Texas Native Fish Conservation Areas
Species of Greatest Conservation Need

- 1300 Plant and animal species in Texas classified as SGCN
- Defined as declining or rare and in need of attention to recover or to prevent the need to list under state or federal regulation
- SGCN List is created by TPWD with expert consultation and public feedback
- Forms the basis of the Texas Conservation Action Plan
Texas Freshwater Fish Diversity

• 190 native freshwater fishes
• 90 Species of Greatest Conservation Need
American Eel
Alligator Gar
Fountain Darter (Federally Endangered)
Guadalupe Bass
Guadalupe Darter
Guadalupe Roundnose Minnow
Texas Freshwater Mussels

Texas Pimpleback (Guadalupe Orb)
Source: BioWest

Texas (Guadalupe?) Fatmucket
Source: BioWest

Golden Orb
Source: Travis Tidwell

False Spike
Source: Clint Robertson
A watershed-scale (10-digit HUC or larger) area where management emphasizes conservation and restoration for long-term persistence of native fishes and other native aquatic species while allowing compatible uses\(^1\).

\(^1\)Williams, J.E. Richard N. Williams, Russell F. Thurow, Leah Elwell, David P. Philipp, Fred A. Harris, Jeffrey L. Kershner, Patrick J. Martinez, Dirk Miller, Gordon H. Reeves, Christopher A. Frissell, and James R. Sedell. Native Fish Conservation Areas: A Vision for Large-Scale Conservation of Native Fish Communities. 2011. Fisheries: 36(6) pp 267-277
Successful Native Fish Conservation Areas

- Wild, naturally-produced, self-sustaining populations

- Functional watersheds
  - Natural land cover
  - Intact riparian buffers
  - Natural river flow patterns
  - Instream connectivity

- Local stewardship

- Sustained conservation investments
Conservation Assessment for Texas Fishes of Greatest Conservation Need

- Assembled range-wide models of species distribution
- Conducted spatial prioritization considering species-specific responses to habitat alteration
- Identified proposed multi-species, watershed-based management units
Texas Native Fish Conservation Areas Network

- Partnership of conservation professionals from NGOs, state and federal agencies, and universities
- Shared vision of collaborative stewardship across interjurisdictional landscapes
- Mission – Protect and restore wild and native fishes and the habitats they need to survive.
Partner Roles and Responsibilities

- Review and adapt the NFCA prioritization to ensure that native fish strongholds are captured within the watershed prioritization
- Identify priority science needs and conservation actions for preservation of native fishes and their habitats in priority watersheds
- Serve as a catalyst for cooperation, collaboration, and leveraging of technical and financial resources
- Facilitate local implementation of the Texas Conservation Action Plan (i.e., TX SWAP)
Assessment → Planning → Action

Bridging the ‘Knowing-Doing’ Gap in Native Fish Conservation

FIND OUT MORE

Nativefishconservation.org
Outcomes of the Watershed-Based Conservation Planning Workshops - As of April 2016, watershed-based conservation planning workshops have been conducted for the Native Fish Conservation Areas in the Brazos, Canolian, Colorado and Red rivers.

Over 60 subject-matter experts participated in the workshops. Workshop participants recommended more than 150 project-level actions to conserve freshwater biodiversity in these priority watersheds. Top-tier projects are presented.
Interactive NFC Project Map

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**Spawning flows for Sharpnose Shiner and Smalleye Shiner**

Upper Brazos River basin of Texas

NRCA: Brazos

Project Description: To understand how water resource development in the Upper Brazos River basin of Texas quantitatively affects spawning flows needed for Sharpnose Shiner (Notropis oxyrhynchus) and Smalleye Shiner (N. buccula) reproductive success by: (1) evaluating groundwater-surface water interactions with trends in baseflow and groundwater level, streamflow measurements during spawning, and hydrograph separation with conductivity, and (2) assessing changes in natural flow regime from reservoir operation using minimum-flow, high flow pulse, and bank storage metrics.

More details

[Map and Satellite options]

[Options for project actions]

- Adaptive management and reporting
- Conduct monitoring to evaluate conservation action
- Conduct research to fill critical information gaps
- Develop conservation demonstration areas
- Mitigate effects of invasive species
- Organize networks of public and private landowners
- Protect and maintain intact, healthy habitats
- Restore impacted habitats
- Restore stream and habitat connectivity

SHOW 25 ▼ ENTRIES
Interactive NFC Project Map

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Saltcedar management within Canadian River drainages

Canadian River: prioritization of treatment will take place across all critical, essential, and utilized habitats within basin.

NFCA: Canadian

Project Description: Conduct an inventory and characterization of saltcedar (SC) coverage, potential refugia, and fish passage barriers, develop plan for prioritized, stepwise, sustainable SC management within Canadian River drainages including SOPs for SC monitoring and managing. Implement prioritized, large-scale SC management that is adaptive to periodic reevaluation based on monitoring results.

More details
Texas Native Fish Conservation Network

2010-2018 Outcomes

- $1.2M in TPWD funds leveraged against $4.5M in project funds and $11M in partner matching funds
- 61 river conservation workshops with engagement of > 2,000 landowners
- 123,000 acres committed to watershed conservation
- 15,890 acres under conservation easements
- > 9,677 acres of habitats restored, including 50 springs and spring complexes
- 2 dams and 1 low water crossing removed
- 2 bridges redesigned and 1 replaced