



MEMORANDUM

To: EAHCP Committees

From: Nathan Pence
EAHCP Program Manager

Date: July 18, 2016

Subject: **Summary of SAV Analysis Report and Options for Implementation**

Dear EAHCP Committee Members:

Please click the hyperlink to access our newly-released [Submerged Aquatic Vegetation Analysis and Recommendations Report](#) (BIO-WEST, Inc. & Watershed Systems Group, Inc., 2016)

This analysis, commissioned by the EAHCP Implementing Committee, features an evaluation of the current programs for submerged aquatic vegetation restoration in the San Marcos and Comal river systems, which are carried out as EAHCP Conservation Measures by the City of San Marcos/Texas State University, and the City of New Braunfels, respectively.

As a result of this exercise, three optional management scenarios—each involving varying levels of change to existing management approaches—were recommended. The following is a brief summary of each scenario:

1. *Scenario 1 - Status quo*

- Includes planting and maintenance of non-natives (*Hydrilla* and *Hygrophila*)
- Not achievable due to competition between Texas Wild-rice and other submerged aquatic vegetation types for physical space
- Cannot be achieved within the term of the permit due to space limitations

2. *Scenario 2*

- Removes non-natives from the Biological Goals (*Hydrilla* and *Hygrophila*) and replaces them with natives (*Potamogeton*, *Heteranthera*, and Texas Wild-rice)
- Comal River system: Increases estimated Fountain Darters by 568 darters within the Long-term Biological Goal (LTBG) reaches
- San Marcos River system: Decreases estimated Fountain Darters by 5,025 darters within the LTBG reaches
- Integrates Texas Wild-rice and submerged aquatic vegetation restoration for a realistic and achievable regime
- Texas Wild-rice Biological Goal is provided as a range of areal coverage; this would allow for at least the lower end of the range to be achieved

3. Scenario 3

- All of Scenario 2, plus the below
- Defines “Proportional Expansion” as required by EAHCP §§ 4.1.1.1 (p. 4-5) and 4.1.1.2 (p. 4-25)
 - This definition includes additional restoration in newly created “restoration reaches”
 - 3 Comal restoration reaches equaling an additional estimated 180,180 Fountain Darters
 - 5 San Marcos restoration reaches equaling an additional estimated 36,175 Fountain Darters

4. Adjustment to Operation of Flow-Split Infrastructure - complements whichever Scenario is chosen

- See EAHCP Table 5-3, p. 5-11
- The maximum controlled flow in the Old Channel would be reduced from 80 cfs to 65 cfs
- The minimum controlled flow in the Old Channel would remain the same (i.e., 20 cfs)

5. Removal and Planting Methods: Besides management scenarios, another important section of the report discusses successful in the field methodologies for implementation that have been documented through 3 years of lessons learned (p. 39). These methodologies should be incorporated into Annual Workplans by Permittees as appropriate.

The proposed changes would result in the following administrative proceedings:

Actions/Changes/Amendments/Clarifications

Assuming Scenario 1 is implemented

- *No changes necessary*

Assuming Scenario 2 is implemented

- *Amendment:* To replace non-natives with natives in Biological Goals resulting in modifications to EAHCP Tables 4-1 (p. 4-4) and 4-21 (p. 4-24)
- *Amendment:* To note the loss of 5,025 darters to the San Marcos system in the Biological Goals resulting in modifications to EAHCP Table 4-21 (p. 4-24)
- *Clarification:* Adjust target flows in Old Channel resulting in modifications to EAHCP Table 5-3 (p. 5-11)

Assuming Scenario 3 is implemented

- *Amendment:* To replace non-natives with natives in Biological Goals resulting in modifications to EAHCP Tables 4-1 (p. 4-4) and 4-21 (p. 4-24)
- *Amendment:* To note the loss of 5,025 darters to the San Marcos system in the Biological Goals resulting in modifications to EAHCP Table 4-21 (p. 4-24)
- *Clarification:* Providing clarifying information regarding the definition of “proportional expansion” by using restoration reaches
- *Clarification:* Adjust target flows in Old Channel resulting in modifications to EAHCP Table 5-3 (p. 5-11)

Timeline:

- **July 2016:** EAHCP staff arrange meetings with key stakeholders to discuss SAV recommendation options for implementation

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- **September 9, 2016:** Science Committee will be convened to discuss implementation options and to possibly endorse a draft scientific evaluation report of the proposed recommendations for implementation
- **September 15, 2016:** Stakeholder Committee meets in the AM to review management options for implementation of SAV report recommendations. Implementing Committee meets in the PM to review Stakeholder report. Final management direction determined on this date.
- **October 1, 2016:** San Marcos/Texas State and New Braunfels submit revised Work Plans and Funding Applications reflecting changes associated with implementation of the Nonroutine AMP proposal.
- **October 20, 2016:** The Implementing Committee will approve the Spring Communities' revised Work Plans and Funding Applications at this meeting.