



# ***Freshwater Mussels Federal Permitting***

***Presented by  
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***Meeting Date: July 30, 2018***



# *Freshwater Mussels Under Consideration for Federal Protection in Brazos River Basin*

Texas Fawnsfoot



Smooth Pimpleback



False Spike



## Recently Documented Candidate-Listed Mussel Populations in the Brazos River Basin

### Legend

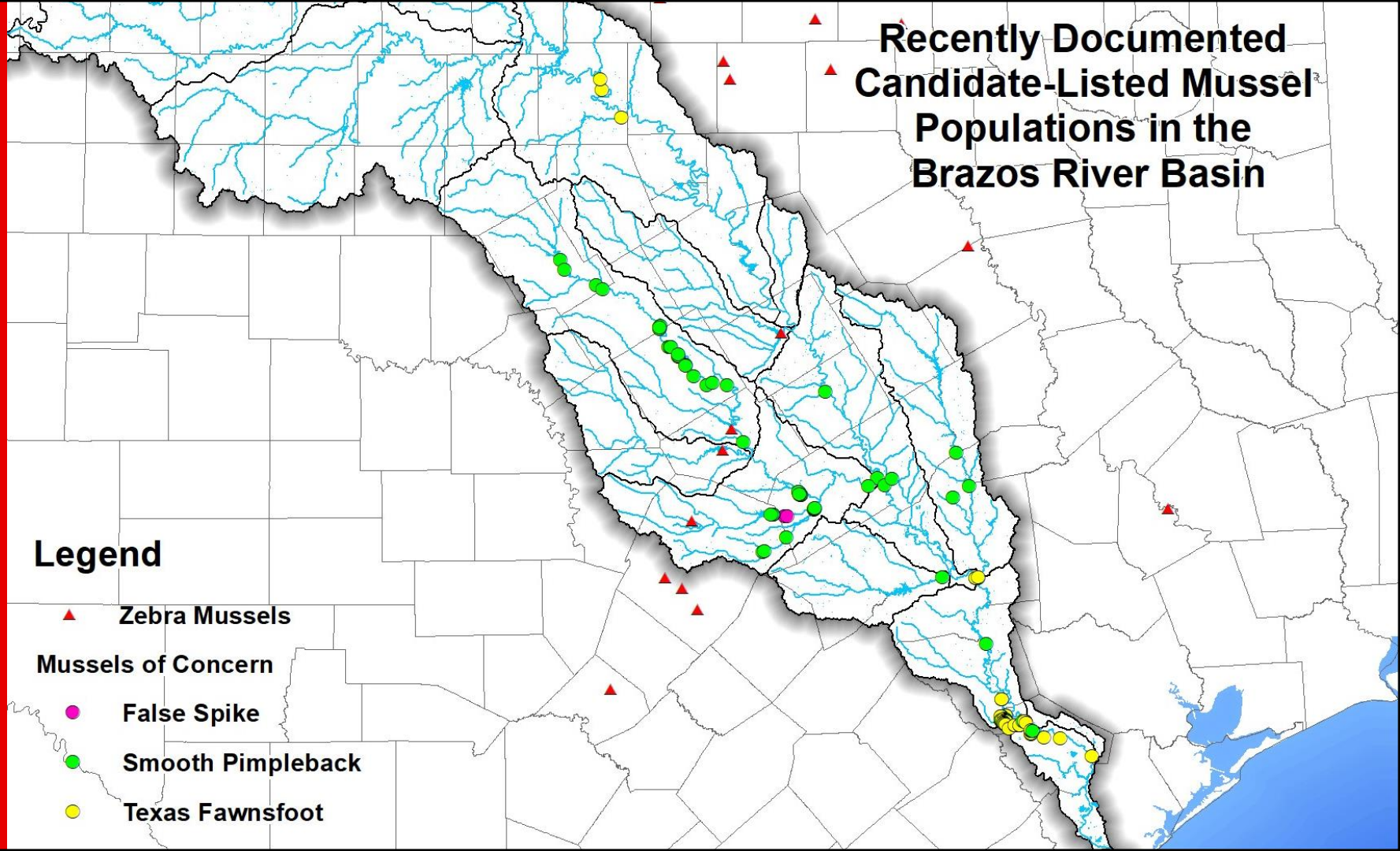
▲ Zebra Mussels

#### Mussels of Concern

● False Spike

● Smooth Pimpleback

● Texas Fawnsfoot





# ***Threats from USFWS Species Status Assessment***

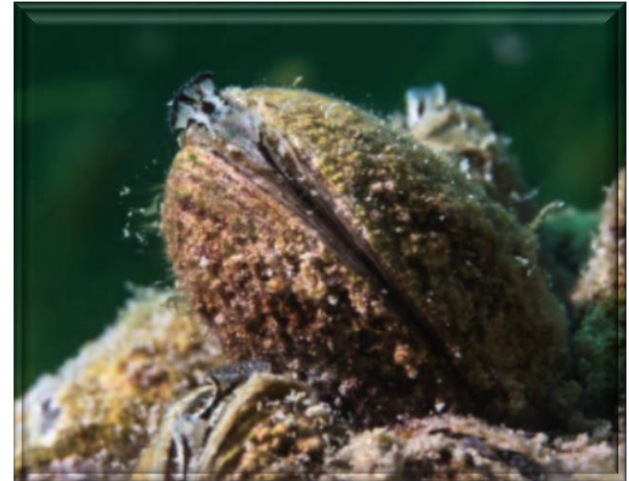
- **Modified/Reduced Stream Flow**
  - Reservoirs
  - Groundwater Pumping
  - Drought
- **Water Quality**
  - Wastewater Discharges
- **Sedimentation**
- **Barriers to Fish Movement**
- **Climate Change**





# *Why Federal permitting?*

- **ESA prohibits activities that affect listed species and their habitats**
- **Permit required for activities that may “take” threatened or endangered species**
- **Minimize exposure to ESA liabilities**
- **Minimize future impacts to BRA water supply operations**







# ***Contract Purpose***

- **Support BRA staff in negotiating permit with U.S. Fish and Wildlife Services**
- **Support BRA staff in implementing permit terms and conditions**





# ***Pre-Listing Permit Development***

- **Duration: FY 2019 – FY 2020**
- **Budget: \$950,000**
- **Pre-listing permit must be completed USFWS' final listing decision is effective**



# ***Contract Tasks***

- **Coordination with USFWS and other resource agencies**
- **Scoping of Permit**
- **Conduct future drought prediction scenarios**
- **Perform environmental flow standards analysis**
- **Develop a Habitat Quantification Tool**
- **Field Work to Support Permit**
  - **Occurrence surveys in areas not previously assessed**
  - **River cross-section surveys in areas where mussels occur**
  - **Flow-habitat data collection in areas where mussels occur**
  - **Occurrence surveys on other relevant aquatic species**





# ***Contract Tasks*** *continued*

- **Draft Permit**
  - **Assessment of current conditions and future needs**
  - **Threat assessment**
  - **Development of conservation actions**
  - **Identify science needs**
  - **Development of success measurement tools**
  - **Develop an adaptive management strategy**
  - **Develop long-term monitoring program**



## ***Contract Tasks*** *continued*

- **Operations/Business Plan**
- **Develop any necessary sampling or study plans**
- **Develop any Standard Operating Procedures necessary**
- **Assist BRA in obtaining Federal Scientific Collection Permit**
- **Assist BRA in amending existing Texas Parks and Wildlife Department scientific collection permit, if necessary**
- **Provide any necessary training for BRA staff**



## ***Contract Tasks*** *continued*

- **USFWS staff has indicated that a National Environmental Policy Act (NEPA) Environmental Assessment (EA) will need to be developed**
  - **Purpose and need for action**
  - **Identification of alternatives to the action**
  - **Analysis of environmental, social, and economic impacts**
  - **Determination if action will have significant impacts**
  - **Participate in public scoping meeting**



# ***Post-Listing Permit***

- **Only necessary if pre-listing permit cannot be obtained by the listing effective date.**
- **Larger, more time consuming permitting action**
  - **Requires development of Habitat Conservation Plan**
  - **NEPA Environmental Impact Statement**



# ***Other Contract Terms***

- **Contemplates a long-term relationship may be necessary**
  - **Post-listing permit**
  - **Conservation measures**
- **Contract includes a negotiated rate structure**
- **No additional work will be authorized without approval of the Board of Directors.**



# ***Resolution***

**“BE IT RESOLVED that the Board of Directors of the Brazos River Authority hereby authorizes the General Manager/CEO to enter into a contract with Bio-West, Inc. in an amount not to exceed \$950,000 for endangered species permitting for freshwater mussels, developing all necessary associated documents, and assisting the Brazos River Authority with implementation of permit provisions.”**





# Brazos River Authority