

Memorandum



DATE November 1, 2013

TO Honorable Mayor and Members of the City Council

SUBJECT **Current Water Supply Conditions and Update of State Mandated Plans**

On Wednesday, November 6, 2013, the City Council will be briefed on Current Water Supply Conditions and Update of State Mandated Water Conservation and Drought Contingency Plans. The briefing material is attached for your review.

Please let me know if you have any questions or need additional information.



Forest E. Turner
Assistant City Manager

Attachment

Cc: A.C. Gonzalez, Interim City Manager
Warren M.S. Ernst, City Attorney
Judge Daniel F. Solis, Administrative Judge
Rosa A. Rios, City Secretary
Craig D. Kinton, City Auditor
Ryan S. Evans, Interim First Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Joey Zapata, Assistant City Manager
Charles M. Cato, Interim Assistant City Manager
Theresa O'Donnell, Interim Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Frank Libro, Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor and Council

Current Water Supply Conditions and Update of State Mandated Plans

Dallas Water Utilities
November 6, 2013





Lake Fork October 2013

Purpose

- Provide an overview of the ongoing weather conditions and its impact on Dallas' water supply
- Provide information on process and time line for updating State mandated plans for Drought Contingency and Water Conservation

Outline

- Current Drought Conditions
- Background – TCEQ Requirements for Mandated Plans
- Next Steps to Updates
- Appendix



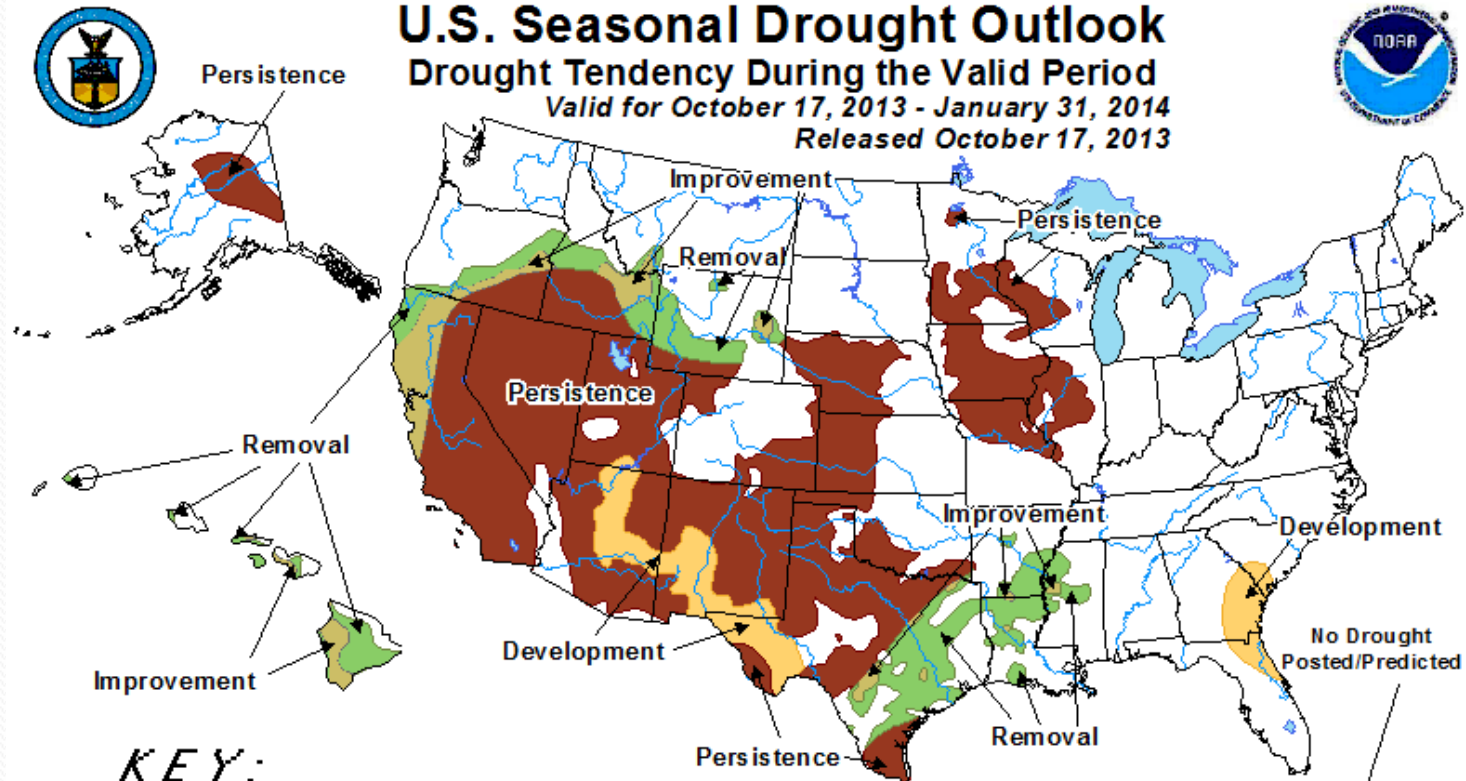
Lake Ray Hubbard October 2013

Current Drought Conditions

Current Drought Chronology

- Drought conditions experienced in the Dallas area in 1996, 2000, 2006 and since May 2010
- 2011 Texas' Worst One Year Drought on record - Dallas' lakes were 75% full
- April 2012 - Council adopts max twice weekly watering restrictions as a conservation strategy (Lakes reached 98% full)
 - Dallas staff begins work with other major regional water providers to streamline and simplify drought stages and responses
- October 31, 2013 – current supplies 70.5% Full
 - Rainfall over last 18 months is almost 13% below normal and has not resulted in significant run-off for water supplies

Drought Conditions: Future Outlook

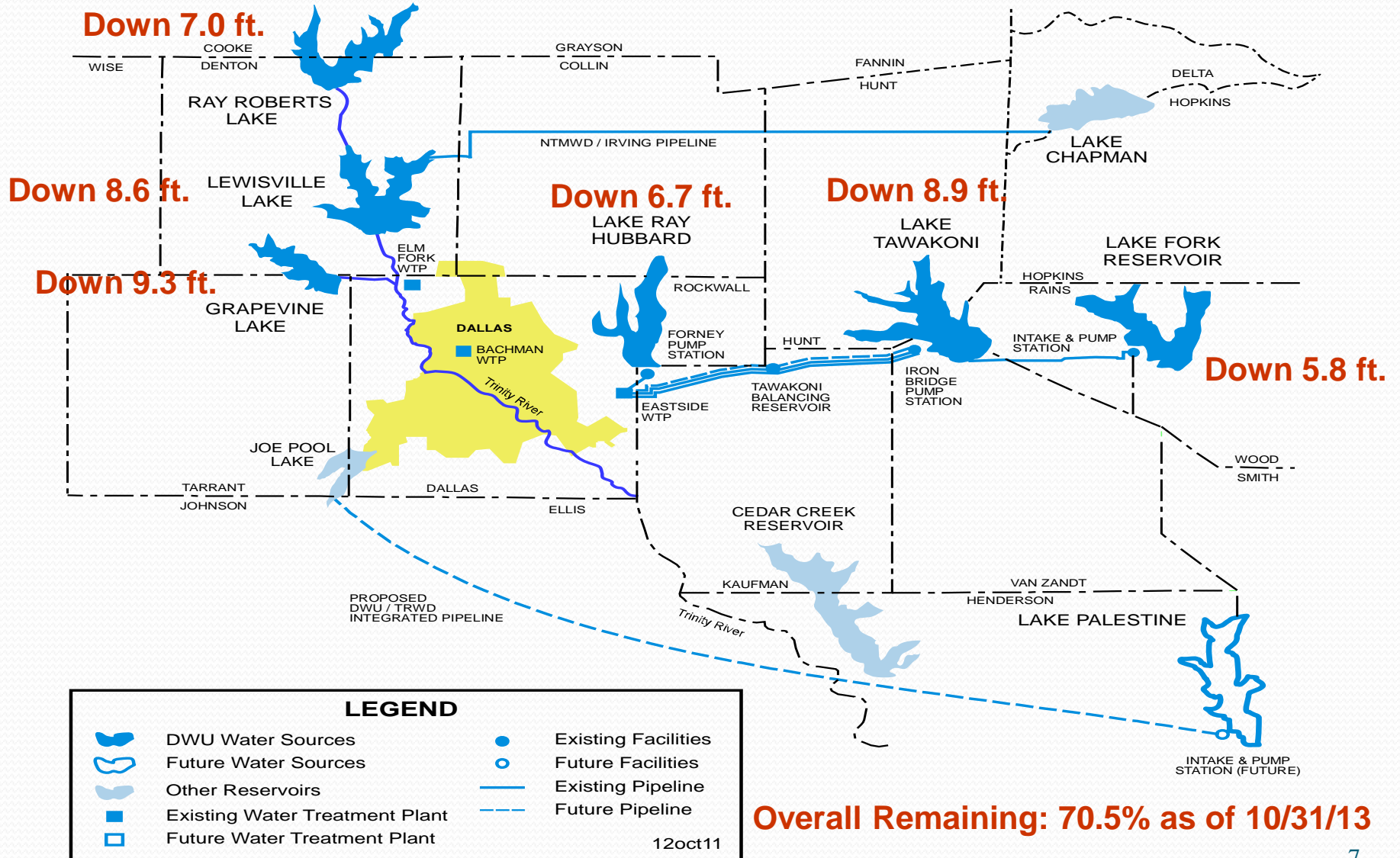


Author: Adam Allgood, Climate Prediction Center, NOAA
http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events – such as individual storms – cannot be accurately forecast more than a few days in advance. Use caution for applications – such as crops – that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor.

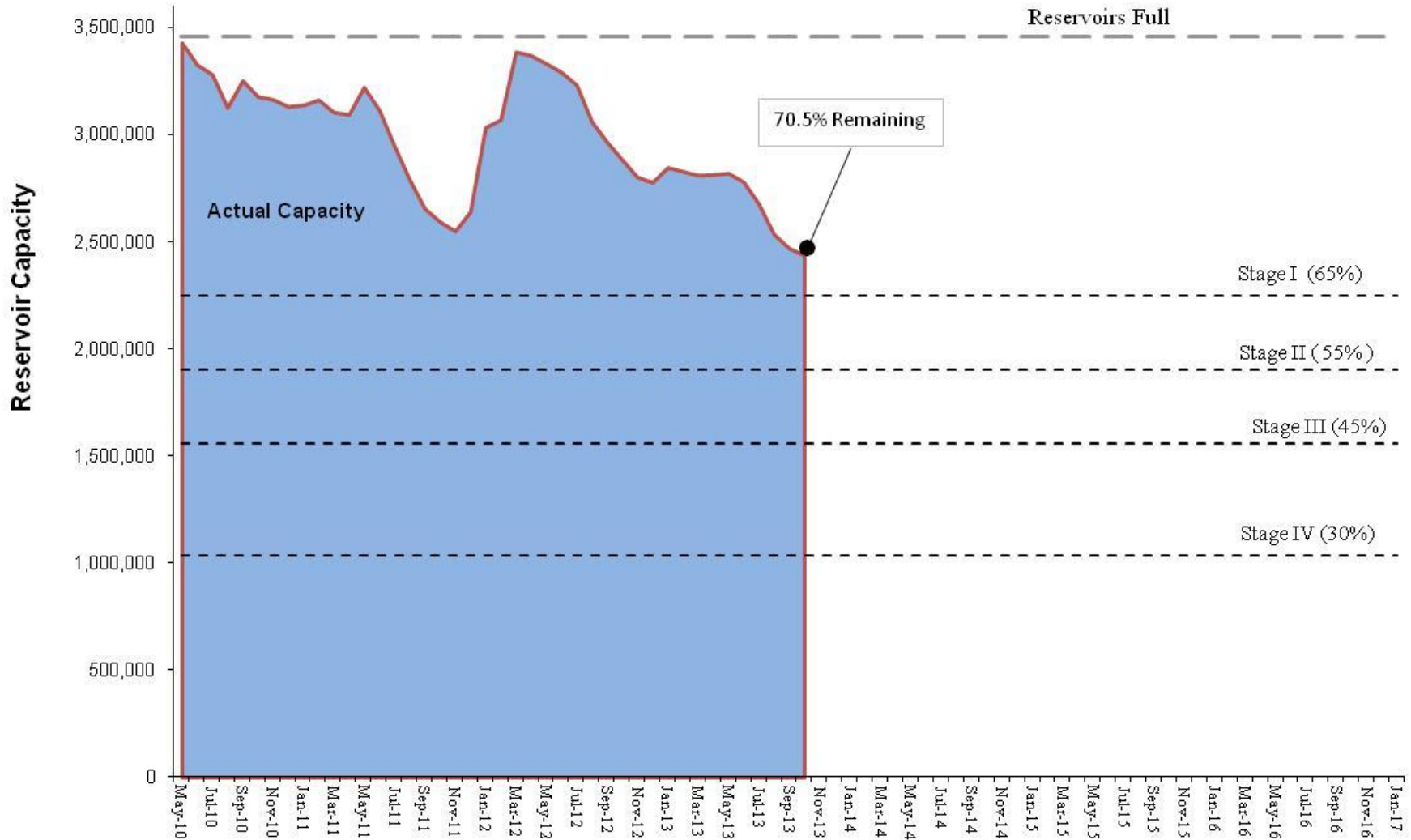
NOTE: The tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain. The Green areas imply drought removal by the end of the period (D0 or none)

Status of Dallas Water Supply Reservoirs



Total Reservoir System Condition Analysis

(Lakes Ray Roberts, Lewisville, Grapevine, Ray Hubbard, Tawakoni and Fork)
As of October 31, 2013



Drought Monitoring Activities

- Staff monitors weather conditions and models impact on Dallas' water supplies
 - Director is responsible for recommending implementation of contingency and emergency procedures to City Manager
 - City Manager may enact the measures for up to 60 days
 - City Council may extend the measures
- Staff will provide periodic drought condition updates to City Council as needed



Lake Tawakoni Oct 2013

State Mandated Plans

- Drought Contingency
- Water Conservation

State of Texas Requirements

- The State of Texas requires Dallas to have Council adopted drought contingency and water conservation plans and to **update the plans every 5 years**
- Current plans adopted by City Council on June 9, 2010
- Next updates are due to the State by May 1, 2014
- With the addition of maximum twice weekly watering in the water conservation ordinance (previously Stage 1 of DCP) some revisions to the existing plans are needed

Comparison of Drought & Conservation Measures

- Drought measures are restrictions used to ensure that water is available to meet public health, welfare, and safety needs during times of shortage. Examples include
 - Restricting lawn watering
 - Prohibiting permitting or filling of swimming pools
 - Prohibiting operation of ornamental fountains
 - Prohibiting recreational water use
- Conservation measures are used to achieve more efficient use of water resources. Examples include:
 - Water Wise landscaping (Xeriscape)
 - Time of Day Watering
 - Low Flow Showerheads
 - Repairing leaking faucets
 - Reducing the frequency of watering lawns

State of Texas Drought Requirements

- Since droughts are a frequent and inevitable factor in the climate of Texas, the State requires **drought contingency plans (DCP)**
- The amended Texas Administrative Code (TAC) Title 30, revised Chapter 288 rules require that drought contingency plans include:
 - specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought
- The rules additionally specify the minimum elements including
 - Public involvement/education
 - Notification procedures
 - Staged implementation based on triggers

Dallas' 2010 Drought Contingency Plan

- Plan based on a simulation of the repeat of the drought of record (1950 to 1957)
- Plan developed to provide adequate water through such a drought
 - Dallas' lakes during a drought equivalent to the drought of record
 - Should be 75 percent full in approximately 1.5 years
 - Should be 50 percent full in approximately 3.5 years
- Triggers for each Stage set for:
 - Raw water supply constraints
 - Treated water capacity constraints
 - Natural or man-made contamination
- Enforcement under existing plan is by Code Compliance with criminal penalties administered through the municipal court system

Dallas' Proposed 2014 Drought Contingency Plan



- Update DCPs with a coordinated regional approach
- Consider reducing number of drought stages
- Implementation triggers will still be unique to each water provider
- Goal is to streamline and consolidate drought responses for ease of implementation

State of Texas Water Conservation Requirements

- As a surface water rights holder, Dallas is required by the State to develop, submit and implement a **water conservation plan**
- TAC Chapter 288 rules require that water conservation plans include:
 - Utility profile, specific quantifiable 5 and 10 year goals for water savings, information on accuracy of metering devices, testing and replacement, leak detection, reservoir operating plan and control of unaccounted for water
- The minimum requirements also include:
 - Continuing public involvement/education
 - Non-promotional rate structure
 - A means for implementation and enforcement
 - Coordination with regional water planning groups
- State mandated 2014 Water Conservation Plan is being updated primarily to include maximum twice weekly watering restrictions in the water conservation ordinances

Dallas' 2010 Water Conservation Plan

- Plan developed to provide long term measures to improve the efficiency of water use and conserve water resources
- In addition to DWU's system profile, metering and leak detection program, it includes information on Water Conservation Programs such as:
 - Public Education Program (public awareness campaign, Environmental Education Initiative, Irrigation System inspections, and special events)
 - Rebate and Incentive Programs (toilet vouchers, Minor Plumbing Repair, ICI audits and incentives and residential irrigation system rebates)
- Enforcement under existing plan is by Code Compliance with criminal penalties administered through the municipal court system

Future Watering Restriction Enforcement

- In 2013, State Legislature passed S.B. 654 which
 - Amended Sec. 54.012 and 54.032 of the Local Government Code
 - Authorizes the use of civil adjudication for violations of watering restrictions
- Amending Dallas City Code will allow for Code Compliance and certain Water personnel to take pictures and issue notice of violation
 - 30 days to respond, plead or request civil hearing in front of administrative judge
 - Civil collection process for fines
- Drought Contingency Plan enforcement references will need to be amended at a later date

Next Steps

Next Steps

- Brief Council Committee(s) on
 - Proposed changes to Drought Plan Stages and responses
 - Revisions to Water Conservation Plan to reflect change from voluntary maximum twice weekly watering
 - Proposed process changes regarding enforcement of City ordinances for watering violations
 - Review background on commercial water rates

Proposed Schedule for State Mandated Plan Review and Adoption

Date	Action
Nov 6, 2013	Brief City Council on Status of Water Supply and Current Drought Conditions
Dec 2, 2013	Brief Budget, Finance & Audit Committee on commercial water rates
Feb 10, 2014	Brief Quality of Life & Environment Committee on Drought Contingency Plan and Water Conservation Plan changes
Feb 19, 2014	Brief City Council on Drought Contingency Plan and Water Conservation Plan changes
Feb 26, 2013	Council Adopts Drought Contingency Plan and Water Conservation Plan
Mar 2014	Drought Contingency Plan and Water Conservation Plan submitted to TCEQ

Appendix

Comparison of Current and Preliminary Drought Triggers and Action Measures – Stage 1

Current Stage 1	Preliminary Stage 1
65% Remaining or 35% Depleted	65% Remaining or 35% Depleted
Target 5% reduction in total GPCD	Target 5% reduction in total GPCD
Mandatory Actions	Mandatory Actions
<ul style="list-style-type: none"> ❑ 1. Mandatory maximum 2 day a week landscape irrigation ❑ 2. Foundations may be watered any day during allowed watering hours with soaker or hand-held hoses only 	<ul style="list-style-type: none"> ❑ 1. Same schedule, but drip irrigation, soaker hoses and hand watering are allowed at anytime, on any day. ❑ 2. Foundations may be watered any day during allowed watering hours with soaker or hand-held hoses or drip irrigation ❑ 3. Enforcement efforts will increase in all stages through pro-active code enforcement ❑ 4. Restrict washing of vehicles to hand held bucket and hose with positive shut-off nozzle (commercial car washes exempt) ❑ 5. Encourage maximum 1 day a week landscape irrigation

Comparison of Current and Preliminary Drought Triggers and Action Measures – Stage 2

Current Stage 2	Preliminary Stage 2
55% Remaining or 45% Depleted	50% Remaining or 50% Depleted
Target 15% reduction in total GPCD	Target 15% reduction in total GPCD
Mandatory Actions	Mandatory Actions
<ul style="list-style-type: none"> ❑ 1. Mandatory maximum 2 day a week landscape irrigation ❑ 2. Foundations may be watered any day during allowed watering hours with soaker or hand-held hoses only ❑ 3. Recreation water use of faucets hoses and hydrants which use water in such a manner as to allow run-off prohibited ❑ 4. Hosing off paved areas, buildings, windows or other surfaces prohibited ❑ 4. Restrict washing of vehicles to hand held bucket and hose with positive shut-off nozzle (commercial car washes exempt) ❑ 5. Restrict ornamental fountains to initial filling except to support aquatic life. 	<ul style="list-style-type: none"> ❑ 1. Same, schedule will change based on trash pick-up days and commercial customers on Wednesdays ❑ 2. Foundations may be watered any day during allowed watering hours with soaker or hand-held hoses or drip irrigation ❑ 3. Same ❑ 3. Moved to Stage 3 ❑ 4. Washing of vehicles restricted to commercial car washes ❑ 5. Moved to Stage 3 ❑ 6. Draining and refilling of swimming pools prohibited except to repair leaks or perform necessary maintenance, existing pools may add water to replace evaporative loss

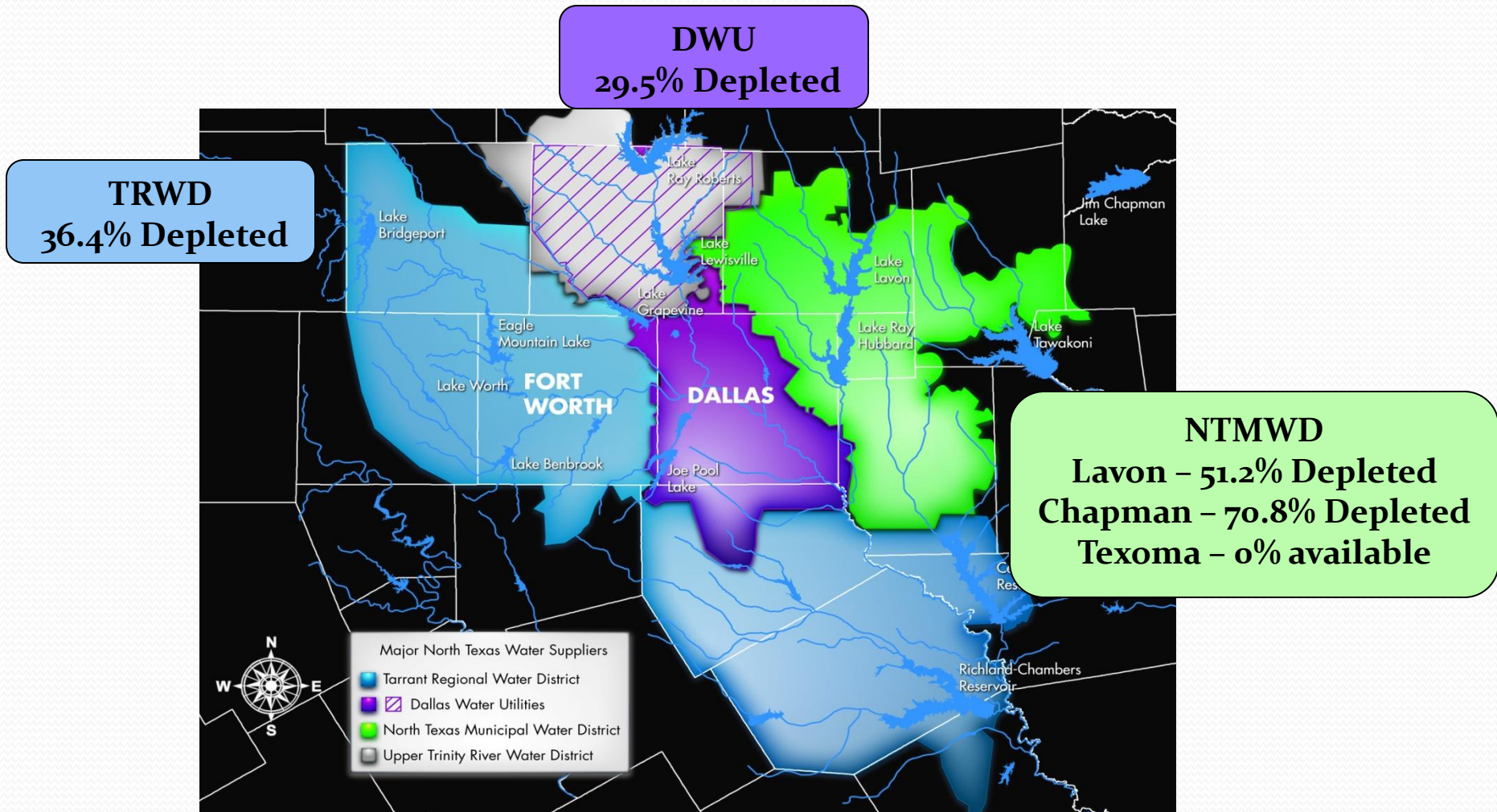
Comparison of Current and Preliminary Drought Triggers and Action Measures – Stage 3

Current Stage 3	Preliminary Stage 3
45% Remaining or 55% Depleted	30% Remaining or 70% depleted
Target 20% reduction in total GPCD	Target 20% reduction in total GPCD
Mandatory Actions	Mandatory Actions
<ol style="list-style-type: none"> 1. Mandatory maximum 1 day a week landscape irrigation with hand-held hoses, soaker hoses and hand-held buckets only 2. Foundations may be watered twice weekly on Stage 1 schedule for a 2 -hour period (off-peak) with soaker hose or hand-held hose with positive shut-off nozzle only 3. Car washing prohibited except for health and safety at a commercial car wash. Washing may only occur between 6 am and 10 am or from 6 pm to 10 pm 4. Operation of ornamental fountains or ponds for aesthetic purposes is prohibited except where necessary to support aquatic life 5. No permitting of new pools, spas, ponds or fountains. No new filling or refilling. Existing pools may be refilled for to replace evaporation and proper operation. 6. No approval for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities 7. 10% rate increase for high water demand users (greater than 10,000 gallons per month.) 	<ol style="list-style-type: none"> 1. Landscape irrigation prohibited, except for trees which may be watered with soaker hoses once per week on Stage 2 schedule 2. Foundations may be watered one day per week on Stage 2 schedule with drip irrigation, soaker hose or hand-held hose. 3. Restrictions remain from Stage 2, commercial car washes not restricted 4. Same 5. Same 6. Same 7. Same 8. Hosing off paved areas, buildings, windows or other surfaces prohibited

Comparison of Current and Preliminary Drought Triggers and Action Measures – Stage 4

Current Stage 4	Updated Plan has No Stage 4
30% Remaining or 70% depleted	
Target 25% reduction in total GPCD	
Mandatory Actions	
<ul style="list-style-type: none"> <li data-bbox="131 696 1025 775">❑ 1. Irrigation of landscaped areas absolutely prohibited <li data-bbox="131 803 1025 975">❑ 2. Foundations may be watered once weekly on Stage 3 schedule for a 2 -hour period (off-peak) with soaker hose or hand-held hose with positive shut-off nozzle only <li data-bbox="131 1003 1025 1089">❑ 3. Use of water to wash any vehicle is absolutely prohibited 	

Major North Texas Water Providers



Drought Stages for Other Area Providers

- Other area water providers are experiencing restrictions due to lack of rainfall, reservoir location, and other drought related factors:
 - Upper Trinity Regional Water District - Stage 1 water restrictions (2 x weekly) July 1, 2013
 - Irving - Stage 2 water restrictions (2x weekly) May 13, 2013; projecting Stage 3 mid-Dec. 2013
 - North Texas Municipal Water District (NTMWD)
 - Stage 3 water restrictions (1 x weekly) June 1, 2013
 - Stage 3 seasonal water restrictions (1 x biweekly) by Nov. 1, 2013
 - Tarrant Regional Water District (TRWD) – Stage 1 water restrictions (2 x weekly) June 3, 2013; projecting Stage 2 mid-Dec. 2013