

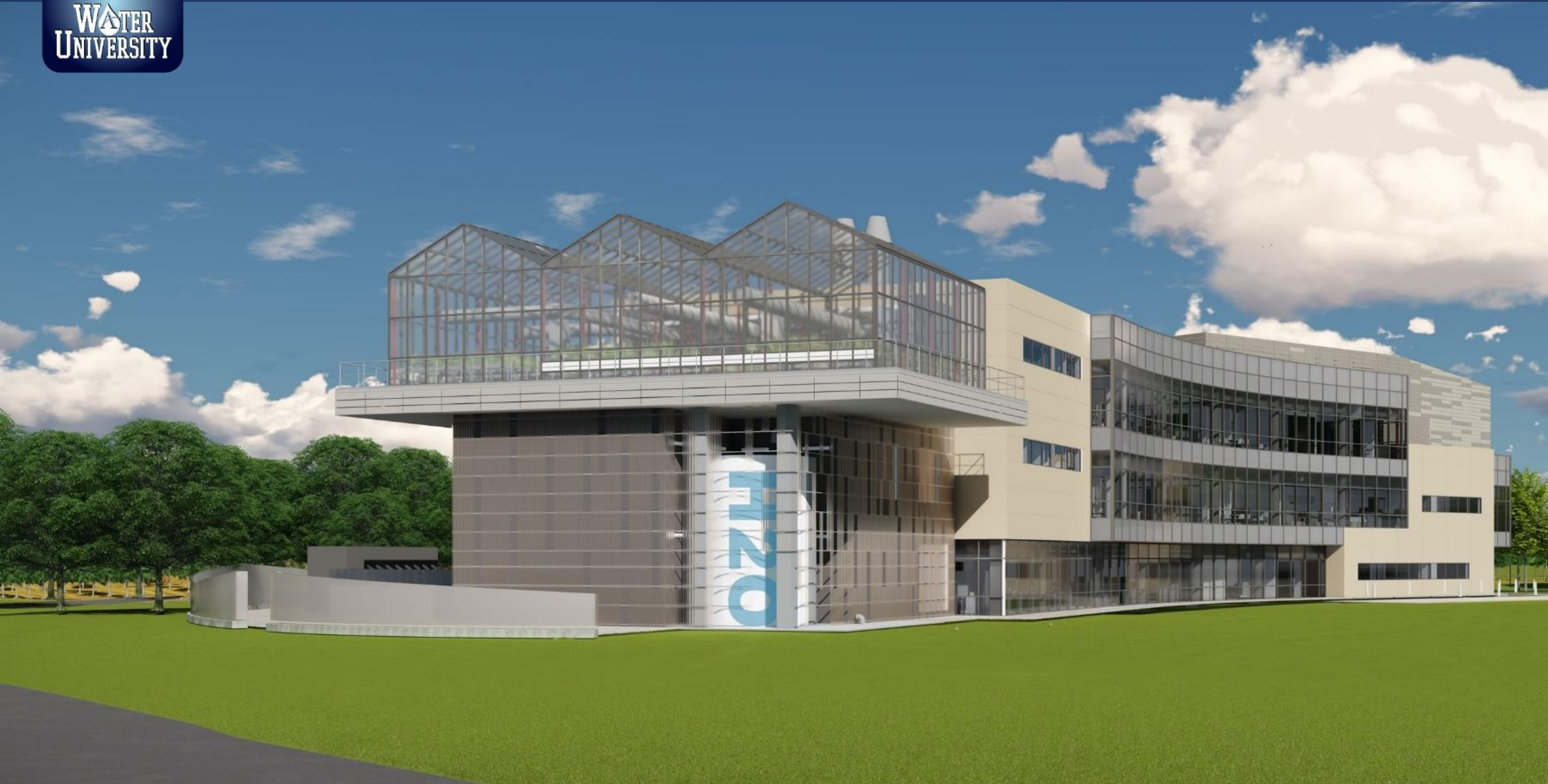
TEXAS A&M
AGRILIFE
RESEARCH

WATER
UNIVERSITY

WaterUniversity.tamu.edu

**RESEARCH, PUBLIC OUTREACH
AND CONTINUING EDUCATION**

**WATER USE
EFFICIENCY
IN THE URBAN ENVIRONMENT**



WATER UNIVERSITY

Public outreach and professional education on urban water conservation and quality protection.



TEXAS A&M
AGRI LIFE
RESEARCH

WATER
UNIVERSITY



**8,000 Square ft
Teaching space for
300 attendees**



30,000 Gallons of
Harvested Rainwater
for Irrigation and
Toilet Flushing



RAIN GARDEN

RETENTION POND

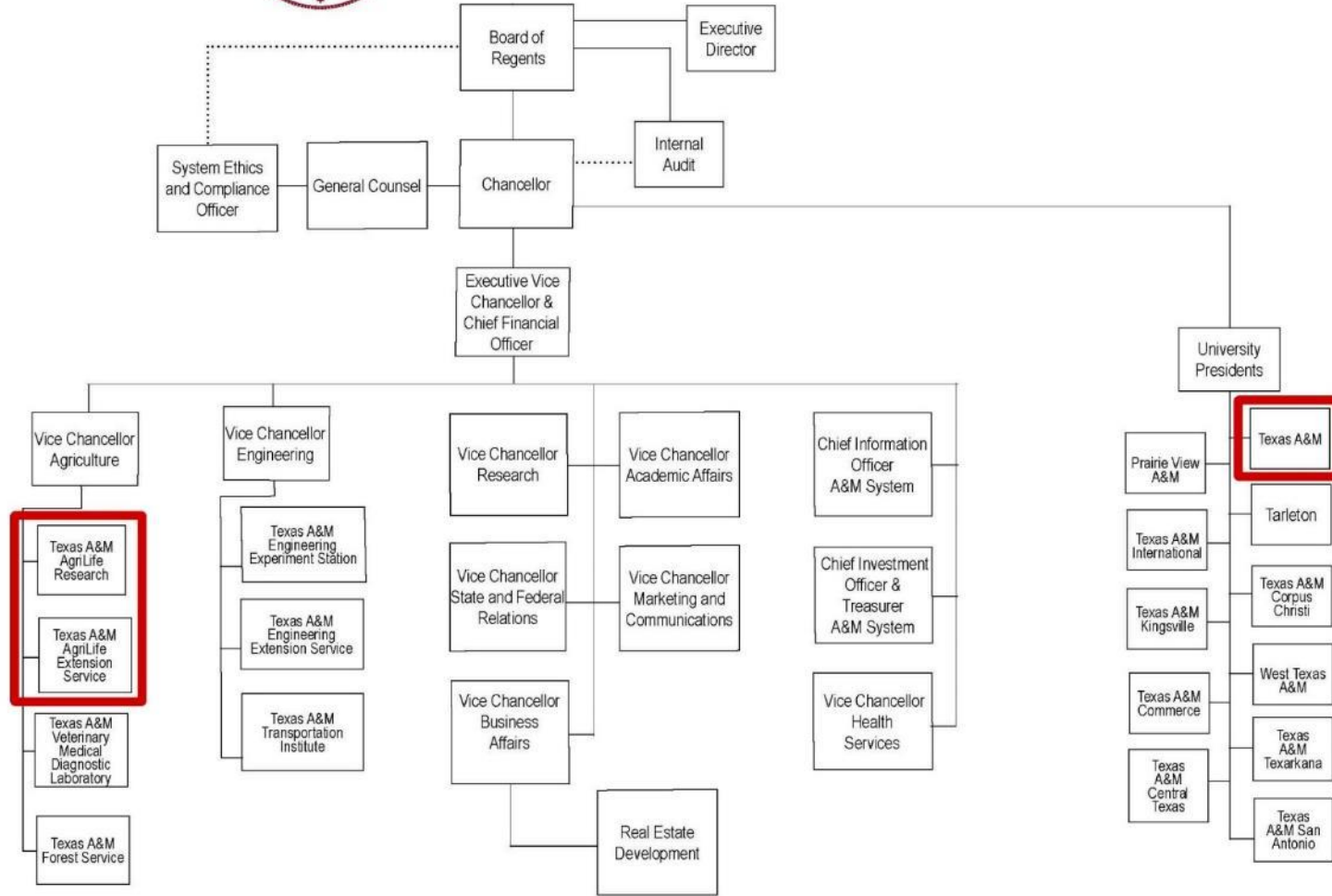
**Green
Infrastructure**





The Texas A&M University System

ORGANIZATIONAL CHART



10

RESEARCH & EXTENSION CENTERS ACROSS TEXAS



THE WATER UNIVERSITY TEAM



**CLINT
WOLFE**
Program Leader



**PATRICK
DICKINSON**



**DANIEL
CUNNINGHAM**



**DR. DOTTY
WOODSON**



**TAMARON
HUNT**

The Communications Team



GABE
SALDANA



SARAH
PYATT

A photograph of the Dallas skyline, featuring the Reunion Tower and several skyscrapers, with a dense line of green trees in the foreground. The text '7.1 MILLION PEOPLE' is overlaid in large, white, bold letters across the center of the image.

7.1 MILLION PEOPLE

ABOUT 50%

Of any urban area is
covered by lawns and
landscaping.

TURFGRASS

Is the largest irrigated
crop in the US

Over 50%

**Of all water used in
north Texas is used
outdoors**

Up to 50%

**Of all water used
outdoors is wasted due
to overwatering or
inefficient irrigation**

Outdoor Use

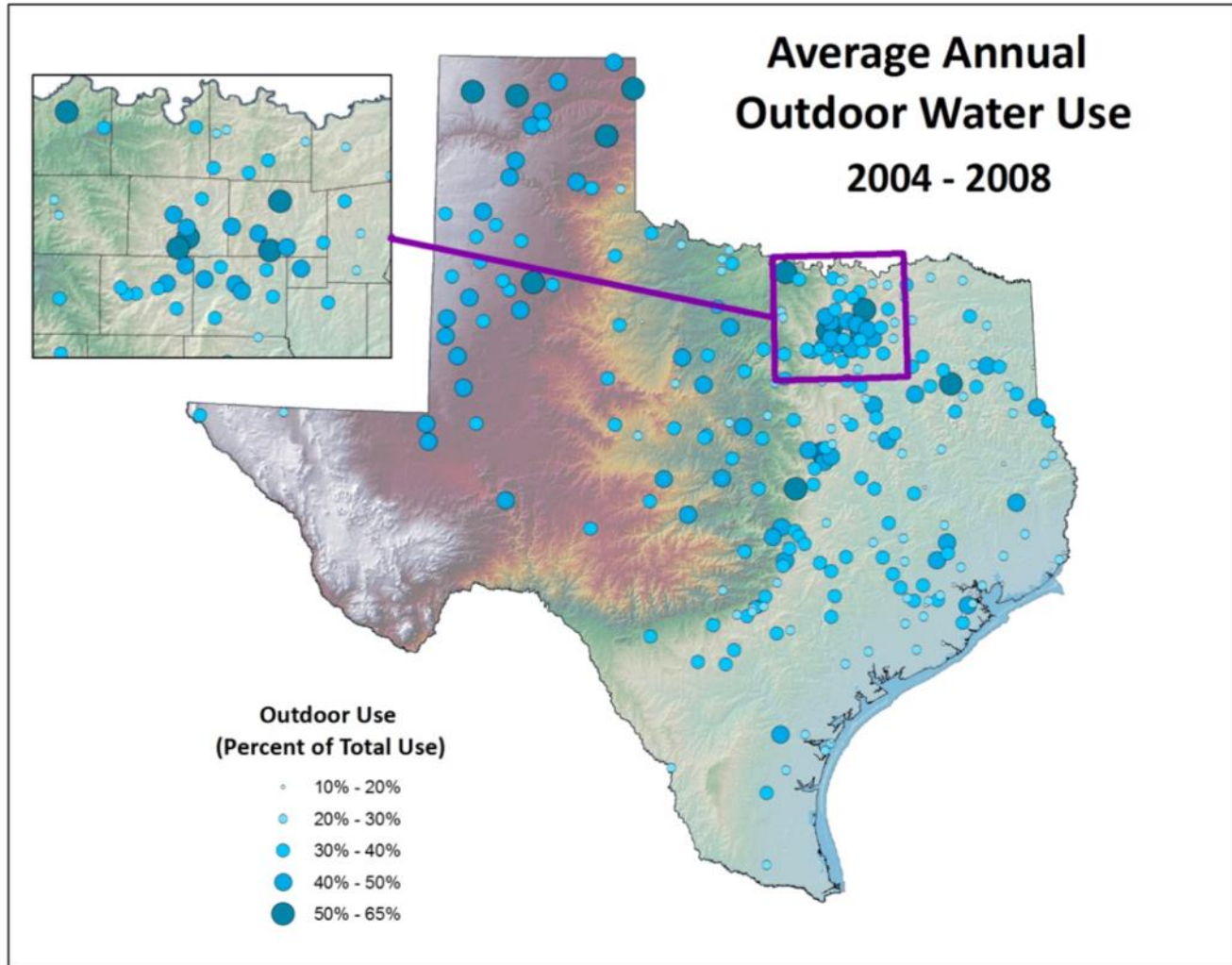


Table 3: Annual average water use by city for 2004 through 2011.

	City	Indoor use (gallons)	Outdoor use (gallons)	Outdoor use as a percentage of total use	Gallons per household per day for indoor use (gallons)	Gallons per household per day for outdoor use (gallons)
1	Amarillo	4,203,333,000	3,110,188,125	42	194	143
2	Arlington	6,579,447,000	3,806,411,375	36	198	114
3	Austin	11,532,894,150	5,879,032,288	33	176	89
4	College Station*	1,510,618,286	922,872,143	38	-	-
5	Corpus Christi	4,983,501,000	1,839,473,375	26	179	66
6	Dallas	16,293,358,200	11,668,235,723	41	173	125
7	El Paso	12,676,702,014	6,231,936,280	33	220	105
8	Fort Worth	11,576,921,511	6,819,864,226	37	166	97
9	Garland	4,398,659,640	2,234,119,198	33	198	100
10	Houston	22,287,783,000	5,629,024,250	20	148	37
11	Katy	281,554,500	202,737,375	40	188	135
12	Laredo	5,013,600,000	1,707,862,500	25	265	93
13	Lubbock	4,332,784,500	2,341,568,000	36	177	96
14	Odessa	2,327,562,000	1,358,331,500	37	205	119
15	Pflugerville	558,544,200	393,038,375	39	219	152
16	San Antonio**	23,242,411,406	7,713,879,696	25	202	67
17	Tyler	1,682,887,500	1,937,568,750	53	171	195
	<i>City average</i>			35	192	108
	<i>City median</i>			36	191	102
	<i>Statewide average</i>			31	181	86



MISSION

Shape perception

Change behavior





LIVE PUBLIC COURSES

- 60 municipalities
- 4 major water utilities

Effective Butterfly Gardening Design
Program Project & CLASSAR

How to Build a Rain Barrel





STATEWIDE EVENT OUTREACH

A man with a beard, wearing a grey button-down shirt, stands at a dark podium in a meeting room, addressing a group of people. The audience is seated around a large, dark conference table. Several people are looking towards the speaker. On the table, there are white boxes of tissues, blue and red plastic cups, and some papers. In the background, an American flag stands to the right of the podium. To the left, there are large windows. On the right wall, a large screen displays a colorful map with the letters 'trwd' written on it. The room has a professional and collaborative atmosphere.

PUBLIC PRIVATE CONSULTATION



TEXAS A&M
AGRILIFE
RESEARCH | WATER
UNIVERSITY

- Home
- About
- Plants
- Turfgrass
- Soil
- Irrigation
- Rainwater Harvesting
- Design
- WaterSense Demonstrations
- Stream Trailer

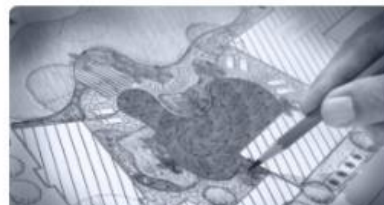
Courses



Plant Database



ULandscapeIt



Publications





D.I.Y. GUIDES, OTHER PUBLICATIONS



@AgriLife Water University

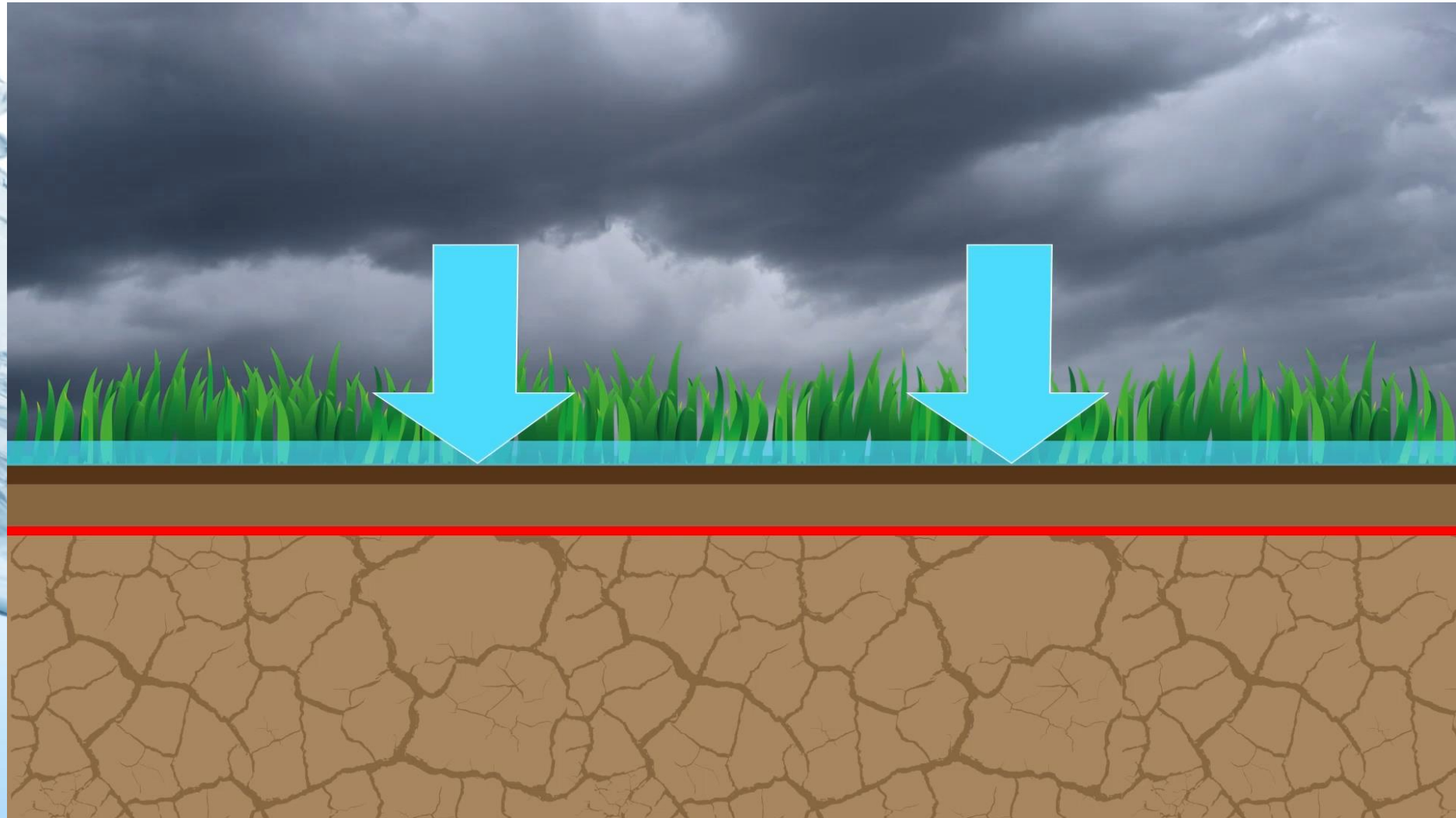




TELEVISION NEWS

Cycle & Soak

Digital
Multi
Media



Multi Media Campaigns



**KNOW
WHERE THE
FERTILIZER
GOES.**



**CLICK FOR
CLEAN
WATER.**

**KNOW
WHERE THE
FERTILIZER
GOES.**



**CLICK FOR
CLEAN
WATER.**



**KNOW WHERE THE
FERTILIZER GOES.**

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COMMUNITY INSTALLATIONS





HOA LANDSCAPDE REDESIGN



TEXAS A&M
AGRILIFE
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TEXAS A&M
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RESEARCH | EXTENSION

THE DALLAS
CENTER

WATERSENSE LABELED HOME





WATERSENSE MULTI FAMILY

TEXAS A&M
AGRI LIFE
RESEARCH | WATER
UNIVERSITY

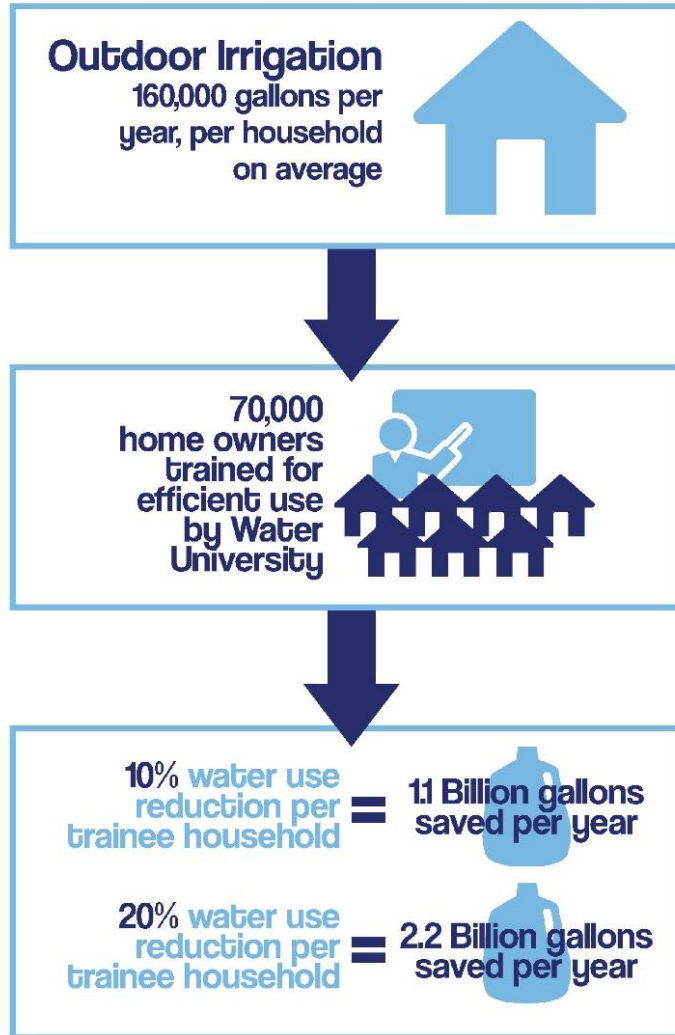
WATERSENSE LABELED
APARTMENTS | DONORS

- Fahr LLC
- Renaissance Technologies
- Las Vegas Sands Paloma Partners
- Adelson Drug Clinic
- Newsweb Corp
- Service Employees Intl. Union
- Priorities USA
- Priorities USA Action
- NextGen Climate Action
- Clark-Hill

THE ROAD TRIP



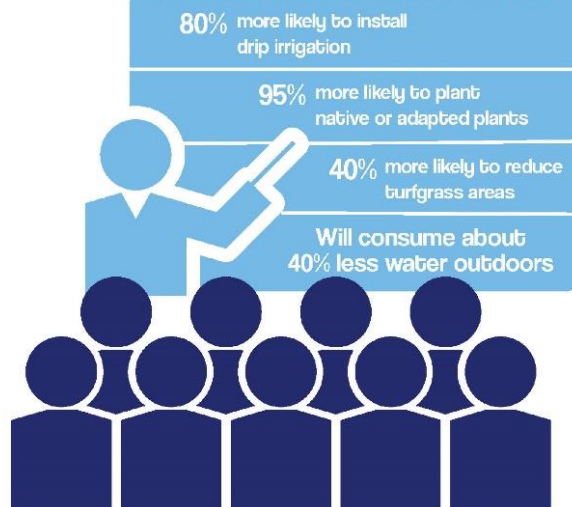
Water University Savings Impact



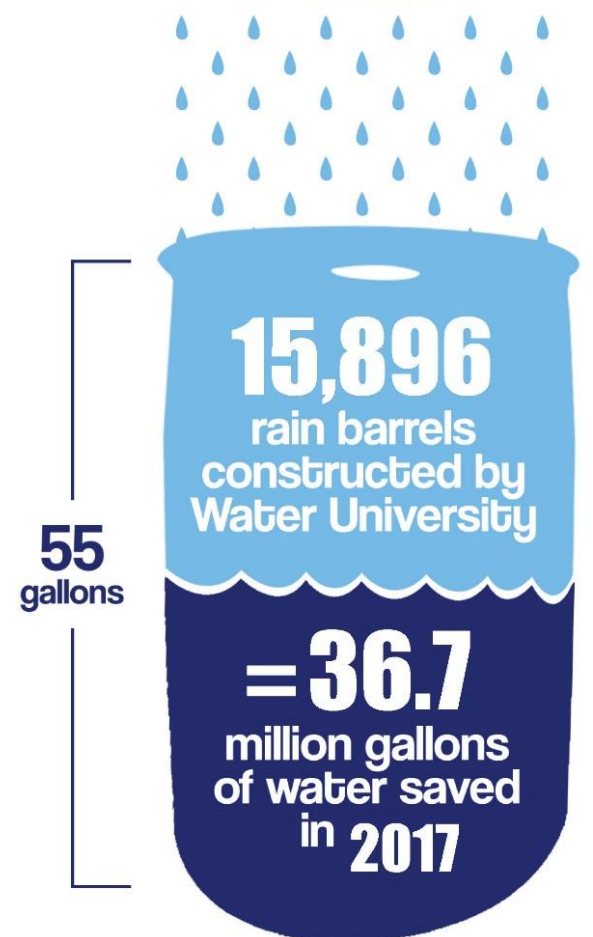
By the Numbers

Water University maintains a comprehensive set of impact statistics based on water use national averages, patron surveys, and regional water use trends. The statistics listed here reflect a conservative estimate of actual water resource savings garnered as a direct result of Water University's educational outreach efforts.

Water University Course Patrons



40 rain events of ¼ in. or more in 2016

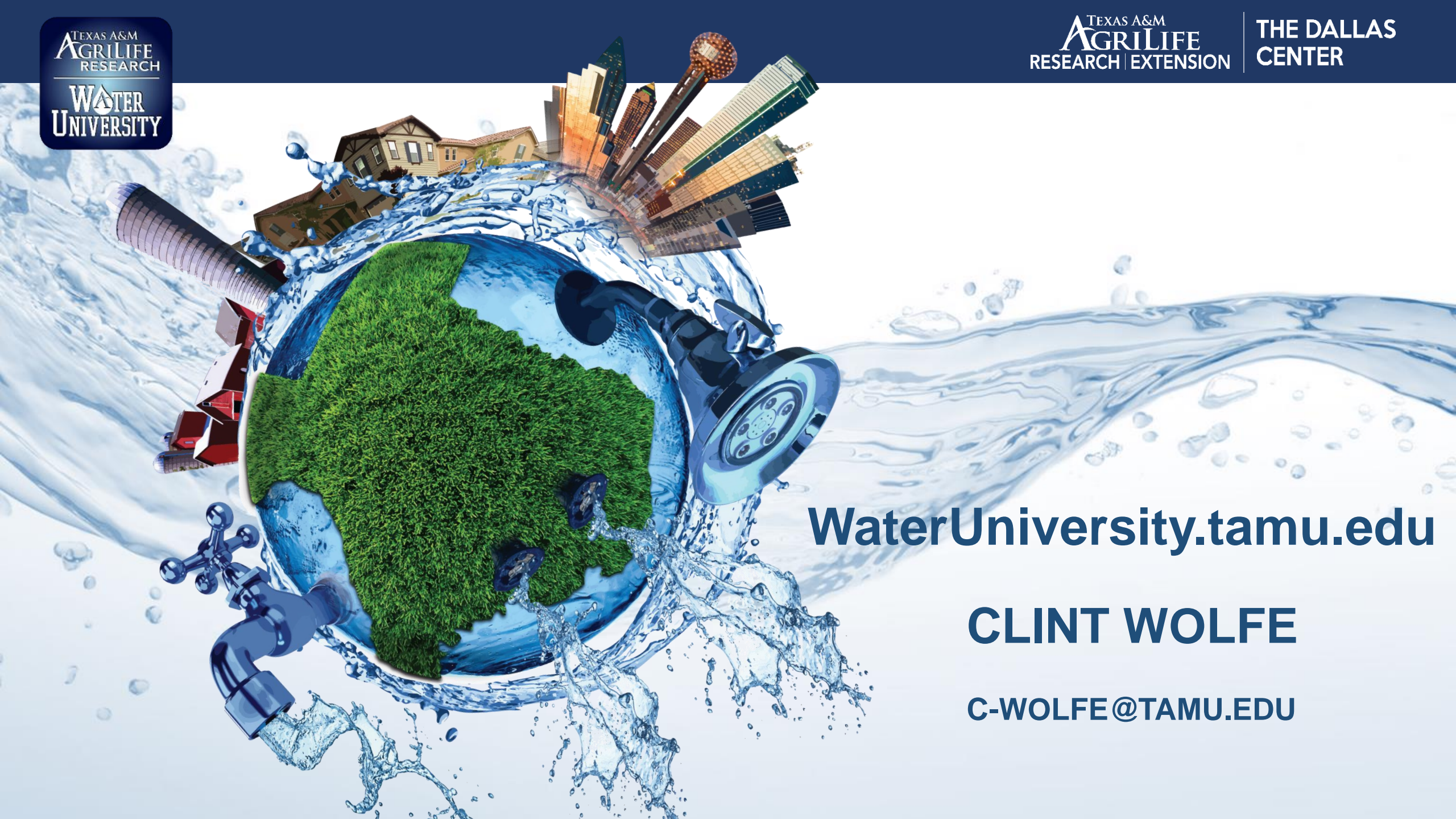


Research Programs

- Water use coefficients of landscape plants
- Effectiveness of landscape BMPs
- Holistic landscape management systems
- Modeling of landscape systems and water requirements
- Rainwater, grey water and alternative water source technologies
- Irrigation technologies
- Landscape design and public acceptance of low water use landscapes

“The “real world” of the Texas homeowner is far removed from the ongoing research being done in landscape water conservation. He is not privy to the reams of information being published on all sorts of new findings and more efficient watering techniques. He is at the mercy of his own limited knowledge and that of the “neighborhood” expert.”

Benny Simpson - 1982



WaterUniversity.tamu.edu

CLINT WOLFE

C-WOLFE@TAMU.EDU