



September XX, 2016

Mr. Adam Zerrenner
United States Fish and Wildlife Services
Austin Ecological Services Field Office
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Austin, Texas 78758

RE: Clarification to the specified vegetation in Table 4-21 of the Edwards Aquifer Habitat Conservation Plan (EAHCP) Biological Goals for fountain darter habitat and amendment regarding the estimated relative abundance of fountain darters within respective reaches in the San Marcos River for the Incidental Take Permit (#TE-63663A-1).

On behalf of the City of New Braunfels (CoNB), the City of San Marcos (CoSM), Edwards Aquifer Authority (EAA), the San Antonio Water System (SAWS), and Texas State University (collectively the Permittees of the Incidental Take Permit #TE-63663A-1), I am providing a clarification to the Edwards Aquifer Habitat Conservation Plan (EAHCP) to remove non-native aquatic vegetation goals in Tables 4-21 (p. 4-24) and replace them with native aquatic vegetation goals for the San Marcos Springs ecosystem. As a result of these changes, adjustments to the coverage of the specific native aquatic vegetation has also been altered to respond to lessons learned in restoring fountain darter habitat. Additionally, we seek an amendment to the Biological Goals in regards to a reduction of estimated fountain darter density in the San Marcos Springs ecosystem as a result of this clarification. This letter is submitted pursuant to Section 9.2.1 of the EAHCP.

Clarification: Section 4.1.1 of the EAHCP discusses the Biological Goals and Objectives associated with the Covered Species. Table 4-21 provides guidance to the permittees in square meter coverage of specified aquatic vegetation for designated Long-term Biological Goal (LTBG) Reaches¹ in the San Marcos springs ecosystems. It is proposed that certain changes to Table 4-21 (Exhibit 1) are warranted to properly maintain a diverse community of native aquatic vegetation to maximize fountain darter habitat. These changes include the complete removal of all non-native aquatic vegetation (*Hygrophila polysperma*, *Hydrilla verticillata* and *Vallisneria spiralis*) from the Biological Goals and replacing these goals with native vegetation (*Hydrocotyle umbellata* and *Zizania texana*).

Amendment: As a result of this change, the overall vegetation coverage, and the estimated relative abundance of fountain darters within respective reaches, has been altered. The original table (4-21 in the EAHCP) was calculated to provide habitat for 34,325 estimated fountain darters. Therefore, despite the proposed alterations being beneficial to the overall coverage of native vegetation throughout the system, the estimated densities associated with each vegetation type finds the revised table is calculated to provide habitat for 29,270 estimated fountain darters (a reduction of 5,055). Please note, as a separate clarification,

¹ The Long-term Biological Goal (LTBG) Reaches refer to the reaches specified in the EAHCP that determine our Biological Goals for the aquatic vegetation restoration and fountain darter habitat (Table 4-21).

the EAHCP Permittees have requested the establishment of “restoration reaches.” These additional areas, if accepted, will provide an estimated fountain darter density of 39,210 above our current goals.

Since December 2015, the EAHCP has pursued an analysis of the current programs for submerged aquatic vegetation restoration in the San Marcos and Comal Springs systems. In this analysis, lessons learned as well as proposed revisions were brought forward and ultimately reviewed by subject matter and regional experts, as well as the EAHCP Committee members. A Scientific Evaluation Report (SER) was produced and adopted by the Science Committee to provide any necessary directive in regards to the Adaptive Management Proposal (Exhibit 2) which was later supported by the Stakeholder Committee and adopted by the Implementing Committee on September 15th. This process was in accordance with the Adaptive Management Process outlined in the Funding and Management Agreement (FMA) and results in this request to clarify and amend the EAHCP.

With that said, to further ensure transparency in the implementation of the EAHCP, the Implementing Committee provided the public the opportunity to comment on this amendment during its September 15, 2016 meeting. All meeting agendas and minutes from this process have been provided in Exhibit 3.

The Permittees seek your formal acceptance of this clarification and amendment to allow alterations to Table 4-21 of the EAHCP to reflect removal of all non-native aquatic vegetation in both systems in order to most effectively limit the re-establishment of non-native aquatic vegetation and reduce the associated estimated fountain darter density goals by 5,055. Your approval of this amendment will allow the Permittees to implement this critical aspect of the EAHCP. We look forward to your formal acceptance of the clarification and amendment and appreciate your consideration and response on this issue.

Respectfully,

Nathan Pence
Program Manager
Edwards Aquifer Habitat Conservation Plan

Exhibit 1**Proposed changes to EAHCP p. 4-24 (Table 4-21)****TABLE 4-21****FOUNTAIN DARTER HABITAT (AQUATIC VEGETATION) IN METERS SQUARED (M2) AND FOUNTAIN DARTER MEDIAN DENSITY (NUMBER/M2) PER HABITAT TYPE**

Fountain darter habitat (aquatic vegetation) goal in meters squared (m ²)								
Study Reach	<i>Hygrophila</i>	<i>Ludwigia</i>	<i>Cabomba</i>	<i>Hydrilla</i>	<i>Potamogeton</i>	<i>Sagittaria</i>	<i>Vallisneria</i> <i>Hydrocotyle*</i>	<i>Zizania</i>
Spring Lake Dam	50	200 100	25 50	100	1,000 200	400 200	125 50	700
City Park	200	1,000 150	50 90	500	2,000 1,450	300	50 10	1,750
IH-35	50	200 50	300 50	400	300 250	400 150	25 50	600
TOTAL	300	1,400 300	375 190	700	3,300 1,900	500 650	200 110	3,050
Fountain darter median density number/m ²								
	<i>Hygrophila</i>	<i>Ludwigia</i>	<i>Cabomba</i>	<i>Hydrilla</i>	<i>Potamogeton</i>	<i>Sagittaria</i>	<i>Vallisneria</i> <i>Hydrocotyle*</i>	<i>Zizania</i>
	4	7	7	5	5	1	4 4	5

* Include flexibility that if, after two years of implementing (2019), *Hydrocotyle* is not succeeding in the San Marcos system, that other native submerged aquatic vegetation (SAV) be considered for the fountain darter Long-term Biological Goals, as long as the replacement species meets the certain criteria.