



Evaluating EAHCP Native Vegetation Restoration in the Comal and San Marcos Systems

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EAHCP Adaptive Management Vegetation Restoration



SAV Restoration Required by the EAHCP

- Non-native removal
- Planting of native SAV (FD Habitat)
- Texas wild-rice

Supporting Measures to SAV Restoration

- Sediment Removal
- Operation of Flow-split Infrastructure
- Riparian Restoration



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Success (compliance w/ the HCP) of SAV and TWR Restoration is measured in m²:

TABLE 4-6
GOALS—FOUNTAIN DARTER HABITAT (AQUATIC VEGETATION) (m²)

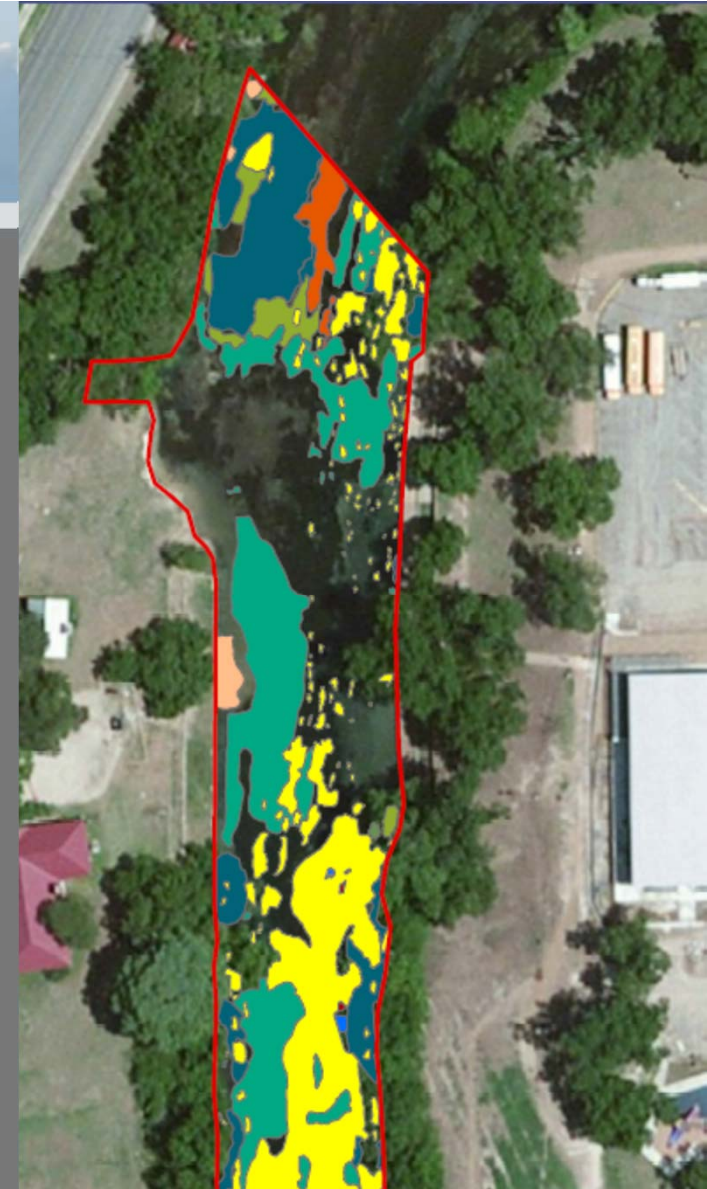
Study Reach	<i>Bryophytes</i>	<i>Hygrophila</i>	<i>Ludwigia</i>	<i>Cabomba</i>	<i>Fil. Algae</i>	<i>Sagittaria</i>	<i>Vallisneria</i>
Upper Spring Run Reach	1,850	650	150			600	
Landa Lake	4,000	250	900	500		1,250	13,500
Old Channel	150	200	1,500		300		
New Channel	150	1,350		350			
TOTAL	6,150	2,450	2,550	850	300	1,850	13,500

****Bold/italics*** indicate a restoration activity that deviates from the Maximum observed.

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Vegetation Restoration Issues:

- Success of Plantings
- TWR and Natives regime
- Timeline to achieve Biological Goals
- Monitoring for Compliance
- Operation of Flow-split Infrastructure





EAHCP Adaptive Management Vegetation Restoration



Utilize Desktop Analysis to:

- Generate information and data for consideration by the EAHCP Implementing Committee when evaluating potential changes to vegetation restoration through the EAHCP Adaptive Management process.
- Establish a timeline, with annual goals, to achieve the vegetation restoration Biological Goals in the EAHCP. This timeline and information will be used in the preparation of annual work plans by the Permittees.
- Use lessons learned from field experience in the first years of implementation, to if necessary, modify methodologies and vegetative goals, to achieve the Biological Goals of the EAHCP.



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Approach to Analysis

- San Marcos and Comal Rivers
- BIOWEST & Watershed Systems
- Co-PIs: Ed Oborny and Thom Hardy
- Consensus Approach
(Use PM & SC to resolve outstanding issues)
- Goal is to present to Implementing Committee in late summer for incorporation into the 2017 workplans.
- At IC direction, the SC will be asked to review the final product



EAHCP Adaptive Management Vegetation Restoration



- Task 1 – Snapshot
 - Veg Restoration to Biological Goals
 - Planting Methodologies
 - Flow- split
- Task 2 – Status Quo
 - Timeline
 - Are the current Biological Goals Achievable?
- Task 3 – Recommendations
 - Veg Restoration – location, species, amount of
 - Other conservation measures
 - Flow-split Infrastructure Operation
 - Measurement of Compliance (mapping event)





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Deliverables

- Timeline to achieve SAV/TWR Biological Goals – status quo
- Timeline to achieve SAV/TWR Biological Goals – modified*
- Recommended changes to SAV/TWR restoration methodology*
- Recommended changes to methodologies that support SAV/TWR*
- Recommended changes to SAV/TWR Biological Goals*
- Modified flow regime for Flow-split infrastructure*
- Recommendation on mapping event(s) for Compliance determination

* Deliverables may or may not be required as established by desktop analysis



EAHCP Adaptive Management



Questions?

