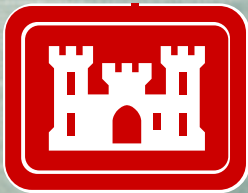


# U.S. Army Corps of Engineers Tulsa District

**Mike Abate, PMP.  
Chief, Civil Works  
Branch, PPMD**

**April 16, 2015**



**US Army Corps of Engineers  
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# Civil Works Mission

## Water Supply

- 50% of Corps water supply contracts
- 18 lakes, 104 water supply customers
- 2.2 million people served



Tenkiller Lake

## Water Quality

- Enhances municipal, industrial, irrigation usage
- Protects endangered species
- Improves degraded streams



Red River Chloride, Area VI



Webbers Falls Turbine

## Hydroelectric Power

- 8 power plants produce 585,000 kw capacity
- Generates power to 8 million customers



New Campgrounds, Canton Lake

## Recreation

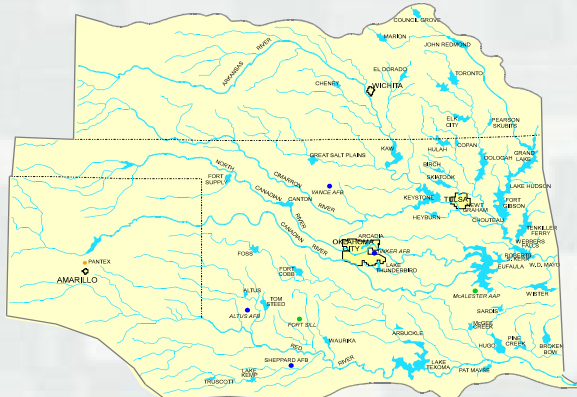
- 475 recreation areas at 33 projects
- 22.5 million visitors in 2012

## Flood Risk Management

- 37 Corps dams + 10 others
- 15,950,000 acre feet of flood storage
- Arkansas River Basin: \$11.144B in cumulative flood damage reductions
- Red River Basin: \$1.936B in cumulative flood damage reductions

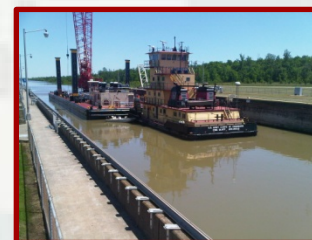
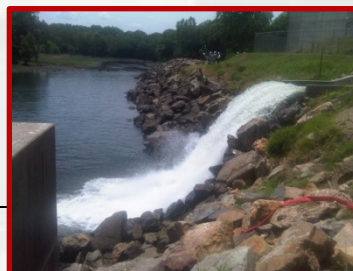


Grand Lake



## Environmental Stewardship

- Tenkiller Low Flow Pipe
- Supersaturated Dissolved Oxygen System (SDOX)



## Inland Navigation (MKARNS)

- 5 locks & dams
- 3 major ports



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# *Tulsa District Fast Facts*

- 37 lakes in 3 states
  - ▶ 1,116,609 Acres Land
  - ▶ 500,893 Acres Water
  - ▶ 4,458 Miles Shoreline
  - ▶ 475 recreation areas
  - ▶ 11,361 Camp Site
  - ▶ 22.5 million visits annually
  - ▶ 11,361 Camp sites
  - ▶ 2,273,929 acre-feet of WS

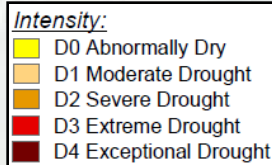
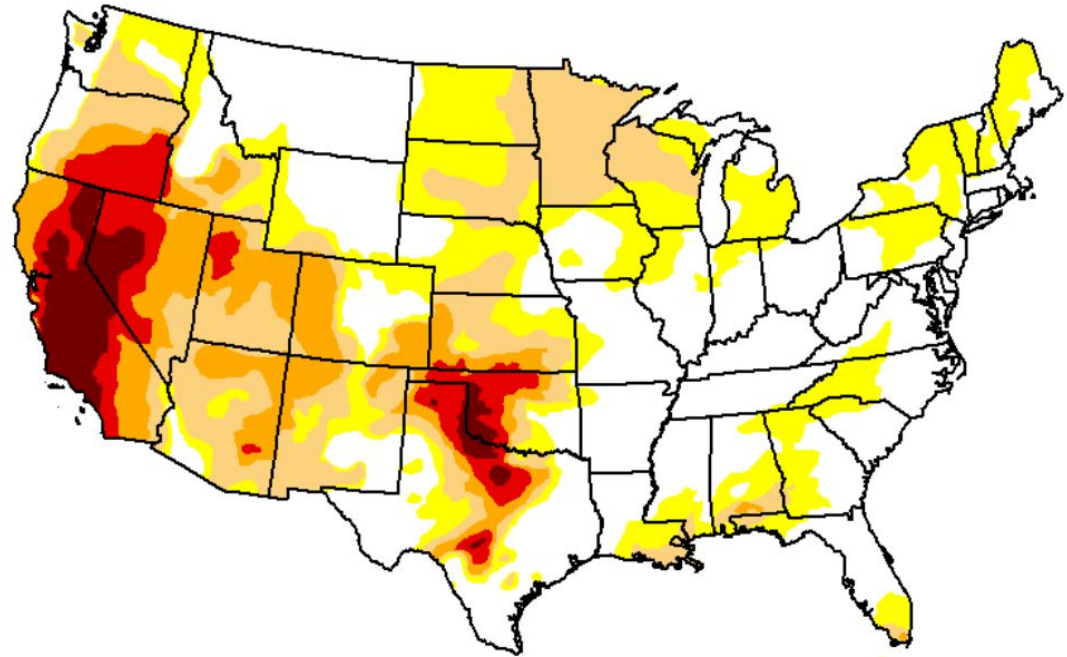


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# Drought Management

## Drought Monitor – April 7, 2015

- Each Corps Lake should have a specific drought management plan
- When conservation pool reaches 75%, water storage accounting by users starts
- During Drought we classify the Lake into four Drought Levels
- Coordinate Interagency Drought Management Committee meetings during drought levels 3 and 4



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# Drought Level 1- (100%-75%)

## Alert Phase-Normal Operations

- **Water storage accounting of conservation storage by users on a monthly basis when 75% of the conservation pool remains**
- Meet monthly with Regional Power Administration (SWPA) to allocate power for the following month
- Obtain water supply withdrawal rates from users
- Monitor Basin and Lake Conditions
- Normal data collection



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# **Drought Level 2 (75%-50%)**

## **Expanding Actions**

- **Begin monthly water storage accounting for users**
- **Activate the Corps Drought Management Committee (CDMC)**
- **Meet with Regional Power Administration (SWPA) to discuss limiting power production**
- **Promote conservation of water to users when they use over 50% of their authorized storage**
- **Provide lake offices with lake projections for concessionaires and dock owners**
- **Cease releases for non-critical project testing and inspections**
- **Schedule AD Hoc meeting of Interagency Drought Management Committee**
- **Notify public of possible boating safety hazards due to low lake levels**



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# Drought Level 3 (50%-25%)

- **Activate the Interagency Drought Management Committee (IDMC)**
- Post warnings, closings, and boating hazards
- Increase frequency of water supply accounting as needed
- **Notify state Water Resources Boards and users when 25% of conservation storage remains**
- Comments are sought by the CDMC from interested individuals and groups
- Schedule more frequent meetings of CDMC as necessary
- Evaluate water intakes of contracted in-lake water users
- Minimize special event recreation releases



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# **Drought Level 4 (<25%)**

- **Notify state Water Resources Board and users when 10% of conservation storage remains**
- Make no releases for special events except as approved by District Engineer
- **Begin planning priorities of usage for inactive storage**
- Notify contract water users of impending need to arrange for emergency water needs
- Contract emergency water supplies if available



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# Reallocations

- Reallocations of storage that would seriously affect the authorized purposes or involve major changes, requires approval from Congress
- If addition is greater than 50,00 acre feet or more than 15% of total storage it requires ASA (CW) Approval
- Higher of updated costs, revenues forgone, benefits forgone, or replacement costs
- Limit to users most likely alternative
- User acquires a permanent right to storage





# Addition of Water Supply Storage

- Addition of storage that would seriously affect the authorized purposes or involve major changes, requires approval from Congress
- If addition is greater than 50,00 acre feet or more than 15% of total storage it requires ASA (CW) Approval
- Non-Federal Share is 100% of costs of all modifications/construction, payment of losses to others, plus ½ of “net benefits”



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# Surplus Water

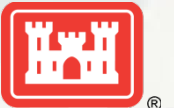
- Classification
  1. Water stored in a Corps reservoir that is not required because the authorized need for the water never developed or the need was reduced by changes that have occurred since authorization or construction.
  2. Water that would be more beneficially used as municipal and industrial water than for the authorized purpose that, when withdrawn, would not significantly affect authorized purposes over some specified period.
- Interim Use (normally 5-years)
- Annual price same as reallocation and includes a pro-rata share of OMRR&R





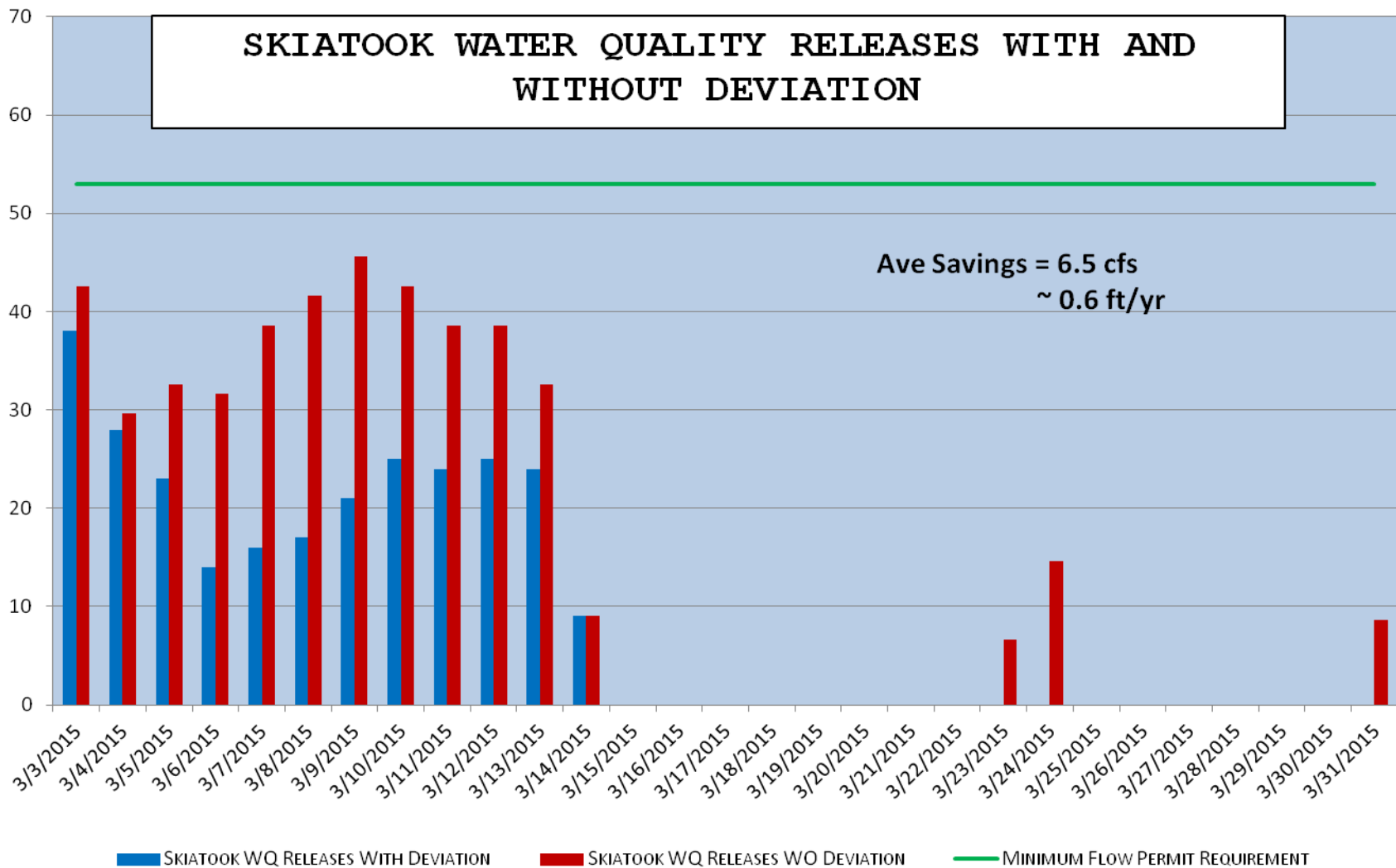
# Seasonal Operations

- Able to request a “Deviation” to Water Control Plan for up to 3 years
- Permanent change to Water Control will require authorization.



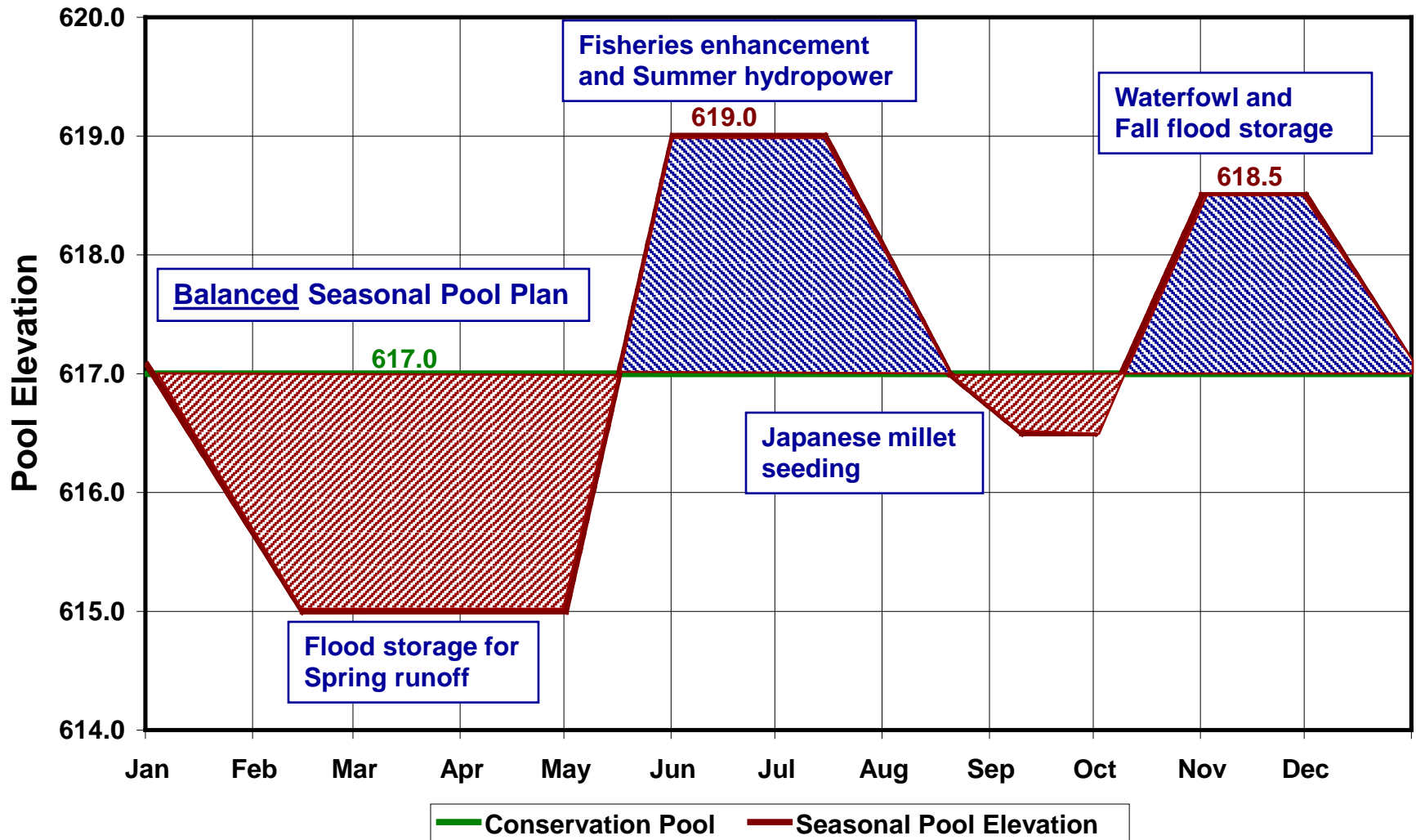
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# SKIATOOK WATER QUALITY RELEASES WITH AND WITHOUT DEVIATION



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# LAKE TEXOMA SEASONAL POOL PLAN





US Army Corps  
of Engineers.

## USACE Disaster Operations Public Law 84-99

### Flood Control and Coastal Emergency Act (PL 84-99)

USACE also has authority under PL 84-99, Flood Control and Coastal Emergencies (FCCE) (33 U.S.C. 701n) (69 Stat. 186) for emergency management activities. Under PL 84-99, the Chief of Engineers, acting for the Secretary of the Army, is authorized to undertake activities including disaster preparedness, Advance Measures, emergency operations (Flood Response and Post Flood Response), rehabilitation of flood control works threatened or destroyed by flood, protection or repair of federally authorized shore protective works threatened or damaged by coastal storm, and provisions of emergency water due to drought or contaminated source.

- Preparedness: The Flood Control and Coastal Emergency Act establishes an emergency fund for preparedness for emergency response to natural disasters; for flood fighting and rescue operations; for rehabilitation of flood control and hurricane protection structures. Funding for USACE emergency response under this authority is provided by Congress through the annual Energy and Water Development Appropriation Act. Disaster preparedness activities include coordination, planning, training and conduct of response exercises with local, state and federal agencies.
- Response Activities: PL 84-99 allows the Corps of Engineers to supplement State and local entities in flood fighting urban and other non-agricultural areas under certain conditions (Engineering Regulation 500-1-1 provides specific details). All flood fight efforts require a Project Cooperation Agreement (PCA) signed by the Public Sponsor and a requirement for the Sponsor to remove all flood fight material after the flood has receded. PL 84-99 also authorizes emergency water support and drought assistance in certain situations and allows for "advance measures" assistance to prevent or reduce flood damage conditions of imminent threat of unusual flooding.
- Rehabilitation: Under the authority of PL 84-99, an eligible flood protection system can be rehabilitated if damaged by a flood event. The flood system would be restored to its pre-disaster status at no cost to the Federal system owner, and at 20% cost to the eligible non-Federal system owner. All systems considered eligible for PL 84-99 rehabilitation assistance have to be in the Rehabilitation and Inspection Program (RIP) prior to the flood event. Acceptable operation and maintenance by the public levee sponsor are verified by levee inspections conducted by the Corps on a regular basis. The Corps has the responsibility to coordinate levee repair issues with interested Federal, State, and local agencies following natural disaster events where flood control works are damaged.



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# Public Law 84-99 - Drought Assistance

## **Drought Assistance Available:**

USACE is authorized to transport emergency supplies of clean drinking water for human consumption to any locality designated as a drought distressed area, and to construct wells in such drought distressed areas. Assistance will only be to meet minimum public health and welfare requirements.

## **Forms of Assistance:**

Emergency supply of clean drinking water for human consumption, and construction of wells if not commercially possible. Water is normally provided by tank trucks or small diameter pipelines, but all potential methods are considered.



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# Public Law 84-99 - Drought Assistance

## Qualifying Requirements:

- Water distribution system may be publicly or privately owned.
- State and local agencies must make full use of their own resources, including the National Guard.
- Reasonable rationing and conservation measures have been implemented.
- A permanent solution is being actively pursued at the local level.
- Requests for assistance to the Corps must be initiated by the Governor or his/her authorized representative.

## Limitations:

USACE assistance is supplemental to state and local efforts. Permanent restoration of water supply is a local responsibility. Applicants must furnish lands, easements, and right-of-way; make necessary relocations; and hold the U.S. free from damages. Water purchase and storage costs are not eligible for PL 84-99 assistance, although purchase of water from USACE reservoirs is an option for the affected locality.



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*Whiskey's  
for drinkin':*

*water's for  
fightin'*

*--Mark  
Twain*

**Questions ?**



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