



# **Invasive Species**

## **Potential Impacts to Water Suppliers**

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*North Texas Municipal Water District*



# Lacey Act

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- Prohibits the transfer of a listed invasive species across state lines
  - Vehicle
  - Pipeline
  - Boats/barges
- Violations include both civil and criminal penalties
- Only 2 Lacey Act exceptions granted for listed invasive species transfers:
  - Zebra mussels in 2012
  - All listed invasives in 2014

# USFWS Categorical Exclusions

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- Relieves USFWS from the obligation to perform either an EA or EIS to list a species
- Reduces the time needed to list a species from 10 years to as little as 1 year
- USFWS estimates that more than 4,600 candidate species could be listed

# Proposed Federal Legislation

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- Draft legislation provided to Congressman Gohmert & House Water, Power, and Oceans Subcommittee
  - Provides for interstate water transfers between Texas, Louisiana & Arkansas
- Proposed bill has 2 conditions:
  - If the listed invasive species is present on both sides of the state line
  - If the water transfer can occur through a closed conduit system

# NTMWD's Invasive Species Experience

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- Zebra mussel history
- Impact to the water supply for 1.6 million residents
  - Drought & watering restrictions
  - \$310 M project cost & rate impact
- Solution
  - 47 miles of 84" & 96" pipelines
  - \$60 M for blending improvements @ the WTP

# What are they?

- Invasive species native to Europe & Asia



<http://www.wearlon.com/Ezmussel.htm>

- First found in Great Lakes in 1988

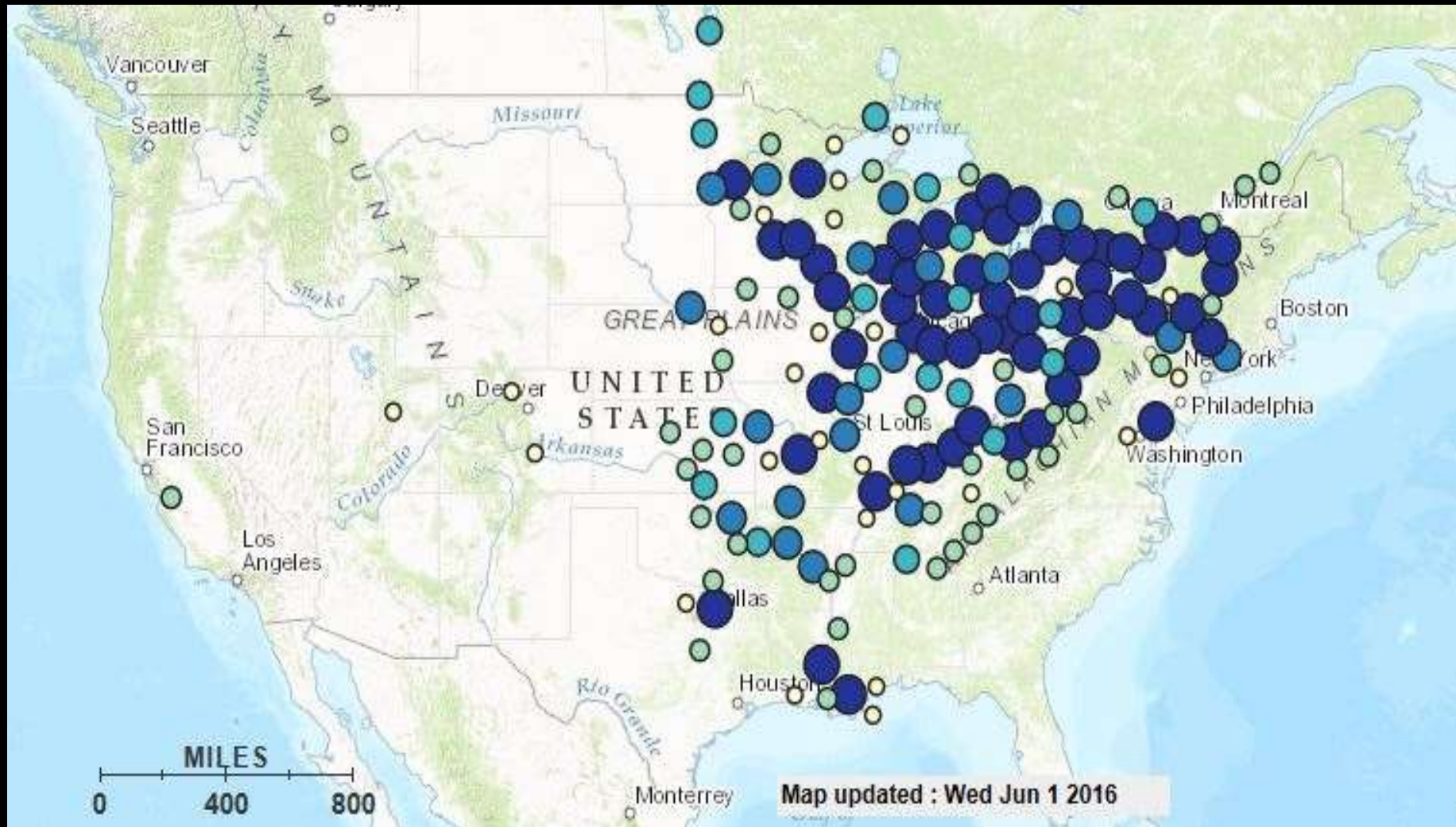


Michigan Sea Grant



<http://www.jaxkayakfishing.com/phpBB/topic16749.html>

# USGS Zebra Mussel Map



# Applicable Regulations

## Federal

- **The Lacey Act**
  - Originally enacted in 1900
  - Prohibits the interstate transport of invasive species
- **Executive Order 13112**
  - Requires federal agencies to ensure their actions do not result in the introduction or propagation of an invasive species
- **USACE - CWA Section 404 Permit**
  - Requires modification of the 404 as a result of “changed conditions”
  - 404 can be revoked

## State

- **Texas Parks & Wildlife Department**
  - Had similar non-transport regulations – Legislature changed in the last session to an annual notification requirement

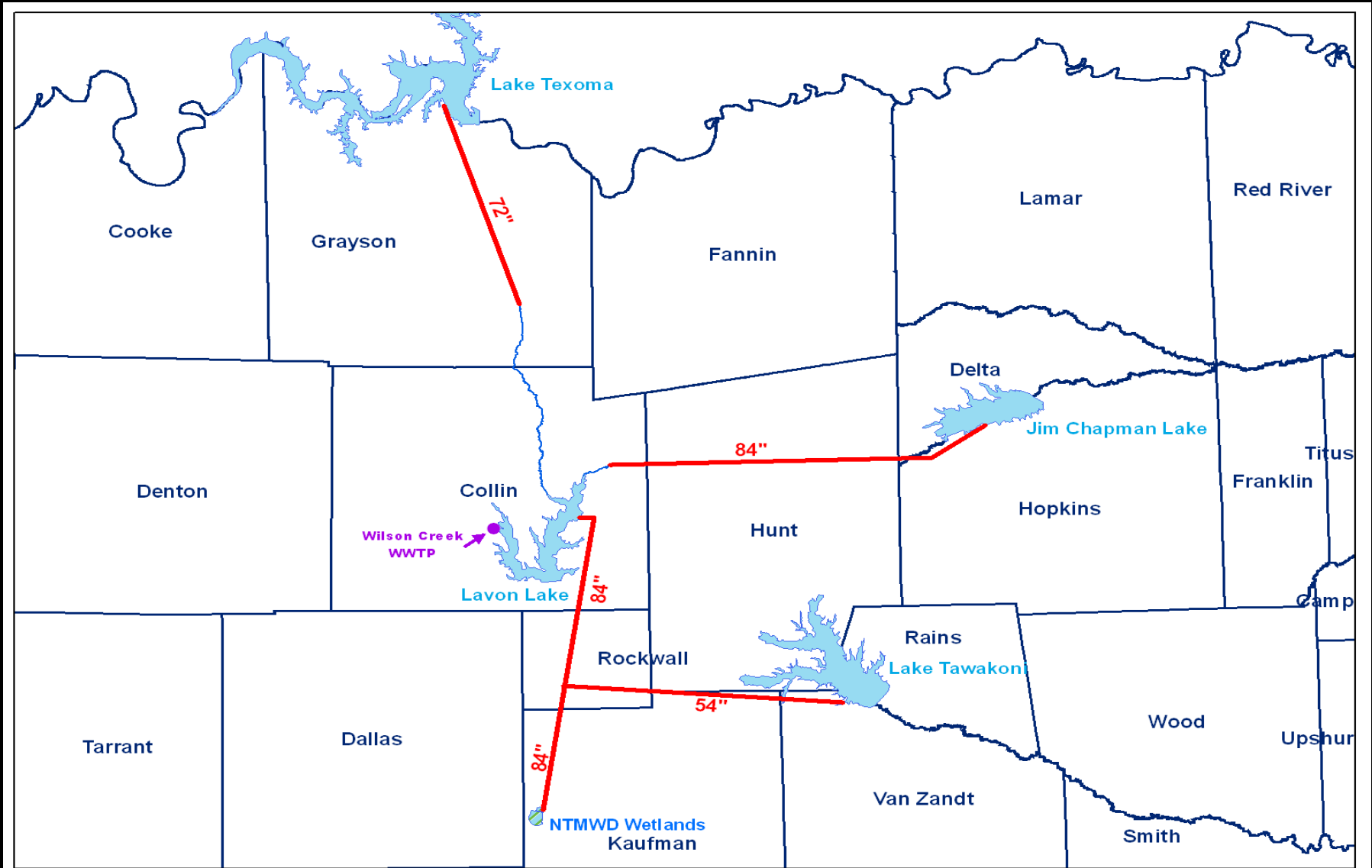


# Chronology

- **April 3, 2009**
  - Zebra mussels found in Texoma by TPWD
- **July 17, 2009**
  - NTMWD stopped pumping
- **August 3, 2009**
  - TPWD found zebra mussels in Sister Grove Creek, a tributary of Lake Lavon
- **August 4, 2009**
  - NTMWD was notified & voluntarily agreed to keep Texoma facility offline
- **May 2014**
  - NTMWD resumed pumping through new pipeline

Over 5 years without 28% of the District's raw water supply

# NTMWD Raw Water Supply Sources



# Water Treatment Plants



## Wylie, TX

■ Plant I	70 MGD
■ Plant II	280 MGD
■ Plant III	280 MGD
■ <u>Plant IV</u>	<u>140 MGD</u>
<b>Total</b>	<b>770 MGD</b>

Bonham WTP 6 MG

Tawakoni WTP 30 MDG

# Texoma Pump Station

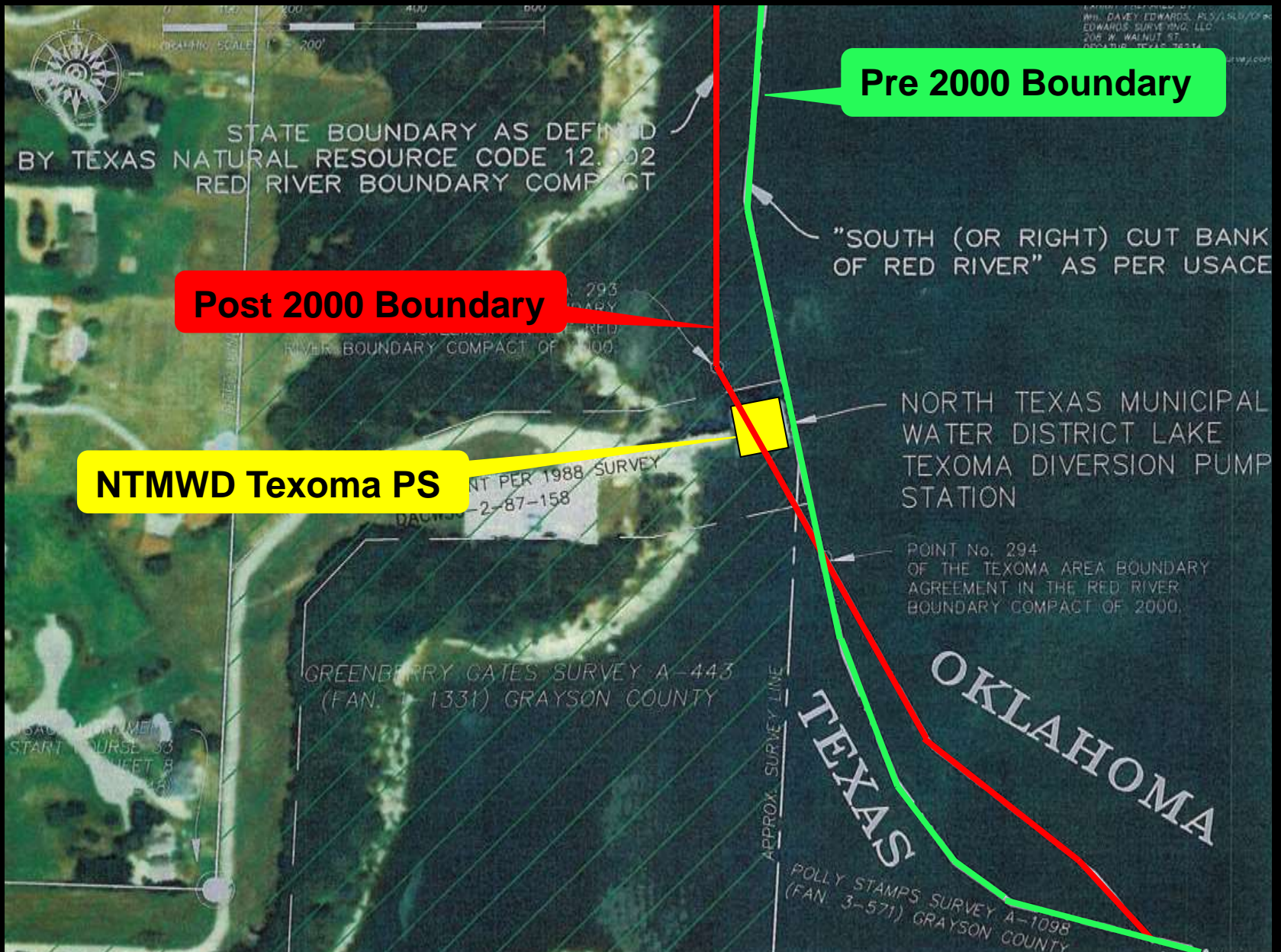


**NTMWD Lake Texoma  
Raw Water Pump  
Station**

**80-100 ft. of water depth**

**90 MGD pumping capacity**

**Expanding to 125mgd**



**OKLAHOMA – TEXAS LAKE TEXOMA BOUNDARY EXHIBIT**





# Summary

- To restore 28% of NTMWD's raw water supply, it took:
  - 5 years
  - \$310 M
  - 2 acts of Congress

And by the way, Zebra mussels were found in Lake Lavon before we resumed pumping!!





# Questions/Comments

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