



# Invasive Exotic Aquatic and Wetland Species Update

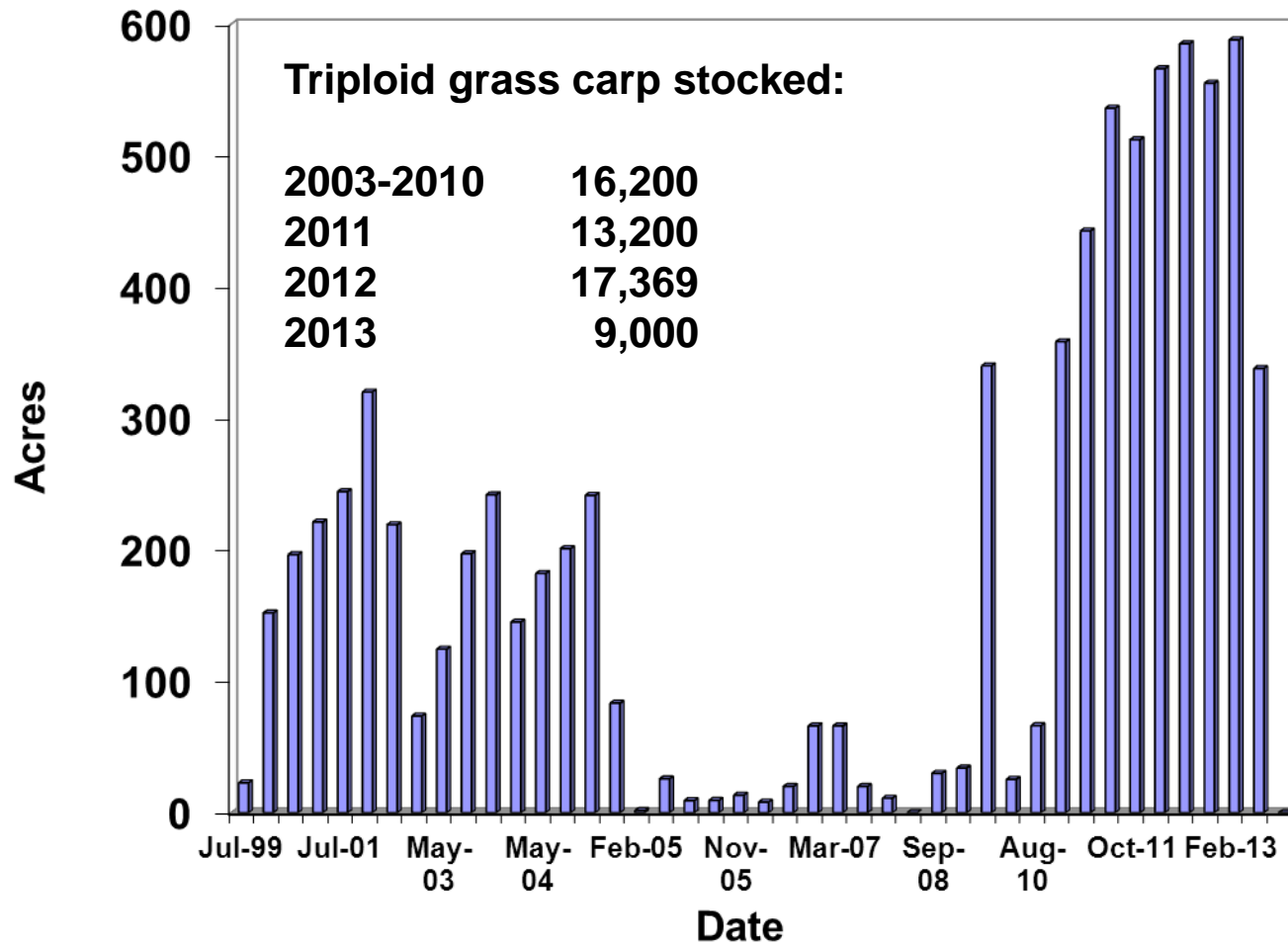
**Earl W. Chilton II, Ph.D.**  
**Texas Parks & Wildlife**  
**Austin, Texas**



# Lake Austin



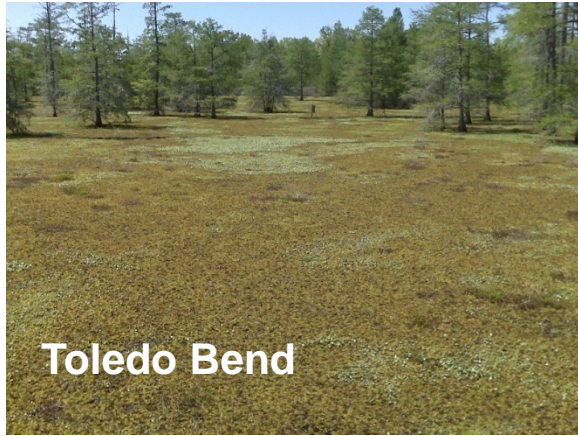
# Hydrilla in Lake Austin



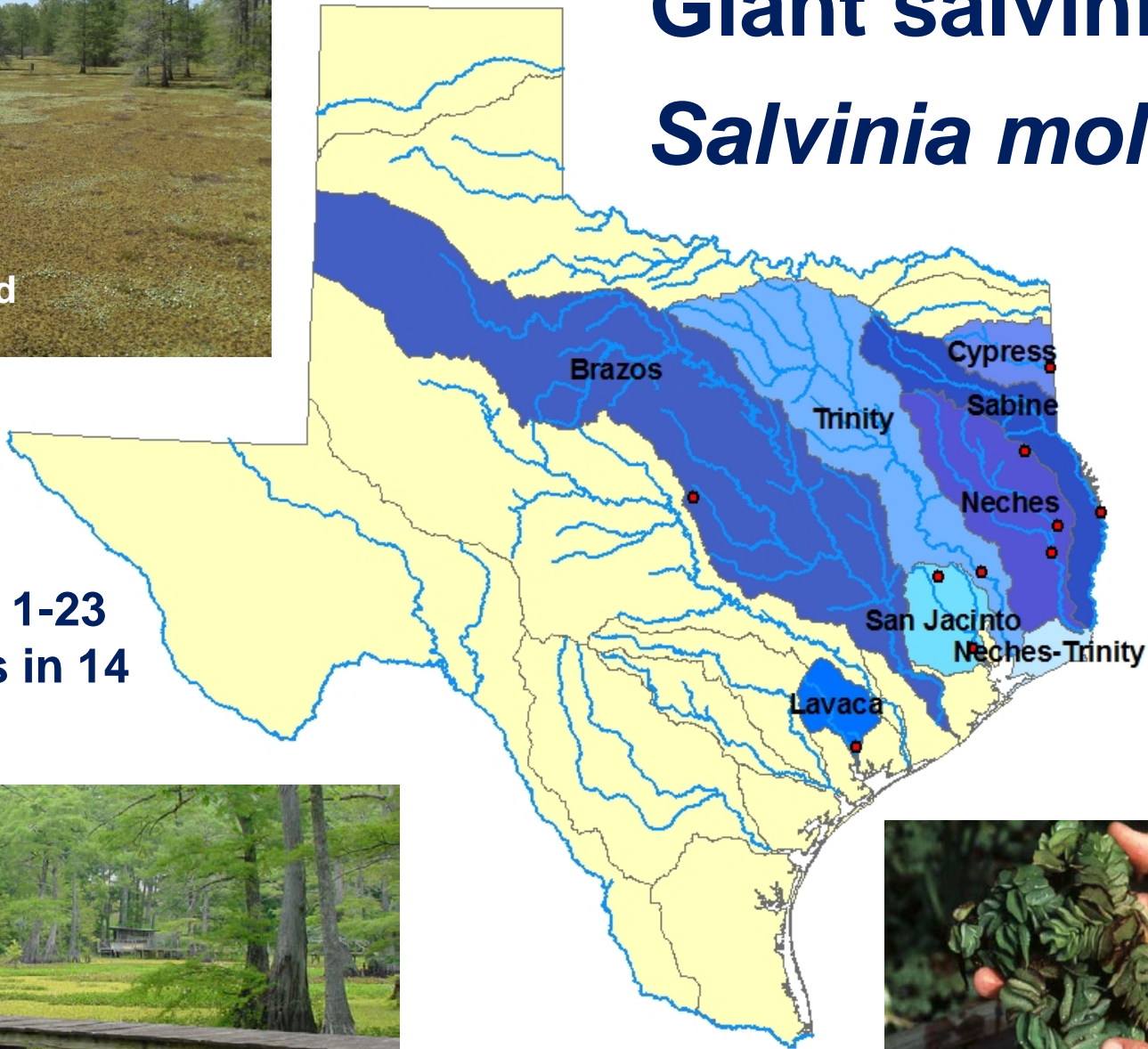


# Giant salvinia

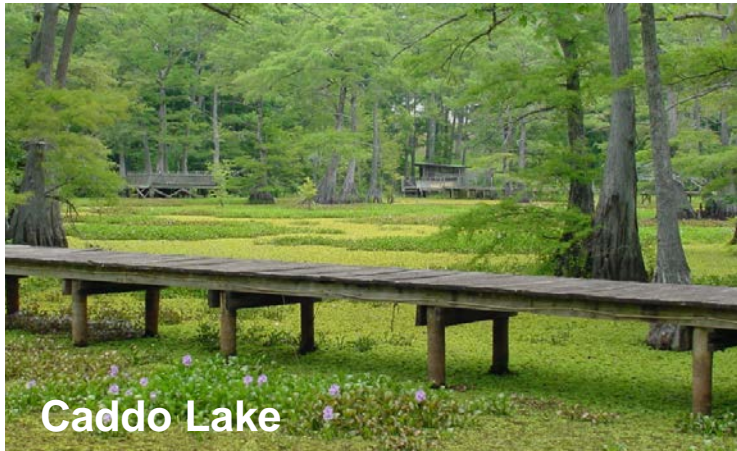
## *Salvinia molesta*



Toledo Bend



Spread from 1-23  
water bodies in 14  
years



Caddo Lake

6,000-15,000 acres



Mature giant  
salvinia

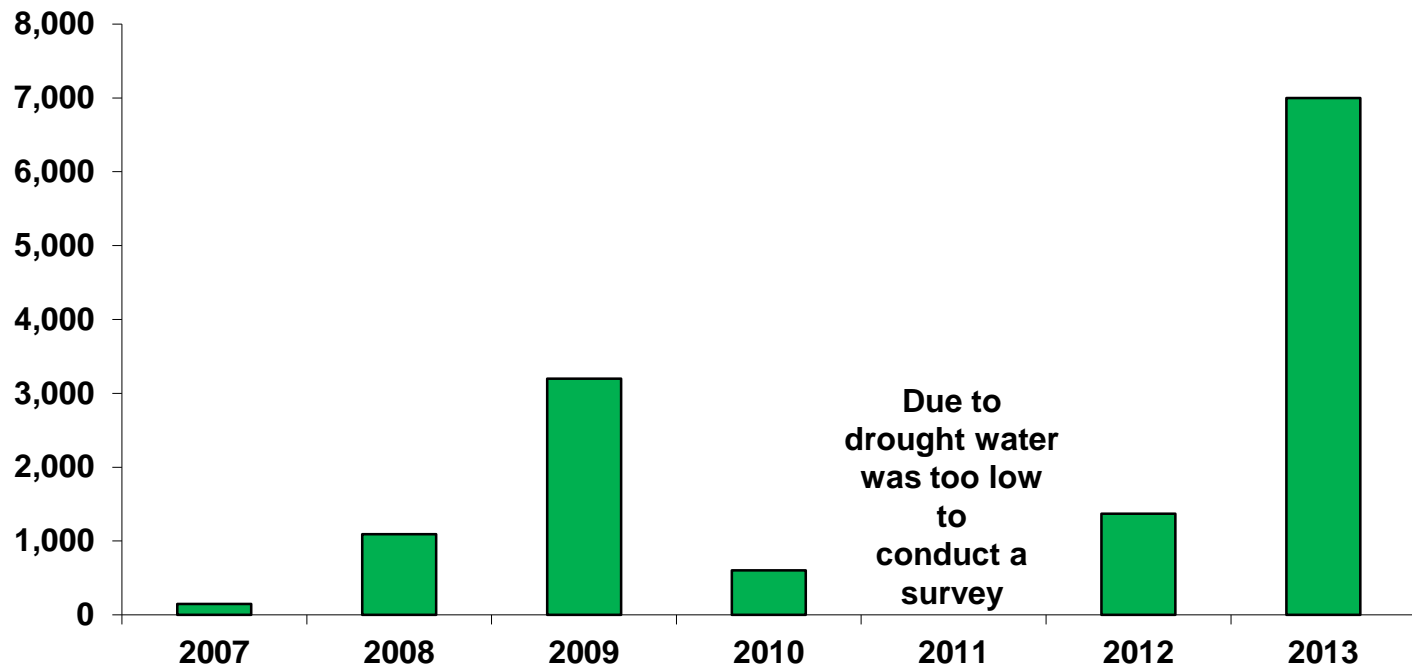


# Giant salvinia and Caddo Lake





# Growth





# Toledo Bend & Caddo Lake

- Estimated Combined Acreage of 13,000 to 15,000 acres of giant salvinia
- Herbicide Treatment Costs:

Aerial Treatment

\$65-100 per acre

Boat Treatment

\$125-145 per acre





# Toledo Bend & Caddo Lake

- Currently, \$450,000 budgeted for FY14 (about 32% of the total \$1.3 million aquatic invasive species budget for Texas)
- Cost of treating the current acreage (not including the rest of the state) would range from ~\$845,000 to \$2,175,000

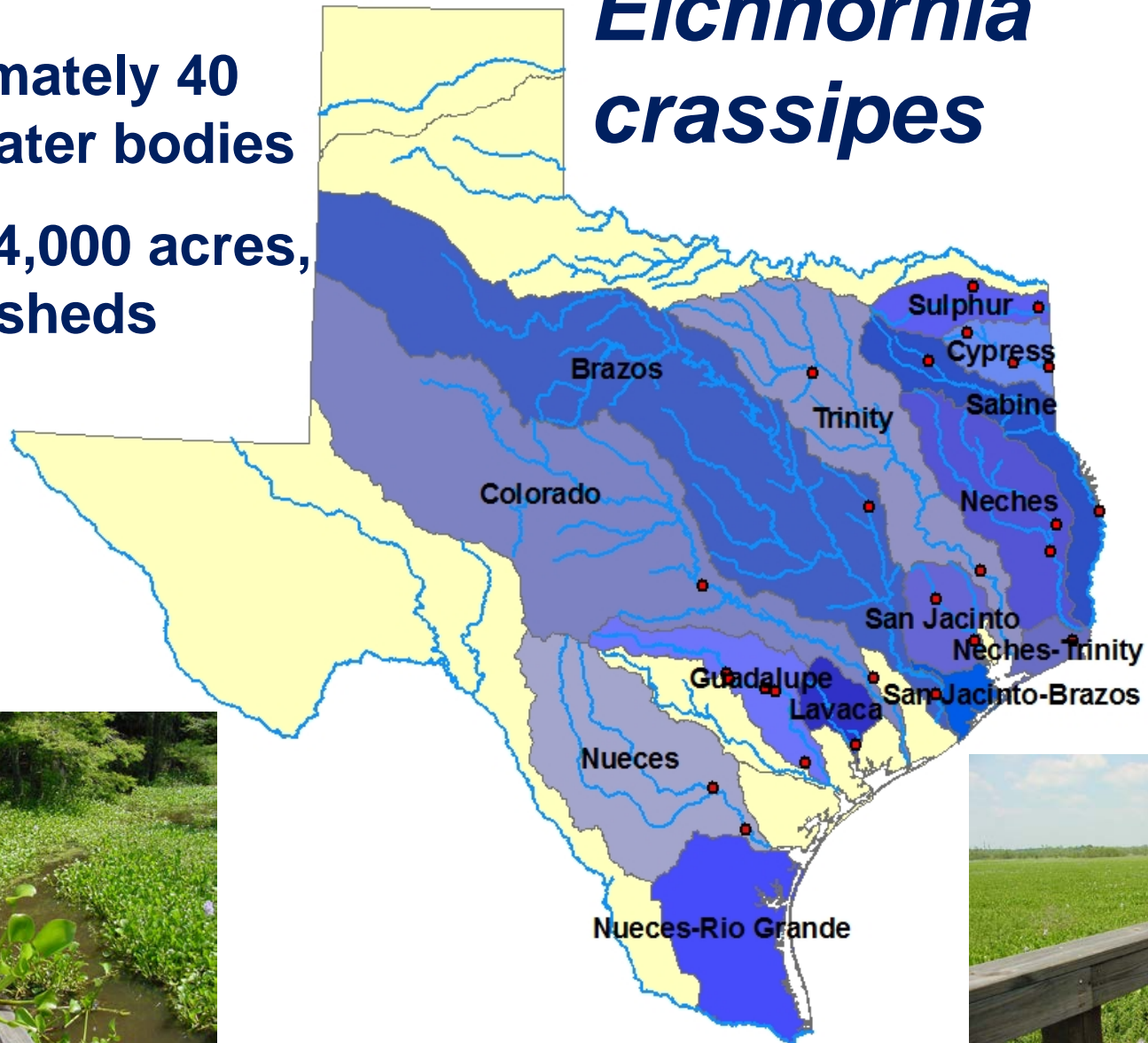




# Water hyacinth *Eichhornia crassipes*

Approximately 40  
public water bodies

6,000 - 14,000 acres,  
14 watersheds



# Lower Trinity River wetlands areas

## Lake Charlotte





# Day Lake east of Houston





# Llano River



**Chinaberry**



**Giant reed**



**Elephant ear**



# Management Options for Elephant Ear

- **Chemical treatments**
  - **Glyphosate-based herbicide (2.0% solution)**
  - **Imazapyr-based herbicide (1.5% solution)**
  - **Imazamox-based herbicide (5.0% solution)**

# Management Options for Elephant Ear

- **Mechanical removal**
  - Dig up corms
  - Leaves contain oxalic acid – could cause skin irritation





# June 20-21, 2012

## 22 Treatment Sites









# July 7, 2012

## Post-Treatment Results





# Hand-Held Herbicide Sprayers





**November 8, 2012**  
**10 Treatment Sites**





**November 12, 2012**  
**Treatment**





# Texas Program Budget

FY 2011	\$1.7 million
FY 2012	\$0.6 million
FY 2013	\$0.6 million
FY 2014	\$1.5 million
FY 2015	\$1.5 million

# Zebra Mussels in Texas

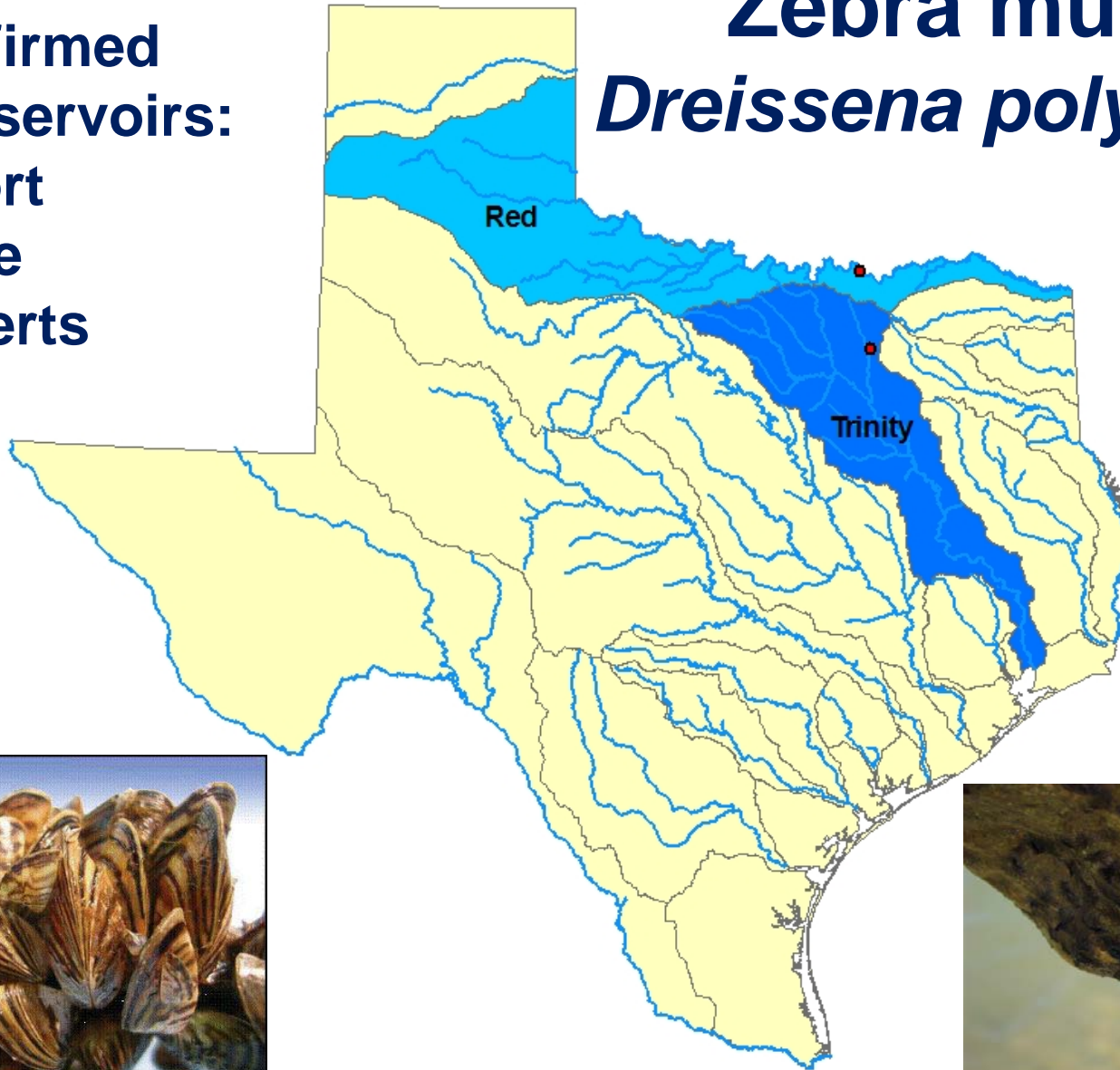




Five confirmed  
public reservoirs:  
Bridgeport  
Lewisville  
Ray Roberts  
Texoma  
Belton

# Zebra mussel

## *Dreissena polymorpha*



# HB 1241

- Gives Commission additional rule-making authority
  - Require persons leaving or approaching public water to drain from vessels all water resulting from immersion in public water
  - Allows inspection authority for these actions
  - Does not apply to salt water



# **Proposed Changes**

- **Requires water be drained from vessels leaving and approaching public water**
- **Applies to areas where boats can be launched**
- **Includes live wells, bilges, and any other receptacles that come in contact with public water**

# Exceptions

- **Travel between access sites on the same water body during the same day**
- **Governmental activities and emergencies**
- **Marine sanitary systems**
- **Commercially purchased live bait**



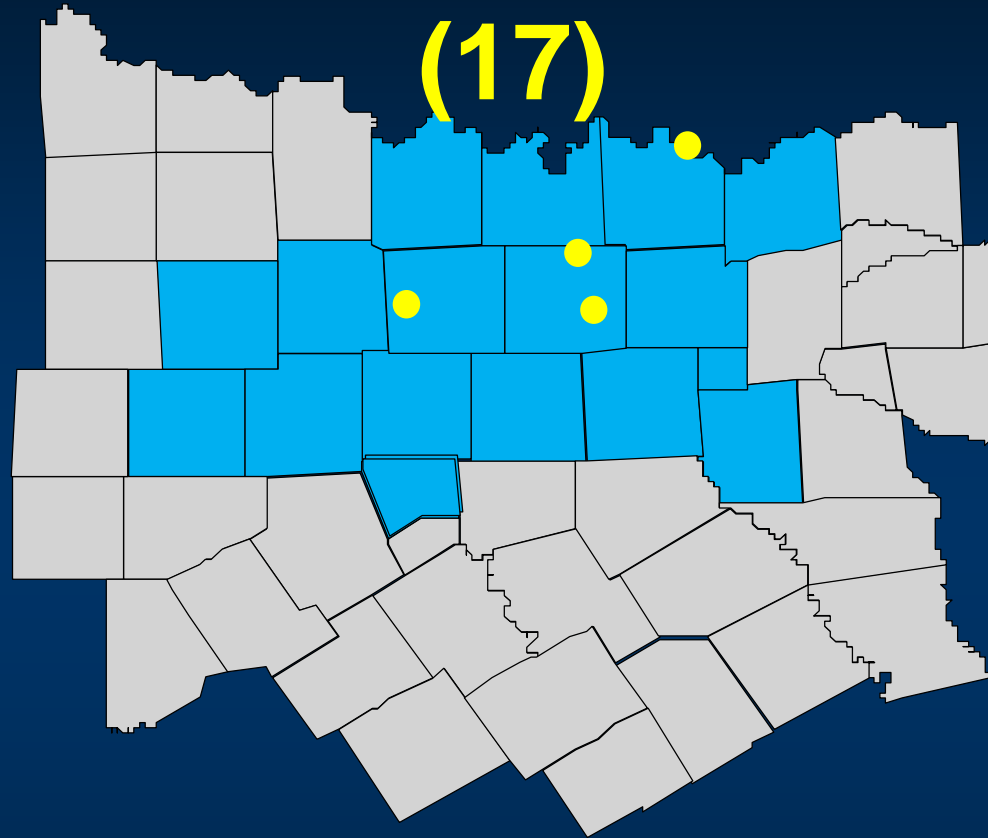
# Application

- **Allows application to water bodies not currently infested**
- **Encompass current infestations (buffer zone)**
- **Apply to all public water bodies in listed counties**
  - **DFW area north to Texoma**



# Restricted Counties

(17)



Confirmed  
● Zebra Mussel  
Populations

Montague, Cooke, Grayson, Fannin  
Young, Jack, Wise, Denton, Collin  
Stephens, Palo Pinto, Parker, Tarrant, Dallas, Rockwall  
Hood, Kaufman



# Major Reservoirs Included

- Arlington
- Benbrook
- Bridgeport
- Bonham
- Daniel
- Eagle Mountain
- Graham
- Granbury
- Grapevine
- Hubbard Creek
- Joe Pool
- Lavon
- Lewisville
- Mineral Wells
- Moss
- Mountain Creek
- Nocona
- Possum Kingdom
- Ray Hubbard
- Ray Roberts
- Texoma
- White Rock
- Worth

# **Impacts to Anglers and Boaters**

- **Draining must occur before travel to or from access areas**
- **Live fish cannot be transported in water from water body where caught**
- **Live bait personally caught can only be used where caught**
- **No off-site tournament weigh-ins if transporting live fish**



# Next Steps

- **Use available resources to publicize proposed changes**
- **Conduct public meetings in DFW – Texoma area**



Thank  
You!