



DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE PERMIT

3-201
(1/97)

2. AUTHORITY-STATUTES
16 USC 1539(a)(1)(B)
REGULATIONS (Attached)
50 CFR §§ 13 & 17

3. NUMBER
TE 839031-1

4. RENEWABLE	5. MAY COPY
<input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> YES
<input type="checkbox"/> NO	<input type="checkbox"/> NO

6. EFFECTIVE 9/13/2013	7. EXPIRES 9/30/2033
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BARTON SPRINGS POOL HABITAT CONSERVATION PLAN

1. PERMITTEE

City of Austin
505 Barton Springs Rd.
11th Floor
Austin, Texas 78704
512/974-9195

8. NAME AND TITLE OF PRINCIPAL OFFICER (if #1 is a business)
Ms. Victoria J. Li, Director, Watershed Protection Department

9. TYPE OF PERMIT
Endangered Species – Incidental Take

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED
The Barton Springs Complex (Barton Springs Pool (BSP) / Parthenia Springs, Eliza Spring, Old Mill Spring, Upper Barton Spring) and a protective buffer of approximately 150 feet surrounding the entire cluster of springs within Zilker Park, in the City of Austin, in Travis County, Texas.

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2, ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORDANCE WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OR ALL APPLICABLE STATE, LOCAL, TRIBAL, OR OTHER FEDERAL LAW.
- C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

12. REPORTING REQUIREMENTS: Annual report is due on February 1, continuing until permit expiration.

ISSUED BY:

Joy E. Nikolopoulos

TITLE

Deputy Regional Director

DATE

9/12/13

- D. Acceptance of the permit serves as evidence that the Permittee (City of Austin) agrees 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 or Act) could also subject the Permittee to criminal or civil penalties.
- E. The authorization granted by this Permit will be subject to full and complete compliance with, and implementation of, the Barton Springs Pool Habitat Conservation Plan, dated July 2013, and all specific conditions contained therein. These Permit terms and conditions shall supersede and take precedence over any inconsistent provisions in the Habitat Conservation Plan or other program documents.
- F. If, during the tenure of this 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 the covered species, the Permittee is required to contact the Service's Austin Ecological Services Office and obtain an amendment to the 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 (512/490-0057) within 48 hours.
- G. If actions associated with implementation of the Barton Springs Pool Habitat Conservation Plan are shown to result in incidental take of listed species not covered by the 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 (512/490-0057) within 48 hours.
- H. The City will redraw the footprint of protected salamander habitat in Barton Springs Pool to include more habitat that is and can be maintained for salamander residence and exclude unsuitable habitat based on monitoring data and habitat condition for Service approval. The total square footage of protected habitat in Barton Springs Pool will not be less than that delineated in the 1998 Habitat Conservation Plan (14,500 ft²) and will be consistent with the habitat area as delineated by the July 2013 HCP.

CONSERVATION MEASURES

- I. The City will develop habitat management plans for each spring site and submit them to the Service for approval.
- J. The City will restrict access to Eliza and Old Mill springs. Eliza Spring and Old Mill Spring may be used as outdoor educational facilities for the study of covered salamanders and the biology and ecology of Central Texas springs.

- K. The City will continue public use of Barton Springs Pool and Upper Barton Spring for recreation, including, but not limited to, wading, swimming, and snorkeling.
- L. The City is authorized to remove up to 6,006,000 gallons per year of spring water from Barton Springs Pool for irrigation of pool grounds and routine cleaning.
- M. The City is authorized to maintain manicured lawns along the riparian corridor of Barton Springs Pool and Eliza Spring.
- N. The City will maintain historic structures and anthropogenic flow regime alterations, including the historic amphitheaters around Eliza Spring and Old Mill Spring and the concrete dams and walls of Barton Springs Pool.
- O. The City will inspect habitat at least 4 days per week. If problems are discovered, the City will take appropriate action to protect salamanders and their habitat. Appropriate actions may include but are not limited to repairing damage from vandalism, removal of trash, and removal of introduced exotic fish or animals.
- P. The City will prohibit unauthorized, deliberate disturbance of salamander habitat.
- Q. The City will not allow unauthorized SCUBA in Barton Springs.
- R. The City will conduct routine cleaning of spring sites, which may include the removal of nuisance algae, excess sediment, and other natural materials from Barton Springs Pool, Eliza Spring, Old Mill Spring, and Upper Barton Spring.
- S. No more than 4 full drawdowns and no more than 8 partial drawdowns of Barton Springs Pool will be conducted annually for maintenance and cleaning.
- T. The City will not conduct full drawdowns if the combined discharge of the Barton Springs complex is less than 54 ft³/s. The City will maintain a written plan with protocols for conducting Barton Springs Pool drawdowns. The 54 ft³/s threshold may be revised with the approval of the Service if habitat restoration or changes in substrate elevation allow maintenance of wetted surface habitat at lower discharges.
- U. During drawdowns, trained and permitted City salamander biologists and staff under their direct supervision will visually inspect all exposed habitat for stranded salamanders before cleaning and maintenance activities in those areas begin. Any stranded salamanders will be moved to permanent water by permitted City salamander biologists.
- V. A minimum of 2 City biologists will be present during full drawdowns and a minimum of 1 City biologist will be present at all partial drawdowns.
- W. During drawdowns, water level in Eliza Spring will be inspected to ensure that water is retained in surface habitat of the spring pool.

- X. Spring water will be used for cleaning and maintenance of Barton Springs Pool to the maximum extent feasible. Only spring water will be used to clean salamander habitat and to provide water over fissures during drawdowns to prevent stranding of salamanders.
- Y. The City is authorized to clean the shallow end of Barton Springs Pool without full drawdown of water in the entire Pool.
- Z. The City may clean sediment and debris from habitat as necessary with low-pressure spring water. Salamander habitat will be cleaned using low pressure (not to exceed 30 lb/in²) spring water to keep at least 2 inches of habitat from becoming embedded with sediment. Water for cleaning may be obtained by recirculation through submersible pumps, or other methods approved by the Service. Material removed during routine cleaning will not be disposed of in salamander habitat.
- AA. The City is authorized to manually trim and remove submerged vegetation as necessary. Only permitted City biologists are authorized to manage vegetation in salamander habitat. Vegetation removed from salamander habitat will be inspected for salamanders prior to removal.
- BB. The City may remove woody debris as necessary. Only permitted City biologists are authorized to remove debris in salamander habitat. Debris removed from salamander habitat will be inspected for salamanders prior to removal.
- CC. Barton Springs Pool may be drawn down in advance of a flood with approval of City biologist according to Service approved drawdown plan.
- DD. As needed, the City may conduct drawdowns of the water level in Barton Springs Pool and Eliza Spring for post-flood pool cleaning.
- EE. The City may remove flood-debris from Barton Springs Pool by vacuum dredging or other Service-approved method.
- FF. The City will develop a plan for routine silt and gravel removal from the deep end of Barton Springs Pool within one year of permit issuance and submit it to the Service for written approval.
- GG. The City will control local surface water runoff into salamander habitats to the maximum extent feasible. Polluted stormwater may be diverted away from Barton Springs Pool or treated using structural best management practices prior to entering Barton Springs Pool. These controls do not include stormwater runoff collecting in Barton Creek that causes basin-wide flooding that can inundate the springs.
- HH. The City will reconstruct or restore salamander habitat within Barton Springs Pool, Eliza Spring, Old Mill Spring, and Upper Barton Spring to the maximum extent feasible. This activity includes:

1. Restoration (daylighting) of the outflow stream from Eliza Spring, which currently travels underground and flows into the bypass structure.
 2. Removal of the concrete floor in Eliza Spring and restoration of the natural substrate in the spring pool.
 3. Replacement of a portion of masonry wall in Old Mill Spring with adjustable gates to improve outflow from the spring pool.
 4. Removal of excess rock, trash, and debris from Old Mill Spring to restore the natural elevation of the spring pool and enhance the directional flow of water from the spring.
 5. Removal of concrete over the upstream fissure area in Barton Springs Pool to enhance flow of water from the springs.
 6. The City will improve and maintain suitable substrate in habitat areas and will only use limestone gravel or cobble if substrate is added.
- II. The City will not allow introduction of exotic plants or animals in any spring in the Barton Springs Complex.
- JJ. Barton Springs Pool lifeguards and maintenance staff will be trained and knowledgeable about the protected aquatic salamander species.
- KK. The City will maintain a catastrophic spill response plan and will provide yearly spill response training and maintain an inventory of necessary containment and remediation equipment.
- LL. The City will reduce contaminant loadings to Barton Springs through a Texas Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Discharge Permit.
- MM. Specific areas will be designated for fueling and maintenance of equipment and vehicles at least 25 feet away from habitat. Absorbent pads will be used underneath or around all equipment, supplies, and vehicles containing toxic components during all operations, fueling and maintenance activities.

INCIDENTAL TAKE

NN. The permit only authorizes incidental take of the following 2 species (covered species):

<u>Common Name</u>	<u>Scientific Name</u>	<u>ESA Status</u>
Barton Springs salamander	<i>Eurycea sosorum</i>	Endangered
Austin blind salamander	<i>Eurycea waterlooensis</i>	Endangered

OO. Incidental take authorized for the 20 year duration of this permit:

1. No more than 1,865 Barton Springs salamanders in any one year and no more than 37,300 for the duration of this permit for recurrent activities specified in the July 2013 HCP.
2. No more than 50 Austin blind salamanders in any one year and no more than 1,000 for the duration of this permit for recurrent activities specified in the July 2013 HCP.
3. No more than 1,065 Barton Springs salamanders for the duration of this permit for discrete restoration activities specified in the July 2013 HCP.
4. No more than 25 Austin blind salamanders for the duration of this permit for discrete restoration activities specified in the July 2013 HCP.
5. Total take authorized by this permit is 38,365 Barton Springs salamanders and 1,025 Austin blind salamanders.
6. Lethal take for each species will not exceed 5% of the total take authorized by this permit.

PP. The City will move salamanders between sites or reintroduce captive salamanders to the wild only according to a Service approved plan.

REFUGIUM AND CAPTIVE BREEDING PROGRAM

QQ. The City will maintain a captive refugium population of salamanders and develop a captive-breeding program. The City will ensure that all people working with captive endangered salamanders are properly trained and supervised by permitted City biologists. All activities at the refugium and with the captive breeding program will be conducted under the terms and conditions of a current federal Endangered Species Act 10(a)(1)(A) scientific permit issued to the City of Austin.

1. The City will develop and maintain written plans for population management, reintroduction, and husbandry. These plans will be updated as necessary.

2. The City will designate a staff biologist and dedicate a minimum of \$28,000 annually to the development and maintenance of this program.
3. The program will provide captive salamanders suitable for reintroduction into the wild if catastrophic events occur.
4. The program may provide a refugium facility for salamanders collected in response to contaminant spills or other immediate threat that could cause extirpation of the species in the wild.
5. The program will also support research that contributes to elucidation of biology, life history and natural history of both species.

COVERED AREA (PLAN AREA)

RR. The permit only authorizes incidental take of covered species within property owned by the City of Austin within Zilker Park that encompasses subterranean and surface aquatic environments and supporting riparian terrestrial habitat around Upper Barton Spring, Old Mill Spring, Eliza Spring, and Barton Springs Pool.

CHANGED CIRCUMSTANCES

- SS. The Barton Springs Pool HCP provides measures for the following changed circumstances (Section 8.3 of the HCP):
1. Catastrophic events leading to temporary loss of habitat (hazardous material spills, temporary dewatering).
 2. Permanent loss of habitat or habitat degradation from global climate change.
 3. Covered species become de-listed.
 4. Covered species become extinct.
 5. Unintentional introduction of invasive plants that modify salamander habitat or conditions in the Pool.
 6. Unintentional introduction or increase in population of non-native predators in habitat areas.
 7. Unintentional failure of dams or floodwater bypass altering water levels of Barton Springs Pool.
 8. New information published in scientific literature establishes detrimental effect levels for *Eurycea* salamanders or appropriate surrogate amphibians resulting from exposure to sunscreen products or other personal care products introduced to Barton Springs Pool from recreational activities.

MONITORING REQUIREMENTS

- TT. The City of Austin shall monitor the covered activities and ensure appropriate and relevant information (as specified below) on the covered activities is provided to the Service.
1. The Permittee will monitor compliance with the HCP and provide an annual report as described below.
 2. The Permittee will develop a monitoring program to determine if progress is being made toward meeting the long-term biological goals and objectives.
- UU. The City will develop and maintain a written monitoring plan to be approved by the Service.
- VV. The City will continue to regularly monitor salamander populations bi-monthly, or on another Service approved schedule.
- WW. The City will ensure that all people conducting salamander and habitat monitoring are properly trained and supervised by permitted City biologists. All monitoring and surveys will be conducted under the terms and conditions of a current federal Endangered Species Act 10(a)(1)(A) scientific permit issued to the City of Austin.

REPORTING REQUIREMENTS

- XX. The City of Austin will provide an annual report, due on February 1 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

1. The report will document the activities and City of Austin's permit compliance for the previous year, thus documenting progress toward the goals and objectives of the HCP and demonstrating compliance with the terms and conditions of the incidental take permit. The annual report will include (Section 6.4 in the BSP HCP):
 - a. Number of drawdowns conducted per year and associated cfs level.

- b. Assessments of the status of both salamander species.
 - c. Analysis of biological data collected during surveys of spring sites and through captive refugium management.
 - d. Review of Barton Springs Pool maintenance and management activities during the year.
 - e. Number of flood events and outcome of any debris removal completed.
 - f. Changes to any habitat management or drawdown plans.
 - g. Assessments and timing of any proposed or completed restoration projects within any of the spring sites.
2. The report will document BSP HCP Management activities, including:
- a. Adaptive management activities undertaken during the year.
 - b. Expenditures by the City of Austin on restoration activities.
 - c. Proposed restoration 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 BSP HCP.
 - f. Any changes to the objectives for the monitoring program.
 - g. Effects on the Covered Species or Permit Area.
 - h. Any recommendations regarding actions to be taken.
3. 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 BSP HCP and to ensure that management changes in response to new, appropriate data are implemented in a timely fashion.

FUNDING

- YY. At least \$45,000 will be provided annually to salamander education efforts. Educational signs will be installed to enhance public awareness of the salamander and the aquifer.

- ZZ. The City will provide \$53,000 annually for the conservation fund. A committee of technical representatives will determine the allocation of money from this fund. At a minimum, the committee will consist of one technical representative from the City and one technical representative from the Service that are knowledgeable and experienced in salamander biology. The City and the Service would both retain “veto” power in deciding how the money is allocated and may be used for the study of salamander biology, captive breeding, refugium development, reintroduction, watershed related research, improved cleaning techniques for natural water bodies, education and/or land acquisition.
- AAA. The City will provide \$28,000 annually to the development and maintenance of the refugium and captive breeding program.
- BBB. The City biologists and Barton Springs staff are employees of the Watershed Protection and Parks and Recreation departments, respectively, and are funded by the City of Austin.

GENERAL TERMS AND CONDITIONS

- CCC. The City will cooperatively develop a memorandum of understanding with the Barton Springs Edwards Aquifer Conservation District to formalize collaborative efforts to protect the covered species and the Barton Springs Segment of the Edwards Aquifer.
- DDD. The City will participate in regional water resource planning that may affect the Barton Springs Segment of the Edwards Aquifer and advocate for protection of water quality and quantity adequate to protect the covered species.
- EEE. 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 has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- FFF. Conditions of the permit shall be binding on, and for the benefit of, the Permittee 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). The 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.

***** End of Permit # 839031-1 *****