



# 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



## EAHCP Adaptive Management Vegetation Restoration



Success (compliance w/ the HCP) of SAV and TWR Restoration is measured in m<sup>2</sup>:

TABLE 4-6  
GOALS—FOUNTAIN DARTER HABITAT (AQUATIC VEGETATION) (m<sup>2</sup>)

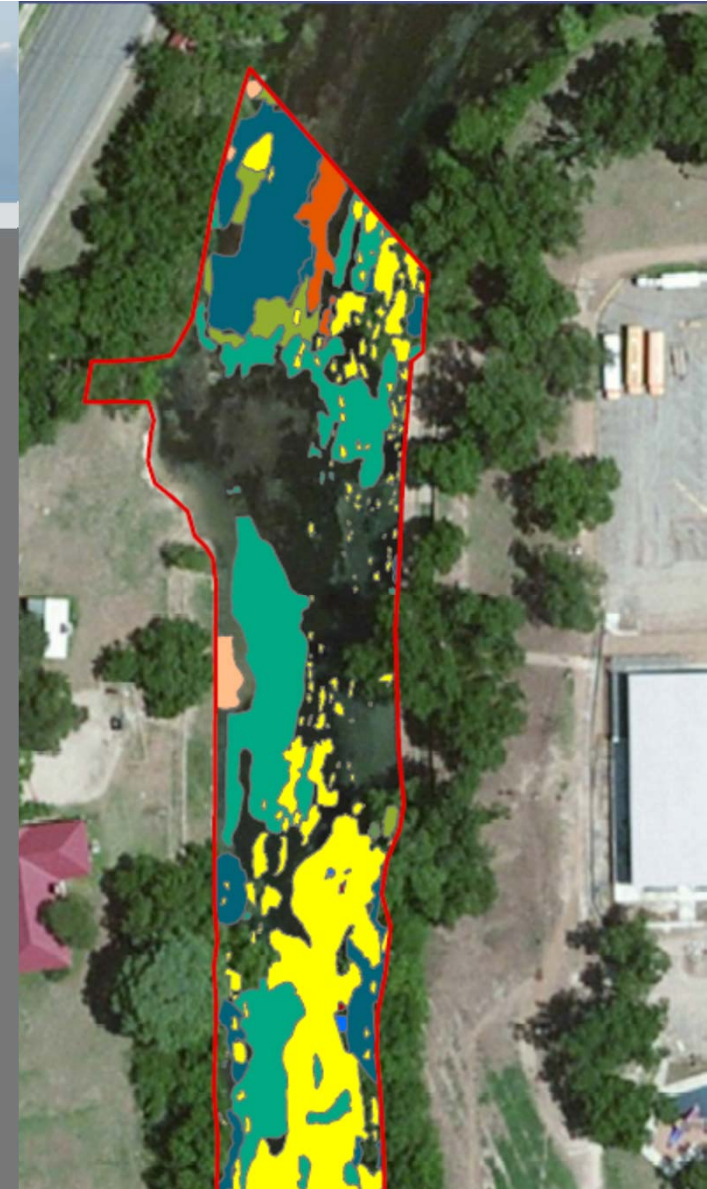
Study Reach	<i>Bryophytes</i>	<i>Hygrophila</i>	<i>Ludwigia</i>	<i>Cabomba</i>	<i>Fil. Algae</i>	<i>Sagittaria</i>	<i>Vallisneria</i>
Upper Spring Run Reach	1,850	650	<b>150</b>			600	
Landa Lake	4,000	<b>250</b>	<b>900</b>	<b>500</b>		1,250	13,500
Old Channel	150	<b>200</b>	<b>1,500</b>		300		
New Channel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

## EAHCP Adaptive Management Vegetation Restoration

### 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.



## EAHCP Adaptive Management Vegetation Restoration



### 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)





## EAHCP Adaptive Management Vegetation Restoration



### 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?**

