



City of Dallas Water Utilities Drought Management Update

Quality of Life Committee

December 11, 2006



Briefing Purpose

Provide an update on the current drought, an extension of Stage 1 of the City's Drought Contingency Plan, as well as information on the proposed ordinance change for time of day watering



Briefing Outline

- Current Drought Outlook & Water Supply Forecast
- Stage 1 Extension
- Proposed Ordinance Change
- Summary
- Appendix
 - Stage Reduction Targets
 - Summary of Trigger Conditions
 - Selection Actions for Stages 1-4
 - Conservation Ordinance Highlights
 - Public Websites



Current Drought Outlook & Water Supply Forecast



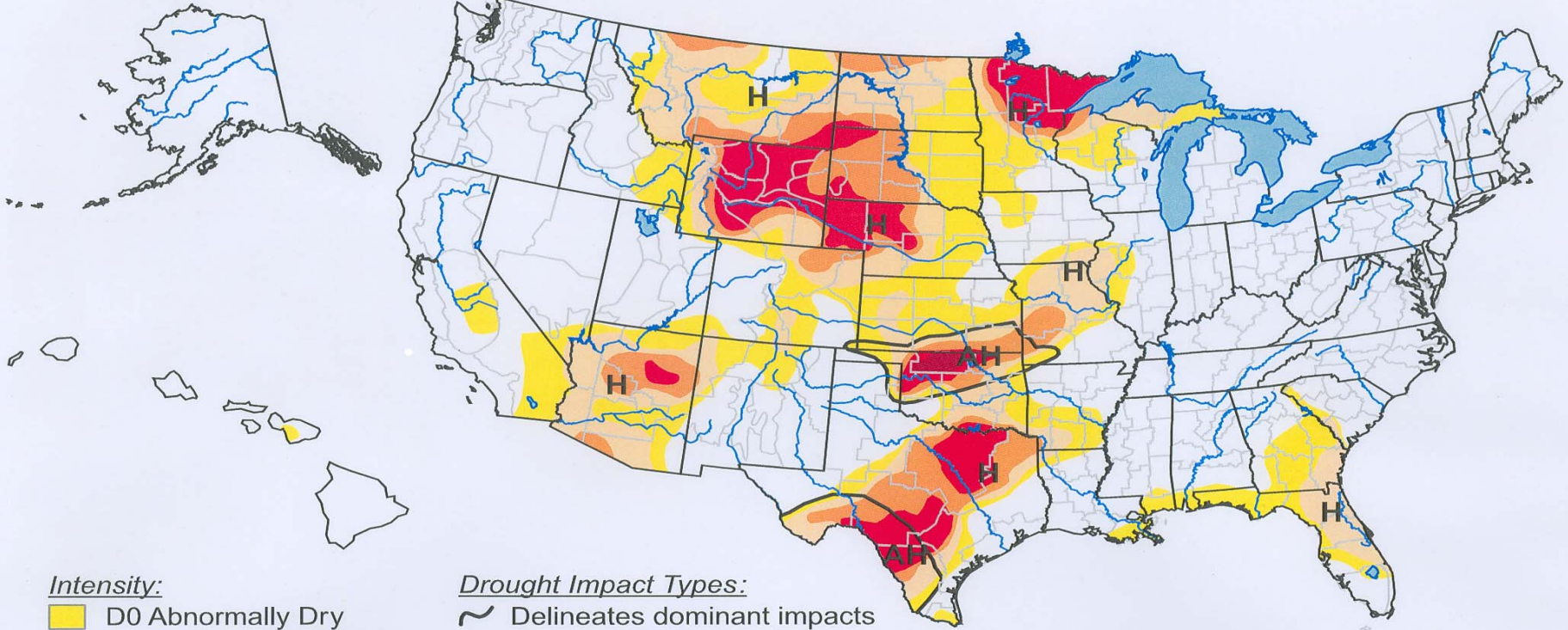
Drought Impact

- Dallas area drought of record (1950s) lasted 7 years
- Current drought began in April 2005
- Dallas' water supply has been planned to provide water throughout the 7 year drought of record
- Our total connected water supplies are currently approximately 35% depleted
- For the past 2 years, rainfall is 16 inches (total) below normal
- If drought weather conditions persist, Stage 2 Water Watch could be initiated as early as April 2007






U.S. Drought Monitor

November 21, 2006


Valid 7 a.m. EST



Intensity:

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

Drought Impact Types:

-  Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

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

<http://drought.unl.edu/dm>

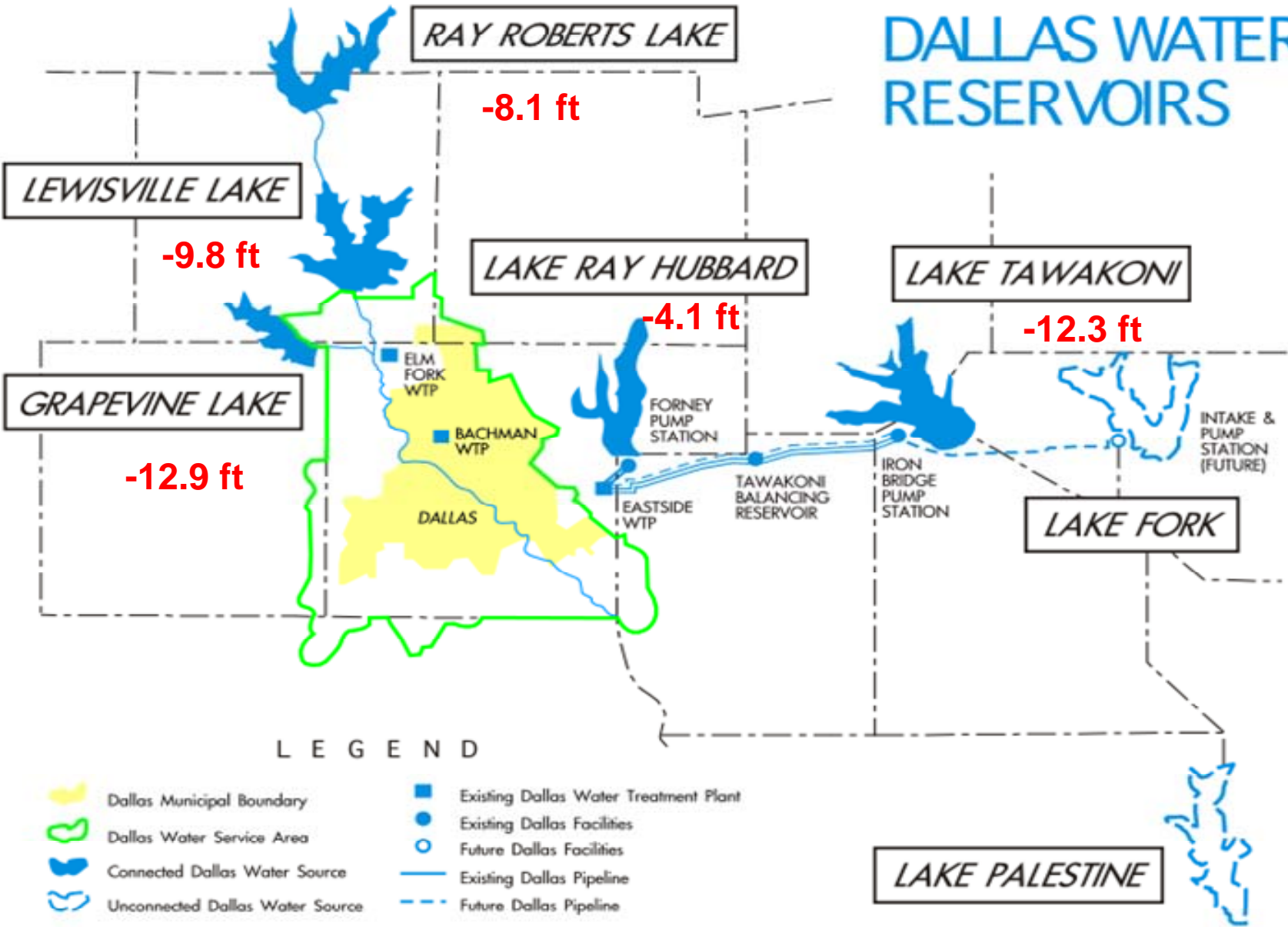


Released Wednesday, November 22, 2006

Author: Ned Guttman/Liz Love-Brotak, NOAA/NESDIS/NCDC

The NOAA projects some improvement in drought conditions, although we have yet to see improvement in the Dallas area lakes.

DALLAS WATER RESERVOIRS



Overall Depletion: 35% as of 12/6/06



Stage 1 Extension



Drought Contingency Plan

- Our drought plan for water supply calls for the following trigger points:
 - Stage 1, Water Awareness (35% depleted)
 - Stage 2, Water Watch (45% depleted)
 - Stage 3, Water Warning (55% depleted)
 - Stage 4, Water Emergency (70% depleted)



Stage 1 Extension

- The City Manager initiated Stage 1 on October 10
- According to the Drought Contingency Plan, a Stage is effective for 60 days unless extended by the City Council
- Lake levels remain low as drought weather conditions have not improved
- An item is on the December 13 agenda addendum for Council to approve an extension of Stage 1 for 120 days
- Staff will continue to actively monitor the current drought situation



Proposed Ordinance Change



Current Conservation Ordinance Highlights

- Ordinance adopted by Dallas City Council in October 2001
- **No irrigation from 10 am to 6 pm from June 1 through September 30 except for hand watering and soaker hoses**
- Do not allow sprinkler systems to water driveways, sidewalks and streets
- Do not allow water to runoff onto a street or other drainage area
- Maintain Sprinkler Systems - Repair any broken, missing or misdirected sprinkler heads
- Install rain and freeze sensing devices on sprinkler systems
 - All automatic sprinkler systems required to have these devices
- Do not water during any form of precipitation
- Hand water or use a soaker hose permitted any time



December 13, 2006 Agenda Items for Council Action

- Council Agenda Addendum Item
 - Stage 1 extension for 120 days
- Council Agenda Item Number 61
 - The agenda item will change the time of day watering conservation measure to April 1 to October 31 annually
 - Currently time of day watering is June 1 to September 30 each year



Appendix

- Stage Reduction Targets
- Summary of Trigger Conditions
- Selection Actions for Stages 1-4
- Conservation Ordinance Highlights
- Public Websites

Stage Reduction Targets

STAGE	LEVEL	TARGET*	RESPONSES
1	Water Awareness	1 %	Voluntary Measures
2	Water Watch	5 %	Voluntary & Mandatory Measures
3	Water Warning	15 %	Mandatory Measures
4	Water Emergency	25 %	Mandatory Measures Water Allocation

*Reduction in gallons per capita per day

Summary of Trigger Conditions

Type of Water Management Condition	Stage 1 Water Awareness	Stage 2 Water Watch	Stage 3 Water Warning	Stage 4 Water Emergency
Water Supplies Are Low	Total raw water supply in connected lakes or the western or eastern reservoirs has dropped below 65% of City's share of the total conservation storage	Total raw water supply in connected lakes or the western or eastern reservoirs has dropped below 55% of City's share of the total conservation storage	Total raw water supply in connected lakes or the western or eastern reservoirs has dropped below 45% of City's share of the total conservation storage	Total raw water supply in connected lakes or the western or eastern reservoirs has dropped below 30% of City's share of the total conservation storage
Response	Voluntary reductions	Voluntary and Mandatory water use reductions	Mandatory water use reductions.	Mandatory water use reductions; water allocation



Selected Voluntary Actions for Stages 1 and 2

<p style="text-align: center;">Stage 1 Water Awareness</p>	<p style="text-align: center;">Stage 2 Water Watch</p>
<p>Encourage reduction in:</p> <ul style="list-style-type: none"> ✓ Frequency of watering new landscaping and foundations ✓ Frequency of washing & rinsing vehicles, hand-held hose or commercial car wash ✓ Frequency in draining and refilling swimming pools ✓ Frequency of recreational use including use of faucets, hoses or hydrants ✓ Water use through voluntary day of week watering schedule ✓ High volume water users through water use audits ✓ Landscape uses for parks and golf courses ✓ Encourage implementation of like procedures by wholesale water customers 	<p>Encourage further reductions by:</p> <ul style="list-style-type: none"> ✓ Additional reductions in draining and filling swimming pools ✓ Identifying and further encouraging voluntary reduction measures for high volume water users through water use audits ✓ Encourage implementation of like procedures by wholesale water customers



Selected Mandatory Actions for Stages 2, 3 and 4

Stage 2 Water Watch	Stage 3 Water Warning	Stage 4 Water Emergency
<ul style="list-style-type: none"> ✓ Restrict operation of ornamental fountains or ponds to initial filling ✓ Prohibit recreational water use including use of faucets, hoses or hydrants ✓ Restrict washing of any motor vehicle to the use of hand-held bucket or commercial car wash ✓ Prohibit hosing off paved areas, buildings, windows, etc. ✓ Mandatory day of week landscape watering 	<ul style="list-style-type: none"> ✓ Irrigation of landscaped areas limited to day of week and time of day watering ✓ Hose-end sprinklers and permanent automatic sprinkler systems prohibited ✓ Filling, refilling or adding to pools is prohibited ✓ Operation of any ornamental fountain or pool prohibited ✓ Permitting of new swimming pools prohibited ✓ 10% rate increase for water use over 10,000 gallons ✓ Golf course greens & tees watered in off peak hours ✓ Require contractual water demand restrictions of wholesale water customers 	<ul style="list-style-type: none"> ✓ Irrigation of landscaped areas is prohibited ✓ Water to wash any motor vehicle, boat, etc. is prohibited ✓ City may impose a retail water rate increase to discourage water use ✓ All stage 2, 3 and 4 requirements remain in effect for City Government, commercial customers and wholesale customers ✓ Director is authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code



Comparison of Drought and Conservation Measures

- Conservation measures are used to achieve more efficient use of water resources
- Drought measures are restrictions used to ensure that water is available to meet public health, welfare, and safety needs

Conservation Examples	Drought Examples
Xeriscape	Restricting lawn watering
Time of Day Watering	Prohibiting permitting, filling or refilling swimming pools
Low Flow Showerheads	Prohibiting operation of ornamental fountains
Repairing leaking faucets	Prohibiting recreational water use
Reducing the frequency of watering lawns	Restrictions on washing of motor vehicles



Public Education & Outreach Website Details

- Website Updates
 - www.dallascityhall.com
 - Prominent link in “Highlights” section on drought information
 - Drought contingency plan information on 1 page user-friendly flyers highlighting stages and responses
 - Current lake levels
 - Frequently asked questions
 - www.savedallaswater.com
 - Drought contingency plan information on 1 page user-friendly flyers highlighting stages and responses
 - Current lake levels
 - Water conservation indoor and outdoor tips
 - Related links for drought information/education
 - www.cod
 - Stages and responses
 - Current lake levels
 - Frequently asked questions
 - Information on training sessions
 - Used to provide prompt and current information to city employees as conditions improve or worsen