

TACWA

November 15, 2019



Update on Listing Process for Native Mussels as Endangered Species in the Trinity River Basin

Glenn Clingenpeel – Trinity River Authority of Texas



Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans




Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans



Update on Native Mussels Listing Process

Malacology

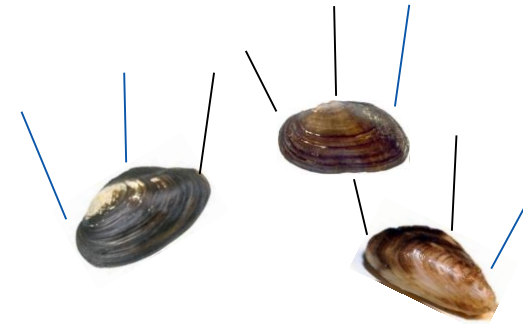
mal·a·col·o·gy

/,malə'käləjē/ 

noun

noun: **malacology**

the branch of zoology that deals with mollusks.



Use over time for: malacology



Source: Google

...A long time ago, in a courtroom far, far away...

2011 - WildEarth Guardians and
Center for Biological Diversity
(CBD) settle with USFWS

Required listing decisions on 878
candidate species

Example of “Sue and Settle” policy
Encourages litigation

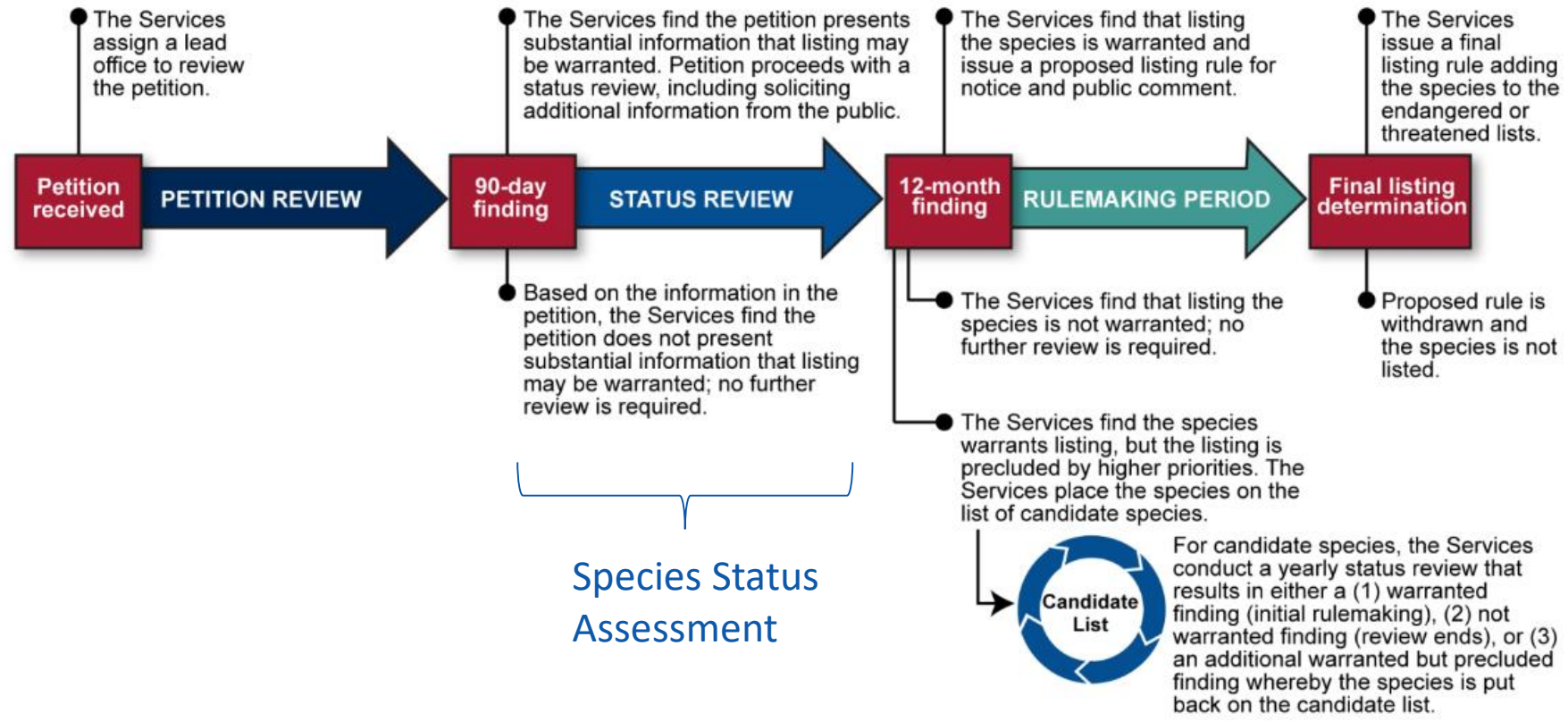
Listings forced through -
Undermines ability to use sound
science

In 2011, the U.S. Fish & Wildlife
Service spent over 75% of its
\$20.9 million listing and critical
habitat budget responding to
litigation from environmental
groups.

Source: Western Energy Alliance

August 23, 2016
CBD filed Notice of Intent to Sue
over missed ESA 12 month
finding deadlines on 417 species

The Listing Process



Species Status Assessment

Compile:

Best Available Data

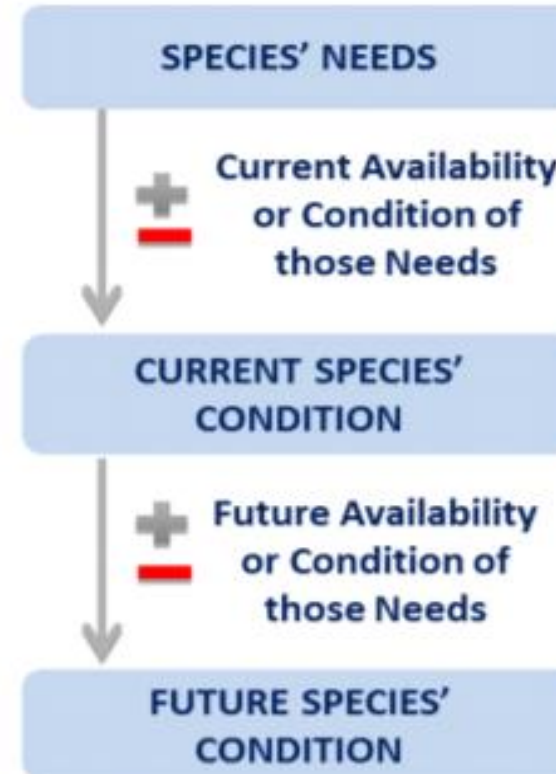
Describe:

Ecological Needs
Effect of Env. Factors

Current Condition
Explanation of changes in
population

Forecast :

Species response to future
conditions



Best Available Data

Law requires the use of “best available science”

Courts have looked at this issue from a data quality perspective

Arbitrary or capricious standard – must show agency ignored or reached an impossible conclusion from available data

“...an agency must utilize the best scientific data available, not the best scientific data possible.”

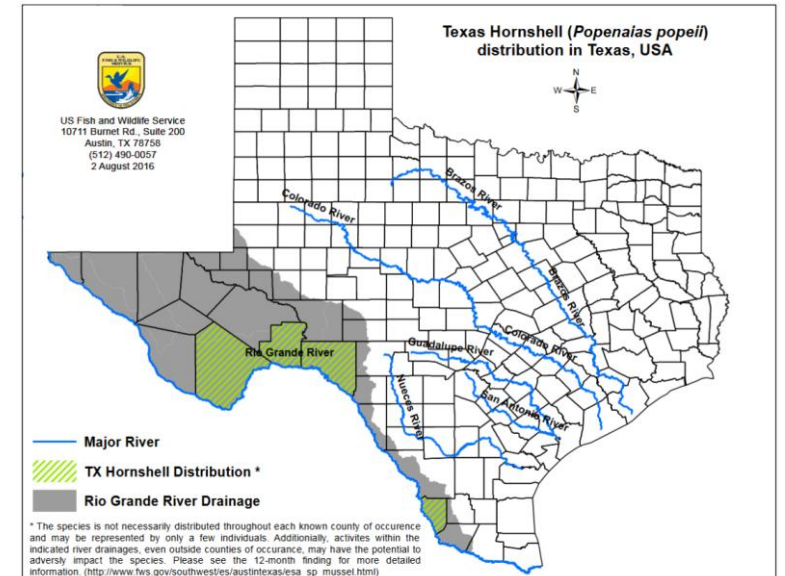
No test for sufficiency

Twelve Mussels in Texas

Common Name	Historic Range
Texas hornshell	Rio Grande, Pecos, Rio Salado
false spike	Brazos, Colorado, Guadalupe
Texas fatmucket	Colorado, Guadalupe
Texas pimpleback	Colorado, Guadalupe
Texas fawnsfoot	Brazos, Colorado
triangle pigtoe	Neches, San Jacinto
Louisiana pigtoe	San Jacinto, Trinity, Neches, Sabine
Texas heelsplitter	Neches, Trinity, Sabine
golden orb	Guadalupe, San Antonio, Nueces-Frio
smooth pimpleback	Brazos, Colorado
Mexan fawnsfoot	Rio Grande, Pecos, Rio Salado
salina muckett	Rio Grande, Pecos, Rio Salado

Texas Hornshell

New Mexico – Rio Grande



Texas Hornshell – Listing Decision

“The Service notes that the Texas hornshell is an endangered species based on impairment of **water quality, loss of flowing water** and **accumulation of fine sediment**, predation, and **barriers to host fish movement** and the **effects of climate change.**”

Texas Hornshell – Listing Decision

The Service lists the following as a non-comprehensive list of activities potentially resulting in a violation of Section 9 of the Act:

- Unauthorized handling or collecting of the species;
- **Modification of the channel or water flow** of any stream in which the Texas hornshell is known to occur;
- Livestock grazing that results in direct or indirect destruction of stream habitat; and
- **Discharge of chemicals or fill material into any waters in which the Texas hornshell is known to occur**

Central Texas Mussels

Brazos – Colorado – Guadalupe – San Antonio
– Trinity

Species Status Assessment finalized in
2018

SSA will inform a listing
recommendation

Preliminary listing decision expected
anytime now

Will begin 12-month comment period
to be followed by final listing decision

False spike
Texas pimpleback
Texas fawnsfoot
Texas fatmucket

**Fawnsfoot =
Texas Fawnsfoot**

East Texas Mussels

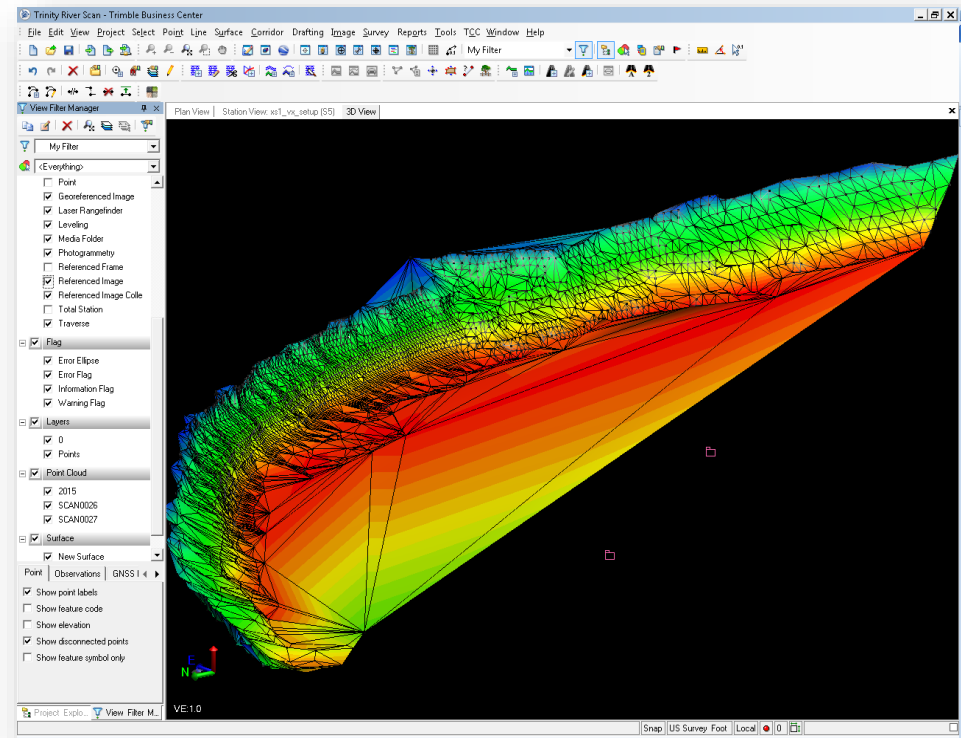
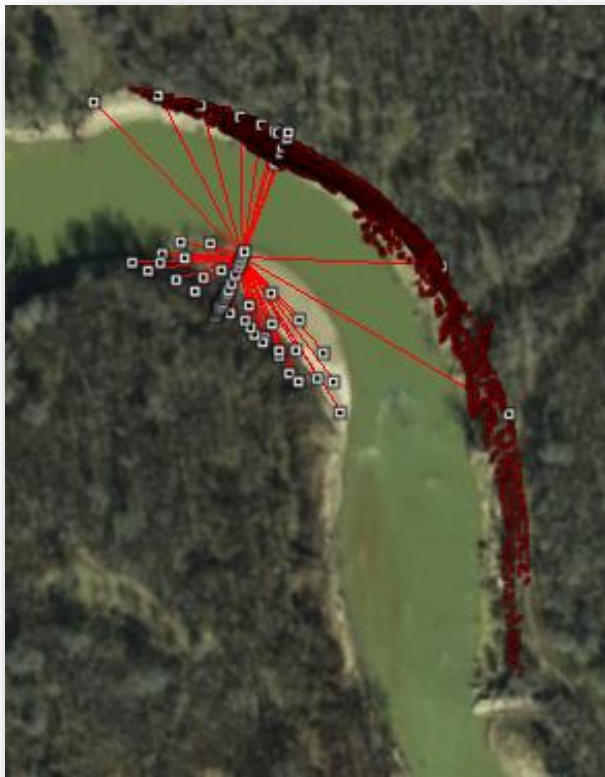
Trinity – Neches – Sabine – San Jacinto

Species Status Assessment
initiated- expect draft SSA
anytime now

Preliminary listing decision
could anytime after release of
final SSA

Significant new body of work in
Neches and Sabine

Texas heelsplitter
Louisiana pigtoe
~~Triangle pigtoe~~



Tactile Mussel Survey



Musseling the Right Way



Compact Funded Study

Contracted with Zara Environmental

1. Perform survey of upper-middle Trinity River (HWY 287 north) Goal: sample previously under-sampled areas in hopes of discovering new populations
2. Perform survey of Elm Fork. Goal: verify presence of LA pigtoe
3. Draft white papers on-the-fly to inform USFWS during SSA and species evaluation process

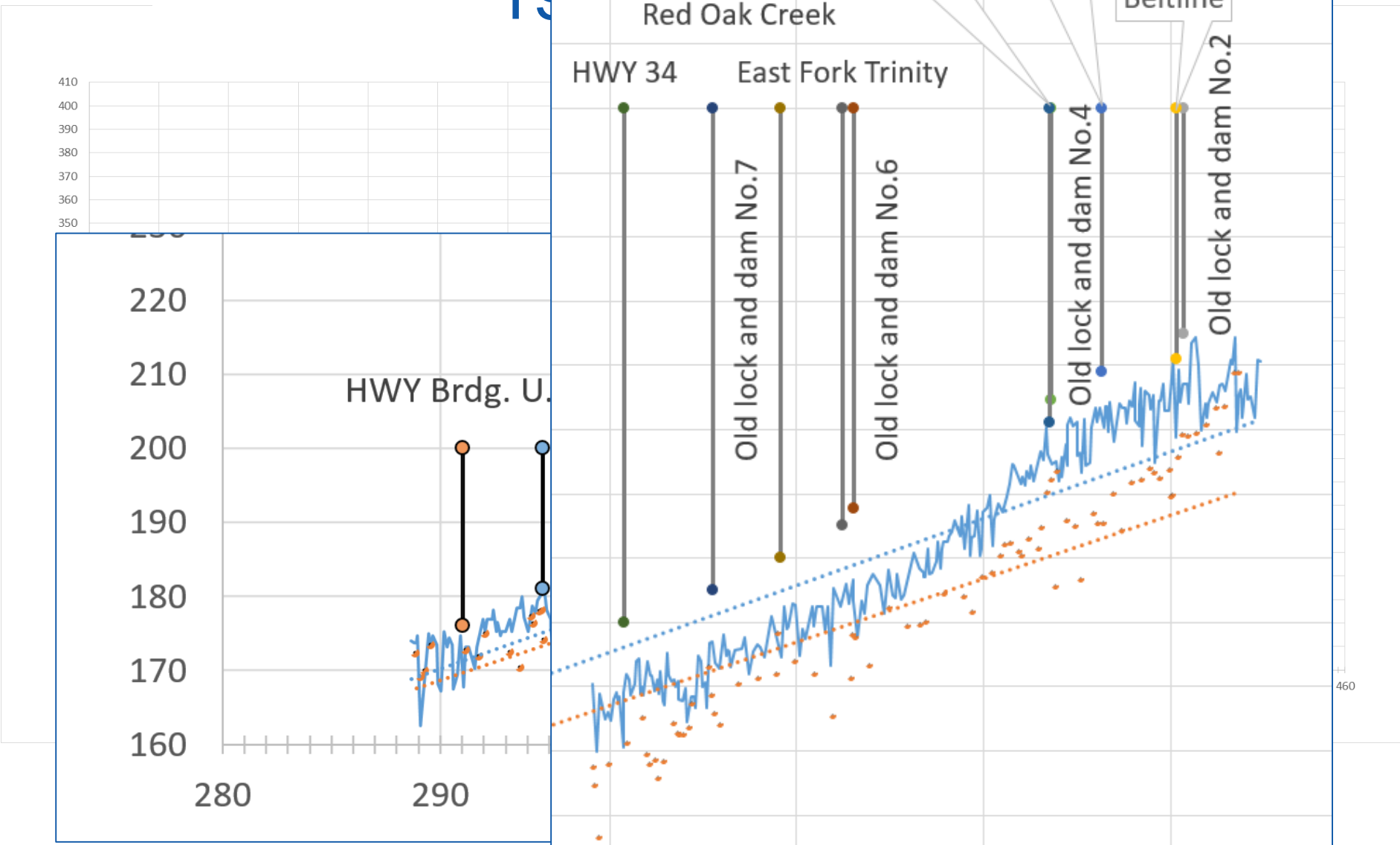
Compact Funded Study

Results

1. Few mussel beds in upper-middle Trinity;
Hydraulics likely responsible for lack of mussels
2. LA pigtoe likely misidentified in previous surveys.
No longer “known” to exist in the Elm Fork and
Upper Main Stem
3. Prepared and submitted white papers including
discussion on the role of water quality – specifically
ammonia

Comparison

19



What's Next?

TRA working with the UTWQC and USFWS to develop Candidate Conservation Agreements with Assurances (CCAA)

Identifies voluntary conservation measures to protect species:

- Public Outreach
- Mussel Sanctuaries
- Research

What's Next?

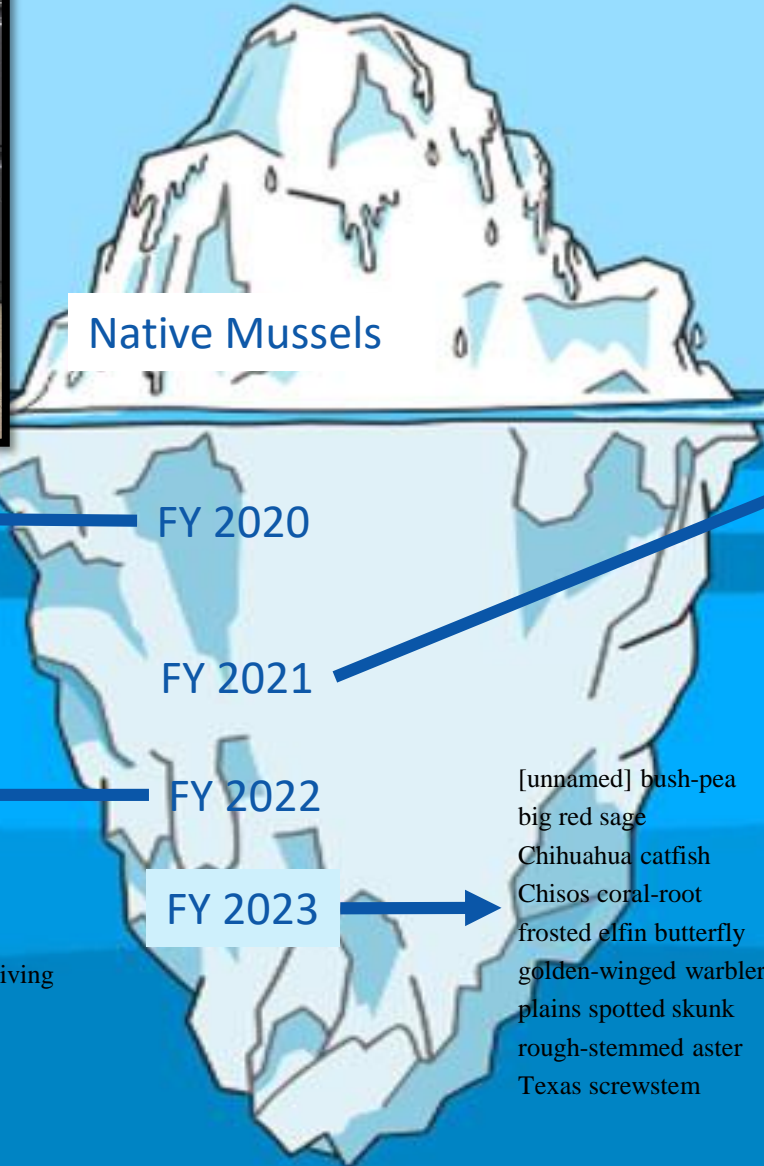
Identifies specific actions that can be taken

- Pipeline installation, repair, maintenance, etc.
- TPDES discharges
- Water diversions

Avoid designation of critical habitat

Becomes takings permit for specified actions

42 Species on USFWS 5-Year Plan



Native Mussels



- alligator snapping turtle
- bracted twistflower
- Comal blind salamander
- golden orb
- Louisiana pigtoe
- prostrate milkweed
- robust (or blanco) blind salamander
- Shinner's sunflower
- smooth pimpleback
- Texas heelsplitter
- toothless blindcat
- triangle pigtoe
- widemouth blindcat

- Cascade Caverns salamander
- Comal Springs salamander
- Mexican fawnsfoot
- mimic cavesnail
- Salina mucket
- saltmarsh topminnow
- spot-tailed earless lizard
- Texas cave (or Edwards Aquifer) diving beetle
- Texas troglobitic water slater

FY 2020

FY 2021

FY 2022

FY 2023

- bushy whitlow-wort
- desert massasauga
- Hall's bulrush
- lesser prairie-chicken
- monarch butterfly
- Navasota false foxglove
- Rio Grande cooter
- Texas kangaroo rat
- Texas salamander
- Tharp blue-star
- tricolored bat

- [unnamed] bush-pea
- big red sage
- Chihuahua catfish
- Chisos coral-root
- frosted elfin butterfly
- golden-winged warbler
- plains spotted skunk
- rough-stemmed aster
- Texas screwstem