


This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





The Good, Bad, and Ugly of Water Restriction Enforcement

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Water Conservation Manager



ALLEN, TEXAS

Population: 85,500

Median Age: 33.5

Avg. Household income: \$109,414

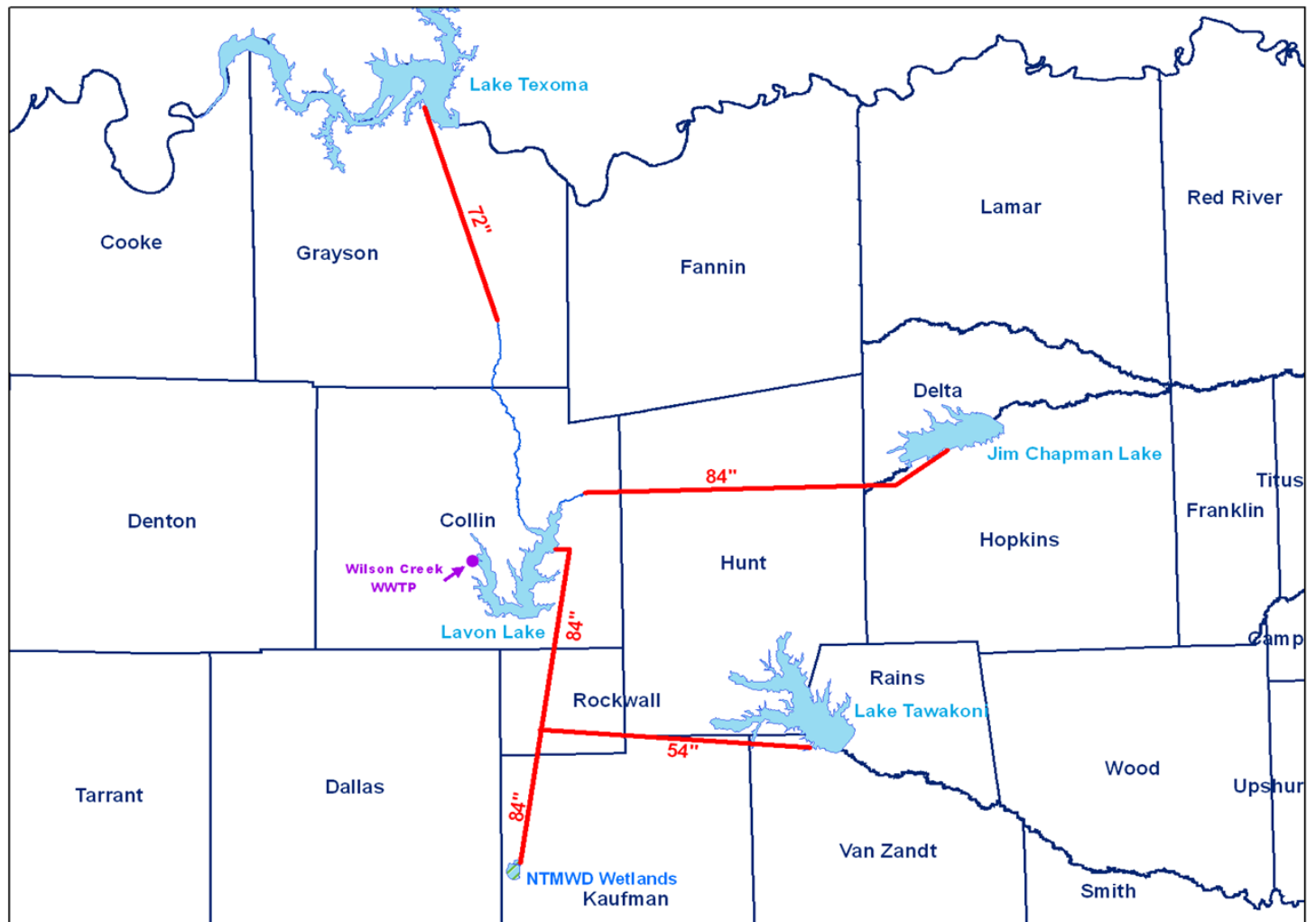
27.11 Square Miles Average Rainfall: 34.8 inches





Water Supply- North Texas Municipal Water District

- Regional water system. 13 member cities, 1.3 million population served.
- Water supply: Lavon Lake, Jim Chapman Lake, Lake Texoma, Lake Tawakoni, East Fork Raw Water Supply Project (wetlands), and Wilson Creek WWTP reuse.
- Water plant capacity: 770 MGD
- Allen has 28,000 utility accounts

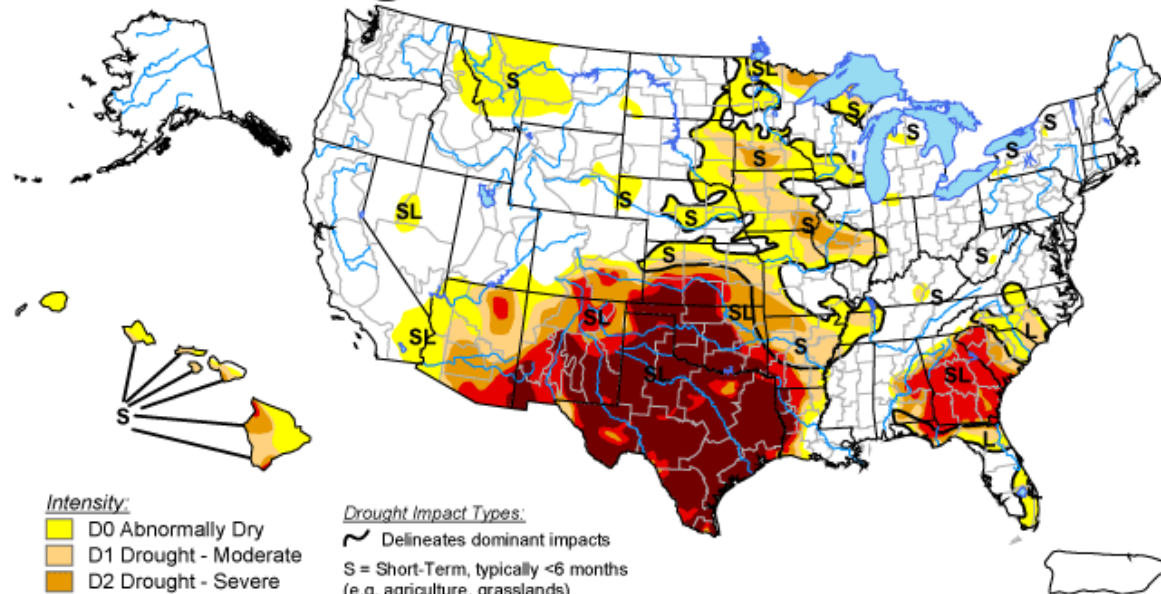


Texas Drought 2011

U.S. Drought Monitor

October 4, 2011

Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. See accompanying text summary
for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, October 6, 2011

Author: Rich Tinker, CPC/NCEP/NWS/NOAA

WATER SUPPLY RESERVOIR 9/18/11
54% of conservation pool.



Allen's Drought Plan

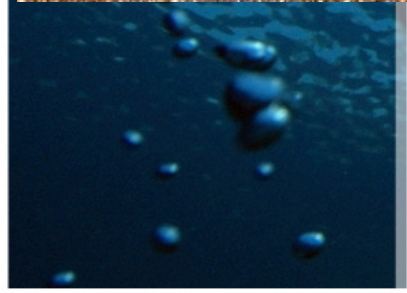
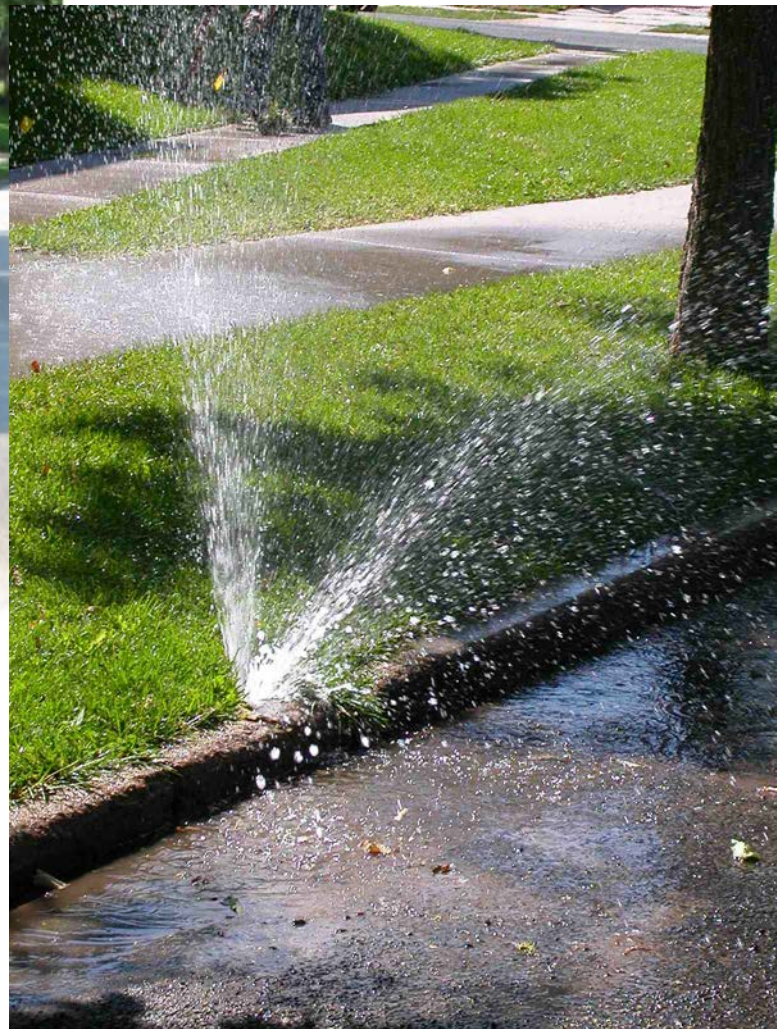
- 4 Stages- Stage 1 voluntary, Stage 2-4 mandatory.
- Stage 2- outdoor irrigation 2X week
- Stage 3- outdoor irrigation 2X month November-March, 1X week Mar-Oct.
- Stage 4- No outdoor watering.
- www.cityoffallen.org





Stage 3 Water Restrictions

- November-March= Twice monthly use of irrigation systems.
- Drip, soaker hoses, hand-held hose use additionally for shrubs, trees, foundations of homes.
- No winter overseeding in turf.
- No washing of impervious surfaces, operation of ornamental fountains.
- No excessive runoff from property.



**WHAT A WASTE! IRRIGATION ACCOUNTS FOR
60% USE**



Stage 3 Enforcement

- 42 water/sewer personnel sworn in by Judge for officer duty. 24/7 patrols began November 1.
- Warning first, then citation.
- Citations=criminal offense-fines begin at \$250. Maximum \$2,000.
- All residential processed through municipal court system with fines assessed by prosecutor and judge.
- All commercial administrative fee.



November 30, 2011

- 67 commercial administrative fees assessed on water accounts.
- 443 residential criminal (misdemeanor) citations issued.
- 388 residential or commercial property warnings for items other than wrong day sprinkler use.
- Total= 898 violations of Stage 3 in 30 days!



November 1-May 31

- Total violations = 1793
- Citations resulting in fines= 521 most \$268., a few over \$500.
- Commercial administration fees = \$16,400. total assessed on irrigation water accounts.



COST ASSOCIATED

- Water conservation personnel dedicated to drought- \$65,080.
- Temporary clerical- \$24,387.
- Patrol labor overtime/Vehicle costs- \$10,490.
- Signage/every door direct/postage & printing- \$40,476.



THE GOOD!

- Compliance very quick-November 898 violations, December-71!
- Consumption drop 163 million gallons from Nov-Dec!
- Broken irrigation systems repaired!
- Residential awareness of their irrigation systems increased quickly!
- Commercial irrigation repair and retrofits to more conserving equipment increased!



THE BAD!

- Added costs associated \$140,433.
- Negative media/resident complaints to staff/city mgr./city council/mayor.
- Added stress to water dept. staff- phone calls, emails, confrontations.
- Court docket clogged-November citations not settled until June- prosecutor very frustrated.



THE UGLY!

- Infrastructure repair projects delayed due to loss of manpower covering violations (Water/Sewer).
- Citizens reporting citizens.
- Revenue loss water sales \$559K
- One instance: Criminal citation = possible Federal probation revoked, for watering on wrong day!

For More Information

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