



MARCH 29, 2016 MEETING MINUTES

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As requested by the Edwards Aquifer Habitat Conservation Plan (EAHCP) Implementing Committee, the 2016 EAHCP Biological Monitoring Program Work Group (BioWG) and the 2016 EAHCP Expanded Water Quality Monitoring Program Work Group (WQWG) have been formed to produce final reports for review by the Implementing Committee providing their assessment of recommendations made for each of the EAHCP Monitoring Programs. The Work Groups are comprised of representatives from throughout the Edwards Aquifer Region. The second meeting for the **Expanded Water Quality Monitoring Work Group** was held **Tuesday, March 29, 2016, at 9 a.m. at the San Marcos Activity Center (Room 1), 501 E. Hopkins, San Marcos, Texas 78666**. Members of the WQWG present at the meeting included: Ken Diehl (San Antonio Water System), Melani Howard (City of San Marcos/Texas State University), Steven Raabe (EAHCP Stakeholder Committee/San Antonio River Authority), and Michael Urrutia (Guadalupe-Blanco River Authority). Charles Kreitler (EAHCP Science Committee) and Benjamin Schwartz (Texas State University) were not in attendance.

At this meeting, the following business was considered by the Work Group.

1. Call to Order.
9:10 a.m.
2. Public Comment.
Pat Hartigan asked if source tracing is being conducted. Nathan Pence stated that the EAA does not perform source tracing. It does perform dye tracing and flow path research.
3. Recap of Work Group Meeting #1.
Rebecca Leonard provided an overview of activities and outcomes from Meeting #1.
4. Review and achieve consensus on revised basic operational principles and guidelines.
Rebecca Leonard presented how the basic operational principles and guidelines were revised, based on Meeting #1 discussions. The Work Group discussed whether scientific recommendations should be constrained by budget. The Work Group reached unanimous approval of operational principles and guidelines.
5. Presentation and discussion of draft modifications to the Scope of Work for the EAHCP Water Quality Monitoring Program.
*Nathan Pence presented two alternatives for modifying the Scope of Work for the EAHCP Water Quality Monitoring Program. The following are comments from the discussion regarding Alternative 1. Key changes to the Scope of Work, as proposed in Alternative 1, are: remove of surface (base-flow) sampling parameters, suspend sediment sampling, add real-time sampling, suspend stormwater sampling, enhance passive diffusion sampling (PDS), and suspend low-flow well sampling. **HCP staff is to provide additional information regarding the proposed suspensions of sampling methods as referenced in Alternative 1. Each Work Group member is to review and be prepared to discuss at next meeting.** Ken Diehl requested the parameters, frequencies, detection limits, locations under the HCP, and locations under the Clean Rivers Program. **EAA is to coordinate with GRBA to provide the Work***

Group with a list of Clean Rivers Program efforts. Suspending stormwater sampling during 2017-2018 was discussed (excluding sampling for detects of concern near golf courses). Then, after 2018, a full suite of detects could be sampled for so that efforts to gather a baseline data trend continue. Steve Raabe was in favor of this approach. Ken Diehl requested to see sampling locations so that the Work Group can determine if it is appropriate (is data adequately capturing the first flush of stormwater that enters the Comal system?). Nathan Pence stated that there has been past discussion regarding the use of automatic sampling devices, but there has yet to be consensus on the topic. Ken Diehl cited vandalism and damage as challenges to the validity of data captured by automatic sampling devices. Bob Hall stated that stormwater enters and leaves the system so quickly that eutrophication has not been an issue. Ken Diehl stated that the National Academy of Sciences (NAS) has identified nutrients as a concern, however, these are in designated areas. Ken Diehl stated that there may be a middle ground between the NAS recommendations and testing for a full suite of contaminants every time. Nathan Pence stated that enhanced PDS sampling entails adding a membrane that detects the presence/absence of pharmaceutical/personal care products (this membrane would not report concentration nor frequency). Parking lot topic: SAWS has ongoing monitoring efforts that detect the movement of bad water lines. **HCP should explore coordination opportunities with this effort.** San Antonio River Authority had USGS sample for emerging constituents of concern. A report has been published. **HCP staff will review report.**

The following are comments from the discussion regarding Alternative 2. Key changes to the Scope of Work, as proposed in Alternative 2, are: remove surface water (base flow) sampling, suspend sediment sampling, add real-time monitoring, suspend stormwater sampling, enhance PDS sampling, suspend low-flow well sampling, and add fish tissue sampling (largemouth bass, Asian clam, fountain darter). The rationale for this recommendation was that fish tissue sampling is a species-driven sampling approach. Mike Urrutia posed the question: "Does the Asian clam filter the water or sediment?" Bob Hall clarified that the Asian clam filters fine silt. Nathan Pence clarified that the Asian clam tissue sampling would serve in lieu of sediment sampling. It would let us know if there is a contaminant of concern in the sediment that is affecting the species. By doing tissue sampling, the program can focus on detects that have an acute effect on the species. Ken Diehl stated that we need a constituents list from experts, then we can tissue sample. Steve Raabe supported tissue sampling stating "It directly answers questions relating to the species. However, it does not answer everything we need to know about sediment." We must devise a program with an appropriate interval of sampling for the correct things (that the original database included). Then, in coming years, the program can tackle additional parameters. **HCP staff shall consider input from this discussion, and draft an Alternative 3, that marries the benefits of both.** Steve Raabe, Chair of the Work Group, approved the creation of an Alternative 3 that addresses concerns regarding long-term trends and adjusted frequencies.

Each Work Group member shared concluding thoughts regarding each alternative. Mike Urrutia stated that he likes Alternative 1 because it's familiar. He is in agreement with the importance of fish-tissue sampling. GBRA does not do this and it may provide valuable data, particularly related to mercury. Plum Creek samplers are automatic, and operating them is challenging. Steve Raabe liked the species direct testing and is in favor of the ability to have long-term data sets (that build upon variable flow studies and three-year data already gathered by the HCP). Steve Raabe stated that there may be need for shorter term sampling efforts (for personal care products, for example) that can be plugged into the long-term model. Ken Diehl stated that the overall challenge is a lot of data has been collected with little detection. He would like to see all the information in one place before he makes a decision. Ken wants to ensure that we are sampling constituents documented to have an impact on the species. He also noted that a person to review the data is needed. Has the Science Subcommittee made recommendations regarding how to proceed? Nathan Pence clarified that data is being collected, placed into one format, and presented to the Science and Implementing Committee. It will likely be 2018 when statistical analysis will be conducted. **HCP is to provide information all in one place, so that Ken may make a decision regarding what to add or potentially remove from the Scope of Work.**

6. Presentation and possible recommendation of the methodology to calculate the historically-recorded water quality conditions (long-term averages) in the Comal River and San Marcos River ecosystems. *Nathan Pence provided an overview of a methodology to calculate the historically recorded water quality conditions (long-term averages to determine the 10 percent deviation in the Comal River and San Marcos River ecosystems). Staff proposed using the data from the Variable Flow Study Fountain Darter Drop-net Sampling (2000-2012), which is biannual. U.S. Fish and Wildlife mandates the ten percent requirement. Steve Raabe asked if the Clean Rivers Program has additional data from the last ten years that could be used? Mike Urrutia stated that GBRA does not. Daniel Large stated that the proposed approach incorporates three measurements at different heights of the water column – mid-level, surface-level and high-level, making it more ecologically relevant for the Fountain Darter. The group considered the action. No objections. **The Work Group unanimously agreed on qualified approval of the proposed data methodology for historical analysis. Meeting facilitators are to note this in the report, and HCP staff is to provide data regarding historical limits.***
7. Presentation of, and possible recommendation of analytical limits for water quality data that is used for the EAHCP. *Alicia Reinmund-Martinez presented an appropriate analytical limit for water quality data used for protection of the Covered Species in the EAHCP. Steve Raabe stated that we are not discussing changing our detection limits. Nathan Pence stated that this is correct, the Work Group is simply considering the limits for reporting. The group considered an action to endorse this limit to water quality data. No objections. **The Work Group unanimously approved the proposed recommendation of analytical limits for water quality data of the protection of the covered species.***
8. Presentation and discussion of National Academy of Sciences (NAS) recommendations. *Nathan Pence provided a summary of recommendations from the NAS Report 1 for the EAHCP Water Quality Monitoring Program. HCP staff recommended that no changes be made to the reach approach for the HCP. Steve Raabe asked if there is a need for system-wide extrapolation? Nathan Pence stated that only data needed for compliance reporting falls within the current reach. **Meeting facilitators to add to agenda for the next meeting the topic of nutrients. The HCP is to gather data to present at next meeting.***
9. Presentation and discussion of the Draft Report. *Rebecca Leonard presented a draft of the Work Group's final report. No additional comments.*
10. Consider future meetings, dates, locations, and agendas. ***HCP staff is to contact those not in attendance to share Alternative 1 and 2. The Work Group's next meeting will be held April 27th at the Dunbar Recreation Center, 801 W. MLK, San Marcos, TX 78666.***
11. Questions and comments from the public. *No questions or comments.*
12. Adjourn. *11:38 a.m. Steve Raabe concludes the meeting.*