RECORD OF DECISION

Edwards Aquifer Authority Recovery Implementation Program Habitat Conservation Plan Issuance of an Incidental Take Permit for Federally Listed Threatened and Endangered Species in Texas

Introduction

The U.S. Department of the Interior, U.S. Fish and Wildlife Service (Service) is responsible for issuing Incidental Take Permits as authorized pursuant to §10(a) of the Endangered Species Act of 1973, as amended (Act)(16 USC §1531-1544). This document records the decision of the U.S. Fish and Wildlife Service (Service) to issue an Incidental Take Permit (ITP) to the Edwards Aquifer Authority (EAA), San Antonio Water System (SAWS), Texas State University (TSU), City of San Marcos, and City of New Braunfels (collectively the Applicants) for implementation of the Edwards Aquifer Recovery Implementation Program Habitat Conservation Plan (EARIP HCP).

The EARIP HCP is a multi-stakeholder water conservation and aquifer management program developed by the Applicants in coordination with the Service and other interested parties to protect threatened, endangered, and other rare aquatic species in central Texas. The requested permit will authorize incidental take of Texas wild-rice (*Zizania texana*)[1], Comal Springs dryopid beetle (*Stygoparnus comalensis*), Comal Springs riffle beetle (*Heterelmis comalensis*), Peck's Cave amphipod (*Stygobromus pecki*), fountain darter (*Etheostoma fonticola*), San Marcos gambusia (*Gambusia georgei*), Texas blind salamander (*Eurycea rathbuni*), the threatened San Marcos salamander (*Eurycea nana*), and the non-listed Edwards Aquifer diving beetle (*Haideoporus texanus*), Texas troglobitic water slater (*Lirceolus smithii*), and Comal Springs salamander (*Eurycea* sp.) over a period of 15 years.

We prepared this Record of Decision (ROD) in compliance with the agency decision-making requirements of the National Environmental Policy Act of 1969, as amended (NEPA; 40 CFR 1505.2). The purpose of this ROD is to document the Service's decision regarding the selection of the preferred alternative as evaluated in our final Environmental Impact Statement (EIS). This ROD describes (1) the Service's decision; (2) the proposed action; (3) alternatives considered in the EIS, including the preferred alternative; (4) key issues; (5) associated impacts, mitigation, and findings, providing all practicable means to avoid and minimize environmental harm; (6) public involvement; and (7) the conclusion. The Service will not issue an ITP until at least 30 days after publication in the Federal Register of the notice of availability of the final EIS and this ROD.

The Decision

The decision is hereby made to issue an ITP to the Applicants for implementation of the EARIP HCP. We intend to issue an ITP allowing the Applicants to implement the preferred alternative (Alternative 2) based on a thorough review of the alternatives and their environmental consequences as described in the final EIS. This alternative has been determined to be economically feasible. Implementation of this decision entails issuance of the ITP, including all terms and conditions governing the permit, and

[1] Take of listed plant species is not defined in the Act. However, because Covered Species in this HCP include both plants and animals, in the following discussion we use the term "incidental take" when discussing impacts to covered plants, as well as incidental take of covered animals.

requires adherence to all of the avoidance, minimization, and mitigation measures specified in the EARIP HCP to offset impacts to the covered species to the maximum extent practicable, including the described monitoring and adaptive management measures. The HCP meets all issuance criteria for an ITP. Since implementation of Alternative 2 would result in authorization for incidental take and the resulting impacts, we prepared a Biological Opinion (BO) prior to making a permit decision in accordance with §7(a)(2) of the Act. Our BO documents our determination that issuance of the ITP will not jeopardize the continued existence of federally listed species, and will not destroy or adversely modify designated critical habitat.

Alternatives Considered

Four alternatives, including the No Action Alternative, and their environmental consequences were evaluated in the draft EIS released July 20, 2012. Publication of a Notice of Availability of the draft HCP and draft EIS, and a request for comments, initiated a 90-day public comment period (77 FR 42756). Several elements were common to all action alternatives and included interagency coordination, National Environmental Policy Act (NEPA) compliance, and protection of threatened and endangered species and cultural resources. The following is a brief summary of the alternatives considered. A longer summary and complete description is included in the final EIS.

Alternative 1 - No Action Alternative: Under the No-Action Alternative, the Service would not issue an incidental take permit to the Applicants for take associated with the otherwise lawful production and regulation of groundwater in the Edwards Aquifer. Water flow at Comal and San Marcos Springs could cease under severe drought conditions as a result of the No Action Alternative.

Alternative 2 - Proposed Action: Our preferred alternative is the proposed EARIP HCP with a 15-year term, as described in the final EIS, which provides for the issuance of an ITP to the Applicants for incidental take of the covered species that is anticipated to occur as a result of covered activities. This alternative includes implementation of measures to avoid, minimize, and mitigate the potential incidental take to the maximum extent practicable through multiple water management and conservation measures.

Alternative 3 – Expanded ASR with Associated Infrastructure: Under this alternative the Applicants would manage the groundwater supply with a combination of pumping restrictions and increasing their use of the ASR and its associated infrastructure in order to store up to 66,700 acre-feet of groundwater to be injected into the aquifer during low water conditions allowing the continual flow of water at Comal and San Marcos springs.

Alternative 4 – Highest CPM Pumping Restriction: This alternative would achieve continual spring flows through pumping restrictions that would curtail pumping by up to 85%.

Rationale for Decision

We intend to select the preferred alternative (Alternative 2) for implementation based on multiple environmental and social factors, including potential impacts and benefits to covered species and their habitat, the extent and effectiveness of minimization and mitigation measures, and social and economic considerations. We did not choose the No Action Alternative because we must issue an ITP when issuance criteria have been met.

In order for us to issue an ITP, we must determine that the HCP meets the criteria set forth in 16 U.S.C. §1539(a)(2)(A) and (B). We have made that determination. These criteria, and how the HCP satisfies these criteria, are summarized below:

1. The taking will be incidental.

We have determined that the covered activities, including regulation and production of groundwater in accordance with state law for irrigation, industrial, municipal, domestic, and livestock purposes; the use of the Comal River and San Marcos River for recreational uses; operational and maintenance activities that could affect Comal Springs, San Marcos Springs, and the associated river systems; and activities necessary to manage potential habitat for the covered species within the permit area are lawful activities. Any take anticipated from the covered activities under the EARIP will be incidental to, and not the purpose of the covered activities. Therefore, we find that the taking of covered species that may occur as a result of the covered activities will be incidental to otherwise lawful activities. Incidental take that may occur as a result of these covered activities is expected to occur primarily in the form of death, harm, or harassment primarily through loss or impacts to habitat.

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2. The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such takings.

The EARIP Applicants have committed to a wide variety of conservation measures, including:

a. Flow protection measures (minimization measures):

- Critical Period Management (CPM) Program: Implements regulations requiring pumping reductions triggered by identified aquifer and/or springflow levels.
- Use of the SAWS Twin Oaks Aquifer Recharge, Storage, and Recovery Facility (ASR) for Springflow Protection.

b. Measures to protect and manage springflow at Comal Springs and San Marcos Springs (minimization measures):

- Voluntary Irrigation Suspension Program (VISPO): Provides economic incentives to cooperators agreeing to suspend pumping for irrigated agriculture when triggered by identified aquifer levels.
- Regional Water Conservation Program (RWCP): Reduces water demand through installation of high-efficiency plumbing fixtures and economic incentive programs encouraging reduction of lost water, large scale retro-fit, landscape irrigation using treated wastewater, and rain water harvesting.
- SAWS ASR management for Springflow Protection: Provides for 50,000 acre feet (61,674,092 cubic meters) of water storage in the ASR facility for subsequent use to offset pumping cutbacks when triggered by aquifer and springflow levels during drought conditions.

c. Measures to mitigate impacts to the spring ecosystems (mitigation measures):

Measures to reduce impacts of drought and enhance viability of the covered species at Comal Springs:

- Restoration and maintenance of native aquatic vegetation.
- Management of river flow between old and new channels of the Comal River.
- Removal of decaying vegetation and dissolved oxygen management.
- Establishment and management of old channel Environmental Restoration and Protection Area (ERPA).
- Management of harmful non-native animal species.
- Monitoring and management of the non-native introduced trematode *Centrocestus formosanus* that parasitizes the fountain darter.
- Restoration of native riparian vegetation.
- Management of public recreational use of the Comal Springs and the Comal River.

Measures to reduce impacts of drought and enhance viability of the covered species at San Marcos Springs:

- Enhancement and restoration of Texas wild-rice.
- Management of public recreation at San Marcos Springs and the San Marcos River.
- Management of aquatic vegetation and litter below Sewell Park.
- Management of non-native plants.
- Management of harmful non-native and predator species.
- Removal of harmful erosion-related sediments below Sewell Park.
- Designation of permanent access points and bank stabilization.
- Restoration of native riparian vegetation.
- Removal of harmful erosion-related sediment in Spring Lake and Sewell Park.
- Removal of harmful erosion-related sand bar in Sessom Creek.
- Management of diving classes in Spring Lake.
- Management of research programs in Spring Lake.
- Management of golf course and grounds.
- Management of boating operations in Spring Lake and Sewell Park.
- Reduction of authorized surface water diversions during low flow periods and intake screen monitoring.

d. Additional measures that contribute to recovery:

- Expanded water quality monitoring program.
- Prohibition of hazardous materials transport across the Comal and San Marcos Rivers and their tributaries.
- Implementation of City of San Marcos household hazardous waste program.
- Implementation of City of San Marcos septic system registration and permitting program.
- Implementation of water quality protection and impervious cover limitation program.
- Management of potentially contaminated runoff.
- Reduction of non-native species introductions.

- Support for refugia efforts at San Marcos Aquatic Resource Center (formerly the San Marcos National Fish Hatchery and Technology Center), Uvalde National Fish Hatchery, and Inks Dam National Fish Hatchery.

e. Adaptive Management Program:

- An extensive adaptive management program focused on testing and addressing uncertainties and improving conservation of the covered species.

f. Phase II Implementation based on Phase I Adaptive Management:

- Research and Modeling for Phase II Adaptive Management Program.
- SAWS Presumptive Action incorporating management and operation of the WRIP pipeline.

These measures, and the associated monitoring, and adaptive management strategies described in the HCP are intended to avoid and minimize harm to the covered species and mitigate for any unavoidable take. Proposed mitigation is commensurate with the level of take anticipated over the duration of the proposed permit. The EARIP Applicants have also included provisions for reasonably foreseeable changed circumstances. These strategies ensure that the effects of potential taking resulting from changed circumstances will also be minimized and mitigated to the maximum extent practicable. We find, therefore, that the EARIP Applicants have avoided, minimized, and mitigated for the impacts of such incidental taking to the maximum extent practicable.

3. The applicant will develop an HCP and ensure that adequate funding for the HCP will be provided.

The EARIP Applicants developed and committed to implementing the EAIRP HCP. Chapter 5 of the HCP describes avoidance and minimization measures, including conservation measures and best management practices that will be written into annual work plan descriptions implementing the HCP. Chapter 7 describes projected costs and funding mechanisms that will fund these measures and Appendix R includes the "Funding and Management Agreement to Fund and Manage the Habitat Conservation Plan for the Edwards Aquifer Recovery Implementation Program", dated November 11, 2011, as executed by the EARIP Applicants. We find that the EARIP Applicants have provided assurances that they will provide funding to implement the measures described in the HCP.

The Service's no surprises assurances and measures to address changed circumstances are described in Chapter 8 of the HCP. The EARIP Applicants have committed to a robust adaptive management process described in Chapter 6 of the HCP that will modify monitoring, conservation, mitigation, or management measures as needed throughout the term of the proposed permit. Unforeseen circumstances will be addressed through close coordination between the Service and the EARIP Applicants. We have determined, therefore, that the EARIP Applicants' conservation plan and financial commitments, along with their willingness to address changed and unforeseen circumstances in a cooperative fashion, satisfies this criterion.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of any listed species in the wild.

The legislative history of the Act establishes the intent of Congress that this issuance criteria be based on a finding of "not likely to jeopardize" under Section 7(a)(2) (see 50 CFR 402.02). As a result, approval of the application has been reviewed by the Service under Section 7 of the Act. Our biological opinion concluded that issuance of the ITP will not jeopardize the continued existence of the covered species in the wild, as described above. No critical habitats are expected to be destroyed or adversely affected. The biological opinion also analyzes other listed and candidate species within the planning area and concludes that the direct and indirect effect of the issuance of the ITP will not appreciably reduce the likelihood of survival and recovery of other listed species or destruction or adverse modification of any designated critical habitat within the permit area. We find, therefore, that the effects resulting from the covered activities described in the HCP will not appreciably reduce the likelihood of survival and recovery of the covered species in the wild.

5. The applicant agrees to implement other measures that the Service requires as being necessary or appropriate for the purposes of the HCP.

The Service assisted the EARIP Applicants in developing their HCP, commented on draft documents, participated in numerous meetings and conference calls, and worked closely with the EARIP Applicants throughout the planning and document preparation phases of the proposal to ensure that the conservation needs of the covered species would be assured and recovery would not be precluded by the covered activities. The HCP incorporates our recommendations for minimization and mitigation of impacts, as well as steps to monitor the effects of the HCP and ensure success. The EARIP Applicants will submit an annual report to the Service each year the permit is in effect describing implementation of avoidance, monitoring, minimization, and mitigation measures described in the HCP. Coordination mechanisms have been designed to ensure that changes in conservation measures can be implemented if proposed measures prove ineffective (though adaptive management measures) or if changed circumstances occur over the duration of the permit. It is our position that no additional measures are required to implement the intent and purpose of the HCP to those detailed in the HCP and its associated ITP.

We have determined that the preferred alternative best balances the protection and management of habitat for covered species, while allowing and providing compliance with the Act for regulation and production of groundwater in accordance with state law for irrigation, industrial, municipal, domestic, and livestock purposes; the use of the Comal River and San Marcos River for recreational uses; operational and maintenance activities that could affect Comal Springs, San Marcos Springs, and the associated river systems; and activities necessary to manage potential habitat for the covered species within the permit area. Considerations used in this decision include: (1) minimization and mitigation measures will benefit the covered species, 2) other conservation measures will protect and enhance habitat, 3) mitigation measures for the Covered Species will fully offset anticipated impacts to the species and provide recovery opportunities, and 4) the HCP is consistent with the covered species' recovery plans.

Section 9 of the Act and its implementing regulations prohibit the "taking" of threatened or endangered species. However, under limited circumstances, we may issue permits to take listed wildlife species

incidental to, and not the purpose of, otherwise lawful activities. To minimize impacts, the EARIP Applicants must comply with the following terms and conditions:

A. Acceptance of the permit serves as evidence that the Permittees agree to abide by all conditions stated. Terms and conditions of the permit are inclusive. Any activity not specifically permitted is prohibited. Please read through these conditions carefully as violations of permit terms and conditions could result in your permit being suspended or revoked. Violations of your permit terms and conditions that contribute to a violation of the Endangered Species Act (ESA) could also subject Permittees to criminal or civil penalties.

B. The permit is non-severable. For the permit to remain in effect, all permittees are required to fully implement the EARIP HCP and fulfill their responsibilities as set forth in the permit and the Funding and Management Agreement.

C. The authorization granted by this Permit will be subject to full and complete compliance with, and implementation of, the EARIP HCP and all specific conditions contained herein. The Permit terms and conditions shall supersede and take precedence over any inconsistent provisions in the HCP or other program documents.

D. This permit does not include incidental take coverage for any federal facility which withdraws groundwater from the Edwards Aquifer.

E. COVERED SPECIES: This permit only authorizes incidental take of animal species, or impacts to plant species of the following 11 species:

Common Name	**Scientific Name**	**ESA Status**
Fountain Darter	*Etheostoma fonticola*	Endangered
San Marcos Gambusia	*Gambusia georgei*	Endangered
Comal Springs Dryopid Beetle	*Stygoparnus comalensis*	Endangered
Comal Springs Riffle Beetle	*Heterelmis comalensis*	Endangered
Peck's Cave Amphipod	*Stygobromus pecki*	Endangered
Texas Wild Rice	*Zizania texana*	Endangered
Texas Blind Salamander	*Typhlomolge* (=*Eurycea*) *rathbuni*	Endangered
San Marcos Salamander	*Eurycea nana*	Threatened
Texas cave diving beetle	*Haideoporus texanus*	Petitioned

Comal Springs Salamander	*Eurycea sp.*	Petitioned
Texas Troglobitic Water Slater	*Lirceolus smithii*	Petitioned

F. INCIDENTAL TAKE AUTHORIZATION: The following amount of incidental take is authorized by this permit over the 15 year permit term:

1. No more than 797,000 fountain darters in Comal Springs, Landa Lake and the Comal River, and no more than 549,129 fountain darters in the San Marcos Springs, Spring Lake, and San Marcos River.

2. No more than 11,179 Comal Springs riffle beetles.

3. No more than 1,543 Comal Springs dryopid beetles.

4. No more than 18,224 Peck's cave amphipod.

5. No more than 10 Texas Blind salamanders.

6. No more than 263,857 San Marcos salamanders.

7. Incidental take of the Texas cave diving beetle will be provided for individuals of the species killed, harmed, or harassed by springflows with monthly averages above 50.5 cfs (1.43 cms) during HCP Phase I; and by springflows with monthly averages above 51.2 cfs (1.45 cms) during Phase II at San Marcos Springs, if and when this species is listed as threatened or endangered and as long as the HCP is fully implemented. Take limits will be exceeded if these minimum flow rates are not met.

8. Incidental take of the Texas troglobitic water slater will be provided for individuals of the species killed, harmed, or harassed by springflows with monthly averages above 50.5 cfs (1.43 cms) during HCP Phase I; and by springflows with monthly averages above 51.2 cfs (1.45 cms) during Phase II at San Marcos Springs, if and when this species is listed as threatened or endangered and as long as the HCP is fully implemented. Take limits will be exceeded if these minimum flow rates are not met.

9. Incidental take of the Comal Springs salamander will be provided for individuals of the species killed, harmed, or harassed by springflows with monthly averages above 27 cfs (0.76 cms) during HCP Phase I and by monthly averages above 45 cfs (1.27 cms) during Phase II at Comal Springs if and when this species is listed as threatened or endangered, as long as the HCP is fully implemented. Take limits will be exceeded if these minimum flow rates are not met.

G. The endangered San Marcos gambusia has not been collected since 1982 and may no longer exist in the wild, but the Service will provide incidental take coverage for individuals of this

species resulting from the covered activities if the species is located or becomes re-established within the Permit Area, as long as the HCP is fully implemented.

H. COVERED AREA: This permit only authorizes incidental take of covered species within all of Bexar, Medina, and Uvalde counties, and parts of Atascosa, Comal, Caldwell, Hays, and Guadalupe counties (Permit Area), Figure 1.2 in the HCP.

I. The EAA will support and coordinate with the U.S. Fish and Wildlife Service (Service) on the work relating to the San Marcos Aquatic Resource Center's operation and maintenance of a series of off-site refugia at the Service's San Marcos, Uvalde, and Inks Dam facilities (Section 6.4 of the HCP). The support of the refugia will augment the existing financial and physical resources of these facilities, and provide supplementary resources for appropriate research activities, as necessary, to house and protect adequate populations of Covered Species and expanded knowledge of their biology, life histories, and effective reintroduction techniques. The use of this support will be limited to the Covered Species in the EARIP HCP.

J. COVERED ACTIVITIES – BY PERMITTEE

1. Edwards Aquifer Authority (EAA) – Covered activities for which incidental take is authorized:

   a. Programs that implement the statutory functions of the EAA Act, including:

      i. Authorization of withdrawals by persons who are both authorized under the EAA Act and the EAA's rules to withdraw groundwater from the Edwards Aquifer within the jurisdictional boundaries of the EAA.
      ii. Authorization of withdrawals from the Edwards Aquifer pursuant to a change in permit under the EAA's permit administration rules in subchapter L of Chapter 711 and for owners and lessees making withdrawals under such a change in permit.
      iii. Withdrawals due to the authorization of a "conversion" of "base" water into "unrestricted" water (EAA Rules §§ 711.338-.342) from the irrigator installing water conservation equipment such that less water is required for irrigation of the historically irrigated land (EAA Act § 1.34(b)) or when the historically irrigated lands that provided the basis for the issuance of the initial regular permit have been developed and are no longer farmed under the circumstances described in the EAA rules.
      iv. Withdrawals from the Edwards Aquifer pursuant to the Critical Period Management Plan described in Section 5.1.4 of the HCP.

   b. The minimization and mitigation measures that the EAA will either implement, or for which it bears responsibility for having implemented, as identified in Chapter 5 of the HCP include:

      i. Voluntary Irrigation Suspension Program Option (Section 5.1.2).
      ii. Regional Water Conservation Program (Section 5.1.3).

iii. Critical Period Management – Stage V (Section 5.1.4).
iv. Expanded Water Quality Monitoring (Section 5.7.5).
v. Impervious Cover/Water Quality Protection (Section 5.7.6)

2. City of New Braunfels – Covered activities for which incidental take is authorized:

   a. Recreational activities within the City of New Braunfels's jurisdiction that are facilitated in any respect by the City of New Braunfels, including, but not limited to swimming, wading, tubing, boating, canoeing, kayaking, scuba diving, snorkeling, and fishing, in accordance with all applicable laws and regulations (Section 2.3.1 of the HCP).

      i. The City of New Braunfels will limit recreational access to the spring runs to the Wading Pool in Spring Run 2; and prohibit recreation within the old channel with the exception of Schlitterbahn operations within its present location (Section 5.2.3 of the HCP).
      ii. Where recreation is facilitated by commercial outfitting businesses, the City of New Braunfels will extend their incidental take coverage to participating businesses through Certificates of Inclusion (Section 5.2.3 of the HCP).

   b. Management of the ecosystems of Comal Springs, Landa Lake, and the Comal River. The City operates gates, culverts, and dam structures from Landa Lake to the Old Channel (three culverts), New Channel U.S. Geological Survey (USGS) Weir, Springfed Pool Inlet, Wading Pool Weir, Clemens Dam, USGS Weir (known as "Stinky Falls"), Golf Course Weir, and Mill Pond Dam (joint New Braunfels Utility and City of New Braunfels operation) to maintain constant flow in the Comal River, maintain constant elevations of large pools, and regulate flow regimes in the old and new channels during high and low flow events (Sections 2.3.2 and 2.3.3 of the HCP).

   c. Diversion of water from the Comal River in accordance with State law. The City of New Braunfels is authorized to divert 8 acre feet (9,868 cubic meters) per year of water from the Old Channel and impound it in the pool (TCEQ Permit 18-3826) as a non-consumptive use because the water is returned to the Old Channel (Section 2.3.4 of the HCP).

   d. Maintenance and operation of the spring-fed pool (including routine cleaning, algae removal, chemical application pursuant to label instructions, and filling/emptying) in accordance with the HCP (Section 2.3.4 of the HCP).

   e. The City of New Braunfels' operation of boats on the Comal River and Landa Lake for research, enforcement, litter collection, and maintenance activities (section 2.3.5 of the HCP).

   f. The minimization and mitigation measures that the City of New Braunfels will either implement, or has responsibility for having implemented, as identified in Chapter 5 of the HCP include:

i. Management of river flow between old and new channels of the Comal River (Section 5.2.1)
ii. Restoration and maintenance of native aquatic vegetation (Section 5.2.2)
iii. Management of public recreational use of Comal Springs and the Comal River (Section 5.2.3)
iv. Removal of decaying vegetation and dissolved oxygen management (Section 5.2.4)
v. Management of harmful non-native animal species (Sections 5.2.5 and 5.2.9)
vi. Monitoring and management of the non-native introduced trematode *Centrocestus formosanus* that parasitizes the fountain darter (Sections 5.2.6 and 6.3.6 of the HCP).
vii. Prohibition of hazardous materials transport across the Comal River and its tributaries (Section 5.2.7)
viii. Restoration of native riparian vegetation (Section 5.2.8 and 5.7.1)
ix. Reduction of non-native species introduction and live bait prohibitions (Section 5.2.9)
x. Litter Collection and Floating Vegetation Management (Section 5.2.10)
xi. Management of Golf Course Diversions and Operations (5.2.11)
xii. Management of Household Hazardous Wastes (Section 5.7.5)
xiii. Impervious Cover/Water Quality Protection (Section 5.7.6)
xiv. Removal of sediment (Section 5.2.2.1)

3. City of San Marcos – Covered activities for which incidental take is authorized:

a. Recreational activities within the City of San Marcos's jurisdiction, including, but not limited to, swimming, wading, tubing, boating, canoeing, kayaking, golfing, snorkeling, SCUBA diving, and fishing, in accordance with all applicable laws and regulations (Section 2.4.of the HCP).

i. Establishment of permanent access points for recreation and closure of unauthorized access points (Sections 5.3.2 and 5.3.7 of the HCP).
ii. Where recreation is facilitated by commercial outfitting businesses, the City of San Marcos will extend their incidental take coverage to participating businesses through Certificates of Inclusion (Section 5.3.2.1 of the HCP).
iii. The City of San Marcos will enforce trespassing laws to prevent the public from accessing the river via private property, without property owner's permission (Section 5.3.2.1 of the HCP).
iv. The City of San Marcos will create an appropriate buffer zone by location to keep picnic tables, pop-up tents, shelters, and portable grills away from the river to reduce litter in the river and decrease bank compaction and /or erosion (Section 5.3.2.1 of the HCP).
v. The City of San Marcos will educate river users and the community about applicable regulations and the importance of protecting the area's natural resources (section 5.3.2.1 of the HCP).

b. The City of San Marcos' operation of boats on the San Marcos River and Spring Lake for research, enforcement, litter collection, and maintenance activities (section 2.4.2 of the HCP). Only electric trolling motors are permitted and no gasoline or petroleum fueled boats are allowed on Spring Lake.

c. Routine, minor repairs of infrastructure and facilities associated with or located on City of San Marcos property that are adjacent to or directly affect the San Marcos Springs and River ecosystem (Section 2.4.3 of the HCP). Routine, minor repairs would include activities such as repairs to access points along the river, but would not involve any activity requiring a U.S. Army Corps of Engineers (USACE) § 404 permit or authorization which may require a section 7 consultation by the USACE.

d. The mitigation and minimization measures that the City of San Marcos will either implement, or has the responsibility of having implemented, as identified in Chapter 5 of the HCP include:

   i. Enhancement and restoration of Texas Wild-rice (Section 5.3.1 of the HCP)
   ii. Management of public recreation at San Marcos Springs and the San Marcos River (Section 5.3.2 of the HCP)
   iii. Management of aquatic vegetation and litter below Sewell Park (Section 5.3.3)
   iv. Prohibition of hazardous materials transport across the San Marcos River and its tributaries (Section 5.3.4 of the HCP)
   v. Reduction of non-native species introduction (Section 5.3.5 of the HCP)
   vi. Removal of harmful erosion-related sediment below Sewell Park (Section 5.3.6 of the HCP)
   vii. Designation of permanent access points and bank stabilization (Section 5.3.7 of the HCP)
   viii. Management of non-native plant species (Section 5.3.8 of the HCP)
   ix. Management of harmful non-native and predator species (Section 5.3.9 of the HCP)
   x. Restoration of native riparian vegetation (Section 5.7.1 of the HCP)
   xi. Implementation of a City of San Marcos septic system registration and permitting program (Section 5.7.3 of the HCP)
   xii. Management of potentially contaminated runoff (Section 5.7.4 of the HCP)
   xiii. Implementation of a City of San Marcos household hazardous waste program (Section 5.7.5 of the HCP)
   xiv. Implementation of water quality protection and an impervious cover limitation program (Section 5.7.6 of the HCP)

4. Texas State University – Covered activities for which incidental take is authorized:

   a. Recreational activities within the University's jurisdiction in the San Marcos River and Spring Lake; including, but not limited to, swimming, wading, tubing, boating, canoeing, kayaking, golf, diving, snorkeling and fishing, in accordance with all applicable laws and regulations (Section 2.5.1 of the HCP).

i. Establishment of permanent access points for recreation, and closure of unauthorized access points (Section 5.4.2 of the HCP).
ii. Remove floating vegetation mats and litter from the River (Section 5.4.3.1 of the HCP).
iii. Inorganic litter will be picked up weekly from the San Marcos River from Sewell Park to City Park during the recreational season (Memorial Day to Labor Day) and monthly during off-season (Section 5.4.3.2 of the HCP).
iv. Operation and management of boating and kayaking activities at Spring Lake (Section 5.4.10 of the HCP).

b. Educational activities, including:

i. Diving for Science Program – trains volunteers to SCUBA in Spring Lake in a manner that protects listed species in order to assist with ecosystem maintenance activities including, but not limited to, algae and litter removal. Participants are required to be under the supervision of the Diving Supervisor, who will be an employee or representative of the Permittee (Texas State University) (Section 2.5.3.1 of the HCP).
ii. Texas State University Continuing Education SCUBA Classes – use of Spring Lake for no more than 10 check-out dives per semester. This use is limited to the Dive Training Area (approximately 0.5 acres [2,140 square meters] in size) (Section 2.5.3.2 in the HCP).
iii. Texas State University SCUBA Classes – SCUBA classes limited to a maximum of 3 classes per day, with no more than 12 students per class. This use is limited to the Dive Training Area (Section 2.5.3.3 of the HCP).
iv. Research activities in Spring Lake, in accordance with all applicable laws and regulations (Section 2.5.4 of the HCP).
v. Texas State University canoeing and kayaking classes in Spring Lake and Sewell Park (Section 2.5.7 of the HCP).

c. Management of the ecosystems of the San Marcos River and Springs, its boating activities in Spring Lake and Sewall Park.

d. The permitted diversion of water from Spring Lake and the San Marcos River in accordance with applicable laws and regulations (Section 2.5.5 of the HCP).

e. Ongoing operation and maintenance of the existing nine-hole University golf course and grounds (section 2.5.6 of the HCP).

e. Minimization and mitigation measures that the University will either implement, or has responsibility for having implemented, as identified in Chapter 5 of the HCP include:

i. Enhancement and restoration of Texas Wild-rice (Sections 5.3.1 & 5.4.1 of the HCP)
ii. Management of public recreation at San Marcos Springs and in the San Marcos River (Section 5.4.2 of the HCP)

iii. Management of aquatic vegetation from Sewell Park to City Park (Section 5.4.3 of the HCP)
iv. Removal of harmful erosion-related sediment in Spring Lake and from Spring Lake Dam to City Park (Section 5.4.4 of the HCP)
v. Management of surface water diversion (Section 5.4.5 of the HCP)
vi. Restoration of native riparian vegetation (Section 5.7.1 of the HCP)
vii. Removal of harmful erosion-related sand bar in Sessom Creek Sand (Section 5.4.6 of the HCP)
viii. Management of research programs in Spring Lake (Section 5.4.8 of the HCP)
ix. Reduction of non-native species introduction (Sections 5.4.11 & 5.7.1 of the HCP)
x. Management of non-native plant species (Section 5.4.12 of the HCP)
xi. Management of harmful non-native and predator species (Section 5.4.13 of the HCP)

5. San Antonio Water System (SAWS) – Covered activities for which incidental take is authorized:

   a. Pumping from the Edwards Aquifer and for use and operation of the SAWS ASR (Section 2.6 of the HCP).

   b. Minimization and mitigation measures and measures that SAWS will either implement, or has responsibility for having implemented, as identified in Chapter 5 of the HCP include:

      i. Use of the SAWS ASR for Springflow Protection. (Section 5.5.1).
      ii. Phase II Expanded Use of the SAWS ASR and Water Resources Integration Program Pipeline. (Section 5.5.2).

K. The Permittees are jointly responsible for the following measures that specifically contribute to recovery and for which incidental take is authorized:

1. Comal Springs, Landa Lake, and the Comal River:

   a. The Permittees will limit disturbance of the (a) substrate, (b) water quality, (c) plants, and (d) animals, including invertebrates, of the Comal Springs, Landa Lake, and Comal River to no more than 10% of the occupied habitat on an annual basis when implementing HCP measures such as habitat and riparian restoration efforts that may directly or indirectly affect species considered here; and,

   b. The Permittees will suspend activities such as habitat restoration and riparian restoration that may result in disturbance of the (a) substrate, (b) water quality, (c) plants, and (d) animals, including invertebrates, of the Comal Springs, Landa Lake, and the Comal River when Comal Springflows decline to 130 cfs or lower.

2. San Marcos Springs, Spring Lake, and the San Marcos River:

a. The Permittees will limit disturbance of the (a) substrate, (b) water quality, (c) plants, and (d) animals, including invertebrates, of the San Marcos Springs, Spring Lake, and the San Marcos River to no more than 10% of the occupied habitat on an annual basis when implementing HCP measures such as habitat and riparian restoration efforts that may directly or indirectly affect species considered here; and,

b. The Permittees will suspend activities such as habitat restoration and riparian restoration that may result in disturbance of the (a) substrate, (b) water quality, (c) plants, and (d) animals, including invertebrates, of the San Marcos Springs, Spring Lake, and the San Marcos River when San Marcos Springflows decline to 120 cfs or lower.

L. Upon locating a dead, injured, or sick individual of the covered species, or any other endangered or threatened species, the Permittee is required to contact the Service's Law Enforcement Office in Austin, Texas, (512) 490-0948 for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, the Permittee and any contractor/subcontractor has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

M. Conditions of the permit shall be binding on, and for the benefit of, the Permittees and any successors and/or assignees. If the permit requires an amendment because of change of ownership, the Service will process it in accordance with regulations (50 CFR 13.23). Any new Permittee must meet issuance criteria per regulations at 50 CFR 13.25. The covered activities proposed or in progress under the original permit may not be interrupted, provided the conditions of the permit are being followed and authorized incidental take limits will not be exceeded (See Term and Condition N).

N. If, during the tenure of the permit, the project design and/or the extent of the habitat impacts is altered, such that there may be an increase in the anticipated take of covered species, the Permittees are required to contact the Service's Austin Ecological Services Office (ESFO) and obtain an amendment to this permit before commencing any construction or other activities that might result in take beyond that authorized by the permit. If authorized take is exceeded, all activities that are shown to cause take must immediately cease and any take above that authorized shall be reported to the Austin Ecological Services Field Office (505/490-0057) within 48 hours.

O. If actions associated with implementation of the EARIP HCP are shown to result in incidental take of listed species not covered by this permit, those activities that are shown to cause take must immediately cease and any take that has occurred shall be reported to the Austin Ecological Services Field Office (505/490-0057) within 48 hours.

P. CHANGED CIRCUMSTANCES

1. The EARIP provides measures for the following changed circumstances (Section 8.8.1 – Table 8-8 of the HCP):

   a. New species listings or new critical habitat designations

   b. Covered Species adversely affected by an acute pollution event

   c. Covered Species adversely affected by invasive species

   d. Covered Species adversely affected by flooding

   e. Inability to use the Phase I SAWS ASR as set out in Section 5.5 to achieve springflow protection

   f. Recreational activities having adverse effects

   g. Provision of financial assurances for any necessary Phase II measures

   h. The Phase II presumptive measure is unable to function as expected within the stated assumptions.

   i. EAA-Specific Changed Circumstances regarding water withdrawal (i.e. pumping) permits:

      i. EAA authorization of withdrawals from the Edwards Aquifer for the owners or lessees making such withdrawals pursuant to a term permit (Section 8.1 of the HCP).
      ii. EAA authorization of any withdrawals under an emergency permit and for the owners or lessees making the authorized withdrawals under any emergency permit (Section 8.1 of the HCP).
      iii. EAA authorization of any withdrawals under recharge recovery permits and for the owners or lessees of the water making the authorized withdrawals under any recharge recovery permit (Section 8.1 of the HCP).

2. Changed Circumstances not provided for in the HCP (Section 8.1.2):

   a. Invasion by exotic species and/or habitat-specific or species-specific disease that threaten Covered Species or their habitats and which cannot be effectively controlled by currently available methods or technologies or which cannot be effectively controlled without resulting in greater harm to other Covered Species than to the affected Covered Species.

S. MONITORING REQUIREMENTS

1. The Permittees will monitor compliance with the HCP and provide an annual report as described below.

2. The Permittees will develop a monitoring program to determine whether progress is being made toward meeting the long-term biological goals and objectives.

3. The Permittees will develop and oversee a monitoring program to identify and assess potential impacts, including incidental take, from Covered Activities and provide a better understanding and knowledge of the species' life cycles and desirable water quality- and springflow-related habitat requirements of the Covered Species (section 6.3 of the HCP).

T. Annual Reporting:

1. The EARIP Applicants will provide an annual report, due on March 31 of each year, to:

   U.S. Fish and Wildlife Service
   Austin Ecological Services Field Office
   10711 Burnet Road, Suite 200
   Austin, Texas 78758

   U.S. Fish and Wildlife Service, Region 2
   Habitat Conservation Plans and Research Permits
   P.O. Box 1306, Room 6034
   Albuquerque, New Mexico 87103

2. The report will document the Permittees' activities and permit compliance for the previous year, thus documenting progress toward the goals and objectives of the EARIP HCP and demonstrating compliance with the terms and conditions of this incidental take permit. The annual report will include:

   a. EAA Permitted withdrawals

   b. Reference well levels

   c. Springflows at Comal and San Marcos Springs

   d. Aquifer recharge

   e. Aquifer discharge from wells and springflow

   f. Critical period management reductions

   g. Water quality data

   h. Location of sampling sites

i. Methods for data collection and variables measured

j. Frequency, timing, and duration of sampling for the variables

k. Description of the data analysis and who conducted the analysis

3. The report will document HCP Management activities, including:

   a. Adaptive management activities undertaken during the year

   b. Expenditures by the EAA on implementation activities

   c. Proposed activities for the next year

   d. Report on the status of implementation of minimization and mitigation measures and their effectiveness

   e. Interim updates and final copies of any research, thesis or dissertation, or published studies accomplished in association with the EARIP or HCP

   f. Description of species-specific research and management actions undertaken with specific reference to the biological goals and objectives identified for each species

   g. Any changes to the Biological Goals and Key Management and Flow-related Objectives of the HCP and the reasons for such changes

   h. Any changes to the objectives for the monitoring program

   i. Effects on the Covered Species or Permit Area

   j. Evaluation of progress toward achieving the Biological Goals and Objectives.

   k. Any recommendations regarding actions to be taken

4. Information provided in the annual report will be used to determine what, if any, adaptive management strategies should be implemented to most effectively implement the conservation program outlined in the EARIP HCP and to ensure that management changes in response to new, appropriate data are implemented in a timely fashion.

Public Comments on the EIS

Formal scoping for the EIS began on March 5, 2010, with publication in the *Federal Register* of a Notice of Intent (NOI) to prepare the EIS (75FR 10305). The NOI described the proposed Federal action (i.e., issuance of an incidental take permit for the EARIP HCP) and the purpose and need for the action. The NOI also announced seven public scoping meetings that were held between April 1 and April 29, 2010, in the cities of Corpus Christi, Kerrville, New Braunfels, San Antonio, San Marcos, Uvalde, and Victoria, Texas. The official scoping comment period for the EIS closed June 3, 2010.

A Notice of Availability of the draft HCP and accompanying draft EIS was published in the *Federal Register* on July 20, 2012 (77FR 42756). Seven public hearings on the draft documents were held in the cities of Corpus Christi, Kerrville, New Braunfels, San Antonio, San Marcos, Uvalde, and Victoria, Texas from August 3 through August 15, 2012. The public comment period closed on October 18, 2012.

Three Federal agencies and two state agencies responded to our request for comments. The National Park Service had no comment, the Environmental Protection Agency had "no objections" to the proposed action, and the Natural Resources Conservation Service concurred with the Service's selection of Alternative 2 (issuance of the incidental take permit and implementation of the HCP) as the preferred alternative. The Texas Commission on Environmental Quality provided comments that they support the preferred alternative. Texas Parks and Wildlife Department provided comments that consisted primarily of clarifications, minor edits and corrections. Comments were also received from three Non-Governmental Organizations and members of the general public. Please refer to Chapters 1 and 8 of the FEIS for more detailed information concerning public involvement and a record of all comments received during the scoping and public comment periods. We believe these comments are addressed and reasonably accommodated in the final documents.

For More Information

The Final EIS is available at the Service's Albuquerque Regional Office or Austin, Texas Field Office. A copy of this Record of Decision will be made available on the website or at the offices listed above. For additional information, call Mr. Marty Tuegel at (505) 248-6651.

for Deputy Regional Director
U.S. Fish and Wildlife Service
Southwest Region
Albuquerque, New Mexico

1/29/13
Date