NORTH TEXAS MUNICIPAL WATER DISTRICT

NTMWD's Vision

Regional Service Through Unity...

Meeting Our Region's Needs Today and Tomorrow

NTMWD's Mission

Meet the Various Needs of Member Cities and Customers

Top 5 Priorities:

- Provide superior water, wastewater, and solid waste services today.
- Secure the future for water, wastewater, and solid waste supplies and services.
- Maintain strong relationships with Member Cities, Customers, and partners.
- Maintain our infrastructure to provide reliable service today and tomorrow through emphasis on preventive/ predictive maintenance.
- Take care of our people – develop our leaders and work force, hire and retain the right people, build our bench, and be safe.



North Texas Municipal Water District

"Regional Service Through Unity ...
Meeting Our Region's Needs Today and Tomorrow"

Water Conservation Awareness and Education Programs
May 12, 2016



Agenda

- I. NTMWD Background
- **II.** Development of the State of Texas Water Planning Process
- III. Development and Identifying the Need for a State-wide Water Awareness and Education Campaign: Water IQ: Know Your Water
- IV. NTMWD's Need and Use of Water IQ: Know Your Water
- V. Water4Otter, Expansion Into the Classrooms
- VI. Future Initiatives: Work Force Development and Data Collection



Agenda

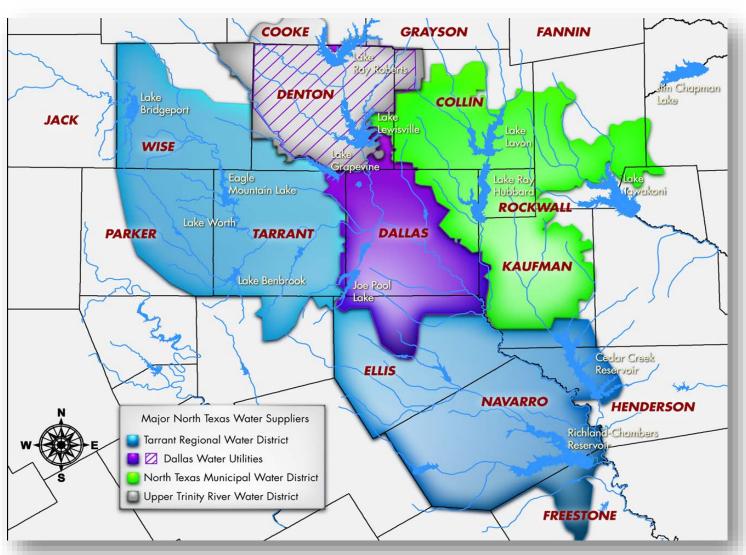
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Major North Texas Water Providers





NTMWD Systems

Water

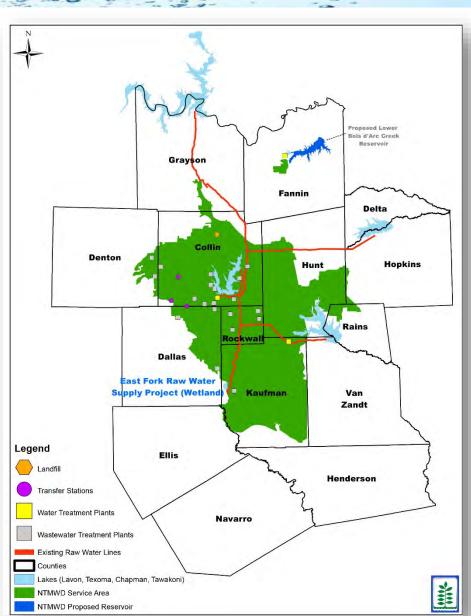
- 370 MGD average raw water supply
- 6 water treatment plants 806+ MGD capacity
- 566 miles of transmission pipelines
- 9 raw water pump stations
- 8 treated water pump stations
- 77 City delivery points

Wastewater

- Operate 17 wastewater treatment plants
 (11 owned by NTMWD, including 4 regional plants)
- 151+ MGD treatment capacity
- 8 interceptor systems with 250+ miles of largediameter pipelines and 23 lift stations

Solid Waste

- 3 transfer stations, 3,295 combined permitted tons/day
- 800,000+ tons/year accepted at landfill





NTMWD Regional Wholesale Provider

Entities Served:

- 70 cities, towns, municipal utility districts, special utility districts, and water supply corporations
- 1.6 million citizens

Supply Sources:

- Lavon Lake
- Jim Chapman Lake
- Lake Texoma
- Lake Tawakoni
- Lake Bonham
- East Fork Raw Water Supply Project (Wetland)



Wylie (Four Plants)

Tawakoni

Bonham

770 MGD

30 MGD

6 MGD

806 MGD

All WTPs utilize ozone as disinfection



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Development of the State of Texas Water Planning Process

• In 1997 the 75th Texas Legislature passed Senate Bill 1 (SB1), designed to address Texas water issues. With the passage of SB1, the legislature put into place a grassroots regional process to plan for future water needs of all Texans. The state water plan is based on a "bottom-up" consensus-driven approach to water planning that reviews water use projections and water availability.

 To implement this process, the Texas Water Development Board (TWDB) created 16 regional water planning regions across the state and established regulations governing regional planning efforts. SB1 also called for all regional water plans to be updated every five years.





Region C Water Planning Group

Region C represents the Metroplex and

surrounding area

All or part of 16 counties

- About ¼ of Texas' population
- 90% of water use for municipal
- 90% is surface water





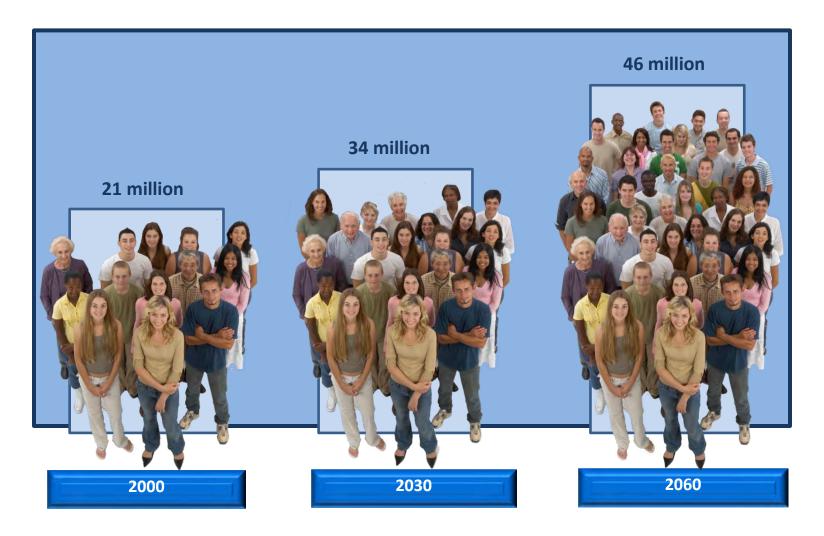
Regional Water Planning

- Project future population and water demand
- Quantify existing and future water supplies
- Identify surpluses and needs
- Evaluate and recommend water management strategies
- Make policy recommendations
- Adopt the plan





Texas Population Projections





Excerpts from Gift of Water, Legacy of Service

Population Growth

"...an outburst of suburban growth that would rank the area, over much of the next quarter-century, among the fastest-growing in the nation."

City	1950	1960	1970	1980	1990	2000	2010	2014
Garland	10,291	38,501	81,437	138,857	180,635	215,768	226,876	231,700
Mesquite	1,684	27,526	55,131	67,053	101,484	124,523	139,824	142,210
Plano	2,115	3,695	17,872	72,331	127,885	222,030	259,841	269,330

NTMWD Historical / Projected Population

Year	1956	1961	1974	1994	2014	2040	2070
Area Population	32,000	60,000	200,000	800,000	1,600,000	2,500,000	3,700,000



Water Supply Planning: Future Sources



New Sources, Reservoirs = 24%

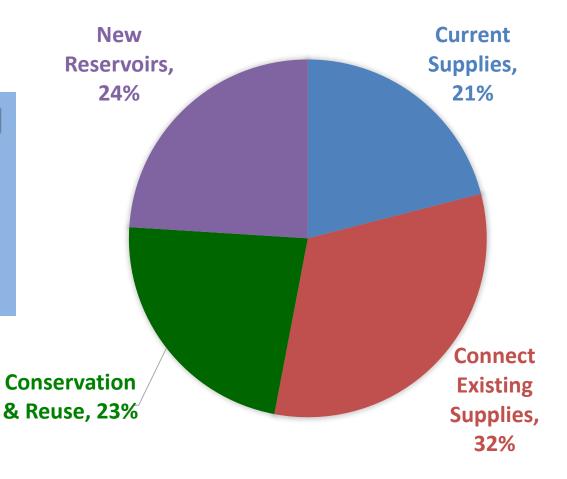




Figure 4E.8

Recommended Water Management Strategies for North Texas Municipal Water District

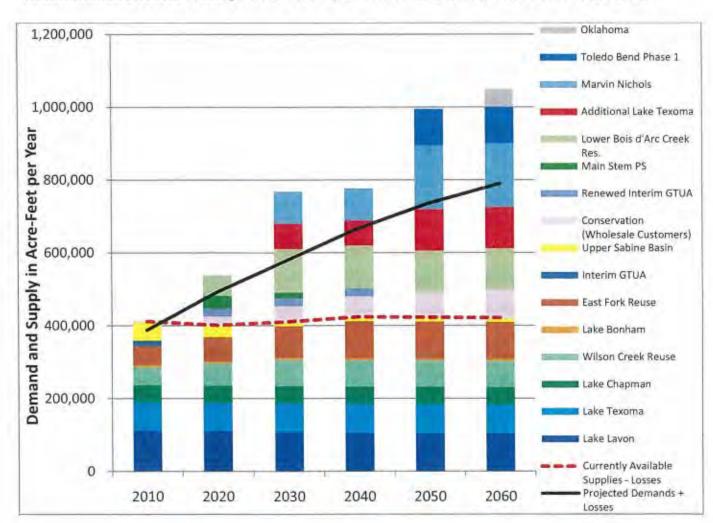
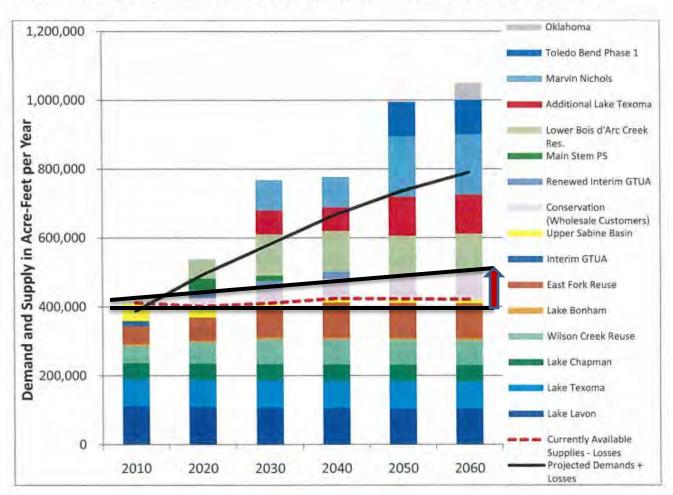




Figure 4E.8

Recommended Water Management Strategies for North Texas Municipal Water District





State, Regional and NTMWD Water Planning - Water Conservation's Impact

- Water Conservation is CRITICAL in meeting future needs of the state, region, and NTMWD's service area
- Water Conservation IS considered a water supply strategy
- Increased efforts in water conservation are REQUIRED
- Even with increased water conservation efforts new water supplies will still be needed to meet water demands
- Water Providers, Cities, Industries, Consultants and other stakeholders must include water conservation and efficiency in our day-to-day activities



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Development and Identifying the Need for a State-wide Water Awareness Campaign

- In 2004, Texas Water Development Board, to support the recommendation for the establishment of a statewide water conservation public awareness campaign, contracted for a research project. (EnviroMedia Social Marketing)
- The project included development strategies, research, and branding.
- Funded by a voluntary coalition of 36 utilities, municipalities, businesses, and conservation groups.
- The research stressed the need for making individual Texans aware of the importance of water conservation, including water reuse, to their future as residents of the state.



of Texans said they definitely know the natural source of their drinking water.

(TEXAS WATER DEVELOPMENT BOARD, BASELICE & ASSOCIATES, 2004)



are more willing to conserve once they know.

(TEXAS WATER DEVELOPMENT BOARD, BASELICE & ASSOCIATES, 2004)



WATER WATER SM

Know your water.



Water IQ: KnowYourWater

- Water IQ: Know Your Water is a licensed service mark of the Texas Water Development Board.
- Water IQ: KnowYourWater serves an the umbrella water conservation campaign for state of Texas

Texas Water Development Board



- North Texas Municipal Water District
- Upper Trinity Regional Water District
- Lower Colorado River Authority
- City of Austin

- City of San Angelo
- City of Tyler
- San Jacinto River Authority
- And many others across
 TX



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NTMWD's Need and Use of Water IQ: Know Your Water

- North Texas drought of 2005-2007 brought NTMWD reservoir supplies to critically low stages
- NTMWD was only water provider implementing water management strategies.
- Limiting Outdoor watering
- Many consumers did not know:
 - NTMWD supplied/treated their drinking water
 - Lavon Lake was their main supply resource

NTMWD turned to the newly created WaterIQ: KnowYourWater



Water Supply Sources Critically Low





NTMWD Launched Campaign June 1, 2006 – Press Conference



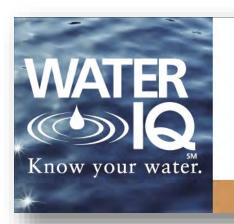


Highlighted Discussion of Drought and Shared Various Efficiency Tips





- Radio advertising
- Outdoor advertising



DROUGHT ALERT:KNOW THE RESTRICTIONS.

WaterIQ.org

North Texas Municipal Water District



Mall Advertising







Yard Signs

DROUGHT ALERT

REDUCE YOUR WATER USE BY 5%.

North Texas Municipal Water District



WaterIQ.org



Website





1st Year: Outreach Merchandise

Boosting Program Brand Recognition – Asking for a Commitment (Pledges)

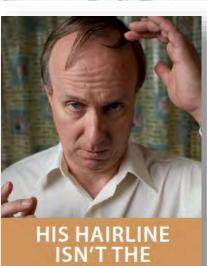




2006







HIS HAIRLINE ISN'T THE ONLY THING RECEDING.





THIS MEATLOAF ISN'T THE ONLY THING THAT'S DRY AND CRUSTY.





HIS JEANS AREN'T THE ONLY THINGS THAT ARE TOO LOW.





2007





WASTING WATER



HAS EXTREME CONSEQUENCES.



MORTH TEXAS MUNICIPAL WATER DISTRICT

LEARN NEW WAYS TO SAVE WATER AT WATERIQ.ORG.





2008











Every day is a chance to save.

Water Q.org | NORTH TEXAS MUNICIPAL WATER DISTRICT



2009



BROKEN OR MISDIRECTED SPRINKLER HEAD? YOU COULD BE WASTING THOUSANDS OF GALLONS A YEAR.

If you think you waste more water indoors, take a look outside.



NORTH TEXAS MUNICIPAL WATER DISTRICT

Every day is a chance to save. WaterIQ.org



NOT WASHING WITH A FULL LOAD? YOU COULD BE WASTING THOUSANDS OF GALLONS A MONTH.

Making small changes to your water habits can make a big difference – indoors and out.



NORTH TEXAS MUNICIPAL WATER DISTRICT

Every day is a chance to save. WaterIQ.org



USING YOUR HOSE AS A BROOM? YOU COULD BE WASTING 150 GALLONS A DAY.

If you think you waste more water indoors, take a look outside.



NORTH TEXAS MUNICIPAL WATER DISTRICT

Every day is a chance to save. WaterIQ.org



2010

Stage: Reprieve from drought conditions

Goal: Work harder converting water

wasters in North Texas

Focus: Evolving mindsets – water

conservation is a way of life

Strategy: Wasting water is a bad habit that

needs to be stopped.

Relationships: Wasting water ranks up there with

other socially unacceptable bad

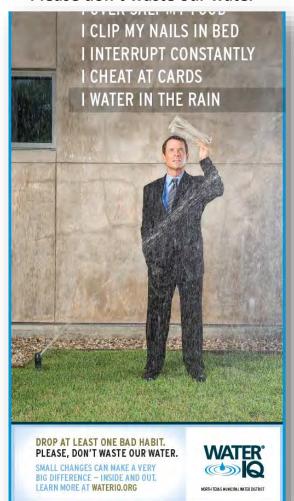
habits:

Playing sports in house

- Feeding pets on counter
- Leaving the faucet running
- Ignoring broken sprinkler head

House of Bad Habits

"Drop at least one bad habit ... Please don't waste our water"





2011 - 2012









2011 - 2012



is more important than ever. Following your watering schedule and not overwatering can make a big difference. Learn more at WaterlQ.org.





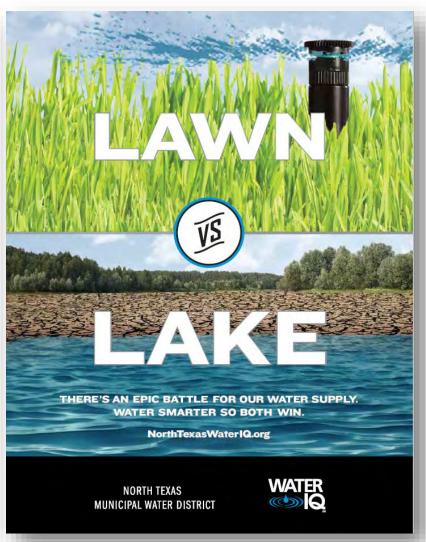
When you waste water, you waste money. That's why conserving is more important than ever. Following your watering schedule and not overwatering can make a big difference. Learn more at WaterlQ.org.





2012 - 2014













2016 Conservation Ad Campaign "When You Know Better, You Water Better"

What's the problem we are trying to solve?

 Reduce peak-day water use by encouraging North Texans to consider the impact of their everyday lifestyle choices on the current and future water supply, and by providing ideas and information to guide proactive decision-making.

What are we trying to achieve?

- Debunk the myth that more water is used indoors than outdoors.
- Educate residents on the value of water (quantification, infrastructure).
- Increase household dialogue among families about water conservation and natural water sources.

Who are we talking to?

- Male homeowners living in NTMWD region who have a household income of \$80,000+ and:
 - Age 25-54
 - Have children living in the house
 - Use a sprinkler system



Promoting Water IQ: Know Your Water

- E-newsletters
- Billboards
- Yard Signs
- Social Media Posts
- Focus Groups
- Game Boards for Outreach
- Displays for Outreach
- Magnets
- Mall Ads
- Mobile App (Water4Otter)
- Outreach Events Staffed
- Pledge Cards and Kiosks
- Pop-up Display Banners
- Print Ads
- Radio Ads
- Gardening Gloves
- Toothpaste Tube Squeezer
- Research (IDI, Post Campaign, and Qualitative)

- Clings Conservation Messaging
- Television Commercials
- Conservation Tip E-mails and Brochures
- Vehicle Decals
- Vehicle Wraps
- Solid Waste Transfer Truck Billboards
- Water Genius Contests
- Water Tower Signage
- Web Banner Ads
- Website (northtexaswateriq.org)
- YouTube and PSAs
- Stadium Sporting Event Ads
- T-shirts
- Notepads
- Pens and Pencils
- Canvas Tote Bags
- Water Bottles
- Rulers
- Bill Insert and Direct Mail Piece Designs (customizable for cities to personalize)



Water IQ: Know Your Water (Main Campaign) NTMWD Financial Commitment

2006 Campaign \$2.0 million

• 2007 Campaign \$1.8 million

• 2008 Campaign \$1.6 million

2009 Campaign \$1.0 million

2010 Campaign \$1.2 million

2011 Campaign \$1.2 million

• 2012 Campaign \$1.2 million

• 2013 Campaign \$1.1 million

• 2014 Campaign \$1.0 million

2015 Campaign \$1.15 million

2016 Campaign \$1.15 million

TOTAL TO DATE

\$14.4 million



WATER IQ: KNOW YOUR WATER SUCCESS



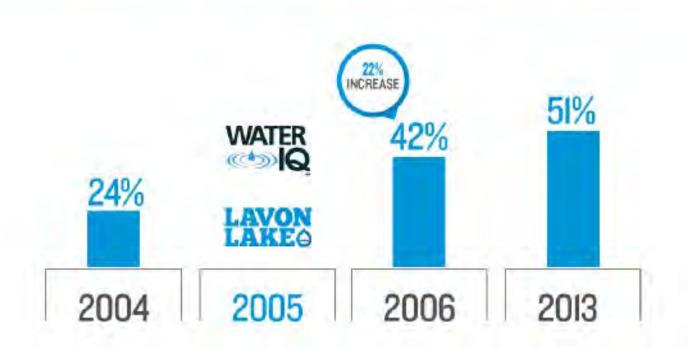
Water IQ: Know Your Water Success

- Quantitative and Qualitative Research
 - Early in campaign year, after each campaign
 - Currently, every 2 years
- Knowledge of water source has increased
- Annualized water reductions of 12-15% since 2006 (reductions also attributed to drought management)
- Reduced Peak Summer Demands since 2006



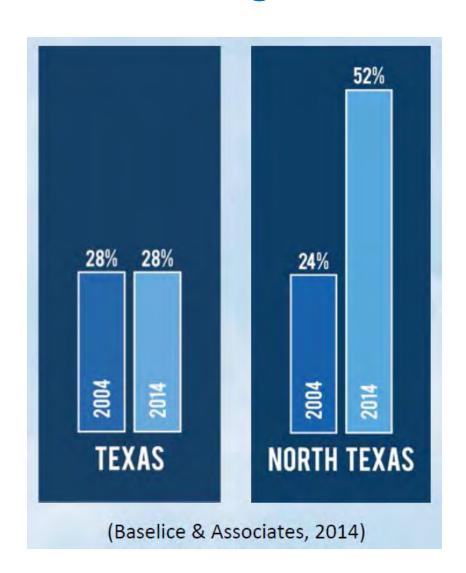
Increased of Knowledge of Water Sources

KNOWLEDGE OF WATER SOURCES





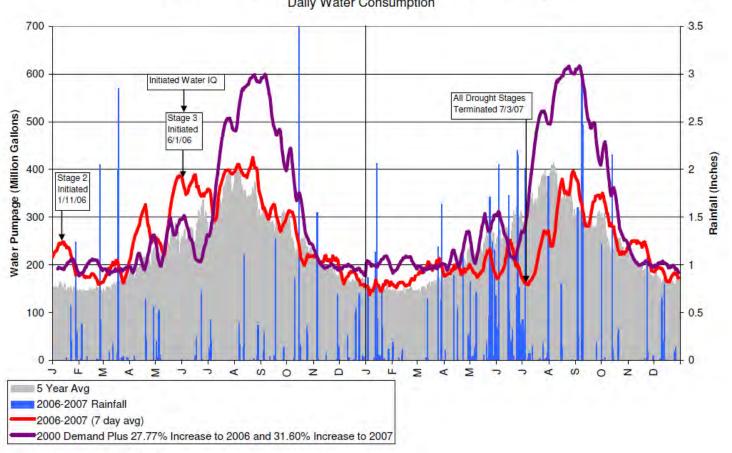
Increased of Knowledge of Water Sources





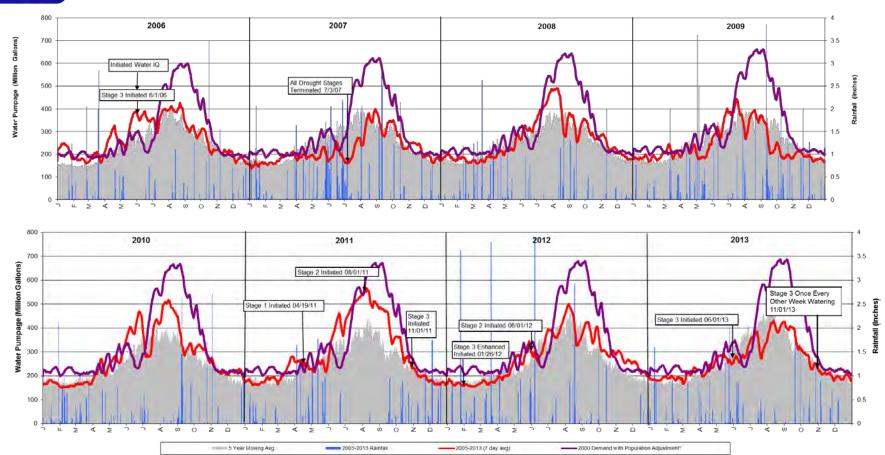
Mandatory Drought Restrictions Began Jan. 2006 and Strengthened – Terminated Jul. 2007

North Texas Municipal Water District
Year 2000 with Projected Increases vs. 2006-2007 Actual Usage
Daily Water Consumption





North Texas Municipal Water District Year 2000 with Projected Increases vs. 2006-2013 Actual Usage Daily Water Consumption

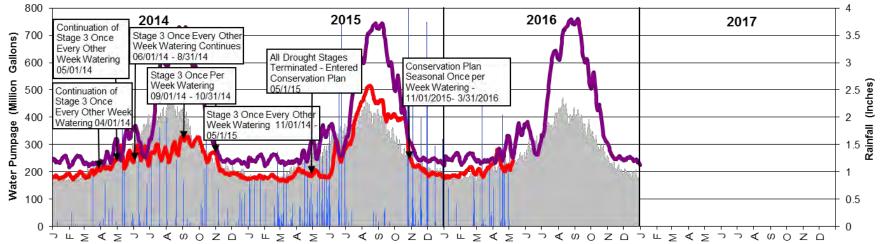


^{* 2000} Demand Plus 37.33% Increase to 2008. Plus 41.45% Increase to 2009. Plus 42.39% Increase to 2010. Plus 43.55% Increase to 2011. Plus 45.07% Increase to 2012. Plus 46.52% Increase to 2013.



North Texas Municipal Water District Year 2000 with Projected Increases vs. 2014-2016 Actual Usage







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LISTENING TO MY KIDS



(BASELICE & ASSOCIATES, 2013)



KIDS CAMPAIGN GOALS



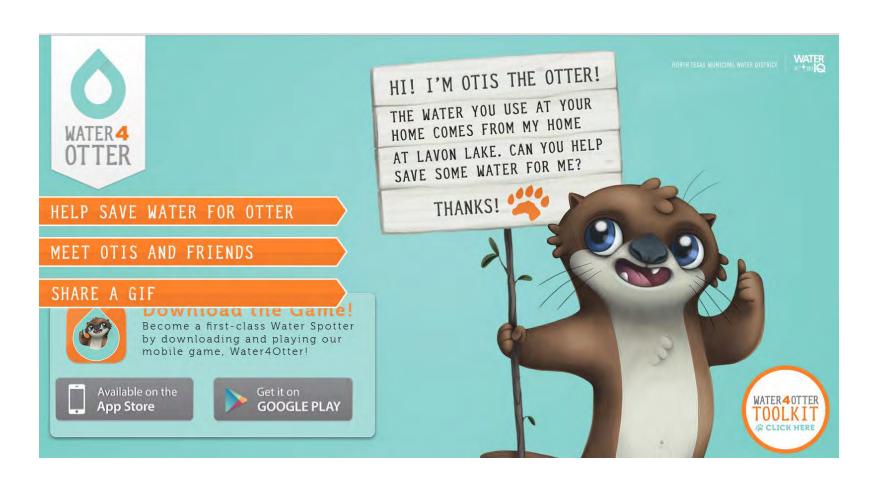
Increase the percentage of parents whose children have reminded them not to waste water from the current 15 percent.

(BASELICE & ASSOCIATES, 2013)

















WATER SPOTTER PANELS



wa•ter spot•ter, n

A special friend of the animals at Lavon Lake who can expertly spot water being wasted









GIFs



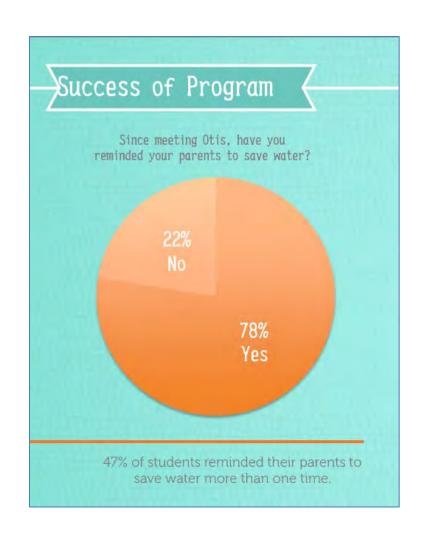






Water4Otter - Post Survey Results

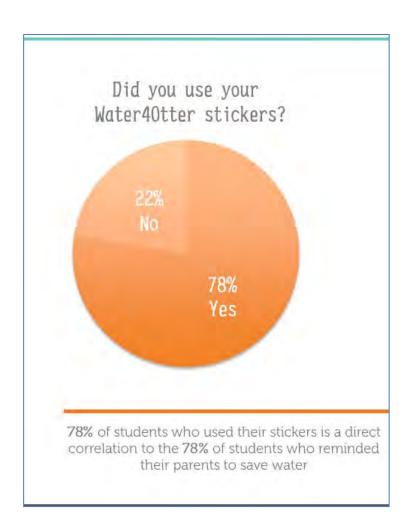
78% reminded parents to save water





Water4Otter - Post Survey Results

78%
used
clings at
home





Water4Otter Youth Program NTMWD Financial Commitment

• 2014 Campaign \$100,000

2015 Campaign \$100,000

• TWDB grant \$150,000

2016 Campaign \$100,000

Total \$450,000



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- VI. Water IQ: Know Your Water Campaign Goals and Elements
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VIII. Future Initiatives: Work Force Development and Data Collection



Current and Future Program Development

- Texas A&M AgriLife Research Partnership
 - Research based expert, NTMWD Member Cities agreed to use the Texas
 A&M University AgriLife as the research-based professional experts
 - Water University Programs, Classes, and Demonstrations
 - Native and Adapted Landscape Local Resources
 - WaterMyYard ET Network Weather Based Irrigation Watering Recommendation Program (subscribers)
 - uLANDSCAPEit (Consumer computer based plant & landscape design tool)
- Water Conservation staff certification
 - WCAC
 - TAWWA
 - WEAT
- Staffing NTMWD (2 person department) and consultant for implementation of programs



AgriLife Classes



Agrilife Research and Extension Center at Dallas offers a wide variety of courses (some free) to help you learn more about how to use water wisely while still maintaining beautiful landscaping. Some course topics are:

- · Making a Rain Barrel
- Vegetable Gardening
- Drip Irrigation
- WaterSense Labeled Home
- Native and Adaptive Plants for North Texas
- Smart Watering During Restrictions
- Lawn Care Maintenance
- Landscape Care for New Homeowners
- Landscape Basics
- Sprinkler System Quick Fixes

TEXAS A&M AGRILIFE RESEARCH/ EXTENSION CENTER AT DALLAS:

> 17360 Coit Road Dallas, Texas 75252 Phone: (972) 231-5362 Fax: (972) 952-9216

You can access their course offerings at: http://dallas.tamu.edu/courses/

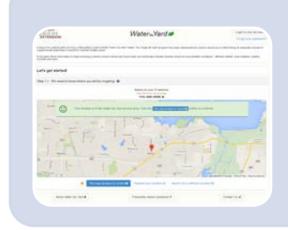


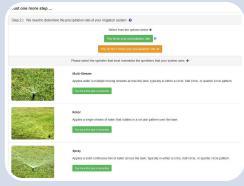
WatermyYard



http://www.WaterMyYard.org

Water_{My}Yard







Sign-up for a FREE ACCOUNT:

www.WaterMyYard.org

Set up your profile:

- * Where you live
- * What type of system components you have
- * Your email address

Receive a weekly email:

- * Pulls data from closest weather station
- * Returns a weekly email to the subscriber based on a 7day weather on how much watering is needed to supplement natural rainfall
- * Many weeks, no watering is recommended



Other NTMWD Conservation Efforts

- Water Conservation Organization Partnerships/Memberships
 - Texas Water Foundation
 - EPA WaterSense Promotional Partner
 - Texas Water Smart Coalition
 - Alliance for Water Efficiency
 - Water Efficiency Network of North Texas (WENNT)
 - Water Conservation Advisory Council
- Local Water Conservation Outreach Activities (not through ESM)
 - Water IQ Promotion (vehicle decals, print items and giveaways)
 - Water Conservation Presentations (civic groups, businesses, and educational facilities)



NTMWD Resources



DENISE HICKEYWater Resource Program and
Public Education Manager



North Texas Municipal Water District 501 E. Brown Street Wylie, Texas 75098 (972) 442-5405 main office (469) 626-4306 direct (972) 670-2711 cell dhickey@ntmwd.com

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- YOUTUBE https://www.youtube.com/channel/UCCPiofTEARsi_rARdGQDe8A
- GOOGLE+ https://plus.google.com/b/114816862363338895330/114816862363338895330
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