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As of April 24, 2013**

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Conservation Foundation
219 Perry Mayfield
Leander, TX 78641

December 23, 2013

Dr. Benjamin Tuggle
Regional Director
U.S. Fish & Wildlife Service
P.O. Box 1306
Albuquerque, NM 87103-1306

Dear Dr. Tuggle:

On December 4, 2013, the Williamson County Conservation Foundation (WCCF) adopted an Adaptive Management Plan (AMP) as part of an overall conservation plan for the Georgetown salamander (GTS). The plan is an iterative process that will help reduce the uncertainty in natural resource management by incorporating it into flexible management plans as new information becomes available.

The AMP will consist of the following:

1. Establish an Adaptive Management Working Group
2. Identify areas of uncertainty
3. Develop and adopt alternative management strategies – (City of Georgetown with assistance from WCCF)
4. Enhance existing monitoring program
 - a. Expand number of locations being monitored
 - b. Expand what is monitored at each location
5. Incorporate feedback loops

The WCCF looks forward to continuing to work on the AMP with the goal of instituting programs and strategies for the conservation of the GTS that are locally supported and based upon the best available science.

Thank you in advance for your support of this very important endeavor.

Best Regards,

A handwritten signature in purple ink that reads 'Valerie Covey'.

Valerie Covey
President, WCCF

Williamson County Conservation Foundation
Adaptive Management Plan for the Georgetown Salamander

On December 4, 2013, the Williamson County Conservation Foundation (WCCF) adopted an Adaptive Management Plan (AMP) as part of an overall conservation plan for the Georgetown salamander (GTS). The plan as detailed below is an iterative process that will help reduce the uncertainty in natural resource management by incorporating it into flexible management plans as new information becomes available.

1. Adaptive Management Working Group

The Adaptive Management Working Group (AMWG) was established by the WCCF to review data on a regular and as needed basis to make recommendations for specific changes in management directions including recommendations on variances to the **Edwards Aquifer Recharge Zone Water Quality Ordinance** as established by the City of Georgetown, Texas. The AMWG will have the following representation:

- Two representatives from the City of Georgetown; one planning and development staff member and one system engineering staff member,
- Two members from the State of Texas, one from the Texas Parks and Wildlife Department (TPWD) and one from the Texas Commission on Environmental Quality (TCEQ)
- One member from US Fish and Wildlife Service or other federal agency,
- A Williamson County landowner representative (owner or agent)
- A representative of the development community
- A representative of the civil engineering community
- A representative from the scientific community, preferably with expertise in subject matter related biology, geology, and/or hydrology.
- A WCCF staff member who shall also provide administrative support.

The AMWG will address issues such as the thoroughness of the annual report regarding Eurycea, implications of the monitoring efforts relating to the need for management changes, assessment of research priorities, and the effectiveness of achieving conservation goals. The following are preliminary goals of the plan which will be further refined by the AMWG.

- Water quality conditions in the Georgetown Salamander range are at appropriate states so as to ensure adopted standards are sufficient for the conservation of the species
- Site protection measures are sufficient to ensure the conservation of the species

2. Identify Areas of Uncertainty

In the context of management needs of spring-shed management areas, the relevant questions are what are the specific potential threats and what evidence is there that those threats have or will cause impacts to be realized. Uncertainties relative to aquatic species and protected areas as well as changing perceptions of those uncertainties in light of future research and monitoring data will be discussed semi-annually by the AMWG. New information will be incorporated into this plan in a timely manner.

3. Develop and Adopt Alternative Management/Conservation Strategies

The AMWG will review the effectiveness of water quality enhancement measures and best management practices adopted by the City of Georgetown as those measures and practices relate to the conservation of the Georgetown salamander. Flexibility for the development and adjustment of alternative strategies as needed is a key element of the adaptive management process.

4. Enhance Existing Monitoring Program

At present the WCCF funds monthly visual encounter surveys and basic water quality monitoring at three springs across the range of the species. These include Swinbank Spring and Twin Springs along the North San Gabriel River and Cobb Spring which is the northern-most known location for the GTS. Through the public outreach function of the Williamson County Regional Habitat Conservation Plan the WCCF has established relationships with the owners of the majority of the known populations of the GTS.

- a. Expand the locations for the monitoring program. The WCCF will build on those relationships to expand its monitoring program to include additional locations. We believe that some of the occupied springs can be incorporated into the existing monitoring program based on those relationships. The WCCF will initiate outreach efforts to the owners of the known locations for the GTS in order to incorporate more of the locations into the monitoring program. The benefits from the additional locations would be population, water quality and spring-shed monitoring should they be incorporated into the monitoring program. Total participation is dependent upon landowner cooperation. Every effort will be made to monitor representative sites across the range of the Georgetown salamander.
- b. Expand what is monitored at each location. The WCCF will pursue additional data gathering at GTS locations to include regular and consistent monitoring activities further addressing surface and sub-surface habitat GTS behavior. Any water quality sampling may include the measurement of constituents such as dissolved oxygen, pH, total dissolved solids, temperature, etc. Additionally, protocols will be established for maintaining a chain of custody for samples to assure quality and consistency. Every effort will be made to monitor representative sites across the range of the Georgetown salamander.

Williamson County Conservation Foundation
Adaptive Management Plan for the Georgetown Salamander

5. Incorporate Feedback Loops

Linking monitoring and research data to changes in management is the key focus of the AMWG. If a determination is made by the AMWG that the goals or management objectives are not being met, then adjustments to the management program may be warranted. The annual report will directly address the adaptive management issue and a statement made, supported by research and monitoring findings, that management practices should or should not change each year. Additionally, the results of monitoring should be included in the annual report. Monitoring data will include all currently measured results plus results from any expanded data collection and monitoring.