Overview of the Edwards Aquifer Habitat Conservation Plan (EAHCP)

The Edwards Aquifer Recovery Implementation Program Habitat Conservation Plan (EAHCP) was approved by the U.S. Fish & Wildlife Service (USFWS) as a regional plan to protect eight federally listed and three non-listed species—termed Covered Species—associated with the Edwards Aquifer while helping to ensure its stability as a regional water supply.

After approval of the EAHCP, the USFWS issued an Incidental Take Permit (ITP) under the federal Endangered Species Act of 1973 to five cooperating Permittees: Edwards Aquifer Authority (EAA), City of New Braunfels, City of San Marcos, Texas State University, and the City of San Antonio acting by and through its San Antonio Water System Board of Trustees.

The area covered by the ITP (Permit Area) is bounded by EAA’s jurisdictional boundary, which encompasses Uvalde, Medina, and Bexar counties and portions of Atascosa, Caldwell, Comal, Guadalupe, and Hays counties.

Medina, and Bexar counties and portions of Atascosa, Caldwell, Comal, Guadalupe, and Hays counties. The EAHCP describes impacts that are likely to result from Covered Activities, identifies Conservation Measures to minimize and mitigate those impacts, and assures funding to implement those Conservation Measures and, more broadly, the EAHCP.

Covered Species

- Texas Wild Rice (Zizania texana), ENDEANGERED
- Texas Blind Salamander (Eurycea nana), THREATENED
- San Marcos Salamander (Eurycea sp.), ENDANGERED
- Fountain Darter (Etheostoma fonticola), ENDANGERED
- Texas Troglobitic Water Slater (Hygrophila texana), ENDANGERED
- Peck’s Cave Amphipod (Stygobromus pecki), NOT LISTED
- Edwards Aquifer Diving Beetle (Heteroceps comalensis), PETITIONED
- Texas Troglobitic Water Slater (Stygobromus pecki), NOT LISTED
- Comal Springs Drying Beetle (Sphyrapicus comalensis), ENDANGERED
- Comal Springs Rifflle Beetle (Heteroceps comalensis), ENDANGERED
- San Marcos Gambusia ( Gambusia georgei), NOT LISTED
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1 USFWS published a final rule on October 17, 2023, to delist San Marcos gambusia due to extinction. Photo courtesy of Texas Parks & Wildlife Department.
2 USFWS published its finding on November 28, 2023, that Texas troglobitic water Slater is not warranted for listing. Both species will remain covered under the EAHCP until the ITP is amended.

EAHCP Implementation:

- **Highlights of 2023**
  - Program Administration
    - As part of the ITP renewal process, the EAHCP Implementing Committee approved memoranda with recommendations for changes to proposed Covered Activities, Covered Species, and Existing Conditions.
    - USFWS published rules addressing two EAHCP Covered Species. On October 17, it published a rule delisting the San Marcos gambusia due to extinction. On November 28, it published a rule finding that the Texas troglobitic water Slater is not warranted for listing. Both species will remain covered under the EAHCP until the ITP is amended.
  - Springflow Protection
    - Extreme drought conditions persisted through 2023, causing some of the lowest springflows observed since EAHCP implementation began. The lowest springflow occurred in August (55 cfs in Comal and 64 cfs in San Marcos). Springflows remained below Condition M levels for most of the year, and restoration activities were limited in accordance with the ITP.
    - Conditions at the J-17 Bexar Index well on October 1 triggered the Voluntary Irrigation Suspension Program Option for the second year in a row. Participants will not pump Edwards Aquifer water in 2024.
  - Habitat Restoration
    - In New Braunfels, Permittees planted 7,046 individual native aquatic plants, or an area of 431 m² in Landa Lake. Permittees also removed 22 m³ of non-native Hygrophila from the Comal River system. Due to implementation of Condition M in July, no additional plantings occurred in other reaches of the Comal River system in 2023.
    - In San Marcos, springflow remained below 120 cfs for the entire year, and aquatic restoration was restricted. USFWS reviewed and approved aquatic restoration starting in June in select areas of the San Marcos River, comprising 7,862 individual native aquatic plants within the river adjacent to Bicentennial Park.
    - Permittees completed construction of a biorretention basin at the Landa Park Aquatics Complex parking lot near Comal Springs.
    - The construction of Phase I of the Sessom Creek restoration project was completed in May. The project is a recommendation of the San Marcos Water Quality Protection Plan.
Fiscal Stability
Budget by Program Activity, 2023

Implementation of Conservation Measures

Conservation Measures are activities carried out by the Permittees in the Permit Area as part of EAHC implementation. These measures encompass springflow protection, habitat conservation, and various supporting activities such as research and biological monitoring.

The tables at right summarize progress toward fulfilling the Conservation Measures. Implementation efforts are highlighted for 2023. As the EAHC enters its 12th year of implementation, most Conservation Measures have either been fulfilled or are in an on-going or maintenance phase.

All efforts to implement the Conservation Measures were conducted in accordance with the Permittees’ approved annual Work Plans.

Incidental Take

Incidental take of listed species from Covered Activities is quantified annually and measured against the total take authorized by the ITF.

The current financial projections and cost estimates for the EAHC indicate an overall fiscally stable Program with an adequate budget for Program implementation in fiscal year 2024. The Program has a reserve balance of $19,918,433 and a cash balance of $26,266,516. There are adequate funds for the Program in fiscal year 2024.

Covered Species Accumulated Take through 2023

Springflow Protection
- Springflow Protection 73.0%
- San Marcos Springs 55.2%
- Comal Springs 41.1%
- Refugia 1.5%
- Program Administration 1.5%
- Monitoring 1.5%
- Modeling and Research 0.4%

In the Comal Springs system, take totaled 72,630 fountain darters, 2,502 Comal Springs riffle beetles, 12 Comal Springs dryopid beetles, and 925 Peck’s cave amphipods. The Comal invertebrate take was mostly due to severe drought conditions that reduced portions of occupied habitat.

In the San Marcos Springs system, take totaled 49,145 habitat.

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Status Key and Abbreviations

Implementation Status
- Working toward fulfillment
- Fulfillment expected or partially achieved
- Fulfillment achieved or implemented
- Maintenance
- On-going
- Implemented when triggered
- Triggered
- No activity

Permittees
- CONB City of New Braunfels
- COSM City of San Marcos
- EAA Edwards Aquifer Authority
- SAWS San Antonio Water System
- TXST Texas State University

Springflow Protection Measures
- Aquifer Storage and Recovery Springflow Protection Program Enrollment
- Aquifer Storage and Recovery Springflow Protection Program Storage
- Voluntary Irrigation Suspension Program Option Enrollment
- Voluntary Irrigation Suspension Program Option Implementation
- Regional Water Conservation
- Stage V Critical Period Management (San Antonio Pool)
- Stage V Critical Period Management (Uvalde Pool)

Habitat Conservation Measures
- Management of Public Recreation
- Designation of Permanent Access Points/Bank Stabilization
- Native Riparian Habitat Restoration
- Native Riparian Habitat Restoration (Riffle Beetle)
- Texas Wild-Rice Enhancement
- Aquatic Vegetation Restoration and Maintenance
- Aquatic Vegetation Restoration and Maintenance
- Decaying Vegetation Removal and Dissolved Oxygen Management
- Management of Floating Vegetation Mats and Litter
- Reduction of Non-Native Species Introduction and Live Bait Prohibition
- Monitoring and Reduction of Gif Parasites
- Non-Native Animal Species Control
- Flow Split Management
- Diversion of Surface Water
- Research Programs in Spring Lake
- Drying Classes (Spring Lake) and Boating (Spring Lake and Sewell Park)
- Management of Golf Course and Grounds
- Prohibition of Hazardous Material Transport Routes
- Management of Household Hazardous Waste
- Minimizing Impacts of Contaminated Runoff
- Impervious Cover/Water Quality Protection
- Session Creek Sand Bar Removal
- Sediment Management
- Septic System Registration and Permitting Program
- Impervious Cover/Water Quality Protection: Coal Tar Sealant Ban

Supporting Measures
- Net Disturbance
- Incidental Take
- Refugia
- Applied Research
- Biological Monitoring
- Water Quality Monitoring
- Ecological Modeling
- Groundwater Modeling

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