



TO: Robert Gulley and Nathan Pence
FROM: Melani Howard
DATE: June 17, 2013
RE: Responses to the additional comments on the Draft Edwards Aquifer Habitat Conservation Plan Work Plans for 2014 activities

I. Management of floating vegetation mats and litter control

Concern: How does the use of the harvester boat and aquatic gardening operations in Spring Lake benefit the EAHCP Covered Species?

Response: The harvester and aquatic gardening are part of the normal operations as described in the EAHCP and the Spring Lake Management Plan. These activities serve the dual purpose of allowing operations of the glass bottom boats which are an integral part of the university's public education and outreach program that highlights activities of the EAHCP. Aquatic gardening is a critical activity that keeps the spring orifice areas clear of vegetation which directly benefits San Marcos salamanders.

Concern: What is/are the root causes(s) of this overgrowth?

Response: There is in fact no overgrowth in Spring Lake. It is simply the normal seasonal growth pattern of submerged aquatic vegetation in spring systems. There is no detected nutrient enrichment, loss of high-level herbivory or anything else that is currently problematic within Spring Lake affecting the aquatic vegetation.

Texas State University has begun development of more effective control measures to capture floating aquatic vegetation before it exits Spring Lake. These floating plant mats come from fragments not captured by the harvester, aquatic gardening, and natural sloughing of algae from the slough arm of Spring Lake. Capturing fragments at Spring Lake will help reduce the volume of floating mats downstream and reduce the impact of mats and removal of mats on Texas wild-rice stands. Once this task has begun, we will insert a statement into the work plan that confirms that no EAHCP funds are being requested to support this additional activity in Spring Lake.

II. Sessom Creek Sandbar Removal

Concern: Due to continued disturbances in the Sessom Creek watershed, sediment deposition will continue at the Sessom Creek confluence and will have to be addressed every five to eight years.

Response: The current effort aimed at the Sessom Creek sandbar removal is the modeling assessment of alternatives that range from 'do nothing' to complete removal of the sandbar. The technical report will lay out a set of options and specific recommendations to the Implementing Committee. There will always be some level of sediment input from Sessom Creek in the future regardless of any remedial

actions taken in the watershed, however, proactive measures can reduce sediment deposition resulting from human activity. Such actions are being taken, i.e. Texas State University has constructed storm water retention basins in the watershed and is collaborating with the City of San Marcos to develop a Water Quality Protection Plan (EAHCP measure) and the Upper San Marcos Watershed Protection Plan (EPA/TCEQ funded) that jointly are evaluating best management practices to control suspended sediment, nutrients, etc from not only Sessom Creek, but all surface drainages into the San Marcos River. Additionally, the WQPP will be integrated into the City's Comprehensive Master Plan. Dr. Hardy's comments concerning the sediment 'island' were not to convey that it will be a problem but simply to recognize that there will always be a sediment delta at the Sessom Creek and San Marcos River confluence as this is partially a natural phenomenon. Even if the existing sandbar was completely removed and all the best management practices were implemented in the watershed, there will still be the occasional formation of a sediment delta at Sessom Creek. However, it is not the responsibility of EAHCP funding to repeatedly remove the sandbar. Once removed/modified, the responsibility shifts to the City and University to prevent sedimentation as a result of development actions within Sessom Creek watershed.

III. Water Quality Protection Plan – Impervious Cover/Water Quality Protection

Concern: This measure as described in the 2014 workplan seems indistinct and requires additional information on the scope and activity to date. Please describe the geographic locations of this panning effort relative to the critical habitat of the covered species.

Response: The study area for the Water Quality Protection Plan (WQPP) is shown on the Study Area Map dated 3/8/13 (sent as a separate document). The extent of the land area that drains to endangered species habitat is indicated by a red line on the map. The confluence of the San Marcos River with the Blanco River is shown as the downstream limit of the study area. From there the plan boundary extends upstream and includes areas within the City's ETJ that drain to the following water resources:

- Surface water: Spring Lake and the San Marcos River
- Ground water: Edwards Aquifer

The headwaters of Sink Creek and Purgatory Creek, which extend beyond the limits of the City's ETJ, will also be considered in the WQPP (in a limited way) since these drainage areas also affect endangered species habitat.

Also shown on the map are the boundaries of the Upper San Marcos River Watershed Protection Plan (WPP) displayed in a green line. The WPP is a separate effort, but is related since it also addresses water quality protection. The WPP is funded by a 319 grant through the TCEQ.

At present, the effort by the City and University incorporates the estimated runoff from all drainages that directly enter the San Marcos River within the known habitat of covered species with a goal to identify the location and magnitude of potential water quality issues that can affect the covered species and then evaluate best management practices necessary to eliminate or adequately control any water quality issues that have been identified. It would be imprudent in our assessments not to incorporate the physical drainages of the Upper San Marcos watershed in the assessments. Watersheds that do not directly drain into the Upper San Marcos watershed are not being considered as part of the EAHCP activities.

To date, research and meetings have been conducted to build the WQPP. By the end of June, the *Draft* WQPP will be at 50% and submitted for review to City and University.

IV. Management of Household Hazardous Waste

Concern: EAHCP funding should only be used for costs of activities within areas directly linked to critical habitat of the covered species. Please provide documentation that the City is monitoring and recording the locations or origin of the incoming HHW and be able to demonstrate the application of funds to only those geographic areas directly proximate to the covered species.

Response: Household hazardous waste is collected at a permanent facility twice a week. The facility is collecting about 1000 pounds of HHW every month.

The facility is open to all Hays County residents and the city does not have the capabilities currently to track every customer. However, later this year the city will be modifying reporting systems to include the ability to track the amount, type and origin of hazardous waste. This will ensure that EAHCP funds are spent on the collection of HHW collection from citizens living in the San Marcos River watershed or over the Edwards Aquifer recharge and contributing zones.

A map of HHW outreach is attached. (I am awaiting its arrival and hope to distribute at June 18 Implementing Committee meeting)