

Memorandum



CITY OF DALLAS

DATE January 27, 2012

TO Honorable Mayor and Members of the City Council

SUBJECT City of Dallas Drought Update – Water Utilities Department

Attached is the Dallas Water Utilities' City of Dallas Drought Update Briefing to be presented by the Water Utilities Department at the February 1, 2012 meeting of the Dallas City Council.

If you have questions or need additional information, please let me know.

A handwritten signature in black ink, appearing to read 'F. Turner'.

Forest E. Turner
Assistant City Manager

Attachment

cc: Mary K. Suhm, City Manager
Rosa A. Rios, Acting City Secretary
Thomas P. Perkins, Jr., City Attorney
Craig D. Kinton, City Auditor
Judge C. Victor Lander, Administrative Judge
A.C. Gonzalez, First Assistant City Manager
Ryan S. Evans, Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Frank Libro, Public Information Officer
Stephanie Pegues-Cooper, Assistant to the City Manager – Council Office

City of Dallas Drought Update

Dallas Water Utilities
February 1, 2012



Purpose

- This briefing provides an overview of the ongoing drought weather conditions and its impact on Dallas water supply and other area water providers, and
- Recommends that Council extend drought Stage 1 by 120 days to June 8, 2012



White Rock Lake 1950's

Outline

- Background
- Current Drought Conditions
- Dallas' 2012 Water System Treatment Capacity Restrictions
- Interim Raw Water Sales
- Actions and Next Steps
- Appendix



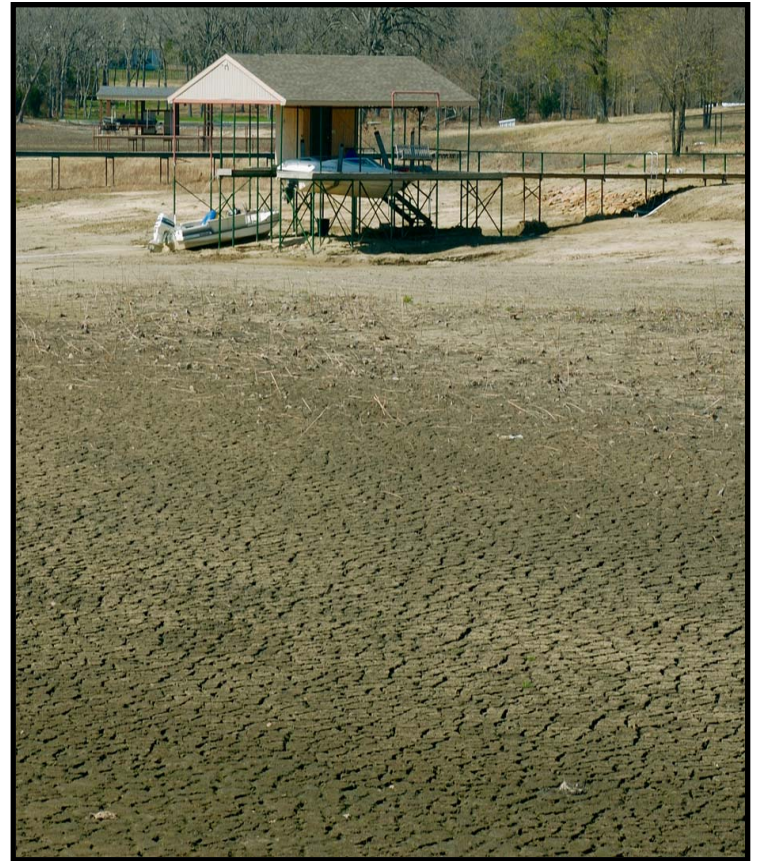
Trinity River 1994

Background

- June 2010 - Dallas' Drought Contingency Plan adopted by the Council and submitted to the State
- August 2011 - Dallas called for customers to voluntarily restrict outside watering
- December 12, 2011 - Dallas entered Stage 1 of its Drought Contingency Plan

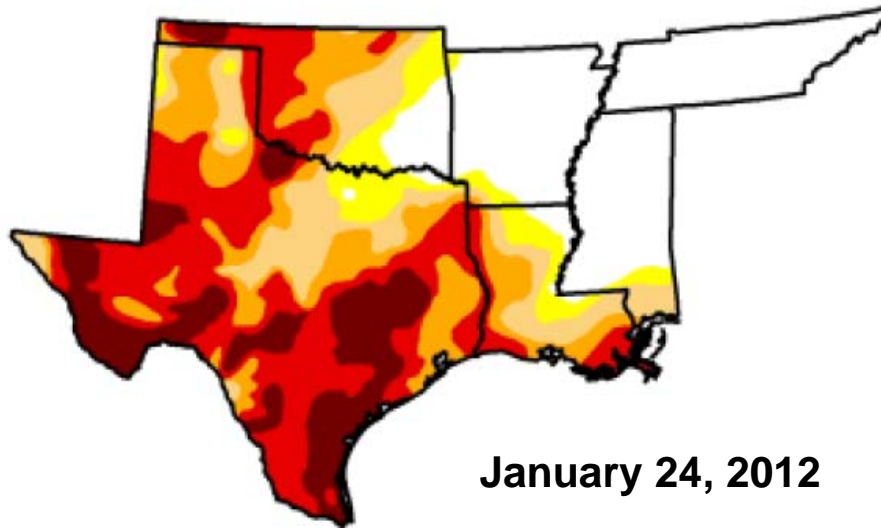
Current Drought Conditions

- ❑ In August 2011 Briefing, lakes were 82 percent full (18 percent depleted)
- ❑ In November 2011 Briefing, lakes were 75 percent full (25 percent depleted)
- ❑ December 2011 and Jan 2012 rains have helped
- ❑ Lakes are currently 85 percent full (15 percent depleted)
 - Lakes were 91 percent full on 2/1/11
- ❑ Dallas will also face treatment plant related restrictions this summer due to ongoing infrastructure improvements

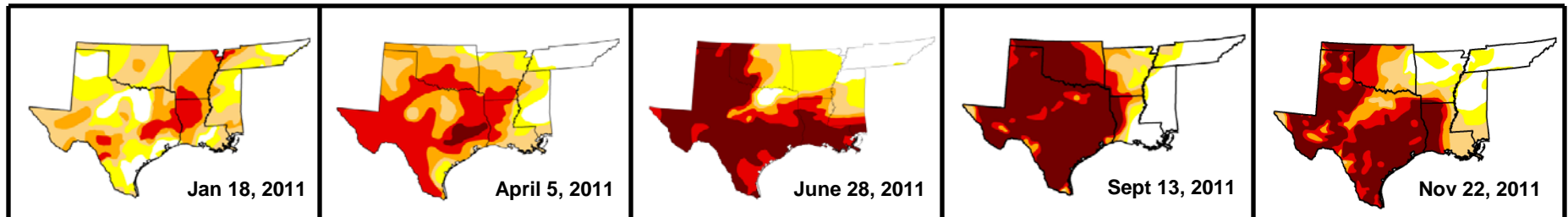


Lake Tawakoni 2006

Current Drought Conditions - Drought Monitor

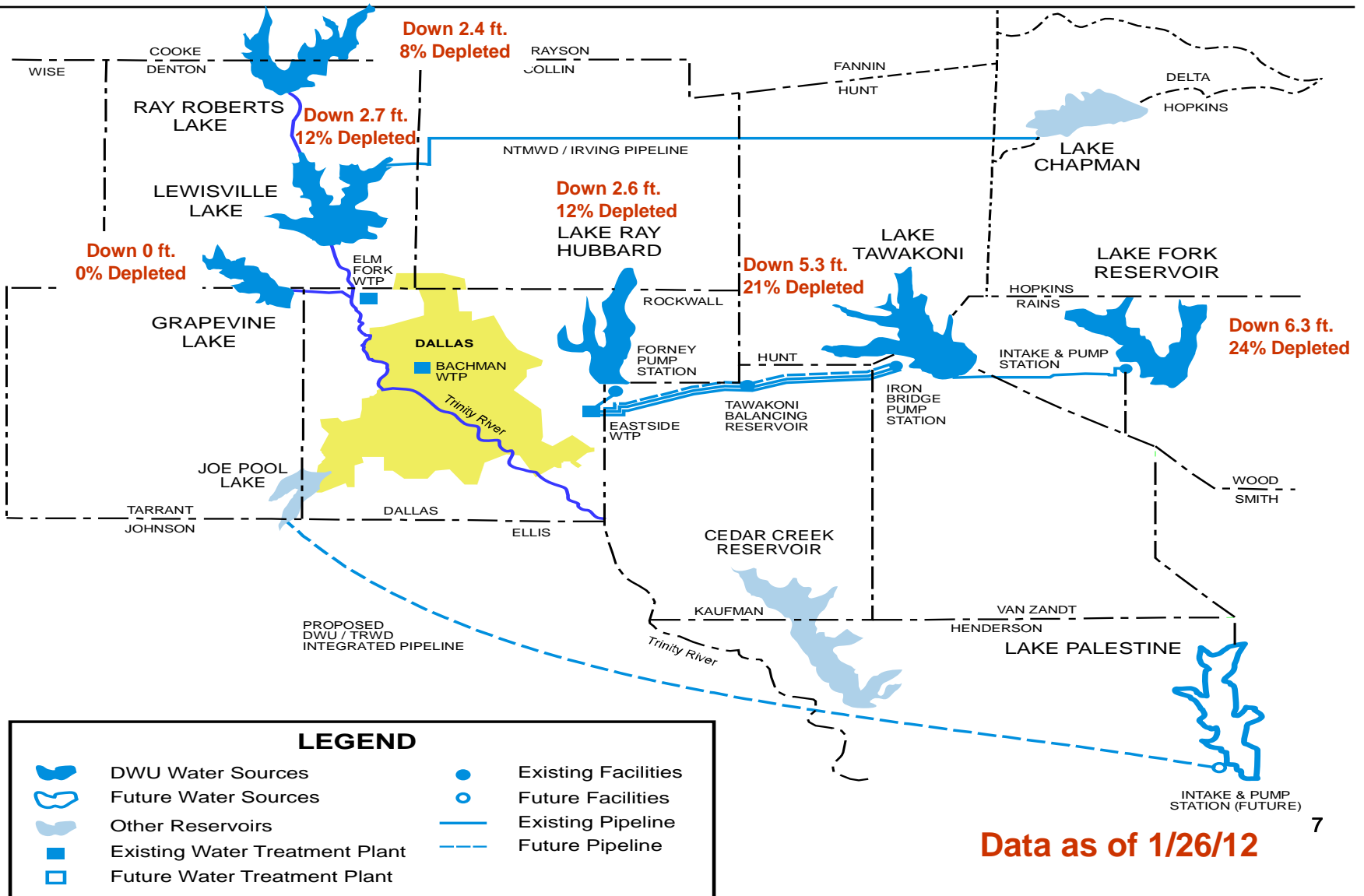


Intensity:



Source: National Drought Mitigation Center

Current Drought Conditions - Status of Dallas Water Supply Reservoirs

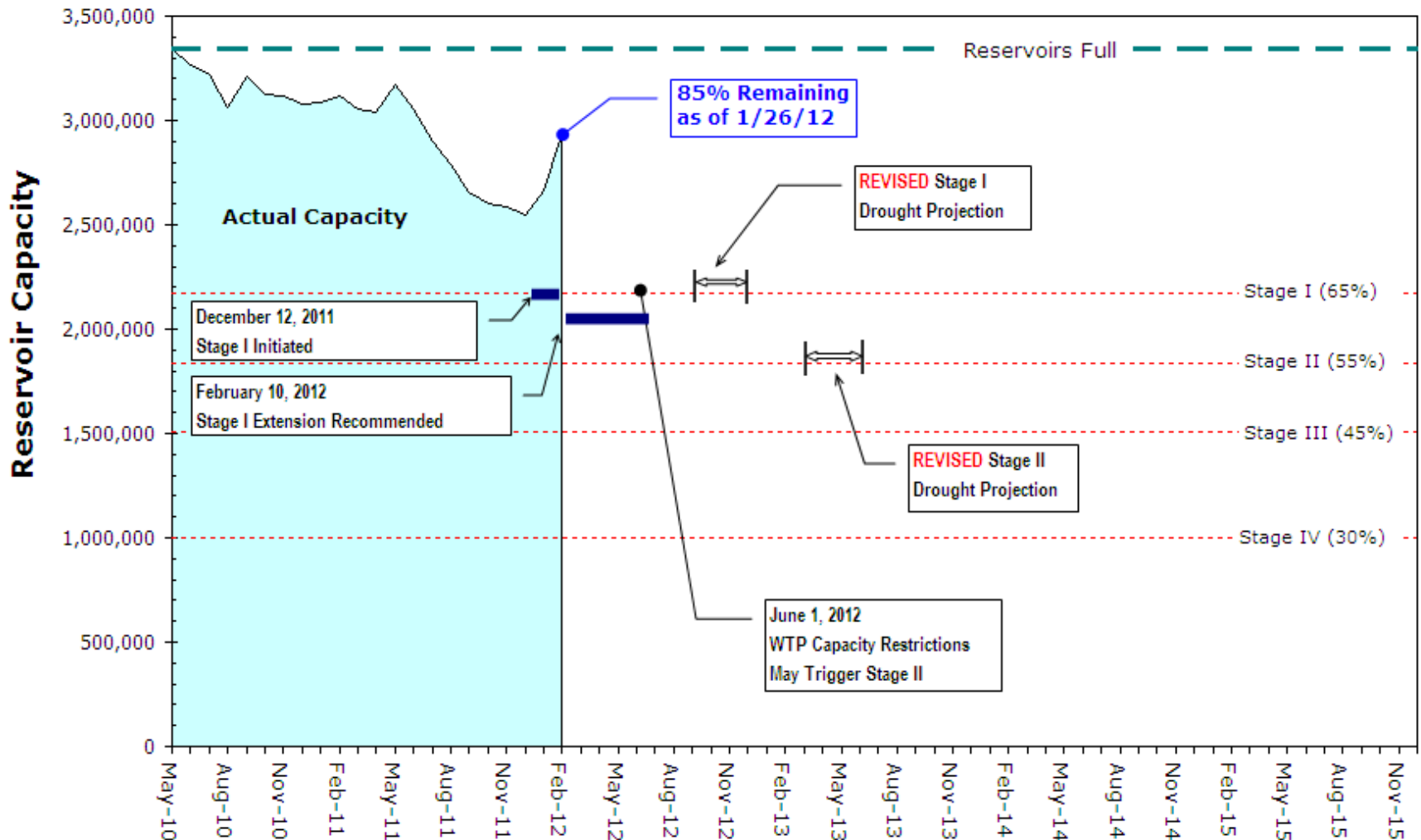


Dallas' 2012 Water System Treatment Capacity Restrictions

- Ongoing construction at the East Side Water Treatment Plant will provide water quality improvements, rehabilitation and increased plant capacity for future demand
- This construction will result in a temporary water treatment capacity restriction of 680 MGD for Dallas' treated water system during the Spring/Summer of 2012
- Service restrictions to customers are anticipated as a result

Total Reservoir System Condition and Analysis

(Lakes Ray Roberts, Lewisville, Grapevine, Ray Hubbard, Tawakoni and Fork)



Water Supply Benchmarks – 75% capacity remaining after 18 months and 50% remaining after 3 ½ years

Interim Raw Water Sales

Interim Raw Water Sales - State Rules/Laws

- Surface water is owned and permitted by the State of Texas
- Texas Water Code 11.036, allows a water rights holder to supply water under contract terms that are just and reasonable and without discrimination, and that if the contract sets forth explicit expiration provisions, no continuation of the service obligation will be implied
- House Bill 2694, passed in 2011, allows the State to suspend or adjust water rights during drought or emergency water shortage
- In addition, Texas Water Code, § 11.139 allows the commission to grant an emergency permit, order, or amendment to an existing permit, certified filing, or certificate of adjudication for a period of 120 days
 - May be renewed for an additional 60 days
 - For conditions which present an imminent threat to the public health and safety

Interim Raw Water Sales - Impacts

- Water sales from the Eastern system up to approximately 70 MGD would not impact Dallas' drought planning
- Water sales from the Western system may accelerate Dallas' drought plan needs by 9 months

System	Eastern (Lakes, Ray Hubbard, Tawakoni and Fork)	Western (Lakes, Lewisville, Ray Roberts, Grapevine and Elm Fork Run of the River)
Yield	335.5 MGD	177.7 MGD
Connected Yield	264.8 MGD	177.7 MGD
Available for Interim Sale	70.7 MGD	0.0 MGD

Interim Raw Water Sales – Luminant - Received

- Luminant has requested additional water from Lake Fork for a two year term expiring December 31, 2013
- No impact to Dallas' drought plan
- Estimated revenue at \$1.2M per year
- Contract agenda item to be scheduled for February 22, 2012

Interim Raw Water Sales – Anticipated Requests

- Anticipated Requests
 - North Texas Municipal Water District (NTMWD) – up to 60 MGD
 - City of Irving – TBD
 - Upper Trinity Regional Water District (UTRWD) – TBD
- Water sales, assuming drought conditions continue as forecasted, may require Dallas to implement stronger drought measures, i.e., Stages 2-4
- Terms and conditions will include length of contract, volume of water, conditions of service, pricing and other considerations

Interim Raw Water Sales – NTMWD - Pending

- NTMWD is not currently a water customer of Dallas
- NTMWD water supply sources
 - Lavon – 36% depleted
 - Chapman – 57% depleted
 - Texoma – 0% available (due to Zebra mussels)
- Potential raw water purchase amounts from Dallas - 27 MGD to 60 MGD
- Contract requested by NTMWD to be completed in the Spring 2012 timeframe
- A request from NTMWD of up to 60 MGD from Dallas' Eastern system would have no impact to Dallas' drought plan

Interim Raw Water Sales – City of Irving - Pending

- Irving has been a Dallas water customer since 1955
 - Irving purchases approximately 7 MGD through a wholesale treated water contract
 - Irving has a treatment services contract with Dallas to treat 40 MGD of their Lake Chapman water
- Lake Chapman is 57% depleted
- Depending on future rain and weather conditions, Irving's water supply in Chapman may be at risk
- At Irving's request, Dallas staff has met to discuss possible water sales to Irving
- At this time, a formal water sale request has not been made to Dallas
- Request would be for Western system water
 - May accelerate drought plan scheduling by 9 months depending upon amount of request

Interim Raw Water Sales – Upper Trinity River Water District (UTRWD) - Pending

- UTRWD has been a Dallas water customer since 1992
- UTRWD takes water from Lake Chapman which is 57% depleted
- Depending on future rain and weather conditions, UTRWD's water supply in Chapman may be at risk (14.3 MGD Chapman Water and 8.6 MGD Chapman Reuse)
- UTRWD's Harpool Water Treatment Plant's sole source of water is Lake Chapman
- UTRWD also purchases a small amount of raw water from Dallas (approx. 4MGD)
- May ask Dallas for a yet to be determined amount
- Request would be for Western system water
 - May accelerate drought plan scheduling by 9 months depending upon amount of request

Actions and Next Steps

Actions and Next Steps

- City Manager recommends that the Council extend the drought restrictions 120 days
 - From Feb 10, 2012 to June 8, 2012
 - Item is scheduled on the Feb 8, 2012 Council Agenda
- Luminant contract recommendation for approval on February 22, 2012 Council Agenda – No impact to Dallas' drought plan
- We will continue to monitor the drought situation and provide additional updates to the Council as needed

Appendix

Drought Triggers and Action Measures

(City of Dallas Drought Contingency Plan adopted June 9, 2010)

Stage 1	Stage 2	Stage 3	Stage 4
35% Depleted	45% Depleted	55% Depleted	70% Depleted
Mandatory	Mandatory	Mandatory	Mandatory
<ul style="list-style-type: none"> □ Target 5% reduction in total Gallons Per Capita per Day (GPCD) □ Restrict operation of ornamental fountains and ponds to initial filling and to support aquatic life □ Encourage reduction in draining and refilling of swimming pools □ Prohibit recreation water use of faucets hoses and hydrants which use water in such a manner as to allow run-off □ Restrict washing of vehicles to hand held bucket (does not affect commercial car washes) □ Mandatory maximum 2 day a week landscape irrigation 	<ul style="list-style-type: none"> □ Target 15% reduction in total GPCD □ Prohibit hosing off paved areas, buildings, windows or other surfaces □ Restrict op of ornamental fountains/ponds to initial filling or support aquatic life □ Encourage further reduction in draining and refilling of swimming pools □ Prohibit recreation water use of faucets hoses and hydrants which use water to allow run-off □ Restrict washing of vehicles to hand held bucket (but not commercial car washes) □ Mandatory maximum 1 day a week landscape irrigation □ Foundations may be watered any day during allowed watering hours with soaker or hand held hoses 	<ul style="list-style-type: none"> □ Target 20% reduction in total GPCD □ No approval for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities □ 10% rate increase for high water demand users (greater than 10,000 gallons per month) □ Prohibit the filling/refilling of swimming pools, wading pools and Jacuzzi pools, Existing pools may add water for proper operation; no permitting of new pools □ Prohibit washing of vehicles (does not affect commercial car washes between 6:00 a.m. and 10:00 a.m. or 6:00 p.m. to 10:00 p.m.) □ Mandatory maximum 1 day a week landscape irrigation with hand held hoses and hand held buckets only □ Foundations may be watered for a 2 –hour period (off-peak) with soaker hose or hand held hose. 	<ul style="list-style-type: none"> □ Target 25% reduction in total GPCD □ Prohibit washing of vehicles □ Prohibit landscape irrigation □ Foundations may be watered for a 2 –hour period (off-peak) with soaker hose or hand held hose.

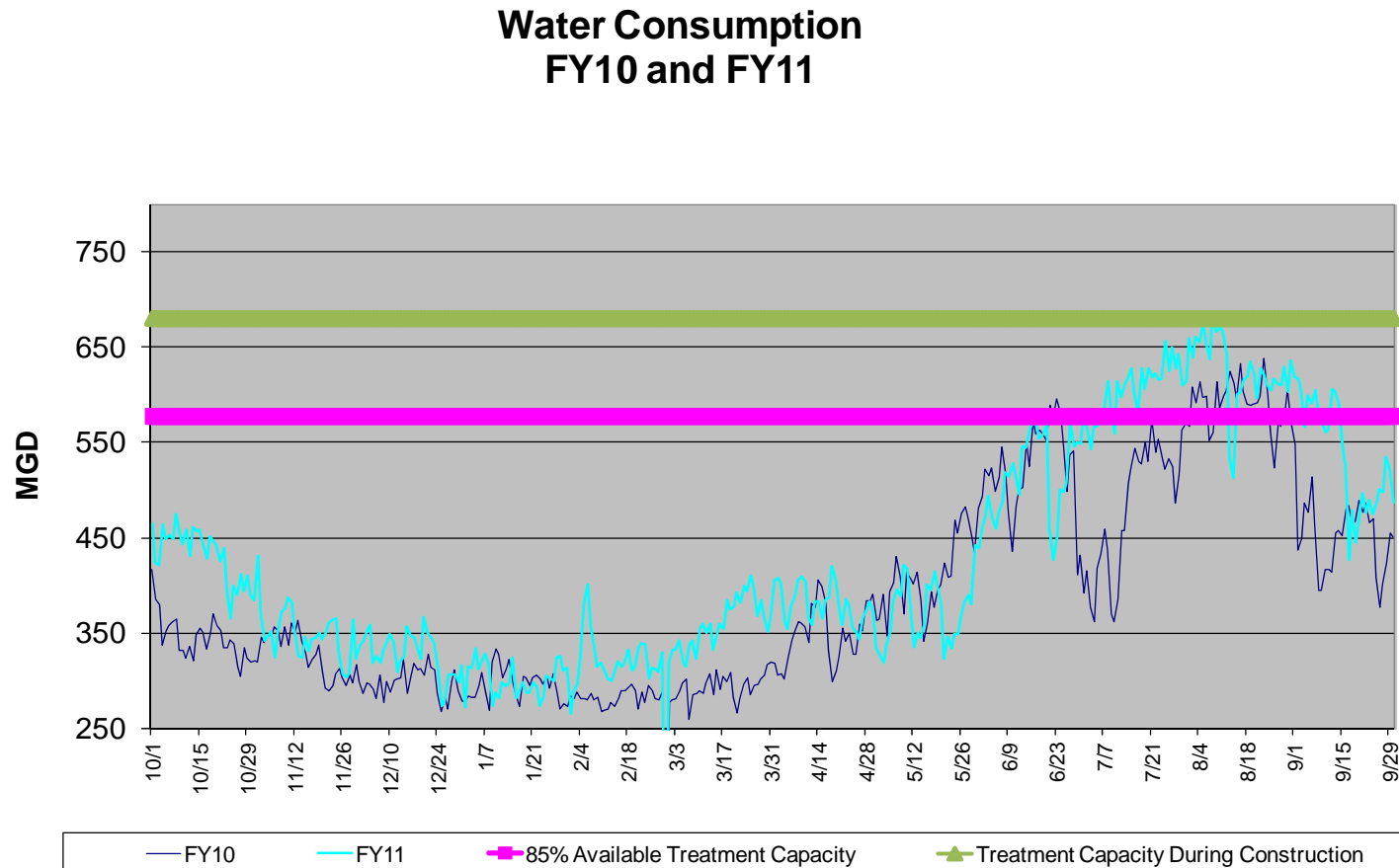
Comparison of Drought and Conservation Measures

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

Process to Implement Contingency and Emergency Measures

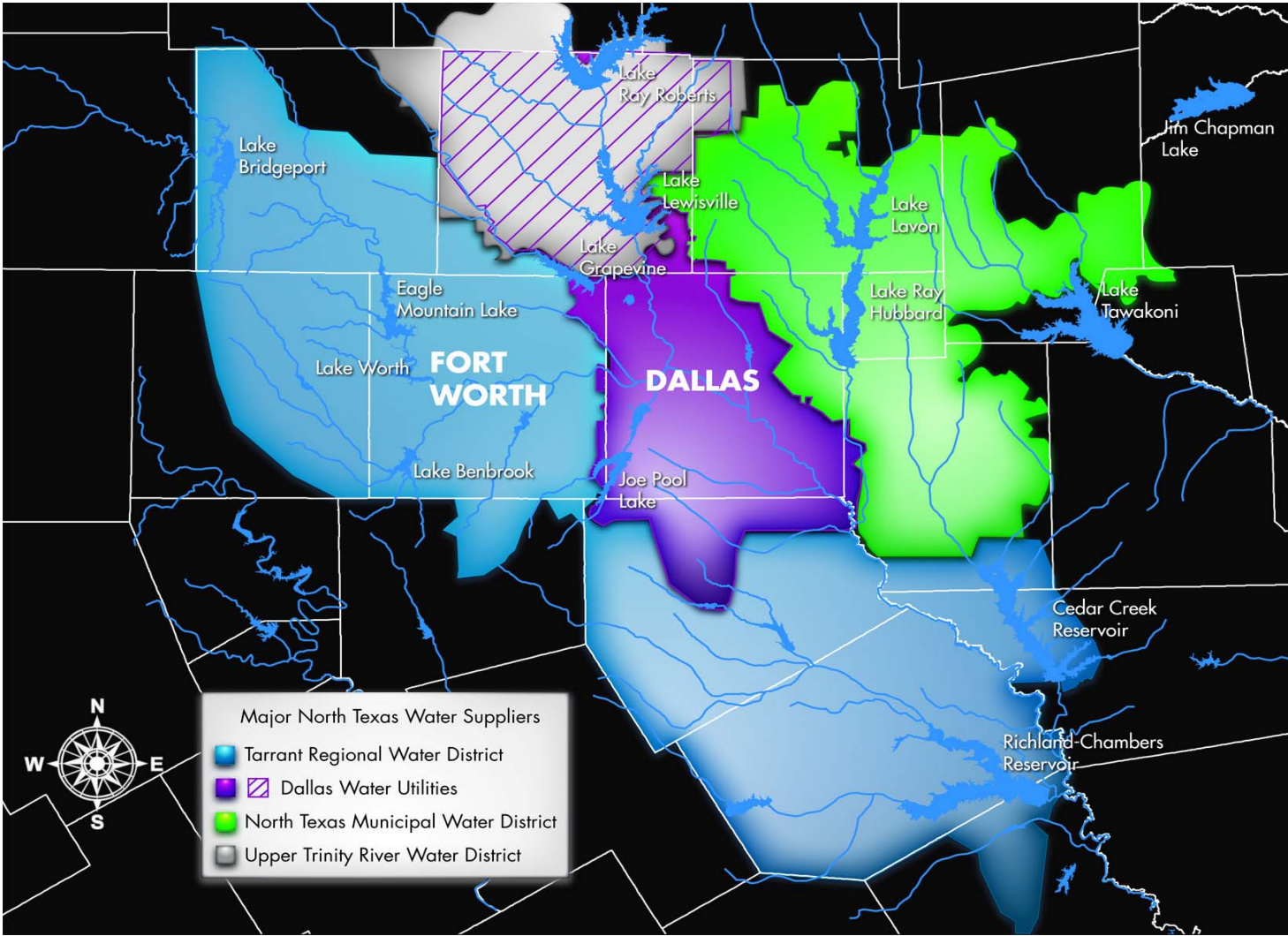
- Utility Director responsible for ongoing monitoring of water system
- Director is responsible for recommending implementation of contingency and emergency procedures to City Manager
- City Manager may enact the measures for up to 60 days
- **City Council may extend the measures beyond original 60 days for additional time periods, not to exceed 120 days each**
- To be effective, measures must be published in a local newspaper within 24 hours of announcement

Water Use and 2012 Water System Restriction



Note: Graph shows that water restrictions would be needed in FY10 and FY11. FY10 was a relatively wet year; FY11 was hot and dry.

Major North Texas Water Providers



Drought Conditions for Other Area Water Providers and Irving

- Other area water providers are experiencing restrictions due to lack of rainfall, reservoir location, and other drought related factors

Stage	Dallas	North Texas Municipal Water District (NTMWD)	Tarrant Regional Water District (TRWD)	Upper Trinity Regional Water District (UTRWD)	City of Irving
Stage 1	December 12, 2011	April 19, 2011	August 29, 2011	July 13, 2011	May 15, 2011
Stage 2		August 11, 2011			August 11, 2011
Stage 3		November 1, 2011			January 1, 2012
Stage 4					

Drought Conditions for Other Area Water Providers and Irving

- Other area water providers are experiencing restrictions due to lack of rainfall, reservoir location, and other drought related factors

Stage	Dallas		North Texas Municipal Water District (NTMWD)		Tarrant Regional Water District (TRWD)		Upper Trinity Regional Water District (UTRWD)		City of Irving	
	Date	Response	Date	Response	Date	Response	Date	Response	Date	Response
1	12/12/11	Maximum twice per week watering	4/19/11	Voluntary water use reductions	8/29/11	Maximum twice per week watering	7/13/11	Voluntary water use reductions	5/15/11	Voluntary water use reductions
2			8/11/11	Maximum twice per week watering					8/11/11	Maximum twice per week watering
3			11/1/11	Maximum Once per every two weeks watering					1/1/12	Maximum once per week watering
4										

Water Supply Depletion (as of 1/26/12)

Dallas

Combined

Down 15%

North Texas
Municipal Water
District

Lavon – Down 36%
Chapman – Down 57%
Texoma – 0% available

Tarrant Regional
Water District

Combined

Down 25%