
P-14	J-93	J-80	573.48	1.08	0.00	2.34	3.58
P-140	J-620	J-639	13.16	2.88	0.00	0.60	1.16

P-141	J-639	J-648	6.58	0.43	0.00	0.30	0.32
P-142	J-529	J-667	8.93	3.23	0.00	0.58	1.37
P-143	J-667	J-686	8.93	2.31	0.00	0.58	1.37
P-144	J-667	J-698	0.00	0.00	0.00	0.00	0.00
P-145	J-699	J-706	0.00	0.00	0.00	0.00	0.00
P-146	J-228	J-710	82.25	0.70	0.00	0.52	0.29
P-147	J-710	J-192	70.50	0.86	0.00	0.45	0.22
P-148	J-710	J-24	11.75	0.47	0.00	0.53	0.94
P-149	J-515	J-747	5.17	0.13	0.00	0.23	0.21
P-15	J-82	J-98	-17.38	0.02	0.00	0.20	0.07
P-150	J-747	J-440	2.35	0.01	0.00	0.11	0.05
P-151	J-747	J-23	2.82	0.30	0.00	0.29	0.48
P-152	J-450	J-760	42.30	0.09	0.00	0.48	0.34
P-153	J-760	J-542	29.14	0.14	0.00	0.33	0.17
P-154	J-760	J-770	13.16	0.08	0.00	0.34	0.29
P-155	J-770	J-16	5.17	0.61	0.00	0.53	1.48
P-156	J-770	J-21	7.99	0.27	0.00	0.36	0.46
P-157	J-473	J-787	50.78	0.23	0.00	0.58	0.48
P-158	J-787	J-450	47.94	0.52	0.00	0.54	0.43
P-159	J-787	J-11	2.84	0.05	0.00	0.13	0.07
P-16	J-98	J-69	-2.87	0.00	0.00	0.03	0.00
P-160	J-811	J-10	8.93	2.44	0.00	0.91	4.07
P-161	J-816	J-9	8.93	0.56	0.00	0.91	4.07
P-162	J-432	J-821	136.30	0.72	0.00	1.55	3.01
P-163	J-822	J-816	108.57	1.13	0.00	1.23	1.97
P-164	J-822	J-1	3.41	0.09	0.00	0.15	0.10
P-165	J-837	J-3	-8.34	0.31	0.00	0.38	0.50
P-166	J-837	J-849	3.76	0.06	0.00	0.17	0.11
P-167	J-821	J-850	123.73	0.50	0.00	1.40	2.51
P-168	J-850	J-851	114.35	0.47	0.00	1.30	2.17
P-169	J-851	J-822	111.98	0.33	0.00	1.27	2.09
P-17	J-82	J-102	7.03	0.14	0.00	0.18	0.09
P-170	J-851	J-4	2.37	0.03	0.00	0.11	0.05
P-171	J-816	J-866	99.64	1.55	0.00	1.13	1.68
P-172	J-866	J-473	65.35	1.62	0.00	0.74	0.77
P-173	J-866	J-15	34.29	0.41	0.00	0.88	1.68
P-174	J-1	J-837	-0.82	0.01	0.00	0.04	0.01
P-175	J-3	J-821	-12.57	1.08	0.00	0.57	1.06
P-176	J-4	J-6	-1.39	0.01	0.00	0.06	0.02
P-177	J-5	J-850	-9.38	0.37	0.00	0.43	0.62
P-178	J-6	J-5	-5.15	0.13	0.00	0.23	0.20
P-179	J-7	J-820	2.35	0.06	0.00	0.24	0.34
P-18	J-84	J-107	19.10	0.13	0.00	0.22	0.08
P-180	J-8	J-7	4.70	0.37	0.00	0.48	1.24
P-181	J-9	J-8	6.58	0.55	0.00	0.67	2.31
P-182	J-10	J-815	4.23	0.43	0.00	0.43	1.02
P-183	J-11	J-12	-1.86	0.03	0.00	0.08	0.03
P-184	J-12	J-13	-6.56	0.21	0.00	0.30	0.32
P-185	J-13	J-811	-11.26	0.36	0.00	0.51	0.87
P-186	J-14	J-811	24.89	0.35	0.00	0.64	0.93
P-187	J-15	J-14	29.59	0.55	0.00	0.76	1.28
P-188	J-16	J-775	2.35	0.10	0.00	0.24	0.34
P-189	J-21	J-22	5.17	0.45	0.00	0.53	1.48
P-19	J-93	J-98	39.88	2.75	0.00	1.02	2.22
P-190	J-22	J-781	2.35	0.07	0.00	0.24	0.34
P-191	J-23	J-756	0.94	0.03	0.00	0.10	0.06
P-192	J-24	J-25	9.40	0.49	0.00	0.43	0.62
P-193	J-25	J-26	7.05	0.26	0.00	0.32	0.36
P-194	J-26	J-27	4.70	0.18	0.00	0.21	0.17
P-195	J-27	J-743	2.35	0.03	0.00	0.11	0.05
P-196	J-698	J-699	0.00	0.00	0.00	0.00	0.00
P-2	J-18	J-19	0.00	0.00	0.00	0.00	0.00
P-20	J-98	J-89	8.92	0.16	0.00	0.23	0.14
P-21	J-89	J-102	1.34	0.00	0.00	0.03	0.00
P-22	J-102	J-107	7.43	0.00	0.00	0.08	0.01
P-23	J-118	J-84	-36.27	0.06	0.00	0.41	0.26
P-24	J-20	J-123	-684.32	0.76	0.00	1.94	2.04
P-25	J-107	J-127	24.65	0.29	0.00	0.63	0.91
P-26	J-127	J-141	3.38	0.17	0.00	0.15	0.09
P-27	J-141	J-142	-9.66	0.04	0.00	0.25	0.16
P-28	J-142	J-118	-23.29	0.48	0.00	0.59	0.82

P-29	J-142	J-143	7.05	1.54	0.00	0.72	2.63
P-3	J-20	J-62	683.38	5.95	0.00	1.94	2.04
P-30	J-127	J-144	11.87	0.17	0.00	0.30	0.24
P-31	J-144	J-141	2.94	0.00	0.00	0.07	0.02
P-32	J-144	J-145	2.82	0.11	0.00	0.29	0.48
P-33	J-83	J-146	441.04	0.60	0.00	1.80	2.20
P-34	J-147	J-118	-7.34	0.00	0.00	0.19	0.10
P-35	J-19	J-20	-0.94	0.00	0.00	0.01	0.00
P-36	J-147	J-146	-12.53	0.32	0.00	0.32	0.26
P-37	J-146	J-151	407.83	0.52	0.00	1.67	1.90
P-38	J-152	J-147	-19.87	0.17	0.00	0.51	0.61
P-39	J-152	J-151	1.60	0.03	0.00	0.07	0.02
P-4	J-62	J-69	24.90	5.18	0.00	1.13	3.78
P-40	J-151	J-153	389.69	0.50	0.00	1.59	1.75
P-41	J-153	J-154	373.00	0.49	0.00	1.52	1.61
P-42	J-154	J-157	-7.23	0.59	0.00	0.33	0.38
P-43	J-157	J-152	-15.45	0.43	0.00	0.70	1.56
P-44	J-157	J-153	3.06	0.10	0.00	0.14	0.08
P-45	J-159	J-160	0.94	0.02	0.00	0.10	0.06
P-46	J-161	J-168	339.81	3.74	0.00	1.39	1.36
P-47	J-159	J-169	6.58	0.05	0.00	0.30	0.32
P-48	J-170	J-171	2.35	0.12	0.00	0.24	0.34
P-49	J-161	J-182	7.99	0.23	0.00	0.20	0.11
P-5	J-69	J-76	4.17	0.16	0.00	0.19	0.14
P-50	J-182	J-170	2.82	0.06	0.00	0.13	0.07
P-51	J-186	J-191	35.71	0.48	0.00	0.91	1.81
P-52	J-192	J-186	50.76	3.67	0.00	1.30	3.48
P-53	J-17	R-2	-1354.16	1.19	0.00	3.84	7.23
P-54	J-192	J-205	17.86	0.03	0.00	0.20	0.07
P-55	J-205	J-210	7.99	4.06	0.00	0.82	3.31
P-56	J-205	J-218	5.17	0.28	0.00	0.23	0.21
P-57	J-219	J-218	-1.41	0.01	0.00	0.06	0.02
P-58	J-218	J-220	1.88	0.01	0.00	0.09	0.03
P-59	J-191	J-222	22.56	0.86	0.00	1.02	3.14
P-6	J-77	J-76	-3.29	0.03	0.00	0.15	0.09
P-60	J-222	J-223	2.82	0.25	0.00	0.29	0.48
P-61	J-222	J-224	15.04	0.29	0.00	0.68	1.48
P-62	J-224	J-225	1.88	0.11	0.00	0.19	0.23
P-63	J-224	J-226	7.52	0.07	0.00	0.34	0.41
P-64	J-227	J-228	90.71	0.26	0.00	0.58	0.35
P-65	J-226	J-237	0.47	0.00	0.00	0.02	0.00
P-66	J-226	J-238	0.47	0.01	0.00	0.05	0.02
P-67	J-186	J-239	10.35	0.91	0.00	1.06	5.35
P-68	J-239	J-242	1.88	0.11	0.00	0.19	0.23
P-69	J-239	J-246	5.18	0.56	0.00	0.53	1.48
P-7	J-80	J-82	30.69	1.69	0.00	0.78	1.37
P-70	J-246	J-191	-4.69	0.99	0.00	0.48	1.24
P-71	J-246	J-259	6.11	1.18	0.00	0.62	2.02
P-72	J-260	J-264	0.94	0.02	0.00	0.10	0.06
P-73	J-265	J-260	2.35	0.02	0.00	0.06	0.01
P-74	J-17	J-295	1840.46	38.28	0.00	3.84	6.02
P-75	J-296	J-265	7.52	0.00	0.00	0.09	0.01
P-76	J-300	J-307	0.94	0.02	0.00	0.10	0.06
P-77	J-308	J-300	-0.94	0.02	0.00	0.10	0.06
P-78	J-314	J-300	7.05	0.10	0.00	0.32	0.36
P-79	J-317	J-314	-0.94	0.02	0.00	0.10	0.06
P-8	J-80	J-83	523.99	0.85	0.00	2.14	3.03
P-80	J-296	J-327	22.09	0.87	0.00	0.56	0.75
P-81	J-328	J-327	-0.47	0.00	0.00	0.05	0.02
P-82	J-327	J-335	19.74	0.08	0.00	0.50	0.60
P-83	J-335	J-314	11.75	0.44	0.00	0.53	0.94
P-84	J-337	J-335	-0.47	0.00	0.00	0.02	0.00
P-85	J-342	J-295	0.00	0.00	0.00	0.00	0.00
P-86	J-343	J-356	4.70	0.11	0.00	0.12	0.04
P-87	J-356	J-361	1.41	0.06	0.00	0.14	0.13
P-88	J-168	J-368	101.99	1.26	0.00	0.65	0.43
P-89	J-369	J-368	-9.87	0.13	0.00	0.25	0.17
P-9	J-84	J-82	-18.02	0.02	0.00	0.20	0.07
P-90	J-373	J-375	-1.50	0.14	0.00	0.15	0.15
P-91	J-375	J-369	-1.97	0.01	0.00	0.20	0.25
P-92	J-375	J-377	0.47	0.01	0.00	0.05	0.02

P-93	J-369	J-382	4.61	0.15	0.00	0.21	0.17
P-94	J-383	J-385	0.00	0.00	0.00	0.00	0.00
P-95	J-295	T-1	1840.46	0.53	0.00	3.84	6.02
P-96	J-373	J-382	-0.38	0.00	0.00	0.02	0.00
P-97	J-382	J-385	0.00	0.00	0.00	0.00	0.00
P-98	J-368	J-227	91.65	0.40	0.00	0.58	0.36
P-99	J-228	J-159	7.52	0.17	0.00	0.34	0.41

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		4.23 (0.47)	338.58	217.85	120.73	52.32
J-10		4.70 (0.47)	332.25	199.08	133.17	57.71
J-102		0.94 (0.47)	363.45	190.00	173.45	75.16
J-107		1.88 (0.47)	363.45	186.95	176.50	76.48
J-11		4.70 (0.47)	334.10	211.96	122.14	52.93
J-118		5.64 (0.47)	363.51	212.83	150.68	65.30
J-12		4.70 (0.47)	334.12	218.95	115.17	49.91
J-123		0.94 (0.47)	375.50	220.00	155.50	67.39
J-127		9.40 (0.47)	363.16	190.00	173.16	75.03
J-13		4.70 (0.47)	334.33	224.77	109.56	47.48
J-14		4.70 (0.47)	335.04	240.91	94.13	40.79
J-141		15.98 (0.47)	362.99	202.36	160.63	69.60
J-142		6.58 (0.47)	363.03	205.87	157.16	68.10
J-143		7.05 (0.47)	361.48	190.00	171.48	74.31
J-144		6.11 (0.47)	362.99	195.83	167.16	72.44
J-145		2.82 (0.47)	362.88	191.49	171.39	74.27
J-146		20.68 (0.47)	363.83	210.00	153.83	66.66
J-147		0.00	363.51	211.49	152.02	65.87
J-15		4.70 (0.47)	335.59	228.55	107.04	46.38
J-151		19.74 (0.47)	363.31	210.00	153.31	66.44
J-152		2.82 (0.47)	363.34	193.45	169.89	73.62
J-153		19.74 (0.47)	362.82	212.86	149.96	64.98
J-154		20.21 (0.47)	362.32	217.50	144.82	62.76
J-157		5.17 (0.47)	362.91	186.08	176.83	76.63
J-159		0.00	348.54	197.29	151.25	65.54
J-16		2.82 (0.47)	332.85	189.37	143.48	62.17
J-160		0.94 (0.47)	348.52	196.12	152.40	66.04
J-161		12.22 (0.47)	354.38	200.00	154.38	66.90
J-168		0.00	350.64	192.42	158.22	68.56
J-169		5.17 (0.47)	348.49	192.49	156.00	67.60
J-17		0.00	418.81	297.52	121.29	52.56
J-170		0.47 (0.47)	354.10	185.89	168.21	72.89
J-171		2.35 (0.47)	353.98	204.49	149.49	64.78
J-18		0.00	374.75	211.06	163.69	70.93
J-182		5.17 (0.47)	354.16	181.76	172.40	74.71
J-186		4.70 (0.47)	343.48	210.00	133.48	57.84
J-19		0.94 (0.47)	374.75	212.37	162.38	70.36
J-191		8.46 (0.47)	343.01	204.06	138.95	60.21
J-192		1.88 (0.47)	347.15	260.00	87.15	37.77
J-20		0.00	374.75	220.00	154.75	67.06
J-205		4.70 (0.47)	347.12	264.67	82.45	35.73
J-21		2.82 (0.47)	333.19	220.98	112.21	48.62
J-210		7.99 (0.47)	343.07	207.47	135.60	58.76
J-218		1.88 (0.47)	346.84	217.91	128.93	55.87
J-219		1.41 (0.47)	346.84	208.85	137.99	59.79
J-22		2.82 (0.47)	332.74	203.68	129.06	55.93
J-220		1.88 (0.47)	346.83	218.56	128.27	55.58
J-222		4.70 (0.47)	342.14	197.12	145.02	62.84
J-223		2.82 (0.47)	341.89	182.33	159.56	69.14
J-224		5.64 (0.47)	341.85	193.71	148.14	64.19
J-225		1.88 (0.47)	341.74	182.60	159.14	68.96
J-226		6.58 (0.47)	341.78	193.14	148.64	64.41
J-227		0.94 (0.47)	348.98	194.03	154.95	67.14
J-228		0.94 (0.47)	348.71	208.55	140.16	60.74
J-23		1.88 (0.47)	332.88	182.32	150.56	65.24

J-237	0.47(0.47)	341.77	179.72	162.05	70.22
J-238	0.47(0.47)	341.77	178.80	162.97	70.62
J-239	3.29(0.47)	342.57	205.67	136.90	59.32
J-24	2.35(0.47)	347.55	211.78	135.77	58.83
J-242	1.88(0.47)	342.46	189.61	152.85	66.23
J-246	3.76(0.47)	342.02	189.64	152.38	66.03
J-25	2.35(0.47)	347.06	206.38	140.68	60.96
J-259	6.11(0.47)	340.83	183.37	157.46	68.23
J-26	2.35(0.47)	346.80	198.54	148.26	64.25
J-260	1.41(0.47)	340.34	190.00	150.34	65.15
J-264	0.94(0.47)	340.32	181.79	158.53	68.70
J-265	5.17(0.47)	340.35	180.00	160.35	69.49
J-27	2.35(0.47)	346.62	180.00	166.62	72.20
J-295	0.00	380.53	356.45	24.08	10.43
J-296	6.11(0.47)	340.35	180.00	160.35	69.49
J-3	4.23(0.47)	338.90	208.17	130.73	56.65
J-300	5.17(0.47)	338.87	180.00	158.87	68.84
J-307	0.94(0.47)	338.85	180.00	158.85	68.83
J-308	0.94(0.47)	338.84	180.00	158.84	68.83
J-314	3.76(0.47)	338.96	180.00	158.96	68.88
J-317	0.94(0.47)	338.95	180.00	158.95	68.88
J-327	1.88(0.47)	339.48	184.68	154.80	67.08
J-328	0.47(0.47)	339.48	180.00	159.48	69.11
J-335	7.52(0.47)	339.40	183.16	156.24	67.70
J-337	0.47(0.47)	339.40	191.93	147.47	63.90
J-342	0.00	380.53	354.29	26.24	11.37
J-343	15.04(0.47)	342.24	194.91	147.33	63.84
J-356	3.29(0.47)	342.12	180.00	162.12	70.25
J-361	1.41(0.47)	342.07	180.00	162.07	70.23
J-368	0.47(0.47)	349.38	194.87	154.51	66.95
J-369	3.29(0.47)	349.25	190.00	159.25	69.01
J-373	1.88(0.47)	349.10	182.43	166.67	72.23
J-375	0.00	349.24	190.00	159.24	69.00
J-377	0.47(0.47)	349.23	180.00	169.23	73.33
J-382	4.23(0.47)	349.10	188.90	160.20	69.42
J-383	0.00	349.10	180.00	169.10	73.28
J-385	0.00	349.10	189.34	159.76	69.23
J-391	0.00	348.49	176.55	171.94	74.51
J-392	1.41(0.47)	348.43	189.91	158.52	68.69
J-4	3.76(0.47)	338.97	224.83	114.14	49.46
J-432	0.00	340.70	207.58	133.12	57.68
J-440	1.88(0.47)	333.16	196.32	136.84	59.30
J-449	0.47(0.47)	333.15	190.00	143.15	62.03
J-450	4.23(0.47)	333.62	223.98	109.64	47.51
J-472	1.41(0.47)	333.41	180.00	153.41	66.48
J-473	0.00	334.38	239.54	94.84	41.10
J-481	5.64(0.47)	333.01	196.46	136.55	59.17
J-499	1.41(0.47)	332.87	174.14	158.73	68.78
J-5	4.23(0.47)	339.11	218.94	120.17	52.07
J-506	6.58(0.47)	332.80	184.61	148.19	64.21
J-512	0.94(0.47)	332.77	180.00	152.77	66.20
J-513	0.94(0.47)	333.32	216.01	117.31	50.83
J-515	4.23(0.47)	333.30	239.14	94.16	40.80
J-516	4.23(0.47)	333.18	209.20	123.98	53.72
J-518	0.94(0.47)	333.15	186.61	146.54	63.50
J-519	0.94(0.47)	333.34	203.91	129.43	56.09
J-522	2.82(0.47)	333.19	180.66	152.53	66.10
J-523	0.47(0.47)	333.15	176.34	156.81	67.95
J-526	2.35(0.47)	332.49	185.23	147.26	63.81
J-527	0.94(0.47)	332.47	180.00	152.47	66.07
J-529	0.00	375.49	220.00	155.49	67.38
J-530	0.94(0.47)	332.27	180.00	152.27	65.99
J-532	0.94(0.47)	332.02	175.95	156.07	67.63
J-533	0.94(0.47)	332.39	179.56	152.83	66.23
J-534	1.41(0.47)	332.41	190.00	142.41	61.71
J-539	1.88(0.47)	332.38	190.00	142.38	61.70
J-542	0.00	333.40	208.96	124.44	53.92
J-550	0.00	333.40	189.62	143.78	62.30
J-580	0.00	346.19	208.84	137.35	59.52
J-591	0.00	340.69	232.03	108.66	47.08
J-592	0.00	340.29	227.95	112.34	48.68

J-6	3.76 (0.47)	338.98	220.33	118.65	51.42
J-601	6.58 (0.47)	338.98	200.00	138.98	60.22
J-607	6.58 (0.47)	338.71	193.46	145.25	62.94
J-608	0.00	338.68	200.86	137.82	59.72
J-616	6.58 (0.47)	337.44	172.66	164.78	71.40
J-62	24.91 (0.47)	368.79	195.66	173.13	75.02
J-620	6.58 (0.47)	338.01	200.00	138.01	59.81
J-626	6.58 (0.47)	336.38	180.00	156.38	67.77
J-639	6.58 (0.47)	335.13	181.25	153.88	66.68
J-648	6.58 (0.47)	334.70	186.13	148.57	64.38
J-667	0.00	372.26	180.00	192.26	83.31
J-686	8.93 (0.47)	369.95	190.00	179.95	77.98
J-69	17.86 (0.47)	363.61	195.43	168.18	72.88
J-698	0.00	372.26	200.00	172.26	74.65
J-699	0.00	372.26	200.00	172.26	74.65
J-7	2.35 (0.47)	336.06	199.95	136.11	58.98
J-706	0.00	372.26	203.52	168.74	73.12
J-710	0.00	348.01	217.47	130.54	56.57
J-743	2.35 (0.47)	346.59	180.00	166.59	72.19
J-747	0.00	333.17	210.67	122.50	53.08
J-756	0.94 (0.47)	332.85	176.92	155.93	67.57
J-76	1.41 (0.47)	363.45	183.45	180.00	78.00
J-760	0.00	333.53	230.18	103.35	44.79
J-77	3.29 (0.47)	363.42	180.00	183.42	79.48
J-770	0.00	333.46	220.53	112.93	48.94
J-775	2.35 (0.47)	332.74	175.77	156.97	68.02
J-781	2.35 (0.47)	332.67	178.50	154.17	66.81
J-787	0.00	334.14	230.00	104.14	45.13
J-8	1.88 (0.47)	336.43	205.49	130.94	56.74
J-80	18.80 (0.47)	365.29	210.00	155.29	67.29
J-811	4.70 (0.47)	334.69	240.00	94.69	41.03
J-815	4.23 (0.47)	331.82	182.04	149.78	64.90
J-816	0.00	337.54	200.00	137.54	59.60
J-82	23.03 (0.47)	363.59	220.00	143.59	62.22
J-820	2.35 (0.47)	336.00	192.47	143.53	62.20
J-821	0.00	339.97	205.88	134.09	58.11
J-822	0.00	338.68	205.78	132.90	57.59
J-83	21.15 (0.47)	364.43	210.00	154.43	66.92
J-837	3.76 (0.47)	338.59	218.45	120.14	52.06
J-84	24.44 (0.47)	363.57	220.00	143.57	62.22
J-849	3.76 (0.47)	338.53	190.68	147.85	64.07
J-850	0.00	339.47	206.32	133.15	57.70
J-851	0.00	339.00	206.78	132.22	57.30
J-866	0.00	336.00	222.62	113.38	49.13
J-89	7.05 (0.47)	363.45	190.00	173.45	75.16
J-9	2.35 (0.47)	336.98	201.84	135.14	58.56
J-93	20.21 (0.47)	366.36	210.00	156.36	67.76
J-96	0.00	374.75	220.00	154.75	67.06
J-98	16.45 (0.47)	363.61	214.41	149.20	64.65
R-1	----	420.00	335.39	84.61	36.66
R-2	----	420.00	291.44	128.56	55.71
T-1	----	380.00	360.00	20.00	8.67

M A X I M U M A N D M I N I M U M V A L U E S

P R E S S U R E S

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-667	83.31	T-1	8.67
J-77	79.48	J-295	10.43
J-76	78.00	J-342	11.37
J-686	77.98	J-205	35.73
J-157	76.63	R-1	36.66
J-107	76.48	J-192	37.77
J-89	75.16	J-14	40.79

J-102	75.16	J-515	40.80
J-127	75.03	J-811	41.03
J-62	75.02	J-473	41.10
J-182	74.71	J-760	44.79
J-698	74.65	J-787	45.13
J-699	74.65	J-15	46.38
J-391	74.51	J-591	47.08
J-143	74.31	J-13	47.48
J-145	74.27	J-450	47.51
J-152	73.62	J-21	48.62
J-377	73.33	J-592	48.68
J-383	73.28	J-770	48.94
J-706	73.12	J-866	49.13

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-53	3.84	P-35	0.01
P-95	3.84	P-11	0.01
P-74	3.84	P-96	0.02
P-12	2.59	P-65	0.02
P-14	2.34	P-84	0.02
P-8	2.14	P-16	0.03
P-24	1.94	P-21	0.03
P-3	1.94	P-174	0.04
P-33	1.80	P-105	0.05
P-37	1.67	P-66	0.05
P-40	1.59	P-81	0.05
P-162	1.55	P-92	0.05
P-41	1.52	P-73	0.06
P-129	1.52	P-176	0.06
P-128	1.47	P-57	0.06
P-102	1.45	P-39	0.07
P-167	1.40	P-31	0.07
P-46	1.39	P-183	0.08
P-1	1.38	P-22	0.08
P-168	1.30	P-58	0.09

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-53	7.23	P-35	0.00
P-95	6.02	P-11	0.00
P-74	6.02	P-96	0.00
P-67	5.35	P-16	0.00
P-12	4.30	P-65	0.00
P-160	4.07	P-84	0.00
P-161	4.07	P-21	0.00
P-4	3.78	P-174	0.01
P-14	3.58	P-73	0.01
P-52	3.48	P-22	0.01
P-55	3.31	P-75	0.01
P-59	3.14	P-105	0.02
P-8	3.03	P-66	0.02
P-162	3.01	P-81	0.02
P-131	2.91	P-92	0.02
P-132	2.91	P-31	0.02
P-29	2.63	P-176	0.02
P-167	2.51	P-57	0.02
P-137	2.31	P-111	0.02
P-139	2.31	P-39	0.02

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
(-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
R-1	486.30	
R-2	1354.16	
T-1	-1146.27	

NET SYSTEM INFLOW = 1840.46
NET SYSTEM OUTFLOW = -1146.27
NET SYSTEM DEMAND = 694.19

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* * * * * K Y P I P E 4 * * * * *
*
*   University of Kentucky Network Modeling Software
*
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*   Version 1.200 - 01/26/2000
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INPUT DATA FILENAME ----- C:\JENNIF~1\JULYMO~1\SOUTHS~2.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF~1\JULYMO~1\SOUTHS~2.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF~1\JULYMO~1\SOUTHS~2.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	R-1	J-17	1097.63	12.00	100.0000	0.00
P-10	J-83	J-84	1235.43	6.00	100.0000	0.00
P-100	J-169	J-391	1304.99	3.00	100.0000	0.00
P-101	J-392	J-169	450.76	2.00	100.0000	0.00
P-102	J-123	T-1	4541.81	14.00	100.0000	0.00
P-103	J-343	J-432	1350.37	8.00	100.0000	0.00
P-104	J-432	J-296	1367.34	6.00	100.0000	0.00
P-105	J-440	J-449	652.39	2.00	100.0000	0.00
P-106	J-450	J-472	1559.64	2.00	100.0000	0.00
P-107	J-473	J-481	975.76	3.00	100.0000	0.00
P-108	J-481	J-499	1087.08	2.00	100.0000	0.00
P-109	J-481	J-506	528.26	3.00	100.0000	0.00
P-11	J-76	J-89	279.53	4.00	100.0000	0.00
P-110	J-506	J-512	425.70	2.00	100.0000	0.00
P-111	J-513	J-515	811.19	6.00	100.0000	0.00
P-112	J-516	J-518	525.66	2.00	100.0000	0.00
P-113	J-513	J-516	221.20	3.00	100.0000	0.00
P-114	J-519	J-513	309.94	6.00	100.0000	0.00
P-115	J-519	J-522	307.47	3.00	100.0000	0.00
P-116	J-522	J-523	230.65	1.30	100.0000	0.00
P-117	J-522	J-526	476.49	2.00	100.0000	0.00
P-118	J-527	J-526	232.74	2.00	100.0000	0.00
P-119	J-123	J-529	22.60	3.00	100.0000	0.00
P-12	J-62	J-93	564.76	12.00	100.0000	0.00
P-120	J-530	J-532	140.27	1.00	100.0000	0.00
P-121	J-533	J-534	278.03	2.00	100.0000	0.00
P-122	J-534	J-516	749.89	2.00	100.0000	0.00
P-123	J-526	J-539	476.86	2.00	100.0000	0.00
P-124	J-539	J-530	466.18	2.00	100.0000	0.00
P-125	J-539	J-534	122.02	2.00	100.0000	0.00
P-126	J-542	J-519	296.17	6.00	100.0000	0.00
P-127	J-542	J-550	223.95	1.00	100.0000	0.00
P-128	J-154	J-28	3707.08	12.00	100.0000	0.00
P-129	J-168	J-580	2141.63	8.00	100.0000	0.00

P-13	J-19	J-96	264.80	2.00	100.0000	0.00
P-130	J-580	J-343	2834.74	8.00	100.0000	0.00
P-131	J-580	J-591	1894.87	4.00	100.0000	0.00
P-132	J-591	J-592	134.71	4.00	100.0000	0.00
P-133	J-592	J-608	1037.55	4.00	100.0000	0.00
P-134	J-592	J-601	1137.64	3.00	100.0000	0.00
P-135	J-601	J-607	815.62	3.00	100.0000	0.00
P-136	J-2	J-295	4742.46	14.00	100.0000	0.00
P-137	J-608	J-616	536.85	2.00	100.0000	0.00
P-138	J-608	J-620	645.96	4.00	100.0000	0.00
P-139	J-620	J-626	705.40	2.00	100.0000	0.00
P-14	J-93	J-80	301.18	12.00	100.0000	0.00
P-140	J-620	J-639	2485.66	3.00	100.0000	0.00
P-141	J-639	J-648	1349.12	3.00	100.0000	0.00
P-142	J-529	J-667	2353.16	2.50	100.0000	0.00
P-143	J-667	J-686	1682.67	2.50	100.0000	0.00
P-144	J-667	J-698	3561.96	2.50	100.0000	0.00
P-145	J-699	J-706	1673.48	2.00	100.0000	0.00
P-146	J-228	J-710	2400.15	10.00	100.0000	0.00
P-147	J-710	J-29	1510.84	10.00	100.0000	0.00
P-148	J-710	J-24	499.04	3.00	100.0000	0.00
P-149	J-515	J-747	622.46	3.00	100.0000	0.00
P-15	J-82	J-98	304.34	6.00	100.0000	0.00
P-150	J-747	J-440	284.33	3.00	100.0000	0.00
P-151	J-747	J-23	616.67	2.00	100.0000	0.00
P-152	J-450	J-760	252.33	6.00	100.0000	0.00
P-153	J-760	J-542	799.00	6.00	100.0000	0.00
P-154	J-760	J-770	266.75	4.00	100.0000	0.00
P-155	J-770	J-16	412.15	2.00	100.0000	0.00
P-156	J-770	J-21	577.34	3.00	100.0000	0.00
P-157	J-473	J-787	482.34	6.00	100.0000	0.00
P-158	J-787	J-450	1207.96	6.00	100.0000	0.00
P-159	J-787	J-11	717.31	3.00	100.0000	0.00
P-16	J-98	J-69	263.71	6.00	100.0000	0.00
P-160	J-811	J-10	598.67	2.00	100.0000	0.00
P-161	J-816	J-9	138.02	2.00	100.0000	0.00
P-162	J-432	J-821	240.75	8.00	100.0000	0.00
P-163	J-822	J-816	573.01	6.00	100.0000	0.00
P-164	J-822	J-1	969.37	3.00	100.0000	0.00
P-165	J-837	J-3	618.21	3.00	100.0000	0.00
P-166	J-837	J-849	512.87	3.00	100.0000	0.00
P-167	J-821	J-850	198.74	8.00	100.0000	0.00
P-168	J-850	J-851	216.85	6.00	100.0000	0.00
P-169	J-851	J-822	156.93	6.00	100.0000	0.00
P-17	J-82	J-102	1608.55	4.00	100.0000	0.00
P-170	J-851	J-4	679.04	3.00	100.0000	0.00
P-171	J-816	J-866	918.56	6.00	100.0000	0.00
P-172	J-866	J-30	1201.85	6.00	100.0000	0.00
P-173	J-866	J-15	242.14	4.00	100.0000	0.00
P-174	J-1	J-837	744.24	3.00	100.0000	0.00
P-175	J-3	J-821	1013.29	3.00	100.0000	0.00
P-176	J-4	J-6	648.41	3.00	100.0000	0.00
P-177	J-5	J-850	591.59	3.00	100.0000	0.00
P-178	J-6	J-5	621.47	3.00	100.0000	0.00
P-179	J-7	J-820	165.70	2.00	100.0000	0.00
P-18	J-84	J-107	1616.93	6.00	100.0000	0.00
P-180	J-8	J-7	301.37	2.00	100.0000	0.00
P-181	J-9	J-8	237.74	2.00	100.0000	0.00
P-182	J-10	J-815	424.90	2.00	100.0000	0.00
P-183	J-11	J-12	919.31	3.00	100.0000	0.00
P-184	J-12	J-13	648.71	3.00	100.0000	0.00
P-185	J-13	J-811	410.86	3.00	100.0000	0.00
P-186	J-14	J-811	377.50	4.00	100.0000	0.00
P-187	J-15	J-14	431.73	4.00	100.0000	0.00
P-188	J-16	J-775	300.59	2.00	100.0000	0.00
P-189	J-21	J-22	304.95	2.00	100.0000	0.00
P-19	J-93	J-98	1236.32	4.00	100.0000	0.00
P-190	J-22	J-781	196.08	2.00	100.0000	0.00
P-191	J-23	J-756	487.45	2.00	100.0000	0.00
P-192	J-24	J-25	781.45	3.00	100.0000	0.00
P-193	J-25	J-26	705.32	3.00	100.0000	0.00

P-194	J-26	J-27	1070.72	3.00	100.0000	0.00
P-195	J-27	J-743	684.89	3.00	100.0000	0.00
P-196	J-698	J-699	25.54	2.00	100.0000	0.00
P-197	J-28	J-161	1549.55	12.00	100.0000	0.00
P-198	J-29	J-192	2429.83	10.00	100.0000	0.00
P-199	J-30	J-473	899.72	6.00	100.0000	0.00
P-2	J-18	J-19	23.17	2.00	100.0000	0.00
P-20	J-98	J-89	1156.93	4.00	100.0000	0.00
P-21	J-89	J-102	740.82	4.00	100.0000	0.00
P-22	J-102	J-107	294.84	6.00	100.0000	0.00
P-23	J-118	J-84	241.77	6.00	100.0000	0.00
P-24	J-20	J-123	370.72	14.00	100.0000	0.00
P-25	J-107	J-127	316.56	4.00	100.0000	0.00
P-26	J-127	J-141	1829.62	3.00	100.0000	0.00
P-27	J-141	J-142	249.66	4.00	100.0000	0.00
P-28	J-142	J-118	590.01	4.00	100.0000	0.00
P-29	J-142	J-143	587.34	2.00	100.0000	0.00
P-3	J-20	J-62	2923.19	12.00	100.0000	0.00
P-30	J-127	J-144	705.59	4.00	100.0000	0.00
P-31	J-144	J-141	274.49	4.00	100.0000	0.00
P-32	J-144	J-145	235.87	2.00	100.0000	0.00
P-33	J-83	J-146	274.29	12.00	100.0000	0.00
P-34	J-147	J-118	38.10	4.00	100.0000	0.00
P-35	J-19	J-20	125.59	8.00	100.0000	0.00
P-36	J-147	J-146	1234.99	4.00	100.0000	0.00
P-37	J-146	J-151	271.81	12.00	100.0000	0.00
P-38	J-152	J-147	272.23	4.00	100.0000	0.00
P-39	J-152	J-151	1233.53	3.00	100.0000	0.00
P-4	J-62	J-69	1371.60	3.00	100.0000	0.00
P-40	J-151	J-153	283.34	12.00	100.0000	0.00
P-41	J-153	J-154	305.43	12.00	100.0000	0.00
P-42	J-154	J-157	1540.36	3.00	100.0000	0.00
P-43	J-157	J-152	274.94	3.00	100.0000	0.00
P-44	J-157	J-153	1230.89	3.00	100.0000	0.00
P-45	J-159	J-160	240.99	2.00	100.0000	0.00
P-46	J-161	J-168	2758.71	12.00	100.0000	0.00
P-47	J-159	J-169	151.29	3.00	100.0000	0.00
P-48	J-170	J-171	352.24	2.00	100.0000	0.00
P-49	J-161	J-182	2004.65	4.00	100.0000	0.00
P-5	J-69	J-76	1171.78	3.00	100.0000	0.00
P-50	J-182	J-170	839.08	3.00	100.0000	0.00
P-51	J-186	J-191	263.74	4.00	100.0000	0.00
P-52	J-192	J-186	1054.83	4.00	100.0000	0.00
P-53	J-17	R-2	164.72	14.00	100.0000	0.00
P-54	J-192	J-205	399.77	6.00	100.0000	0.00
P-55	J-205	J-210	1224.25	2.00	100.0000	0.00
P-56	J-205	J-218	1383.79	3.00	100.0000	0.00
P-57	J-219	J-218	271.60	3.00	100.0000	0.00
P-58	J-218	J-220	411.12	3.00	100.0000	0.00
P-59	J-191	J-222	274.42	3.00	100.0000	0.00
P-6	J-77	J-76	333.23	3.00	100.0000	0.00
P-60	J-222	J-223	520.88	2.00	100.0000	0.00
P-61	J-222	J-224	196.07	3.00	100.0000	0.00
P-62	J-224	J-225	480.30	2.00	100.0000	0.00
P-63	J-224	J-226	179.85	3.00	100.0000	0.00
P-64	J-227	J-228	755.52	10.00	100.0000	0.00
P-65	J-226	J-237	1389.38	3.00	100.0000	0.00
P-66	J-226	J-238	634.10	2.00	100.0000	0.00
P-67	J-186	J-239	170.77	3.00	100.0000	0.00
P-68	J-239	J-242	502.82	2.00	100.0000	0.00
P-69	J-239	J-246	374.70	2.00	100.0000	0.00
P-7	J-80	J-82	1235.93	4.00	100.0000	0.00
P-70	J-246	J-191	800.14	2.00	100.0000	0.00
P-71	J-246	J-259	586.49	2.00	100.0000	0.00
P-72	J-260	J-264	284.00	2.00	100.0000	0.00
P-73	J-265	J-260	1288.46	4.00	100.0000	0.00
P-74	J-17	J-2	1614.21	14.00	100.0000	0.00
P-75	J-296	J-265	127.42	6.00	100.0000	0.00
P-76	J-300	J-307	275.17	2.00	100.0000	0.00
P-77	J-308	J-300	327.58	2.00	100.0000	0.00
P-78	J-314	J-300	266.92	3.00	100.0000	0.00

P-79	J-317	J-314	258.85	2.00	100.0000	0.00
P-8	J-80	J-83	282.30	12.00	100.0000	0.00
P-80	J-296	J-327	1171.91	4.00	100.0000	0.00
P-81	J-328	J-327	257.54	2.00	100.0000	0.00
P-82	J-327	J-335	134.77	4.00	100.0000	0.00
P-83	J-335	J-314	465.30	3.00	100.0000	0.00
P-84	J-337	J-335	810.11	3.00	100.0000	0.00
P-85	J-342	J-295	69.97	3.00	100.0000	0.00
P-86	J-343	J-356	2694.79	4.00	100.0000	0.00
P-87	J-356	J-361	423.26	2.00	100.0000	0.00
P-88	J-168	J-368	2910.61	10.00	100.0000	0.00
P-89	J-369	J-368	760.22	4.00	100.0000	0.00
P-9	J-84	J-82	281.66	6.00	100.0000	0.00
P-90	J-373	J-375	918.87	2.00	100.0000	0.00
P-91	J-375	J-369	43.16	2.00	100.0000	0.00
P-92	J-375	J-377	652.38	2.00	100.0000	0.00
P-93	J-369	J-382	888.92	3.00	100.0000	0.00
P-94	J-383	J-385	515.26	2.00	100.0000	0.00
P-95	J-295	T-1	87.56	14.00	100.0000	0.00
P-96	J-373	J-382	414.44	3.00	100.0000	0.00
P-97	J-382	J-385	42.39	3.00	100.0000	0.00
P-98	J-368	J-227	1138.24	10.00	100.0000	0.00
P-99	J-228	J-159	423.90	3.00	100.0000	0.00

END NODE DATA

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		9.00	217.85	
J-10		10.00	199.08	
J-102		2.00	190.00	
J-107		4.00	186.95	
J-11		10.00	211.96	
J-118		12.00	212.83	
J-12		10.00	218.95	
J-123		2.00	220.00	
J-127		20.00	190.00	
J-13		10.00	224.77	
J-14		10.00	240.91	
J-141		34.00	202.36	
J-142		14.00	205.87	
J-143		15.00	190.00	
J-144		13.00	195.83	
J-145		6.00	191.49	
J-146		44.00	210.00	
J-147		0.00	211.49	
J-15		10.00	228.55	
J-151		42.00	210.00	
J-152		6.00	193.45	
J-153		42.00	212.86	
J-154		43.00	217.50	
J-157		11.00	186.08	
J-159		0.00	197.29	
J-16		6.00	189.37	
J-160		2.00	196.12	
J-161		26.00	200.00	
J-168		0.00	192.42	
J-169		11.00	192.49	
J-17		0.00	297.52	
J-170		1.00	185.89	
J-171		5.00	204.49	
J-18		0.00	211.06	
J-182		11.00	181.76	
J-186		10.00	210.00	
J-19		2.00	212.37	
J-191		18.00	204.06	
J-192		4.00	260.00	
J-2		76.00	290.00	

J-20	0.00	220.00
J-205	10.00	264.67
J-21	6.00	220.98
J-210	17.00	207.47
J-218	4.00	217.91
J-219	3.00	208.85
J-22	6.00	203.68
J-220	4.00	218.56
J-222	10.00	197.12
J-223	6.00	182.33
J-224	12.00	193.71
J-225	4.00	182.60
J-226	14.00	193.14
J-227	2.00	194.03
J-228	2.00	208.55
J-23	4.00	182.32
J-237	1.00	179.72
J-238	1.00	178.80
J-239	7.00	205.67
J-24	5.00	211.78
J-242	4.00	189.61
J-246	8.00	189.64
J-25	5.00	206.38
J-259	13.00	183.37
J-26	5.00	198.54
J-260	3.00	190.00
J-264	2.00	181.79
J-265	11.00	180.00
J-27	5.00	180.00
J-28	66.00	208.62
J-29	66.00	250.00
J-295	0.00	356.45
J-296	13.00	180.00
J-3	9.00	208.17
J-30	66.00	239.96
J-300	11.00	180.00
J-307	2.00	180.00
J-308	2.00	180.00
J-314	8.00	180.00
J-317	2.00	180.00
J-327	4.00	184.68
J-328	1.00	180.00
J-335	16.00	183.16
J-337	1.00	191.93
J-342	0.00	354.29
J-343	32.00	194.91
J-356	7.00	180.00
J-361	3.00	180.00
J-368	1.00	194.87
J-369	7.00	190.00
J-373	4.00	182.43
J-375	0.00	190.00
J-377	1.00	180.00
J-382	9.00	188.90
J-383	0.00	180.00
J-385	0.00	189.34
J-391	0.00	176.55
J-392	3.00	189.91
J-4	8.00	224.83
J-432	0.00	207.58
J-440	4.00	196.32
J-449	1.00	190.00
J-450	9.00	223.98
J-472	3.00	180.00
J-473	0.00	239.54
J-481	12.00	196.46
J-499	3.00	174.14
J-5	9.00	218.94
J-506	14.00	184.61
J-512	2.00	180.00
J-513	2.00	216.01

J-515	9.00	239.14	
J-516	9.00	209.20	
J-518	2.00	186.61	
J-519	2.00	203.91	
J-522	6.00	180.66	
J-523	1.00	176.34	
J-526	5.00	185.23	
J-527	2.00	180.00	
J-529	0.00	220.00	
J-530	2.00	180.00	
J-532	2.00	175.95	
J-533	2.00	179.56	
J-534	3.00	190.00	
J-539	4.00	190.00	
J-542	0.00	208.96	
J-550	0.00	189.62	
J-580	0.00	208.84	
J-591	0.00	232.03	
J-592	0.00	227.95	
J-6	8.00	220.33	
J-601	14.00	200.00	
J-607	14.00	193.46	
J-608	0.00	200.86	
J-616	14.00	172.66	
J-62	53.00	195.66	
J-620	14.00	200.00	
J-626	14.00	180.00	
J-639	14.00	181.25	
J-648	14.00	186.13	
J-667	0.00	180.00	
J-686	19.00	190.00	
J-69	38.00	195.43	
J-698	0.00	200.00	
J-699	0.00	200.00	
J-7	5.00	199.95	
J-706	0.00	203.52	
J-710	0.00	217.47	
J-743	5.00	180.00	
J-747	0.00	210.67	
J-756	2.00	176.92	
J-76	3.00	183.45	
J-760	0.00	230.18	
J-77	7.00	180.00	
J-770	0.00	220.53	
J-775	5.00	175.77	
J-781	5.00	178.50	
J-787	0.00	230.00	
J-8	4.00	205.49	
J-80	40.00	210.00	
J-811	10.00	240.00	
J-815	9.00	182.04	
J-816	0.00	200.00	
J-82	49.00	220.00	
J-820	5.00	192.47	
J-821	0.00	205.88	
J-822	0.00	205.78	
J-83	45.00	210.00	
J-837	8.00	218.45	
J-84	52.00	220.00	
J-849	8.00	190.68	
J-850	0.00	206.32	
J-851	0.00	206.78	
J-866	66.00	222.62	
J-89	15.00	190.00	
J-9	5.00	201.84	
J-93	43.00	210.00	
J-96	0.00	220.00	
J-98	35.00	214.41	
R-1	----	335.39	410.00
R-2	----	291.44	410.00
T-1	----	360.00	380.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 20
 MAXIMUM AND MINIMUM VELOCITIES = 20
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 20

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 199
 NUMBER OF END NODES(j) = 179
 NUMBER OF PRIMARY LOOPS(l) = 18
 NUMBER OF SUPPLY NODES(f) = 3
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00001

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	R-1	J-17	311.64	0.52	0.00	0.88	0.48
P-10	J-83	J-84	61.84	0.86	0.00	0.70	0.70
P-100	J-169	J-391	0.00	0.00	0.00	0.00	0.00
P-101	J-392	J-169	-1.41	0.06	0.00	0.14	0.13
P-102	J-123	T-1	-818.27	6.10	0.00	1.71	1.34
P-103	J-343	J-432	234.06	2.72	0.00	1.49	2.02
P-104	J-432	J-296	35.72	0.34	0.00	0.41	0.25
P-105	J-440	J-449	0.47	0.01	0.00	0.05	0.02
P-106	J-450	J-472	1.41	0.21	0.00	0.14	0.13
P-107	J-473	J-481	14.57	1.37	0.00	0.66	1.40
P-108	J-481	J-499	1.41	0.14	0.00	0.14	0.13
P-109	J-481	J-506	7.52	0.22	0.00	0.34	0.41
P-11	J-76	J-89	-0.84	0.00	0.00	0.02	0.00
P-110	J-506	J-512	0.94	0.03	0.00	0.10	0.06
P-111	J-513	J-515	9.40	0.02	0.00	0.11	0.02
P-112	J-516	J-518	0.94	0.03	0.00	0.10	0.06
P-113	J-513	J-516	9.42	0.14	0.00	0.43	0.62
P-114	J-519	J-513	19.76	0.03	0.00	0.22	0.08
P-115	J-519	J-522	8.44	0.16	0.00	0.38	0.51
P-116	J-522	J-523	0.47	0.03	0.00	0.11	0.14
P-117	J-522	J-526	5.15	0.70	0.00	0.53	1.47
P-118	J-527	J-526	-0.94	0.01	0.00	0.10	0.06
P-119	J-123	J-529	8.93	0.01	0.00	0.41	0.57
P-12	J-62	J-93	762.52	1.41	0.00	2.16	2.50
P-120	J-530	J-532	0.94	0.26	0.00	0.38	1.84
P-121	J-533	J-534	-0.94	0.02	0.00	0.10	0.06
P-122	J-534	J-516	-4.25	0.77	0.00	0.43	1.03
P-123	J-526	J-539	1.86	0.11	0.00	0.19	0.22
P-124	J-539	J-530	1.88	0.11	0.00	0.19	0.23
P-125	J-539	J-534	-1.90	0.03	0.00	0.19	0.23
P-126	J-542	J-519	29.14	0.05	0.00	0.33	0.17
P-127	J-542	J-550	0.00	0.00	0.00	0.00	0.00
P-128	J-154	J-28	484.10	3.99	0.00	1.37	1.08

P-129	J-168	J-580	299.86	6.83	0.00	1.91	3.19
P-13	J-19	J-96	0.00	0.00	0.00	0.00	0.00
P-130	J-580	J-343	253.80	6.64	0.00	1.62	2.34
P-131	J-580	J-591	46.06	5.51	0.00	1.18	2.91
P-132	J-591	J-592	46.06	0.39	0.00	1.18	2.91
P-133	J-592	J-608	32.90	1.62	0.00	0.84	1.56
P-134	J-592	J-601	13.16	1.32	0.00	0.60	1.16
P-135	J-601	J-607	6.58	0.26	0.00	0.30	0.32
P-136	J-2	J-295	1577.46	21.47	0.00	3.29	4.53
P-137	J-608	J-616	6.58	1.24	0.00	0.67	2.31
P-138	J-608	J-620	26.32	0.67	0.00	0.67	1.03
P-139	J-620	J-626	6.58	1.63	0.00	0.67	2.31
P-14	J-93	J-80	708.28	0.66	0.00	2.01	2.18
P-140	J-620	J-639	13.16	2.88	0.00	0.60	1.16
P-141	J-639	J-648	6.58	0.43	0.00	0.30	0.32
P-142	J-529	J-667	8.93	3.23	0.00	0.58	1.37
P-143	J-667	J-686	8.93	2.31	0.00	0.58	1.37
P-144	J-667	J-698	0.00	0.00	0.00	0.00	0.00
P-145	J-699	J-706	0.00	0.00	0.00	0.00	0.00
P-146	J-228	J-710	113.27	0.43	0.00	0.46	0.18
P-147	J-710	J-29	101.52	0.22	0.00	0.41	0.14
P-148	J-710	J-24	11.75	0.47	0.00	0.53	0.94
P-149	J-515	J-747	5.17	0.13	0.00	0.23	0.21
P-15	J-82	J-98	-7.62	0.00	0.00	0.09	0.01
P-150	J-747	J-440	2.35	0.01	0.00	0.11	0.05
P-151	J-747	J-23	2.82	0.30	0.00	0.29	0.48
P-152	J-450	J-760	42.30	0.09	0.00	0.48	0.34
P-153	J-760	J-542	29.14	0.14	0.00	0.33	0.17
P-154	J-760	J-770	13.16	0.08	0.00	0.34	0.29
P-155	J-770	J-16	5.17	0.61	0.00	0.53	1.48
P-156	J-770	J-21	7.99	0.27	0.00	0.36	0.46
P-157	J-473	J-787	47.97	0.21	0.00	0.54	0.43
P-158	J-787	J-450	47.94	0.52	0.00	0.54	0.43
P-159	J-787	J-11	0.03	0.00	0.00	0.00	0.00
P-16	J-98	J-69	1.69	0.00	0.00	0.02	0.00
P-160	J-811	J-10	8.93	2.44	0.00	0.91	4.07
P-161	J-816	J-9	8.93	0.56	0.00	0.91	4.07
P-162	J-432	J-821	198.34	0.36	0.00	1.27	1.48
P-163	J-822	J-816	170.61	2.61	0.00	1.94	4.56
P-164	J-822	J-1	1.20	0.01	0.00	0.05	0.01
P-165	J-837	J-3	-10.55	0.48	0.00	0.48	0.77
P-166	J-837	J-849	3.76	0.06	0.00	0.17	0.11
P-167	J-821	J-850	183.56	0.26	0.00	1.17	1.29
P-168	J-850	J-851	171.25	1.00	0.00	1.94	4.59
P-169	J-851	J-822	171.81	0.72	0.00	1.95	4.62
P-17	J-82	J-102	6.81	0.14	0.00	0.17	0.08
P-170	J-851	J-4	-0.56	0.00	0.00	0.03	0.00
P-171	J-816	J-866	161.68	3.79	0.00	1.83	4.13
P-172	J-866	J-30	93.56	1.80	0.00	1.06	1.50
P-173	J-866	J-15	37.10	0.47	0.00	0.95	1.95
P-174	J-1	J-837	-3.03	0.06	0.00	0.14	0.08
P-175	J-3	J-821	-14.78	1.46	0.00	0.67	1.44
P-176	J-4	J-6	-4.32	0.10	0.00	0.20	0.15
P-177	J-5	J-850	-12.31	0.61	0.00	0.56	1.02
P-178	J-6	J-5	-8.08	0.29	0.00	0.37	0.47
P-179	J-7	J-820	2.35	0.06	0.00	0.24	0.34
P-18	J-84	J-107	19.79	0.14	0.00	0.22	0.08
P-180	J-8	J-7	4.70	0.37	0.00	0.48	1.24
P-181	J-9	J-8	6.58	0.55	0.00	0.67	2.31
P-182	J-10	J-815	4.23	0.43	0.00	0.43	1.02
P-183	J-11	J-12	-4.67	0.16	0.00	0.21	0.17
P-184	J-12	J-13	-9.37	0.40	0.00	0.43	0.62
P-185	J-13	J-811	-14.07	0.54	0.00	0.64	1.31
P-186	J-14	J-811	27.70	0.43	0.00	0.71	1.13
P-187	J-15	J-14	32.40	0.65	0.00	0.83	1.51
P-188	J-16	J-775	2.35	0.10	0.00	0.24	0.34
P-189	J-21	J-22	5.17	0.45	0.00	0.53	1.48
P-19	J-93	J-98	34.03	2.05	0.00	0.87	1.66
P-190	J-22	J-781	2.35	0.07	0.00	0.24	0.34
P-191	J-23	J-756	0.94	0.03	0.00	0.10	0.06
P-192	J-24	J-25	9.40	0.49	0.00	0.43	0.62

P-193	J-25	J-26	7.05	0.26	0.00	0.32	0.36
P-194	J-26	J-27	4.70	0.18	0.00	0.21	0.17
P-195	J-27	J-743	2.35	0.03	0.00	0.11	0.05
P-196	J-698	J-699	0.00	0.00	0.00	0.00	0.00
P-197	J-28	J-161	453.08	1.47	0.00	1.29	0.95
P-198	J-29	J-192	70.50	0.18	0.00	0.29	0.07
P-199	J-30	J-473	62.54	0.64	0.00	0.71	0.71
P-2	J-18	J-19	0.00	0.00	0.00	0.00	0.00
P-20	J-98	J-89	8.27	0.14	0.00	0.21	0.12
P-21	J-89	J-102	0.38	0.00	0.00	0.01	0.00
P-22	J-102	J-107	6.25	0.00	0.00	0.07	0.01
P-23	J-118	J-84	-23.08	0.03	0.00	0.26	0.11
P-24	J-20	J-123	-808.40	0.49	0.00	1.68	1.31
P-25	J-107	J-127	24.16	0.28	0.00	0.62	0.88
P-26	J-127	J-141	3.27	0.16	0.00	0.15	0.09
P-27	J-141	J-142	-10.15	0.04	0.00	0.26	0.18
P-28	J-142	J-118	-23.78	0.50	0.00	0.61	0.85
P-29	J-142	J-143	7.05	1.54	0.00	0.72	2.63
P-3	J-20	J-62	807.46	8.11	0.00	2.29	2.77
P-30	J-127	J-144	11.49	0.16	0.00	0.29	0.22
P-31	J-144	J-141	2.56	0.00	0.00	0.07	0.01
P-32	J-144	J-145	2.82	0.11	0.00	0.29	0.48
P-33	J-83	J-146	578.80	0.41	0.00	1.64	1.50
P-34	J-147	J-118	6.34	0.00	0.00	0.16	0.07
P-35	J-19	J-20	-0.94	0.00	0.00	0.01	0.00
P-36	J-147	J-146	-15.43	0.47	0.00	0.39	0.38
P-37	J-146	J-151	542.70	0.36	0.00	1.54	1.33
P-38	J-152	J-147	-9.08	0.04	0.00	0.23	0.14
P-39	J-152	J-151	-3.91	0.15	0.00	0.18	0.12
P-4	J-62	J-69	20.03	3.46	0.00	0.91	2.52
P-40	J-151	J-153	519.04	0.35	0.00	1.47	1.22
P-41	J-153	J-154	498.89	0.35	0.00	1.42	1.14
P-42	J-154	J-157	-5.42	0.35	0.00	0.25	0.22
P-43	J-157	J-152	-10.18	0.20	0.00	0.46	0.72
P-44	J-157	J-153	-0.41	0.00	0.00	0.02	0.00
P-45	J-159	J-160	0.94	0.02	0.00	0.10	0.06
P-46	J-161	J-168	432.87	2.41	0.00	1.23	0.87
P-47	J-159	J-169	6.58	0.05	0.00	0.30	0.32
P-48	J-170	J-171	2.35	0.12	0.00	0.24	0.34
P-49	J-161	J-182	7.99	0.23	0.00	0.20	0.11
P-5	J-69	J-76	3.86	0.14	0.00	0.18	0.12
P-50	J-182	J-170	2.82	0.06	0.00	0.13	0.07
P-51	J-186	J-191	34.43	0.45	0.00	0.88	1.69
P-52	J-192	J-186	50.76	3.67	0.00	1.30	3.48
P-53	J-17	R-2	-1301.54	0.52	0.00	2.71	3.17
P-54	J-192	J-205	17.86	0.03	0.00	0.20	0.07
P-55	J-205	J-210	7.99	4.06	0.00	0.82	3.31
P-56	J-205	J-218	5.17	0.28	0.00	0.23	0.21
P-57	J-219	J-218	-1.41	0.01	0.00	0.06	0.02
P-58	J-218	J-220	1.88	0.01	0.00	0.09	0.03
P-59	J-191	J-222	22.56	0.86	0.00	1.02	3.14
P-6	J-77	J-76	-3.29	0.03	0.00	0.15	0.09
P-60	J-222	J-223	2.82	0.25	0.00	0.29	0.48
P-61	J-222	J-224	15.04	0.29	0.00	0.68	1.48
P-62	J-224	J-225	1.88	0.11	0.00	0.19	0.23
P-63	J-224	J-226	7.52	0.07	0.00	0.34	0.41
P-64	J-227	J-228	121.73	0.15	0.00	0.50	0.20
P-65	J-226	J-237	0.47	0.00	0.00	0.02	0.00
P-66	J-226	J-238	0.47	0.01	0.00	0.05	0.02
P-67	J-186	J-239	11.63	0.16	0.00	0.53	0.92
P-68	J-239	J-242	1.88	0.11	0.00	0.19	0.23
P-69	J-239	J-246	6.46	0.84	0.00	0.66	2.23
P-7	J-80	J-82	27.69	1.40	0.00	0.71	1.13
P-70	J-246	J-191	-3.41	0.55	0.00	0.35	0.68
P-71	J-246	J-259	6.11	1.18	0.00	0.62	2.02
P-72	J-260	J-264	0.94	0.02	0.00	0.10	0.06
P-73	J-265	J-260	2.35	0.02	0.00	0.06	0.01
P-74	J-17	J-2	1613.18	7.62	0.00	3.36	4.72
P-75	J-296	J-265	7.52	0.00	0.00	0.09	0.01
P-76	J-300	J-307	0.94	0.02	0.00	0.10	0.06
P-77	J-308	J-300	-0.94	0.02	0.00	0.10	0.06

P-78	J-314	J-300	7.05	0.10	0.00	0.32	0.36
P-79	J-317	J-314	-0.94	0.02	0.00	0.10	0.06
P-8	J-80	J-83	661.79	0.54	0.00	1.88	1.92
P-80	J-296	J-327	22.09	0.87	0.00	0.56	0.75
P-81	J-328	J-327	-0.47	0.00	0.00	0.05	0.02
P-82	J-327	J-335	19.74	0.08	0.00	0.50	0.60
P-83	J-335	J-314	11.75	0.44	0.00	0.53	0.94
P-84	J-337	J-335	-0.47	0.00	0.00	0.02	0.00
P-85	J-342	J-295	0.00	0.00	0.00	0.00	0.00
P-86	J-343	J-356	4.70	0.11	0.00	0.12	0.04
P-87	J-356	J-361	1.41	0.06	0.00	0.14	0.13
P-88	J-168	J-368	133.01	0.70	0.00	0.54	0.24
P-89	J-369	J-368	-9.87	0.13	0.00	0.25	0.17
P-9	J-84	J-82	-5.47	0.00	0.00	0.06	0.01
P-90	J-373	J-375	-1.50	0.14	0.00	0.15	0.15
P-91	J-375	J-369	-1.97	0.01	0.00	0.20	0.25
P-92	J-375	J-377	0.47	0.01	0.00	0.05	0.02
P-93	J-369	J-382	4.61	0.15	0.00	0.21	0.17
P-94	J-383	J-385	0.00	0.00	0.00	0.00	0.00
P-95	J-295	T-1	1577.46	0.40	0.00	3.29	4.53
P-96	J-373	J-382	-0.38	0.00	0.00	0.02	0.00
P-97	J-382	J-385	0.00	0.00	0.00	0.00	0.00
P-98	J-368	J-227	122.67	0.23	0.00	0.50	0.21
P-99	J-228	J-159	7.52	0.17	0.00	0.34	0.41

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		4.23 (0.47)	334.81	217.85	116.96	50.68
J-10		4.70 (0.47)	324.43	199.08	125.35	54.32
J-102		0.94 (0.47)	361.71	190.00	171.71	74.41
J-107		1.88 (0.47)	361.71	186.95	174.76	75.73
J-11		4.70 (0.47)	325.78	211.96	113.82	49.32
J-118		5.64 (0.47)	361.81	212.83	148.98	64.56
J-12		4.70 (0.47)	325.93	218.95	106.98	46.36
J-123		0.94 (0.47)	373.90	220.00	153.90	66.69
J-127		9.40 (0.47)	361.43	190.00	171.43	74.29
J-13		4.70 (0.47)	326.33	224.77	101.56	44.01
J-14		4.70 (0.47)	327.30	240.91	86.39	37.44
J-141		15.98 (0.47)	361.27	202.36	158.91	68.86
J-142		6.58 (0.47)	361.31	205.87	155.44	67.36
J-143		7.05 (0.47)	359.77	190.00	169.77	73.57
J-144		6.11 (0.47)	361.27	195.83	165.44	71.69
J-145		2.82 (0.47)	361.16	191.49	169.67	73.52
J-146		20.68 (0.47)	362.29	210.00	152.29	65.99
J-147		0.00	361.82	211.49	150.33	65.14
J-15		4.70 (0.47)	327.95	228.55	99.40	43.07
J-151		19.74 (0.47)	361.93	210.00	151.93	65.84
J-152		2.82 (0.47)	361.78	193.45	168.33	72.94
J-153		19.74 (0.47)	361.58	212.86	148.72	64.45
J-154		20.21 (0.47)	361.24	217.50	143.74	62.29
J-157		5.17 (0.47)	361.58	186.08	175.50	76.05
J-159		0.00	352.11	197.29	154.82	67.09
J-16		2.82 (0.47)	324.48	189.37	135.11	58.55
J-160		0.94 (0.47)	352.09	196.12	155.97	67.59
J-161		12.22 (0.47)	355.77	200.00	155.77	67.50
J-168		0.00	353.36	192.42	160.94	69.74
J-169		5.17 (0.47)	352.06	192.49	159.57	69.15
J-17		0.00	409.48	297.52	111.96	48.52
J-170		0.47 (0.47)	355.49	185.89	169.60	73.49
J-171		2.35 (0.47)	355.37	204.49	150.88	65.38
J-18		0.00	373.42	211.06	162.36	70.35
J-182		5.17 (0.47)	355.55	181.76	173.79	75.31
J-186		4.70 (0.47)	347.79	210.00	137.79	59.71
J-19		0.94 (0.47)	373.42	212.37	161.05	69.79
J-191		8.46 (0.47)	347.34	204.06	143.28	62.09
J-192		1.88 (0.47)	351.46	260.00	91.46	39.63
J-2		35.72 (0.47)	401.86	290.00	111.86	48.47

J-20	0.00	373.42	220.00	153.42	66.48
J-205	4.70 (0.47)	351.43	264.67	86.76	37.59
J-21	2.82 (0.47)	324.82	220.98	103.84	45.00
J-210	7.99 (0.47)	347.37	207.47	139.90	60.62
J-218	1.88 (0.47)	351.14	217.91	133.23	57.73
J-219	1.41 (0.47)	351.14	208.85	142.29	61.66
J-22	2.82 (0.47)	324.37	203.68	120.69	52.30
J-220	1.88 (0.47)	351.13	218.56	132.57	57.45
J-222	4.70 (0.47)	346.48	197.12	149.36	64.72
J-223	2.82 (0.47)	346.23	182.33	163.90	71.02
J-224	5.64 (0.47)	346.19	193.71	152.48	66.07
J-225	1.88 (0.47)	346.08	182.60	163.48	70.84
J-226	6.58 (0.47)	346.11	193.14	152.97	66.29
J-227	0.94 (0.47)	352.43	194.03	158.40	68.64
J-228	0.94 (0.47)	352.28	208.55	143.73	62.28
J-23	1.88 (0.47)	324.51	182.32	142.19	61.61
J-237	0.47 (0.47)	346.11	179.72	166.39	72.10
J-238	0.47 (0.47)	346.10	178.80	167.30	72.50
J-239	3.29 (0.47)	347.63	205.67	141.96	61.52
J-24	2.35 (0.47)	351.38	211.78	139.60	60.50
J-242	1.88 (0.47)	347.51	189.61	157.90	68.43
J-246	3.76 (0.47)	346.79	189.64	157.15	68.10
J-25	2.35 (0.47)	350.90	206.38	144.52	62.62
J-259	6.11 (0.47)	345.61	183.37	162.24	70.30
J-26	2.35 (0.47)	350.64	198.54	152.10	65.91
J-260	1.41 (0.47)	336.80	190.00	146.80	63.61
J-264	0.94 (0.47)	336.78	181.79	154.99	67.16
J-265	5.17 (0.47)	336.81	180.00	156.81	67.95
J-27	2.35 (0.47)	350.46	180.00	170.46	73.86
J-28	31.02 (0.47)	357.25	208.62	148.63	64.41
J-29	31.02 (0.47)	351.63	250.00	101.63	44.04
J-295	0.00	380.40	356.45	23.95	10.38
J-296	6.11 (0.47)	336.82	180.00	156.82	67.95
J-3	4.23 (0.47)	335.35	208.17	127.18	55.11
J-30	31.02 (0.47)	326.62	239.96	86.66	37.55
J-300	5.17 (0.47)	335.33	180.00	155.33	67.31
J-307	0.94 (0.47)	335.31	180.00	155.31	67.30
J-308	0.94 (0.47)	335.31	180.00	155.31	67.30
J-314	3.76 (0.47)	335.42	180.00	155.42	67.35
J-317	0.94 (0.47)	335.41	180.00	155.41	67.34
J-327	1.88 (0.47)	335.94	184.68	151.26	65.55
J-328	0.47 (0.47)	335.94	180.00	155.94	67.57
J-335	7.52 (0.47)	335.86	183.16	152.70	66.17
J-337	0.47 (0.47)	335.86	191.93	143.93	62.37
J-342	0.00	380.40	354.29	26.11	11.31
J-343	15.04 (0.47)	339.88	194.91	144.97	62.82
J-356	3.29 (0.47)	339.77	180.00	159.77	69.23
J-361	1.41 (0.47)	339.71	180.00	159.71	69.21
J-368	0.47 (0.47)	352.67	194.87	157.80	68.38
J-369	3.29 (0.47)	352.54	190.00	162.54	70.43
J-373	1.88 (0.47)	352.39	182.43	169.96	73.65
J-375	0.00	352.53	190.00	162.53	70.43
J-377	0.47 (0.47)	352.52	180.00	172.52	74.76
J-382	4.23 (0.47)	352.39	188.90	163.49	70.85
J-383	0.00	352.39	180.00	172.39	74.70
J-385	0.00	352.39	189.34	163.05	70.66
J-391	0.00	352.06	176.55	175.51	76.05
J-392	1.41 (0.47)	352.00	189.91	162.09	70.24
J-4	3.76 (0.47)	335.55	224.83	110.72	47.98
J-432	0.00	337.16	207.58	129.58	56.15
J-440	1.88 (0.47)	324.79	196.32	128.47	55.67
J-449	0.47 (0.47)	324.78	190.00	134.78	58.40
J-450	4.23 (0.47)	325.25	223.98	101.27	43.88
J-472	1.41 (0.47)	325.04	180.00	145.04	62.85
J-473	0.00	325.98	239.54	86.44	37.46
J-481	5.64 (0.47)	324.62	196.46	128.16	55.54
J-499	1.41 (0.47)	324.47	174.14	150.33	65.14
J-5	4.23 (0.47)	335.94	218.94	117.00	50.70
J-506	6.58 (0.47)	324.40	184.61	139.79	60.58
J-512	0.94 (0.47)	324.38	180.00	144.38	62.56
J-513	0.94 (0.47)	324.95	216.01	108.94	47.21

J-515	4.23 (0.47)	324.93	239.14	85.79	37.18
J-516	4.23 (0.47)	324.81	209.20	115.61	50.10
J-518	0.94 (0.47)	324.78	186.61	138.17	59.87
J-519	0.94 (0.47)	324.97	203.91	121.06	52.46
J-522	2.82 (0.47)	324.82	180.66	144.16	62.47
J-523	0.47 (0.47)	324.79	176.34	148.45	64.33
J-526	2.35 (0.47)	324.12	185.23	138.89	60.18
J-527	0.94 (0.47)	324.10	180.00	144.10	62.44
J-529	0.00	373.89	220.00	153.89	66.69
J-530	0.94 (0.47)	323.91	180.00	143.91	62.36
J-532	0.94 (0.47)	323.65	175.95	147.70	64.00
J-533	0.94 (0.47)	324.02	179.56	144.46	62.60
J-534	1.41 (0.47)	324.04	190.00	134.04	58.08
J-539	1.88 (0.47)	324.01	190.00	134.01	58.07
J-542	0.00	325.03	208.96	116.07	50.30
J-550	0.00	325.03	189.62	135.41	58.68
J-580	0.00	346.53	208.84	137.69	59.66
J-591	0.00	341.02	232.03	108.99	47.23
J-592	0.00	340.63	227.95	112.68	48.83
J-6	3.76 (0.47)	335.65	220.33	115.32	49.97
J-601	6.58 (0.47)	339.31	200.00	139.31	60.37
J-607	6.58 (0.47)	339.05	193.46	145.59	63.09
J-608	0.00	339.01	200.86	138.15	59.87
J-616	6.58 (0.47)	337.77	172.66	165.11	71.55
J-62	24.91 (0.47)	365.31	195.66	169.65	73.51
J-620	6.58 (0.47)	338.35	200.00	138.35	59.95
J-626	6.58 (0.47)	336.72	180.00	156.72	67.91
J-639	6.58 (0.47)	335.47	181.25	154.22	66.83
J-648	6.58 (0.47)	335.03	186.13	148.90	64.53
J-667	0.00	370.66	180.00	190.66	82.62
J-686	8.93 (0.47)	368.35	190.00	178.35	77.28
J-69	17.86 (0.47)	361.85	195.43	166.42	72.11
J-698	0.00	370.66	200.00	170.66	73.95
J-699	0.00	370.66	200.00	170.66	73.95
J-7	2.35 (0.47)	330.73	199.95	130.78	56.67
J-706	0.00	370.66	203.52	167.14	72.43
J-710	0.00	351.85	217.47	134.38	58.23
J-743	2.35 (0.47)	350.42	180.00	170.42	73.85
J-747	0.00	324.80	210.67	114.13	49.46
J-756	0.94 (0.47)	324.48	176.92	147.56	63.94
J-76	1.41 (0.47)	361.71	183.45	178.26	77.25
J-760	0.00	325.16	230.18	94.98	41.16
J-77	3.29 (0.47)	361.68	180.00	181.68	78.73
J-770	0.00	325.09	220.53	104.56	45.31
J-775	2.35 (0.47)	324.37	175.77	148.60	64.40
J-781	2.35 (0.47)	324.30	178.50	145.80	63.18
J-787	0.00	325.78	230.00	95.78	41.50
J-8	1.88 (0.47)	331.10	205.49	125.61	54.43
J-80	18.80 (0.47)	363.24	210.00	153.24	66.41
J-811	4.70 (0.47)	326.87	240.00	86.87	37.64
J-815	4.23 (0.47)	324.00	182.04	141.96	61.52
J-816	0.00	332.22	200.00	132.22	57.29
J-82	23.03 (0.47)	361.84	220.00	141.84	61.47
J-820	2.35 (0.47)	330.67	192.47	138.20	59.89
J-821	0.00	336.80	205.88	130.92	56.73
J-822	0.00	334.83	205.78	129.05	55.92
J-83	21.15 (0.47)	362.70	210.00	152.70	66.17
J-837	3.76 (0.47)	334.87	218.45	116.42	50.45
J-84	24.44 (0.47)	361.84	220.00	141.84	61.46
J-849	3.76 (0.47)	334.81	190.68	144.13	62.46
J-850	0.00	336.55	206.32	130.23	56.43
J-851	0.00	335.55	206.78	128.77	55.80
J-866	31.02 (0.47)	328.42	222.62	105.80	45.85
J-89	7.05 (0.47)	361.71	190.00	171.71	74.41
J-9	2.35 (0.47)	331.65	201.84	129.81	56.25
J-93	20.21 (0.47)	363.90	210.00	153.90	66.69
J-96	0.00	373.42	220.00	153.42	66.48
J-98	16.45 (0.47)	361.85	214.41	147.44	63.89
R-1	----	410.00	335.39	74.61	32.33
R-2	----	410.00	291.44	118.56	51.38
T-1	----	380.00	360.00	20.00	8.67

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-667	82.62	T-1	8.67
J-77	78.73	J-295	10.38
J-686	77.28	J-342	11.31
J-76	77.25	R-1	32.33
J-391	76.05	J-515	37.18
J-157	76.05	J-14	37.44
J-107	75.73	J-473	37.46
J-182	75.31	J-30	37.55
J-377	74.76	J-205	37.59
J-383	74.70	J-811	37.64
J-89	74.41	J-192	39.63
J-102	74.41	J-760	41.16
J-127	74.29	J-787	41.50
J-698	73.95	J-15	43.07
J-699	73.95	J-450	43.88
J-27	73.86	J-13	44.01
J-743	73.85	J-29	44.04
J-373	73.65	J-21	45.00
J-143	73.57	J-770	45.31
J-145	73.52	J-866	45.85

VELOCITIES

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-74	3.36	P-159	0.00
P-136	3.29	P-35	0.01
P-95	3.29	P-21	0.01
P-53	2.71	P-96	0.02
P-3	2.29	P-44	0.02
P-12	2.16	P-16	0.02
P-14	2.01	P-65	0.02
P-169	1.95	P-84	0.02
P-168	1.94	P-11	0.02
P-163	1.94	P-170	0.03
P-129	1.91	P-105	0.05
P-8	1.88	P-66	0.05
P-171	1.83	P-81	0.05
P-102	1.71	P-92	0.05
P-24	1.68	P-164	0.05
P-33	1.64	P-73	0.06
P-130	1.62	P-9	0.06
P-37	1.54	P-57	0.06
P-103	1.49	P-31	0.07
P-40	1.47	P-22	0.07

HL / 1000

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-74	4.72	P-159	0.00
P-169	4.62	P-35	0.00
P-168	4.59	P-21	0.00
P-163	4.56	P-16	0.00
P-136	4.53	P-96	0.00

P-95	4.53	P-11	0.00
P-171	4.13	P-44	0.00
P-160	4.07	P-65	0.00
P-161	4.07	P-84	0.00
P-52	3.48	P-170	0.00
P-55	3.31	P-9	0.01
P-129	3.19	P-22	0.01
P-53	3.17	P-73	0.01
P-59	3.14	P-164	0.01
P-131	2.91	P-31	0.01
P-132	2.91	P-75	0.01
P-3	2.77	P-15	0.01
P-29	2.63	P-105	0.02
P-4	2.52	P-66	0.02
P-12	2.50	P-81	0.02

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

(+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
 (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE

R-1	311.64	
R-2	1301.54	
T-1	-759.19	
NET SYSTEM INFLOW	=	1613.18
NET SYSTEM OUTFLOW	=	-759.19
NET SYSTEM DEMAND	=	853.99

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* * * * * K Y P I P E 4 * * * * *
*
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INPUT DATA FILENAME ----- C:\JENNIF-1\JULYMO-1\EL_CAM-2.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF-1\JULYMO-1\EL_CAM-2.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF-1\JULYMO-1\EL_CAM-2.RS2

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*****
SUMMARY OF ORIGINAL DATA
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UNITS SPECIFIED

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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PIPELINE DATA

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NAMES #1	#2	LENGTH (ft)	DIAMETER (in)	ROUGHNESS COEFF.	MINOR LOSS COEFF.
P-1	J-2	J-14	11.61	4.00	100.0000	0.00
P-10	J-47	J-59	691.45	3.00	100.0000	0.00
P-11	J-6	J-17	152.39	4.00	100.0000	0.00
P-12	J-61	J-68	310.80	3.00	100.0000	0.00
P-13	J-61	J-70	766.88	3.00	100.0000	0.00
P-14	J-59	J-15	352.90	3.00	100.0000	0.00
P-15	J-15	J-1	159.31	3.00	100.0000	0.00
P-16	J-78	J-16	219.65	2.00	100.0000	0.00
P-17	J-59	J-70	338.24	3.00	100.0000	0.00
P-18	J-70	J-93	717.42	2.00	100.0000	0.00
P-19	J-93	J-98	264.22	2.00	100.0000	0.00
P-2	J-4	J-8	386.65	3.00	100.0000	0.00
P-20	J-1	J-78	1029.97	2.00	100.0000	0.00
P-21	J-3	J-17	617.87	3.00	100.0000	0.00
P-22	J-5	J-47	869.73	3.00	100.0000	0.00
P-23	J-6	J-61	184.75	4.00	100.0000	0.00
P-24-XX	J-7	J-20	353.35	3.00	100.0000	0.00
P-25-XX	J-7	Pump-1	17.29	3.00	100.0000	0.00
P-26-XX	J-7	Pump-2	15.48	3.00	100.0000	0.00
P-27-XX	J-11	T-1	17.24	3.00	100.0000	0.00
P-28-XX	J-11	T-2	18.26	3.00	100.0000	0.00
P-29-XX	J-9	T-2	13.89	3.00	100.0000	0.00
P-3	J-8	J-3	300.21	3.00	100.0000	0.00
P-30-XX	J-9	R-1	246.29	3.00	100.0000	0.00
P-31-XX	T-1	J-9	13.73	3.00	100.0000	0.00
P-32-XX	Pump-1	J-11	16.34	3.00	100.0000	0.00
P-33-XX	Pump-2	J-11	16.34	3.00	100.0000	0.00
P-34	J-13	T-4	18.00	3.00	100.0000	0.00
P-35	T-3	J-13	18.00	3.00	100.0000	0.00
P-36-XX	T-3	J-20	15.96	3.00	100.0000	0.00
P-37-XX	T-4	J-20	17.02	3.00	100.0000	0.00
P-38	J-15	J-18	718.28	2.00	100.0000	0.00
P-39	J-13	Pump-3	12.02	3.00	100.0000	0.00
P-4	J-17	J-2	139.42	4.00	100.0000	0.00
P-40	J-13	Pump-4	13.21	3.00	100.0000	0.00
P-41	Pump-3	J-12	13.98	3.00	100.0000	0.00

P-42	Pump-4	J-12	14.30	3.00	100.0000	0.00
P-43	J-14	J-4	135.10	4.00	100.0000	0.00
P-44	J-14	J-12	9.11	3.00	100.0000	0.00
P-45	J-16	J-19	175.65	1.00	100.0000	0.00
P-5	J-8	J-25	796.34	3.00	100.0000	0.00
P-6	J-25	J-27	493.15	2.00	100.0000	0.00
P-7	J-27	J-32	232.13	1.00	100.0000	0.00
P-8	J-25	J-5	653.61	3.00	100.0000	0.00
P-9	J-47	J-4	302.38	4.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
250.00	0.00	75.00 (Default)
200.00	150.00	75.00 (Default)
110.00	225.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
250.00	0.00	75.00 (Default)
200.00	150.00	75.00 (Default)
110.00	225.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 2)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	50.00	1.00
120.00	75.00	1.00

THERE IS A DEVICE AT NODE Pump-4 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	50.00	1.00
120.00	75.00	1.00

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		16.00	192.00	
J-11		0.00	183.00	
J-12		0.00	190.00	
J-13		0.00	190.00	
J-14		0.00	189.00	
J-15		0.00	190.00	
J-16		3.00	185.00	
J-17		13.00	182.00	
J-18		6.00	187.00	
J-19		2.00	180.00	

J-2	0.00	190.00	
J-20	0.00	0.00	
J-25	15.00	185.00	
J-27	4.00	182.00	
J-3	5.00	185.00	
J-32	0.00	180.00	
J-4	14.00	194.00	
J-47	17.00	183.00	
J-5	6.00	182.00	
J-59	9.00	206.00	
J-6	0.00	183.00	
J-61	16.00	184.00	
J-68	5.00	181.00	
J-7	0.00	183.00	
J-70	14.00	198.00	
J-78	6.00	185.00	
J-8	10.00	194.00	
J-9	0.00	183.00	
J-93	3.00	186.00	
J-98	3.00	183.00	
Pump-1	0.00	183.00	
Pump-2	0.00	183.00	
Pump-3	0.00	190.00	
Pump-4	0.00	190.00	
R-1	----	183.00	200.00
T-1	----	183.00	195.00
T-2	----	183.00	195.00
T-3	----	190.00	214.00
T-4	----	190.00	214.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 10
 MAXIMUM AND MINIMUM VELOCITIES = 10
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 10

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 45
 NUMBER OF END NODES(j) = 34
 NUMBER OF PRIMARY LOOPS(l) = 7
 NUMBER OF SUPPLY NODES(f) = 5
 NUMBER OF SUPPLY ZONES(z) = 1

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CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

*** WARNING ***

DUE TO SPECIFIED DEMANDS THE PUMP IN LINE ~@Pump-2 IS FORCED TO OPERATE
 AT ZERO FLOW. THIS MAY CAUSE PROBLEMS CALCULATING THE HGLs IN THE
 VICINITY OF THE PUMP. TRY CLOSING LINE ~@Pump-2 AND RERUN THE SIMULATION.

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00000

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	J-2	J-14	-66.26	0.07	0.00	1.69	5.70
P-10	J-47	J-59	27.00	3.03	0.00	1.23	4.39
P-11	J-6	J-17	-43.72	0.40	0.00	1.12	2.64
P-12	J-61	J-68	4.26	0.04	0.00	0.19	0.14
P-13	J-61	J-70	25.82	3.10	0.00	1.17	4.04
P-14	J-59	J-15	28.12	1.67	0.00	1.28	4.73
P-15	J-15	J-1	23.00	0.52	0.00	1.04	3.26
P-16	J-78	J-16	4.26	0.23	0.00	0.44	1.03
P-17	J-59	J-70	-8.78	0.19	0.00	0.40	0.55
P-18	J-70	J-93	5.11	1.04	0.00	0.52	1.45
P-19	J-93	J-98	2.56	0.11	0.00	0.26	0.40
P-2	J-4	J-8	14.51	0.54	0.00	0.66	1.39
P-20	J-1	J-78	9.37	4.59	0.00	0.96	4.45
P-21	J-3	J-17	-11.47	0.56	0.00	0.52	0.90
P-22	J-5	J-47	-8.10	0.41	0.00	0.37	0.47
P-23	J-6	J-61	43.72	0.49	0.00	1.12	2.64
P-24	J-7	J-20	0.00	0.00	0.00	0.00	0.00
P-25	J-7	Pump-1	0.00	0.00	0.00	0.00	0.00
P-26	J-7	Pump-2	0.00	0.00	0.00	0.00	0.00
P-27	J-11	T-1	0.00	0.00	0.00	0.00	0.00
P-28-XX	J-11	T-2					
P-29-XX	J-9	T-2	0.00	0.00	0.00	0.00	0.00
P-3	J-8	J-3	-7.21	0.11	0.00	0.33	0.38
P-30-XX	J-9	R-1					
P-31-XX	T-1	J-9					
P-32-XX	Pump-1	J-11	0.00	0.00	0.00	0.00	0.00
P-33-XX	Pump-2	J-11					
P-34	J-13	T-4	-71.14	0.47	0.00	3.23	26.38
P-35	T-3	J-13	71.14	0.47	0.00	3.23	26.38
P-36-XX	T-3	J-20					
P-37-XX	T-4	J-20					
P-38	J-15	J-18	5.11	1.04	0.00	0.52	1.45
P-39	J-13	Pump-3	71.15	0.32	0.00	3.23	26.39
P-4	J-17	J-2	-66.26	0.79	0.00	1.69	5.70
P-40	J-13	Pump-4	71.13	0.35	0.00	3.23	26.38
P-41	Pump-3	J-12	71.15	0.37	0.00	3.23	26.39
P-42	Pump-4	J-12	71.13	0.38	0.00	3.23	26.38
P-43	J-14	J-4	76.02	0.99	0.00	1.94	7.35
P-44	J-14	J-12	-142.28	0.87	0.00	6.46	95.24
P-45	J-16	J-19	1.70	0.97	0.00	0.70	5.54
P-5	J-8	J-25	13.20	0.93	0.00	0.60	1.17
P-6	J-25	J-27	3.41	0.34	0.00	0.35	0.68
P-7	J-27	J-32	0.00	0.00	0.00	0.00	0.00
P-8	J-25	J-5	-2.99	0.05	0.00	0.14	0.07
P-9	J-47	J-4	-49.58	1.01	0.00	1.27	3.33

PUMP/LOSS ELEMENT RESULTS

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMTL COST (\$)	TOTAL COST (\$)
Pump-1	0.00	12.00	214.50	202.5	----	-----	---	----
Pump-2	0.00	13.51	216.01	202.5	----	-----	---	----
Pump-3	71.15	23.21	154.07	130.9	----	-----	---	----
Pump-4	71.13	23.18	154.08	130.9	----	-----	---	----

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		13.63 (0.85)	335.62	192.00	143.62	62.23
J-11		0.00	195.00	183.00	12.00	5.20
J-12		0.00	343.70	190.00	153.70	66.61
J-13		0.00	213.53	190.00	23.53	10.19
J-14		0.00	342.84	189.00	153.84	66.66
J-15		0.00	336.14	190.00	146.14	63.33
J-16		2.56 (0.85)	330.80	185.00	145.80	63.18
J-17		11.08 (0.85)	341.98	182.00	159.98	69.32
J-18		5.11 (0.85)	335.09	187.00	148.09	64.17
J-19		1.70 (0.85)	329.83	180.00	149.83	64.93
J-2		0.00	342.77	190.00	152.77	66.20
J-20		0.00	399.01			
J-25		12.78 (0.85)	340.38	185.00	155.38	67.33
J-27		3.41 (0.85)	340.04	182.00	158.04	68.48
J-3		4.26 (0.85)	341.42	185.00	156.42	67.78
J-32		0.00	340.04	180.00	160.04	69.35
J-4		11.93 (0.85)	341.84	194.00	147.84	64.07
J-47		14.48 (0.85)	340.84	183.00	157.84	68.40
J-5		5.11 (0.85)	340.43	182.00	158.43	68.65
J-59		7.67 (0.85)	337.80	206.00	131.80	57.11
J-6		0.00	341.57	183.00	158.57	68.72
J-61		13.63 (0.85)	341.09	184.00	157.09	68.07
J-68		4.26 (0.85)	341.04	181.00	160.04	69.35
J-7		0.00	399.01	183.00	216.01	93.60
J-70		11.93 (0.85)	337.99	198.00	139.99	60.66
J-78		5.11 (0.85)	331.03	185.00	146.03	63.28
J-8		8.52 (0.85)	341.31	194.00	147.31	63.83
J-9		0.00	195.00	183.00	12.00	5.20
J-93		2.56 (0.85)	336.95	186.00	150.95	65.41
J-98		2.56 (0.85)	336.84	183.00	153.84	66.67
Pump-1		0.00	397.50	183.00	214.50	92.95
Pump-2		0.00	196.51	183.00	13.51	5.85
Pump-3		0.00	213.21	190.00	23.21	10.06
Pump-4		0.00	213.18	190.00	23.18	10.04
R-1		----	200.00	183.00	17.00	7.37
T-1		----	195.00	183.00	12.00	5.20
T-2		----	195.00	183.00	12.00	5.20
T-3		----	214.00	190.00	24.00	10.40
T-4		----	214.00	190.00	24.00	10.40
Pump-1		0.00	195.00	183.00	12.00	5.20
Pump-2		0.00	399.01	183.00	216.01	93.60
Pump-3		0.00	344.07	190.00	154.07	66.76
Pump-4		0.00	344.08	190.00	154.08	66.77

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-7	93.60	J-11	5.20
Pump-2	93.60	J-9	5.20
Pump-1	92.95	T-1	5.20
J-68	69.35	T-2	5.20
J-32	69.35	Pump-1	5.20
J-17	69.32	Pump-2	5.85
J-6	68.72	R-1	7.37
J-5	68.65	Pump-4	10.04
J-27	68.48	Pump-3	10.06
J-47	68.40	J-13	10.19

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-44	6.46	P-8	0.14
P-39	3.23	P-12	0.19
P-41	3.23	P-19	0.26
P-35	3.23	P-3	0.33
P-34	3.23	P-6	0.35
P-40	3.23	P-22	0.37
P-42	3.23	P-17	0.40
P-43	1.94	P-16	0.44
P-1	1.69	P-21	0.52
P-4	1.69	P-18	0.52

H L / 1 0 0 0

PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-44	95.24	P-8	0.07
P-39	26.39	P-12	0.14
P-41	26.39	P-3	0.38
P-35	26.38	P-19	0.40
P-34	26.38	P-22	0.47
P-40	26.38	P-17	0.55
P-42	26.38	P-6	0.68
P-43	7.35	P-21	0.90
P-1	5.70	P-16	1.03
P-4	5.70	P-5	1.17

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
- (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
R-1	0.00	
T-1	0.00	
T-2	0.00	
T-3	71.14	
T-4	71.14	

NET SYSTEM INFLOW = 142.28
 NET SYSTEM OUTFLOW = 0.00
 NET SYSTEM DEMAND = 142.28

***** HYDRAULIC ANALYSIS COMPLETED *****

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***** K Y P I P E 4 *****
*
*   University of Kentucky Network Modeling Software   *
*
*   Copyrighted by KPFS 1998                           *
*   Version 1.200 - 01/26/2000                         *
*
*****

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INPUT DATA FILENAME ----- C:\JENNIF~1\JULYMO~1\EL_CAM~3.DT2
TABULATED OUTPUT FILENAME ----- C:\JENNIF~1\JULYMO~1\EL_CAM~3.OT2
POSTPROCESSOR RESULTS FILENAME --- C:\JENNIF~1\JULYMO~1\EL_CAM~3.RS2

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*****
SUMMARY OF ORIGINAL DATA
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U N I T S S P E C I F I E D

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FLOWRATE ..... = gallons/minute
HEAD (HGL) ..... = feet
PRESSURE ..... = psig

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P I P E L I N E D A T A

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

P I P E N A M E	N O D E N A M E S		L E N G T H (ft)	D I A M E T E R (in)	R O U G H N E S S C O E F F .	M I N O R L O S S C O E F F .
	#1	#2				
P-1	J-2	J-14	11.61	6.00	100.0000	0.00
P-10	J-47	J-59	691.45	3.00	100.0000	0.00
P-11	J-6	J-17	152.39	4.00	100.0000	0.00
P-12	J-61	J-68	310.80	3.00	100.0000	0.00
P-13	J-61	J-70	766.88	3.00	100.0000	0.00
P-14	J-59	J-15	352.90	3.00	100.0000	0.00
P-15	J-15	J-1	159.31	3.00	100.0000	0.00
P-16	J-78	J-16	219.65	2.00	100.0000	0.00
P-17	J-59	J-70	338.24	3.00	100.0000	0.00
P-18	J-70	J-93	717.42	2.00	100.0000	0.00
P-19	J-93	J-98	264.22	2.00	100.0000	0.00
P-2	J-4	J-8	386.65	3.00	100.0000	0.00
P-20	J-1	J-78	1029.97	2.00	100.0000	0.00
P-21	J-3	J-17	617.87	3.00	100.0000	0.00
P-22	J-5	J-47	869.73	3.00	100.0000	0.00
P-23	J-6	J-61	184.75	4.00	100.0000	0.00
P-24-XX	J-7	J-20	353.35	3.00	100.0000	0.00
P-25-XX	J-7	Pump-1	17.29	3.00	100.0000	0.00
P-26-XX	J-7	Pump-2	15.48	3.00	100.0000	0.00
P-27-XX	J-11	T-1	17.24	3.00	100.0000	0.00
P-28-XX	J-11	T-2	18.26	3.00	100.0000	0.00
P-29-XX	J-9	T-2	13.89	3.00	100.0000	0.00
P-3	J-8	J-3	300.21	3.00	100.0000	0.00
P-30-XX	J-9	R-1	246.29	3.00	100.0000	0.00
P-31-XX	T-1	J-9	13.73	3.00	100.0000	0.00
P-32-XX	Pump-1	J-11	16.34	3.00	100.0000	0.00
P-33-XX	Pump-2	J-11	16.34	3.00	100.0000	0.00
P-34	J-13	T-4	18.00	6.00	100.0000	0.00
P-35	T-3	J-13	18.00	6.00	100.0000	0.00
P-36-XX	T-3	J-20	15.96	3.00	100.0000	0.00
P-37-XX	T-4	J-20	17.02	3.00	100.0000	0.00
P-38	J-15	J-18	718.28	2.00	100.0000	0.00
P-39	J-13	Pump-3	12.02	6.00	100.0000	0.00
P-4	J-17	J-2	139.42	6.00	100.0000	0.00

P-40	J-13	Pump-4	13.21	6.00	100.0000	0.00
P-41	Pump-3	J-12	13.98	6.00	100.0000	0.00
P-42	Pump-4	J-12	14.30	6.00	100.0000	0.00
P-43	J-14	J-4	135.10	6.00	100.0000	0.00
P-44	J-14	J-12	9.11	6.00	100.0000	0.00
P-45	J-16	J-19	175.65	2.00	100.0000	0.00
P-5	J-8	J-25	796.34	3.00	100.0000	0.00
P-6	J-25	J-27	493.15	2.00	100.0000	0.00
P-7	J-27	J-32	232.13	1.00	100.0000	0.00
P-8	J-25	J-5	653.61	3.00	100.0000	0.00
P-9	J-47	J-4	302.38	4.00	100.0000	0.00

P U M P / L O S S E L E M E N T D A T A

THERE IS A DEVICE AT NODE Pump-1 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
250.00	0.00	75.00 (Default)
200.00	150.00	75.00 (Default)
110.00	225.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-2 DESCRIBED BY THE' FOLLOWING DATA: (ID= 1)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
250.00	0.00	75.00 (Default)
200.00	150.00	75.00 (Default)
110.00	225.00	75.00 (Default)

PUMP SPEED RATIO = 0.900

THERE IS A DEVICE AT NODE Pump-3 DESCRIBED BY THE' FOLLOWING DATA: (ID= 2)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	50.00	1.00
120.00	75.00	1.00

THERE IS A DEVICE AT NODE Pump-4 DESCRIBED BY THE' FOLLOWING DATA: (ID= 3)

HEAD (ft)	FLOWRATE (gpm)	EFFICIENCY (%)
258.46	0.00	1.00
184.62	50.00	1.00
120.00	75.00	1.00

E N D N O D E D A T A

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	JUNCTION ELEVATION (ft)	EXTERNAL GRADE (ft)
J-1		16.00	192.00	
J-11		0.00	183.00	
J-12		0.00	190.00	
J-13		0.00	190.00	
J-14		0.00	189.00	
J-15		0.00	190.00	
J-16		3.00	185.00	
J-17		13.00	182.00	

J-18	6.00	187.00	
J-19	2.00	180.00	
J-2	0.00	190.00	
J-20	0.00	0.00	
J-25	15.00	185.00	
J-27	4.00	182.00	
J-3	5.00	185.00	
J-32	0.00	180.00	
J-4	14.00	194.00	
J-47	17.00	183.00	
J-5	6.00	182.00	
J-59	9.00	206.00	
J-6	0.00	183.00	
J-61	16.00	184.00	
J-68	5.00	181.00	
J-7	0.00	183.00	
J-70	14.00	198.00	
J-78	6.00	185.00	
J-8	10.00	194.00	
J-9	0.00	183.00	
J-93	3.00	186.00	
J-98	3.00	183.00	
Pump-1	0.00	183.00	
Pump-2	0.00	183.00	
Pump-3	0.00	190.00	
Pump-4	0.00	190.00	
R-1	----	183.00	200.00
T-1	----	183.00	195.00
T-2	----	183.00	195.00
T-3	----	190.00	214.00
T-4	----	190.00	214.00

OUTPUT OPTION DATA

OUTPUT SELECTION: ALL RESULTS ARE INCLUDED IN THE TABULATED OUTPUT
 MAXIMUM AND MINIMUM PRESSURES = 10
 MAXIMUM AND MINIMUM VELOCITIES = 10
 MAXIMUM AND MINIMUM HEAD LOSS/1000 = 10

SYSTEM CONFIGURATION

NUMBER OF PIPES(p) = 45
 NUMBER OF END NODES(j) = 34
 NUMBER OF PRIMARY LOOPS(l) = 7
 NUMBER OF SUPPLY NODES(f) = 5
 NUMBER OF SUPPLY ZONES(z) = 1

=====

CHANGES FOR NEXT SIMULATION (Change Number = 3)

JUNCTION DEMANDS CHANGED - PLEASE SEE RESULTS TABLE

*** WARNING ***

DUE TO SPECIFIED DEMANDS THE PUMP IN LINE ~@Pump-2 IS FORCED TO OPERATE
 AT ZERO FLOW. THIS MAY CAUSE PROBLEMS CALCULATING THE HGLs IN THE
 VICINITY OF THE PUMP. TRY CLOSING LINE ~@Pump-2 AND RERUN THE SIMULATION.

RESULTS OBTAINED AFTER 2 TRIALS: ACCURACY = 0.00001

PIPELINE RESULTS

STATUS CODE: XX -CLOSED PIPE CV -CHECK VALVE

PIPE NAME	NODE NUMBERS		FLOWRATE (gpm)	HEAD LOSS (ft)	MINOR LOSS (ft)	LINE VELO. (ft/s)	HL/ 1000 (ft/ft)
	#1	#2					
P-1	J-2	J-14	-65.45	0.01	0.00	0.74	0.77
P-10	J-47	J-59	27.19	3.07	0.00	1.23	4.44
P-11	J-6	J-17	-43.52	0.40	0.00	1.11	2.62
P-12	J-61	J-68	4.26	0.04	0.00	0.19	0.14
P-13	J-61	J-70	25.63	3.05	0.00	1.16	3.98
P-14	J-59	J-15	28.12	1.67	0.00	1.28	4.73
P-15	J-15	J-1	23.00	0.52	0.00	1.04	3.26
P-16	J-78	J-16	4.26	0.23	0.00	0.44	1.03
P-17	J-59	J-70	-8.59	0.18	0.00	0.39	0.53
P-18	J-70	J-93	5.11	1.04	0.00	0.52	1.45
P-19	J-93	J-98	2.56	0.11	0.00	0.26	0.40
P-2	J-4	J-8	15.04	0.57	0.00	0.68	1.48
P-20	J-1	J-78	9.37	4.59	0.00	0.96	4.45
P-21	J-3	J-17	-10.85	0.50	0.00	0.49	0.81
P-22	J-5	J-47	-8.20	0.42	0.00	0.37	0.48
P-23	J-6	J-61	43.52	0.48	0.00	1.11	2.62
P-24	J-7	J-20	0.00	0.00	0.00	0.00	0.00
P-25	J-7	Pump-1	0.00	0.00	0.00	0.00	0.00
P-26	J-7	Pump-2	0.00	0.00	0.00	0.00	0.00
P-27	J-11	T-1	0.00	0.00	0.00	0.00	0.00
P-28-XX	J-11	T-2					
P-29-XX	J-9	T-2	0.00	0.00	0.00	0.00	0.00
P-3	J-8	J-3	-6.59	0.10	0.00	0.30	0.32
P-30-XX	J-9	R-1					
P-31-XX	T-1	J-9					
P-32-XX	Pump-1	J-11	0.00	0.00	0.00	0.00	0.00
P-33-XX	Pump-2	J-11					
P-34	J-13	T-4	-71.14	0.02	0.00	0.81	0.90
P-35	T-3	J-13	71.14	0.02	0.00	0.81	0.90
P-36-XX	T-3	J-20					
P-37-XX	T-4	J-20					
P-38	J-15	J-18	5.11	1.04	0.00	0.52	1.45
P-39	J-13	Pump-3	71.14	0.01	0.00	0.81	0.90
P-4	J-17	J-2	-65.45	0.11	0.00	0.74	0.77
P-40	J-13	Pump-4	71.14	0.01	0.00	0.81	0.90
P-41	Pump-3	J-12	71.14	0.01	0.00	0.81	0.90
P-42	Pump-4	J-12	71.14	0.01	0.00	0.81	0.90
P-43	J-14	J-4	76.84	0.14	0.00	0.87	1.04
P-44	J-14	J-12	-142.28	0.03	0.00	1.61	3.26
P-45	J-16	J-19	1.70	0.03	0.00	0.17	0.19
P-5	J-8	J-25	13.10	0.92	0.00	0.59	1.15
P-6	J-25	J-27	3.41	0.34	0.00	0.35	0.68
P-7	J-27	J-32	0.00	0.00	0.00	0.00	0.00
P-8	J-25	J-5	-3.08	0.05	0.00	0.14	0.08
P-9	J-47	J-4	-49.87	1.02	0.00	1.27	3.37

PUMP/LOSS ELEMENT RESULTS

NAME	FLOWRATE (gpm)	INLET HEAD (ft)	OUTLET HEAD (ft)	HEAD CHANGE (ft)	EFFIC- ENCY (%)	USEFUL POWER (Hp)	INCREMENTL COST (\$)	TOTAL COST (\$)
Pump-1	0.00	12.00	214.50	202.5	----	-----	---	----
Pump-2	0.00	13.51	216.01	202.5	----	-----	---	----
Pump-3	71.14	23.97	154.86	130.9	----	-----	---	----
Pump-4	71.14	23.97	154.86	130.9	----	-----	---	----

END NODE RESULTS

NODE NAME	NODE TITLE	EXTERNAL DEMAND (gpm)	HYDRAULIC GRADE (ft)	NODE ELEVATION (ft)	PRESSURE HEAD (ft)	NODE PRESSURE (psi)
J-1		13.63 (0.85)	338.40	192.00	146.40	63.44
J-11		0.00	195.00	183.00	12.00	5.20
J-12		0.00	344.84	190.00	154.84	67.10
J-13		0.00	213.98	190.00	23.98	10.39
J-14		0.00	344.81	189.00	155.81	67.52
J-15		0.00	338.91	190.00	148.91	64.53
J-16		2.56 (0.85)	333.58	185.00	148.58	64.39
J-17		11.08 (0.85)	344.70	182.00	162.70	70.50
J-18		5.11 (0.85)	337.87	187.00	150.87	65.38
J-19		1.70 (0.85)	333.55	180.00	153.55	66.54
J-2		0.00	344.81	190.00	154.81	67.08
J-20		0.00	399.01			
J-25		12.78 (0.85)	343.19	185.00	158.19	68.55
J-27		3.41 (0.85)	342.85	182.00	160.85	69.70
J-3		4.26 (0.85)	344.20	185.00	159.20	68.99
J-32		0.00	342.85	180.00	162.85	70.57
J-4		11.93 (0.85)	344.67	194.00	150.67	65.29
J-47		14.48 (0.85)	343.66	183.00	160.66	69.62
J-5		5.11 (0.85)	343.24	182.00	161.24	69.87
J-59		7.67 (0.85)	340.58	206.00	134.58	58.32
J-6		0.00	344.30	183.00	161.30	69.90
J-61		13.63 (0.85)	343.82	184.00	159.82	69.25
J-68		4.26 (0.85)	343.77	181.00	162.77	70.53
J-7		0.00	399.01	183.00	216.01	93.60
J-70		11.93 (0.85)	340.76	198.00	142.76	61.86
J-78		5.11 (0.85)	333.81	185.00	148.81	64.48
J-8		8.52 (0.85)	344.10	194.00	150.10	65.04
J-9		0.00	195.00	183.00	12.00	5.20
J-93		2.56 (0.85)	339.72	186.00	153.72	66.61
J-98		2.56 (0.85)	339.62	183.00	156.62	67.87
Pump-1		0.00	397.50	183.00	214.50	92.95
Pump-2		0.00	196.51	183.00	13.51	5.85
Pump-3		0.00	213.97	190.00	23.97	10.39
Pump-4		0.00	213.97	190.00	23.97	10.39
R-1		----	200.00	183.00	17.00	7.37
T-1		----	195.00	183.00	12.00	5.20
T-2		----	195.00	183.00	12.00	5.20
T-3		----	214.00	190.00	24.00	10.40
T-4		----	214.00	190.00	24.00	10.40
Pump-1		0.00	195.00	183.00	12.00	5.20
Pump-2		0.00	399.01	183.00	216.01	93.60
Pump-3		0.00	344.86	190.00	154.86	67.10
Pump-4		0.00	344.86	190.00	154.86	67.10

MAXIMUM AND MINIMUM VALUES

PRESSURES

JUNCTION NUMBER	MAXIMUM PRESSURES (psi)	JUNCTION NUMBER	MINIMUM PRESSURES (psi)
J-7	93.60	J-11	5.20
Pump-2	93.60	J-9	5.20
Pump-1	92.95	T-1	5.20
J-32	70.57	T-2	5.20
J-68	70.53	Pump-1	5.20
J-17	70.50	Pump-2	5.85
J-6	69.90	R-1	7.37
J-5	69.87	Pump-4	10.39
J-27	69.70	Pump-3	10.39
J-47	69.62	J-13	10.39

V E L O C I T I E S

PIPE NUMBER	MAXIMUM VELOCITY (ft/s)	PIPE NUMBER	MINIMUM VELOCITY (ft/s)
P-44	1.61	P-8	0.14
P-14	1.28	P-45	0.17
P-9	1.27	P-12	0.19
P-10	1.23	P-19	0.26
P-13	1.16	P-3	0.30
P-11	1.11	P-6	0.35
P-23	1.11	P-22	0.37
P-15	1.04	P-17	0.39
P-20	0.96	P-16	0.44
P-43	0.87	P-21	0.49

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PIPE NUMBER	MAXIMUM HL/1000 (ft/ft)	PIPE NUMBER	MINIMUM HL/1000 (ft/ft)
P-14	4.73	P-8	0.08
P-20	4.45	P-12	0.14
P-10	4.44	P-45	0.19
P-13	3.98	P-3	0.32
P-9	3.37	P-19	0.40
P-15	3.26	P-22	0.48
P-44	3.26	P-17	0.53
P-11	2.62	P-6	0.68
P-23	2.62	P-1	0.77
P-2	1.48	P-4	0.77

S U M M A R Y O F I N F L O W S A N D O U T F L O W S

- (+) INFLOWS INTO THE SYSTEM FROM SUPPLY NODES
- (-) OUTFLOWS FROM THE SYSTEM INTO SUPPLY NODES

NODE NAME	FLOWRATE (gpm)	NODE TITLE
R-1	0.00	
T-1	0.00	
T-2	0.00	
T-3	71.14	
T-4	71.14	

NET SYSTEM INFLOW = 142.28
 NET SYSTEM OUTFLOW = 0.00
 NET SYSTEM DEMAND = 142.28

***** HYDRAULIC ANALYSIS COMPLETED *****

SABINE COUNTY
TOTAL WATER SYSTEM IMPROVEMENTS WITHOUT FIRE FLOW

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	1687	GPM	\$600.00	\$1,012,200	424	GPM	\$600.00	\$254,400	2111	GPM	\$600.00	\$1,266,600
Surface Water Treatment Plant	2.43	MGD	\$2,500,000.00	\$6,075,000	0.61	MGD	\$2,500,000.00	\$1,525,000	3.04	MGD	\$2,500,000.00	\$7,600,000
High Service Pump Station	2	Each	\$250,000.00	\$500,000	0.00	Each	\$250,000.00	\$0	2	Each	\$250,000.00	\$500,000
Ground Storage Tank	0	Gallons	\$0.40	\$0	10000	Gallons	\$0.40	\$4,000	10000	Gallons	\$0.40	\$4,000
Standpipe	75000	Gallons	\$0.55	\$41,250	115000	Gallons	\$0.55	\$63,250	190000	Gallons	\$0.55	\$104,500
Service Connections	1070	Each	\$750.00	\$802,500	715	Each	\$750.00	\$536,250	1785	Each	\$750.00	\$1,338,750
22" Waterline	19	L.F.	\$49.50	\$941	0	L.F.	\$49.50	\$0	19	L.F.	\$49.50	\$941
18" Waterline	280	L.F.	\$38.00	\$10,640	0	L.F.	\$38.00	\$0	280	L.F.	\$38.00	\$10,640
16" Waterline	0	L.F.	\$32.50	\$0	368	L.F.	\$32.50	\$11,960	368	L.F.	\$32.50	\$11,960
14" Waterline	10985	L.F.	\$27.00	\$296,595	577	L.F.	\$27.00	\$15,579	11562	L.F.	\$27.00	\$312,174
12" Waterline	22760	L.F.	\$21.25	\$483,650	13113	L.F.	\$21.25	\$278,651	35873	L.F.	\$21.25	\$762,301
10" Waterline	23774	L.F.	\$17.25	\$410,102	26292	L.F.	\$17.25	\$453,537	50066	L.F.	\$17.25	\$863,639
8" Waterline	78353	L.F.	\$13.25	\$1,038,177	24064	L.F.	\$13.25	\$318,848	102417	L.F.	\$13.25	\$1,357,025
6" Waterline	56691	L.F.	\$10.25	\$581,083	6087	L.F.	\$10.25	\$62,392	62778	L.F.	\$10.25	\$643,475
4" Waterline	56560	L.F.	\$8.75	\$494,900	5563	L.F.	\$8.75	\$48,676	62123	L.F.	\$8.75	\$543,576
3" Waterline	21780	L.F.	\$7.75	\$168,795	12972	L.F.	\$7.75	\$100,533	34752	L.F.	\$7.75	\$269,328
2" Waterline	1743	L.F.	\$7.25	\$12,637	2003	L.F.	\$7.25	\$14,522	3746	L.F.	\$7.25	\$27,159
22" Gate Valve	1	Each	\$3,800.00	\$3,800	0	Each	\$3,800.00	\$0	1	Each	\$3,800.00	\$3,800
18" Gate Valve	1	Each	\$2,825.00	\$2,825	0	Each	\$2,825.00	\$0	1	Each	\$2,825.00	\$2,825
16" Gate Valve	0	Each	\$2,250.00	\$0	1	Each	\$2,250.00	\$2,250	1	Each	\$2,250.00	\$2,250
14" Gate Valve	10	Each	\$1,475.00	\$14,750	2	Each	\$1,475.00	\$2,950	12	Each	\$1,475.00	\$17,700
12" Gate Valve	23	Each	\$1,225.00	\$27,918	13	Each	\$1,225.00	\$15,702	36	Each	\$1,225.00	\$43,620
10" Gate Valve	24	Each	\$970.00	\$23,735	25	Each	\$970.00	\$24,231	49	Each	\$970.00	\$47,966
8" Gate Valve	79	Each	\$710.00	\$55,837	27	Each	\$710.00	\$19,366	106	Each	\$710.00	\$75,202
6" Gate Valve	55	Each	\$535.00	\$29,604	6	Each	\$535.00	\$3,236	61	Each	\$535.00	\$32,840
4" Gate Valve	58	Each	\$450.00	\$26,227	4	Each	\$450.00	\$1,800	62	Each	\$450.00	\$28,027
3" Gate Valve	22	Each	\$380.00	\$8,298	12	Each	\$380.00	\$4,695	34	Each	\$380.00	\$12,994
2" Gate Valve	2	Each	\$320.00	\$646	3	Each	\$320.00	\$960	5	Each	\$320.00	\$1,606
Fire Hydrant	10	Each	\$1,500.00	\$14,957	0	Each	\$1,500.00	\$0	10	Each	\$1,500.00	\$14,957
Pavement Repair	19704	S.Y.	\$30.00	\$591,129	7582	S.Y.	\$30.00	\$227,460	27286	S.Y.	\$30.00	\$818,589
Trench Safety	252352	L.F.	\$1.50	\$378,529	69004	L.F.	\$1.50	\$103,506	321356	L.F.	\$1.50	\$482,034
Subtotal Construction				\$13,106,722				\$4,093,754				\$17,200,476
Contingencies	15%			\$1,966,008	15%			\$614,063	15%			\$2,580,071
Project Administration	1%			\$131,067	1%			\$40,938	1%			\$172,005
Engineering Design Phase	12%			\$1,572,807	12%			\$491,250	12%			\$2,064,057
Construction Inspection	1%			\$131,067	1%			\$40,938	1%			\$172,005
Geotechnical	1%			\$131,067	1%			\$40,938	1%			\$172,005
Design Surveying	2%			\$262,134	2%			\$81,875	2%			\$344,010
Construction Surveying	1%			\$131,067	1%			\$40,938	1%			\$172,005
Material Testing	1%			\$131,067	1%			\$40,938	1%			\$172,005
Engineering Construction Phase	2%			\$262,134	2%			\$81,875	2%			\$344,010
Easements	5%			\$655,336	5%			\$204,688	5%			\$860,024
Legal	2%			\$262,134	2%			\$81,875	2%			\$344,010
Fiscal	2%			\$262,134	2%			\$81,875	2%			\$344,010
Subtotal Non-Construction				\$5,888,025				\$1,842,189				\$7,740,214
TOTAL PROJECT COST				\$19,004,747				\$5,935,943				\$24,940,690

**SABINE COUNTY
TOTAL WATER SYSTEM IMPROVEMENTS INCLUDING FIRE FLOW**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	1687	GPM	\$600.00	\$1,012,200	424	GPM	\$600.00	\$254,400	2111	GPM	\$600.00	\$1,266,600
Surface Water Treatment Plant	2.43	MGD	\$2,500,000.00	\$6,075,000	0.61	MGD	\$2,500,000.00	\$1,525,000	3.04	MGD	\$2,500,000.00	\$7,600,000
High Service Pump Station	2.00	Each	\$250,000.00	\$500,000	0.00	Each	\$250,000.00	\$0	2.00	Each	\$250,000.00	\$500,000
Ground Storage Tank	0	Gallons	\$0.40	\$0	10000	Gallons	\$0.40	\$4,000	10000	Gallons	\$0.40	\$4,000
Standpipe	75000	Gallons	\$0.55	\$41,250	115000	Gallons	\$0.55	\$63,250	190000	Gallons	\$0.55	\$104,500
Service Connections	1070	Each	\$750.00	\$802,500	715	Each	\$750.00	\$536,250	1785	Each	\$750.00	\$1,338,750
22" Waterline	19	L.F.	\$49.50	\$941	0	L.F.	\$49.50	\$0	19	L.F.	\$49.50	\$941
18" Waterline	280	L.F.	\$38.00	\$10,640	0	L.F.	\$38.00	\$0	280	L.F.	\$38.00	\$10,640
16" Waterline	0	L.F.	\$32.50	\$0	368	L.F.	\$32.50	\$11,960	368	L.F.	\$32.50	\$11,960
14" Waterline	15942	L.F.	\$27.00	\$430,434	577	L.F.	\$27.00	\$15,579	16519	L.F.	\$27.00	\$446,013
12" Waterline	34274	L.F.	\$21.25	\$728,323	13113	L.F.	\$21.25	\$278,651	47387	L.F.	\$21.25	\$1,006,974
10" Waterline	36532	L.F.	\$17.25	\$630,177	26292	L.F.	\$17.25	\$453,537	62824	L.F.	\$17.25	\$1,083,714
8" Waterline	95556	L.F.	\$13.25	\$1,266,117	24064	L.F.	\$13.25	\$318,848	119620	L.F.	\$13.25	\$1,584,965
6" Waterline	60457	L.F.	\$10.25	\$619,684	6087	L.F.	\$10.25	\$62,392	66544	L.F.	\$10.25	\$682,076
4" Waterline	61207	L.F.	\$8.75	\$535,561	5563	L.F.	\$8.75	\$48,676	66770	L.F.	\$8.75	\$584,238
3" Waterline	21780	L.F.	\$7.75	\$168,795	12972	L.F.	\$7.75	\$100,533	34752	L.F.	\$7.75	\$269,328
2" Waterline	1743	L.F.	\$7.25	\$12,637	2003	L.F.	\$7.25	\$14,522	3746	L.F.	\$7.25	\$27,159
22" Gate Valve	1	Each	\$3,800.00	\$3,800	0	Each	\$3,800.00	\$0	1	Each	\$3,800.00	\$3,800
18" Gate Valve	1	Each	\$2,825.00	\$2,825	0	Each	\$2,825.00	\$0	1	Each	\$2,825.00	\$2,825
16" Gate Valve	0	Each	\$2,250.00	\$0	1	Each	\$2,250.00	\$2,250	1	Each	\$2,250.00	\$2,250
14" Gate Valve	15	Each	\$1,475.00	\$22,125	2	Each	\$1,475.00	\$2,950	17	Each	\$1,475.00	\$25,075
12" Gate Valve	34	Each	\$1,225.00	\$42,022	13	Each	\$1,225.00	\$15,702	47	Each	\$1,225.00	\$57,724
10" Gate Valve	37	Each	\$970.00	\$35,790	25	Each	\$970.00	\$24,231	62	Each	\$970.00	\$60,021
8" Gate Valve	95	Each	\$710.00	\$67,732	27	Each	\$710.00	\$19,366	123	Each	\$710.00	\$87,098
6" Gate Valve	58	Each	\$535.00	\$31,209	6	Each	\$535.00	\$3,236	64	Each	\$535.00	\$34,445
4" Gate Valve	62	Each	\$450.00	\$28,101	4	Each	\$450.00	\$1,800	66	Each	\$450.00	\$29,901
3" Gate Valve	22	Each	\$380.00	\$8,298	12	Each	\$380.00	\$4,695	34	Each	\$380.00	\$12,994
2" Gate Valve	2	Each	\$320.00	\$646	3	Each	\$320.00	\$960	5	Each	\$320.00	\$1,606
Fire Hydrant	10	Each	\$1,500.00	\$14,957	0	Each	\$1,500.00	\$0	10	Each	\$1,500.00	\$14,957
Pavement Repair	25798	S.Y.	\$30.00	\$773,945	7582	S.Y.	\$30.00	\$227,460	33380	S.Y.	\$30.00	\$1,001,405
Trench Safety	286039	L.F.	\$1.50	\$429,058	69004	L.F.	\$1.50	\$103,506	355042	L.F.	\$1.50	\$532,563
Subtotal Construction				\$14,294,766				\$4,093,754				\$18,388,520
Contingencies	15%			\$2,144,215	15%			\$614,063	15%			\$2,758,278
Project Administration	1%			\$142,948	1%			\$40,938	1%			\$183,885
Engineering Design Phase	12%			\$1,715,372	12%			\$491,250	12%			\$2,206,622
Construction Inspection	1%			\$142,948	1%			\$40,938	1%			\$183,885
Geotechnical	1%			\$142,948	1%			\$40,938	1%			\$183,885
Design Surveying	2%			\$285,895	2%			\$81,875	2%			\$367,770
Construction Surveying	1%			\$142,948	1%			\$40,938	1%			\$183,885
Material Testing	1%			\$142,948	1%			\$40,938	1%			\$183,885
Engineering Construction Phase	2%			\$285,895	2%			\$81,875	2%			\$367,770
Easements	5%			\$714,738	5%			\$204,688	5%			\$919,426
Legal	2%			\$285,895	2%			\$81,875	2%			\$367,770
Fiscal	2%			\$285,895	2%			\$81,875	2%			\$367,770
Subtotal Non-Construction				\$6,432,645				\$1,842,189				\$8,274,834
TOTAL PROJECT COST				\$20,727,411				\$5,935,943				\$26,663,354

**CITY OF HEMPHILL
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	174	GPM	\$600.00	\$104,400	56	GPM	\$600.00	\$33,600	230	GPM	\$600.00	\$138,000
Surface Water Treatment Plant	0.25	MGD	\$2,500,000.00	\$625,000	0.08	MGD	\$2,500,000.00	\$200,000	0.33	MGD	\$2,500,000.00	\$825,000
High Service Pump Station	0.15	Each	\$250,000.00	\$37,500		Each	\$250,000.00	\$0	0.15	Each	\$250,000.00	\$37,500
Ground Storage Tank		Gallons	\$0.40	\$0		Gallons	\$0.40	\$0	0	Gallons	\$0.40	\$0
Standpipe		Gallons	\$0.55	\$0		Gallons	\$0.55	\$0	0	Gallons	\$0.55	\$0
Service Connections	146	Each	\$750.00	\$109,500	98	Each	\$750.00	\$73,500	244	Each	\$750.00	\$183,000
22" Waterline	19	L.F.	\$49.50	\$941		L.F.	\$49.50	\$0	19	L.F.	\$49.50	\$941
18" Waterline	280	L.F.	\$38.00	\$10,640		L.F.	\$38.00	\$0	280	L.F.	\$38.00	\$10,640
16" Waterline		L.F.	\$32.50	\$0	368	L.F.	\$32.50	\$11,960	368	L.F.	\$32.50	\$11,960
14" Waterline		L.F.	\$27.00	\$0	42	L.F.	\$27.00	\$1,134	42	L.F.	\$27.00	\$1,134
12" Waterline	410	L.F.	\$21.25	\$8,713	2818	L.F.	\$21.25	\$59,883	3228	L.F.	\$21.25	\$68,595
10" Waterline	4531	L.F.	\$17.25	\$78,160	7525	L.F.	\$17.25	\$129,806	12056	L.F.	\$17.25	\$207,966
8" Waterline	4731	L.F.	\$13.25	\$62,686	6932	L.F.	\$13.25	\$91,849	11663	L.F.	\$13.25	\$154,535
6" Waterline	3230	L.F.	\$10.25	\$33,108	2113	L.F.	\$10.25	\$21,658	5343	L.F.	\$10.25	\$54,766
4" Waterline	11089	L.F.	\$8.75	\$97,029	704	L.F.	\$8.75	\$6,160	11793	L.F.	\$8.75	\$103,189
3" Waterline	4404	L.F.	\$7.75	\$34,131	10356	L.F.	\$7.75	\$80,259	14760	L.F.	\$7.75	\$114,390
2" Waterline	724	L.F.	\$7.25	\$5,249	621	L.F.	\$7.25	\$4,502	1345	L.F.	\$7.25	\$9,751
22" Gate Valve	1	Each	\$3,800.00	\$3,800		Each	\$3,800.00	\$0	1	Each	\$3,800.00	\$3,800
18" Gate Valve	1	Each	\$2,825.00	\$2,825		Each	\$2,825.00	\$0	1	Each	\$2,825.00	\$2,825
16" Gate Valve		Each	\$2,250.00	\$0	1	Each	\$2,250.00	\$2,250	1	Each	\$2,250.00	\$2,250
14" Gate Valve		Each	\$1,475.00	\$0	1	Each	\$1,475.00	\$1,475	1	Each	\$1,475.00	\$1,475
12" Gate Valve	1	Each	\$1,225.00	\$1,225	3	Each	\$1,225.00	\$3,452	4	Each	\$1,225.00	\$4,677
10" Gate Valve	5	Each	\$970.00	\$4,395	7	Each	\$970.00	\$6,790	12	Each	\$970.00	\$11,185
8" Gate Valve	5	Each	\$710.00	\$3,359	7	Each	\$710.00	\$4,922	12	Each	\$710.00	\$8,281
6" Gate Valve	3	Each	\$535.00	\$1,728	2	Each	\$535.00	\$1,130	5	Each	\$535.00	\$2,859
4" Gate Valve	11	Each	\$450.00	\$4,990	1	Each	\$450.00	\$450	12	Each	\$450.00	\$5,440
3" Gate Valve	4	Each	\$380.00	\$1,674	10	Each	\$380.00	\$3,935	15	Each	\$380.00	\$5,609
2" Gate Valve	1	Each	\$320.00	\$320	1	Each	\$320.00	\$320	2	Each	\$320.00	\$640
Fire Hydrant	10	Each	\$1,500.00	\$14,957		Each	\$1,500.00	\$0	10	Each	\$1,500.00	\$14,957
Pavement Repair	3269	S.Y.	\$30.00	\$98,060	3498	S.Y.	\$30.00	\$104,930	6766	S.Y.	\$30.00	\$202,990
Trench Safety	8825	L.F.	\$1.50	\$13,238	9444	L.F.	\$1.50	\$14,166	18269	L.F.	\$1.50	\$27,404
Subtotal Construction				\$1,357,625				\$858,131				\$2,215,756
Contingencies	15%			\$203,644	15%			\$128,720	15%			\$332,363
Project Administration	1%			\$13,576	1%			\$8,581	1%			\$22,158
Engineering Design Phase	12%			\$162,915	12%			\$102,976	12%			\$265,891
Construction Inspection	1%			\$13,576	1%			\$8,581	1%			\$22,158
Geotechnical	1%			\$13,576	1%			\$8,581	1%			\$22,158
Design Surveying	2%			\$27,153	2%			\$17,163	2%			\$44,315
Construction Surveying	1%			\$13,576	1%			\$8,581	1%			\$22,158
Material Testing	1%			\$13,576	1%			\$8,581	1%			\$22,158
Engineering Construction Phase	2%			\$27,153	2%			\$17,163	2%			\$44,315
Easements	5%			\$67,881	5%			\$42,907	5%			\$110,788
Legal	2%			\$27,153	2%			\$17,163	2%			\$44,315
Fiscal	2%			\$27,153	2%			\$17,163	2%			\$44,315
Subtotal Non-Construction				\$610,931				\$386,159				\$997,090
TOTAL PROJECT COST				\$1,968,556				\$1,244,290				\$3,212,847

**CITY OF PINELAND
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	139	GPM	\$600.00	\$83,400	21	GPM	\$600.00	\$12,600	160	GPM	\$600.00	\$96,000
Surface Water Treatment Plant	0.2	MGD	\$2,500,000.00	\$500,000	0.03	MGD	\$2,500,000.00	\$75,000	0.23	MGD	\$2,500,000.00	\$575,000
High Service Pump Station	0.1	Each	\$250,000.00	\$25,000		Each	\$250,000.00	\$0	0.1	Each	\$250,000.00	\$25,000
Ground Storage Tank		Gallons	\$0.40	\$0		Gallons	\$0.40	\$0	0	Gallons	\$0.40	\$0
Standpipe		Gallons	\$0.55	\$0		Gallons	\$0.55	\$0	0	Gallons	\$0.55	\$0
Service Connections	86	Each	\$750.00	\$64,500	58	Each	\$750.00	\$43,500	144	Each	\$750.00	\$108,000
22" Waterline		L.F.	\$49.50	\$0		L.F.	\$49.50	\$0	0	L.F.	\$49.50	\$0
18" Waterline		L.F.	\$38.00	\$0		L.F.	\$38.00	\$0	0	L.F.	\$38.00	\$0
16" Waterline		L.F.	\$32.50	\$0		L.F.	\$32.50	\$0	0	L.F.	\$32.50	\$0
14" Waterline		L.F.	\$27.00	\$0		L.F.	\$27.00	\$0	0	L.F.	\$27.00	\$0
12" Waterline		L.F.	\$21.25	\$0		L.F.	\$21.25	\$0	0	L.F.	\$21.25	\$0
10" Waterline		L.F.	\$17.25	\$0	642	L.F.	\$17.25	\$11,075	642	L.F.	\$17.25	\$11,075
8" Waterline		L.F.	\$13.25	\$0		L.F.	\$13.25	\$0	0	L.F.	\$13.25	\$0
6" Waterline		L.F.	\$10.25	\$0		L.F.	\$10.25	\$0	0	L.F.	\$10.25	\$0
4" Waterline		L.F.	\$8.75	\$0	1607	L.F.	\$8.75	\$14,061	1607	L.F.	\$8.75	\$14,061
3" Waterline	942	L.F.	\$7.75	\$7,301	1510	L.F.	\$7.75	\$11,703	2452	L.F.	\$7.75	\$19,003
2" Waterline		L.F.	\$7.25	\$0	1104	L.F.	\$7.25	\$8,004	1104	L.F.	\$7.25	\$8,004
22" Gate Valve		Each	\$3,800.00	\$0		Each	\$3,800.00	\$0	0	Each	\$3,800.00	\$0
18" Gate Valve		Each	\$2,825.00	\$0		Each	\$2,825.00	\$0	0	Each	\$2,825.00	\$0
16" Gate Valve		Each	\$2,250.00	\$0		Each	\$2,250.00	\$0	0	Each	\$2,250.00	\$0
14" Gate Valve		Each	\$1,475.00	\$0		Each	\$1,475.00	\$0	0	Each	\$1,475.00	\$0
12" Gate Valve		Each	\$1,225.00	\$0		Each	\$1,225.00	\$0	0	Each	\$1,225.00	\$0
10" Gate Valve		Each	\$970.00	\$0		Each	\$970.00	\$0	0	Each	\$970.00	\$0
8" Gate Valve		Each	\$710.00	\$0		Each	\$710.00	\$0	0	Each	\$710.00	\$0
6" Gate Valve		Each	\$535.00	\$0		Each	\$535.00	\$0	0	Each	\$535.00	\$0
4" Gate Valve		Each	\$450.00	\$0		Each	\$450.00	\$0	0	Each	\$450.00	\$0
3" Gate Valve	1	Each	\$380.00	\$380		Each	\$380.00	\$0	1	Each	\$380.00	\$380
2" Gate Valve		Each	\$320.00	\$0		Each	\$320.00	\$0	0	Each	\$320.00	\$0
Fire Hydrant		Each	\$1,500.00	\$0		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Pavement Repair		L.F.	\$30.00	\$0		L.F.	\$30.00	\$0	0	L.F.	\$30.00	\$0
Trench Safety	942	L.F.	\$1.50	\$1,413	4863	L.F.	\$1.50	\$7,295	5805	L.F.	\$1.50	\$8,708
Subtotal Construction				\$681,994				\$183,237				\$865,230
Contingencies	15%			\$102,299	15%			\$27,486	15%			\$129,785
Project Administration	1%			\$6,820	1%			\$1,832	1%			\$8,652
Engineering Design Phase	12%			\$81,839	12%			\$21,988	12%			\$103,828
Construction Inspection	1%			\$6,820	1%			\$1,832	1%			\$8,652
Geotechnical	1%			\$6,820	1%			\$1,832	1%			\$8,652
Design Surveying	2%			\$13,640	2%			\$3,665	2%			\$17,305
Construction Surveying	1%			\$6,820	1%			\$1,832	1%			\$8,652
Material Testing	1%			\$6,820	1%			\$1,832	1%			\$8,652
Engineering Construction Phase	2%			\$13,640	2%			\$3,665	2%			\$17,305
Easements	5%			\$34,100	5%			\$9,162	5%			\$43,262
Legal	2%			\$13,640	2%			\$3,665	2%			\$17,305
Fiscal	2%			\$13,640	2%			\$3,665	2%			\$17,305
Subtotal Non-Construction				\$306,897				\$82,457				\$389,354
TOTAL PROJECT COST				\$988,891				\$265,693				\$1,254,584

**G-M WATER SUPPLY CORPORATION
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2005-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	701	GPM	\$600.00	\$420,600	236	GPM	\$600.00	\$141,600	937	GPM	\$600.00	\$562,200
Surface Water Treatment Plant	1.01	MGD	\$2,500,000.00	\$2,525,000	0.34	MGD	\$2,500,000.00	\$850,000	1.35	MGD	\$2,500,000.00	\$3,375,000
High Service Pump Station	0.7	Each	\$250,000.00	\$175,000		Each	\$250,000.00	\$0	0.7	Each	\$250,000.00	\$175,000
Ground Storage Tank		Gallons	\$0.40	\$0	10000	Gallons	\$0.40	\$4,000	10000	Gallons	\$0.40	\$4,000
Standpipe	75000	Gallons	\$0.55	\$41,250	115000	Gallons	\$0.55	\$63,250	190000	Gallons	\$0.55	\$104,500
Service Connections	578	Each	\$750.00	\$433,500	385	Each	\$750.00	\$288,750	963	Each	\$750.00	\$722,250
22" Waterline		L.F.	\$49.50	\$0		L.F.	\$49.50	\$0	0	L.F.	\$49.50	\$0
18" Waterline		L.F.	\$38.00	\$0		L.F.	\$38.00	\$0	0	L.F.	\$38.00	\$0
16" Waterline		L.F.	\$32.50	\$0		L.F.	\$32.50	\$0	0	L.F.	\$32.50	\$0
14" Waterline		L.F.	\$27.00	\$0		L.F.	\$27.00	\$0	0	L.F.	\$27.00	\$0
12" Waterline	17790	L.F.	\$21.25	\$378,038		L.F.	\$21.25	\$0	17790	L.F.	\$21.25	\$378,038
10" Waterline	8938	L.F.	\$17.25	\$154,181	6980	L.F.	\$17.25	\$120,405	15918	L.F.	\$17.25	\$274,586
8" Waterline	55912	L.F.	\$13.25	\$740,834	13344	L.F.	\$13.25	\$176,808	69256	L.F.	\$13.25	\$917,642
6" Waterline	39104	L.F.	\$10.25	\$400,816	1936	L.F.	\$10.25	\$19,844	41040	L.F.	\$10.25	\$420,660
4" Waterline	45194	L.F.	\$8.75	\$395,448		L.F.	\$8.75	\$0	45194	L.F.	\$8.75	\$395,448
3" Waterline	16434	L.F.	\$7.75	\$127,364		L.F.	\$7.75	\$0	16434	L.F.	\$7.75	\$127,364
2" Waterline	1019	L.F.	\$7.25	\$7,388		L.F.	\$7.25	\$0	1019	L.F.	\$7.25	\$7,388
22" Gate Valve		Each	\$3,800.00	\$0		Each	\$3,800.00	\$0	0	Each	\$3,800.00	\$0
18" Gate Valve		Each	\$2,825.00	\$0		Each	\$2,825.00	\$0	0	Each	\$2,825.00	\$0
16" Gate Valve		Each	\$2,250.00	\$0		Each	\$2,250.00	\$0	0	Each	\$2,250.00	\$0
14" Gate Valve		Each	\$1,475.00	\$0		Each	\$1,475.00	\$0	0	Each	\$1,475.00	\$0
12" Gate Valve	18	Each	\$1,225.00	\$21,793		Each	\$1,225.00	\$0	18	Each	\$1,225.00	\$21,793
10" Gate Valve	9	Each	\$970.00	\$8,670	7	Each	\$970.00	\$6,771	16	Each	\$970.00	\$15,440
8" Gate Valve	56	Each	\$710.00	\$39,698	13	Each	\$710.00	\$9,474	69	Each	\$710.00	\$49,172
6" Gate Valve	39	Each	\$535.00	\$20,921	2	Each	\$535.00	\$1,036	41	Each	\$535.00	\$21,956
4" Gate Valve	45	Each	\$450.00	\$20,337		Each	\$450.00	\$0	45	Each	\$450.00	\$20,337
3" Gate Valve	16	Each	\$380.00	\$6,245		Each	\$380.00	\$0	16	Each	\$380.00	\$6,245
2" Gate Valve	1	Each	\$320.00	\$326		Each	\$320.00	\$0	1	Each	\$320.00	\$326
Fire Hydrant		Each	\$1,500.00	\$0		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Pavement Repair	12293	S.Y.	\$30.00	\$368,782	1484	S.Y.	\$30.00	\$44,520	13777	S.Y.	\$30.00	\$413,302
Trench Safety	184391	L.F.	\$1.50	\$276,587	22260	L.F.	\$1.50	\$33,390	206651	L.F.	\$1.50	\$309,977
Subtotal Construction				\$6,562,774				\$1,759,848				\$8,322,622
Contingencies	15%			\$984,416	15%			\$263,977	15%			\$1,248,393
Project Administration	1%			\$65,628	1%			\$17,598	1%			\$83,226
Engineering Design Phase	12%			\$787,533	12%			\$211,182	12%			\$998,715
Construction Inspection	1%			\$65,628	1%			\$17,598	1%			\$83,226
Geotechnical	1%			\$65,628	1%			\$17,598	1%			\$83,226
Design Surveying	2%			\$131,255	2%			\$35,197	2%			\$166,452
Construction Surveying	1%			\$65,628	1%			\$17,598	1%			\$83,226
Material Testing	1%			\$65,628	1%			\$17,598	1%			\$83,226
Engineering Construction Phase	2%			\$131,255	2%			\$35,197	2%			\$166,452
Easements	5%			\$328,139	5%			\$87,992	5%			\$416,131
Legal	2%			\$131,255	2%			\$35,197	2%			\$166,452
Fiscal	2%			\$131,255	2%			\$35,197	2%			\$166,452
Subtotal Non-Construction				\$2,953,248				\$791,931				\$3,745,180
TOTAL PROJECT COST				\$9,516,023				\$2,551,779				\$12,067,802

**BEECHWOOD WATER SUPPLY CORPORATION
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	340	GPM	\$600.00	\$204,000	42	GPM	\$600.00	\$25,200	382	GPM	\$600.00	\$229,200
Surface Water Treatment Plant	0.49	MGD	\$2,500,000.00	\$1,225,000	0.06	MGD	\$2,500,000.00	\$150,000	0.55	MGD	\$2,500,000.00	\$1,375,000
High Service Pump Station	0.8	Each	\$250,000.00	\$200,000		Each	\$250,000.00	\$0	0.8	Each	\$250,000.00	\$200,000
Ground Storage Tank		Gallons	\$0.40	\$0		Gallons	\$0.40	\$0	0	Gallons	\$0.40	\$0
Standpipe		Gallons	\$0.55	\$0		Gallons	\$0.55	\$0	0	Gallons	\$0.55	\$0
Service Connections	98	Each	\$750.00	\$73,500	66	Each	\$750.00	\$49,500	164	Each	\$750.00	\$123,000
22" Waterline		L.F.	\$49.50	\$0		L.F.	\$49.50	\$0	0	L.F.	\$49.50	\$0
18" Waterline		L.F.	\$38.00	\$0		L.F.	\$38.00	\$0	0	L.F.	\$38.00	\$0
16" Waterline		L.F.	\$32.50	\$0		L.F.	\$32.50	\$0	0	L.F.	\$32.50	\$0
14" Waterline		L.F.	\$27.00	\$0		L.F.	\$27.00	\$0	0	L.F.	\$27.00	\$0
12" Waterline		L.F.	\$21.25	\$0		L.F.	\$21.25	\$0	0	L.F.	\$21.25	\$0
10" Waterline	10	L.F.	\$17.25	\$173		L.F.	\$17.25	\$0	10	L.F.	\$17.25	\$173
8" Waterline	240	L.F.	\$13.25	\$3,180	3348	L.F.	\$13.25	\$44,361	3588	L.F.	\$13.25	\$47,541
6" Waterline	5388	L.F.	\$10.25	\$55,227	1662	L.F.	\$10.25	\$17,036	7050	L.F.	\$10.25	\$72,263
4" Waterline	188	L.F.	\$8.75	\$1,645	3252	L.F.	\$8.75	\$28,455	3440	L.F.	\$8.75	\$30,100
3" Waterline		L.F.	\$7.75	\$0	936	L.F.	\$7.75	\$7,254	936	L.F.	\$7.75	\$7,254
2" Waterline		L.F.	\$7.25	\$0	103	L.F.	\$7.25	\$747	103	L.F.	\$7.25	\$747
22" Gate Valve		Each	\$3,800.00	\$0		Each	\$3,800.00	\$0	0	Each	\$3,800.00	\$0
18" Gate Valve		Each	\$2,825.00	\$0		Each	\$2,825.00	\$0	0	Each	\$2,825.00	\$0
16" Gate Valve		Each	\$2,250.00	\$0		Each	\$2,250.00	\$0	0	Each	\$2,250.00	\$0
14" Gate Valve		Each	\$1,475.00	\$0		Each	\$1,475.00	\$0	0	Each	\$1,475.00	\$0
12" Gate Valve		Each	\$1,225.00	\$0		Each	\$1,225.00	\$0	0	Each	\$1,225.00	\$0
10" Gate Valve	1	Each	\$970.00	\$970		Each	\$970.00	\$0	1	Each	\$970.00	\$970
8" Gate Valve	1	Each	\$710.00	\$710	3	Each	\$710.00	\$2,130	4	Each	\$710.00	\$2,840
6" Gate Valve	5	Each	\$535.00	\$2,675	1	Each	\$535.00	\$535	6	Each	\$535.00	\$3,210
4" Gate Valve	1	Each	\$450.00	\$450	3	Each	\$450.00	\$1,350	4	Each	\$450.00	\$1,800
3" Gate Valve		Each	\$380.00	\$0	1	Each	\$380.00	\$380	1	Each	\$380.00	\$380
2" Gate Valve		Each	\$320.00	\$0	1	Each	\$320.00	\$320	1	Each	\$320.00	\$320
Fire Hydrant		Each	\$1,500.00	\$0		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Pavement Repair	647	S.Y.	\$30.00	\$19,420	1033	S.Y.	\$30.00	\$31,003	1681	S.Y.	\$30.00	\$50,423
Trench Safety	5826	L.F.	\$1.50	\$8,739	9301	L.F.	\$1.50	\$13,952	15127	L.F.	\$1.50	\$22,691
Subtotal Construction				\$1,795,689				\$372,222				\$2,167,911
Contingencies	15%			\$269,353	15%			\$55,833	15%			\$325,187
Project Administration	1%			\$17,957	1%			\$3,722	1%			\$21,679
Engineering Design Phase	12%			\$215,483	12%			\$44,667	12%			\$260,149
Construction Inspection	1%			\$17,957	1%			\$3,722	1%			\$21,679
Geotechnical	1%			\$17,957	1%			\$3,722	1%			\$21,679
Design Surveying	2%			\$35,914	2%			\$7,444	2%			\$43,358
Construction Surveying	1%			\$17,957	1%			\$3,722	1%			\$21,679
Material Testing	1%			\$17,957	1%			\$3,722	1%			\$21,679
Engineering Construction Phase	2%			\$35,914	2%			\$7,444	2%			\$43,358
Easements	5%			\$89,784	5%			\$18,611	5%			\$108,396
Legal	2%			\$35,914	2%			\$7,444	2%			\$43,358
Fiscal	2%			\$35,914	2%			\$7,444	2%			\$43,358
Subtotal Non-Construction				\$808,060				\$167,500				\$975,560
TOTAL PROJECT COST				\$2,603,748				\$539,722				\$3,143,470

**SOUTH SABINE WATER SUPPLY CORPORATION
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	264	GPM	\$600.00	\$158,400	69	GPM	\$600.00	\$41,400	333	GPM	\$600.00	\$199,800
Surface Water Treatment Plant	0.38	MGD	\$2,500,000.00	\$950,000	0.1	MGD	\$2,500,000.00	\$250,000	0.48	MGD	\$2,500,000.00	\$1,200,000
High Service Pump Station	0.2	Each	\$250,000.00	\$50,000		Each	\$250,000.00	\$0	0.2	Each	\$250,000.00	\$50,000
Ground Storage Tank		Gallons	\$0.40	\$0		Gallons	\$0.40	\$0	0	Gallons	\$0.40	\$0
Standpipe		Gallons	\$0.55	\$0		Gallons	\$0.55	\$0	0	Gallons	\$0.55	\$0
Service Connections	162	Each	\$750.00	\$121,500	108	Each	\$750.00	\$81,000	270	Each	\$750.00	\$202,500
22" Waterline		L.F.	\$49.50	\$0		L.F.	\$49.50	\$0	0	L.F.	\$49.50	\$0
18" Waterline		L.F.	\$38.00	\$0		L.F.	\$38.00	\$0	0	L.F.	\$38.00	\$0
16" Waterline		L.F.	\$32.50	\$0		L.F.	\$32.50	\$0	0	L.F.	\$32.50	\$0
14" Waterline	10985	L.F.	\$27.00	\$296,595	535	L.F.	\$27.00	\$14,445	11520	L.F.	\$27.00	\$311,040
12" Waterline	4560	L.F.	\$21.25	\$96,900	10295	L.F.	\$21.25	\$218,769	14855	L.F.	\$21.25	\$315,669
10" Waterline	10295	L.F.	\$17.25	\$177,589	11145	L.F.	\$17.25	\$192,251	21440	L.F.	\$17.25	\$369,840
8" Waterline	17470	L.F.	\$13.25	\$231,478	440	L.F.	\$13.25	\$5,830	17910	L.F.	\$13.25	\$237,308
6" Waterline	8960	L.F.	\$10.25	\$91,840		L.F.	\$10.25	\$0	8960	L.F.	\$10.25	\$91,840
4" Waterline		L.F.	\$8.75	\$0		L.F.	\$8.75	\$0	0	L.F.	\$8.75	\$0
3" Waterline		L.F.	\$7.75	\$0	170	L.F.	\$7.75	\$1,318	170	L.F.	\$7.75	\$1,318
2" Waterline		L.F.	\$7.25	\$0		L.F.	\$7.25	\$0	0	L.F.	\$7.25	\$0
22" Gate Valve		Each	\$3,800.00	\$0		Each	\$3,800.00	\$0	0	Each	\$3,800.00	\$0
18" Gate Valve		Each	\$2,825.00	\$0		Each	\$2,825.00	\$0	0	Each	\$2,825.00	\$0
16" Gate Valve		Each	\$2,250.00	\$0		Each	\$2,250.00	\$0	0	Each	\$2,250.00	\$0
14" Gate Valve	10	Each	\$1,475.00	\$14,750	1	Each	\$1,475.00	\$1,475	11	Each	\$1,475.00	\$16,225
12" Gate Valve	4	Each	\$1,225.00	\$4,900	10	Each	\$1,225.00	\$12,250	14	Each	\$1,225.00	\$17,150
10" Gate Valve	10	Each	\$970.00	\$9,700	11	Each	\$970.00	\$10,670	21	Each	\$970.00	\$20,370
8" Gate Valve	17	Each	\$710.00	\$12,070	4	Each	\$710.00	\$2,840	21	Each	\$710.00	\$14,910
6" Gate Valve	8	Each	\$535.00	\$4,280		Each	\$535.00	\$0	8	Each	\$535.00	\$4,280
4" Gate Valve		Each	\$450.00	\$0		Each	\$450.00	\$0	0	Each	\$450.00	\$0
3" Gate Valve		Each	\$380.00	\$0	1	Each	\$380.00	\$380	1	Each	\$380.00	\$380
2" Gate Valve		Each	\$320.00	\$0		Each	\$320.00	\$0	0	Each	\$320.00	\$0
Fire Hydrant		Each	\$1,500.00	\$0		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Pavement Repair	3485	S.Y.	\$30.00	\$104,540	1506	S.Y.	\$30.00	\$45,170	4990	S.Y.	\$30.00	\$149,710
Trench Safety	52270	L.F.	\$1.50	\$78,405	22585	L.F.	\$1.50	\$33,878	74855	L.F.	\$1.50	\$112,283
Subtotal Construction				\$2,402,946				\$911,675				\$3,314,621
Contingencies	15%			\$360,442	15%			\$136,751	15%			\$497,193
Project Administration	1%			\$24,029	1%			\$9,117	1%			\$33,146
Engineering Design Phase	12%			\$288,354	12%			\$109,401	12%			\$397,755
Construction Inspection	1%			\$24,029	1%			\$9,117	1%			\$33,146
Geotechnical	1%			\$24,029	1%			\$9,117	1%			\$33,146
Design Surveying	2%			\$48,059	2%			\$18,234	2%			\$66,292
Construction Surveying	1%			\$24,029	1%			\$9,117	1%			\$33,146
Material Testing	1%			\$24,029	1%			\$9,117	1%			\$33,146
Engineering Construction Phase	2%			\$48,059	2%			\$18,234	2%			\$66,292
Easements	5%			\$120,147	5%			\$45,584	5%			\$165,731
Legal	2%			\$48,059	2%			\$18,234	2%			\$66,292
Fiscal	2%			\$48,059	2%			\$18,234	2%			\$66,292
Subtotal Non-Construction				\$1,081,326				\$410,254				\$1,491,580
TOTAL PROJECT COST				\$3,484,272				\$1,321,929				\$4,806,201

**EL CAMINO BAY WATER SUPPLY CORPORATION
WATER SYSTEM IMPROVEMENTS**

Description	Phase 1 (2005-2010)				Phase 2 (2025-2030)				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Raw Water Intake	69	GPM	\$600.00	\$41,400		GPM	\$600.00	\$0	69	GPM	\$600.00	\$41,400
Surface Water Treatment Plant	0.1	MGD	\$2,500,000.00	\$250,000		MGD	\$2,500,000.00	\$0	0.1	MGD	\$2,500,000.00	\$250,000
High Service Pump Station	0.05	Each	\$250,000.00	\$12,500		Each	\$250,000.00	\$0	0.05	Each	\$250,000.00	\$12,500
Ground Storage Tank		Gallons	\$0.40	\$0		Gallons	\$0.40	\$0	0	Gallons	\$0.40	\$0
Standpipe		Gallons	\$0.55	\$0		Gallons	\$0.55	\$0	0	Gallons	\$0.55	\$0
Service Connections		Each	\$750.00	\$0		Each	\$750.00	\$0	0	Each	\$750.00	\$0
22" Waterline		L.F.	\$49.50	\$0		L.F.	\$49.50	\$0	0	L.F.	\$49.50	\$0
18" Waterline		L.F.	\$38.00	\$0		L.F.	\$38.00	\$0	0	L.F.	\$38.00	\$0
16" Waterline		L.F.	\$32.50	\$0		L.F.	\$32.50	\$0	0	L.F.	\$32.50	\$0
14" Waterline		L.F.	\$27.00	\$0		L.F.	\$27.00	\$0	0	L.F.	\$27.00	\$0
12" Waterline		L.F.	\$21.25	\$0		L.F.	\$21.25	\$0	0	L.F.	\$21.25	\$0
10" Waterline		L.F.	\$17.25	\$0		L.F.	\$17.25	\$0	0	L.F.	\$17.25	\$0
8" Waterline		L.F.	\$13.25	\$0		L.F.	\$13.25	\$0	0	L.F.	\$13.25	\$0
6" Waterline	9	L.F.	\$10.25	\$92	376	L.F.	\$10.25	\$3,854	385	L.F.	\$10.25	\$3,946
4" Waterline	89	L.F.	\$8.75	\$779		L.F.	\$8.75	\$0	89	L.F.	\$8.75	\$779
3" Waterline		L.F.	\$7.75	\$0		L.F.	\$7.75	\$0	0	L.F.	\$7.75	\$0
2" Waterline		L.F.	\$7.25	\$0	175	L.F.	\$7.25	\$1,269	175	L.F.	\$7.25	\$1,269
22" Gate Valve		Each	\$3,800.00	\$0		Each	\$3,800.00	\$0	0	Each	\$3,800.00	\$0
18" Gate Valve		Each	\$2,825.00	\$0		Each	\$2,825.00	\$0	0	Each	\$2,825.00	\$0
16" Gate Valve		Each	\$2,250.00	\$0		Each	\$2,250.00	\$0	0	Each	\$2,250.00	\$0
14" Gate Valve		Each	\$1,475.00	\$0		Each	\$1,475.00	\$0	0	Each	\$1,475.00	\$0
12" Gate Valve		Each	\$1,225.00	\$0		Each	\$1,225.00	\$0	0	Each	\$1,225.00	\$0
10" Gate Valve		Each	\$970.00	\$0		Each	\$970.00	\$0	0	Each	\$970.00	\$0
8" Gate Valve		Each	\$710.00	\$0		Each	\$710.00	\$0	0	Each	\$710.00	\$0
6" Gate Valve		Each	\$535.00	\$0	1	Each	\$535.00	\$535	1	Each	\$535.00	\$535
4" Gate Valve	1	Each	\$450.00	\$450		Each	\$450.00	\$0	1	Each	\$450.00	\$450
3" Gate Valve		Each	\$380.00	\$0		Each	\$380.00	\$0	0	Each	\$380.00	\$0
2" Gate Valve		Each	\$320.00	\$0	1	Each	\$320.00	\$320	1	Each	\$320.00	\$320
Fire Hydrant		Each	\$1,500.00	\$0		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Pavement Repair	11	S.Y.	\$30.00	\$327	61	S.Y.	\$30.00	\$1,837	72	S.Y.	\$30.00	\$2,163
Trench Safety	98	L.F.	\$1.50	\$147	551	L.F.	\$1.50	\$827	649	L.F.	\$1.50	\$974
Subtotal Construction				\$305,695				\$8,641				\$314,336
Contingencies	15%			\$45,854	15%		\$1,296		15%			\$47,150
Project Administration	1%			\$3,057	1%		\$86		1%			\$3,143
Engineering Design Phase	12%			\$36,683	12%		\$1,037		12%			\$37,720
Construction Inspection	1%			\$3,057	1%		\$86		1%			\$3,143
Geotechnical	1%			\$3,057	1%		\$86		1%			\$3,143
Design Surveying	2%			\$6,114	2%		\$173		2%			\$6,287
Construction Surveying	1%			\$3,057	1%		\$86		1%			\$3,143
Material Testing	1%			\$3,057	1%		\$86		1%			\$3,143
Engineering Construction Phase	2%			\$6,114	2%		\$173		2%			\$6,287
Easements	5%			\$15,285	5%		\$432		5%			\$15,717
Legal	2%			\$6,114	2%		\$173		2%			\$6,287
Fiscal	2%			\$6,114	2%		\$173		2%			\$6,287
Subtotal Non-Construction				\$137,563			\$3,888					\$141,451
TOTAL PROJECT COST				\$443,257			\$12,529					\$455,787

**SABINE COUNTY
TOTAL WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2010 PHASE				2020 PHASE				2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)	0	Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0	1	Each	\$260,000.00	\$260,000	1	Each	\$260,000.00	\$260,000
Conventional Wastewater Treatment Plant (0.04 MGD)	0	Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0	1	Each	\$310,000.00	\$310,000	1	Each	\$310,000.00	\$310,000
Conventional Wastewater Treatment Plant (0.05 MGD)	0	Each	\$350,000.00	\$0	1	Each	\$350,000.00	\$350,000	0	Each	\$350,000.00	\$0	1	Each	\$350,000.00	\$350,000
Conventional Wastewater Treatment Plant (0.07 MGD)	0	Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0	1	Each	\$440,000.00	\$440,000	1	Each	\$440,000.00	\$440,000
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000	3	Each	\$520,000.00	\$1,560,000
Conventional Wastewater Treatment Plant (0.11 MGD)	1	Each	\$610,000.00	\$610,000	0	Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0	1	Each	\$610,000.00	\$610,000
Conventional Wastewater Treatment Plant (0.12 MGD)	0	Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0	2	Each	\$650,000.00	\$1,300,000	2	Each	\$650,000.00	\$1,300,000
6" Gravity Collection Line (12'-14' Deep)	28244	L.F.	\$19.00	\$536,636	20019.2	L.F.	\$19.00	\$380,365	53179.2	L.F.	\$19.00	\$1,010,405	101442.4	L.F.	\$19.00	\$1,927,406
6" Gravity Collection Line (10'-12' Deep)	28244	L.F.	\$18.75	\$529,575	20019.2	L.F.	\$18.75	\$375,360	53179.2	L.F.	\$18.75	\$997,110	101442.4	L.F.	\$18.75	\$1,902,045
6" Gravity Collection Line (8'-10' Deep)	28244	L.F.	\$16.75	\$473,087	20019.2	L.F.	\$16.75	\$335,322	53179.2	L.F.	\$16.75	\$890,752	101442.4	L.F.	\$16.75	\$1,699,160
6" Gravity Collection Line (6'-8' Deep)	28244	L.F.	\$16.00	\$451,904	20019.2	L.F.	\$16.00	\$320,307	53179.2	L.F.	\$16.00	\$850,867	101442.4	L.F.	\$16.00	\$1,623,078
6" Gravity Collection Line (4'-6' Deep)	28244	L.F.	\$16.00	\$451,904	20019.2	L.F.	\$16.00	\$320,307	53179.2	L.F.	\$16.00	\$850,867	101442.4	L.F.	\$16.00	\$1,623,078
8" Effluent Line	2400	L.F.	\$20.75	\$49,800	4200	L.F.	\$20.75	\$87,150	3400	L.F.	\$20.75	\$70,550	10000	L.F.	\$20.75	\$207,500
Manhole (12'-14' Deep)	56	Each	\$1,900.00	\$107,327	40	Each	\$1,900.00	\$76,073	106	Each	\$1,900.00	\$202,081	202,8848	Each	\$1,900.00	\$385,481
Manhole (10'-12' Deep)	56	Each	\$1,700.00	\$96,030	40	Each	\$1,700.00	\$68,065	106	Each	\$1,700.00	\$180,809	202,8848	Each	\$1,700.00	\$344,904
Manhole (8'-10' Deep)	56	Each	\$1,500.00	\$84,732	40	Each	\$1,500.00	\$60,058	106	Each	\$1,500.00	\$159,538	202,8848	Each	\$1,500.00	\$304,327
Manhole (6'-8' Deep)	56	Each	\$1,300.00	\$73,434	40	Each	\$1,300.00	\$52,050	106	Each	\$1,300.00	\$138,266	202,8848	Each	\$1,300.00	\$263,750
Manhole (4'-6' Deep)	56	Each	\$1,300.00	\$73,434	40	Each	\$1,300.00	\$52,050	106	Each	\$1,300.00	\$138,266	202,8848	Each	\$1,300.00	\$263,750
Cleanout	960	Each	\$1,000.00	\$960,000	646	Each	\$1,000.00	\$646,000	2080	Each	\$1,000.00	\$2,080,000	3666	Each	\$1,000.00	\$3,666,000
Lift Station with Grinder Pumps (1-20 GPM)	8	Each	\$50,000.00	\$400,000	5	Each	\$50,000.00	\$250,000	19	Each	\$50,000.00	\$950,000	32	Each	\$50,000.00	\$1,600,000
Lift Station with Grinder Pumps (20-40 GPM)	4	Each	\$50,000.00	\$200,000	5	Each	\$50,000.00	\$250,000	8	Each	\$50,000.00	\$400,000	17	Each	\$50,000.00	\$850,000
Lift Station with Grinder Pumps (40-60 GPM)	4	Each	\$50,000.00	\$200,000	3	Each	\$50,000.00	\$150,000	6	Each	\$50,000.00	\$300,000	13	Each	\$50,000.00	\$650,000
Lift Station with Grinder Pumps (60-80 GPM)	2	Each	\$80,000.00	\$160,000	0	Each	\$80,000.00	\$0	1	Each	\$80,000.00	\$80,000	3	Each	\$80,000.00	\$240,000
Lift Station with Grinder Pumps (80-100 GPM)	1	Each	\$80,000.00	\$80,000	2	Each	\$80,000.00	\$160,000	1	Each	\$80,000.00	\$80,000	4	Each	\$80,000.00	\$320,000
Lift Station with Grinder Pumps (100-120 GPM)	1	Each	\$170,000.00	\$170,000	0	Each	\$170,000.00	\$0	2	Each	\$170,000.00	\$340,000	3	Each	\$170,000.00	\$510,000
Lift Station with Grinder Pumps (120-140 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	2	Each	\$170,000.00	\$340,000	2	Each	\$170,000.00	\$340,000
Lift Station with Grinder Pumps (140-160 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Lift Station with Grinder Pumps (160-180 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)	1	Each	\$170,000.00	\$170,000	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	1	Each	\$170,000.00	\$170,000
4" Force Main	65900	L.F.	\$9.75	\$642,525	67610	L.F.	\$9.75	\$659,198	161830	L.F.	\$9.75	\$1,577,843	295340	L.F.	\$9.75	\$2,879,565
6" Gravity Main (4'-6' Deep)	14585	L.F.	\$19.75	\$288,054	3640	L.F.	\$19.75	\$71,890	47990	L.F.	\$19.75	\$947,803	66215	L.F.	\$19.75	\$1,307,746
Service Connections	960	Each	\$500.00	\$480,000	646	Each	\$500.00	\$323,000	2080	Each	\$500.00	\$1,040,000	3686	Each	\$500.00	\$1,843,000
Pavement Repair	47073	S.Y.	\$30.00	\$1,412,200	33365.33	S.Y.	\$30.00	\$1,000,960	88632	S.Y.	\$30.00	\$2,658,960	169070.7	S.Y.	\$30.00	\$5,072,120
Trench Safety	141220	L.F.	\$1.50	\$211,830	100096	L.F.	\$1.50	\$150,144	265896	L.F.	\$1.50	\$398,844	507212	L.F.	\$1.50	\$760,818
Subtotal Construction				\$9,432,472				\$6,658,298				\$19,682,959				\$35,773,730
Contingencies	15%			\$1,414,871	15%			\$998,745	15%			\$2,952,444	15%			\$5,366,059
Project Administration	1%			\$94,325	1%			\$66,583	1%			\$196,830	1%			\$357,737
Engineering Design Phase	12%			\$1,131,897	12%			\$798,996	12%			\$2,361,955	12%			\$4,292,848
Construction Inspection	1%			\$94,325	1%			\$66,583	1%			\$196,830	1%			\$357,737
Geotechnical	1%			\$94,325	1%			\$66,583	1%			\$196,830	1%			\$357,737
Design Surveying	2%			\$188,649	2%			\$133,166	2%			\$393,659	2%			\$715,475
Construction Surveying	1%			\$94,325	1%			\$66,583	1%			\$196,830	1%			\$357,737
Material Testing	1%			\$94,325	1%			\$66,583	1%			\$196,830	1%			\$357,737
Engineering Construction Phase	2%			\$188,649	2%			\$133,166	2%			\$393,659	2%			\$715,475
Wastewater Discharge Permits	2%			\$188,649	2%			\$133,166	2%			\$393,659	2%			\$715,475
Easements	5%			\$471,624	5%			\$332,915	5%			\$984,148	5%			\$1,788,686
Legal	2%			\$188,649	2%			\$133,166	2%			\$393,659	2%			\$715,475
Fiscal	2%			\$188,649	2%			\$133,166	2%			\$393,659	2%			\$715,475
Subtotal Non-Construction				\$4,433,262				\$3,128,400				\$9,250,991				\$16,813,653
TOTAL PROJECT COST				\$13,865,734				\$9,787,698				\$28,933,950				\$52,587,383

**BEECHWOOD / SOUTH SABINE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2010 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)	1	Each	\$610,000.00	\$610,000	1	Each	\$610,000.00	\$610,000
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
6" Gravity Collection Line (12'-14' Deep)	28244	L.F.	\$19.00	\$536,636	28244	L.F.	\$19.00	\$536,636
6" Gravity Collection Line (10'-12' Deep)	28244	L.F.	\$18.75	\$529,575	28244	L.F.	\$18.75	\$529,575
6" Gravity Collection Line (8'-10' Deep)	28244	L.F.	\$16.75	\$473,087	28244	L.F.	\$16.75	\$473,087
6" Gravity Collection Line (6'-8' Deep)	28244	L.F.	\$16.00	\$451,904	28244	L.F.	\$16.00	\$451,904
6" Gravity Collection Line (4'-6' Deep)	28244	L.F.	\$16.00	\$451,904	28244	L.F.	\$16.00	\$451,904
8" Effluent Line	2400	L.F.	\$20.75	\$49,800	2400	L.F.	\$20.75	\$49,800
Manhole (12'-14' Deep)	56	Each	\$1,900.00	\$107,327	56	Each	\$1,900.00	\$107,327
Manhole (10'-12' Deep)	56	Each	\$1,700.00	\$96,030	56	Each	\$1,700.00	\$96,030
Manhole (8'-10' Deep)	56	Each	\$1,500.00	\$84,732	56	Each	\$1,500.00	\$84,732
Manhole (6'-8' Deep)	56	Each	\$1,300.00	\$73,434	56	Each	\$1,300.00	\$73,434
Manhole (4'-6' Deep)	56	Each	\$1,300.00	\$73,434	56	Each	\$1,300.00	\$73,434
Cleanout	960	Each	\$1,000.00	\$960,000	960	Each	\$1,000.00	\$960,000
Lift Station with Grinder Pumps (1-20 GPM)	8	Each	\$50,000.00	\$400,000	8	Each	\$50,000.00	\$400,000
Lift Station with Grinder Pumps (20-40 GPM)	4	Each	\$50,000.00	\$200,000	4	Each	\$50,000.00	\$200,000
Lift Station with Grinder Pumps (40-60 GPM)	4	Each	\$50,000.00	\$200,000	4	Each	\$50,000.00	\$200,000
Lift Station with Grinder Pumps (60-80 GPM)	2	Each	\$80,000.00	\$160,000	2	Each	\$80,000.00	\$160,000
Lift Station with Grinder Pumps (80-100 GPM)	1	Each	\$80,000.00	\$80,000	1	Each	\$80,000.00	\$80,000
Lift Station with Grinder Pumps (100-120 GPM)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
4" Force Main	65900	L.F.	\$9.75	\$642,525	65900	L.F.	\$9.75	\$642,525
6" Gravity Main (4'-6' Deep)	14585	L.F.	\$19.75	\$288,054	14585	L.F.	\$19.75	\$288,054
Service Connections	960	Each	\$500.00	\$480,000	960	Each	\$500.00	\$480,000
Pavement Repair	47073	S.Y.	\$30.00	\$1,412,200	47073	S.Y.	\$30.00	\$1,412,200
Trench Safety	141220	L.F.	\$1.50	\$211,830	141220	L.F.	\$1.50	\$211,830
Subtotal Construction				\$9,432,472				\$9,432,472
Contingencies	15%			\$1,414,871	15%			\$1,414,871
Project Administration	1%			\$94,325	1%			\$94,325
Engineering Design Phase	12%			\$1,131,897	12%			\$1,131,897
Construction Inspection	1%			\$94,325	1%			\$94,325
Geotechnical	1%			\$94,325	1%			\$94,325
Design Surveying	2%			\$188,649	2%			\$188,649
Construction Surveying	1%			\$94,325	1%			\$94,325
Material Testing	1%			\$94,325	1%			\$94,325
Engineering Construction Phase	2%			\$188,649	2%			\$188,649
Wastewater Discharge Permits	2%			\$188,649	2%			\$188,649
Easements	5%			\$471,624	5%			\$471,624
Legal	2%			\$188,649	2%			\$188,649
Fiscal	2%			\$188,649	2%			\$188,649
Subtotal Non-Construction				\$4,433,262				\$4,433,262
TOTAL PROJECT COST				\$13,865,734				\$13,865,734

**TIMBERLANE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2020 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)	1	Each	\$350,000.00	\$350,000	1	Each	\$350,000.00	\$350,000
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
6" Gravity Collection Line (12'-14' Deep)	20019	L.F.	\$19.00	\$380,365	20019	L.F.	\$19.00	\$380,365
6" Gravity Collection Line (10'-12' Deep)	20019	L.F.	\$18.75	\$375,360	20019	L.F.	\$18.75	\$375,360
6" Gravity Collection Line (8'-10' Deep)	20019	L.F.	\$16.75	\$335,322	20019	L.F.	\$16.75	\$335,322
6" Gravity Collection Line (6'-8' Deep)	20019	L.F.	\$16.00	\$320,307	20019	L.F.	\$16.00	\$320,307
6" Gravity Collection Line (4'-6' Deep)	20019	L.F.	\$16.00	\$320,307	20019	L.F.	\$16.00	\$320,307
8" Effluent Line	4200	L.F.	\$20.75	\$87,150	4200	L.F.	\$20.75	\$87,150
Manhole (12'-14' Deep)	40	Each	\$1,900.00	\$76,073	40	Each	\$1,900.00	\$76,073
Manhole (10'-12' Deep)	40	Each	\$1,700.00	\$68,065	40	Each	\$1,700.00	\$68,065
Manhole (8'-10' Deep)	40	Each	\$1,500.00	\$60,058	40	Each	\$1,500.00	\$60,058
Manhole (6'-8' Deep)	40	Each	\$1,300.00	\$52,050	40	Each	\$1,300.00	\$52,050
Manhole (4'-6' Deep)	40	Each	\$1,300.00	\$52,050	40	Each	\$1,300.00	\$52,050
Cleanout	646	Each	\$1,000.00	\$646,000	646	Each	\$1,000.00	\$646,000
Lift Station with Grinder Pumps (1-20 GPM)	5	Each	\$50,000.00	\$250,000	5	Each	\$50,000.00	\$250,000
Lift Station with Grinder Pumps (20-40 GPM)	5	Each	\$50,000.00	\$250,000	5	Each	\$50,000.00	\$250,000
Lift Station with Grinder Pumps (40-60 GPM)	3	Each	\$50,000.00	\$150,000	3	Each	\$50,000.00	\$150,000
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)	2	Each	\$80,000.00	\$160,000	2	Each	\$80,000.00	\$160,000
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	67610	L.F.	\$9.75	\$659,198	67610	L.F.	\$9.75	\$659,198
6" Gravity Main (4'-6' Deep)	3640	L.F.	\$19.75	\$71,890	3640	L.F.	\$19.75	\$71,890
Service Connections	646	Each	\$500.00	\$323,000	646	Each	\$500.00	\$323,000
Pavement Repair	33365	S.Y.	\$30.00	\$1,000,960	33365	S.Y.	\$30.00	\$1,000,960
Trench Safety	100096	L.F.	\$1.50	\$150,144	100096	L.F.	\$1.50	\$150,144
Subtotal Construction				\$6,658,298				\$6,658,298
Contingencies	15%			\$998,745	15%			\$998,745
Project Administration	1%			\$66,583	1%			\$66,583
Engineering Design Phase	12%			\$798,996	12%			\$798,996
Construction Inspection	1%			\$66,583	1%			\$66,583
Geotechnical	1%			\$66,583	1%			\$66,583
Design Surveying	2%			\$133,166	2%			\$133,166
Construction Surveying	1%			\$66,583	1%			\$66,583
Material Testing	1%			\$66,583	1%			\$66,583
Engineering Construction Phase	2%			\$133,166	2%			\$133,166
Wastewater Discharge Permits	2%			\$133,166	2%			\$133,166
Easements	5%			\$332,915	5%			\$332,915
Legal	2%			\$133,166	2%			\$133,166
Fiscal	2%			\$133,166	2%			\$133,166
Subtotal Non-Construction				\$3,129,400				\$3,129,400
TOTAL PROJECT COST				\$9,787,698				\$9,787,698

**EL CAMINO BAY AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)	1	Each	\$260,000.00	\$260,000	1	Each	\$260,000.00	\$260,000
Conventional Wastewater Treatment Plant (0.04 MGD)	1	Each	\$310,000.00	\$310,000	1	Each	\$310,000.00	\$310,000
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)	1	Each	\$440,000.00	\$440,000	1	Each	\$440,000.00	\$440,000
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
6" Gravity Collection Line (12'-14' Deep)	21615	L.F.	\$19.00	\$410,689	21615	L.F.	\$19.00	\$410,689
6" Gravity Collection Line (10'-12' Deep)	21615	L.F.	\$18.75	\$405,285	21615	L.F.	\$18.75	\$405,285
6" Gravity Collection Line (8'-10' Deep)	21615	L.F.	\$16.75	\$362,055	21615	L.F.	\$16.75	\$362,055
6" Gravity Collection Line (6'-8' Deep)	21615	L.F.	\$16.00	\$345,843	21615	L.F.	\$16.00	\$345,843
6" Gravity Collection Line (4'-6' Deep)	21615	L.F.	\$16.00	\$345,843	21615	L.F.	\$16.00	\$345,843
8" Effluent Line	1150	L.F.	\$20.75	\$23,863	1150	L.F.	\$20.75	\$23,863
Manhole (12'-14' Deep)	43	Each	\$1,900.00	\$82,138	43	Each	\$1,900.00	\$82,138
Manhole (10'-12' Deep)	43	Each	\$1,700.00	\$73,492	43	Each	\$1,700.00	\$73,492
Manhole (8'-10' Deep)	43	Each	\$1,500.00	\$64,846	43	Each	\$1,500.00	\$64,846
Manhole (6'-8' Deep)	43	Each	\$1,300.00	\$56,200	43	Each	\$1,300.00	\$56,200
Manhole (4'-6' Deep)	43	Each	\$1,300.00	\$56,200	43	Each	\$1,300.00	\$56,200
Cleanout	888	Each	\$1,000.00	\$888,000	888	Each	\$1,000.00	\$888,000
Lift Station with Grinder Pumps (1-20 GPM)	9	Each	\$50,000.00	\$450,000	9	Each	\$50,000.00	\$450,000
Lift Station with Grinder Pumps (20-40 GPM)	4	Each	\$50,000.00	\$200,000	4	Each	\$50,000.00	\$200,000
Lift Station with Grinder Pumps (40-60 GPM)	2	Each	\$50,000.00	\$100,000	2	Each	\$50,000.00	\$100,000
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	53300	L.F.	\$9.75	\$519,675	53300	L.F.	\$9.75	\$519,675
6" Gravity Main (4'-6' Deep)	27620	L.F.	\$19.75	\$545,495	27620	L.F.	\$19.75	\$545,495
Service Connections	888	Each	\$500.00	\$444,000	888	Each	\$500.00	\$444,000
Pavement Repair	36025	S.Y.	\$30.00	\$1,080,760	36025	S.Y.	\$30.00	\$1,080,760
Trench Safety	108076	L.F.	\$1.50	\$162,114	108076	L.F.	\$1.50	\$162,114
Subtotal Construction				\$8,316,495				\$8,316,495
Contingencies	15%			\$1,247,474	15%			\$1,247,474
Project Administration	1%			\$83,165	1%			\$83,165
Engineering Design Phase	12%			\$997,979	12%			\$997,979
Construction Inspection	1%			\$83,165	1%			\$83,165
Geotechnical	1%			\$83,165	1%			\$83,165
Design Surveying	2%			\$166,330	2%			\$166,330
Construction Surveying	1%			\$83,165	1%			\$83,165
Material Testing	1%			\$83,165	1%			\$83,165
Engineering Construction Phase	2%			\$166,330	2%			\$166,330
Wastewater Discharge Permits	2%			\$166,330	2%			\$166,330
Easements	5%			\$415,825	5%			\$415,825
Legal	2%			\$166,330	2%			\$166,330
Fiscal	2%			\$166,330	2%			\$166,330
Subtotal Non-Construction				\$3,908,753				\$3,908,753
TOTAL PROJECT COST				\$12,225,248				\$12,225,248

**MIDLAKE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)		Each	\$520,000.00	\$0	0	Each	\$520,000.00	\$0
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)	1	Each	\$650,000.00	\$650,000	1	Each	\$650,000.00	\$650,000
6" Gravity Collection Line (12'-14' Deep)	15557	L.F.	\$19.00	\$295,579	15557	L.F.	\$19.00	\$295,579
6" Gravity Collection Line (10'-12' Deep)	15557	L.F.	\$18.75	\$291,690	15557	L.F.	\$18.75	\$291,690
6" Gravity Collection Line (8'-10' Deep)	15557	L.F.	\$16.75	\$260,576	15557	L.F.	\$16.75	\$260,576
6" Gravity Collection Line (6'-8' Deep)	15557	L.F.	\$16.00	\$248,909	15557	L.F.	\$16.00	\$248,909
6" Gravity Collection Line (4'-6' Deep)	15557	L.F.	\$16.00	\$248,909	15557	L.F.	\$16.00	\$248,909
8" Effluent Line	1050	L.F.	\$20.75	\$21,788	1050	L.F.	\$20.75	\$21,788
Manhole (12'-14' Deep)	31	Each	\$1,900.00	\$59,116	31	Each	\$1,900.00	\$59,116
Manhole (10'-12' Deep)	31	Each	\$1,700.00	\$52,893	31	Each	\$1,700.00	\$52,893
Manhole (8'-10' Deep)	31	Each	\$1,500.00	\$46,670	31	Each	\$1,500.00	\$46,670
Manhole (6'-8' Deep)	31	Each	\$1,300.00	\$40,448	31	Each	\$1,300.00	\$40,448
Manhole (4'-6' Deep)	31	Each	\$1,300.00	\$40,448	31	Each	\$1,300.00	\$40,448
Cleanout	598	Each	\$1,000.00	\$598,000	598	Each	\$1,000.00	\$598,000
Lift Station with Grinder Pumps (1-20 GPM)	3	Each	\$50,000.00	\$150,000	3	Each	\$50,000.00	\$150,000
Lift Station with Grinder Pumps (20-40 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)	2	Each	\$50,000.00	\$100,000	2	Each	\$50,000.00	\$100,000
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)	1	Each	\$80,000.00	\$80,000	1	Each	\$80,000.00	\$80,000
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	47410	L.F.	\$9.75	\$462,248	47410	L.F.	\$9.75	\$462,248
6" Gravity Main (4'-6' Deep)	10040	L.F.	\$19.75	\$198,290	10040	L.F.	\$19.75	\$198,290
Service Connections	598	Each	\$500.00	\$299,000	598	Each	\$500.00	\$299,000
Pavement Repair	25928	S.Y.	\$30.00	\$777,840	25928	S.Y.	\$30.00	\$777,840
Trench Safety	77784	L.F.	\$1.50	\$116,676	77784	L.F.	\$1.50	\$116,676
Subtotal Construction				\$5,039,079				\$5,039,079
Contingencies	15%			\$755,862	15%			\$755,862
Project Administration	1%			\$50,391	1%			\$50,391
Engineering Design Phase	12%			\$604,689	12%			\$604,689
Construction Inspection	1%			\$50,391	1%			\$50,391
Geotechnical	1%			\$50,391	1%			\$50,391
Design Surveying	2%			\$100,782	2%			\$100,782
Construction Surveying	1%			\$50,391	1%			\$50,391
Material Testing	1%			\$50,391	1%			\$50,391
Engineering Construction Phase	2%			\$100,782	2%			\$100,782
Wastewater Discharge Permits	2%			\$100,782	2%			\$100,782
Easements	5%			\$251,954	5%			\$251,954
Legal	2%			\$100,782	2%			\$100,782
Fiscal	2%			\$100,782	2%			\$100,782
Subtotal Non-Construction				\$2,368,367				\$2,368,367
TOTAL PROJECT COST				\$7,407,446				\$7,407,446

**NORTH AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)		Each	\$520,000.00	\$0	0	Each	\$520,000.00	\$0
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)	1	Each	\$650,000.00	\$650,000	1	Each	\$650,000.00	\$650,000
6" Gravity Collection Line (12'-14' Deep)	16007	L.F.	\$19.00	\$304,137	16007	L.F.	\$19.00	\$304,137
6" Gravity Collection Line (10'-12' Deep)	16007	L.F.	\$18.75	\$300,135	16007	L.F.	\$18.75	\$300,135
6" Gravity Collection Line (8'-10' Deep)	16007	L.F.	\$16.75	\$268,121	16007	L.F.	\$16.75	\$268,121
6" Gravity Collection Line (6'-8' Deep)	16007	L.F.	\$16.00	\$256,115	16007	L.F.	\$16.00	\$256,115
6" Gravity Collection Line (4'-6' Deep)	16007	L.F.	\$16.00	\$256,115	16007	L.F.	\$16.00	\$256,115
8" Effluent Line	1200	L.F.	\$20.75	\$24,900	1200	L.F.	\$20.75	\$24,900
Manhole (12'-14' Deep)	32	Each	\$1,900.00	\$60,827	32	Each	\$1,900.00	\$60,827
Manhole (10'-12' Deep)	32	Each	\$1,700.00	\$54,424	32	Each	\$1,700.00	\$54,424
Manhole (8'-10' Deep)	32	Each	\$1,500.00	\$48,022	32	Each	\$1,500.00	\$48,022
Manhole (6'-8' Deep)	32	Each	\$1,300.00	\$41,619	32	Each	\$1,300.00	\$41,619
Manhole (4'-6' Deep)	32	Each	\$1,300.00	\$41,619	32	Each	\$1,300.00	\$41,619
Cleanout	594	Each	\$1,000.00	\$594,000	594	Each	\$1,000.00	\$594,000
Lift Station with Grinder Pumps (1-20 GPM)	7	Each	\$50,000.00	\$350,000	7	Each	\$50,000.00	\$350,000
Lift Station with Grinder Pumps (20-40 GPM)	4	Each	\$50,000.00	\$200,000	4	Each	\$50,000.00	\$200,000
Lift Station with Grinder Pumps (40-60 GPM)	2	Each	\$50,000.00	\$100,000	2	Each	\$50,000.00	\$100,000
Lift Station with Grinder Pumps (60-80 GPM)	1	Each	\$80,000.00	\$80,000	1	Each	\$80,000.00	\$80,000
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Lift Station with Grinder Pumps (120-140 GPM)	2	Each	\$170,000.00	\$340,000	2	Each	\$170,000.00	\$340,000
Lift Station with Grinder Pumps (140-160 GPM)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	61120	L.F.	\$9.75	\$595,920	61120	L.F.	\$9.75	\$595,920
6" Gravity Main (4'-6' Deep)	10330	L.F.	\$19.75	\$204,018	10330	L.F.	\$19.75	\$204,018
Service Connections	594	Each	\$500.00	\$297,000	594	Each	\$500.00	\$297,000
Pavement Repair	26679	S.Y.	\$30.00	\$800,360	26679	S.Y.	\$30.00	\$800,360
Trench Safety	80036	L.F.	\$1.50	\$120,054	80036	L.F.	\$1.50	\$120,054
Subtotal Construction				\$6,327,385				\$6,327,385
Contingencies	15%			\$949,108	15%			\$949,108
Project Administration	1%			\$63,274	1%			\$63,274
Engineering Design Phase	12%			\$759,286	12%			\$759,286
Construction Inspection	1%			\$63,274	1%			\$63,274
Geotechnical	1%			\$63,274	1%			\$63,274
Design Surveying	2%			\$126,548	2%			\$126,548
Construction Surveying	1%			\$63,274	1%			\$63,274
Material Testing	1%			\$63,274	1%			\$63,274
Engineering Construction Phase	2%			\$126,548	2%			\$126,548
Wastewater Discharge Permits	2%			\$126,548	2%			\$126,548
Easements	5%			\$316,369	5%			\$316,369
Legal	2%			\$126,548	2%			\$126,548
Fiscal	2%			\$126,548	2%			\$126,548
Subtotal Non-Construction				\$2,973,871				\$2,973,871
TOTAL PROJECT COST				\$9,301,256				\$9,301,256

**SABINE COUNTY
TOTAL WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2010 PHASE				2020 PHASE				2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	1	Each	\$85,000.00	\$85,000	5	Each	\$85,000.00	\$425,000	5	Each	\$85,000.00	\$425,000	11	Each	\$85,000.00	\$935,000
Natural Treatment Facilities (.005-.010 MGD)	6	Each	\$170,000.00	\$1,020,000	5	Each	\$170,000.00	\$850,000	3	Each	\$170,000.00	\$510,000	14	Each	\$170,000.00	\$2,380,000
Natural Treatment Facilities (.010-.015 MGD)	3	Each	\$255,000.00	\$765,000	0	Each	\$255,000.00	\$0	7	Each	\$255,000.00	\$1,785,000	10	Each	\$255,000.00	\$2,550,000
Natural Treatment Facilities (.015-.020 MGD)	1	Each	\$340,000.00	\$340,000	1	Each	\$340,000.00	\$340,000	0	Each	\$340,000.00	\$0	2	Each	\$340,000.00	\$680,000
Natural Treatment Facilities (.020-.025 MGD)	0	Each	\$425,000.00	\$0	0	Each	\$425,000.00	\$0	3	Each	\$425,000.00	\$1,275,000	3	Each	\$425,000.00	\$1,275,000
Natural Treatment Facilities (.025-.030 MGD)	0	Each	\$510,000.00	\$0	0	Each	\$510,000.00	\$0	3	Each	\$510,000.00	\$1,530,000	3	Each	\$510,000.00	\$1,530,000
Natural Treatment Facilities (.030-.040 MGD)	2	Each	\$880,000.00	\$1,360,000	1	Each	\$880,000.00	\$680,000	1	Each	\$880,000.00	\$680,000	4	Each	\$880,000.00	\$2,720,000
6" Gravity Collection Line (12'-14' Deep)	28150	L.F.	\$19.00	\$534,850	20019	L.F.	\$19.00	\$380,365	47090	L.F.	\$19.00	\$894,710	95259	L.F.	\$19.00	\$1,809,925
6" Gravity Collection Line (10'-12' Deep)	28150	L.F.	\$18.75	\$527,813	20019	L.F.	\$18.75	\$375,360	47090	L.F.	\$18.75	\$882,938	95259	L.F.	\$18.75	\$1,786,110
6" Gravity Collection Line (8'-10' Deep)	28150	L.F.	\$16.75	\$471,513	20019	L.F.	\$16.75	\$335,322	47090	L.F.	\$16.75	\$788,758	95259	L.F.	\$16.75	\$1,595,592
6" Gravity Collection Line (6'-8' Deep)	28150	L.F.	\$16.00	\$450,400	20019	L.F.	\$16.00	\$320,307	47090	L.F.	\$16.00	\$753,440	95259	L.F.	\$16.00	\$1,524,147
6" Gravity Collection Line (4'-6' Deep)	28150	L.F.	\$16.00	\$450,400	20019	L.F.	\$16.00	\$320,307	47090	L.F.	\$16.00	\$753,440	95259	L.F.	\$16.00	\$1,524,147
8" Effluent Line	1300	L.F.	\$20.75	\$26,975	1200	L.F.	\$20.75	\$24,900	2200	L.F.	\$20.75	\$45,650	4700	L.F.	\$20.75	\$97,525
Manhole (12'-14' Deep)	56	Each	\$1,900.00	\$106,970	40	Each	\$1,900.00	\$76,073	94	Each	\$1,900.00	\$178,942	191	Each	\$1,900.00	\$361,985
Manhole (10'-12' Deep)	56	Each	\$1,700.00	\$95,710	40	Each	\$1,700.00	\$68,065	94	Each	\$1,700.00	\$160,106	191	Each	\$1,700.00	\$323,881
Manhole (8'-10' Deep)	56	Each	\$1,500.00	\$84,450	40	Each	\$1,500.00	\$60,058	94	Each	\$1,500.00	\$141,270	191	Each	\$1,500.00	\$285,778
Manhole (6'-8' Deep)	56	Each	\$1,300.00	\$73,190	40	Each	\$1,300.00	\$52,050	94	Each	\$1,300.00	\$122,434	191	Each	\$1,300.00	\$247,674
Manhole (4'-6' Deep)	56	Each	\$1,300.00	\$73,190	40	Each	\$1,300.00	\$52,050	94	Each	\$1,300.00	\$122,434	191	Each	\$1,300.00	\$247,674
Cleanout	879	Each	\$1,000.00	\$879,000	580	Each	\$1,000.00	\$580,000	1662	Each	\$1,000.00	\$1,662,000	3121	Each	\$1,000.00	\$3,121,000
Lift Station with Grinder Pumps (1-20 GPM)	13	Each	\$50,000.00	\$650,000	9	Each	\$50,000.00	\$450,000	13	Each	\$50,000.00	\$650,000	35	Each	\$50,000.00	\$1,750,000
Lift Station with Grinder Pumps (20-40 GPM)	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	32000	L.F.	\$9.75	\$312,000	15100	L.F.	\$9.75	\$147,225	26500	L.F.	\$9.75	\$258,375	73600	L.F.	\$9.75	\$717,600
Service Connections	879	Each	\$500.00	\$439,500	580	Each	\$500.00	\$290,000	1662	Each	\$500.00	\$831,000	3121	Each	\$500.00	\$1,560,500
Pavement Repair	46917	S.Y.	\$30.00	\$1,407,500	33365	S.Y.	\$30.00	\$1,000,960	78483	S.Y.	\$30.00	\$2,354,500	158765	S.Y.	\$30.00	\$4,762,960
Trench Safety	140750	L.F.	\$1.50	\$211,125	100096	L.F.	\$1.50	\$150,144	235450	L.F.	\$1.50	\$353,175	476296	L.F.	\$1.50	\$714,444
Subtotal Construction				\$10,364,585				\$6,978,185				\$17,158,171				\$34,500,941
Contingencies	15%			\$1,554,688	15%			\$1,046,728	15%			\$2,573,726	15%			\$5,175,141
Project Administration	1%			\$103,646	1%			\$69,782	1%			\$171,582	1%			\$345,009
Engineering Design Phase	12%			\$1,243,750	12%			\$837,382	12%			\$2,058,981	12%			\$4,140,113
Construction Inspection	1%			\$103,646	1%			\$69,782	1%			\$171,582	1%			\$345,009
Geotechnical	1%			\$103,646	1%			\$69,782	1%			\$171,582	1%			\$345,009
Design Surveying	2%			\$207,292	2%			\$139,564	2%			\$343,163	2%			\$690,019
Construction Surveying	1%			\$103,646	1%			\$69,782	1%			\$171,582	1%			\$345,009
Material Testing	1%			\$103,646	1%			\$69,782	1%			\$171,582	1%			\$345,009
Engineering Construction Phase	2%			\$207,292	2%			\$139,564	2%			\$343,163	2%			\$690,019
Wastewater Discharge Permits	2%			\$207,292	2%			\$139,564	2%			\$343,163	2%			\$690,019
Easements	5%			\$518,229	5%			\$348,909	5%			\$857,909	5%			\$1,725,047
Legal	2%			\$207,292	2%			\$139,564	2%			\$343,163	2%			\$690,019
Fiscal	2%			\$207,292	2%			\$139,564	2%			\$343,163	2%			\$690,019
Subtotal Non-Construction				\$4,871,355				\$3,279,747				\$8,064,340				\$16,215,442
TOTAL PROJECT COST				\$15,235,940				\$10,257,933				\$25,222,511				\$50,716,384

**BEECHWOOD / SOUTH SABINE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2010 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	1	Each	\$85,000.00	\$85,000	1	Each	\$85,000.00	\$85,000
Natural Treatment Facilities (.005-.010 MGD)	6	Each	\$170,000.00	\$1,020,000	6	Each	\$170,000.00	\$1,020,000
Natural Treatment Facilities (.010-.015 MGD)	3	Each	\$255,000.00	\$765,000	3	Each	\$255,000.00	\$765,000
Natural Treatment Facilities (.015-.020 MGD)	1	Each	\$340,000.00	\$340,000	1	Each	\$340,000.00	\$340,000
Natural Treatment Facilities (.020-.025 MGD)	0	Each	\$425,000.00	\$0	0	Each	\$425,000.00	\$0
Natural Treatment Facilities (.025-.030 MGD)	0	Each	\$510,000.00	\$0	0	Each	\$510,000.00	\$0
Natural Treatment Facilities (.030-.040 MGD)	2	Each	\$680,000.00	\$1,360,000	2	Each	\$680,000.00	\$1,360,000
6" Gravity Collection Line (12'-14' Deep)	28150	L.F.	\$19.00	\$534,850	28150	L.F.	\$19.00	\$534,850
6" Gravity Collection Line (10'-12' Deep)	28150	L.F.	\$18.75	\$527,813	28150	L.F.	\$18.75	\$527,813
6" Gravity Collection Line (8'-10' Deep)	28150	L.F.	\$16.75	\$471,513	28150	L.F.	\$16.75	\$471,513
6" Gravity Collection Line (6'-8' Deep)	28150	L.F.	\$16.00	\$450,400	28150	L.F.	\$16.00	\$450,400
6" Gravity Collection Line (4'-6' Deep)	28150	L.F.	\$16.00	\$450,400	28150	L.F.	\$16.00	\$450,400
8" Effluent Line	1300	L.F.	\$20.75	\$26,975	1300	L.F.	\$20.75	\$26,975
Manhole (12'-14' Deep)	56	Each	\$1,900.00	\$106,970	56	Each	\$1,900.00	\$106,970
Manhole (10'-12' Deep)	56	Each	\$1,700.00	\$95,710	56	Each	\$1,700.00	\$95,710
Manhole (8'-10' Deep)	56	Each	\$1,500.00	\$84,450	56	Each	\$1,500.00	\$84,450
Manhole (6'-8' Deep)	56	Each	\$1,300.00	\$73,190	56	Each	\$1,300.00	\$73,190
Manhole (4'-6' Deep)	56	Each	\$1,300.00	\$73,190	56	Each	\$1,300.00	\$73,190
Cleanout	879	Each	\$1,000.00	\$879,000	879	Each	\$1,000.00	\$879,000
Lift Station with Grinder Pumps (1-20 GPM)	13	Each	\$50,000.00	\$650,000	13	Each	\$50,000.00	\$650,000
Lift Station with Grinder Pumps (20-40 GPM)	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)	0	Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)	0	Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)	0	Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	32000	L.F.	\$9.75	\$312,000	32000	L.F.	\$9.75	\$312,000
Service Connections	879	Each	\$500.00	\$439,500	879	Each	\$500.00	\$439,500
Pavement Repair	46917	S.Y.	\$30.00	\$1,407,500	46917	S.Y.	\$30.00	\$1,407,500
Trench Safety	140750	L.F.	\$1.50	\$211,125	140750	L.F.	\$1.50	\$211,125
Subtotal Construction				\$10,384,585				\$10,364,585
Contingencies	15%			\$1,554,688	15%			\$1,554,688
Project Administration	1%			\$103,646	1%			\$103,646
Engineering Design Phase	12%			\$1,243,750	12%			\$1,243,750
Construction Inspection	1%			\$103,646	1%			\$103,646
Geotechnical	1%			\$103,646	1%			\$103,646
Design Surveying	2%			\$207,292	2%			\$207,292
Construction Surveying	1%			\$103,646	1%			\$103,646
Material Testing	1%			\$103,646	1%			\$103,646
Engineering Construction Phase	2%			\$207,292	2%			\$207,292
Wastewater Discharge Permits	2%			\$207,292	2%			\$207,292
Easements	5%			\$518,229	5%			\$518,229
Legal	2%			\$207,292	2%			\$207,292
Fiscal	2%			\$207,292	2%			\$207,292
Subtotal Non-Construction				\$4,871,355				\$4,871,355
TOTAL PROJECT COST				\$15,235,940				\$15,235,940

**TIMBERLANE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2020 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	5	Each	\$85,000.00	\$425,000	5	Each	\$85,000.00	\$425,000
Natural Treatment Facilities (.005-.010 MGD)	5	Each	\$170,000.00	\$850,000	5	Each	\$170,000.00	\$850,000
Natural Treatment Facilities (.010-.015 MGD)		Each	\$255,000.00	\$0	0	Each	\$255,000.00	\$0
Natural Treatment Facilities (.015-.020 MGD)	1	Each	\$340,000.00	\$340,000	1	Each	\$340,000.00	\$340,000
Natural Treatment Facilities (.020-.025 MGD)		Each	\$425,000.00	\$0	0	Each	\$425,000.00	\$0
Natural Treatment Facilities (.025-.030 MGD)		Each	\$510,000.00	\$0	0	Each	\$510,000.00	\$0
Natural Treatment Facilities (.030-.040 MGD)	1	Each	\$680,000.00	\$680,000	1	Each	\$680,000.00	\$680,000
6" Gravity Collection Line (12'-14' Deep)	20019	L.F.	\$19.00	\$380,365	20019	L.F.	\$19.00	\$380,365
6" Gravity Collection Line (10'-12' Deep)	20019	L.F.	\$18.75	\$375,360	20019	L.F.	\$18.75	\$375,360
6" Gravity Collection Line (8'-10' Deep)	20019	L.F.	\$16.75	\$335,322	20019	L.F.	\$16.75	\$335,322
6" Gravity Collection Line (6'-8' Deep)	20019	L.F.	\$16.00	\$320,307	20019	L.F.	\$16.00	\$320,307
6" Gravity Collection Line (4'-6' Deep)	20019	L.F.	\$16.00	\$320,307	20019	L.F.	\$16.00	\$320,307
8" Effluent Line	1200	L.F.	\$20.75	\$24,900	1200	L.F.	\$20.75	\$24,900
Manhole (12'-14' Deep)	40	Each	\$1,900.00	\$76,073	40	Each	\$1,900.00	\$76,073
Manhole (10'-12' Deep)	40	Each	\$1,700.00	\$68,065	40	Each	\$1,700.00	\$68,065
Manhole (8'-10' Deep)	40	Each	\$1,500.00	\$60,058	40	Each	\$1,500.00	\$60,058
Manhole (6'-8' Deep)	40	Each	\$1,300.00	\$52,050	40	Each	\$1,300.00	\$52,050
Manhole (4'-6' Deep)	40	Each	\$1,300.00	\$52,050	40	Each	\$1,300.00	\$52,050
Cleanout	580	Each	\$1,000.00	\$580,000	580	Each	\$1,000.00	\$580,000
Lift Station with Grinder Pumps (1-20 GPM)	9	Each	\$50,000.00	\$450,000	9	Each	\$50,000.00	\$450,000
Lift Station with Grinder Pumps (20-40 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	15,100	L.F.	\$9.75	\$147,225	15100	L.F.	\$9.75	\$147,225
Service Connections	580	Each	\$500.00	\$290,000	580	Each	\$500.00	\$290,000
Pavement Repair	33365	S.Y.	\$30.00	\$1,000,960	33365	S.Y.	\$30.00	\$1,000,960
Trench Safety	100096	L.F.	\$1.50	\$150,144	100096	L.F.	\$1.50	\$150,144
Subtotal Construction				\$6,978,185				\$6,978,185
Contingencies	15%			\$1,046,728	15%			\$1,046,728
Project Administration	1%			\$69,782	1%			\$69,782
Engineering Design Phase	12%			\$837,382	12%			\$837,382
Construction Inspection	1%			\$69,782	1%			\$69,782
Geotechnical	1%			\$69,782	1%			\$69,782
Design Surveying	2%			\$139,564	2%			\$139,564
Construction Surveying	1%			\$69,782	1%			\$69,782
Material Testing	1%			\$69,782	1%			\$69,782
Engineering Construction Phase	2%			\$139,564	2%			\$139,564
Wastewater Discharge Permits	2%			\$139,564	2%			\$139,564
Easements	5%			\$348,909	5%			\$348,909
Legal	2%			\$139,564	2%			\$139,564
Fiscal	2%			\$139,564	2%			\$139,564
Subtotal Non-Construction				\$3,279,747				\$3,279,747
TOTAL PROJECT COST				\$10,257,933				\$10,257,933

**EL CAMINO BAY AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	2	Each	\$85,000.00	\$170,000	2	Each	\$85,000.00	\$170,000
Natural Treatment Facilities (.005-.010 MGD)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
Natural Treatment Facilities (.010-.015 MGD)	2	Each	\$255,000.00	\$510,000	2	Each	\$255,000.00	\$510,000
Natural Treatment Facilities (.015-.020 MGD)		Each	\$340,000.00	\$0		Each	\$340,000.00	\$0
Natural Treatment Facilities (.020-.025 MGD)	1	Each	\$425,000.00	\$425,000	1	Each	\$425,000.00	\$425,000
Natural Treatment Facilities (.025-.030 MGD)	2	Each	\$510,000.00	\$1,020,000	2	Each	\$510,000.00	\$1,020,000
Natural Treatment Facilities (.030-.040 MGD)	1	Each	\$680,000.00	\$680,000	1	Each	\$680,000.00	\$680,000
6" Gravity Collection Line (12'-14' Deep)	18740	L.F.	\$19.00	\$356,060	18740	L.F.	\$19.00	\$356,060
6" Gravity Collection Line (10'-12' Deep)	18740	L.F.	\$18.75	\$351,375	18740	L.F.	\$18.75	\$351,375
6" Gravity Collection Line (8'-10' Deep)	18740	L.F.	\$16.75	\$313,895	18740	L.F.	\$16.75	\$313,895
6" Gravity Collection Line (6'-8' Deep)	18740	L.F.	\$16.00	\$299,840	18740	L.F.	\$16.00	\$299,840
6" Gravity Collection Line (4'-6' Deep)	18740	L.F.	\$16.00	\$299,840	18740	L.F.	\$16.00	\$299,840
8" Effluent Line	800	L.F.	\$20.75	\$16,600	800	L.F.	\$20.75	\$16,600
Manhole (12'-14' Deep)	37	Each	\$1,900.00	\$71,212	37	Each	\$1,900.00	\$71,212
Manhole (10'-12' Deep)	37	Each	\$1,700.00	\$63,716	37	Each	\$1,700.00	\$63,716
Manhole (8'-10' Deep)	37	Each	\$1,500.00	\$56,220	37	Each	\$1,500.00	\$56,220
Manhole (6'-8' Deep)	37	Each	\$1,300.00	\$48,724	37	Each	\$1,300.00	\$48,724
Manhole (4'-6' Deep)	37	Each	\$1,300.00	\$48,724	37	Each	\$1,300.00	\$48,724
Cleanout	823	Each	\$1,000.00	\$823,000	823	Each	\$1,000.00	\$823,000
Lift Station with Grinder Pumps (1-20 GPM)	10	Each	\$50,000.00	\$500,000	10	Each	\$50,000.00	\$500,000
Lift Station with Grinder Pumps (20-40 GPM)		Each	\$50,000.00	\$0		Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)		Each	\$50,000.00	\$0		Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0		Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0		Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0		Each	\$170,000.00	\$0
4" Force Main	20850	L.F.	\$9.75	\$203,288	20850	L.F.	\$9.75	\$203,288
Service Connections	823	Each	\$500.00	\$411,500	823	Each	\$500.00	\$411,500
Pavement Repair	31233	S.Y.	\$30.00	\$937,000	31233	S.Y.	\$30.00	\$937,000
Trench Safety	93700	L.F.	\$1.50	\$140,550	93700	L.F.	\$1.50	\$140,550
Subtotal Construction				\$7,746,544				\$7,746,544
Contingencies	15%			\$1,161,982	15%			\$1,161,982
Project Administration	1%			\$77,465	1%			\$77,465
Engineering Design Phase	12%			\$929,585	12%			\$929,585
Construction Inspection	1%			\$77,465	1%			\$77,465
Geotechnical	1%			\$77,465	1%			\$77,465
Design Surveying	2%			\$154,931	2%			\$154,931
Construction Surveying	1%			\$77,465	1%			\$77,465
Material Testing	1%			\$77,465	1%			\$77,465
Engineering Construction Phase	2%			\$154,931	2%			\$154,931
Wastewater Discharge Permits	2%			\$154,931	2%			\$154,931
Easements	5%			\$387,327	5%			\$387,327
Legal	2%			\$154,931	2%			\$154,931
Fiscal	2%			\$154,931	2%			\$154,931
Subtotal Non-Construction				\$3,640,875				\$3,640,875
TOTAL PROJECT COST				\$11,387,419				\$11,387,419

**MIDLAKE AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	1	Each	\$85,000.00	\$85,000	1	Each	\$85,000.00	\$85,000
Natural Treatment Facilities (.005-.010 MGD)	1	Each	\$170,000.00	\$170,000	1	Each	\$170,000.00	\$170,000
Natural Treatment Facilities (.010-.015 MGD)	1	Each	\$255,000.00	\$255,000	1	Each	\$255,000.00	\$255,000
Natural Treatment Facilities (.015-.020 MGD)		Each	\$340,000.00	\$0	0	Each	\$340,000.00	\$0
Natural Treatment Facilities (.020-.025 MGD)	1	Each	\$425,000.00	\$425,000	1	Each	\$425,000.00	\$425,000
Natural Treatment Facilities (.025-.030 MGD)	1	Each	\$510,000.00	\$510,000	1	Each	\$510,000.00	\$510,000
Natural Treatment Facilities (.030-.040 MGD)		Each	\$680,000.00	\$0	0	Each	\$680,000.00	\$0
6" Gravity Collection Line (12'-14' Deep)	13730	L.F.	\$19.00	\$260,870	13730	L.F.	\$19.00	\$260,870
6" Gravity Collection Line (10'-12' Deep)	13730	L.F.	\$18.75	\$257,438	13730	L.F.	\$18.75	\$257,438
6" Gravity Collection Line (8'-10' Deep)	13730	L.F.	\$16.75	\$229,978	13730	L.F.	\$16.75	\$229,978
6" Gravity Collection Line (6'-8' Deep)	13730	L.F.	\$16.00	\$219,680	13730	L.F.	\$16.00	\$219,680
6" Gravity Collection Line (4'-6' Deep)	13730	L.F.	\$16.00	\$219,680	13730	L.F.	\$16.00	\$219,680
8" Effluent Line	500	L.F.	\$20.75	\$10,375	500	L.F.	\$20.75	\$10,375
Manhole (12'-14' Deep)	27	Each	\$1,900.00	\$52,174	27	Each	\$1,900.00	\$52,174
Manhole (10'-12' Deep)	27	Each	\$1,700.00	\$46,682	27	Each	\$1,700.00	\$46,682
Manhole (8'-10' Deep)	27	Each	\$1,500.00	\$41,190	27	Each	\$1,500.00	\$41,190
Manhole (6'-8' Deep)	27	Each	\$1,300.00	\$35,698	27	Each	\$1,300.00	\$35,698
Manhole (4'-6' Deep)	27	Each	\$1,300.00	\$35,698	27	Each	\$1,300.00	\$35,698
Cleanout	353	Each	\$1,000.00	\$353,000	353	Each	\$1,000.00	\$353,000
Lift Station with Grinder Pumps (1-20 GPM)	1	Each	\$50,000.00	\$50,000	1	Each	\$50,000.00	\$50,000
Lift Station with Grinder Pumps (20-40 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	1950	L.F.	\$9.75	\$19,013	1950	L.F.	\$9.75	\$19,013
Service Connections	353	Each	\$500.00	\$176,500	353	Each	\$500.00	\$176,500
Pavement Repair	22883	S.Y.	\$30.00	\$686,500	22883	S.Y.	\$30.00	\$686,500
Trench Safety	68650	L.F.	\$1.50	\$102,975	68650	L.F.	\$1.50	\$102,975
Subtotal Construction				\$4,242,450				\$4,242,450
Contingencies	15%			\$636,367	15%			\$636,367
Project Administration	1%			\$42,424	1%			\$42,424
Engineering Design Phase	12%			\$509,094	12%			\$509,094
Construction Inspection	1%			\$42,424	1%			\$42,424
Geotechnical	1%			\$42,424	1%			\$42,424
Design Surveying	2%			\$84,849	2%			\$84,849
Construction Surveying	1%			\$42,424	1%			\$42,424
Material Testing	1%			\$42,424	1%			\$42,424
Engineering Construction Phase	2%			\$84,849	2%			\$84,849
Wastewater Discharge Permits	2%			\$84,849	2%			\$84,849
Easements	5%			\$212,122	5%			\$212,122
Legal	2%			\$84,849	2%			\$84,849
Fiscal	2%			\$84,849	2%			\$84,849
Subtotal Non-Construction				\$1,993,951				\$1,993,951
TOTAL PROJECT COST				\$6,236,401				\$6,236,401

**NORTH AREA
WASTEWATER SYSTEM IMPROVEMENTS
GRAVITY COLLECTION AND NATURAL TREATMENT**

Description	2010 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment Facilities (.001-.005 MGD)	2	Each	\$85,000.00	\$170,000	2	Each	\$85,000.00	\$170,000
Natural Treatment Facilities (.005-.010 MGD)	2	Each	\$170,000.00	\$340,000	2	Each	\$170,000.00	\$340,000
Natural Treatment Facilities (.010-.015 MGD)	4	Each	\$255,000.00	\$1,020,000	4	Each	\$255,000.00	\$1,020,000
Natural Treatment Facilities (.015-.020 MGD)		Each	\$340,000.00	\$0	0	Each	\$340,000.00	\$0
Natural Treatment Facilities (.020-.025 MGD)	1	Each	\$425,000.00	\$425,000	1	Each	\$425,000.00	\$425,000
Natural Treatment Facilities (.025-.030 MGD)		Each	\$510,000.00	\$0	0	Each	\$510,000.00	\$0
Natural Treatment Facilities (.030-.040 MGD)		Each	\$680,000.00	\$0	0	Each	\$680,000.00	\$0
6" Gravity Collection Line (12'-14' Deep)	14620	L.F.	\$19.00	\$277,780	14620	L.F.	\$19.00	\$277,780
6" Gravity Collection Line (10'-12' Deep)	14620	L.F.	\$18.75	\$274,125	14620	L.F.	\$18.75	\$274,125
6" Gravity Collection Line (8'-10' Deep)	14620	L.F.	\$16.75	\$244,885	14620	L.F.	\$16.75	\$244,885
6" Gravity Collection Line (6'-8' Deep)	14620	L.F.	\$16.00	\$233,920	14620	L.F.	\$16.00	\$233,920
6" Gravity Collection Line (4'-6' Deep)	14620	L.F.	\$16.00	\$233,920	14620	L.F.	\$16.00	\$233,920
8" Effluent Line	900	L.F.	\$20.75	\$18,675	900	L.F.	\$20.75	\$18,675
Manhole (12'-14' Deep)	29	Each	\$1,900.00	\$55,556	29	Each	\$1,900.00	\$55,556
Manhole (10'-12' Deep)	29	Each	\$1,700.00	\$49,708	29	Each	\$1,700.00	\$49,708
Manhole (8'-10' Deep)	29	Each	\$1,500.00	\$43,860	29	Each	\$1,500.00	\$43,860
Manhole (6'-8' Deep)	29	Each	\$1,300.00	\$38,012	29	Each	\$1,300.00	\$38,012
Manhole (4'-6' Deep)	29	Each	\$1,300.00	\$38,012	29	Each	\$1,300.00	\$38,012
Cleanout	486	Each	\$1,000.00	\$486,000	486	Each	\$1,000.00	\$486,000
Lift Station with Grinder Pumps (1-20 GPM)	2	Each	\$50,000.00	\$100,000	2	Each	\$50,000.00	\$100,000
Lift Station with Grinder Pumps (20-40 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (40-60 GPM)		Each	\$50,000.00	\$0	0	Each	\$50,000.00	\$0
Lift Station with Grinder Pumps (60-80 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (80-100 GPM)		Each	\$80,000.00	\$0	0	Each	\$80,000.00	\$0
Lift Station with Grinder Pumps (100-120 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (120-140 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (140-160 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (160-180 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
Lift Station with Grinder Pumps (180-200 GPM)		Each	\$170,000.00	\$0	0	Each	\$170,000.00	\$0
4" Force Main	3700	L.F.	\$9.75	\$36,075	3700	L.F.	\$9.75	\$36,075
Service Connections	486	Each	\$500.00	\$243,000	486	Each	\$500.00	\$243,000
Pavement Repair	24366.7	S.Y.	\$30.00	\$731,000	24367	S.Y.	\$30.00	\$731,000
Trench Safety	73100	L.F.	\$1.50	\$109,650	73100	L.F.	\$1.50	\$109,650
Subtotal Construction				\$5,169,178				\$5,169,178
Contingencies	15%			\$775,377	15%			\$775,377
Project Administration	1%			\$51,692	1%			\$51,692
Engineering Design Phase	12%			\$620,301	12%			\$620,301
Construction Inspection	1%			\$51,692	1%			\$51,692
Geotechnical	1%			\$51,692	1%			\$51,692
Design Surveying	2%			\$103,384	2%			\$103,384
Construction Surveying	1%			\$51,692	1%			\$51,692
Material Testing	1%			\$51,692	1%			\$51,692
Engineering Construction Phase	2%			\$103,384	2%			\$103,384
Wastewater Discharge Permits	2%			\$103,384	2%			\$103,384
Easements	5%			\$258,459	5%			\$258,459
Legal	2%			\$103,384	2%			\$103,384
Fiscal	2%			\$103,384	2%			\$103,384
Subtotal Non-Construction				\$2,429,514				\$2,429,514
TOTAL PROJECT COST				\$7,598,692				\$7,598,692

SABINE COUNTY
TOTAL WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT

Description	2010 PHASE				2020 PHASE				2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Pla	0	Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0	1	Each	\$260,000.00	\$260,000	1	Each	\$260,000.00	\$260,000
Conventional Wastewater Treatment Pla	0	Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0	1	Each	\$310,000.00	\$310,000	1	Each	\$310,000.00	\$310,000
Conventional Wastewater Treatment Pla	0	Each	\$350,000.00	\$0	1	Each	\$350,000.00	\$350,000	0	Each	\$350,000.00	\$0	1	Each	\$350,000.00	\$350,000
Conventional Wastewater Treatment Pla	0	Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0	1	Each	\$440,000.00	\$440,000	1	Each	\$440,000.00	\$440,000
Conventional Wastewater Treatment Pla	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000	3	Each	\$520,000.00	\$1,560,000
Conventional Wastewater Treatment Pla	1	Each	\$610,000.00	\$610,000	0	Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0	1	Each	\$610,000.00	\$610,000
Conventional Wastewater Treatment Pla	0	Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0	2	Each	\$650,000.00	\$1,300,000	2	Each	\$650,000.00	\$1,300,000
2" STEP Line	141220	L.F.	\$7.25	\$1,023,845	100096	L.F.	\$7.25	\$725,696	265896	L.F.	\$7.25	\$1,927,746	507212	L.F.	\$7.25	\$3,677,287
Electrical Connection and STEP Pump	960	Each	\$3,500.00	\$3,360,000	646	Each	\$3,500.00	\$2,261,000	2080	Each	\$3,500.00	\$7,280,000	3686	Each	\$3,500.00	\$12,901,000
Septic Tank Replacement	320	Each	\$1,500.00	\$480,000	215	Each	\$1,500.00	\$323,000	693	Each	\$1,500.00	\$1,040,000	1229	Each	\$1,500.00	\$1,843,000
6" Gravity Main (4'-6" Deep)	14585	L.F.	\$19.75	\$288,054	3640	L.F.	\$19.75	\$71,890	47990	L.F.	\$19.75	\$947,803	66215	L.F.	\$19.75	\$1,307,746
8" Effluent Line	2400	L.F.	\$20.75	\$49,800	2600	L.F.	\$20.75	\$53,950	3400	L.F.	\$20.75	\$70,550	8400	L.F.	\$20.75	\$174,300
Manhole (12'-14" Deep)	0	Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12" Deep)	0	Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10" Deep)	0	Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (6'-8" Deep)	0	Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6" Deep)	29.17	Each	\$1,300.00	\$37,921	7.28	Each	\$1,300.00	\$9,464	95.98	Each	\$1,300.00	\$124,774	132.43	Each	\$1,300.00	\$172,159
Cleanout	960	Each	\$1,000.00	\$960,000	646	Each	\$1,000.00	\$646,000	2080	Each	\$1,000.00	\$2,080,000	3686	Each	\$1,000.00	\$3,686,000
Lift Station with Centrifugal Pumps (1-20)	8	Each	\$45,000.00	\$360,000	5	Each	\$45,000.00	\$225,000	19	Each	\$45,000.00	\$855,000	32	Each	\$45,000.00	\$1,440,000
Lift Station with Centrifugal Pumps (20-4)	4	Each	\$45,000.00	\$180,000	5	Each	\$45,000.00	\$225,000	8	Each	\$45,000.00	\$360,000	17	Each	\$45,000.00	\$765,000
Lift Station with Centrifugal Pumps (40-6)	4	Each	\$45,000.00	\$180,000	3	Each	\$45,000.00	\$135,000	6	Each	\$45,000.00	\$270,000	13	Each	\$45,000.00	\$585,000
Lift Station with Centrifugal Pumps (60-8)	2	Each	\$72,000.00	\$144,000	0	Each	\$72,000.00	\$0	1	Each	\$72,000.00	\$72,000	3	Each	\$72,000.00	\$216,000
Lift Station with Centrifugal Pumps (80-1)	1	Each	\$72,000.00	\$72,000	2	Each	\$72,000.00	\$144,000	1	Each	\$72,000.00	\$72,000	4	Each	\$72,000.00	\$288,000
Lift Station with Centrifugal Pumps (100-)	1	Each	\$155,000.00	\$155,000	0	Each	\$155,000.00	\$0	2	Each	\$155,000.00	\$310,000	3	Each	\$155,000.00	\$465,000
Lift Station with Centrifugal Pumps (120-)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	2	Each	\$155,000.00	\$310,000	2	Each	\$155,000.00	\$310,000
Lift Station with Centrifugal Pumps (140-)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
Lift Station with Centrifugal Pumps (160-)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-)	1	Each	\$155,000.00	\$155,000	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	1	Each	\$155,000.00	\$155,000
2" Force Main	65900	L.F.	\$7.25	\$477,775	64610	L.F.	\$7.25	\$468,423	161830	L.F.	\$7.25	\$1,173,268	292340	L.F.	\$7.25	\$2,119,465
Service Connections	960	Each	\$500.00	\$480,000	646	Each	\$500.00	\$323,000	2080	Each	\$500.00	\$1,040,000	3686	Each	\$500.00	\$1,843,000
Pavement Repair	31382.22	S.Y.	\$30.00	\$941,467	22243.56	L.F.	\$30.00	\$667,307	59088	L.F.	\$30.00	\$1,772,640	112713.8	L.F.	\$30.00	\$3,381,413
Trench Safety	14585	L.F.	\$1.50	\$21,878	3640	L.F.	\$1.50	\$5,460	47990	L.F.	\$1.50	\$71,985	66215	L.F.	\$1.50	\$99,323
Subtotal Construction				\$10,496,739				\$7,154,189				\$22,762,765				\$40,413,693
Contingencies	15%			\$1,574,511	15%			\$1,073,128	15%			\$3,414,415	15%			\$6,062,054
Project Administration	1%			\$104,967	1%			\$71,542	1%			\$227,628	1%			\$404,137
Engineering Design Phase	12%			\$1,259,609	12%			\$858,503	12%			\$2,731,532	12%			\$4,849,643
Construction Inspection	1%			\$104,967	1%			\$71,542	1%			\$227,628	1%			\$404,137
Geotechnical	1%			\$104,967	1%			\$71,542	1%			\$227,628	1%			\$404,137
Design Surveying	2%			\$209,935	2%			\$143,084	2%			\$455,255	2%			\$808,274
Construction Surveying	1%			\$104,967	1%			\$71,542	1%			\$227,628	1%			\$404,137
Material Testing	1%			\$104,967	1%			\$71,542	1%			\$227,628	1%			\$404,137
Engineering Construction Phase	2%			\$209,935	2%			\$143,084	2%			\$455,255	2%			\$808,274
Wastewater Discharge Permits	2%			\$209,935	2%			\$143,084	2%			\$455,255	2%			\$808,274
Easements	5%			\$524,837	5%			\$357,709	5%			\$1,138,138	5%			\$2,020,685
Legal	2%			\$209,935	2%			\$143,084	2%			\$455,255	2%			\$808,274
Fiscal	2%			\$209,935	2%			\$143,084	2%			\$455,255	2%			\$808,274
Subtotal Non-Construction				\$4,933,467				\$3,362,469				\$10,698,500				\$18,994,436
TOTAL PROJECT COST				\$15,430,206				\$10,516,658				\$33,461,265				\$59,408,129

**BEECHWOOD / SOUTH SABINE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2010 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)	1	Each	\$610,000.00	\$610,000	1	Each	\$610,000.00	\$610,000
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
2" STEP Line	141220	L.F.	\$7.25	\$1,023,845	141220	L.F.	\$7.25	\$1,023,845
Electrical Connection and STEP Pump	960	Each	\$3,500.00	\$3,360,000	960	Each	\$3,500.00	\$3,360,000
Septic Tank Replacement	320	Each	\$1,500.00	\$480,000	320	Each	\$1,500.00	\$480,000
6" Gravity Main (4'-6' Deep)	14585	L.F.	\$19.75	\$288,054	14585	L.F.	\$19.75	\$288,054
8" Effluent Line	2400	L.F.	\$20.75	\$49,800	2400	L.F.	\$20.75	\$49,800
Manhole (12'-14' Deep)	0	Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12' Deep)	0	Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10' Deep)	0	Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (8'-8' Deep)	0	Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6' Deep)	29	Each	\$1,300.00	\$37,921	29	Each	\$1,300.00	\$37,921
Cleanout	960	Each	\$1,000.00	\$960,000	960	Each	\$1,000.00	\$960,000
Lift Station with Centrifugal Pumps (1-20 GPM)	8	Each	\$45,000.00	\$360,000	8	Each	\$45,000.00	\$360,000
Lift Station with Centrifugal Pumps (20-40 GPM)	4	Each	\$45,000.00	\$180,000	4	Each	\$45,000.00	\$180,000
Lift Station with Centrifugal Pumps (40-60 GPM)	4	Each	\$45,000.00	\$180,000	4	Each	\$45,000.00	\$180,000
Lift Station with Centrifugal Pumps (60-80 GPM)	2	Each	\$72,000.00	\$144,000	2	Each	\$72,000.00	\$144,000
Lift Station with Centrifugal Pumps (80-100 GPM)	1	Each	\$72,000.00	\$72,000	1	Each	\$72,000.00	\$72,000
Lift Station with Centrifugal Pumps (100-120 GPM)	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
Lift Station with Centrifugal Pumps (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-200 GPM)	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
2" Force Main	65900	L.F.	\$7.25	\$477,775	65900	L.F.	\$7.25	\$477,775
Service Connections	960	Each	\$500.00	\$480,000	960	Each	\$500.00	\$480,000
Pavement Repair	31382	S.Y.	\$30.00	\$941,467	31382	L.F.	\$30.00	\$941,467
Trench Safety	14585	L.F.	\$1.50	\$21,878	14585	L.F.	\$1.50	\$21,878
Subtotal Construction				\$10,496,739				\$10,496,739
Contingencies	15%			\$1,574,511	15%			\$1,574,511
Project Administration	1%			\$104,967	1%			\$104,967
Engineering Design Phase	12%			\$1,259,609	12%			\$1,259,609
Construction Inspection	1%			\$104,967	1%			\$104,967
Geotechnical	1%			\$104,967	1%			\$104,967
Design Surveying	2%			\$209,935	2%			\$209,935
Construction Surveying	1%			\$104,967	1%			\$104,967
Material Testing	1%			\$104,967	1%			\$104,967
Engineering Construction Phase	2%			\$209,935	2%			\$209,935
Wastewater Discharge Permits	2%			\$209,935	5%			\$524,837
Easements	5%			\$524,837	2%			\$209,935
Legal	2%			\$209,935	2%			\$209,935
Fiscal	2%			\$209,935	2%			\$209,935
Subtotal Non-Construction				\$4,933,467				\$4,933,467
TOTAL PROJECT COST				\$15,430,206				\$15,430,206

**TIMBERLANE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2020 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)	1	Each	\$350,000.00	\$350,000	1	Each	\$350,000.00	\$350,000
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
2" STEP Line	100096	L.F.	\$7.25	\$725,696	100096	L.F.	\$7.25	\$725,696
Electrical Connection and STEP Pump	646	Each	\$3,500.00	\$2,261,000	646	Each	\$3,500.00	\$2,261,000
Septic Tank Replacement	215	Each	\$1,500.00	\$323,000	215	Each	\$1,500.00	\$323,000
6" Gravity Main (4'-6" Deep)	3640	L.F.	\$19.75	\$71,890	3640	L.F.	\$19.75	\$71,890
8" Effluent Line	2600	L.F.	\$20.75	\$53,950	2600	L.F.	\$20.75	\$53,950
Manhole (12'-14' Deep)		Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12' Deep)		Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10' Deep)		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (6'-8' Deep)		Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6' Deep)	7	Each	\$1,300.00	\$9,464	7	Each	\$1,300.00	\$9,464
Cleanout	646	Each	\$1,000.00	\$646,000	646	Each	\$1,000.00	\$646,000
Lift Station with Centrifugal Pumps (1-20 GPM)	5	Each	\$45,000.00	\$225,000	5	Each	\$45,000.00	\$225,000
Lift Station with Centrifugal Pumps (20-40 GPM)	5	Each	\$45,000.00	\$225,000	5	Each	\$45,000.00	\$225,000
Lift Station with Centrifugal Pumps (40-60 GPM)	3	Each	\$45,000.00	\$135,000	3	Each	\$45,000.00	\$135,000
Lift Station with Centrifugal Pumps (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pumps (80-100 GPM)	2	Each	\$72,000.00	\$144,000	2	Each	\$72,000.00	\$144,000
Lift Station with Centrifugal Pumps (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	64610	L.F.	\$7.25	\$468,423	64610	L.F.	\$7.25	\$468,423
Service Connections	646	Each	\$500.00	\$323,000	646	Each	\$500.00	\$323,000
Pavement Repair	22244	S.Y.	\$30.00	\$667,307	22244	L.F.	\$30.00	\$667,307
Trench Safety	3640	L.F.	\$1.50	\$5,460	3640	L.F.	\$1.50	\$5,460
Subtotal Construction				\$7,154,189				\$7,154,189
Contingencies	15%			\$1,073,128	15%			\$1,073,128
Project Administration	1%			\$71,542	1%			\$71,542
Engineering Design Phase	12%			\$858,503	12%			\$858,503
Construction Inspection	1%			\$71,542	1%			\$71,542
Geotechnical	1%			\$71,542	1%			\$71,542
Design Surveying	2%			\$143,084	2%			\$143,084
Construction Surveying	1%			\$71,542	1%			\$71,542
Material Testing	1%			\$71,542	1%			\$71,542
Engineering Construction Phase	2%			\$143,084	2%			\$143,084
Wastewater Discharge Permits	2%			\$143,084	5%			\$357,709
Easements	5%			\$357,709	2%			\$143,084
Legal	2%			\$143,084	2%			\$143,084
Fiscal	2%			\$143,084	2%			\$143,084
Subtotal Non-Construction				\$3,362,469				\$3,362,469
TOTAL PROJECT COST				\$10,516,658				\$10,516,658

**EL CAMINO BAY AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)	1	Each	\$260,000.00	\$260,000	1	Each	\$260,000.00	\$260,000
Conventional Wastewater Treatment Plant (0.04 MGD)	1	Each	\$310,000.00	\$310,000	1	Each	\$310,000.00	\$310,000
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)	1	Each	\$440,000.00	\$440,000	1	Each	\$440,000.00	\$440,000
Conventional Wastewater Treatment Plant (0.09 MGD)	1	Each	\$520,000.00	\$520,000	1	Each	\$520,000.00	\$520,000
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)		Each	\$650,000.00	\$0	0	Each	\$650,000.00	\$0
2" STEP Line	108076	L.F.	\$7.25	\$783,551	1E+05	L.F.	\$7.25	\$783,551
Electrical Connection and STEP Pump	888	Each	\$3,500.00	\$3,108,000	888	Each	\$3,500.00	\$3,108,000
Septic Tank Replacement	296	Each	\$1,500.00	\$444,000	296	Each	\$1,500.00	\$444,000
6" Gravity Main (4'-6" Deep)	27620	L.F.	\$19.75	\$545,495	27620	L.F.	\$19.75	\$545,495
8" Effluent Line	1150	L.F.	\$20.75	\$23,863	1150	L.F.	\$20.75	\$23,863
Manhole (12'-14' Deep)		Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12' Deep)		Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10' Deep)		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (6'-8' Deep)		Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6' Deep)	55	Each	\$1,300.00	\$71,812	55	Each	\$1,300.00	\$71,812
Cleanout	888	Each	\$1,000.00	\$888,000	888	Each	\$1,000.00	\$888,000
Lift Station with Centrifugal Pumps (1-20 GPM)	9	Each	\$45,000.00	\$405,000	9	Each	\$45,000.00	\$405,000
Lift Station with Centrifugal Pumps (20-40 GPM)	4	Each	\$45,000.00	\$180,000	4	Each	\$45,000.00	\$180,000
Lift Station with Centrifugal Pumps (40-60 GPM)	2	Each	\$45,000.00	\$90,000	2	Each	\$45,000.00	\$90,000
Lift Station with Centrifugal Pumps (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pumps (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pumps (100-120 GPM)	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
Lift Station with Centrifugal Pumps (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	53300	L.F.	\$7.25	\$386,425	53300	L.F.	\$7.25	\$386,425
Service Connections	888	Each	\$500.00	\$444,000	888	Each	\$500.00	\$444,000
Pavement Repair	24017	S.Y.	\$30.00	\$720,507	24017	L.F.	\$30.00	\$720,507
Trench Safety	27620	L.F.	\$1.50	\$41,430	27620	L.F.	\$1.50	\$41,430
Subtotal Construction				\$9,817,082				\$9,817,082
Contingencies	15%			\$1,472,562	15%			\$1,472,562
Project Administration	1%			\$98,171	1%			\$98,171
Engineering Design Phase	12%			\$1,178,050	12%			\$1,178,050
Construction Inspection	1%			\$98,171	1%			\$98,171
Geotechnical	1%			\$98,171	1%			\$98,171
Design Surveying	2%			\$196,342	2%			\$196,342
Construction Surveying	1%			\$98,171	1%			\$98,171
Material Testing	1%			\$98,171	1%			\$98,171
Engineering Construction Phase	2%			\$196,342	2%			\$196,342
Wastewater Discharge Permits	2%			\$196,342	5%			\$490,854
Easements	5%			\$490,854	2%			\$196,342
Legal	2%			\$196,342	2%			\$196,342
Fiscal	2%			\$196,342	2%			\$196,342
Subtotal Non-Construction				\$4,614,029				\$4,614,029
TOTAL PROJECT COST				\$14,431,111				\$14,431,111

**MIDLAKE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)		Each	\$520,000.00	\$0	0	Each	\$520,000.00	\$0
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)	1	Each	\$650,000.00	\$650,000	1	Each	\$650,000.00	\$650,000
2" STEP Line	77784	L.F.	\$7.25	\$563,934	77784	L.F.	\$7.25	\$563,934
Electrical Connection and STEP Pump	598	Each	\$3,500.00	\$2,093,000	598	Each	\$3,500.00	\$2,093,000
Septic Tank Replacement	199	Each	\$1,500.00	\$299,000	199	Each	\$1,500.00	\$299,000
6" Gravity Main (4'-6" Deep)	10040	L.F.	\$19.75	\$198,290	10040	L.F.	\$19.75	\$198,290
8" Effluent Line	1050	L.F.	\$20.75	\$21,788	1050	L.F.	\$20.75	\$21,788
Manhole (12'-14' Deep)		Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12' Deep)		Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10' Deep)		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (6'-8' Deep)		Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6' Deep)		Each	\$1,300.00	\$26,104	20	Each	\$1,300.00	\$26,104
Cleanout	598	Each	\$1,000.00	\$598,000	598	Each	\$1,000.00	\$598,000
Lift Station with Centrifugal Pumps (1-20 GPM)	3	Each	\$45,000.00	\$135,000	3	Each	\$45,000.00	\$135,000
Lift Station with Centrifugal Pumps (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pumps (40-60 GPM)	2	Each	\$45,000.00	\$90,000	2	Each	\$45,000.00	\$90,000
Lift Station with Centrifugal Pumps (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pumps (80-100 GPM)	1	Each	\$72,000.00	\$72,000	1	Each	\$72,000.00	\$72,000
Lift Station with Centrifugal Pumps (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	47410	L.F.	\$7.25	\$343,723	47410	L.F.	\$7.25	\$343,723
Service Connections	598	Each	\$500.00	\$299,000	598	Each	\$500.00	\$299,000
Pavement Repair	17285	S.Y.	\$30.00	\$518,560	17285	L.F.	\$30.00	\$518,560
Trench Safety	10040	L.F.	\$1.50	\$15,060	10040	L.F.	\$1.50	\$15,060
Subtotal Construction				\$5,923,458				\$5,923,458
Contingencies	15%			\$888,519	15%			\$888,519
Project Administration	1%			\$59,235	1%			\$59,235
Engineering Design Phase	12%			\$710,815	12%			\$710,815
Construction Inspection	1%			\$59,235	1%			\$59,235
Geotechnical	1%			\$59,235	1%			\$59,235
Design Surveying	2%			\$118,469	2%			\$118,469
Construction Surveying	1%			\$59,235	1%			\$59,235
Material Testing	1%			\$59,235	1%			\$59,235
Engineering Construction Phase	2%			\$118,469	2%			\$118,469
Wastewater Discharge Permits	2%			\$118,469	5%			\$296,173
Easements	5%			\$296,173	2%			\$118,469
Legal	2%			\$118,469	2%			\$118,469
Fiscal	2%			\$118,469	2%			\$118,469
Subtotal Non-Construction				\$2,784,025				\$2,784,025
TOTAL PROJECT COST				\$8,707,483				\$8,707,483

**NORTH AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND CONVENTIONAL CENTRALIZED TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Conventional Wastewater Treatment Plant (0.03 MGD)		Each	\$260,000.00	\$0	0	Each	\$260,000.00	\$0
Conventional Wastewater Treatment Plant (0.04 MGD)		Each	\$310,000.00	\$0	0	Each	\$310,000.00	\$0
Conventional Wastewater Treatment Plant (0.05 MGD)		Each	\$350,000.00	\$0	0	Each	\$350,000.00	\$0
Conventional Wastewater Treatment Plant (0.07 MGD)		Each	\$440,000.00	\$0	0	Each	\$440,000.00	\$0
Conventional Wastewater Treatment Plant (0.09 MGD)		Each	\$520,000.00	\$0	0	Each	\$520,000.00	\$0
Conventional Wastewater Treatment Plant (0.11 MGD)		Each	\$610,000.00	\$0	0	Each	\$610,000.00	\$0
Conventional Wastewater Treatment Plant (0.12 MGD)	1	Each	\$650,000.00	\$650,000	1	Each	\$650,000.00	\$650,000
2" STEP Line	80036	L.F.	\$7.25	\$580,261	80036	L.F.	\$7.25	\$580,261
Electrical Connection and STEP Pump	594	Each	\$3,500.00	\$2,079,000	594	Each	\$3,500.00	\$2,079,000
Septic Tank Replacement	198	Each	\$1,500.00	\$297,000	198	Each	\$1,500.00	\$297,000
6" Gravity Main (4'-6" Deep)	10330	L.F.	\$19.75	\$204,018	10330	L.F.	\$19.75	\$204,018
8" Effluent Line	1200	L.F.	\$20.75	\$24,900	1200	L.F.	\$20.75	\$24,900
Manhole (12'-14' Deep)		Each	\$1,900.00	\$0	0	Each	\$1,900.00	\$0
Manhole (10'-12' Deep)		Each	\$1,700.00	\$0	0	Each	\$1,700.00	\$0
Manhole (8'-10' Deep)		Each	\$1,500.00	\$0	0	Each	\$1,500.00	\$0
Manhole (6'-8' Deep)		Each	\$1,300.00	\$0	0	Each	\$1,300.00	\$0
Manhole (4'-6' Deep)	21	Each	\$1,300.00	\$26,858	21	Each	\$1,300.00	\$26,858
Cleanout	594	Each	\$1,000.00	\$594,000	594	Each	\$1,000.00	\$594,000
Lift Station with Centrifugal Pumps (1-20 GPM)	7	Each	\$45,000.00	\$315,000	7	Each	\$45,000.00	\$315,000
Lift Station with Centrifugal Pumps (20-40 GPM)	4	Each	\$45,000.00	\$180,000	4	Each	\$45,000.00	\$180,000
Lift Station with Centrifugal Pumps (40-60 GPM)	2	Each	\$45,000.00	\$90,000	2	Each	\$45,000.00	\$90,000
Lift Station with Centrifugal Pumps (60-80 GPM)	1	Each	\$72,000.00	\$72,000	1	Each	\$72,000.00	\$72,000
Lift Station with Centrifugal Pumps (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pumps (100-120 GPM)	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
Lift Station with Centrifugal Pumps (120-140 GPM)	2	Each	\$155,000.00	\$310,000	2	Each	\$155,000.00	\$310,000
Lift Station with Centrifugal Pumps (140-160 GPM)	1	Each	\$155,000.00	\$155,000	1	Each	\$155,000.00	\$155,000
Lift Station with Centrifugal Pumps (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pumps (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	61120	L.F.	\$7.25	\$443,120	61120	L.F.	\$7.25	\$443,120
Service Connections	594	Each	\$500.00	\$297,000	594	Each	\$500.00	\$297,000
Pavement Repair	17786	S.Y.	\$30.00	\$533,573	17786	L.F.	\$30.00	\$533,573
Trench Safety	10330	L.F.	\$1.50	\$15,495	10330	L.F.	\$1.50	\$15,495
Subtotal Construction				\$7,022,225				\$7,022,225
Contingencies	15%			\$1,053,334	15%			\$1,053,334
Project Administration	1%			\$70,222	1%			\$70,222
Engineering Design Phase	12%			\$842,667	12%			\$842,667
Construction Inspection	1%			\$70,222	1%			\$70,222
Geotechnical	1%			\$70,222	1%			\$70,222
Design Surveying	2%			\$140,444	2%			\$140,444
Construction Surveying	1%			\$70,222	1%			\$70,222
Material Testing	1%			\$70,222	1%			\$70,222
Engineering Construction Phase	2%			\$140,444	2%			\$140,444
Wastewater Discharge Permits	2%			\$140,444	5%			\$351,111
Easements	5%			\$351,111	2%			\$140,444
Legal	2%			\$140,444	2%			\$140,444
Fiscal	2%			\$140,444	2%			\$140,444
Subtotal Non-Construction				\$3,300,448				\$3,300,448
TOTAL PROJECT COST				\$10,322,671				\$10,322,671

**SABINE COUNTY
TOTAL WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2010 PHASE				2020 PHASE				2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	1	Each	\$75,000.00	\$75,000	5	Each	\$75,000.00	\$375,000	5	Each	\$75,000.00	\$375,000	11	Each	\$75,000.00	\$825,000
Natural Treatment System (.005-.010 MGD)	6	Each	\$150,000.00	\$900,000	5	Each	\$150,000.00	\$750,000	3	Each	\$150,000.00	\$450,000	14	Each	\$150,000.00	\$2,100,000
Natural Treatment System (.010-.015 MGD)	3	Each	\$225,000.00	\$675,000	0	Each	\$225,000.00	\$0	7	Each	\$225,000.00	\$1,575,000	10	Each	\$225,000.00	\$2,250,000
Natural Treatment System (.015-.020 MGD)	1	Each	\$300,000.00	\$300,000	1	Each	\$300,000.00	\$300,000	0	Each	\$300,000.00	\$0	2	Each	\$300,000.00	\$600,000
Natural Treatment System (.020-.025 MGD)	0	Each	\$375,000.00	\$0	0	Each	\$375,000.00	\$0	3	Each	\$375,000.00	\$1,125,000	3	Each	\$375,000.00	\$1,125,000
Natural Treatment System (.025-.030 MGD)	0	Each	\$450,000.00	\$0	0	Each	\$450,000.00	\$0	3	Each	\$450,000.00	\$1,350,000	3	Each	\$450,000.00	\$1,350,000
Natural Treatment System (.030-.040 MGD)	2	Each	\$600,000.00	\$1,200,000	1	Each	\$600,000.00	\$600,000	1	Each	\$600,000.00	\$600,000	4	Each	\$600,000.00	\$2,400,000
2" STEP Line	140750	L.F.	\$7.25	\$1,020,438	100096	L.F.	\$7.25	\$725,696	235450	L.F.	\$7.25	\$1,707,013	476296	L.F.	\$7.25	\$3,453,146
Electrical Connection and STEP Pump	879	Each	\$3,500.00	\$3,076,500	580	Each	\$3,500.00	\$2,030,000	1662	Each	\$3,500.00	\$5,817,000	3121	Each	\$3,500.00	\$10,923,500
Septic Tank Replacement	293	Each	\$1,500.00	\$439,500	193	Each	\$1,500.00	\$290,000	554	Each	\$1,500.00	\$831,000	1040	Each	\$1,500.00	\$1,560,500
8" Effluent Line	1300	L.F.	\$20.75	\$26,975	1200	L.F.	\$20.75	\$24,900	2200	L.F.	\$20.75	\$45,650	4700	L.F.	\$20.75	\$97,525
Cleanout	879	Each	\$1,000.00	\$879,000	580	Each	\$1,000.00	\$580,000	1662	Each	\$1,000.00	\$1,662,000	3121	Each	\$1,000.00	\$3,121,000
Lift Station with Centrifugal Pump (1-20 GPM)	13	Each	\$45,000.00	\$585,000	9	Each	\$45,000.00	\$405,000	13	Each	\$45,000.00	\$585,000	35	Each	\$45,000.00	\$1,575,000
Lift Station with Centrifugal Pump (20-40 GPM)	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	32000	L.F.	\$7.25	\$232,000	15100	L.F.	\$7.25	\$109,475	26500	L.F.	\$7.25	\$192,125	73600	L.F.	\$7.25	\$533,600
Service Connections	879	Each	\$500.00	\$439,500	580	Each	\$500.00	\$290,000	1662	Each	\$500.00	\$831,000	3121	Each	\$500.00	\$1,560,500
Pavement Repair	31278	S.Y.	\$30.00	\$938,333	22244	S.Y.	\$30.00	\$667,307	52322	S.Y.	\$30.00	\$1,569,667	105844	S.Y.	\$30.00	\$3,175,307
Trench Safety	140750	L.F.	\$1.50	\$211,125	100096	L.F.	\$1.50	\$150,144	235450	L.F.	\$1.50	\$353,175	476296	L.F.	\$1.50	\$714,444
Subtotal Construction				\$10,998,371				\$7,297,522				\$19,068,629				\$37,364,522
Contingencies	15%			\$1,649,756	15%			\$1,094,628	15%			\$2,860,294	15%			\$5,604,678
Project Administration	1%			\$109,984	1%			\$72,975	1%			\$190,686	1%			\$373,645
Engineering Design Phase	12%			\$1,319,805	12%			\$875,703	12%			\$2,288,236	12%			\$4,483,743
Construction Inspection	1%			\$109,984	1%			\$72,975	1%			\$190,686	1%			\$373,645
Geotechnical	1%			\$109,984	1%			\$72,975	1%			\$190,686	1%			\$373,645
Design Surveying	2%			\$219,967	2%			\$145,950	2%			\$381,373	2%			\$747,290
Construction Surveying	1%			\$109,984	1%			\$72,975	1%			\$190,686	1%			\$373,645
Material Testing	1%			\$109,984	1%			\$72,975	1%			\$190,686	1%			\$373,645
Engineering Construction Phase	2%			\$219,967	2%			\$145,950	2%			\$381,373	2%			\$747,290
Wastewater Discharge Permits	2%			\$219,967	2%			\$145,950	2%			\$381,373	2%			\$747,290
Easements	5%			\$549,919	5%			\$364,876	5%			\$953,431	5%			\$1,888,226
Legal	2%			\$219,967	2%			\$145,950	2%			\$381,373	2%			\$747,290
Fiscal	2%			\$219,967	2%			\$145,950	2%			\$381,373	2%			\$747,290
Subtotal Non-Construction				\$5,169,234				\$3,429,835				\$8,962,256				\$17,561,325
TOTAL PROJECT COST				\$16,167,605				\$10,727,357				\$28,030,885				\$54,925,847

**BEECHWOOD / SOUTH SABINE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2010 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	1	Each	\$75,000.00	\$75,000	1	Each	\$75,000.00	\$75,000
Natural Treatment System (.005-.010 MGD)	6	Each	\$150,000.00	\$900,000	6	Each	\$150,000.00	\$900,000
Natural Treatment System (.010-.015 MGD)	3	Each	\$225,000.00	\$675,000	3	Each	\$225,000.00	\$675,000
Natural Treatment System (.015-.020 MGD)	1	Each	\$300,000.00	\$300,000	1	Each	\$300,000.00	\$300,000
Natural Treatment System (.020-.025 MGD)	0	Each	\$375,000.00	\$0	0	Each	\$375,000.00	\$0
Natural Treatment System (.025-.030 MGD)	0	Each	\$450,000.00	\$0	0	Each	\$450,000.00	\$0
Natural Treatment System (.030-.040 MGD)	2	Each	\$600,000.00	\$1,200,000	2	Each	\$600,000.00	\$1,200,000
2" STEP Line	140750	L.F.	\$7.25	\$1,020,438	140750	L.F.	\$7.25	\$1,020,438
Electrical Connection and STEP Pump	879	Each	\$3,500.00	\$3,076,500	879	Each	\$3,500.00	\$3,076,500
Septic Tank Replacement	293	Each	\$1,500.00	\$439,500	293	Each	\$1,500.00	\$439,500
8" Effluent Line	1300	L.F.	\$20.75	\$26,975	1300	L.F.	\$20.75	\$26,975
Cleanout	879	Each	\$1,000.00	\$879,000	879	Each	\$1,000.00	\$879,000
Lift Station with Centrifugal Pump (1-20 GPM)	13	Each	\$45,000.00	\$585,000	13	Each	\$45,000.00	\$585,000
Lift Station with Centrifugal Pump (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	32000	L.F.	\$7.25	\$232,000	32000	L.F.	\$7.25	\$232,000
Service Connections	879	Each	\$500.00	\$439,500	879	Each	\$500.00	\$439,500
Pavement Repair	31278	S.Y.	\$30.00	\$938,333	31278	S.Y.	\$30.00	\$938,333
Trench Safety	140750	L.F.	\$1.50	\$211,125	140750	L.F.	\$1.50	\$211,125
Subtotal Construction				\$10,998,371				\$10,998,371
Contingencies	15%			\$1,649,756	15%			\$1,649,756
Project Administration	1%			\$109,984	1%			\$109,984
Engineering Design Phase	12%			\$1,319,805	12%			\$1,319,805
Construction Inspection	1%			\$109,984	1%			\$109,984
Geotechnical	1%			\$109,984	1%			\$109,984
Design Surveying	2%			\$219,967	2%			\$219,967
Construction Surveying	1%			\$109,984	1%			\$109,984
Material Testing	1%			\$109,984	1%			\$109,984
Engineering Construction Phase	2%			\$219,967	2%			\$219,967
Wastewater Discharge Permits	2%			\$219,967	2%			\$219,967
Easements	5%			\$549,919	5%			\$549,919
Legal	2%			\$219,967	2%			\$219,967
Fiscal	2%			\$219,967	2%			\$219,967
Subtotal Non-Construction				\$5,169,234				\$5,169,234
TOTAL PROJECT COST				\$16,167,605				\$16,167,605

**TIMBERLANE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2020 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	5	Each	\$75,000.00	\$375,000	5	Each	\$75,000.00	\$375,000
Natural Treatment System (.005-.010 MGD)	5	Each	\$150,000.00	\$750,000	5	Each	\$150,000.00	\$750,000
Natural Treatment System (.010-.015 MGD)		Each	\$225,000.00	\$0	0	Each	\$225,000.00	\$0
Natural Treatment System (.015-.020 MGD)	1	Each	\$300,000.00	\$300,000	1	Each	\$300,000.00	\$300,000
Natural Treatment System (.020-.025 MGD)		Each	\$375,000.00	\$0	0	Each	\$375,000.00	\$0
Natural Treatment System (.025-.030 MGD)		Each	\$450,000.00	\$0	0	Each	\$450,000.00	\$0
Natural Treatment System (.030-.040 MGD)	1	Each	\$600,000.00	\$600,000	1	Each	\$600,000.00	\$600,000
2" STEP Line	100096	L.F.	\$7.25	\$725,696	100096	L.F.	\$7.25	\$725,696
Electrical Connection and STEP Pump	580	Each	\$3,500.00	\$2,030,000	580	Each	\$3,500.00	\$2,030,000
Septic Tank Replacement	193	Each	\$1,500.00	\$290,000	193	Each	\$1,500.00	\$290,000
8" Effluent Line	1200	L.F.	\$20.75	\$24,900	1200	L.F.	\$20.75	\$24,900
Cleanout	580	Each	\$1,000.00	\$580,000	580	Each	\$1,000.00	\$580,000
Lift Station with Centrifugal Pump (1-20 GPM)	9	Each	\$45,000.00	\$405,000	9	Each	\$45,000.00	\$405,000
Lift Station with Centrifugal Pump (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	15100	L.F.	\$7.25	\$109,475	15100	L.F.	\$7.25	\$109,475
Service Connections	580	Each	\$500.00	\$290,000	580	Each	\$500.00	\$290,000
Pavement Repair	22244	S.Y.	\$30.00	\$667,307	22244	S.Y.	\$30.00	\$667,307
Trench Safety	100096	L.F.	\$1.50	\$150,144	100096	L.F.	\$1.50	\$150,144
Subtotal Construction				\$7,297,522				\$7,297,522
Contingencies	15%			\$1,094,628	15%			\$1,094,628
Project Administration	1%			\$72,975	1%			\$72,975
Engineering Design Phase	12%			\$875,703	12%			\$875,703
Construction Inspection	1%			\$72,975	1%			\$72,975
Geotechnical	1%			\$72,975	1%			\$72,975
Design Surveying	2%			\$145,950	2%			\$145,950
Construction Surveying	1%			\$72,975	1%			\$72,975
Material Testing	1%			\$72,975	1%			\$72,975
Engineering Construction Phase	2%			\$145,950	2%			\$145,950
Wastewater Discharge Permits	2%			\$145,950	2%			\$145,950
Easements	5%			\$364,876	5%			\$364,876
Legal	2%			\$145,950	2%			\$145,950
Fiscal	2%			\$145,950	2%			\$145,950
Subtotal Non-Construction				\$3,429,835				\$3,429,835
TOTAL PROJECT COST				\$10,727,357				\$10,727,357

**EL CAMINO BAY AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	2	Each	\$75,000.00	\$150,000	2	Each	\$75,000.00	\$150,000
Natural Treatment System (.005-.010 MGD)		Each	\$150,000.00	\$0	0	Each	\$150,000.00	\$0
Natural Treatment System (.010-.015 MGD)	2	Each	\$225,000.00	\$450,000	2	Each	\$225,000.00	\$450,000
Natural Treatment System (.015-.020 MGD)		Each	\$300,000.00	\$0	0	Each	\$300,000.00	\$0
Natural Treatment System (.020-.025 MGD)	1	Each	\$375,000.00	\$375,000	1	Each	\$375,000.00	\$375,000
Natural Treatment System (.025-.030 MGD)	2	Each	\$450,000.00	\$900,000	2	Each	\$450,000.00	\$900,000
Natural Treatment System (.030-.040 MGD)	1	Each	\$600,000.00	\$600,000	1	Each	\$600,000.00	\$600,000
2" STEP Line	93700	L.F.	\$7.25	\$679,325	93700	L.F.	\$7.25	\$679,325
Electrical Connection and STEP Pump	823	Each	\$3,500.00	\$2,880,500	823	Each	\$3,500.00	\$2,880,500
Septic Tank Replacement	274	Each	\$1,500.00	\$411,500	274	Each	\$1,500.00	\$411,500
8" Effluent Line	800	L.F.	\$20.75	\$16,600	800	L.F.	\$20.75	\$16,600
Cleanout	823	Each	\$1,000.00	\$823,000	823	Each	\$1,000.00	\$823,000
Lift Station with Centrifugal Pump (1-20 GPM)	10	Each	\$45,000.00	\$450,000	10	Each	\$45,000.00	\$450,000
Lift Station with Centrifugal Pump (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	20850	L.F.	\$7.25	\$151,163	20850	L.F.	\$7.25	\$151,163
Service Connections	823	Each	\$500.00	\$411,500	823	Each	\$500.00	\$411,500
Pavement Repair	20822	S.Y.	\$30.00	\$624,667	20822	S.Y.	\$30.00	\$624,667
Trench Safety	93700	L.F.	\$1.50	\$140,550	93700	L.F.	\$1.50	\$140,550
Subtotal Construction				\$9,063,804				\$9,063,804
Contingencies	15%			\$1,359,571	15%			\$1,359,571
Project Administration	1%			\$90,638	1%			\$90,638
Engineering Design Phase	12%			\$1,087,657	12%			\$1,087,657
Construction Inspection	1%			\$90,638	1%			\$90,638
Geotechnical	1%			\$90,638	1%			\$90,638
Design Surveying	2%			\$181,276	2%			\$181,276
Construction Surveying	1%			\$90,638	1%			\$90,638
Material Testing	1%			\$90,638	1%			\$90,638
Engineering Construction Phase	2%			\$181,276	2%			\$181,276
Wastewater Discharge Permits	2%			\$181,276	2%			\$181,276
Easements	5%			\$453,190	5%			\$453,190
Legal	2%			\$181,276	2%			\$181,276
Fiscal	2%			\$181,276	2%			\$181,276
Subtotal Non-Construction				\$4,259,988				\$4,259,988
TOTAL PROJECT COST				\$13,323,792				\$13,323,792

**MIDLAKE AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	1	Each	\$75,000.00	\$75,000	1	Each	\$75,000.00	\$75,000
Natural Treatment System (.005-.010 MGD)	1	Each	\$150,000.00	\$150,000	1	Each	\$150,000.00	\$150,000
Natural Treatment System (.010-.015 MGD)	1	Each	\$225,000.00	\$225,000	1	Each	\$225,000.00	\$225,000
Natural Treatment System (.015-.020 MGD)		Each	\$300,000.00	\$0	0	Each	\$300,000.00	\$0
Natural Treatment System (.020-.025 MGD)	1	Each	\$375,000.00	\$375,000	1	Each	\$375,000.00	\$375,000
Natural Treatment System (.025-.030 MGD)	1	Each	\$450,000.00	\$450,000	1	Each	\$450,000.00	\$450,000
Natural Treatment System (.030-.040 MGD)		Each	\$600,000.00	\$0	0	Each	\$600,000.00	\$0
2" STEP Line	68650	L.F.	\$7.25	\$497,713	68650	L.F.	\$7.25	\$497,713
Electrical Connection and STEP Pump	353	Each	\$3,500.00	\$1,235,500	353	Each	\$3,500.00	\$1,235,500
Septic Tank Replacement	118	Each	\$1,500.00	\$176,500	118	Each	\$1,500.00	\$176,500
8" Effluent Line	500	L.F.	\$20.75	\$10,375	500	L.F.	\$20.75	\$10,375
Cleanout	353	Each	\$1,000.00	\$353,000	353	Each	\$1,000.00	\$353,000
Lift Station with Centrifugal Pump (1-20 GPM)	1	Each	\$45,000.00	\$45,000	1	Each	\$45,000.00	\$45,000
Lift Station with Centrifugal Pump (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	1950	L.F.	\$7.25	\$14,138	1950	L.F.	\$7.25	\$14,138
Service Connections	353	Each	\$500.00	\$176,500	353	Each	\$500.00	\$176,500
Pavement Repair	15256	S.Y.	\$30.00	\$457,667	15256	S.Y.	\$30.00	\$457,667
Trench Safety	68650	L.F.	\$1.50	\$102,975	68650	L.F.	\$1.50	\$102,975
Subtotal Construction				\$4,344,367				\$4,344,367
Contingencies	15%			\$651,655	15%			\$651,655
Project Administration	1%			\$43,444	1%			\$43,444
Engineering Design Phase	12%			\$521,324	12%			\$521,324
Construction Inspection	1%			\$43,444	1%			\$43,444
Geotechnical	1%			\$43,444	1%			\$43,444
Design Surveying	2%			\$86,887	2%			\$86,887
Construction Surveying	1%			\$43,444	1%			\$43,444
Material Testing	1%			\$43,444	1%			\$43,444
Engineering Construction Phase	2%			\$86,887	2%			\$86,887
Wastewater Discharge Permits	2%			\$86,887	2%			\$86,887
Easements	5%			\$217,218	5%			\$217,218
Legal	2%			\$86,887	2%			\$86,887
Fiscal	2%			\$86,887	2%			\$86,887
Subtotal Non-Construction				\$2,041,852				\$2,041,852
TOTAL PROJECT COST				\$6,386,219				\$6,386,219

**NORTH AREA
WASTEWATER SYSTEM IMPROVEMENTS
STEP COLLECTION AND NATURAL TREATMENT**

Description	2030 PHASE				TOTAL PROJECT			
	Quantity	Units	Unit Price	Total	Quantity	Units	Unit Price	Total
Natural Treatment System (.001-.005 MGD)	2	Each	\$75,000.00	\$150,000	2	Each	\$75,000.00	\$150,000
Natural Treatment System (.005-.010 MGD)	2	Each	\$150,000.00	\$300,000	2	Each	\$150,000.00	\$300,000
Natural Treatment System (.010-.015 MGD)	4	Each	\$225,000.00	\$900,000	4	Each	\$225,000.00	\$900,000
Natural Treatment System (.015-.020 MGD)		Each	\$300,000.00	\$0	0	Each	\$300,000.00	\$0
Natural Treatment System (.020-.025 MGD)	1	Each	\$375,000.00	\$375,000	1	Each	\$375,000.00	\$375,000
Natural Treatment System (.025-.030 MGD)		Each	\$450,000.00	\$0	0	Each	\$450,000.00	\$0
Natural Treatment System (.030-.040 MGD)		Each	\$600,000.00	\$0	0	Each	\$600,000.00	\$0
2" STEP Line	73100	L.F.	\$7.25	\$529,975	73100	L.F.	\$7.25	\$529,975
Electrical Connection and STEP Pump	486	Each	\$3,500.00	\$1,701,000	486	Each	\$3,500.00	\$1,701,000
Septic Tank Replacement	162	Each	\$1,500.00	\$243,000	162	Each	\$1,500.00	\$243,000
8" Effluent Line	900	L.F.	\$20.75	\$18,675	900	L.F.	\$20.75	\$18,675
Cleanout	486	Each	\$1,000.00	\$486,000	486	Each	\$1,000.00	\$486,000
Lift Station with Centrifugal Pump (1-20 GPM)	2	Each	\$45,000.00	\$90,000	2	Each	\$45,000.00	\$90,000
Lift Station with Centrifugal Pump (20-40 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (40-60 GPM)		Each	\$45,000.00	\$0	0	Each	\$45,000.00	\$0
Lift Station with Centrifugal Pump (60-80 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (80-100 GPM)		Each	\$72,000.00	\$0	0	Each	\$72,000.00	\$0
Lift Station with Centrifugal Pump (100-120 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (120-140 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (140-160 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (160-180 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
Lift Station with Centrifugal Pump (180-200 GPM)		Each	\$155,000.00	\$0	0	Each	\$155,000.00	\$0
2" Force Main	3700	L.F.	\$7.25	\$26,825	3700	L.F.	\$7.25	\$26,825
Service Connections	486	Each	\$500.00	\$243,000	486	Each	\$500.00	\$243,000
Pavement Repair	16244	S.Y.	\$30.00	\$487,333	16244	S.Y.	\$30.00	\$487,333
Trench Safety	73100	L.F.	\$1.50	\$109,650	73100	L.F.	\$1.50	\$109,650
Subtotal Construction				\$5,660,458				\$5,660,458
Contingencies	15%			\$849,069	15%			\$849,069
Project Administration	1%			\$56,605	1%			\$56,605
Engineering Design Phase	12%			\$679,255	12%			\$679,255
Construction Inspection	1%			\$56,605	1%			\$56,605
Geotechnical	1%			\$56,605	1%			\$56,605
Design Surveying	2%			\$113,209	2%			\$113,209
Construction Surveying	1%			\$56,605	1%			\$56,605
Material Testing	1%			\$56,605	1%			\$56,605
Engineering Construction Phase	2%			\$113,209	2%			\$113,209
Wastewater Discharge Permits	2%			\$113,209	2%			\$113,209
Easements	5%			\$283,023	5%			\$283,023
Legal	2%			\$113,209	2%			\$113,209
Fiscal	2%			\$113,209	2%			\$113,209
Subtotal Non-Construction				\$2,660,415				\$2,660,415
TOTAL PROJECT COST				\$8,320,874				\$8,320,874

**SABINE COUNTY
WATER SYSTEM IMPROVEMENTS
FINANCIAL MODEL**

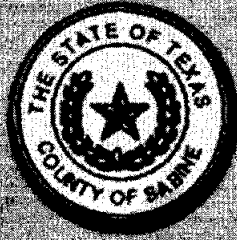
Year	Total Construction Costs and Fees						Debt Service			Operational Costs			Interest on Investment	Hemphill Projected Connections	Hemphill Projected Water Use	Pineland Projected Connections	Pineland Projected Water Use	G-M WSC Projected Connections	G-M WSC Projected Water Use	Beechwood WSC Projected Connections	Beechwood WSC Projected Water Use	
	Hemphill	Pineland	G-M WSC	Beechwood WSC	South Sabine WSC	El Camino Bay WSC	Total	Total Bond Sale	Bond Issue 1	Bond Issue 2	O&M	Rehab and Replacement										Admin.
2001											\$1,283,000	\$256,800		659	129,000	377	127,000	2,744	592,000	470	72,000	
2002											\$1,291,135	\$258,227	\$0	664	129,895	380	127,889	2,781	595,760	473	72,458	
2003	\$1,470,761		\$1,903,205	\$1,301,874			\$4,675,840	\$22,028,377	\$1,130,580	\$1,299,270	\$1,307,405	\$261,451	\$0	668	130,790	382	128,778	2,779	599,520	476	72,916	
2004	\$1,470,761	\$494,445	\$1,903,205	\$1,301,874	\$696,854	\$271,629	\$6,088,768	\$3,316,133	\$1,130,580	\$1,315,540	\$1,331,810	\$263,108	\$660,082	673	131,685	385	129,667	2,796	603,280	479	73,374	
2005		\$494,445	\$1,903,205		\$696,854	\$271,629	\$2,800,059	\$1,130,580	\$1,130,580	\$1,323,675	\$1,339,945	\$264,735	\$393,088	687	133,475	390	131,445	2,831	610,800	482	73,832	
2006			\$1,903,205		\$696,854		\$2,800,059	\$1,130,580	\$1,130,580	\$1,331,810	\$1,348,080	\$266,382	\$267,989	687	134,370	393	132,334	2,849	614,560	488	74,748	
2007			\$1,903,205		\$696,854		\$696,854	\$1,130,580	\$1,130,580	\$1,339,945	\$1,348,080	\$267,989	\$122,497	691	135,265	395	133,223	2,866	618,320	491	75,206	
2008					\$696,854		\$0	\$1,130,580	\$1,130,580	\$1,348,080	\$1,348,080	\$269,616	\$74,617	696	136,160	398	134,112	2,883	622,080	494	75,664	
2009							\$0	\$1,130,580	\$1,130,580	\$1,356,215	\$1,356,215	\$271,243	\$60,238	700	137,055	401	135,001	2,901	625,840	497	76,122	
2010							\$0	\$1,130,580	\$1,130,580	\$1,364,350	\$1,364,350	\$272,870	\$45,362	705	137,950	403	135,890	2,918	629,600	500	76,580	
2011							\$0	\$1,130,580	\$1,130,580	\$1,372,485	\$1,372,485	\$274,497	\$40,033	710	138,845	406	136,779	2,936	633,360	503	77,038	
2012							\$0	\$1,130,580	\$1,130,580	\$1,380,620	\$1,380,620	\$276,124	\$34,731	714	139,740	409	137,668	2,953	637,120	506	77,496	
2013							\$0	\$1,130,580	\$1,130,580	\$1,388,755	\$1,388,755	\$277,751	\$29,459	719	140,635	411	138,557	2,970	640,880	509	77,954	
2014							\$0	\$1,130,580	\$1,130,580	\$1,396,890	\$1,396,890	\$279,378	\$24,216	724	141,530	414	139,446	2,988	644,640	512	78,412	
2015							\$0	\$1,130,580	\$1,130,580	\$1,405,025	\$1,405,025	\$281,005	\$22,442	728	142,425	417	140,335	3,005	648,400	515	78,870	
2016							\$0	\$1,130,580	\$1,130,580	\$1,413,160	\$1,413,160	\$282,632	\$20,897	733	143,320	419	141,224	3,023	652,160	518	79,328	
2017							\$0	\$1,130,580	\$1,130,580	\$1,421,295	\$1,421,295	\$284,259	\$19,554	737	144,215	422	142,113	3,040	655,920	521	79,786	
2018							\$0	\$1,130,580	\$1,130,580	\$1,429,430	\$1,429,430	\$285,886	\$18,544	742	145,110	425	143,002	3,058	659,680	524	80,244	
2019							\$0	\$1,130,580	\$1,130,580	\$1,437,565	\$1,437,565	\$287,513	\$17,761	747	146,005	427	143,891	3,075	663,440	527	80,702	
2020							\$0	\$1,130,580	\$1,130,580	\$1,445,700	\$1,445,700	\$289,140	\$27,868	751	146,900	430	144,780	3,092	667,200	530	81,160	
2021							\$0	\$1,130,580	\$1,130,580	\$1,453,835	\$1,453,835	\$290,767	\$38,873	756	147,795	432	145,669	3,110	670,960	533	81,618	
2022							\$0	\$1,130,580	\$1,130,580	\$1,461,970	\$1,461,970	\$292,394	\$50,823	760	148,690	435	146,558	3,127	674,720	536	82,076	
2023							\$0	\$1,130,580	\$1,130,580	\$1,470,105	\$1,470,105	\$294,021	\$43,289	765	149,585	438	147,447	3,145	678,480	539	82,534	
2024							\$0	\$1,130,580	\$1,130,580	\$1,478,240	\$1,478,240	\$295,648	\$35,749	770	150,480	440	148,336	3,162	682,240	542	82,992	
2025	\$248,858	\$53,139	\$510,356	\$107,944	\$264,386	\$2,506	\$1,187,189	\$6,331,675	\$1,130,580	\$324,966	\$1,486,375	\$399,554	\$297,275	774	151,375	443	149,225	3,180	686,000	545	83,450	
2026	\$248,858	\$53,139	\$510,356	\$107,944	\$264,386	\$2,506	\$1,187,189	\$1,130,580	\$1,130,580	\$324,966	\$1,494,510	\$399,554	\$298,902	779	152,270	446	150,114	3,197	689,760	547	83,908	
2027	\$248,858	\$53,139	\$510,356	\$107,944	\$264,386	\$2,506	\$1,187,189	\$1,130,580	\$1,130,580	\$324,966	\$1,502,645	\$399,554	\$300,529	783	153,165	448	151,003	3,214	693,520	550	84,366	
2028	\$248,858	\$53,139	\$510,356	\$107,944	\$264,386	\$2,506	\$1,187,189	\$1,130,580	\$1,130,580	\$324,966	\$1,510,780	\$399,554	\$302,156	788	154,060	451	151,892	3,232	697,280	553	84,824	
2029	\$248,858	\$53,139	\$510,356	\$107,944	\$264,386	\$2,506	\$1,187,189	\$1,130,580	\$1,130,580	\$324,966	\$1,518,915	\$399,554	\$303,783	793	154,955	454	152,781	3,249	701,040	556	85,282	
2030							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,527,050	\$399,554	\$305,410	797	155,850	456	153,670	3,267	704,800	559	85,740	
2031							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,535,185	\$399,554	\$307,037	802	156,745	459	154,559	3,284	708,560	562	86,198	
2032							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,543,320	\$399,554	\$308,664	807	157,640	461	155,448	3,301	712,320	565	86,656	
2033							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,551,455	\$399,554	\$310,291	811	158,535	464	156,337	3,319	716,080	568	87,114	
2034							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,559,590	\$399,554	\$311,918	816	159,430	467	157,226	3,336	719,840	571	87,572	
2035							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,567,725	\$399,554	\$313,545	820	160,325	469	158,115	3,354	723,600	574	88,030	
2036							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,575,860	\$399,554	\$315,172	825	161,220	472	159,004	3,371	727,360	577	88,488	
2037							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,583,995	\$399,554	\$316,799	830	162,115	475	159,893	3,389	731,120	580	88,946	
2038							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,592,130	\$399,554	\$318,426	834	163,010	477	160,782	3,406	734,880	583	89,404	
2039							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,600,265	\$399,554	\$320,053	839	163,905	480	161,671	3,423	738,640	586	89,862	
2040							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,608,400	\$399,554	\$321,680	843	164,800	483	162,560	3,441	742,400	589	90,320	
2041							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,616,535	\$399,554	\$323,307	848	165,695	485	163,449	3,458	746,160	592	90,778	
2042							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,624,670	\$399,554	\$324,934	853	166,590	488	164,338	3,476	749,920	595	91,236	
2043							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,632,805	\$399,554	\$326,561	857	167,485	491	165,227	3,493	753,680	598	91,694	
2044							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,640,940	\$399,554	\$328,188	862	168,380	493	166,116	3,510	757,440	601	92,152	
2045							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,649,075	\$399,554	\$329,815	866	169,275	496	167,005	3,528	761,200	604	92,610	
2046							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,657,210	\$399,554	\$331,442	871	170,170	498	167,894	3,545	764,960	607	93,068	
2047							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,665,345	\$399,554	\$333,069	876	171,065	501	168,783	3,563	768,720	610	93,526	
2048							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,673,480	\$399,554	\$334,696	880	171,960	504	169,672	3,580	772,480	613	93,984	
2049							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,681,615	\$399,554	\$336,323	885	172,855	506	170,561	3,598	776,240	616	94,442	
2050							\$0	\$1,130,580	\$1,130,580	\$324,966	\$1,689,750	\$399,554	\$337,950									

SABINE COUNTY
WATER SYSTEM IMPROVEMENTS
FINANCIAL MODEL

South Sabine WSC Projected Connections	South Sabine WSC Projected Water Use	El Camino Bay WSC Projected Connections	El Camino Bay WSC Projected Water Use	Total Projected Connections	Total Projected Water Use	Contract Water Rate	Sudlow Water Cost	Sabine County Proposed Rate		City of Hempstead	City of Pinebluff	Projected Average Monthly Water Bill		Projected Weighted Average Water Bill	Revenue	Expenses	Account Balance	Cash Flow	Cash Balance
								Fixed Monthly Rate	Over \$6,000 Gallons			Beechwood WSC	South Sabine WSC						
770	74,000	112	18,000	5,132	\$50.00	\$51,520	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,196,826	\$7,417,731	\$16,782,095	\$0	\$0
775	74,470	112	18,000	5,166	\$50.00	\$51,856	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,286,826	\$7,417,731	\$16,869,095	\$0	\$16,869,095
780	74,940	112	18,000	5,197	\$50.00	\$52,187	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,376,826	\$7,417,731	\$16,955,095	\$0	\$16,955,095
785	75,410	112	18,000	5,230	\$50.00	\$52,513	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,466,826	\$7,417,731	\$17,041,095	\$0	\$17,041,095
790	75,880	112	18,000	5,262	\$50.00	\$52,843	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,556,826	\$7,417,731	\$17,127,095	\$0	\$17,127,095
795	76,350	112	18,000	5,295	\$50.00	\$53,171	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,646,826	\$7,417,731	\$17,213,095	\$0	\$17,213,095
800	76,820	112	18,000	5,327	\$50.00	\$53,500	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,736,826	\$7,417,731	\$17,299,095	\$0	\$17,299,095
805	77,290	112	18,000	5,360	\$50.00	\$53,829	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,826,826	\$7,417,731	\$17,385,095	\$0	\$17,385,095
809	77,760	112	18,000	5,392	\$50.00	\$54,156	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$24,916,826	\$7,417,731	\$17,471,095	\$0	\$17,471,095
814	78,230	112	18,000	5,425	\$50.00	\$54,484	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,006,826	\$7,417,731	\$17,557,095	\$0	\$17,557,095
819	78,700	112	18,000	5,457	\$50.00	\$54,813	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,096,826	\$7,417,731	\$17,643,095	\$0	\$17,643,095
824	79,170	112	18,000	5,490	\$50.00	\$55,141	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,186,826	\$7,417,731	\$17,729,095	\$0	\$17,729,095
829	79,640	112	18,000	5,522	\$50.00	\$55,469	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,276,826	\$7,417,731	\$17,815,095	\$0	\$17,815,095
834	80,110	112	18,000	5,555	\$50.00	\$55,797	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,366,826	\$7,417,731	\$17,901,095	\$0	\$17,901,095
838	80,580	112	18,000	5,588	\$50.00	\$56,126	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,456,826	\$7,417,731	\$17,987,095	\$0	\$17,987,095
843	81,050	112	18,000	5,620	\$50.00	\$56,454	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,546,826	\$7,417,731	\$18,073,095	\$0	\$18,073,095
848	81,520	112	18,000	5,653	\$50.00	\$56,782	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,636,826	\$7,417,731	\$18,159,095	\$0	\$18,159,095
853	81,990	112	18,000	5,685	\$50.00	\$57,110	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,726,826	\$7,417,731	\$18,245,095	\$0	\$18,245,095
858	82,460	112	18,000	5,718	\$50.00	\$57,439	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,816,826	\$7,417,731	\$18,331,095	\$0	\$18,331,095
863	82,930	112	18,000	5,750	\$50.00	\$57,767	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$25,906,826	\$7,417,731	\$18,417,095	\$0	\$18,417,095
868	83,400	112	18,000	5,783	\$50.00	\$58,095	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,000,826	\$7,417,731	\$18,503,095	\$0	\$18,503,095
873	83,870	112	18,000	5,815	\$50.00	\$58,423	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,090,826	\$7,417,731	\$18,589,095	\$0	\$18,589,095
878	84,340	112	18,000	5,848	\$50.00	\$58,752	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,180,826	\$7,417,731	\$18,675,095	\$0	\$18,675,095
882	84,810	112	18,000	5,880	\$50.00	\$59,080	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,270,826	\$7,417,731	\$18,761,095	\$0	\$18,761,095
887	85,280	112	18,000	5,913	\$50.00	\$59,408	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,360,826	\$7,417,731	\$18,847,095	\$0	\$18,847,095
892	85,750	112	18,000	5,946	\$50.00	\$59,736	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,450,826	\$7,417,731	\$18,933,095	\$0	\$18,933,095
897	86,220	112	18,000	5,978	\$50.00	\$60,065	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,540,826	\$7,417,731	\$19,019,095	\$0	\$19,019,095
902	86,690	112	18,000	6,011	\$50.00	\$60,393	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,630,826	\$7,417,731	\$19,105,095	\$0	\$19,105,095
907	87,160	112	18,000	6,043	\$50.00	\$60,721	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,720,826	\$7,417,731	\$19,191,095	\$0	\$19,191,095
912	87,630	112	18,000	6,076	\$50.00	\$61,050	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,810,826	\$7,417,731	\$19,277,095	\$0	\$19,277,095
917	88,100	112	18,000	6,108	\$50.00	\$61,378	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$26,900,826	\$7,417,731	\$19,363,095	\$0	\$19,363,095
922	88,570	112	18,000	6,141	\$50.00	\$61,706	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,000,826	\$7,417,731	\$19,449,095	\$0	\$19,449,095
926	89,040	112	18,000	6,173	\$50.00	\$62,034	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,090,826	\$7,417,731	\$19,535,095	\$0	\$19,535,095
931	89,510	112	18,000	6,206	\$50.00	\$62,362	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,180,826	\$7,417,731	\$19,621,095	\$0	\$19,621,095
936	89,980	112	18,000	6,238	\$50.00	\$62,691	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,270,826	\$7,417,731	\$19,707,095	\$0	\$19,707,095
941	90,450	112	18,000	6,271	\$50.00	\$63,019	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,360,826	\$7,417,731	\$19,793,095	\$0	\$19,793,095
946	90,920	112	18,000	6,303	\$50.00	\$63,347	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,450,826	\$7,417,731	\$19,879,095	\$0	\$19,879,095
951	91,390	112	18,000	6,336	\$50.00	\$63,675	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,540,826	\$7,417,731	\$19,965,095	\$0	\$19,965,095
956	91,860	112	18,000	6,369	\$50.00	\$64,004	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,630,826	\$7,417,731	\$20,051,095	\$0	\$20,051,095
961	92,330	112	18,000	6,401	\$50.00	\$64,332	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,720,826	\$7,417,731	\$20,137,095	\$0	\$20,137,095
966	92,800	112	18,000	6,434	\$50.00	\$64,660	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,810,826	\$7,417,731	\$20,223,095	\$0	\$20,223,095
970	93,270	112	18,000	6,466	\$50.00	\$64,988	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,900,826	\$7,417,731	\$20,309,095	\$0	\$20,309,095
975	93,740	112	18,000	6,499	\$50.00	\$65,317	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$27,990,826	\$7,417,731	\$20,395,095	\$0	\$20,395,095
980	94,210	112	18,000	6,531	\$50.00	\$65,645	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,080,826	\$7,417,731	\$20,481,095	\$0	\$20,481,095
985	94,680	112	18,000	6,564	\$50.00	\$65,973	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,170,826	\$7,417,731	\$20,567,095	\$0	\$20,567,095
990	95,150	112	18,000	6,596	\$50.00	\$66,301	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,260,826	\$7,417,731	\$20,653,095	\$0	\$20,653,095
995	95,620	112	18,000	6,629	\$50.00	\$66,630	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,350,826	\$7,417,731	\$20,739,095	\$0	\$20,739,095
1,000	96,090	112	18,000	6,661	\$50.00	\$66,958	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,440,826	\$7,417,731	\$20,825,095	\$0	\$20,825,095
1,005	96,560	112	18,000	6,694	\$50.00	\$67,286	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,530,826	\$7,417,731	\$20,911,095	\$0	\$20,911,095
1,010	97,030	112	18,000	6,726	\$50.00	\$67,614	\$34.00	\$1.50	\$34.81	\$40.16	\$34.71	\$34.00	\$34.00	\$34.81	\$28,620,826	\$7,417,731	\$21,000,095	\$0	\$21,000,095

SABINE COUNTY
WASTEWATER SYSTEM IMPROVEMENTS
FINANCIAL MODEL
(2% interest and 0% loan forgiveness)

Year	Revenue	Expenses	Account Balance	Cash Flow	Cash Balance
2001	\$1,400,000	\$1,400,000	\$0	\$0	\$14,758,711
2002	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2003	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2004	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2005	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2006	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2007	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2008	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2009	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2010	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2011	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2012	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2013	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2014	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2015	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2016	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2017	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2018	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2019	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2020	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2021	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2022	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2023	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2024	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2025	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2026	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2027	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2028	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2029	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2030	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2031	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2032	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2033	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2034	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2035	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2036	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2037	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2038	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2039	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2040	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2041	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2042	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2043	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2044	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2045	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2046	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2047	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2048	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2049	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711
2050	\$0	\$0	\$1,400,000	\$1,400,000	\$14,758,711



Regional Water and Wastewater Planning

**Public Meeting
February 27, 2001**



Introduction

- Jack Leath - County Judge
- Keith Clark - Precinct 1
- Lynn Smith - Precinct 2
- Doyle Dickerson - Precinct 3
- Gene Nethery - Precinct 4



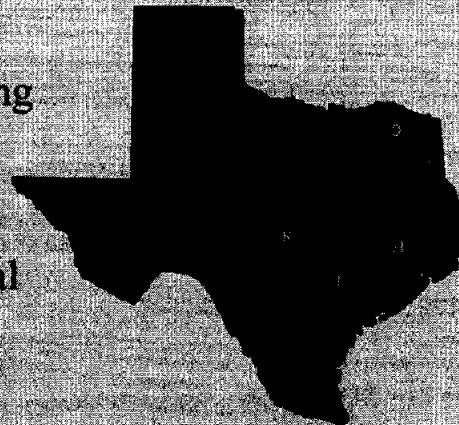
Meeting Agenda

- Regional Planning Background
- Regional Planning Participants
- Regional Planning Tasks
- Regional Planning Benefits
- Project Schedules and Milestones
- Questions and Answers



Senate Bill 1 Background

- 1997 Senate Bill 1
- 50-year Water Planning
- 16 Regions
- Region I (East Texas)
- January 2001 Regional Plans
- January 2002 State Water Plan





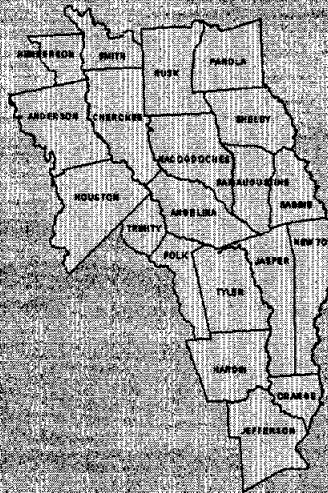
Senate Bill 1 Summary

- February 2001 Regional Summary
- State population double in 50-years
- Growth in I-35 corridor, Gulf Coast, Rio Grande Valley
- 20 percent of the State's total water supply in Region I
- 25 percent of Region I supply in Toledo Bend and Sabine River



Region I (East Texas) Plan Findings

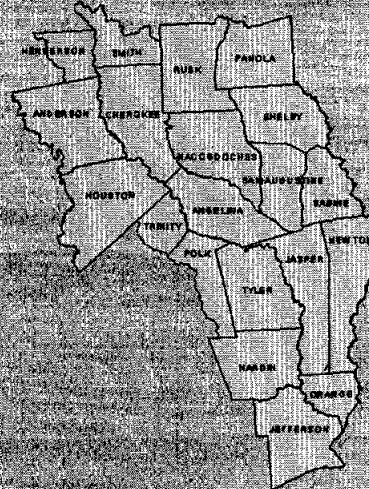
- Hemphill, Pineland, and County-Other only municipal WUG's
- Municipal shortages identified for Hemphill and County-Other
- Not enough groundwater to meet projected municipal demands





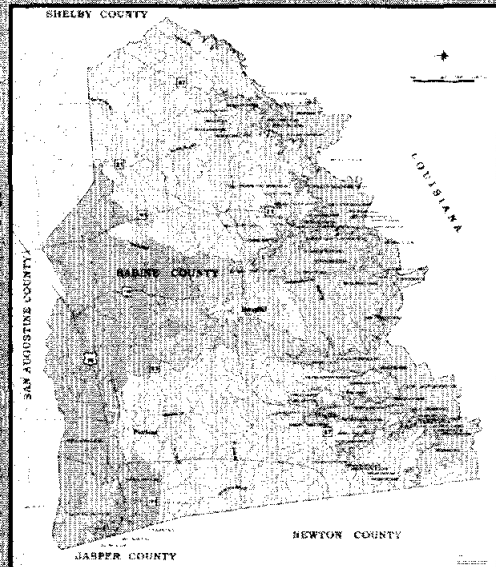
Region I (East Texas) Plan Findings (cont'd)

- Majority of County-Other groundwater use from minor aquifers
- No growth recommended for minor aquifer use
- Majority of municipal growth met through increased surface supplies



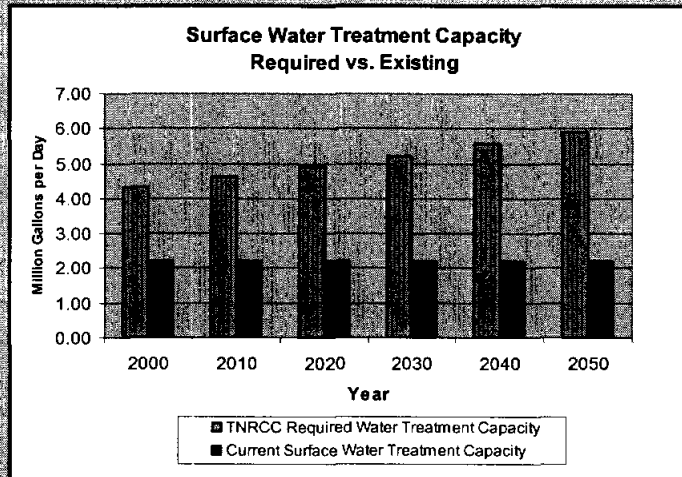
Why are we here today?

- Senate Bill 1 Planning addressed water supply and demand only
- Existing infrastructure needs
- TNRCC minimum requirements
- Impact on economic growth
- Wastewater treatment needs
- Plan for bringing supply to the individual end users





Surface Water Treatment Needs



Surface Water Availability

- SRA Surplus 827,000 ac-ft/yr
- Sabine County Needs
 - 2000 4,838 ac-ft/yr
 - 2010 5,123 ac-ft/yr
 - 2020 5,488 ac-ft/yr
 - 2030 5,845 ac-ft/yr
 - 2040 6,224 ac-ft/yr
 - 2050 6,629 ac-ft/yr

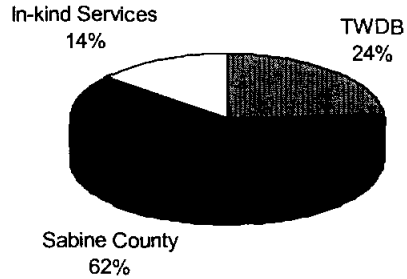


Regional Planning Participants

• Resolutions and Letters of Support

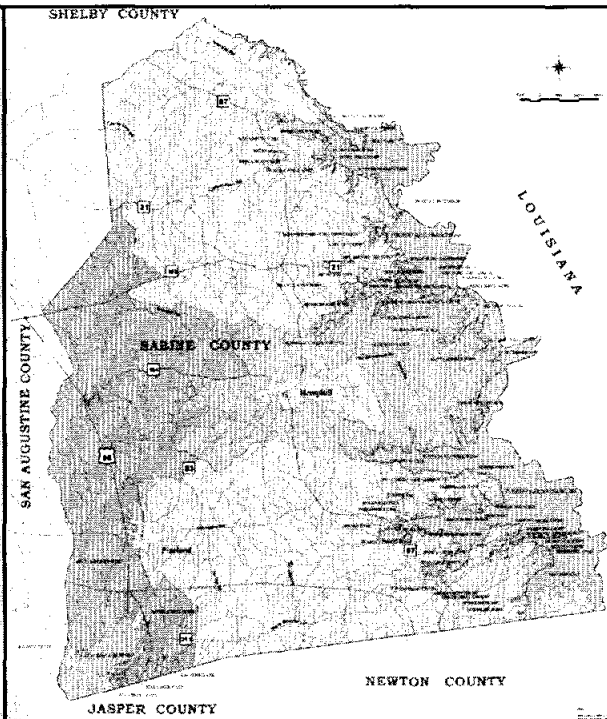
- Sabine County
- Sabine River Authority
- City of Hemphill
- City of Pinedale
- G-M Water Supply
- Temple-Inland Forest Products
- El Camino Water Supply
- Frontier Water Supply
- Pendleton Harbor Water Supply
- Beechwood Water Supply Corp.
- South Sabine Water Corp.
- Dogwood Estates

Financial Commitments



Sabine County Today

- 8 Water Supply Corporations
- 2 Incorporated Municipalities
- Over 60 Subdivisions
- Private Well Owners
- Private Septic Tanks
- No Regionalization of Services
- No Cost Sharing





Regional Planning Goals

- Is a regional system the best way to go?
- Proposed regional facilities
- Proposed sub-regional improvements
- What are the economic impacts?
- Maximize use of existing infrastructure
- Maximize existing water resources



Regional Planning Tasks

- Population projections
- Water demand projections
- Wastewater projections
- Potential sources of water
- Regional water treatment facilities
- Regional wastewater treatment facilities



Regional Planning Tasks

(cont'd)

- Cost development and rate study
- Regional versus sub-regional analysis
- Environmental Assessment
- EDAP Facility Engineering Plan
- Management Authority Creation
- Public Involvement

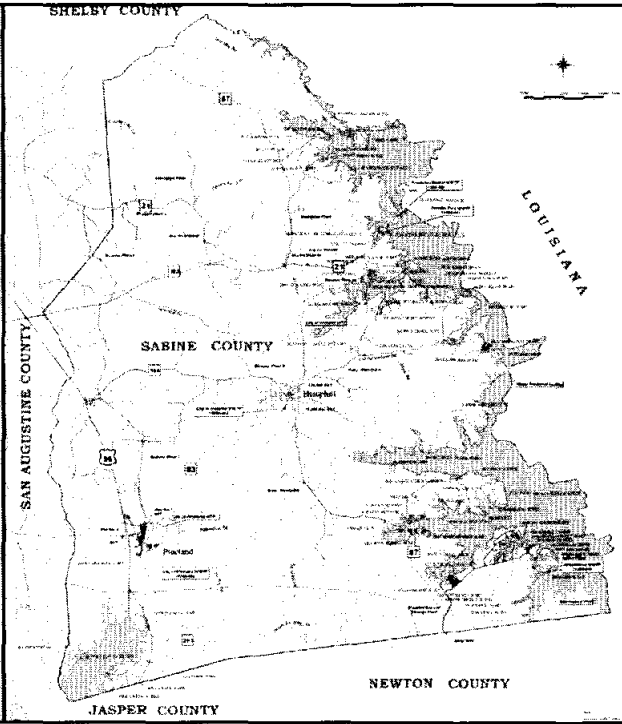


Regional Facilities Funding

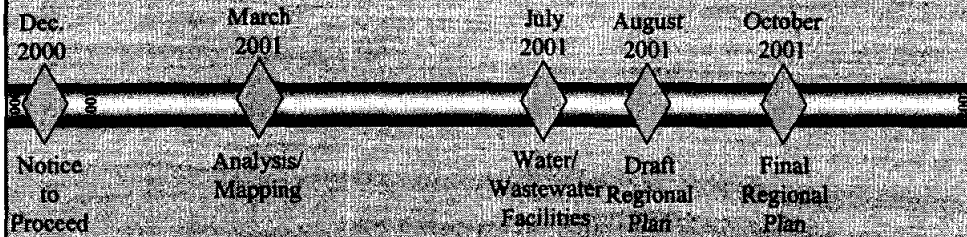
- TWDB State Revolving Fund
- TWDB State Participation Program
- EDAP grants and loans
- Rural Development grants and loans
- Local water and wastewater user fees

Regional Planning Benefits

- Secure future surface water source
- Maximize existing water resources
- Provide long-term solutions
- Economic development for County
- Economies of scale

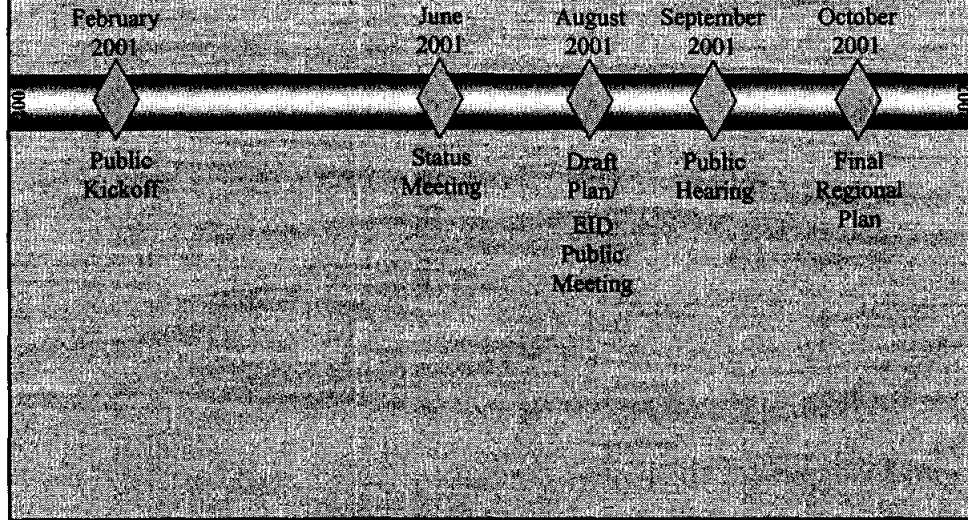


Schedule and Milestones





Public Participation



Contacts

County Judge
Judge Jack Leath
(409) 787-3543

TWDB
J.D. Beffort
(512) 463-7989

Turner Collie & Braden
Keith Kindle, P.E.
(956) 781-6991
Michael Reedy, P.E.
(713) 267-3127

County Commissioners
Keith Clark – Precinct 1
Lynn Smith – Precinct 2
Doyle Dickerson – Precinct 3
Gene Nethery – Precinct 4

Emergency Meeting Public Hearing
Sabine County Commissioners' Court
Tuesday, February 27, 2001 7:00 P.M.

Members of the Court present:

Jack Leath	County Judge
Keith Clark	Commissioner Pct. #1
Lynn Smith	Commissioner Pct. #2
Doyle Dickerson	Commissioner Pct. #3
Gene Nethery	Commissioner Pct. #4
Louise Clark	Chief Deputy County Clerk

Judge Leath called the meeting to order.

Present at the meeting:

Approximately 35 members of the public
Keith Kindle with the Engineering Firm, Turner, Collie & Braden, hired by Sabine
County
George Campbell-Chairman of Region I
Representative from the Sabine River Authority

Agenda item #1-Public Meeting/Regional Water Dist.-Regional Planning
Group-District Courtroom

Judge Leath briefly explained to the public present that there are 8 or 9 water corporations in Sabine County with G-M Water Supply being the largest. All are having trouble complying with the Texas Natural Resource Conservation Commission (TNRCC) regulations. At least 2 of these corporations are under order of the TNRCC to do upgrades to their systems that they can not afford to do. What the County is attempting to do is complete a study or plan for a Regional Water Supply District. We envision this to be a non-taxing district with the cost being covered by the water users. The small water corporations are not required to join this but it would be beneficial to them and to the entire County for them to. Water is the second most important issue you will be hearing about from Austin. We are going to have to do something to protect our water rights. What we want to do as a Commissioners' Court is to insure, as best we can, that the citizens of Sabine County have a good and adequate water supply. We got a \$105,000.00 grant from the Texas Water Development Board and the County is basically funding the rest of it. We will get some help from the Sabine River Authority.

Your water cost is going to go up. Some people believe that some day water will cost as much as gasoline. Legislation came up last session and will come up again this session and one day it will pass to pump water to other areas. Tonight we want to give you information on what we are doing.

Commissioner Smith thanked the people for coming tonight. He said the roll that the County is playing in this is to try to help form this new water district to supply the entire County with an adequate water supply. It would not be County owned or governed by the County. It will have it's own governing body that is elected by the people.

Commissioner Clark said the Court wants input from the citizens of Sabine County and is glad for the people that are here tonight.

Commissioner Nethery said that this is a long-term problem for the County as he sees it. We need to address this problem now not only for the people here now but for the people that will come to Sabine County in the future.

Commissioner Dickerson thanked the people for coming. It is good to have this size group here.

Judge Leath turned the meeting over to Keith Kindle to speak to the people and to answer questions.

Mr. Kindle introduced his staff. Mike Reedy is the project manager for the Regional Planning effort. Jennifer Helms is a senior staff member. They showed films and discussed the plans and needs of the area and the funding of the project.

The representative from the Sabine River Authority spoke to the group.

Mr. George Campbell spoke to the group of citizens present about the importance of working with the Corporation.

This is the first kickoff meeting on the Regional Water plan. We will be having more.

The floor was opened for questions from the audience. This was discussion only. No action was taken.

The public meeting adjourned at 8:45 p.m.

Jack Leath COUNTY JUDGE

Keith Clark COMMISSIONER PCT. #1

Lynn Smith COMMISSIONER PCT. #2

Ray Deerson COMMISSIONER PCT. #3

W. Grotting COMMISSIONER PCT. #4

ATTEST:

Louise Clark CHIEF DEPUTY COUNTY CLERK

**Sabine County Regional Planning
Public Kick-Off Meeting
February 27, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

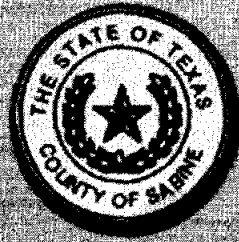
Name	Affiliation	Address	Phone
Col Bennett	C.M. Water	RR1 Box 170-A Pinedon Tx	586-3342
Aaron Lavin		P.O. Box 986 - Hemphill 75948	787-3751
Michael Lavin		P.O. Box 985 - Hemphill	787-3751
Al Cooper	South Sabine	52, 935 Hemphill	787-4885
Lynn Smith	Sab. Co.		787-3543
Byron Powell	Beechwood Water	HC 52 Box 619 Hemphill	579-2121
Keith Farrow	Beechwood WTR	HC 52 Box 762A Hemphill	579-3990
Ja Fisher	Alpine Sub Div	RR 1, Box 1419 Hemphill	605-4208
Donnie Houston	Sabine River Arts	Box 579 Orange	746-2192
MK & Joan Beam		P.O. Box 360 Hemphill	579-3789
Debbie Pickard	C.M. Water	RR2 Box 421A Pinedon	275-2751
SONNY DAVIS	HOME OWNER	HC 53 BOX 310 HEMPHILL	579-2502
Jack Lane	El Camino Bay	107 Overlook Cir Hemphill	787-7457
Jeff Row	South Sabine Water Corp	52, 935 Hemphill	579-9911
Carl Clark	Sabine	HC-52, Box 829 Hemphill	579-4293

**Sabine County Regional Planning
Public Kick-Off Meeting
February 27, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

Name	Affiliation	Address	Phone
Jennifer Elms	Turner Collic. & Braden	5157 Woodway Houston 77057	713-267-2410
Bobbie Clark	Holiday Forest	HC 52, Box 961, Hemp. 75948	409 579-3702
Pat Wells	South Sabine WSC	HC 52 Box 935 Hemphill 75948	409 579-4185
Richard Balyard	Beechwood HCO	HC 52 Box 618 75948	579-4145
Bill Hengel	South Sabine	HC 52 Box 828 Hemphill 75949	879-3525
Wm. L. Lanier	Trambar-Larre	HC 53 Bx 298	579-3079
N.B. Peoples	GM.	P.O. Box 1115	579-3582
Jack H. Clonk	El Camino Bay	124 Bayshore Dr. Hemph. 1175948	787-4091
S.C. MYERS	El Camino Bay	118 ✓ ✓ ✓ ✓	787-2060
HENRY BARTLETT	El Camino Bay	116 ✓ ✓ ✓ ✓	787-2543
Chad Miller	GM Water	PO Box 727 Hemphill	787-2755
Don Iles	City Manager - Hemphill	PO Box 742 "	787-2251
Charles Friedl	Holiday Forest	HC 52 Box 984	579 4382
Jimmie Baker	Holiday Forest	HC 52 Box 982 Hemphill	579 4283
Priscilla Baker	" "	✓ ✓ ✓ ✓	✓ ✓

**Sabine County Regional Planning
Public Kick-Off Meeting
February 27, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

Name	Affiliation	Address	Phone
HENRY A. LAVIGNE	HOMEOWNER	HC 52 BOX 972	579-4394
Harry P. Jensen	"	Holiday Forest P.O. Box 502 75948	579-3013
ALBERT LAVIGNE	Homeowner	HC 52 BOX 958 HEMPHILL TX 75948	579-7137
George E. Carney	Homeowner	HCR 1 Box 196 Milan	625-3284
WENDELL GRANT	"	HCO-1 - Box 559 MILAN TX	625-4006
Laura Hargrave	"	Box 2 Box 354 - Euau Augustin, Tex	275-7860
Mal Kirby	G-M General Manager	P.O. Box 727 Hemphill	579-2219
Jim Watts	"	"	625-4869
PHIL YOCOM	pm	126 SHADY LN HEMPHILL	787-4042
Gene & Ann Nalley	SABINE Co.	P.O. Box 266 Milan	625-3296
Jene C. Ogilison	OAK Ridge subd.	308 Allison, Sulphur La. 70663	337-628-5276
Jerry Campbell	Region I Chairman	101 W MAIN ST Nacogdoches, TX 75761	936-569-6772



Regional Water and Wastewater Planning

**Project Status Meeting
June 21, 2001**



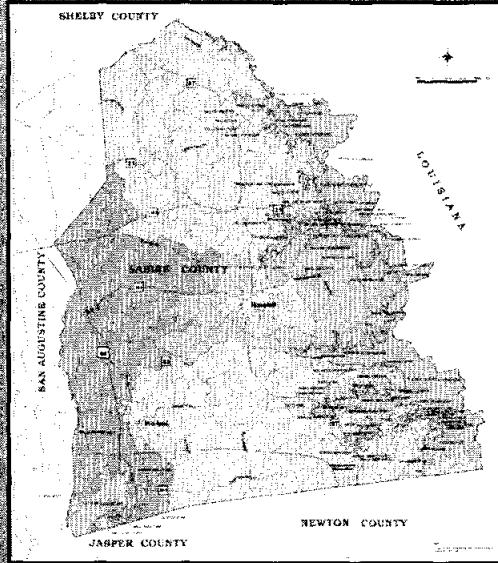
Meeting Agenda

- Introduction and Background
- Status of Regional Facilities Planning
- Creation of Management Authority
- Review of Project Schedule
- Questions and Answers



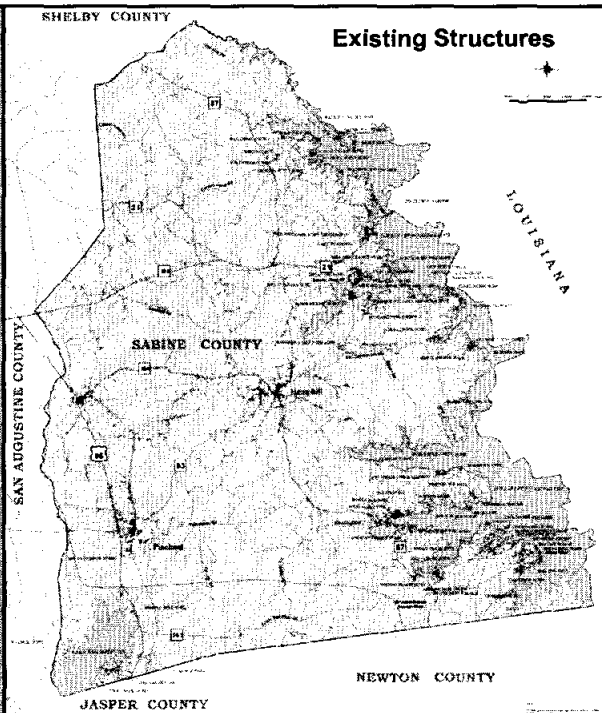
Background

- Senate Bill 1 Regional Planning
- Existing local infrastructure needs
- Local agenda for economic growth
- TNRCC enforcement actions in County
- Wastewater treatment needs
- Plan for bringing supply to the individual end users



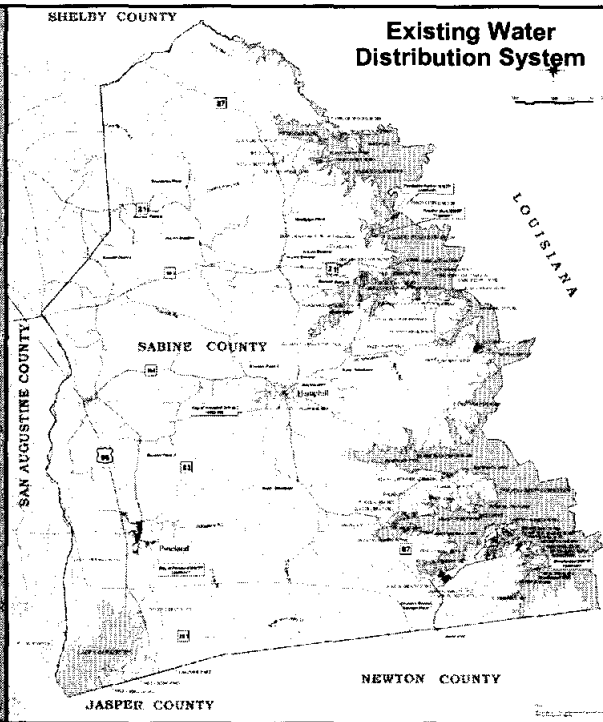
Sabine County Today

- 8 WSCs
- 5 WWTPs
- 2 Municipalities
- Private Well Owners
- Private Septic Tanks
- No Regionalization
- No Cost Sharing



Regional Planning Benefits

- Secure future surface water source
- Maximize existing water resources
- Provide long-term solutions
- Economic development for County
- Economics of scale



Tasks Completed

- Public Kick-off Meeting held 2/27/01
- Data and information collection
- Facilities Mapping
- Preliminary water improvements
- Preliminary wastewater improvements
- Draft EDAP Facilities Plan

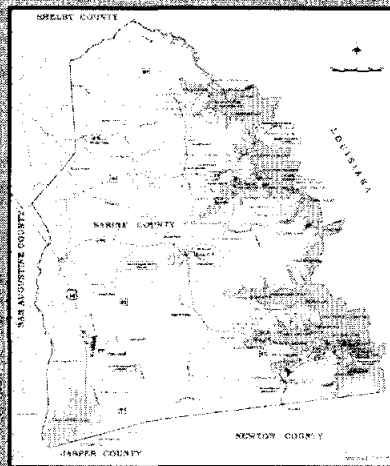


Draft EDAP Facility Plan

- 4 Eligible areas including Bronson, Toledo Hills, Beechwood IV, and McGee's Landing
- Total of \$3.6 million for water and wastewater improvements
- EDAP Grant to leverage regional water and wastewater improvement costs



Preliminary Water Improvements





Water Demand

	Total Connections 2001	Total Connections 2050	Average Water Demand		
			2001 (GPM)	2030 (GPM)	2050 (GPM)
GM WSC	2,744	3,707	533	638	720
City of Hemphill	659	903	317	383	433
City of Pineland	377	521	176	214	244
South Sabine WSC	770	1040	89	107	120
Beechwood WSC	470	634	54	65	73
El Camino	112	151	18	22	25



TNRCC Requirements (per water connection)

- Plant Capacity = 0.6 gpm
- Service Pumps = 2 gpm
- Total Storage = 200 gallons
- Elevated Storage = 100 gallons
- Pressure Tank = 20 gallons



TNRCC Requirements (2001)

	Plant (GPM)		Service Pumps (GPM)		Total Storage (Gallons)		Elevated (Gallons)		Pressure Tank (Gallons)	
	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC
GM WSC ⁽¹⁾	586	1,646	5,080	5,488	484,000	548,800	30,000	274,400	24,500	54,880
Hemphill	1,011	395	2,000	1,318	429,000	131,800	100,000	NA	NA	13,180
Pineland ⁽²⁾	325	226	770	754	200,000	75,400	200,000	NA	NA	7,540
South Sabine ⁽²⁾	480	462	NA	1540	210,000	154,000	0	NA	0	15,400
Beechwood	150	282	1,000	940	296,000	94,000	0	NA	10,000	9,400
El Camino	70	67	200	224	24,000	22,400	0	NA	2,625	2,240

(1) GM WSC purchases all water from City of Hemphill WTP

(2) Pineland and South Sabine are groundwater systems



TNRCC Requirements (2050)

	Plant (GPM)		Service Pumps (GPM)		Total Storage (Gallons)		Elevated (Gallons)		Pressure Tank (Gallons)	
	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC	Existing	TNRCC
GM WSC ⁽¹⁾	586	2,224	5,080	7,414	484,000	741,400	30,000	370,700	24,500	74,140
Hemphill	1,011	542	2,250	1,806	429,000	180,600	100,000	NA	NA	18,060
Pineland ⁽²⁾	325	313	770	1,042	200,000	104,200	200,000	NA	NA	10,420
South Sabine ⁽²⁾	480	624	NA	2,080	210,000	208,000	0	NA	0	20,800
Beechwood	150	380	1,000	1,268	296,000	126,800	0	NA	10,000	12,680
El Camino ⁽³⁾	70	67	200	224	24,000	24,000	0	NA	2,625	2,240

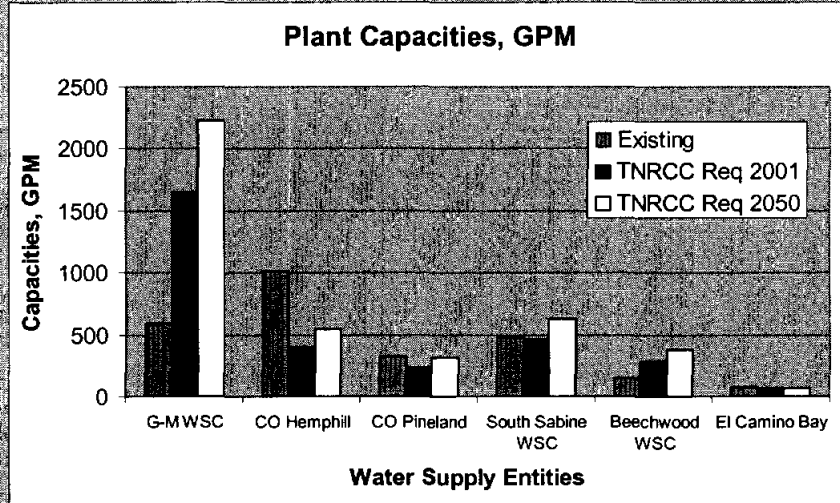
(1) GM WSC purchases all water from City of Hemphill WTP

(2) Pineland and South Sabine are groundwater systems

(3) El Camino has projected no growth through 2050



Water Treatment Needs



Water Planning Basis

- Expansion and improvement of GM distribution system
- City of Hemphill / SRA regional water treatment plant
- Beechwood / South Sabine regional water treatment plant
- City of Pineland interconnect to GM

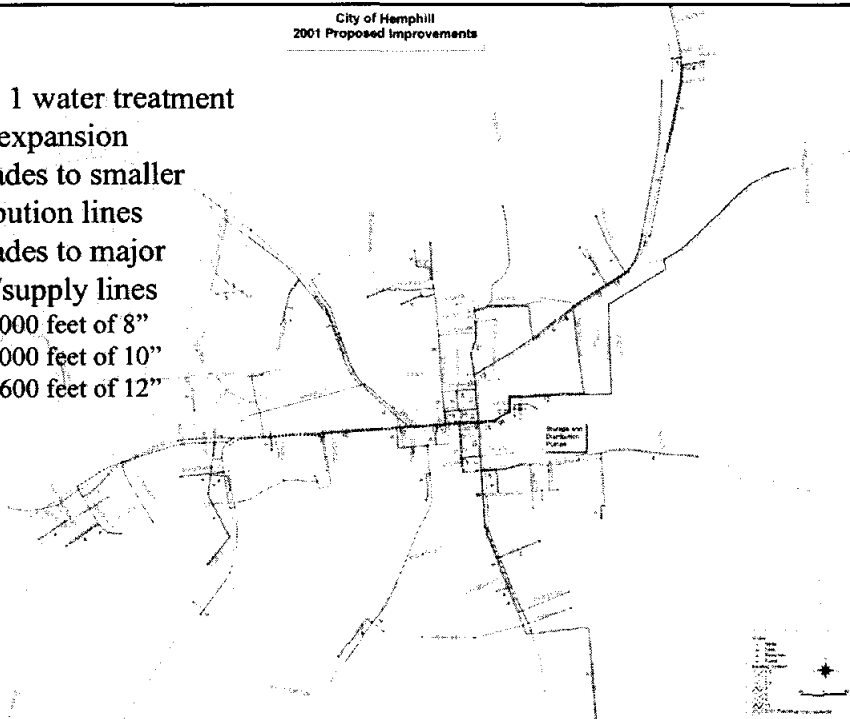


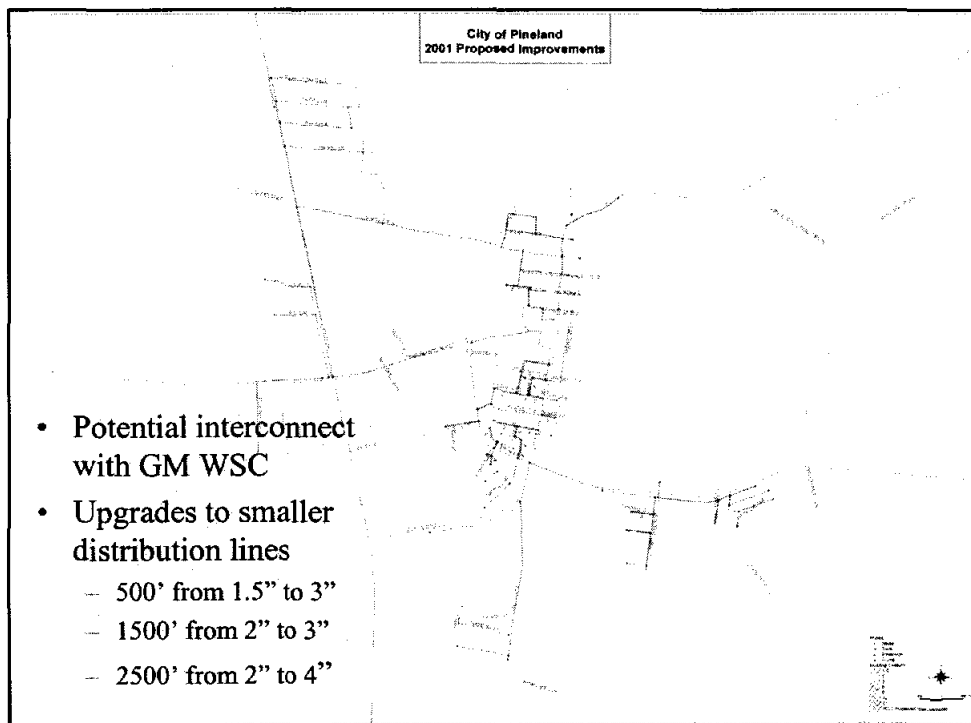
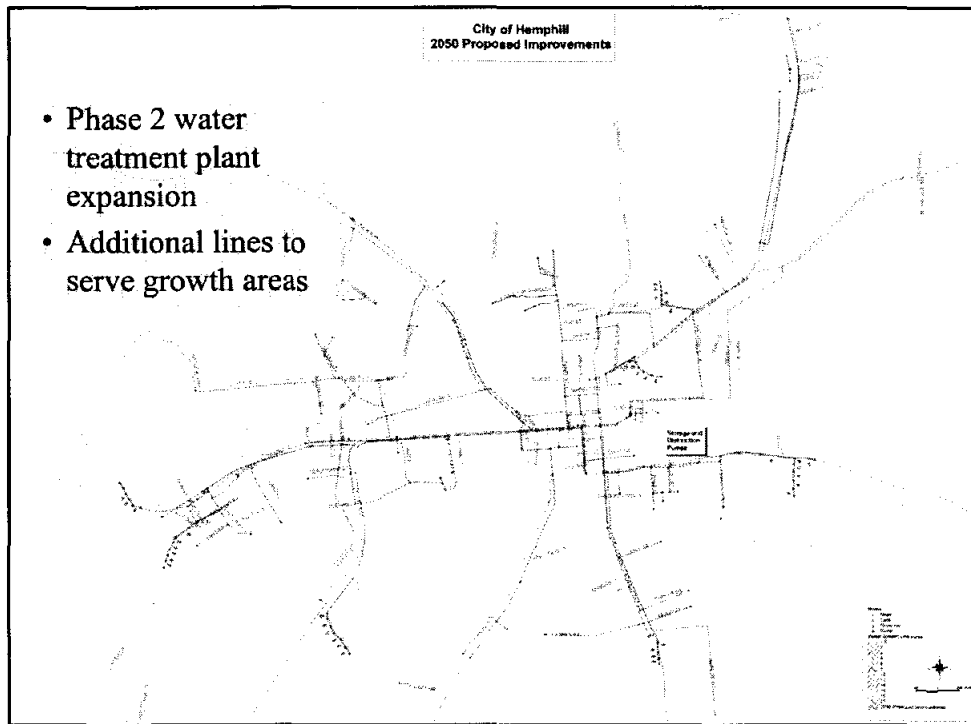
Water Model Criteria

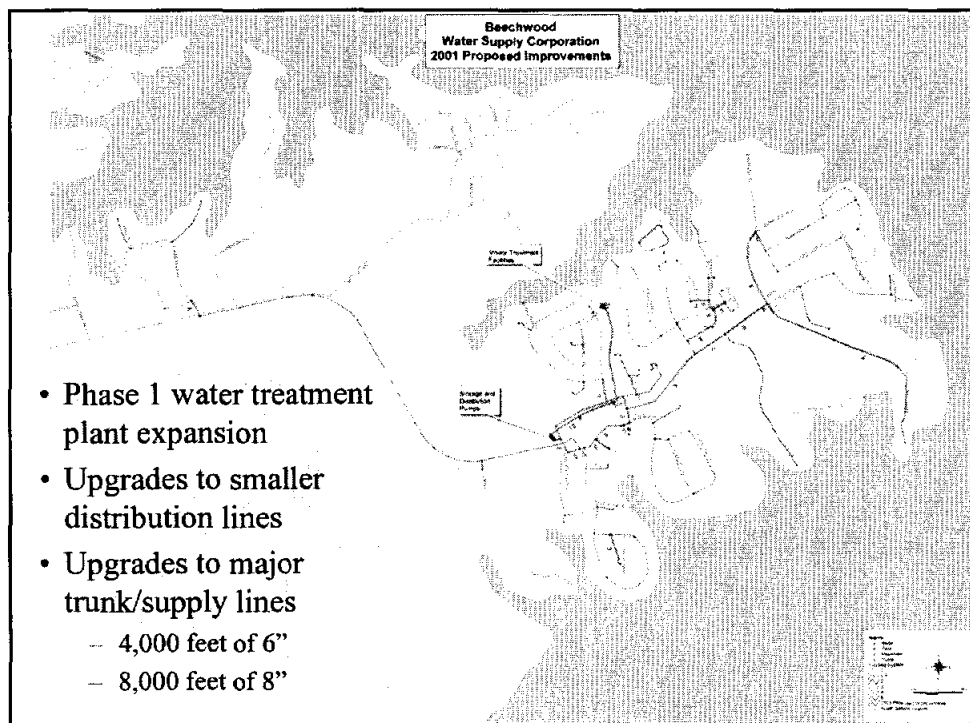
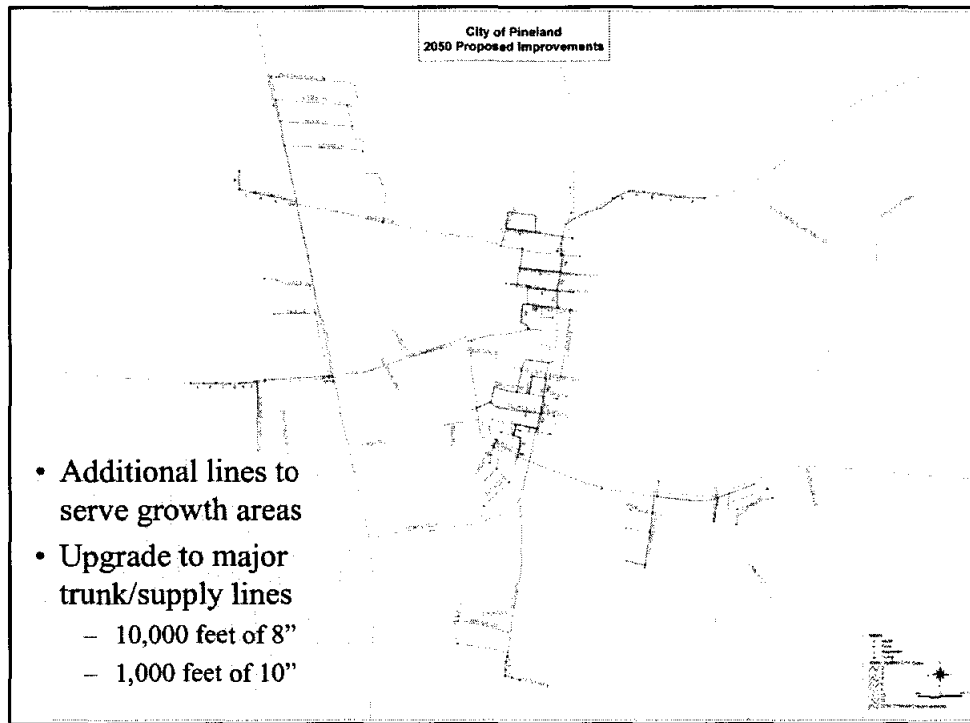
- Pipe2000 water model
- Distribution system sized for peak hour demand
- Peak hour demand based on actual water usage and TNRCC standards
- Improvements for 2001 and 2050
- Headloss less than 5 feet per 1,000 feet
- Velocity less than 5 feet per second
- Pressures above 35 psi (per TNRCC)

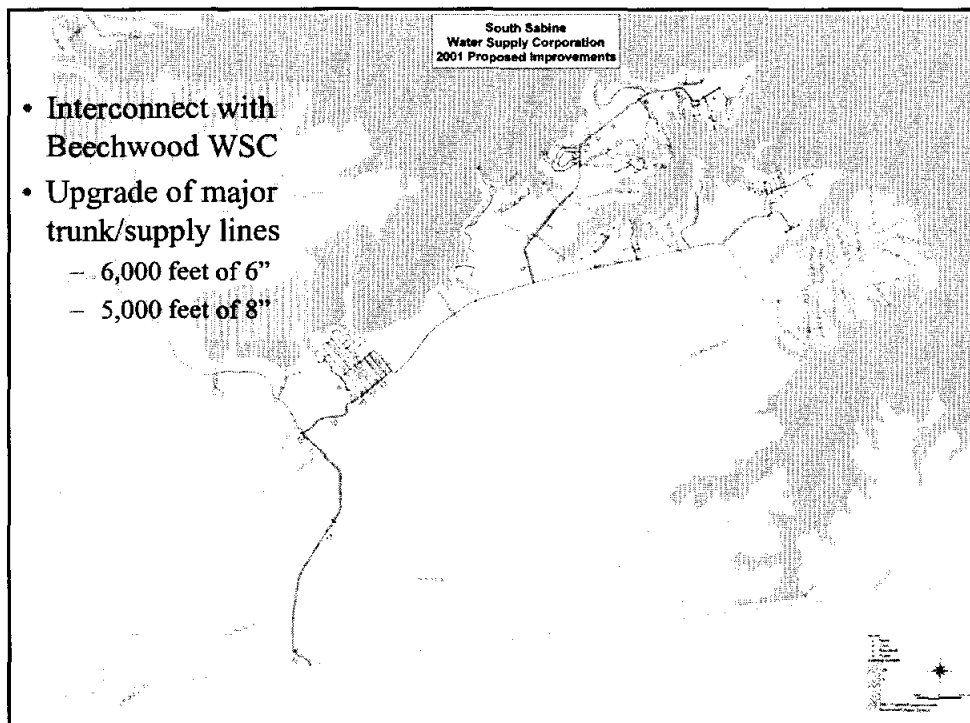
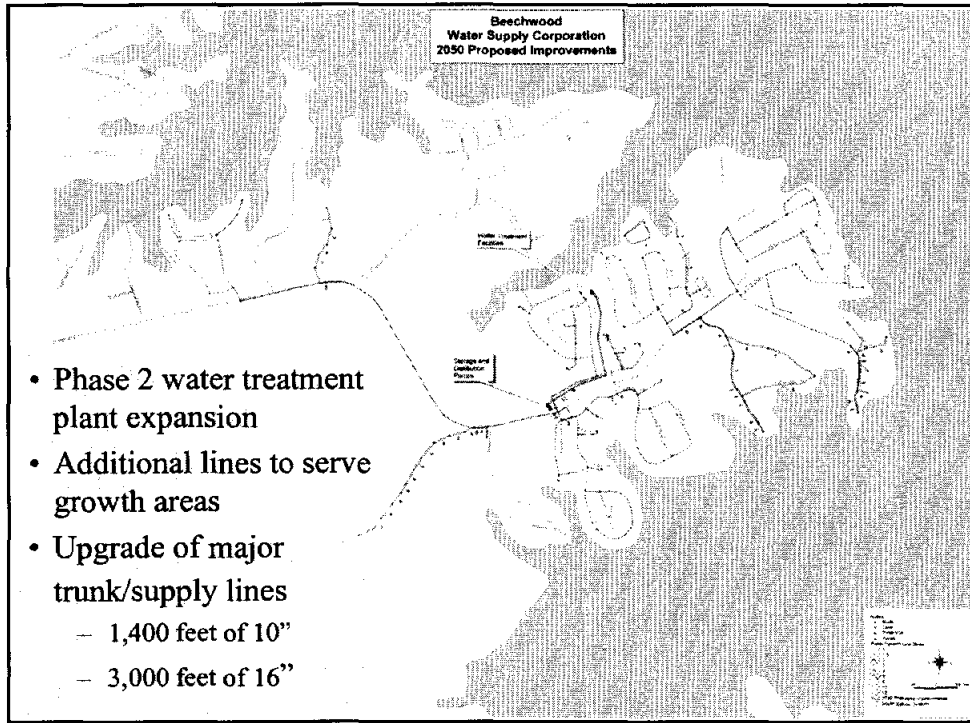
City of Hemphill
2001 Proposed Improvements

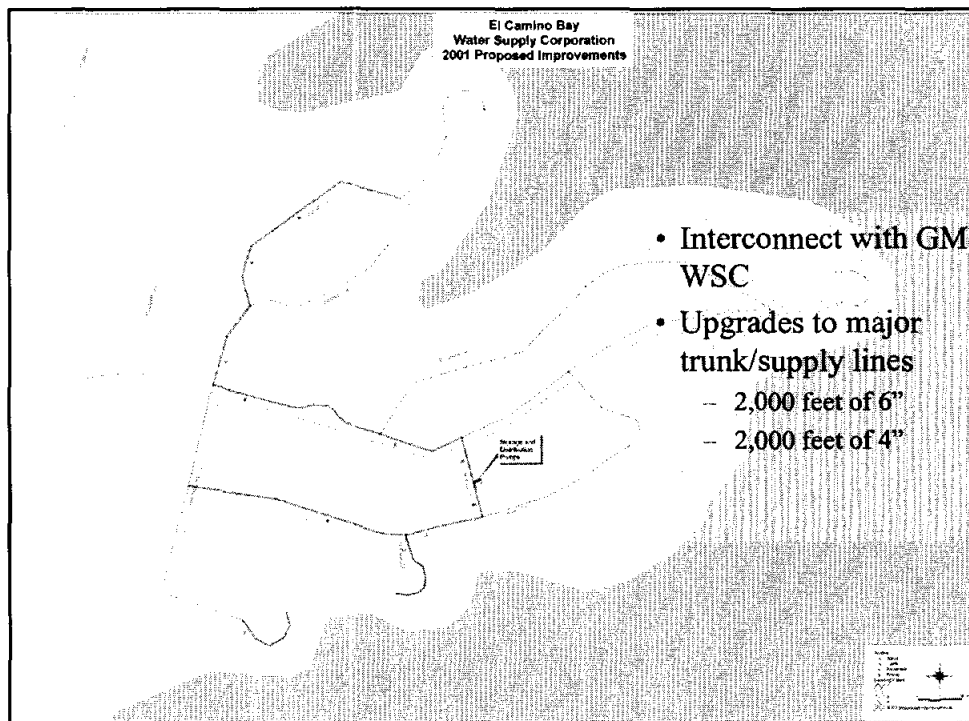
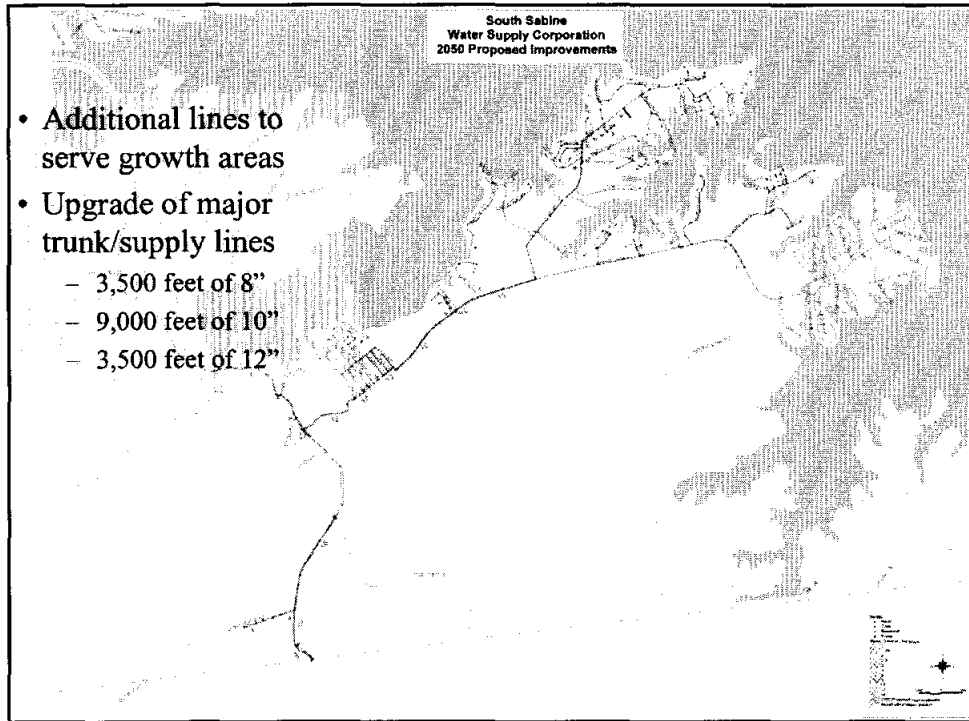
- Phase 1 water treatment plant expansion
- Upgrades to smaller distribution lines
- Upgrades to major trunk/supply lines
 - 4,000 feet of 8"
 - 6,000 feet of 10"
 - 1,600 feet of 12"







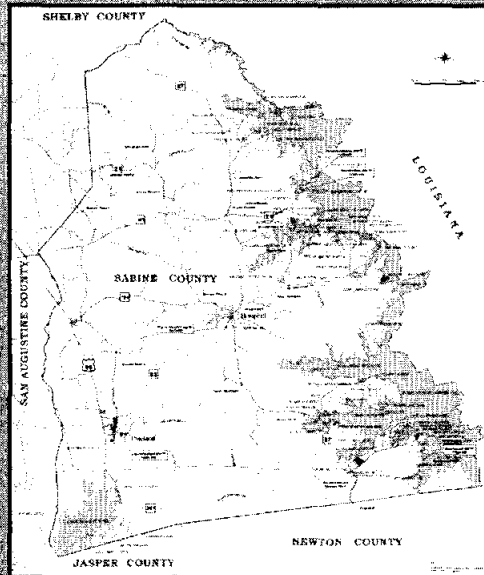






GM WSC Preliminary Improvements

- Expand current contract for water from City of Hemphill/SRA Plant
- Increase size of major trunk lines
- Increased storage capacity
- Increased pumping capacity
- Increase connections to areas in need

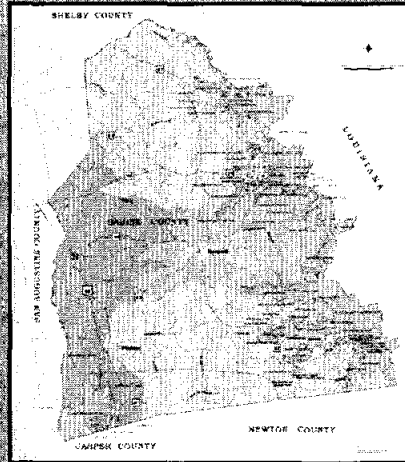


Preliminary Water Improvements Summary

- City of Hemphill plant expansion – 1500 to 2000 gpm over planning period
- Beechwood WSC plant expansion – 1000 to 1500 gpm over planning period
- GM WSC interconnects with Pineland, El Camino Bay, and others
- Interconnects between South Sabine WSC and Beechwood WSC
- Expand service areas for South Sabine WSC and Beechwood WSC to serve growth
- GM improvements to storage, pumping capacity, and distribution lines
- Upgrades to distribution lines for all entities



Preliminary Wastewater Improvements



Wastewater Demand

	Total Connections 2001	Total Connections 2050	Existing Plant (MGD)	Average Wastewater		
				2001 (MGD)	2030 (MGD)	2050 (MGD)
GM WSC	2,744	3,707	NA	0.57	0.68	0.77
Hemphill	659	903	0.2	0.14	0.17	0.19
Pineland	377	521	0.214	0.08	0.1	0.11
South Sabine	770	1,040	NA	0.16	0.19	0.22
Beechwood	470	634	0.05	0.1	0.12	0.13
El Camino	112	151	NA	0.02	0.03	0.03
TOTAL	5,132	6,956	0.464	1.07	1.29	1.45



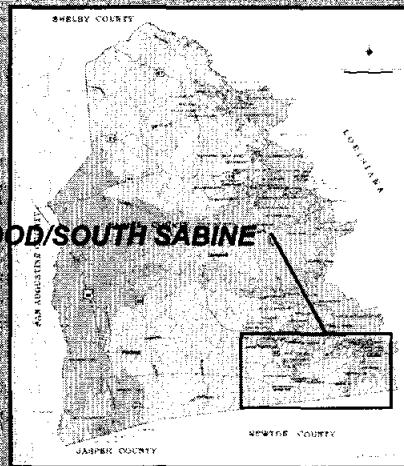
Wastewater Planning Basis

- Certain soils along Toledo Bend not suitable for on-site treatment
- Protection of primary water source
- STEP or gravity systems in individual subdivisions
- Multiple collection and pumping stations
- Multiple regional WWTPs along Toledo Bend Reservoir
- City of Hemphill WWTP expansion
- City of Pineland WWTP expansion
- Beechwood WWTP expansion

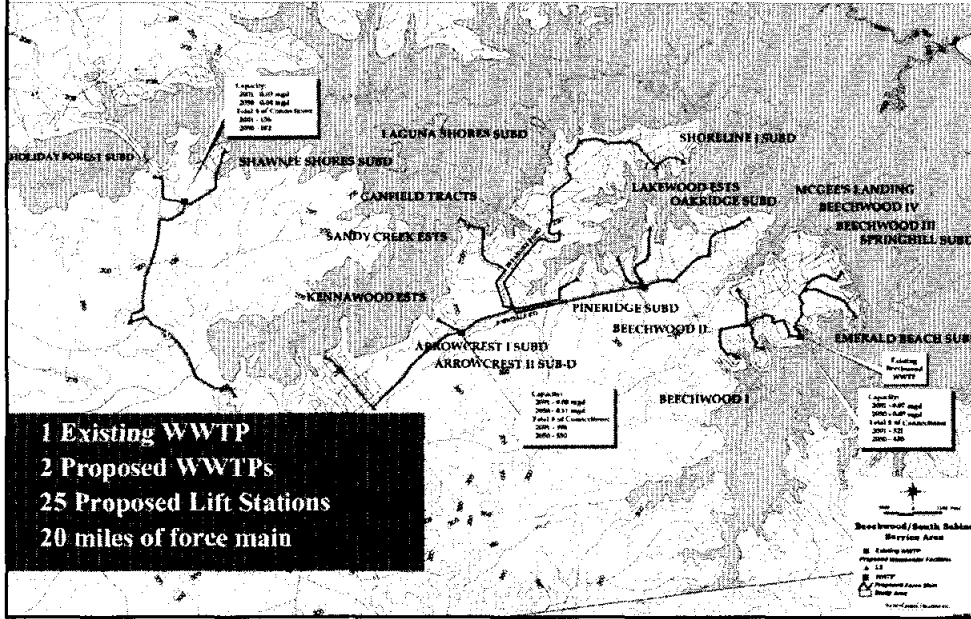


Preliminary Wastewater Improvements

BEECHWOOD/SOUTH SABINE



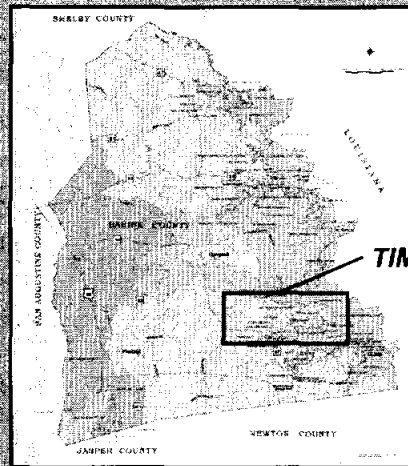
Beechwood/South Sabine Region



1 Existing WWTP
 2 Proposed WWTPs
 25 Proposed Lift Stations
 20 miles of force main

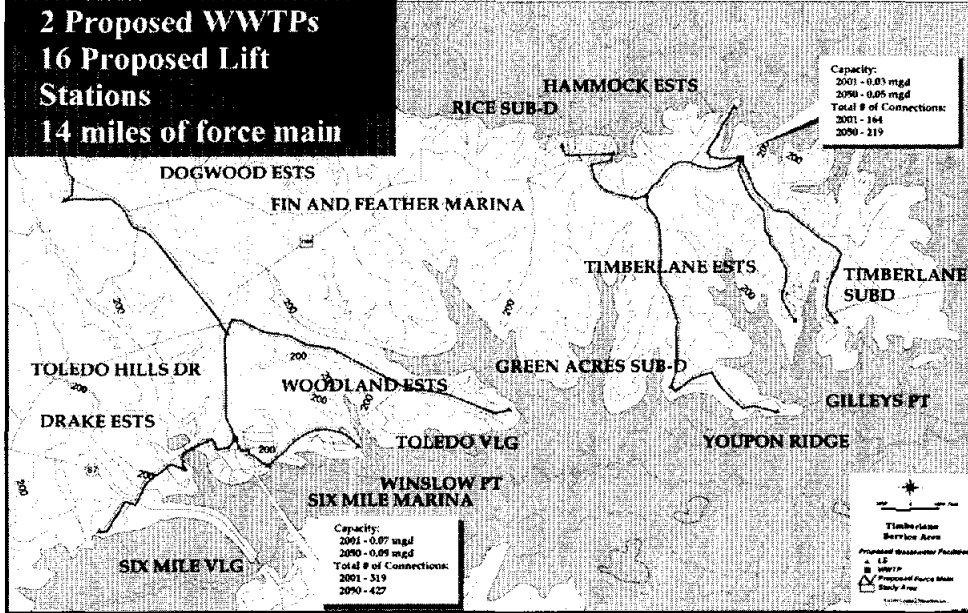


Preliminary Wastewater Improvements

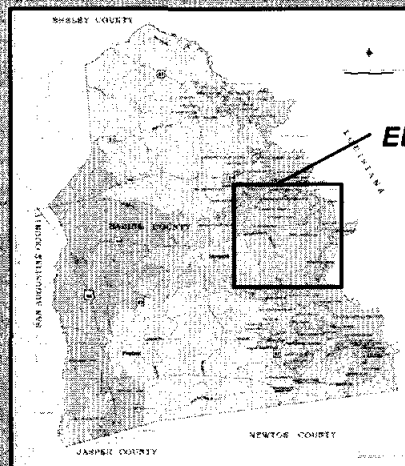


Timberlane Region

2 Proposed WWTPs
16 Proposed Lift Stations
14 miles of force main

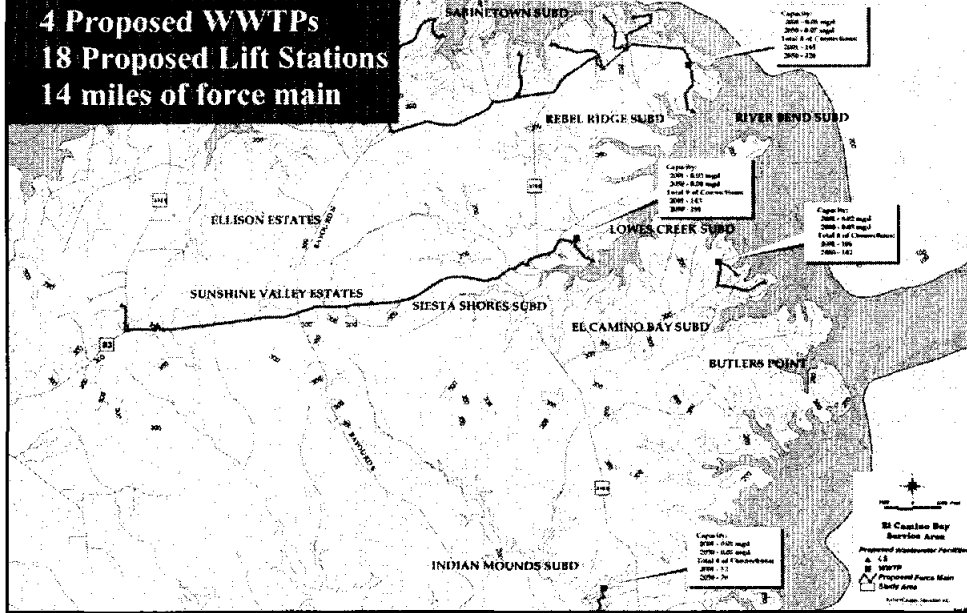


Preliminary Wastewater Improvements

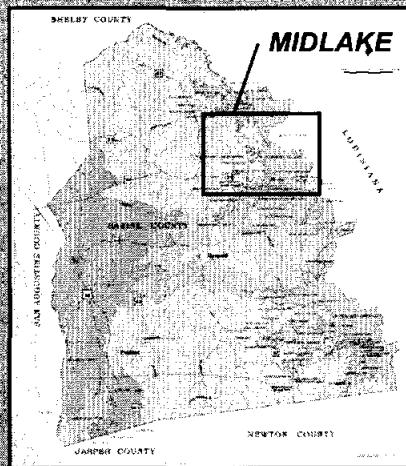


El Camino Bay Region

4 Proposed WWTPs
18 Proposed Lift Stations
14 miles of force main

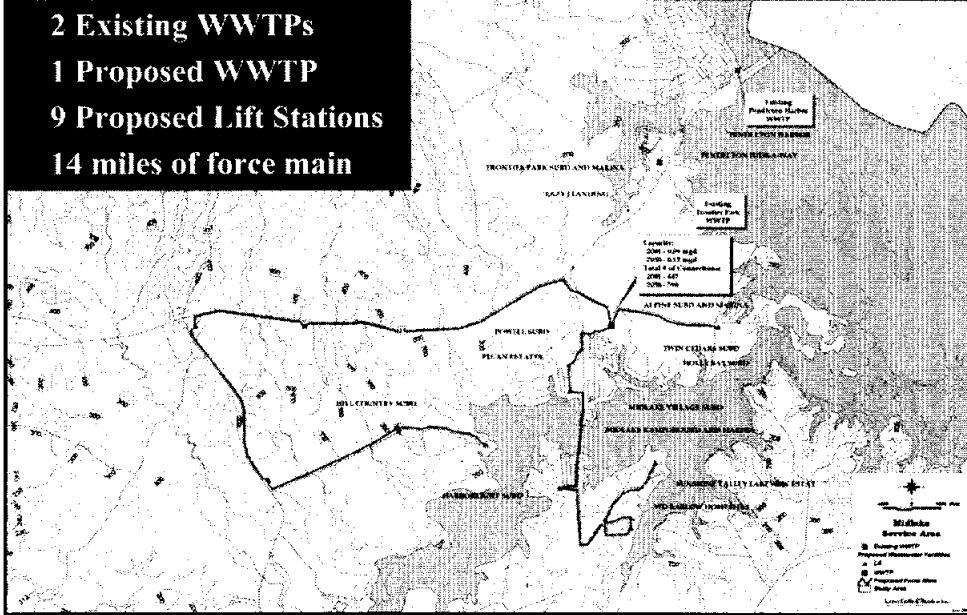


Preliminary Wastewater Improvements

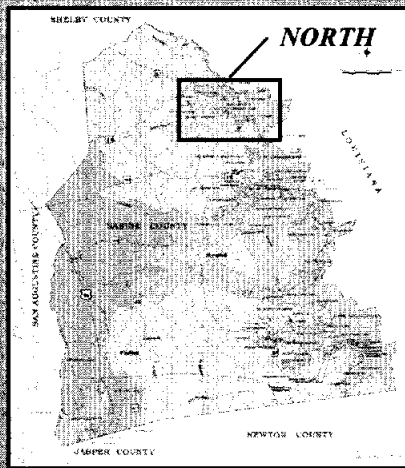


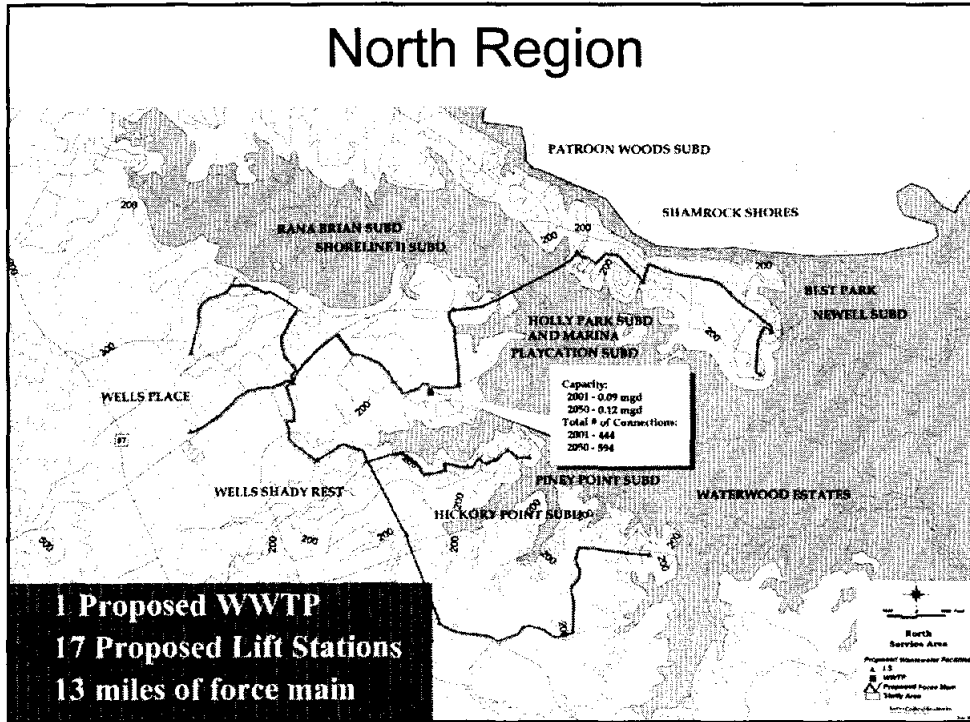
Midlake Region

2 Existing WWTPs
 1 Proposed WWTP
 9 Proposed Lift Stations
 14 miles of force main



Preliminary Wastewater Improvements





Preliminary Wastewater Improvements Summary

- 10 WWTPs along Toledo Bend – approximately 1 MGD over planning period
- Approximately 80 lift stations over planning period
- 75 miles of force main over planning period
- STEP/Gravity Collection Systems in individual subdivisions
- Possible improvements to existing Hemphill, Pineland, and Beechwood WWTPs
- Potential regional WWTP in Bronson area



Freshwater Supply District Creation

- Created by Petition, Hearing, and Election
- Petition presented to the County Commissioners Court
- Petition signed by 50 or a majority of electors who own land
- Hearing held between the 15th and 30th day following petition
- Five temporary supervisors appointed to serve on District
- Election held to determine if district will be established



Freshwater Supply District Restrictions

- Elections required for all bond issues
- Revenue notes with terms no greater than 20 years can be issued without elections
- Creation of district inside ETJ of city requires city consent
- District can not be created outside County without annexations

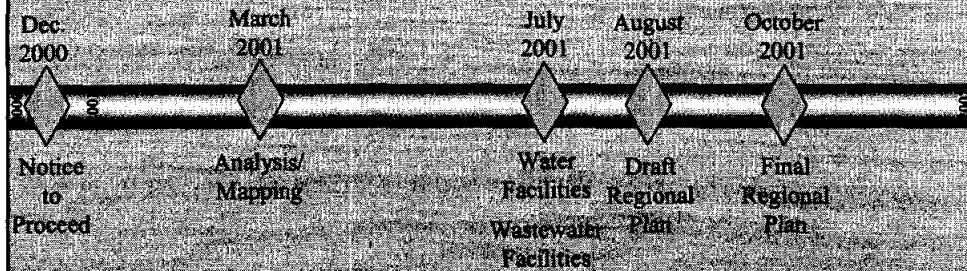


Upcoming Activities

- Finalize proposed improvements
- Environmental Assessment
- Facilities cost estimating
- Rate analysis
- Funding options
- Management Authority



Schedule and Milestones





Public Participation

February
2001

April
2001

May
2001

June
2001

August
2001

September
2001

Public
Kickoff

BDAP
Presentation

Draft
EID
Presentation

Status
Meeting

Draft
Plan

Status
Meeting



Contacts

County Judge

Judge Jack Leath
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TWDB

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County Commissioners

Keith Clark – Precinct 1
Lynn Smith – Precinct 2
Doyle Dickerson – Precinct 3
Gene Nethery – Precinct 4

Emergency Session Commissioners' Court

June 21, 2001 7:00 p.m.

District Courtroom

Members of the Court Present:

Jack Leath	County Judge
Keith Clark	Commissioner Pct. #1
Lynn Smith	Commissioner Pct. #2
Doyle Dickerson	Commissioner Pct. #3
Gene Nethery	Commissioner Pct. #4
Janice McDaniel	County Clerk

Judge Leath called the meeting to order at 7:00 p.m.

Agenda item #1-Discuss Regional Water & Wastewater Quarterly Progress

- District Courtroom

Judge Leath welcomed all the people for coming to the meeting. He said this is our second public meeting and we will have at least one more. He said we will have a time for questions and comments. At this time he turned the presentation over to Keith Kindle, project manager. Mr. Kindle is with Turner, Collie & Braden, the Engineering Firm for this project.

Mr. Kindle introduced his assistants, Mike Reddy, Jennifer Elms, Janie Acock, and Barbara Hatfield. He said we will have two more public meetings. He went over the background and reasons for this project. (See attached copies.) He said only four areas in the County qualified for EDAP. There were other areas that probably would have qualified, but we did not get enough of a response from the residents. We had to have a 30 percent response. Mr. Kindle then turned the presentation over to Mike Reddy.

Mike Reddy gave a presentation of the status of the facilities at the present and the projected status in 2050. He gave the steps that are planned for the projects completion. (See attached copies.)

Mr. Kindle gave an overview of how the water district will be created. (See attached copies.)

Some of the questions asked and the response given:

1. Can a person that owns property in the County but does not reside here permanently sign a petition for a water district?

Response- Mr. Kindle said he does not know the answer but he will find out and let the gentleman know.

2. Are we under EDAP?

Response- Mr. Kindle said only 4 areas qualified for EDAP. This was due partly because of the lack of response from the people. We had to have a 30 percent response to the survey. This is a loss to the County because of Grant money we could have gotten.

3. When the Water District is created, will all water supply corporations operate under the same rule?

Response- Mr. Kindle said if they join the water district, they will all operate under 1 rule. If they do not, they will continue as they have been.

4. Are all the water rates going to be the same in the County?

Response- Mr. Kindle said the rates would be the same for everyone. You could not make someone pay more for water than what someone else was paying.

5. Will All water plants stay where they are or will they be moved?

Response- Mr. Kindle said that if the existing plants have room to expand and it would be cheaper to utilize them, we will use them.

6. Are we talking about wells or about getting water out of the lake?

Response- Mr. Kindle said we are talking about getting water out of the lake. Ground water may be good now but we have to think of 50 years from now and securing that water supply.

7. Who is going to get the ball rolling? For example, the petition to present to the Commissioners' Court?

Response- Mr. Kindle said come August we are going to be looking at the petition to get it on the November ballot. First we are going to have to get a cost for this project.

8. Will areas that do not have a water supply be first and when do you anticipate this to happen?

Response- Mr. Kindle said we will be looking to add new customers. This will be the most cost-effective thing we can do to add new customers.

9. Will water and wastewater be together?

Response- Mr. Kindle said it would all be together and that is why we are not pressing wastewater. Our priority is water supply.

Mr. Kindle said their attorney will draw up the petition to give to the County. The County will then ask people if they want to sign it. Fifty signatures are required. After the required number of signatures, the Court will then have a hearing on the petition. If the Court grants the petition, then the County would have an election. We are trying for the November election.

Judge Leath told the people that the Court would not ask anyone to sign the petition before we can tell them pretty close what the cost will be for the project.

Commissioner Clark moved to adjourn. Commissioner Smith seconded. All voted for. Meeting adjourned.

Jack Cook COUNTY JUDGE

Kevin Clark COMMISSIONER PCT. #1

Lynn Smith COMMISSIONER PCT. #2

Doyle Dickerson COMMISSIONER PCT. #3

W. Gentry COMMISSIONER PCT. #4

ATTEST:

Jamie McDaniel COUNTY CLERK

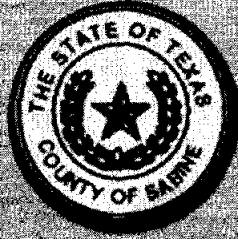
**Sabine County Regional Planning
Project Status Meeting
June 21, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

48-06035-002
2.3 Public Mtgs

Name	Affiliation	Address	Phone
Lindsay, Don	El Camino Bay	143 Bayshore Dr.	787-3728
SP INVETS	El Camino Bay	148 Bayshore	787-2060
Ann Myers	El Camino Bay	118 Bayshore	787-2060
HENRY BARTLET	EL CAMINO BAY	116 Bay Shore	787-2543
Charlotte BARTETT			
Tom Kendall	El Camino Bay	191 Bayshore Dr	787-4781
Mara Kendall	" "	" " "	" "
Jack Clark	" " "	124 Bayshore dr	787-4091
Cale & Margie Hanna	Dogwood Forest Eto.	848 Cherokee, Port Neches, TX	727-6443
D.E. Haight	Beechwood II	HC 52 Box 697 Hemphill	579 3753
Norman & Peggy Holden	Beechwood II	817 Montrose Pt Neches TX 77651	722-2546
William & Marjorie Messer	Beechwood II	5421 KENT AVE GROVES, TX 7764A	942-6076
William P. Herrington	Dogwood Forest II	P.O. Box 456 Hemphill, TX	579-4216
X m/m W. D. HAMMOCK	Rock Rd.	HC 52 Box 759.A, Hemphill, TX	579 3798

**Sabine County Regional Planning
Project Status Meeting
June 21, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

Name	Affiliation	Address	Phone
R.T. Wells	South Sabine WSC	HC 52 Box 935	579-4185
George L. Cooper	" "	HC 52 Box 869	579-4138
WAYNE SEAL	BEECHWOOD	HC 52 Box 845	579-3348
Russ J. Jarrell	Beechwood	HC 52 Box 762A	579-3990
Richard Belyard	Beechwood H20	HC 52 Box 618	579-4195
Dale Conway	Beechwood Resident	129 Beechwood Loop	579-3587
Ben Pringle	Beechwood I	HC 52 Box 619	579-2233
Mark Lintner	G-M WATER	Supply in Hemphill	787-2755
Wendell Grant	G-M WATER	" " "	625-4006
George E. Carney	G-M WATER	" " "	625-3284
Homer R. Taylor	Beechwood	HC 51 - Box 686 Hemphill	579-4005
RL BIGGERSTAFF	BEECHWOOD	HC 52 Box 678 HEMPHILL TX 75948	579-3953
George Sam	SRA	P.O. Box 579 Orange 77631	(409) 746-2192
Richard Jolley	Beechwood	HC 52 Box 686 - HEMPHILL TX	409-579-3138
Jeanne Woods	Beechwood II	HC 52 Box 792 - Hemphill	579-2236



Regional Water and Wastewater Planning

**Public Hearing
September 27, 2001**



Meeting Agenda

- Introduction
- Water and Wastewater Improvements
- Water and Wastewater Rates
- Sabine County FWSD Creation
- Future Activities
- Questions and Answers




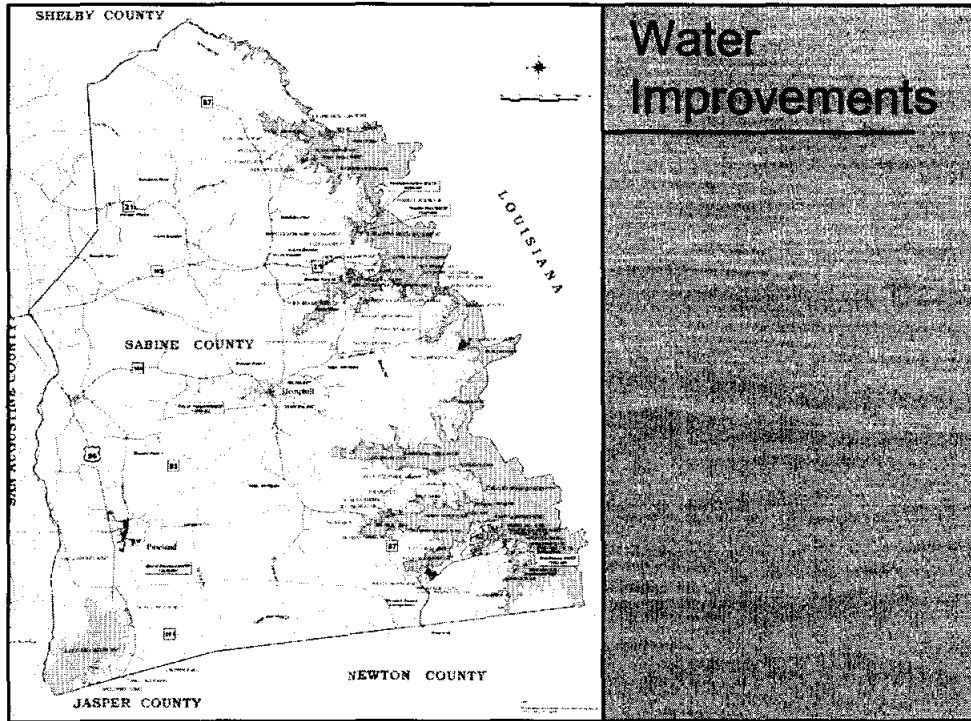
Tasks Completed

- Public Kick-off Meeting held 2/27/01
- Project Status Meeting held 6/21/01
- Draft EDAP Facilities Plan
- Proposed water improvements
- Proposed wastewater improvements
- Proposed water and wastewater rates
- Draft Regional Facilities Plan



Draft EDAP Facility Plan

- Bronson, Toledo Hills, Beechwood IV, and McGee's Landing are eligible areas
- Total of \$3.6 million for water and wastewater improvements
- EDAP grant to leverage regional water and wastewater improvement costs

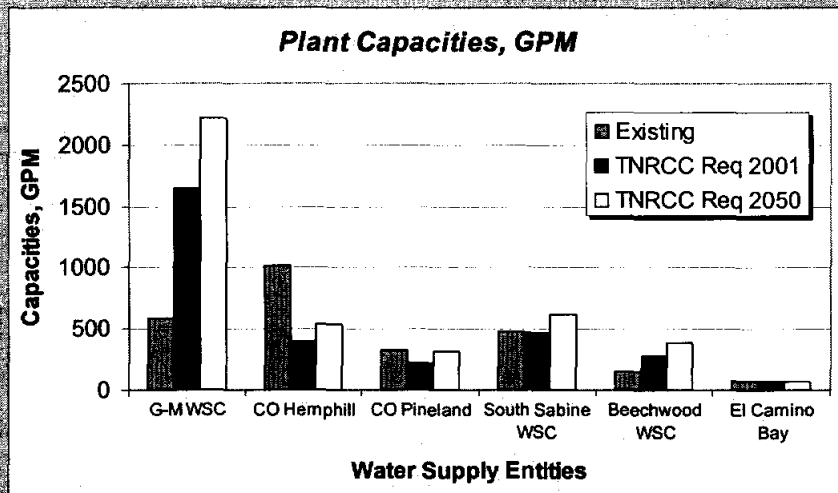


Water Planning Basis

- Surface water treatment capacity for Sabine County currently not adequate to meet TNRCC requirements
- Distribution system improvements required to deliver peak hour demands
- Additional storage capacity required in parts of Sabine County
- Existing TNRCC enforcement actions on WSCs in Sabine County




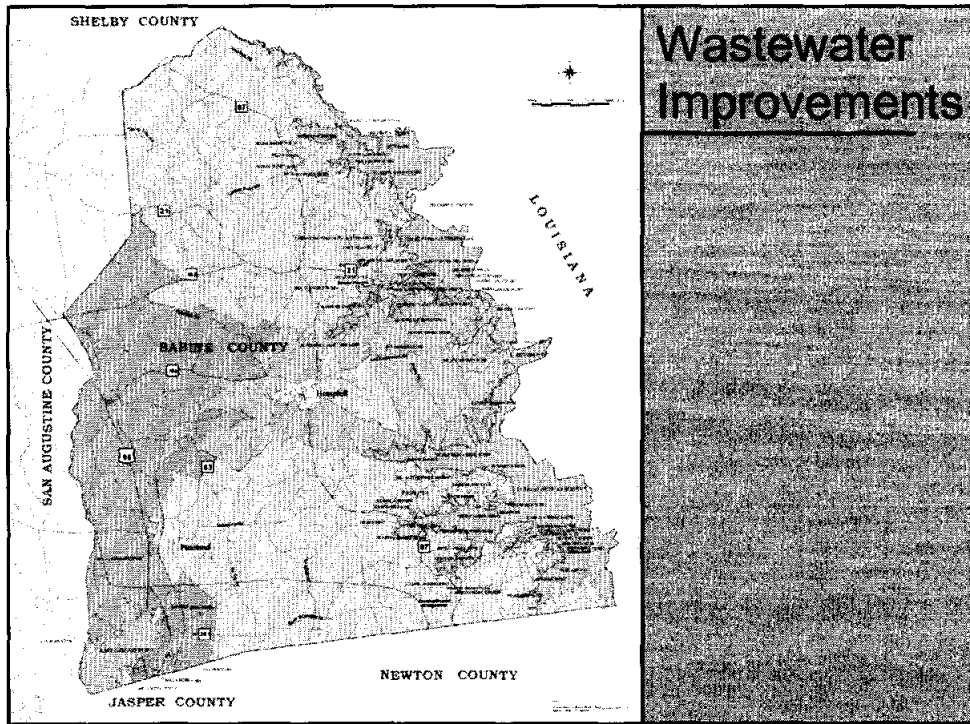
Water Treatment Needs



Water Recommendations

- Hemphill/SRA Water Treatment Plant Expansion (2 MGD over 50-years)
- Beechwood/South Sabine Water Treatment Plant (0.75 MGD over 50-years)
- City of Pineland Interconnect and Back-up Water Supply
- El Camino Bay connection with G-M WSC
- Additional storage capacity for G-M WSC (200,000 gallons over 50-years)
- Improvements to distribution systems throughout Sabine County

Improvements in two phases (2005-2010 and 2025-2030)



Wastewater Planning Basis

- Certain soils along Toledo Bend not suitable for on-site treatment
- Protection of primary and long-term water source for Sabine County
- Focus of study along Toledo Bend Reservoir
- Multiple treatment facilities along Toledo Bend Reservoir
- Extensive collection and pumping facilities
- Consideration of planned improvements for City of Hemphill in rate analysis



Wastewater Alternatives

- Larger conventional WWTPs located central to multiple subdivisions (200 or more connections)
- Natural treatment systems located in smaller community clusters (less than 200 connections)
- Gravity collection lines in subdivisions
- STEP collection lines in subdivisions



Wastewater Recommendations

- Conventional centralized treatment facilities
- Combination of gravity and STEP collection lines
- Extensive network of force mains and lift stations
- Approximately 11 WWTPs over 50-years
- Approximately 1 MGD total WWTP capacity over 50-years
- Conversion of a majority of properties along Toledo Bend to centralized facilities

Improvements in three phases (2010, 2020, and 2030)



Rate Analysis

\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$



Rate Analysis Objectives

- Develop equitable rate structure for all participants
- Consistent monthly bills across the county
- Rates fund all improvements recommended in plan
- Rate structure pays for all capital and O&M costs to operate district
- Maintain ample year-end cash balance for district water and wastewater accounts (at least \$300,000)

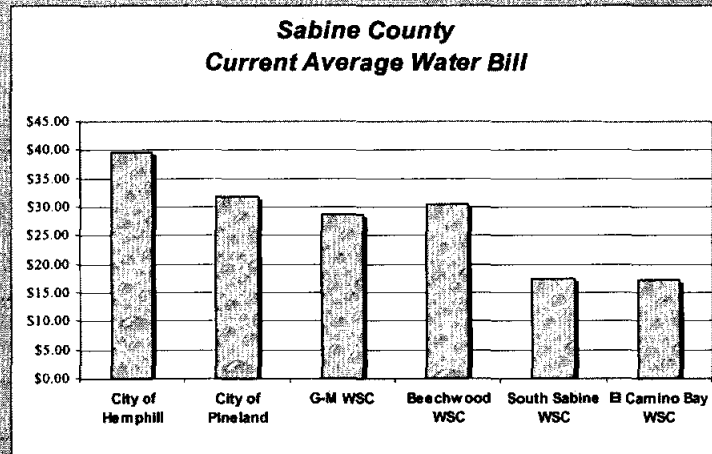


Current Water Rates

Provider	Existing Water Rates for Sabine County				
	Flat Monthly Rate (\$)	Maximum Volume (gallons)	2nd Tier Rate (\$/1,000 gal)	2nd Tier Maximum Volume (gallons)	3rd Tier Rate (\$/1,000 gal)
Hemphill	\$18.36	2,000	\$1.71	NA	NA
Pineland	\$8.25	2,000	\$1.50	NA	NA
G-M WSC	\$20.00	3,000	\$2.50	20,000	\$3.00
Beechwood	\$28.00	3,000	\$1.50	10,000	\$2.00
South Sabine	\$17.50	4,000	\$2.50	NA	NA
El Camino Bay	\$13.50	3,000	\$2.00	NA	NA



Current Average Water Bill



Weighted Average Water Bill for County = \$28.54



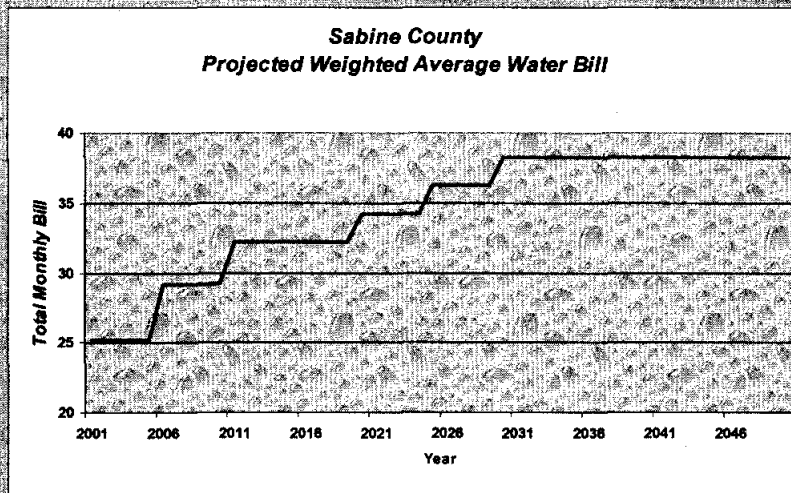
Capital Cost of Water Improvements

Provider	Treatment Plant ⁽¹⁾	System Distribution	Total Construction	Total Non-Construction	Total Capital Cost
City of Hemphill	\$1,000,500	\$1,776,655	\$2,777,155	\$1,249,720	\$4,026,875
City of Pineland	\$696,000	\$686,264	\$1,382,264	\$622,019	\$2,004,283
G-M WSC	\$4,112,200	\$4,210,422	\$8,322,622	\$3,745,179	\$12,067,801
Beechwood WSC	\$1,804,200	\$363,711	\$2,167,911	\$975,560	\$3,143,471
South Sabine WSC	\$633,400	\$1,864,822	\$2,498,222	\$1,124,200	\$3,622,422
EICamino Bay WSC	\$303,900	\$10,436	\$314,336	\$141,451	\$455,787
TOTAL	\$8,550,200	\$8,912,310	\$17,462,510	\$7,858,129	\$25,320,639

(1) Treatment plant costs for each provider based on a pro-rata share of capacity from treatment plants.

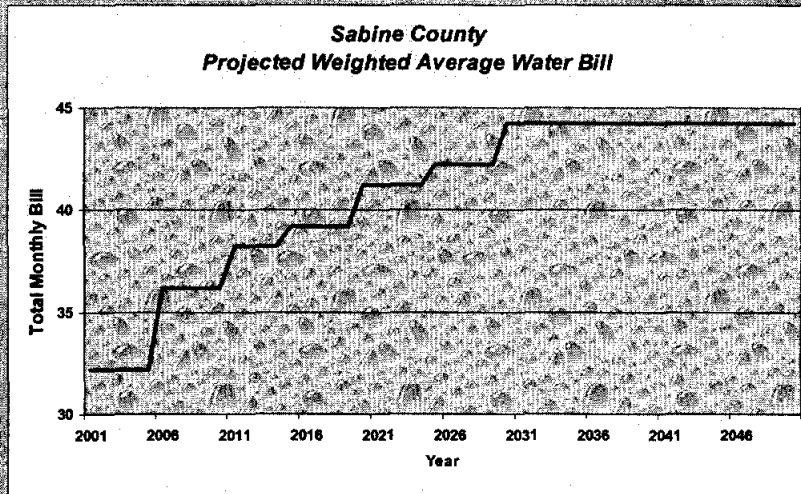


Projected Average Water Bill 0% interest and 35% loan forgiveness

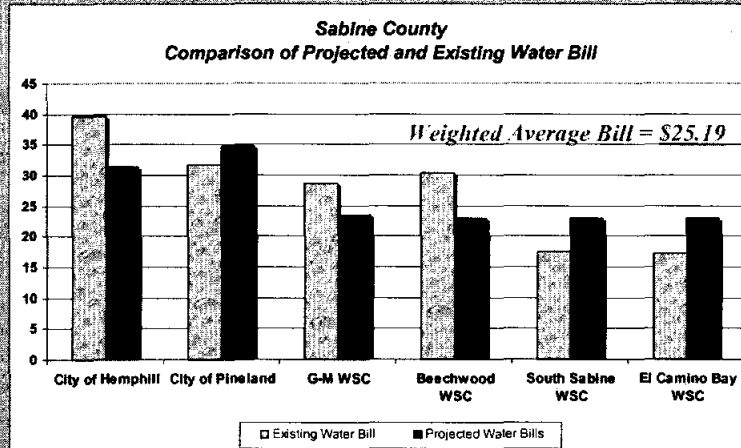




Projected Average Water Bill 2% interest and 0% loan forgiveness



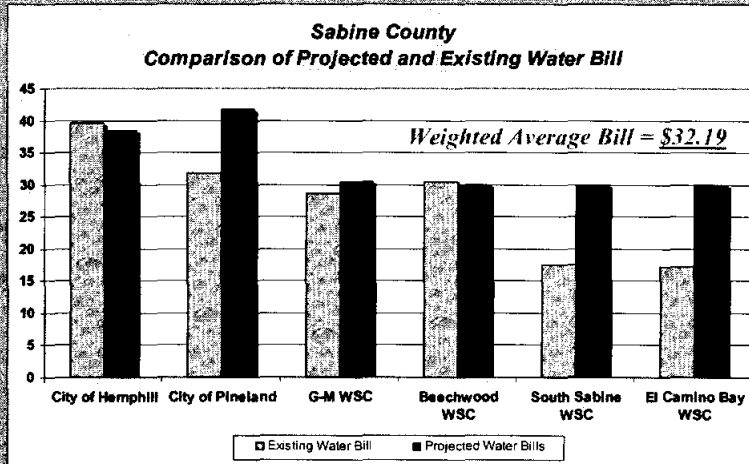
Average Water Bill (2005) 0% interest and 35% loan forgiveness



*Fixed Monthly Water Rate = \$23 for first 6,000 gallons
\$1.00 per 1,000 gallons for usage above 6,000 gallons*



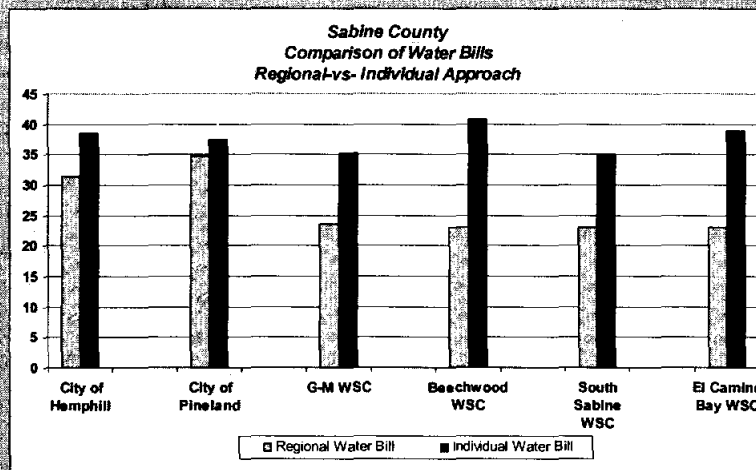
Average Water Bill (2005) 2% interest and 0% loan forgiveness



*Fixed Monthly Water Rate = \$30 for first 6,000 gallons
\$1.00 per 1,000 gallons for usage above 6,000 gallons*



Comparison of 2005 Water Bills Regional -vs- Individual Approach



0% interest and 35% loan forgiveness



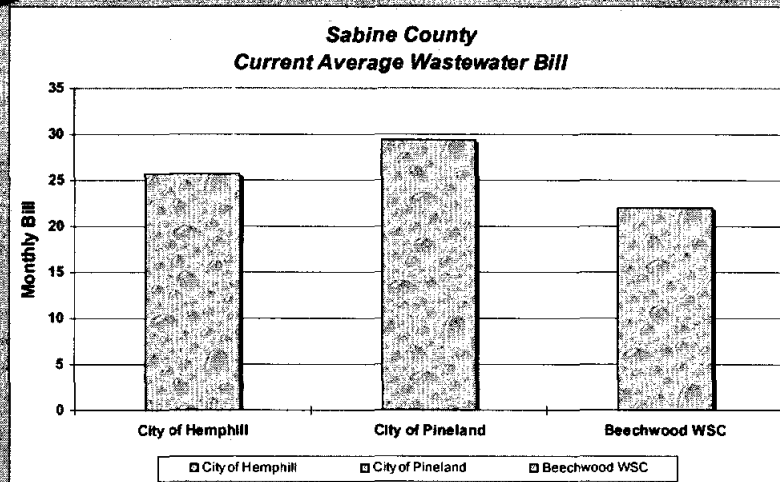
Current Wastewater Rates

Existing Wastewater Rates for Sabine County

Provider	Flat Monthly Rate (\$)	Maximum Volume (gallons)	2nd Tier Rate (\$/1,000 gal)
City of Hemphill	\$12.00	3,000	\$1.20
City of Pineland	\$11.35	2,000	\$1.15
Beechwood WSC	\$22.00	NA	NA



Current Average Wastewater Bill



Weighted Average Wastewater Bill for Sabine County = \$25.47

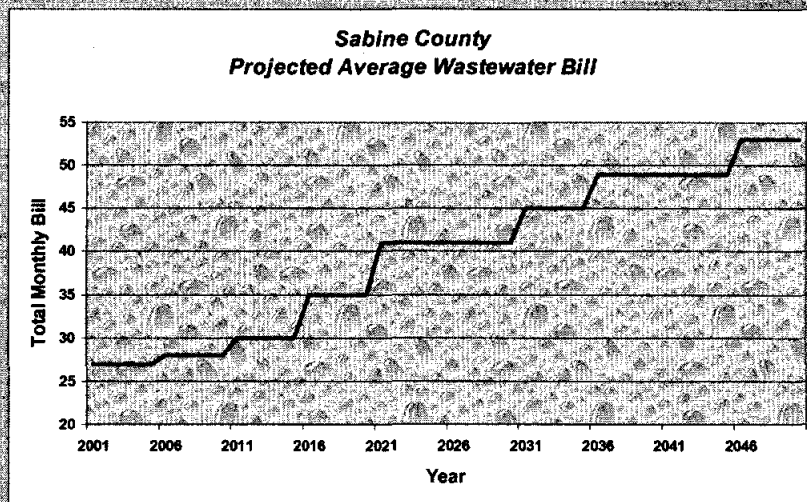


Capital Cost of Improvements

Entity	Treatment Plant	Collection and Pumping	Total Construction	Total Non-Construction	Total Capital Cost
Beechwood/South Sabine Area	\$1,440,000	\$9,512,676	\$10,952,676	\$5,147,758	\$16,100,434
Timberlane Area	\$870,000	\$5,788,298	\$6,658,298	\$3,129,400	\$9,787,698
El Camino Bay Area	\$1,530,000	\$6,786,495	\$8,316,495	\$3,908,753	\$12,225,248
Midlake Area	\$650,000	\$4,389,079	\$5,039,079	\$2,368,367	\$7,407,446
North Area	\$650,000	\$5,677,385	\$6,327,385	\$2,973,871	\$9,301,256
TOTAL	\$5,140,000	\$32,153,933	\$37,293,933	\$17,528,149	\$54,822,082

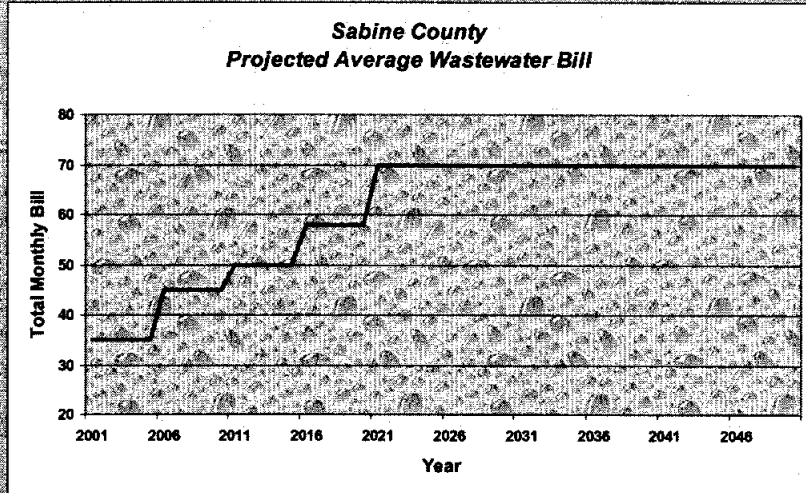


Projected Average Wastewater Bill 0% interest and 35% loan forgiveness

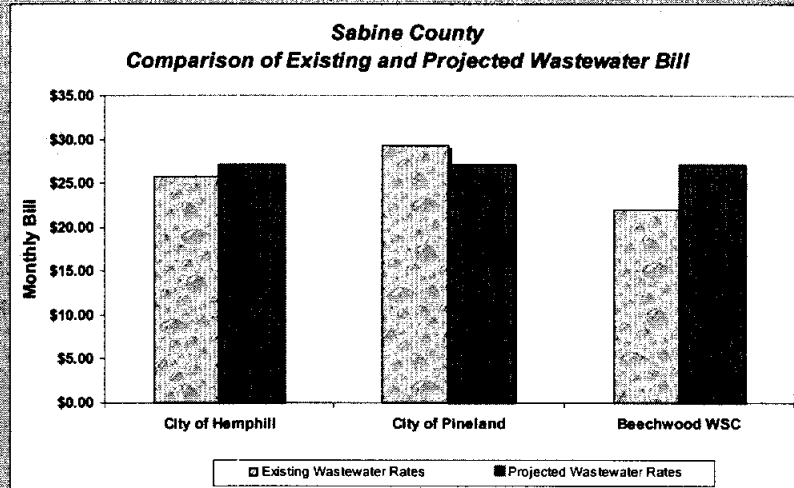




Projected Average Wastewater Bill 2% interest and 0% loan forgiveness



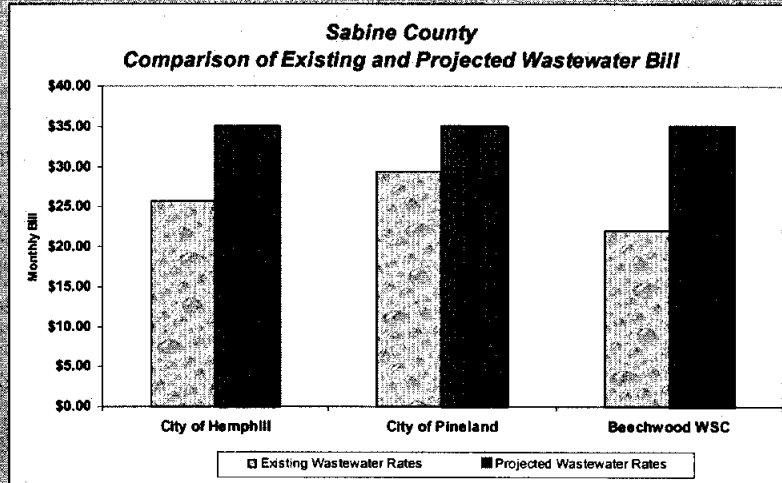
Average Wastewater Bill (2005) 0% interest and 35% loan forgiveness



Fixed Monthly Wastewater Rate = \$27



Average Wastewater Bill (2005) 2% interest and 0% loan forgiveness



Fixed Monthly Wastewater Rate = \$35



Regional Plan Summary

- \$25 million in water improvements over 50-years
- \$55 million in wastewater improvements over 50-years
- Initial average water bill for Sabine County approximately \$25 to \$32 per month
- Initial average wastewater bill for Sabine County approximately \$27 to \$35 per month



Benefits of Regional Plan

- Addresses deficiencies in existing water systems
- Addresses long-term growth of Sabine County
- Addresses the need for wastewater improvements along Toledo Bend Reservoir
- Provides economy of scale to reduce average water bills for Sabine County
- Results in monthly water bills comparable to most residents in Sabine County



Freshwater Supply District Creation

- Created by Petition, Hearing, and Election
- Petition presented to the County Commissioners Court
- Petition signed by 50 or a majority of electors who own land
- Hearing held between the 15th and 30th day following petition
- Five temporary supervisors appointed to serve on District Board
- Election held to determine if district will be established



Freshwater Supply District Restrictions

- Elections required for all bond issues
- Revenue notes with terms no greater than 20 years can be issued without elections
- Creation of district inside ETJ of city requires city consent
- District can not be created outside county without annexations



Upcoming Activities

- Review of Draft Plan by participants (2 to 3 weeks)
- Public Hearing on Environmental Information Document (Oct 2001)
- Submittal of Draft Plan to TWDB (Oct 2001)
- Final Regional Plan Approved (Dec 2001)
- Finalize Sabine County FWSD legal boundary description (Nov/Dec 2001)
- Sabine County FWSD Petition, Hearing, and Election (Jan/Feb 2002)



Contacts

County Judge
Judge Jack Leath
(409) 787-3543

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1 REGIONAL WATER AND WASTEWATER
2 PLANNING

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10 PUBLIC HEARING

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18 TRANSCRIPT OF PUBLIC HEARING
19 ON SEPTEMBER 27, 2001, 7:00 P.M.
20 IN HEMPHILL, TEXAS

21
22
23 _____
24 Computer-Aided Transcription By:
25 EXCEL REPORTING & ASSOCIATES
P.O. Box 151601, Lufkin, Texas 75915
ANDREA K. SIMMONS, CSR

APPEARANCES

Jack Leath, County Judge
Keith Kindle, P.E.
Michael Reedy, P.E.

I would remind you if you came up the elevator you probably passed by the sign-in sheet. If you would, before you leave tonight make sure you sign in. And when we get to the question-and-answer portion of this, make sure you state your name for the record so Andrea can get that because otherwise she's going to really get after me. I'll have to ask you again for that.

Without further ado, although I would with your permission, Judge -- I know y'all have probably done this several times a little bit, but with our President's instructions to never forget and never rest I'd like to take a moment of silence for the events of September the 11th.

(Moment of silence observed)

Thank you. I appreciate that.

What have we done? This is our third public meeting that we have had up here. We had our first kickoff meeting in February in 2001. At that meeting, we told you what the objectives of the regional plan were and as well as what we were going to do. And we had a meeting in June of 2001 telling you what stage we were at.

The meeting agenda tonight we are supposed to cover is the water and wastewater improvements, the

JUDGE LEATH: If we could have your attention, please. Once again, we want to thank you for coming. Mr. Kindle has, I believe, pretty much finalized the plans. Still some environmental things to do but he's going to have some information, probably the information that we've all been waiting for.

During the meeting tonight, I'll ask that you come up here if you want to make a statement because all of this has to be recorded by the court reporter here. And when you -- make sure that you identify yourself so that she will have that as part of the record also.

And with nothing else from me, I'll ask Keith Kindle to introduce himself once again and proceed with the presentation.

MR. KINDLE: Thank you, Judge. I'm going to go ahead and use this microphone. Can everybody hear me okay, or is that too loud? It's all right. Okay.

As the Judge said, my name is Keith Kindle. I'm principal and project director for Turner, Collie & Braden. Mr. Mike Reedy has been the project manager for this regional planning effort. Ms. Jennifer Elms has assisted him as one of our planners, and also Ms. Jamie who is in the back. And last but certainly not least, Ms. Andrea who is our court reporter tonight.

evaluation of alternatives, the analysis and selection, proposed water and wastewater improvements that have been included in the draft stage. We've also done an evaluation of water and wastewater areas proposed through the support that calls for the proposed improvements. We also have information on creation of the fresh water supply district, more importantly the mechanism and the time that has been proposed for this regional facility plan, as well as our future activities. And the last part of this presentation tonight will be the question and answers.

What have we completed? Well, we've done a few public meetings, as I've talked about. We have also completed a draft EDAP facilities plan. For some of those who haven't been at the prior meetings, EDAP is the Economically Distressed Areas Program. It is a grant program by which we've had four areas identified as eligible: Bronson, Toledo Hills, McGee's Landing and Beechwood IV. That is significant in the fact since it's mostly 100 percent grant we plan to use it to leverage the regional improvements. By that, I mean the more grant that I get the less loan that the district has to take on to do these improvements.

Mike Reedy at that time will cover the proposed water improvements, proposed wastewater

Page 6

1 improvements and also probably most interesting the
 2 proposed water and wastewater rates. And then last but
 3 not least the draft regional facilities plan which is
 4 the highlight of the summary. The draft EDAP facilities
 5 plan, as I mentioned, the four areas that are eligible,
 6 the total cost is 3.6 million, which 1.2 million is the
 7 water improvements and 2.4 million is wastewater
 8 improvements.
 9 As I discussed earlier, the EDAP grant
 10 will be used to leverage the regional planning cost.
 11 What that does is reduce the loan amount that we need.
 12 At this point in time, I'm going to turn
 13 it over to Mike Reedy. He's going to cover the meat of
 14 the presentation and I'll come back on creation of the
 15 district and cover that with you and where we're going
 16 on the future tasks. Mike.
 17 MR. REEDY: Thank you, Keith. And thank
 18 everybody for showing up tonight. I'm going to try to
 19 get through this as quick as I can because I want to
 20 leave enough time at the end of this for questions and
 21 open discussions.
 22 As far as the improvements, both water and
 23 wastewater, I'm not going to spend a lot of time on all
 24 the technical specifics but I am going to hit the
 25 highlights and try to spend most of the time on cost and

Page 7

1 rates.
 2 The basis of our water planning thus far
 3 has been that we realize that in Sabine County today
 4 there is inadequate water treatment capacity to meet
 5 TNRCC requirements. Through our work we've also found
 6 that there are improvements needed to existing
 7 distribution systems in order to deliver peak hour
 8 demands. We also know that there are storage capacity
 9 requirements in certain parts of the county. And there
 10 are two water supply corporations existing today that
 11 have enforcement actions against them by the TNRCC that
 12 need to be addressed.
 13 This gives you a little graphic of what I
 14 was just talking about in terms of water treatment
 15 needs. The six entities that we've dealt with on this
 16 planning study are shown on the bottom. What you'll see
 17 is that the G-M water supply corporation is
 18 significantly inadequate in terms of plant capacity.
 19 The City of Hemphill which provides all the water to
 20 G-M, they have got adequate capacity of right now. City
 21 of Pineland appears to be right at their capacity, as
 22 well as South Sabine. And again, Beechwood water supply
 23 corporation are inadequate. What I forgot to just
 24 mention to you, the blue is the existing capacity today,
 25 the maroon is what the TNRCC will require today and the

Page 8

1 white is what the TNRCC will require in 2050. All the
 2 water facilities planned are out to that period, 50-year
 3 planning cycle. The water recommendations that are
 4 included in the plan, again in general, these are the
 5 high points. We've got the Hemphill Sabine River
 6 Authority water treatment plant expansion, roughly two
 7 million gallons per day expansion over the next 50
 8 years. We've got a new plant proposed for Beechwood
 9 which would serve all of Beechwood's existing demand and
 10 their growth and would provide water for future growth
 11 for South Sabine. And we're looking at roughly three
 12 quarters of a million gallons per day over the next 50
 13 years. We've provided enough capacity to provide a
 14 backup water supply for the City of Pineland. We're
 15 looking at connecting El Camino Bay directly
 16 to the G-M water supply corporation. And we've got
 17 roughly 200,000 gallons planned over the next 50 years
 18 in additional storage for G-M.
 19 And again, we've got lots of improvements
 20 to existing distribution systems pretty much throughout
 21 Sabine County. In terms of rates and cost, what we're
 22 looking at right now is two phases of construction for
 23 these improvements. The first phase would take place,
 24 say, roughly 2005 to 2010. Could be a little earlier,
 25 could be little later. But this is what we're dealing

Page 9

1 with in the plan. The next phase will be roughly 2025
 2 to 2030. These improvements would take us all the way
 3 out to 2050 in terms of water demand.
 4 Over onto wastewater improvements. The
 5 basis on our wastewater planning, we realize the
 6 documents that we've been able to pull together that
 7 there is just certain soil along Toledo Bend that really
 8 aren't suitable for on-site treatment or septic tanks.
 9 We also recognize that the protection of primary and
 10 vital water source for Sabine County in this whole area,
 11 that being Toledo Bend Reservoir, is an important goal.
 12 What that led us to is, in terms of wastewater the focus
 13 of our study really has been along the Toledo Bend
 14 Reservoir. What that's going to require is multiple
 15 treatment facilities along the reservoir. It's a fairly
 16 extensive collection of pumping facilities. And one
 17 thing that I do want to note in terms of our rate study,
 18 based on some information that we received from the city
 19 of Hemphill we do have cost that was provided to us for
 20 plant improvements in the City of Hemphill in order to
 21 develop our rates.
 22 We looked at two different alternatives
 23 for wastewater. The first is locating somewhat larger
 24 plants that would connect 200 or more connections.
 25 These would be conventional-type, package-type plants.

1 The other alternative that we looked at was locating
 2 smaller natural-type treatment systems. When I say
 3 natural-type, that's treatment technology using maybe a
 4 large septic tank that would handle the solids.
 5 Something like a sand filter or something like that to
 6 treat the wastewater. But again, it would take a lot of
 7 these systems to cover this because we would be
 8 connecting less than 200 connections, far less than 200
 9 in most cases.

10 We looked at two different types of
 11 collection facilities in individual subdivisions. The
 12 first is just your common gravity collection system.
 13 The other one we looked at is something that we call
 14 STEP, actually septic tank effluent pumps. These are
 15 pumps that would be installed in existing septic tanks
 16 so that existing septic tanks would still handle the
 17 solids but all the water would come off and we would
 18 treat those in these natural treatment systems.

19 After we ran all the cost and based on a
 20 lot of other criteria, what we have come up with in the
 21 plan is really the best approach if we were to do this
 22 would be the conventional centralized treatment systems.
 23 In terms of collection, we would probably look at for
 24 the most part gravity-type sewers. If certain
 25 subdivisions the topography really doesn't allow it, we

1 improvements that are recommended in that plan. And
 2 there's a lot of them. The rate structure pays for all
 3 the capital costs and all the operational costs to
 4 operate a district. What we've also done is made sure
 5 that in every year the district would have a year-end
 6 cash balance of at least \$300,000. That's \$300,000 in
 7 the water and the wastewater fund. So for the district
 8 it's actually a \$600,000 year-end cash fund.

9 These are the current water rates. These
 10 were provided to us by these entities. All the rates
 11 consist of a flat monthly rate. And it varies and the
 12 variances really have to do more with who's using
 13 groundwater, who's using surface water. Pineland and
 14 South Sabine are both groundwater systems. And that
 15 flat monthly fee is based on certain volume of water up
 16 to a certain volume of water. That varies anywhere from
 17 2 to \$4,000. Then they also have a per 1,000 gallon
 18 second tier rate. And that's applying any water that's
 19 above that maximum volume. And for two of them they
 20 actually have a third tier rate.

21 We did some calculations to try to
 22 determine what an average water bill is today for these
 23 various entities. And the way we went about this is, we
 24 collected water production data from these six entities.
 25 We also determined the number of connections that these

1 might have to use these STEP systems that I just talked
 2 about. But for the most part, we would try to stick
 3 with the gravity lines. Again, that would be a very
 4 extensive network of force mains and lift stations over
 5 the next 50 years to convert over to conventional
 6 wastewater treatment. We're looking at approximately 11
 7 wastewater treatment plants over the next 50 years.
 8 Right around one million gallons per day of capacity.

9 And really what we're doing, it's a
 10 conversion of a majority of the properties along Toledo
 11 Bend from what is now septic systems to centralized
 12 facilities. For wastewater we're actually looking at
 13 three phases in terms of developing, cost and rates.
 14 Those phases are roughly 2010, 2020 and 2030. And
 15 again, those would take us out to 2050 in terms of
 16 wastewater demand.

17 This is where we're going to talk about
 18 the money here. These are just some of the objectives
 19 that we have in developing a rate analysis. What we
 20 tried to do was develop an equitable rate structure for
 21 all the participants that we looked at. We didn't want
 22 to put too much burden on any one entity. We also tried
 23 to develop consistent monthly bills across the county.
 24 And what's important is that the rates that we're going
 25 to go over here in a second, they fund all the

1 entities serve. So we took that water production data,
 2 basically divided it by the number of connections to
 3 come up with some estimate of a monthly water usage per
 4 connection. Then once we had those numbers we applied
 5 the rate I just showed you to come up to what we
 6 calculated as an average water bill. And it appears to
 7 vary across the county, depending on water use. We also
 8 calculated an average water bill for the county as a
 9 whole. And that would be an average of all six. And
 10 the average, at least based on this analysis, the
 11 average today in Sabine County appears to be around \$28.

12 These are the capital costs for water
 13 improvements that we have in our plan as of today. We
 14 divided these costs out by entity as well as we have
 15 shown a little bit of division between those costs that
 16 are in the plan for treatment plant expansion. Those
 17 costs would include the plant as well as some of the
 18 ancillary pumps and intakes. We've got system
 19 distribution cost and then the total construction cost.
 20 You can see for all six entities over the next 50 years
 21 total construction costs are roughly 17 1/2 million.
 22 The total non-construction cost that you see include
 23 things like legal, physical, engineering.

24 And we also have 15 percent contingency
 25 all the way into this, just to be on the safe side. So

1 the total cost for the next 50 years for water
 2 improvements is right around \$25 million.
 3 This graph shows you our projection of an
 4 average water bill over the next 50 years with those
 5 capital cost improvements that I just showed you. What
 6 this indicates to us is that the water bill would need
 7 to start out -- the average water bill is going to start
 8 out around \$25. We're going to see an increase in the
 9 next 10 years to somewhere in the 28 to 29 range. And
 10 ultimately when we get out to the year 2030, we're going
 11 to be in the 37 to \$38 range.

12 One thing I want to point out, the graph
 13 looks a little funny, is that we did a long straight
 14 line there. The reason that it's like that is actually
 15 when you get out to 30 years and beyond, theoretically
 16 we could actually see a decline in water rates as you
 17 start paying off your debt service. That's 30 years
 18 from now and we really didn't want to show something
 19 like that at this point. It's kind of unknown. So
 20 water rate was just -- stayed flat because of that.

21 Another thing I need to point out, through
 22 the Texas Water Development Board Sabine County has
 23 currently approved their drinking water fund for, I
 24 think it's \$16 million; is that correct?

25 MR. KINDLE: 16.2 million.

1 our projected water bills. What you will see is that
 2 most cases the projected water bill is pretty close or
 3 even below what we believe the existing water bill is
 4 today. The rate structure that we would have to use,
 5 and again this is a zero percent interest loan, 35
 6 percent loan forgiveness, again the best-case, the water
 7 rate that we would have to use is right around \$23 per
 8 month per connection for the first 6,000 gallons. And
 9 then we would apply a dollar per 1,000 gallons for usage
 10 above 6,000. We did the same analysis and came up with
 11 an average water bill for the entire county of roughly
 12 \$25. And if you can remember a few slides back, the
 13 current average water bill, I believe, was about \$28.
 14 So we think we're pretty close to what the average water
 15 bill is today.

16 This graph shows you the same thing, only
 17 using a 2 percent interest and zero percent loan
 18 forgiveness. You see, the 2 percent makes a difference.
 19 It raises the average water bill to roughly \$32. And
 20 our fixed monthly water rate would have to be something
 21 more like \$30 per month for the first 6,000 gallons.
 22 And then again another dollar per 1,000 gallons used
 23 beyond that.

24 What we did here with this graph, we took
 25 the total capital cost dollars that I showed you on that

1 MR. REEDY: Because of Sabine County and the
 2 way they rank there are two different -- or we have
 3 shown two different types of loans. They could be
 4 approved for a loan as good as zero percent interest and
 5 35 percent debt forgiveness. That's really what this
 6 graph represents. So this graph represents the
 7 best-case scenario for water rates.

8 This next graph shows what we believe to
 9 be the worst-case scenario for water rates. This is a
 10 2 percent interest and no loan forgiveness. Under these
 11 conditions, the water bill would start out around 32,
 12 33. In the next 10 years we would see an increase up to
 13 36 or 37. And then again, out to 2030 we would be up in
 14 the \$44 range.

15 We also tried to look at what the
 16 projected average water bill might be for these
 17 individual entities because all these entities have a
 18 different water usage. Some entities just -- the people
 19 are just using more water, primarily because they're not
 20 as trained as those that are along the lake. But what
 21 this does is try to compare what our projected average
 22 water bill is versus what we think the average water
 23 bill is today.

24 The lighter blue column represents
 25 existing water bills today, the darker blue represents

1 other table for each entity, we took those costs and we
 2 said, okay, what if each individual entity made these
 3 capital improvements but made them on their own, they
 4 did their own thing. What we found was that the dark
 5 blue columns represent the average water bill for each
 6 of these individual entities if they implemented the
 7 capital cost improvements that we've shown. The dark or
 8 the lighter blue shows what the average water rate would
 9 be in a district or a regional-type plan.

10 What this shows, long-winded, but what it
 11 shows is the economy of scale. That as a large group of
 12 little over 5,000 connections you can do a lot of
 13 improvements in Sabine County and still keep the average
 14 water bills relatively low, whereas an individual entity
 15 that may be dealing with 300 connections, 400
 16 connections, it's harder for them to make improvements,
 17 capital improvements, without impacting water bills.

18 Okay. On the wastewater rates, these are
 19 the wastewater rates that were provided to us for three
 20 of the entities in Sabine County that currently offer
 21 centralized wastewater treatment. Again, we have a flat
 22 monthly rate, \$11 up to \$22. And then two of them have
 23 a second-tier rate on a per 1,000 gallon basis of the
 24 maximum volume. Right now, the current average
 25 wastewater bill based on the water use data we have for

1 each entity is somewhere, anywhere from 21 to maybe \$29,
2 with an average being roughly 25. The capital cost for
3 wastewater improvements we have in our plan through the
4 next 50 years totals roughly \$55 million. And again,
5 that would be done over three phases over the next 50
6 years, 2010, 2020 and 2030.

7 We have it divided similarly as the water.
8 We have got treatment plant costs. Most of the cost
9 associated with wastewater is in your collection and
10 pumping. There's just not enough density in any one
11 area on that lake to make collection and pumping an easy
12 task. A similar analysis that we did for water -- one
13 thing I want to point out here is, we did the similar
14 analysis using a zero percent interest, 35 percent loan
15 forgiveness and then also the 2 percent. We don't think
16 that Sabine County is going to be eligible, at least on
17 the wastewater side, for a loan of zero percent interest
18 and 35 percent loan forgiveness. It's probably going to
19 be more like the 2 percent we are going to show you, but
20 we went ahead and did these for comparative purposes.

21 What this shows is initially a wastewater
22 rate somewhere around \$28 and then over the next 50
23 years it grows as high as \$53 per month. This is a
24 2 percent interest. And this probably is more
25 representative of what this plan will actually cost.

1 would be somewhere around 27 to \$35 per month.

2 So what are the benefits of all this?

3 Well, our plan will address the deficiencies of existing
4 water systems today. We know that. It also addresses
5 long-term growth for Sabine County. We have growth
6 numbers that are provided by the water development
7 board. Those are in there. And it addresses the need
8 for wastewater improvements along the Toledo Bend
9 reservoir. If you remember the slide I showed you
10 earlier we definitely can provide some economies of
11 scale to help reduce average water bills. And for the
12 most part results in monthly water bills anyway
13 comparable to most residents today in Sabine County.

14 Okay. At this point I think I'll hand it
15 back over to Keith and he'll talk a little bit about
16 putting together a fresh water supply district.

17 MR. KINDLE: Thank you, Mike. For those
18 of you that thought that was a long presentation, that's
19 what Mike was covering, in a very short amount of time.
20 Those are the drafts that we plan to give to the planner
21 participants. They had been involved in this for quite
22 a while, over the past nine months.

23 I need to quickly summarize in the creation of
24 a district is there's two points or two parts of this
25 presentation tonight. One, of course, is we were

1 The average wastewater bill started out 34, \$35, and by
2 2020 we would be up in the \$70 range. This again shows
3 a comparison of existing wastewater rates versus the
4 projected rates. And this is at the zero percent
5 interest and 35 percent loan forgiveness.

6 At that type of interest rate we would see
7 a fixed monthly wastewater rate for the county of about
8 \$27 per month. And for a 2 percent interest which is
9 probably more typical, the fixed monthly wastewater rate
10 in the county would have to be something around \$35. So
11 in that case, the projected wastewater rates are quite a
12 bit more than existing wastewater rates today. And on
13 top of that most of our improvements are planned for
14 areas that are currently on septic tanks, so those
15 individuals would see a wastewater rate go from
16 basically zero today to these numbers.

17 Just kind of a summary on the regional
18 plan. What we're looking at is roughly \$25 million in
19 water improvements over the next 50 years, \$55 million
20 in wastewater improvements over the next 50 years.
21 Right now, we're seeing initial average water bills for
22 Sabine County of approximately 25 to \$32 per month.
23 Again, that is going to depend a lot on the type of loan
24 we get. Initial average wastewater bill for Sabine
25 County if we were to implement all these improvements

1 charged to develop a regional plan that provides a water
2 and wastewater plan for the next 50 years. Those are
3 our requirements that we're supposed to fulfill to the
4 Texas Water Development Board. When you see \$55 million
5 in wastewater that provides the blueprint for
6 individuals or a district to proceed when the need
7 arises.

8 I want to make a distinction because our
9 recommendations on this right now because you don't have
10 the population density you do not have enough data to
11 support that the septic tanks are working the way they
12 should be, you do not have enough data to support that
13 Toledo Bend Lake is at risk due to septic tanks and you
14 don't have the population density. But the only
15 wastewater improvements we're recommending at this point
16 would be the EDAP improvements, those that are 100
17 percent graphed. Now, the water improvements that we
18 have fortunately, this is coincidentally, the county is
19 eligible, this was approved last month, for 16.2 million
20 drinking water SRF funds. That's equivalent to the
21 phase one water improvements. Worst-case scenario, the
22 2 percent that was shown the rates are still comparable.
23 That is the worst-case. Best-case scenario the 35
24 percent loan forgiveness which we believe they will
25 achieve, the preliminary calculations show that they are

Page 22

1 eligible, it's going to be a substantial save, presents
 2 quite an opportunity for the district and for the
 3 county.
 4 I do want to make a distinction when we
 5 talk about the district. The county has the ultimate
 6 on this drinking water SRF. How will these projects be
 7 funded? The county would receive the money and through
 8 contract revenues by the district, the district would be
 9 responsible for the debt service through contract with
 10 the county.
 11 Now before I go any further on that, the
 12 last thing I want to say before I get into creation of a
 13 district is recognizing achievement in the last nine
 14 months. First and foremost, you now have a digital map
 15 of the entire county, water, wastewater, all the
 16 infrastructure within the county. Believe me, there was
 17 a stack of maps that we -- one map about this high off
 18 the table. Quite a bit of work. We identified all the
 19 problems, water and wastewater, that were not both
 20 TNRCC, talking with the individual water supply
 21 corporations, talking with the individual cities, and
 22 listed all those and we defined water and wastewater
 23 solutions after identifying all the alternatives and
 24 costs and have supplied the rate analysis to show you
 25 what has been the cost for that.

Page 23

1 And then what I am up to now is, of course, how
 2 can a district be created and what are the benefits of
 3 that. One of the benefits you have already seen, the
 4 economy of scale. And individual cities and water
 5 supply corporations had to make improvements on our own.
 6 And as we talked about several times before, these
 7 improvements will have to be done, the majority of them.
 8 We have already got two or three by TNRCC. You're going
 9 to do something regardless. Somebody's going to pay for
 10 these improvements. There isn't any doubt or isn't any
 11 discussion. It'll have to be. Or somebody else will
 12 start operating them, one or the other.
 13 Creation of a district. Petition, hearing and
 14 election. Those are our three major steps for creation
 15 of a fresh water supply district. The petition is
 16 presented to the county commissioners' court. That
 17 petition must be signed by 50 or a majority of the
 18 electors who own land in Sabine County. A hearing is
 19 held by the county court between the 15th and 30th day
 20 after the petition is submitted. The court may appoint
 21 five temporary supervisors to serve on the district
 22 board. An election is then held to determine if the
 23 district will be established.
 24 One of the things -- I know I've had this
 25 question several times -- is who's eligible to vote.

Page 24

1 Well, that's going to be the registered voters within
 2 the district boundary. I want to make that distinction.
 3 If the district boundary doesn't include South Sabine,
 4 then voters in South Sabine cannot vote on the creation
 5 of the district, only the registered -- and if you think
 6 about this, it's what the Texas water code requires. If
 7 you are going to be in the district and you're a
 8 registered voter, then you get to vote on creation of
 9 the district. If you are not affected by the district,
 10 if you're not within the boundary of the district, even
 11 if you are a registered voter you do not get to vote on
 12 creation of a district or you're not eligible to vote.
 13 Put it that way.
 14 Any bond issues of the district, of course, our
 15 first recommendation right now of any debt service
 16 funding is to utilize the EDAP funding as well as the
 17 drinking water SRF. That will be done by the county.
 18 The district itself can incur debt. The elections are
 19 required for all bond issues of the district with the
 20 issue. Also revenue notes with terms no greater than 20
 21 years can be issued without an election.
 22 The creation of a district inside, these
 23 are just some of the restrictions of the ETJ or the
 24 extra territorial jurisdiction. The city -- requires
 25 the city's consent. With Hemphill, once our boundary

Page 25

1 will go around Hemphill or include Hemphill it has to be
 2 done, obviously, with their consent. And the district,
 3 the first creation of it cannot go outside the county
 4 line unless -- again, the water supply corporation goes
 5 a little bit into San Augustine County. That could be
 6 annexed at a later point. But the original, the first
 7 initial creation of the district has to be within Sabine
 8 County lines.
 9 All right. That's very brief on the
 10 creation of the district because I'm obviously not an
 11 attorney, I'm an engineer. But I do want to show you
 12 what the steps are. And it really doesn't get a lot
 13 more complicated than that.
 14 Our upcoming activities, we are submitting
 15 the draft plan tonight to the participants. We're
 16 allowing two to three weeks for comments. We're going
 17 to have a public hearing next month on the environmental
 18 information document. That's the last part on our
 19 effort that we have done. And if we're going to get
 20 funding for all of these improvements, you have to get
 21 the environmental clearance for that. That's what the
 22 environmental information document is. It takes all of
 23 these proposed improvements, describes the environmental
 24 impact, it does all the regulatory coordination, parks
 25 and wildlife, U.S. Fish and Wildlife Service, all the

1 Sabine River Authority, all the regulatory agencies that
 2 are out there that has to be done. And we get what we
 3 call the issuance of the finding and no significant
 4 impact.
 5 After we've done that public hearing we'll
 6 submit the draft plan to the Texas Water Development
 7 Board. They are the ones funding this regional plan.
 8 Final regional plan approved hopefully in December of
 9 2001 by the Texas Water Development Board. Also the
 10 time in November/December expect to finalize the Sabine
 11 County fresh water supply district boundary. We have to
 12 provide legal descriptions of that. What that is, and
 13 that's a pretty significant statement, is who's in,
 14 who's out, who wants to wait a while, et cetera, et
 15 cetera.
 16 At that point in time, there will have to
 17 be a legal boundary defined, obviously before the
 18 elections. We are looking at the petition hearing
 19 election through January or February of 2001. Excuse
 20 me. That's the time frame that the Judge and the county
 21 commissioners' court have come up with. These are the
 22 contacts.
 23 This brings us to the point now, Judge,
 24 unless you have any or commissioners you have anything
 25 I'm going to open it up to questions and answers.

1 installation to each household? Well, the drinking
 2 water, SRF, are you talking about the property line to
 3 the household? If we're talking about that for water, I
 4 can't imagine that being over \$400, depending on the
 5 length of how far you are away from the main line.
 6 Wastewater side, for that we are talking about on the
 7 STEP systems, that's included in the cost that we've
 8 shown. It wouldn't be a cost per household. We would
 9 go ahead and put in a septic tank and a pump and a line.
 10 For a sewer gravity line, all you're
 11 talking about is a service line. I would not think that
 12 would be much more than \$600. I'm using very high
 13 rates. A lot of that would be covered within the cost
 14 of, since most, for wastewater side especially, there's
 15 not going to be a lot of gravity lines. Relief is such
 16 it's just not cost efficient to put in gravity lines and
 17 lift stations everywhere. That's why we're talking
 18 about these small diameter high-pressure lines and/or
 19 just using septic tanks.
 20 So -- and again, I'll emphasize receive
 21 enough feedback that wastewater doesn't appear to be
 22 supported. But more importantly, even if it wasn't
 23 supported the data could support that there is
 24 environmental and there is health or risk to the public,
 25 it would probably go ahead and do that. But that data

1 JUDGE LEATH: No. I expect we'll get
 2 questions from the --
 3 MR. KINDLE: I suspect we will. That's
 4 why I wanted to make clear that, of course, one of the
 5 obvious questions that comes across is what if we don't
 6 participate? Do the rates go up even more because
 7 you've lost a certain number of connections. We did a
 8 sensitivity analysis, construction cost. If you don't
 9 participate we're obviously not going to be doing those
 10 improvements. Pay for those improvements. It really
 11 does -- really does impact the rates that we have shown.
 12 I will remind you once again, if you have
 13 a question please state your name for the record so that
 14 Andrea doesn't get after me at the end of the evening.
 15 I'll open it up to questions. Yes, sir?
 16 MR. TERRY: Projected installation cost
 17 each household?
 18 MR. KINDLE: I'm sorry? Could you state
 19 your name for the record.
 20 MR. TERRY: Hiram Terry. El Camino Bay.
 21 MR. KINDLE: And your question was? I'm
 22 sorry?
 23 MR. TERRY: What's the projected cost of
 24 installation of each household?
 25 MR. KINDLE: The projected cost of the

1 and those studies are not conclusive enough to make that
 2 recommendation.
 3 Now, areas such as Bronson and McGee's
 4 Landing, yes. Texas Department of Health went out there
 5 and they did their studies and found raw sewage in the
 6 ditches coming out from septic tanks, found mosquito
 7 larvae that were breeding year round. Raw sewage.
 8 Would also associate that with gastrointestinal disease
 9 and everything else that comes along with that. What
 10 you see human waste elevated enough in Toledo Bend along
 11 the shoreline which, privately they know it's there but
 12 the studies just haven't been done conclusively stating
 13 that is a problem at this point in time. Yes, sir?
 14 MR. COWGILL: Jerry Cowgill. Back to the
 15 water hookup. When you put the water line in you're
 16 going to put the tap for the houses that want water.
 17 And you're going to run the tap over and you're going to
 18 put a meter in. That's going to be the cost of
 19 installing. And our expense would just be from the
 20 meter to our house?
 21 MR. KINDLE: Yes, sir, that's correct.
 22 MR. COWGILL: So there would be no cost to
 23 me?
 24 MR. KINDLE: No, sir. Yes, sir?
 25 MR. NETHERY: Jim Nethery. If we went

Page 30

1 along with this regional water plan would your employer,
 2 would we have a waiver from TNRCC about all this stuff
 3 that we're under right now, even though this is going to
 4 be three or four years down the road before we get this?
 5 Will we still have to do --
 6 MR. KINDLE: Well, one of the things I
 7 wanted to -- the reason I had Mike make that statement
 8 is his study is 2005 I think because, you know, you're
 9 eligible for this drinking water SRF for one year. I
 10 thought, frankly, if the district is created expect
 11 improvements starting within a year. But you have to
 12 take a commitment. So that's why what Mike was alluding
 13 to is don't take the 2005 as that.
 14 But in direct answer to your question, I
 15 would say that I can't speak for the TNRCC. If you're
 16 taking the steps, the county has created the district.
 17 And I think more importantly once the district was
 18 created, say the election did pass, well, then I would
 19 think you could get an extension over what you've
 20 already got before because you're taking the steps, and
 21 particularly if G-M becomes part of the district. The
 22 county has secured, obviously, the funding to take the
 23 steps and improvement is being provided, schedule
 24 because the funding is in place. Yes, ma'am?
 25 MS. MCPHERSON: Katherine McPherson, El

Page 31

1 Camino Bay. What happens if our subdivision does not
 2 decide to go on this county water system initially
 3 cost-wise? What would we be looking at if we decided to
 4 do it at a later time? Be responsible totally ourselves
 5 or could we...
 6 MR. KINDLE: No, you could come in to the
 7 district later through annexation at that point. And
 8 again, if improvements were done to El Camino Bay,
 9 obviously, depending on where your rates fall it may,
 10 you know, you may actually see a reduction on your basin
 11 and inquiries. As you've seen, it has a lot of variety.
 12 Most of El Camino Bay and particularly
 13 you're talking about interconnect and some improvements,
 14 but the wastewater side -- and I think this is a general
 15 question, does all the cost go back. If El Camino Bay
 16 comes in later and do several thousand dollars' or
 17 million dollars' worth of improvements, does El Camino
 18 Bay only pay for that? No. That cost is spread across
 19 the district to the providers because that is part of
 20 the regional -- it really is as a benefit of all and/or
 21 a benefit to none. You can't separate that. One, it's
 22 against the law if you're going to be a freshwater
 23 supply district. Does that answer your question?
 24 MS. MCPHERSON: Basically do not cost us
 25 any more to come in now or later?

Page 32

1 MR. KINDLE: No, it wouldn't. The only
 2 thing that you, obviously as a district would be run as
 3 a business. We have funding available to do
 4 improvements and we have a plan to do those
 5 improvements. It really would depend on the funding
 6 available because the district also has a decision.
 7 They may decide if you want to come in later, they may
 8 be in the position of, we really can't afford to do
 9 these improvements for you; we don't have the funding
 10 available. I'm sorry, you're going to have to fund it
 11 yourself, if you need to do those improvements. So
 12 that's the other side of that coin. The district.
 13 Again, it's also their consideration of do they want to
 14 take you or not at that point in time, too.
 15 MS. MCPHERSON: One other base of that
 16 question. I did not hear you mention El Camino Bay as
 17 being one of those that would be under a grant; is that
 18 correct?
 19 MR. KINDLE: That is correct. We did not
 20 get enough of a survey response in those areas. We
 21 originally had 25 areas identified when we went through
 22 the EDAP surveys. Everybody always asks this question.
 23 It's my biggest sore point throughout the last nine
 24 months that I had, was that I had an opportunity to get
 25 grant funds for nearly all of these areas. Because we

Page 33

1 did not get at least a 30 percent response rate 21 of
 2 the areas were taken out, were no longer considered.
 3 That's just one of the board requirements.
 4 I do know the Judge spent an extensive
 5 amount of time from door to door with surveys, hanging
 6 surveys on the doors, stamped envelopes, a lot of other
 7 things. We just did not get the response from a lot of
 8 the majority of the area. Subsequently, any
 9 improvements done will be under the loans and not grant
 10 funds. Yes, sir?
 11 MR. TERRY: Is there going to be a charge
 12 for the main going down the street to the property
 13 owners?
 14 MR. KINDLE: No, sir.
 15 MR. TERRY: No charge for the main?
 16 MR. KINDLE: For the main? Just what you
 17 get on your monthly rate. Or the water usage that you
 18 have. Yes, sir?
 19 MR. ILES: I'm Don Iles, city of Hemphill.
 20 First, I'd like to thank Mike and Jennifer. They've
 21 helped me out a lot. They sent me a lot of information.
 22 I know they've worked very hard on this project. I'd be
 23 asking questions a long time. I want to keep it short
 24 but I've got a few that I think the public should be
 25 aware of.

1 No. 1, the consensus right now with the
 2 city council, City of Hemphill, is opt out of joining
 3 the district. And after conversations with the mayor of
 4 Pineland, Mr. Booker, City of Pineland is going to opt
 5 out, preliminary. And did you take into account these
 6 cost figures if you lose two such large entities?
 7 MR. KINDLE: Yes, sir, we did. That's what I
 8 was saying earlier about that sensitivity analysis, is
 9 when you look at that one of the things we wanted to
 10 examine is if we lose that large number of connections
 11 like that, well, then what does it do to the rates?
 12 Will the rates have to go way up or not? Well, it's
 13 also because those improvements aren't done. In other
 14 words, some of the additional improvements that would be
 15 done for the city of Hemphill would be done for the city
 16 of Pineland. Those costs you saw in that table would
 17 not be done by the district. So then you're taking less
 18 debt service and so that keeps your rates about --
 19 that's where we came to the sensitivity analysis showing
 20 what....
 21 MR. ILES: I don't quite follow that
 22 because \$12 million of the \$25 million are G-Ms capital
 23 expenses. So 50 percent of the capital expense is going
 24 to G-M. And if you lose these connections you still
 25 have that large capital expenditure so I don't see how

1 MR. ILES: Also on the rates, I just want
 2 to clear a couple of items up. Your methodology for
 3 determining rates on the city of Hemphill on your chart,
 4 both the city of Hemphill's average rate per connection
 5 and the city of Pineland's was grossly overstated, just
 6 about 60 percent, based on actual meter readings, volume
 7 of water delivered per volume. Okay. And I wanted to
 8 know, though, my question is on the population estimates
 9 you're considering about 80 percent growth in the
 10 population of Sabine County between now and 2050, I
 11 think it runs 77 percent growth, almost double the
 12 population. Is that population estimate included in
 13 your cost estimates? Are you considering our
 14 connections to grow that much and if our connections
 15 don't grow that much that extra cost has to be passed
 16 along to our current residents?
 17 MR. KINDLE: Well, Mike, you want to
 18 answer that?
 19 MR. REEDY: The growth rates are important
 20 and what they are, the growth rates of the water
 21 development board --
 22 UNIDENTIFIED SPEAKER: Can't hear you.
 23 MR. REEDY: Yes. We use the same growth
 24 rate that the water development board provided in the
 25 Region I planning. And I forget the percentage, say, it

1 it could not be, you know, pertinent.
 2 MR. KINDLE: I know what you're saying but
 3 when we took those off -- and I recognize that as a
 4 large cost from G-M but G-M also has a large number of
 5 the accounts as well, over 80 percent of the accounting.
 6 So it wasn't as sensitive as you might be saying,
 7 although it has a larger cost. The other part of that
 8 is the majority of the improvements that we're doing is
 9 really helped along by the drinking water SRF fund. The
 10 interest.
 11 I would be glad for Mike to send you the
 12 information and/or make it available to the public and
 13 obviously we will, once we know who opts out and who
 14 will be joining in. Part of the public information for
 15 the voters to decide on the district is here are your
 16 rates, you know, these are the rates that we've
 17 established now at this point in time, based on all the
 18 participants. As we determine who is out and who is in
 19 we'll adjust what the proposed improvements are, what
 20 debt service would be incurred by the county and the
 21 proposed district, and what those rates would be. But I
 22 tell you when Mike and I went through it and knocked
 23 some of that off, we really did not see a big change.
 24 Change, yes, but not the huge change that I thought it
 25 would, too.

1 was 70 or 80.
 2 MR. ILES: 50-year period about 80 percent
 3 growth.
 4 MR. REEDY: We use the same annual growth
 5 rate that the water development board used. You're
 6 right. If Sabine County doesn't see, you know, that
 7 same growth, then the rates over time are going to be
 8 different than what -- you're right.
 9 MR. ILES: I didn't know if you'd taken
 10 that into consideration. I'll let someone else talk.
 11 MR. KINDLE: No, that's fine. That's a
 12 good point. That's always the risk of any improvements
 13 you do. You know, the only distinction G-M and
 14 Beechwood is they're going to have to do some
 15 improvements whether they grow or not, in that respect.
 16 And also any time the city does future improvements,
 17 they're obviously planning on future growth.
 18 But if we do not give the one percent or
 19 whatever that annual growth rate is over the 50 years,
 20 obviously, one, you wouldn't do the phase two
 21 improvements, which you would have already heard the
 22 cost of the phase plan three. And that would still be,
 23 that debt service will be paid by the existing
 24 customers. Yes, sir. Next question. Yes, sir?
 25 MR. HEUGEL: I'm Bill Heugel. In figuring

Page 38

1 the rates did you use the present day graph or was there
 2 an escalation?
 3 MR. KINDLE: Did you use the present day
 4 factor?
 5 MR. REEDY: Yes.
 6 MR. HEUGEL: The other question is, in our
 7 particular area, South Sabine, we have a lot of zero use
 8 meters. So when you figure your average cost and you
 9 were figuring the average including all those zero use
 10 meters, those people that would be actually using water
 11 are actually higher rates....
 12 MR. KINDLE: What he's saying is they have
 13 a lot of zero use. As I believe when you came up with
 14 your average, though, you were counting all the
 15 connections?
 16 MR. REEDY: That's right.
 17 MR. KINDLE: Yes, sir?
 18 MR. LINDSEY: I'm Don Lindsey from El
 19 Camino Bay. If the City of Hemphill opts not to go into
 20 the water district, what's that going to do for that
 21 water treatment plant over there at Mid County? Are
 22 they still going to do improvement and expansion that
 23 it's going to need to take in El Camino Bay?
 24 MR. KINDLE: Well, that's one of the --
 25 one of the alternatives we examined was putting a water

Page 39

1 plant in the older part of the county as well. Wasn't a
 2 lot of cost there between that to some extent. And
 3 really, it's a question that I can't answer because if
 4 one SRA owns the plant, City of Hemphill operates it. I
 5 don't think I want to have access to the 35 percent loan
 6 forgiveness on the drinking water SRF expand the plant.
 7 Of course, G-M is the one that's impacted most by not
 8 having a treatment plant. So whether you expand the
 9 plant in the city of Hemphill or you do a northern water
 10 treatment plant I can't answer that, and I really don't
 11 think Hemphill opting in or out has a great impact on
 12 it. I think that's really going to be more of SRAs,
 13 where they stand and what they want to do as well.
 14 MR. LINDSEY: The cost to expand the plant
 15 or the cost to build a new water treatment plant is
 16 virtually the same?
 17 MR. KINDLE: What you were doing is at the
 18 time we were also including the city of Hemphill as
 19 well. No, it costs more to build a new plant but it
 20 wasn't substantially different when counted over 30
 21 years.
 22 MR. KIMLER: Randy Kimler.
 23 MR. KINDLE: Yes, sir.
 24 MR. KIMLER: You mentioned -- some of the areas
 25 have wells?

Page 40

1 MR. KINDLE: Yes, sir.
 2 MR. KIMLER: Why would you -- talking about
 3 building possibly a plant in the north area, why would
 4 you not consider drilling wells over there?
 5 MR. KINDLE: For South Sabine area and also we
 6 looked at the Region I study, they recommend that
 7 groundwater continue for industrial use in some of the
 8 areas. Region I did make a recommendation 50-year
 9 horizon Sabine should consider converting over to
 10 surface water at that time. We are complying with those
 11 recommendations within the Region I plan because at some
 12 point within the Region I, and I don't think they talk
 13 about groundwater studies, but it does -- they did do
 14 enough, and I know we have one of the regional planning
 15 members here to look at that, and it does not appear
 16 that groundwater throughout the entire county area is as
 17 good quality as in other areas of the county or the
 18 quantity available within that.
 19 One of the things you would have and one
 20 of the biggest considerations of this, what this
 21 district creates is, and what I think it does is secures
 22 a water supply for the future of the area. We're
 23 sitting next to the largest freshwater supply source in
 24 the state of Texas. It's the only one left. Toledo
 25 Bend is the largest part that is left in the state of

Page 41

1 Texas, period. It has more available than any other
 2 reservoir or any other lake in the state of Texas. What
 3 the district can do is secure that water supply for the
 4 future growth of Sabine County. I think that's probably
 5 the biggest benefits that I see.
 6 MR. KIMLER: One reason I asked that
 7 question because of capital cost of installation,
 8 whatever you're going to do and also your operation
 9 maintenance cost. Difference in the groundwater --
 10 MR. KINDLE: There is no doubt if you've
 11 got good quality groundwater and all of the regulations
 12 that are proposed don't come through and groundwater is
 13 always going to be more cost effective to treat surface
 14 water.
 15 MR. KIMLER: One other question. I've got
 16 dates for the area, various areas. What are those,
 17 prior to the January/February election district-wide?
 18 Is that what you're calling an opt out/opt in, prior to
 19 the election?
 20 MR. KINDLE: Yes, prior to that.
 21 MR. KIMLER: What are those dates?
 22 MR. KINDLE: November, December is in or
 23 out because at that time we'll have, do the legal --
 24 that's the dates I gave the legal boundary. So
 25 November, December in and out. And we do the legal.

1 Yes, sir.
 2 MR. KIMLER: Deadline?
 3 MR. KINDLE: I prefer to do it before
 4 December the 15th. Yes, sir?
 5 MR. ILES: I'd like to make a
 6 clarification.
 7 MR. KINDLE: Yes, sir.
 8 MR. ILES: The city of Hemphill, if we opt out,
 9 are we just opting out of the centralized management of
 10 this district? We still have excess capacity in the
 11 water plant. We can produce 1.5 million gallons a day.
 12 We're currently producing less than a million gallons a
 13 day. So in my conversations with Mike, we can still
 14 provide water to the freshwater district. That's not a
 15 problem. But I just want to make it clear that we
 16 wouldn't be just alone, we could provide capacity to the
 17 freshwater district.
 18 MR. KINDLE: That's an important point.
 19 I'm glad you brought that up. I do want to make --
 20 there's a lot of relations that exist in the district.
 21 You're in or you're out of the district. Our human
 22 nature is if you're out you must be opposed to it.
 23 There's a lot of different relationships between the
 24 district and a lot of the cities and part of the
 25 district. But what it does do is it helps support the

1 distribution where you've got the lines looped together.
 2 All right. Next question. Yes, sir?
 3 MR. COWGILL: Jerry Cowgill. You had
 4 mentioned, and I maybe misunderstood, that the treatment
 5 plant that we have now for the city of Hemphill is owned
 6 by the Sabine River Authority and the City of Hemphill
 7 manages it or operates it.
 8 MR. KINDLE: Yes, sir.
 9 MR. COWGILL: Is it a possibility that
 10 Sabine River Authority would build other treatment
 11 plants and we buy the treated water from them?
 12 MR. KINDLE: Yeah, I can't say that Sabine
 13 River Authority would build other treatment plants or
 14 not, but is that a possibility to buy treated water?
 15 Certainly.
 16 MR. COWGILL: The other question is, the
 17 City of Hemphill apparently has a contract with Sabine
 18 River Authority. Is that being operated now?
 19 MR. KINDLE: Yes.
 20 MR. COWGILL: How long is that contract
 21 good for?
 22 MR. REEDY: Through 2030.
 23 MR. COWGILL: 2030.
 24 JUDGE LEATH: Let me say this.
 25 MR. KINDLE: Yes, sir.

1 other areas. There can be interconnects with a
 2 wholesale meter between the district and South Sabine or
 3 an interconnect done between the city of Hemphill and
 4 the treated water provided to the district in those
 5 areas.
 6 What the district is trying to do is
 7 secure, supply water and also supply economy of scale
 8 with water distribution improvements. Because fact of
 9 the matter is for G-M and Beechwood, they do not meet
 10 the TNRCC requirements for treatment capacity or
 11 distribution of water or for the storage of water,
 12 period. Cost and improve those. G-M doing it on their
 13 own or through the creation or being part of the
 14 district. G-M I will flat out tell you is I think
 15 critical if they're in and out of the district because
 16 they cover the largest majority of the county.
 17 But what I want to emphasize is, there's a
 18 lot of different contracts between districts, a lot of
 19 different relationships between cities and water supply
 20 corporations. What you want to try to get to is where
 21 everybody has a second source of water at some point.
 22 That way, if your groundwater goes out you've got some
 23 access to another route of water, whether that be
 24 through another entity or whether it be through an
 25 interconnect and future improvement for water

1 JUDGE LEATH: Sabine River Authority has
 2 been approached with the proposal to build an additional
 3 treatment plant on the north end of the county. At this
 4 point they have not answered it, and they couldn't be
 5 here tonight. I don't think he would be able to answer
 6 it even if he were here. But that proposal has been
 7 made.
 8 MR. LINDSEY: Lindsey again. Would you go
 9 over one more time -- Mr. Terry asked the question, how
 10 much is it going to cost for each individual subscriber
 11 to tie on to the water district when they get it in
 12 place and I understood it was \$400 for this district.
 13 MR. KINDLE: Well, I was using an
 14 estimate. Whatever your cost for your PVC line, putting
 15 a meter to your household.
 16 MR. LINDSEY: What if it's already there?
 17 MR. KINDLE: If it's already there, it's
 18 not going to cost you anything.
 19 MR. LINDSEY: Okay. Just set the meter
 20 in?
 21 MR. KINDLE: Yes. Yes, ma'am?
 22 MS. MCPHERSON: Pauline McPherson, EI
 23 Camino Bay. Would you know prior to the election which
 24 loan you're going to be able to get as far as rate
 25 interest since that 10 percent and that zero percent

Page 46

1 makes quite a difference.
 2 MR. KINDLE: Yes, we will.
 3 MS. MCPHERSON: And that will be made
 4 public?
 5 MR. KINDLE: Yes, ma'am.
 6 MS. MCPHERSON: One other question. What
 7 happens to our preexisting water treatment plant? Is
 8 that just -- becomes obsolete, or will that be used as a
 9 backup?
 10 MR. KINDLE: It will probably be used as a
 11 backup if it meets the requirements and still operating.
 12 Are you talking about if you join the district, what
 13 happens to the existing facilities? It becomes part of
 14 the district. Would they continue to operate? It's
 15 hard for me to answer because I don't know. If we do an
 16 interconnect and continue to keep the plant operating
 17 they may want to continue operating it as a backup, like
 18 you said, or maintain the pressures up within that area
 19 or may want to mothball it and keep it for future. I
 20 really can't answer that, that part of it.
 21 MR. LINDSEY: Let me ask you one other and then
 22 I'll be through.
 23 MR. KINDLE: Yes, sir.
 24 MR. LINDSEY: Are you on a time schedule now
 25 for these meetings for October, November and December

Page 47

1 with the election being definite sometime in January or
 2 February?
 3 MR. KINDLE: Definite in February. If I
 4 don't hear it in February, they're going -- you probably
 5 won't see me again. I'll put it that way.
 6 MR. LINDSEY: I mean, --
 7 MR. KINDLE: Well, when I say that, this
 8 is actually for the regional planning. That's why I
 9 want to make the distinction. This meeting that we're
 10 having tonight with the court reporter is our next to
 11 the last meeting as far as the regional plan. The last
 12 one will be the environmental information document and
 13 we're required under the national environmental policy
 14 act to have one public hearing advertised 30 days in
 15 advance and have a court reporter. That meeting in
 16 October will be the last meeting as far as regional
 17 planning effort. After that, this plan goes to the
 18 Texas Water Development Board, they review and comment
 19 and we have it finalized. That's why I wanted to make
 20 that distinction.
 21 This is completely separate in some
 22 respects from the creation of a district. The district
 23 is getting into who is in or who is out. What this
 24 provides (pointing) hopefully where the money is, one of
 25 the problems identified in the framework to implement

Page 48

1 solutions to those problems. If the county, the city or
 2 district or whoever so wishes to be, at least if there
 3 are some problems thought out, some costs applied to
 4 that and also some very good data, analysis and exhibits
 5 and maps done. And also last but not least, a water
 6 model for the entire county that's available through
 7 this planning effort. Yes, sir?
 8 MR. OWENS: Wayne Owens. Would a copy of
 9 this document here, study plan or whatever, be made
 10 available to the public or perhaps put one in the
 11 library or --
 12 MR. KINDLE: I'm glad you asked that. It
 13 will be. It will not be right now. We want to get
 14 their comments first, obviously. The plan participants
 15 are going to get to look at it. When we send it to the
 16 water development board for their review and comment,
 17 both the environmental information document and this
 18 document will be available at the library for the
 19 public. Yes, sir?
 20 MR. ENGELHARDT: Chad Engelhardt. In the
 21 four areas that the EDAP funds are available, doesn't
 22 EDAP funds make everyone that's in that area, doesn't it
 23 make it mandatory for all of them to hook up? And do
 24 you have in those areas, do you have any specific
 25 locations that the water treatment plants are going to

Page 49

1 be put in or if they're not there now where they're
 2 going to be located?
 3 MR. KINDLE: The water plants or the
 4 wastewater plants?
 5 MR. ENGELHARDT: Wastewater.
 6 MR. KINDLE: Yeah, the wastewater plants
 7 we do, because that's actually part of the regional
 8 plan. Now, one of the things that I would like to see,
 9 obviously, we use all the grant funds but that's going
 10 to be a consideration by the county, too, since they are
 11 the applicant, will they get a lot of resistance. I'll
 12 say from the Bronson surveys, the McGee Landing surveys
 13 was probably 80 percent overwhelming in support of
 14 wastewater improvements. But again, that total survey
 15 might represent maybe 35 or 40 percent of the entire
 16 area.
 17 If you don't see the support for that and,
 18 you know, the county made their own decision from the
 19 engineering recommendation and from a health
 20 recommendation based on the studies that were done by
 21 the Texas Department of Health.
 22 MR. ENGELHARDT: Maybe I missed something.
 23 As far as the -- as far as the tie-ins on the
 24 wastewater --
 25 MR. KINDLE: It is madatory, yes, sir.

1 MR. ENGLEHARDT: It is mandatory any time
 2 EDAP funds are involved?
 3 MR. KINDLE: Yes, sir. They have to pass
 4 what they call a mandatory program.
 5 JUDGE LEATH: That would only be effective
 6 if they were getting the water?
 7 MR. KINDLE: Yes, sir. It's only
 8 effective if you use the EDAP funds and only for the
 9 EDAP areas. In other words --
 10 JUDGE LEATH: Within, say, within the EDAP
 11 area like Bronson, if they were not using the district
 12 water they would not be required to hook on to the
 13 wastewater?
 14 MR. ENGLEHARDT: Well, the EDAP -- isn't
 15 EDAP strictly on the wastewater anyway?
 16 MR. KINDLE: You have EDAP funds for water
 17 as well.
 18 MR. ENGLEHARDT: Okay.
 19 MR. KINDLE: Most of the time --
 20 MR. ENGLEHARDT: But if the county
 21 receives EDAP funds for wastewater in that specific
 22 area --
 23 MR. KINDLE: In that specific area. You
 24 are required to hook up.
 25 MR. ENGLEHARDT: Mandatory for them to

1 MR. KINDLE: Yeah. Mike mentioned the
 2 2 percent -- it's not the 2 percent that makes the big
 3 difference. It's 35 percent loan forgiveness that makes
 4 a big difference.
 5 MR. KIMLER: I assume this is -- I'm
 6 looking at here, looks like to me \$20 currently to 22 --
 7 30. Projected.
 8 MR. KINDLE: Yeah. Is there a question in
 9 there?
 10 MR. KIMLER: Well, I'm assuming I'm
 11 looking at this correctly.
 12 MR. KINDLE: Yes, sir. Yeah, I believe it
 13 is, sir. I don't have it in front of me but if that's
 14 what the graph is showing, yes, sir.
 15 MR. KIMLER: Maybe I'll get with you
 16 afterwards.
 17 MR. KINDLE: That would be fine. Anybody
 18 else? Judge, commissioners, anything else?
 19 JUDGE LEATH: Well, I don't have anything
 20 and, once again, I appreciate everyone coming. I hope
 21 you will take these things the plant participants or the
 22 projected participants, take the information with you
 23 tonight, study it carefully so that you can go back to
 24 the people that will make the decision for your
 25 particular water supply corporation and they can take a

1 hook up?
 2 MR. KINDLE: Yes, sir. And the same for
 3 water, too, although water is usually not an issue.
 4 Most everybody -- water is usually not the big issue but
 5 wastewater is. But that's just one of the rules. If
 6 you want a 100 percent grant funds or --
 7 MR. ENGLEHARDT: Did you say you do have
 8 specific areas where these wastewater plants --
 9 MR. KINDLE: Yes, we do. That would be
 10 part of the environmental information document that will
 11 be shown in the next month's hearing.
 12 MR. ENGLEHARDT: Do you have any at this
 13 point in time?
 14 MR. KINDLE: I have it at this point in
 15 time, but I want to be able to review and comment before
 16 I give it to the public.
 17 JUDGE LEATH: It will be available at the
 18 October meeting?
 19 MR. KINDLE: Yes, sir. Anybody else?
 20 Yes, sir?
 21 MR. KIMLER: Randy Kimler. Looking at
 22 your charts, bill for about 6,000 gallons in El Camino
 23 Bay, \$20 right now based on your chart. And 2005 it
 24 would vary between \$2 to \$30 based on what type of loan.
 25 I mean, looking at your information I'm --

1 good hard look at it and make a good informed decision,
 2 because we do have to make the decision of who's in and
 3 who's out, if that's the proper terminology, by around
 4 December 15th. And you will need all the information
 5 you can get in order to make that decision.
 6 Thanks again for coming. If no one else
 7 has anything, we'll stand adjourned.
 8 MR. KINDLE: Please sign in. If you have
 9 not signed in, Ms. Jennifer Elms is in the back.
 10 (Proceedings concluded at 8:17 p.m.)
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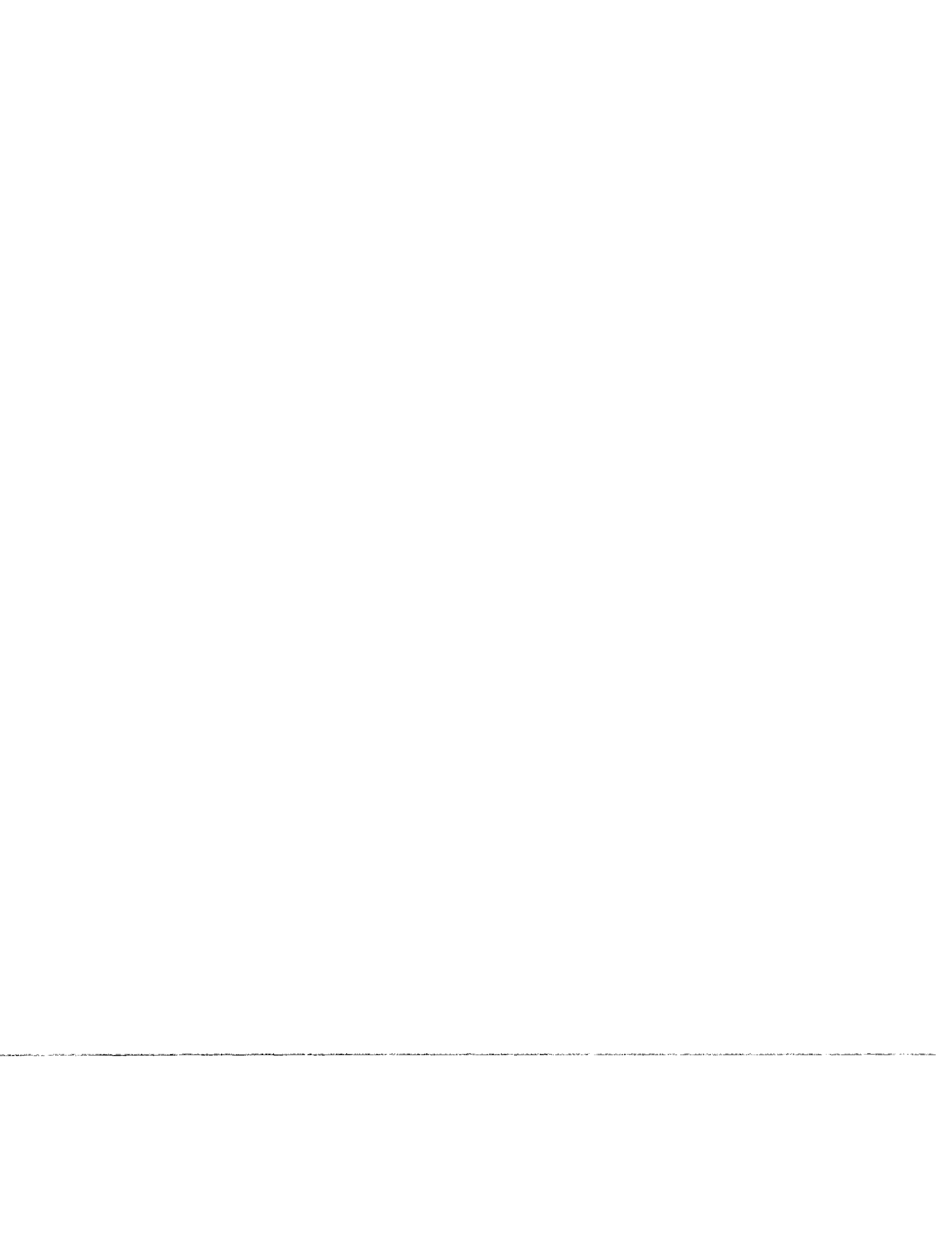
CERTIFICATE OF REPORTER

I, Andrea K. Simmons, CSR, for the State of Texas,
do hereby certify that the foregoing transcript is a
true, accurate, and complete record.

I further certify that I am neither related to nor
counsel for any party to the cause pending or
interested in the events thereof.

October __, 2001

Andrea K. Simmons, CSR



**Sabine County Regional Planning
Public Hearing
September 27, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

Name	Affiliation	Address	Phone
<i>Earl Ford</i>		P.O. Box 1519, Hemphill, Tex	409 287 3443
<i>J.C. Meyer</i>		118 Bayshore	287 2060
<i>Kirby Vincent</i>		103 Lakeview Dr	787-2339
<i>W.B. Owens</i>		Rt 1 Box 1501 - D Hemphill	625 4137
<i>Horner R. Taylor</i>		HCC Box 680 Hemphill	579-4065
<i>RL BIGGERSTAFF</i>		HCC BOX 678 HEMPHILL TX	579 3953
<i>Pauline McPherson</i>		P.O. Box 635 Hemphill Tx	787-4498
<i>Larry McPherson</i>		P.O. Box 635 Hemphill TX	787 4498
<i>Chad Miller</i>	<i>G-M Water</i>	P.O. Box 727 Hemphill tx	787-2755
<i>Mike Kelly</i>	<i>G-M WATER</i>	P.O. Box 92 Hemphill TX	579 2219
<i>Jack Stone</i>		102 Overlook Ct Hemphill	787-7457
<i>J.L. Langford</i>		145 Emeline Ln Hemphill	787-2432
<i>Bill Heugel</i>	<i>SSWSC</i>	HCC Box 828 Hemphill	579-3525
<i>Don Lee</i>	<i>CITY OF HEMPHILL</i>	P.O. BOX 788 HEMPHILL	787-2251

**Sabine County Regional Planning
Public Hearing
September 27, 2001 7:00 p.m.
County Courthouse, Hemphill Texas**

Name	Affiliation	Address	Phone
B. CHED ENGELHARDT	PROPERTY OWNER	MORT RD 13280 BILK OAKS BLVD	409 782 2299
Don Lueders	El Camino Viejo		787-3778
Abraham Terry	El Camino Viejo		
Donald B. Smith		HC4-Box 550A Hemphill	409-579-4083
Donald W. Smith	Oak Ridge	H.C. 4 Box 825 "	409-579-4126
Ed Ecker	OAK Ridge	HC 4 Box 829 Hemphill	409-579-4293
Dick + Phyllis Westberry	Property Owner	101 Riverbend Dr. Hemphill	409-787-3242
MAURICE PATTERSON	SOUTH SABINE	HC 52 Box 930 HEMPHILL	409 579 3947
John Booker	Pineland	City of Pineland	409-584-2851
JERRY & SUSAN Cowgill	GMW	P.O. Box 264 Hemphill	409-787-4333
JOE & LEAH GOODSON	RIVER BEND	Rt 4 Box 687 Hemphill	409-787-1947
Jim Nathan	GMW	Rt 1 Bx 1770 "	625-4869
George E. Carney	GMW	HCR 1 Box 196 Milam	625-3284



TEXAS WATER DEVELOPMENT BOARD



William B. Madden, *Chairman*
Jack Hunt, *Member*
Noé Fernández, *Member*

Craig D. Pedersen
Executive Administrator

Wales H. Madden, Jr., *Vice-Chairman*
William W. Meadows, *Member*

January 10, 2002

The Honorable Jack H. Leath
County Judge, Sabine County
P.O. Box 716
Hemphill, TX 75948

Re: Regional Facility Planning Grant Contract Between Sabine County, (County) and the Texas Water Development Board (Board), TWDB Contract No. 2001-483-372, Draft Report Comments

Dear Judge Leath:

Staff members of the Texas Water Development Board have completed a review of the draft report under TWDB Contract No. 2001-483-372. Board staff has determined that the Environmental Information Document (EID) "Task C" was not included with delivery of the draft final report. The EID must be submitted for review prior to the final report delivery. As stated in the above referenced contract, the County will consider incorporating comments from the EXECUTIVE ADMINISTRATOR shown in Attachment 1 and other commentors on the draft final report into a final report. The County must include a copy of the EXECUTIVE ADMINISTRATOR's comments in the final report.

After the EID has been accepted, you will be required to submit one (1) electronic copy, one (1) unbound single-sided camera-ready original, and nine (9) bound double-sided copies of the final report on this study. Please contact Mr. Bill Roberts at (512) 936-0853 if you have any questions about the Board's comments.

Sincerely,

Tommy Knowles, Ph.D., P.E.
Deputy Executive Administrator
Office of Planning

cc: Bill Roberts, TWDB

Our Mission

Provide leadership, technical services and financial assistance to support planning, conservation, and responsible development of water for Texas.

P.O. Box 13231 • 1700 N. Congress Avenue • Austin, Texas 78711-3231
Telephone (512) 463-7847 • Fax (512) 475-2053 • 1-800-RELAYTX (for the hearing impaired)

Web Address: www.twdb.state.tx.us • E-Mail Address: info@twdb.state.tx.us
V:\RPF\GM\DRRAFT\2001483372.COMMENTS.COC

INRIS - The Texas Information Gateway • www.inris.state.tx.us
A Member of the Texas Geographic Information Council (TGIC)



ATTACHMENT 1
TEXAS WATER DEVELOPMENT BOARD
Review of the Draft Final Report: Contract No. 2001-483-372
"Sabine County Regional Water and Wastewater Facilities Plan"

1. Page 3 of the report correctly cites the TWDB approved population for 2000 for the Cities of Hemphill and Pineland. In the paragraph following those population estimates the report incorrectly cites the basin names for the two river basins in Sabine County. The report cites the Sabine River Basin correctly, however the other basin is cited as the "Angelina-Neches River Basin". TWDB uses standardized terminology for river basins and the basin cited is not in that list. Please use the correct reference for the basin, which is "Neches River Basin".
2. The water quality determinations made for the Senate Bill 1 Regional Planning Area (Task A, 3) and an Environmental Information Document (EID) were not provided as required by Task C. Please provide the water quality determinations made for Regional Planning Area
3. Page 34, Beechwood/South Sabine Planning Area, the Plan indicates that a Wastewater Treatment Plant (WWTP) would be located in the western portions of the planning area near the Shawnee Shores and Holiday Forest subdivisions. The TWDB is currently financing a conventional WWTP for the Shawnee Shores and Holiday Forest area under a Brookeland Fresh Water Supply District (FWSD) Economically Distressed Area Program (EDAP) Project, so the project listed for the Shawnee Shores and Holiday Forest subdivision is not necessary. Please update Table 6.6 and any other information relating to this project.
4. Page 76, Table 10.5, Financial Model Assumptions, and the Interest Rate for Debt Service will be approximately 3.30%, not 0% to 2%. Please amend Table 10.7, Table 10.9, Table 10.10, Table 10.12, and any other Financial Information relating to this interest rate.

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Dr. Tommy Knowles, Ph.D., P.E.
Deputy Executive Administrator
Texas Water Development Board
1700 North Congress Avenue
P.O. Box 13231
Austin, Texas 78711-3231

**Re: Sabine County Regional Water and Wastewater Facilities Plan
Response to Comments to the Draft Report
TWDB Contract No. 2001-483-372**

Dear Dr. Knowles:

We have received your letter dated January 10, 2002 and offer the following responses to comments made in regard to the above reference document.

- 1) The basin cited as the Angelina-Neches River Basin (Page 3 of Draft Final Report) has been correctly identified as the Neches River Basin in the Final Report document.
- 2) Additional information regarding the water quality of the water supply for Sabine County has been added to the report text. See page 10 of Final Report. Also, three copies of the Environmental Information Document, corresponding to the Facilities Plan, were submitted under separate cover on October 26, 2001 to Jose Rodriguez, P.E. of the TWDB. Our understanding is that Mr. Danny Fox reviewed the documents.
- 3) The wastewater treatment plant proposed for the Shawnee Shores and Holiday Forest subdivisions has been removed from the facilities plan. Corresponding text, tables, and cost estimates have been revised to reflect such. Please see Sections 6.0 and 8.0.
- 4) Cost tables and financial assumptions have been revised to reflect the that the interest rate for debt service will be approximately 3.3%, rather than the 0 to 2% previously assumed.

TurnerCollie & Braden Inc.

Mr. Tommy Knowles, Ph.D., P.E.

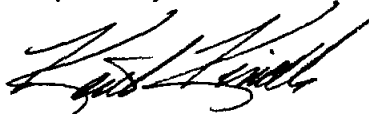
February 13, 2002

Page 2

With these revisions, and responses to other public comments received during public participation events, we respectfully submit these nine hard copies of the Final - *Sabine County Regional Water and Wastewater Facilities Plan* in addition to the electronic and camera-ready format versions of the Final Report per the scope of services outlined in the agreement between the TWDB and Sabine County.

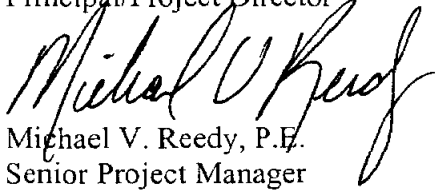
Should you or your staff have any additional concerns, please contact me at (956) 781-6991 or Mike Reedy at (713) 267-3127.

Respectfully,



Keith P. Kindle, P.E.

Principal/Project Director



Michael V. Reedy, P.E.

Senior Project Manager



County of Sabine

P.O. Box 720
Hemphill, Texas 75948

October 11, 2001

Jack H. Leath, County Judge

Commissioners

Keith Clark	Precinct #1
Lynn Smith	Precinct #2
Doyle Dickerson	Precinct #3
Gene Nethery	Precinct #4

RE: Comments to Preliminary Draft of Sabine
County Regional Water and Wastewater
Facilities Plan

Mr. Michael V. Reedy, P.E.
Senior Project Manager
Turner Collie & Braden, Inc.
P.O. Box 130089
Houston, TX 77219-0089

Dear Mike,

Pursuant to your request of October 4, and our telecom late last week, I wish to make the following observations concerning the draft report.

1. The design criteria seems to be lacking. There is little discussion on what the completed facilities will likely look like. We must address dead end line issues. That seems to be one of the most significant contributions to poor water quality presently.
2. It currently appears that the new district may only include GM, El Camino and maybe Frontier Park. If that is true then we need to be sure of the financial impact that will cause. There remains the possibility of Beechwood becoming part of the district. If they choose to do so, then the financial impact of adding Beechwood with and without the currently planned treatment facility should be included.
3. More discussion among all interested parties concerning the other cost along with debt service needs to be had prior to our acceptance of your first report. As an example, it simply doesn't look right if \$ 25.00 / month minimum bill is now required, without debt service, and a number in the low 30's with debt service. I do not believe we have adequately identified all cost associated with the new district.
4. We need information concerning preliminary scheduling. How much engineering lead time, status of when construction could begin, what type and size of packaging of contracts etc. The locals will want to see dirt moved quickly if they vote this issue up. We need to be able to discuss a realistic time frame with them.

Thank you for giving me the opportunity to comment. Your attention to my points will be appreciated.

Best regards,

R. G. Nethery
Commissioner Pct. 4

GN/cc

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Mr. R. G. Nethery
Commissioner Precinct 4
Sabine County
P.O. Box 720
Hemphill, Texas 75948

Re: Response to Comments to the Draft Regional Facilities Plan

Commissioner Nethery:

Thank you for providing comments to the Preliminary Draft of the Sabine County Regional Water and Wastewater Facilities Plan. It is our intention that the following responses will adequately address the concerns you have raised.

- 1) The purpose of the Regional facilities Plan was to analyze the water and wastewater infrastructure needs in Sabine County and to make recommendations for long-term improvements based on planning level study criteria. Relative sizes and locations of treatment facilities have been provided in the study. However, detailed information concerning individual facilities will be addressed during Preliminary Engineering Design. Due to the configuration of existing water facilities in Sabine County it is neither currently feasible nor cost effective to provide the water lines necessary to alleviate dead end lines. Dead end lines will need to be addressed by the District through operation and maintenance practices such as a routine scheduled flushing program.
- 2) The scope of work approved by the Texas Water Development Board included the requirement for planning improvements for all planning participants. A detailed analysis of the financial impacts associated with one or more entities not participating in a newly formed district was not part of this scope of work. While we agree that this analysis should be performed prior to the creation of a district and the establishment of projected rates, this analysis should be performed independent of this report.
- 3) Capital costs were estimated based on our experience related to water and wastewater infrastructure costs in Texas as well as information obtained from Engineering News Record (ENR). Operations and maintenance costs were estimated based on a review of

Turner Collie & Braden Inc.

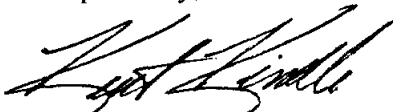
Mr. R. G. Nethery
January 15, 2002
Page 2

annual financial reports from municipalities and water supply corporations in Sabine County. The primary reason that significant debt service is projected to be paid at a relatively low rate structure is due to the assumption that all entities included in the analysis contribute. The inclusion of all entities in a district allows for the financing of debt service to be spread among a much larger customer base and therefore reducing individual service rates. However, as stated earlier, an analysis of the required rates for one or more parties participating in the creation of the district and the revised capital and O&M costs should be done separately from this planning effort.

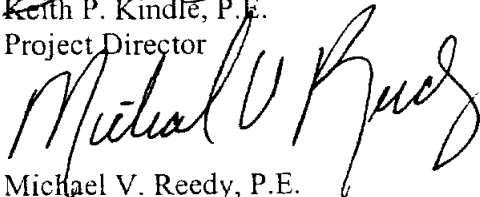
- 4) The Regional Facilities Plan provides for two phases of construction for water improvements and three phases for wastewater improvements. The general schedule outlined in the report identifies initial construction taking place between 2003 and 2007 for water improvements with a second phase of improvements between 2025 and 2030. Wastewater improvements are identified for construction using the same time frames as water improvements with the exception that an additional phase of construction is identified between 2015 and 2020 for wastewater improvements. While we agree that additional scheduling and planning for construction activities needs to be performed for specific improvements that are funded, it is beyond the scope of work for this planning study and should be performed independent of this report.

Thank you again for taking time to take part in this public participation effort. Your comments are appreciated and we hope that we have adequately addressed your concerns. Should you have any additional concerns please contact me at 956-781-6991 or Mike Reedy at 713-267-3127

Respectfully,



Keith P. Kindle, P.E.
Project Director



Michael V. Reedy, P.E.
Senior Project Manager

G-M WATER SUPPLY CORPORATION

P. O. BOX 727
HEMPHILL, TEXAS 75948-0727
PHONE: (409) 787-2755
FAX: (409) 787-2780

OCTOBER 22, 2001

TURNER, COLLIE & BRADEN INC.
PO BOX 130089
HOUSTON, TX 77219-0089

ATTN: MICHAEL REEDY, P.E.

I WOULD LIKE TO THANK TURNER, COLLIE & BRADEN FOR THE HARD WORK PUT IN TO THE REGIONAL WATER PLANNING STUDY. G-M WATER SUPPLY WILL APPRECIATE ANY KIND OF HELP THAT WE CAN GET FINANCIALLY AS WELL AS UPGRADING THE QUALITY OF OUR SYSTEM.

I WOULD LIKE YOUR GROUP TO KNOW THAT G-M WATER NOT ONLY RUNS THE LARGEST WATER SUPPLY WITH THE SMALLEST NUMBER OF OPERATORS IN THIS REGION BUT HAS THE CAPABILITY OF RUNNING A SURFACE TREATMENT PLANT AND PROCESS SUPERIOR QUALITY WATER. G-M ALSO HAS THE EXPERIENCE AND CAPABILITY OF OPERATING A WASTEWATER FACILITY.

WE ARE READY TO MOVE FORWARD WITH THIS AND HELP IN ANY WAY POSSIBLE.

IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CALL ME AT 409-787-2755.

THANK YOU,



MARK KIRKPATRICK
GENERAL MANAGER

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Mr. Mark Kirkpatrick
General Manager
G-M Water Supply Corporation
P.O. Box 727
Hemphill, Texas 75948

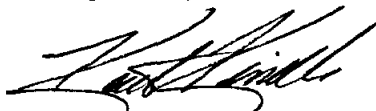
Re: Comments to the Preliminary Draft for the Sabine County Regional Water and Wastewater
Facilities Plan

Dear Mr. Kirkpatrick:

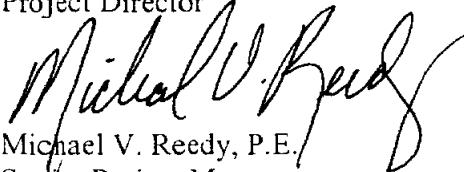
Thank you for providing comments to the Sabine County Regional Water and Wastewater
Facilities Plan and the planning effort on behalf of G-M Water Supply Corporation. Your time and
interest throughout this project has helped in the development of a comprehensive long-range plan
to provide a safe and adequate water supply and improved wastewater service to the people of
Sabine County.

If you have any additional concerns, please contact me at 956-781-6991 or Mike Reedy at 713-
267-3127.

Respectfully,



Keith P. Kindle, P.E.
Project Director



Michael V. Reedy, P.E.
Senior Project Manger

October 18, 2001

Jennifer L. Elms
Turner Collie & Braden, Inc.
P.O. Box 130089
Houston, Texas 77219

Dear Ms. Elms;

This correspondence is in reference to our recent conversation concerning the TC & B Inc., draft regional water plan for Sabine County. This will document the discrepancies in the plan that will need to be corrected, with regard to the El Camino Bay subdivision. Our water system operator, Bill Kyser, brought these to my attention.

First, I want to note that the report states that the system has 112 customers while, as of October 1, 2001, it actually has 118 customers. Next, all four of the dead-end lines shown on the existing water facilities map end in one-inch lines. The map shows that only two of the lines end with one-inch lines, rather than all four. One final change needed is that the placement of the two-inch line shown running north of Pine Tree Lane. This line actually runs behind the lots facing Pinetree Lane and Hillside Drive. (This line is a fifth dead-end line but does not end in a one-inch line section.)

Thank you for giving us an opportunity to ensure the accuracy of the water plan. You have been most helpful.

Sincerely,

A handwritten signature in cursive script that reads "Randy Kimler".

Randy Kimler
Vice President
El Camino Bay Homeowners Association
2044 Llano Street
Port Neches, TX 77651

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Mr. Randy Kimler
Vice-President
El Camino Bay Homeowners Association
2044 Llano Street
Port Neches, Texas 77651

Re: Comments to the Sabine County Regional Water and Wastewater Facilities Plan

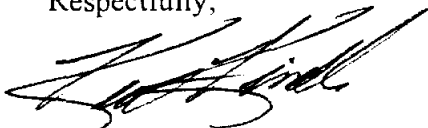
Dear Mr. Kimler:

Thank you for providing comments to the Sabine County Regional Water and Wastewater Facilities Plan - Preliminary Draft. It is our intention that the following responses will adequately address the concerns you have raised.

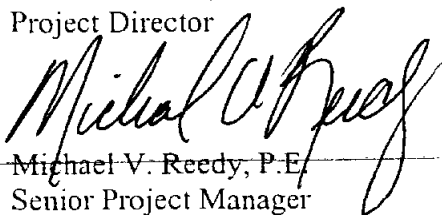
All planning level models were developed with information that was received from the individual water supply companies in December 2000. While we understand that the number of customers and connections will vary, baseline data was used in the plan formation. Secondly, in the transition from hard-copy maps to Geographic Information Systems (GIS), a number of maps were unreadable and the best engineering judgement was used. We have corrected the line sizes of concern and moved the line running behind Pine Tree Lane lots in order to best represent actual conditions.

Thank you again for taking time to take part in this public participation effort. Your comments are appreciated and we hope that we have adequately addressed your concerns. Should you have addition concerns, please contact me at 956-781-6991 or Mike Reedy at 713-267-3127.

Respectfully,



Keith P. Kindle, P.E.
Project Director



Michael V. Reedy, P.E.
Senior Project Manager

**South Sabine WSC
HC 52 Box 935
Hemphill, TX
75948**

12 October, 2001

Turner Collie & Braden Inc.
PO Box 130089
Houston, TX
77219-0089

Attention Michael V. Reedy, PE

Re: Comments to the Preliminary Draft of the Sabine County Regional Water and Wastewater Facilities Plan

Dear Mr. Reedy

We have reviewed the referenced document. We feel the proposed system does not consider several factors and has resulted in an overdesign. The effect of this overdesign is a significant cost associated with the South Sabine System. We did not review the wastewater sections and the water sections associated with other companies. We believe a meeting is necessary to discuss the system and resolve any differences. We particularly feel that a range of system solutions and associated cost range is necessary.

Specific comments:

1. South Sabine is a ground water based system. We feel solutions considering additional ground water should be considered.
2. South Sabine is presently operating under a waiver of .3 GPM per meter. We see no reason why this should change in the future. In fact discussions with TWDB personnel have indicated that there is a relaxing of the .6 for many companies that can show the data to indicated their capability to supply water to the members. We believe the .3 GPM requirement should be considered in the analysis.
3. Our present pumping capability is 270 GPM. Not the 490 GPM which has been indicated in the report.
4. The Gulf Coast Aquifer is used to provide water for both of our wells and is anticipated to be used for future wells. There is no mention in the report of this aquifer for supplying Sabine County. The Region I planning group has been informed of the error in their data.
5. Table 6.1 seems to overstate the peak requirement for the system. We do not believe the 3.9 peaking factor is appropriate. A review of the maximum daily load for the system in the past three years is significantly less than the estimated value. Perhaps a statistical method or selection of the actual peak values would be more appropriate.
6. Page 19 lists the TNRCC criteria of 35 PSI during the peak load as well as the additional design criteria based on the velocity. While the design criteria listed in items 3&4 might be of value for a new system we feel it is excessive and represents a maximum cost. The South Sabine System should be evaluated based on the 35 PSI solution to indicate the minimum requirement.

7. We believe the velocity and head loss of the existing South Sabine system is within the defined criteria presented as items 3 & 4 on page 19. We would like to review the pressure drop

**South Sabine WSC
HC 52 Box 935
Hemphill, TX
75948**

profiles and the velocity profiles as well as the information used for friction factors and Reynolds numbers.

8. We have not been able to find Appendix C.
9. The construction costs shown in Appendix D appears to be high based on some of our recent projects.
10. The report does not consider Shawnee Shores and Holiday Forest subdivisions. These are in the southern part of the county and would most likely be supplied by water from the Beechwood or South Sabine.

Our opinion is that a range of options should be provided. We believe the proposed system represents the top of the line and we should have information on a more moderate system design. We believe a meeting to discuss some of the details identified above would help all concerned.

If our assumptions about the minimal system are correct it may have a major impact on the overall cost to the other water companies if South Sabine is not a part of the district. This also raises some questions about the requirements and costs applied to the other company systems.

If you have you would like to discuss the issues we have raised, please call us at 409-579-4185 or 409-579-3525

Sincerely,



W. F. Heugel
Vice President
South Sabine WSC

CC Judge Jack Leath
Commissioner Lynn Smith
Commissioner Gene Nethery

February 13, 2002

TC&B Job No. 48-06035-002
Sabine County Regional Water and
Wastewater Planning

Mr. W.F. Heugel
Vice-President
South Sabine Water Supply Corporation
HC 52 Box 935
Hemphill, Texas 75948

Re: Comments to the Sabine County Regional Water and Wastewater Facilities Plan - Preliminary Draft

Dear Mr. Heugel:

Thank you for providing comments on the Sabine County Regional Water and Wastewater Facilities Plan - Preliminary Draft. The planning team appreciates you time and effort in reviewing the document and providing comments. The following paragraphs respond to the issues you have raised and will hopefully address your concerns.

- 1) We recognize that groundwater is a significant source of water for Sabine County, however, in accordance with the recommendations and planning conclusions from the effort of the East Texas Regional Water Planning Group, the Regional Plan concluded that ground water from minor aquifers should not be relied upon as a sustainable supply source for municipal water. While some groundwater supply in Sabine County is provided by major aquifers, the majority of wells currently used are from minor aquifer systems. Senate Bill 1 requires that all future water planning be done within the confines of recommendations and conclusions from the regional planning efforts. Therefore, in accordance with the East Texas Regional Plan, Sabine County planning was based on a conversion from ground water dependence to surface water sources to meet long-term municipal water demands.
- 2) Current regulations of the Texas Natural Resource Conservation Commission (TNRCC) require a minimum of 0.60 gallons per minute (gpm) per connection for public drinking water systems. As you have stated, there are requirements in the rules for requesting a waiver to this regulation, based on back-up power facilities (i.e., generator) and other requirements. While we understand the variances are sometimes granted, it is our understanding that this waiver is subject to change at any time based on the discretion of the TNRCC. The Regional Facilities Plan prepared for Sabine

Mr. W.F. Heugel
February 13, 2002
Page 2

County addresses water supply for a 50-year period. The purpose of the planning effort is to provide a safe and secure long-term water supply for Sabine County based on current regulations and sound engineering judgement. Based on this, it is our opinion that long-term water planning for Sabine County be based on the current requirement for 0.60 gpm per connection.

- 3) Text and tables within the text have been revised to reflect that South Sabine's current pumping capacity is 270 gpm.
- 4) As previously stated, planning guidelines are based on the Senate Bill 1 Regional Planning effort. As those plans are revised and the Texas State Water Plan is updated, revisions to projects relying on that information will also be made.
- 5) Current water usage in Sabine County, particularly in the subdivisions along Toledo Bend Reservoir, is significantly less than State averages. This is due primarily to the transient (i.e., weekend and holiday occupancy) nature of the current population in Sabine County. A peaking factor for South Sabine, as well as other water supply corporations along Toledo Bend Reservoir, was developed to better reflect this weekend water usage and to represent a more average peak day and peak hour water usage when compared to other comparable areas of the State. While we agree that the estimated peak demands used in the analysis are higher than what is currently being experienced in your system, the transient nature of the population currently served by your system is primarily the cause of this lower than average peak demand. Due to the long-term nature of this planning study, it is our opinion that the estimated peak water demands (for which water modeling and pipe sizing are based) are prudent.
- 6) Criteria specified for evaluation of water facilities were based on TNRCC design criteria as well as engineering judgement and experience. Based on experience, increased velocity and headloss in water distribution facilities will result in, over time, increased probability of water main breaks, pipe scouring, decreased pump life, and increased energy costs. These standards are commonly used in the engineering community and are prudent when evaluating water supply facilities for long-term planning studies. The decision to replace water lines based on potential undesirable velocity or headloss conditions will ultimately be the decision of the district or water utility responsible for the system. However, we feel the criteria specified and used in the analysis is sound and provides the information required to make long-term decisions.
- 7) Appendix C in the Final Report provides a printout of the computer model output from the PIPE2000 water model. The information requested is provided in this output.
- ~~8) Due to the volume of printout from the modeling effort, we did not include this appendix for the Draft Report. The Appendix is included in the Final Report.~~

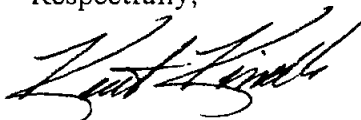
Mr. W.F. Heugel
February 13, 2002
Page 3

- 9) Projected costs were based on our experience related to current construction costs for water and wastewater facilities in Texas as well as utilizing the Engineering News Record (ENR) cost information. It is our understanding that many of the utilities in Sabine County currently conduct capital infrastructure projects using an in-house labor force. Due to the relatively large capital improvements recommended in the Regional Facilities Plan for Sabine County, independent construction contractors will likely be required. Therefore, the cost estimates provided in the plan include a cost for labor that may not be represented in the costs of recent projects in your area.

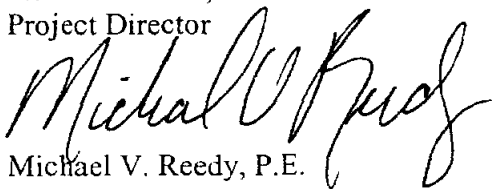
- 10) TWDB currently is funding a wastewater project through the Economically Depressed Areas Program in association with Brookeland Fresh Water Supply District and is therefore not a portion of the Sabine County study area.

Thank you again for taking time to contribute in this public participation effort. Your comments are appreciated and we hope that we have adequately addressed your concerns. Should you have additional concerns, please contact me at 956-781-6991 or Mike Reedy at 713-267-3127.

Respectfully,



Keith P. Kindle, P.E.
Project Director



Michael V. Reedy, P.E.
Senior Project Manager