

Native Fish Conservation Areas Chihuahuan Desert of Texas

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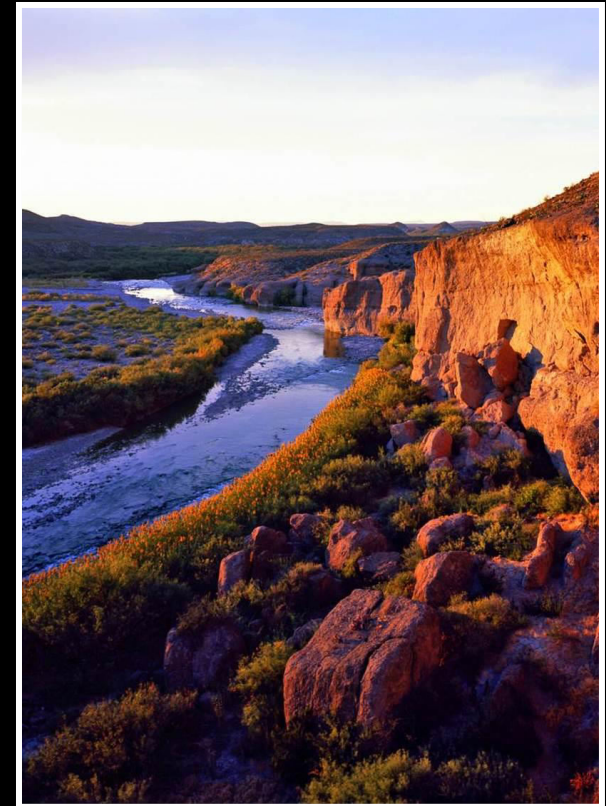
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Native Fish Conservation Areas Objectives

- 1. Protect and maintain intact, healthy habitats**
- 2. Restore impacted habitats**
- 3. Restore stream and habitat connectivity**
- 4. Mitigate effects of invasive species**
- 5. Organize conservation networks**
- 6. Promote sustainable recreation and develop conservation demonstration areas**
- 7. Conduct research to fill critical information gaps**
- 8. Conduct adaptive management and reporting**

Native Fish Conservation Areas Planned Outcomes

- ◆ **Wild, naturally-produced, self-sustaining populations**
- ◆ **Functional watersheds**
 - **Natural land cover**
 - **Intact riparian buffers**
 - **Natural river flow patterns**
 - **Connected aquatic landscapes**
- ◆ **Sustainable management**



Conservation Actions and Monitoring Guidelines for Native Fish Conservation Areas

- Identify focal species and NFCA boundaries.
- Describe the current and desired biological status of focal species.
- Assess threat factors and identify those that can be managed.



Focal Species - Chihuahuan NFCAs

Shovelnose Sturgeon

Alligator Gar

American Eel

Mexican Stoneroller

Maravillas Red Shiner

Proserpine Shiner

Conchos Roundnose Minnow

Manantial Roundnose Minnow

Devils River Minnow

Roundnose Minnow

Rio Grande Chub

Rio Grande Silvery Minnow

Speckled Chub

Tamaulipas Shiner

Chihuahua Shiner

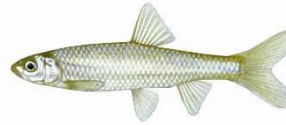
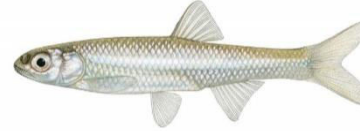
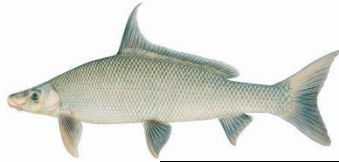
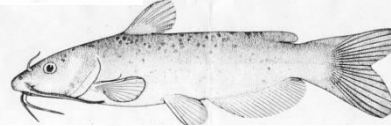
Rio Grande Shiner

West Texas Shiner

Phantom Shiner

Pecos Bluntnose Shiner

Rio Grande Bluntnose Shiner



Longnose Dace

Rio Grande Blue Sucker

Longlip Jumprock

Mexican Redhorse

Chihuahua Catfish

Rio Grande Blue Catfish

Headwater Catfish

Mexican Blindcat

Rio Grande Cutthroat Trout

Big Bend Gambusia

Spotfin Gambusia

Pecos Gambusia

Blotched Gambusia

Leon Springs Pupfish

Comanche Springs Pupfish

Conchos Pupfish

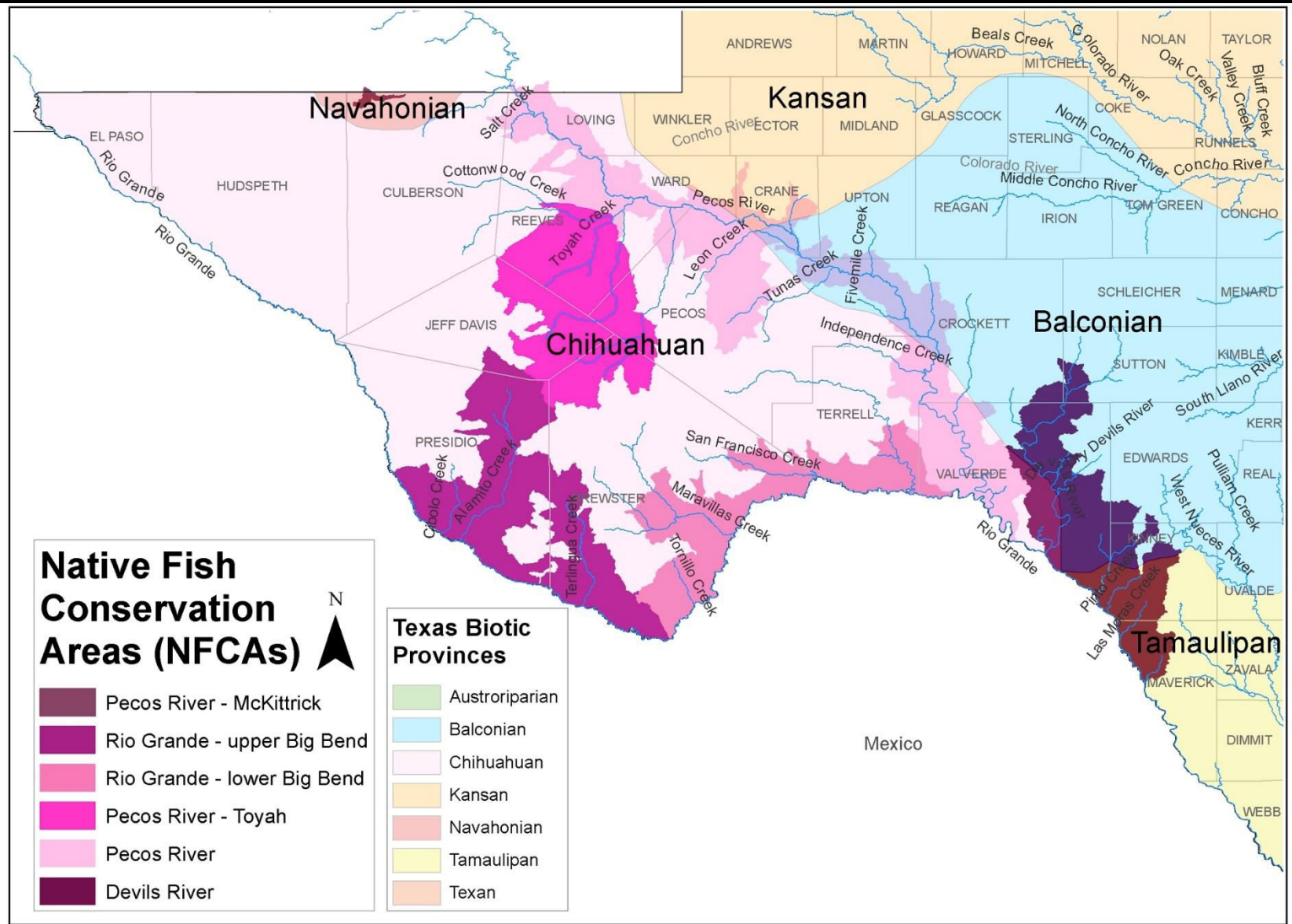
Pecos Pupfish

Grande Largemouth Bass

Rio Grande Darter



Chihuahuan NFCAs



Fishes of the Big Bend NFCAs (upper & lower)

Scaphirhynchus platyrhynchus (Shovelnose Sturgeon)

Atractosteus spatula (Alligator Gar)

Lepisosteus oculatus (Spotted Gar)

Lepisosteus osseus (Longnose Gar)

Anguilla rostrata (American Eel)

Dorosoma cepedianum (Gizzard Shad)

Dorosoma petenense (Threadfin Shad)

Campostoma ornatum (Mexican Stoneroller)

Carassius auratus (Goldfish)

Cyprinella lutrensis (Red Shiner)

Cyprinella lutrensis blairi (Maravillas Red Shiner)

Cyprinella venusta (Blacktail Shiner)

Cyprinus carpio (Common Carp)

Dionda sp 1 (Conchos Roundnose Minnow)

Hybognathus amarus (Rio Grande Silvery Minnow)

Macrhybopsis aestivalis (Speckled Chub)

Notemigonus crysoleucas (Golden Shiner)

Notropis braytoni (Tamaulipas Shiner)

Notropis chihuahua (Chihuahua Shiner)

Notropis jemezanus (Rio Grande Shiner)

Notropis orca (Phantom Shiner)

Notropis simus simus (Rio Grande Bluntnose Shiner)

Notropis stramineus (Sand Shiner)

Pimephales promelas (Fathead Minnow)

Pimephales vigilax (Bullhead Minnow)

Rhinichthys cataractae (Longnose Dace)

Carpionodes carpio (River Carpsucker)

Cycleptus sp (Rio Grande Blue Sucker)

Ictiobus bubalus (Smallmouth Buffalo)

Ictiobus niger (Black Buffalo)

Moxostoma austrinum (Mexican Redhorse)

Moxostoma congestum (Gray Redhorse)

Astyanax mexicanus (Mexican Tetra)

Ameiurus natalis (Yellow Bullhead)

Ictalurus sp (Chihuahua Catfish)

Ictalurus sp (Rio Grande Blue Catfish)

Ictalurus furcatus (Blue Catfish)

Ictalurus lupus (Headwater Catfish)

Ictalurus punctatus (Channel Catfish)

Pylodictis olivaris (Flathead Catfish)

Menidia beryllina (Inland Silverside)

Fundulus grandis (Gulf Killifish)

Fundulus zebrinus (Plains Killifish)

Gambusia affinis (Western Mosquitofish)

Gambusia gaigei (Big Bend Gambusia)

Cyprinodon eximius (Conchos Pupfish)

Morone chrysops (White Bass)

Lepomis auritus (Redbreast Sunfish)

Lepomis cyanellus (Green Sunfish)

Lepomis gulosus (Warmouth)

Lepomis macrochirus (Bluegill)

Lepomis megalotis (Longear Sunfish)

Lepomis microlophus (Redear Sunfish)

Micropterus salmoides floridanus (Florida Largemouth Bass)

Micropterus salmoides nuecensis (Rio Grande

Largemouth Bass)

Pomoxis annularis (White Crappie)

Aplodinotus grunniens (Freshwater Drum)

Herichthys cyanoguttatus (Rio Grande Cichlid)

Oreochromis aureus (Blue Tilapia)

- ◆ **More than ½ of the native species are imperiled or already gone**
- ◆ **50% of the focal species no longer occur here**
- ◆ **30% of the species currently in these two NFCAs are non-native**



Threats and Limiting Factors

- **habitat fragmentation**
- **barriers to migration**
- **spring flow declines**
- **reduced stream flow**
- **loss of natural flow regime**
- **habitat loss**
- **pollution**
- **overharvest**
- **non-native species (hybridization, competition and predation)**



Overview of the Watershed-Based Planning Process



- **Develop a prioritized list of conservation needs and actions** to be taken to conserve focal species and habitats within the NFCAs.
- **Appropriate conservation and restoration may also include riparian and upland systems.**

Overview of the Watershed-Based Planning Process



- **Determine specific regulatory, voluntary and policy-oriented conservation actions** that the conservation partner network can implement to ensure long-term persistence of focal species within the NFCAs.

Overview of the Watershed-Based Planning Process



- **Develop conservation and restoration plans** designed to conserve native fishes to the level that populations thrive as stable components of diverse ecological communities, simultaneously providing clean water, outstanding outdoor recreation and a stable economic base for present and future citizens of the watershed

Conservation and Restoration Plan

- Establish a holistic, watershed-scale approach to restoration and management that will address threats and limiting factors.
- Delineate actions specific to addressing focal species threats.
- Organize networks of public and private landowners committed to the cooperative conservation of land and water resources within the watershed.
- Coordinate conservation actions at sufficient scales to meet all life history stages of the focal species.



Conservation and Restoration Plan

Develop conservation demonstration areas

- Provide fishing, paddling, and hiking opportunities.
- Promote sustainable public use of rivers.
- Demonstrate best management practices.
- Highlight restoration actions through educational kiosks.



<http://nativefishconservation.org/>



CONSERVATION
ASSESSMENT

GREAT PLAINS
NFCN

CONSERVATION
PLANNING

CONSERVATION
PLANS

INTERACTIVE MAP

CONSERVATION
ACTIONS

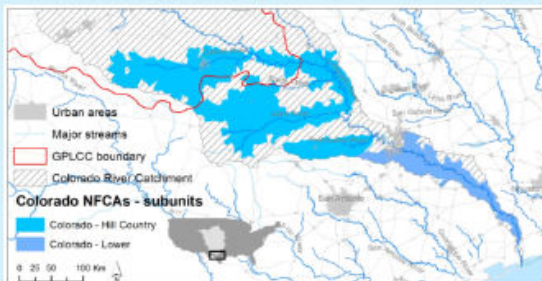
Assessment → Planning → Action

Bridging the 'Knowing-Doing' Gap in Native Fish Conservation

FIND OUT MORE



COLORADO RIVER, TEXAS



Progress and Outcomes of the Colorado River Native Fish Conservation Area Planning Process. An interdisciplinary team of 32 fish and wildlife conservation professionals representing conservation non-profits, universities, state and federal agencies gathered for a series of conservation planning workshops in fall 2015. Priority actions now provide the groundwork for a conservation action plan that will guide partner

investments over the next 5-10 years in cooperative, watershed-scale conservation of native fishes and other aquatic resources in the Colorado River watershed. The Colorado River Conservation Action Plan is expected to be finalized by fall 2016.

COLORADO RIVER NFCA ACTION PLAN SUMMARY

Priority science needs identified within the Colorado River Native Fish Conservation Area primarily centered on the need for development of river reach-specific data and decision support tools that can be used to inform the conservation of environmental flows (through mechanisms such as inclusion of prescribed releases in water rights permits and dam operations plans or leases of existing water rights for instream uses). Another area of interest focused on the need for data and decision support tools to guide and prioritize restoration and preservation of riparian and floodplain habitats (through mechanisms such as conservation easements or other landowner incentives). Three highest-priority projects emerged during the Colorado River Native Fish Conservation Area planning process. These three projects are listed below, all three of which are now underway supported directly by TPWD.

- Examine flow-ecology relationships to inform instream flow prescriptions in the Lower Colorado River Water Management Plan to conserve Guadalupe Bass (state fish of Texas) and State-Listed Blue Sucker

- Application of the Texas Ecological Indices Project to prioritize riparian buffers for protection through landowner incentives and conservation easements supported by the Texas Farm and Ranch Lands Conservation Program and TPWD Landowner Incentive Program

- Examine opportunities for water leases, water rights acquisition, and voluntary incentive-based programs to achieve flow restoration targets for conservation of Guadalupe Bass in Hill Country tributaries of the Colorado River

SUB BASIN PROFILES

- [Hill Country NFCA Profile](#)
- [Lower Colorado River NFCA Profile](#)

INTERACTIVE NFC PROJECT MAP



SUBMIT YOUR CONSERVATION PROJECT HERE

This form will feed a project planning spreadsheet that will facilitate sorting, prioritization, and further discussions of projects.

[Open Submission Form](#)

