Trinity River Authority of Texas

Best Management Practices for Section 7 Activities within the Trinity River basin

Purpose of Document and Disclaimer:

The following document is intended to avoid and minimize the impacts to the Covered Species of freshwater mussels and turtles, listed in the Trinity River Authority's Candidate Conservation Agreement with Assurances (CCAA). These Best Management Practices have been developed by the Covered Parties to fulfill the avoidance, mitigation, and educational requirements tasked to the Covered Parties within the Covered Area. Where these BMPs were developed specifically for the Covered Species and the Covered Activities outlined in Section 7 of the Trinity River CCAA, their beneficial impacts should extend to all other species of freshwater mussels and turtles found within the Trinity River basin. These BMPs are not intended to replace Endangered Species Act coordination if required for a project, but rather to act as guidance of how to voluntarily avoid harming these species. These recommended BMPs were developed in cooperation with Texas Parks and Wildlife Department (TPWD), USFWS and from other publicly available BMPs for each species.

Covered Species & Ecological Profiles:

-**Freshwater mussels** are a highly inconspicuous group of organisms that play a vital role within the aquatic environment. Commonly mistaken for rocks, these relatively immobile creatures are filter feeders who remove algae, bacteria and other material from the water column, improving the water quality within their environment. They live their lives in the substrate of flowing waters, usually in areas with stable substrate (gravel, cobble or boulder). Certain species have adapted to be found in backwaters, oxbows and in sandier/silt filled environments, though this is uncommon. Currently, 29 different species can be found within the Trinity River Basin, with this CCAA focusing on the Covered Species: Trinity Pigtoe (*Fusconaia chunii),* Texas Heelsplitter (*Potamilus amphichaenus)* and Texas Fawnsfoot *(Truncilla macrodon).* Additionally, the Louisiana Pigtoe (*Pleurobema riddellii),* though no longer found within the Trinity, is also a Covered Species.

-The **Alligator Snapping Turtle** (*Macrochelys temminckii)* is a modern-day dinosaur found throughout East Texas and the Southeast in a variety of aquatic habitats from small streams to large rivers and on the banks of some reservoirs, though they prefer aquatic habitat with canopy cover, submerged structures and areas of slower moving water. Adults are opportunistic feeders but are highly adapted to consuming fish and other aquatic prey. Males rarely leave the water and use downed trees and root balls as habitat. Female Alligator Snapping Turtles will use riparian areas for nesting.

-The **Western Chicken Turtle** (Deirochelys reticularia miaria) is a semi-aquatic turtle that prefers wetlands and smaller bodies of water in the spring. Most of the year, these turtles will leave the aquatic environment and bury themselves underground for the remainder of the year. Ranges and many behavior characteristics are still being discovered for this species.

Threats within the Trinity:

Major threats to these Covered Species include; altered hydrology, degraded water quality, modification, loss, or fragmentation of habitat, and barriers to dispersal. All these factors can and have impacted the Covered Species in varying degrees within the Trinity Basin. Freshwater mussels are the most endangered species group in the United States, with multiple species either listed or currently under consideration for Threatened or Endangered Species Protections. Alligator Snapping Turtle, along with the threats above, are commonly poached for their meat, shell or to be sold in the pet trade.

Best Management Practices:

The Covered Parties operations require staff to operate in riparian areas where the Covered Species are found. These Best Management Practices are designed to minimize any

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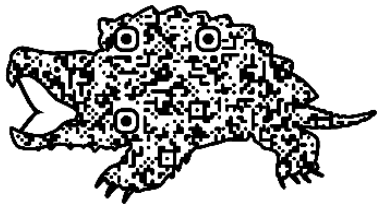
disturbance of the Covered Species while working in and near aquatic environments:

- All Covered Parties will ensure that any project is evaluated for compliance with TPWD's Guidelines for Aquatic Resource Relocation Plans for Fish and Shellfish, Including Freshwater Mussels (ARRP) and Section 106 of the National Historic Preservation Act (NHPA).
- All Covered Parties employees and contractors should be provided with educational material on the Covered Species. Contents of the material should focus on the general identification, habitat, and avoidance measures for these covered species.
- A general inspection shall be conducted by construction crews to determine if any of the covered species are found within the potential project area or along the easement leading to the project area. If species are found, avoidance measures should be implemented, and appropriate authorities should be contacted.
- All project-specific equipment and materials should be staged outside of riparian areas when feasible and only brought into the riparian area when necessary to complete the goal/task.
- Vehicles used regularly for work within the riparian environment should be routinely inspected for any fluid leaks.
- Exclusion barriers, temporary coffer dams, and silt fencing shall be constructed when required by USFWS, TPWD, or other agency. Barriers should not impede flow when possible and, be made out of non-toxic materials and checked daily.
- The clearing of riparian or aquatic vegetation should be avoided unless necessary for access to the project area.
- Avoid removing or destroying unique aquatic habitat features (downed trees, root snags, etc.) unless necessary. If possible, aquatic features can be temporarily removed and replaced once work is completed.
- Any vehicles or machinery operating within the waterway shall comply with all State laws and/or State/Federal permit regulations.
- Natural channel and riparian designs, along with bioengineered methods should be included in all projects, when feasible.
- Any Covered Species spotted by personnel within or near the project area should be immediately reported to TRA. If an Alligator Snapping Turtle is sighted, take a photo, only if a photo can be taken without harassing the animal, and report the sighting using the online reporting tool from TRA website (See "Reporting" below).

Reporting

Any sighting of an Alligator Snapping Turtle should be reported immediately to TRA here: https://www.trinityra.org/basin_planning/turtles.php



Contact Information:

For questions regarding CCAA compliance and reporting:

Trinity River Authority of Texas
Attn: Technical Services and Basin Planning
Webster Mangham or Ryan Seymour
Phone: 817-467-4343
Email: EnvOps@trinityra.org

Additional Resources:

Section 10(1)(a) Permit and CCAA Document: https://www.trinityra.org/basin_planning/initiatives/endangered_species/ccaa.php

Information on Freshwater Mussels:

- https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/texas_nature_trackers/mussel/biology/
- https://www.fws.gov/library/collections/texas-freshwater-mussels

Information on Alligator Snapping Turtles and Western Chicken Turtles:

- https://ecos.fws.gov/ecp/species/4658
- https://ecos.fws.gov/ecp/species/9903