



## APRIL 27, 2016 MEETING MINUTES

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As requested by the 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 third meeting for the Water Quality Monitoring Work Group is scheduled for Wednesday, April 27, 2016, at 9 a.m. at the Dunbar Recreation Center, 801 W. Martin Luther King Drive, San Marcos, TX 78666. Please RSVP to [dlarge@edwardsaquifer.org](mailto:dlarge@edwardsaquifer.org).

At this meeting, the following business may be considered and recommended for Work Group action:

1. Call to Order.  
*9:07 a.m.*
2. Public Comment.  
*No comments or questions.*
3. Recap of Work Group Meeting #2.  
*Rebecca Leonard provided an overview of previous Meeting #2 activities. Alicia Reinmund-Martinez provided a recap of the datasets for establishing ten percent deviations discussions. The group confirmed no objections, and that there is still consensus on the ten percent deviation methodology. Alicia Reinmund-Martinez provided a recap of analytical criteria for water quality outcomes from Meeting #2. Passive diffusion sampling was determined to be beneficial as more species-driven. Ben Schwartz posed the question of whether measurements show that we are exceeding set baselines.*
4. Presentation, discussion and possible recommendation of Scope of Work #3 for the EAHCP Water Quality Monitoring Program.  
*Nathan Pence provided an overview of the Expanded Water Quality Program and the Scopes of Work (#1 and #2) presented to the Work Group at the second meeting, and the rationales for each option. The third presentation to be discussed today, Scope of Work #3 alternates the frequencies of sampling efforts. Scope of Work #3 also addresses a few techniques that are not required by the Habitat Conservation Plan, such as sampling for Personal Care Products, and how the Implementing Committee may consider accommodating these without increasing the program's budget. Charlie Kreitler asked for an explanation of why tissue sampling is recommended. Nathan Pence provided an overview of previous efforts and discussions that have led to the tissue sampling recommendation. Charlie Kreitler stated a concern that there has been a lot of data collected, but limited analysis has occurred. Nathan Pence shared with the group, that EAA gathers water quality data that allows for both baseline and trend analysis. EAHCP will be contracting with a team to analyze and share the database that incorporates data from various sources, such as the Clean Rivers Program. Steve Raabe stated that the HCP should engage with other entities, such as GBRA, to ensure monitoring and data collection efforts further the long-term goals of the HCP. As funding remains finite, and*

*data collection becomes more complex and expensive, this coordination will become more important. Key changes to the Scope of Work, as proposed in Scope of Work 3, are: remove of surface (base-flow) sampling parameters, remove sediment sampling, add real-time sampling, reduce stormwater sampling, add passive diffusion sampling (PDS), remove low-flow well sampling, and add tissue sampling. Benjamin Schwartz shared that one golf course in San Marcos might close, due to significant storm damage, and become recreational ball fields, which would have differing integrated pest management considerations. Charlie Kreidler asked the impact to the budget for tissue sampling. Nathan Pence shared that current efforts cost \$520k. Scope of Work 3, includes tissue sampling, which EAHCP staff estimates could provide a savings of approximately \$100k annually. Nathan Pence provided an overview of surface water quality parameters suspended in Scope of Work 3. **Facilitators are to add “EAHCP Surface Water Quality Parameters Suspended in Scope of Work 3” be added as a section in the report.** Potassium is not typically viewed as nutrient by aquatic biology. Ben Schwartz and Melani Howard comment that because EAA already samples for potassium and the other detects on this list, they agree with the recommendation to suspend the surface water (base flow) suite of parameters as proposed in Scope of Work 3. AWRL detection levels differ from what EAHCP is currently doing. Nathan Pence provided an overview of tissue sampling. There are experts and literature that EAHCP staff are collecting and referencing. To date, the key findings are that two locations per system, with three species tested per system. **Meeting facilitators are to use the term “aquatic tissue sampling” instead of “fish tissue sampling” in final report.** Nathan Pence provided an overview of sediment sampling recommendation to continue this program less frequently. Steve Raabe requested that consistency in data allow for flexibility, but the topic of adding testing for specific constituent needs to be held until a specific issue occurs. Ben Schwartz stated that it’s not a static system that you can wait for specific constituent to be in the same location every year. Alicia stated that stormwater sampling will provide the results of the deposition of the storm event. Ken Diehl stated that he agrees with the proposal in Scope of Work 3 and believes that the frequency is okay as proposed, as long as the rest of the group is in consensus. Charlie Kreidler stated that sediment sampling is looking at more gradual, longer-term changes that explore how metals are building up. Ben Schwartz supports the approach of sampling the stormwater, and then if contaminant is detected, go to aquatic tissue sampling to see if it is affecting the species. Ben Schwartz prefers to have the same sites tested at each year. Nathan Pence provided overview of real-time sampling recommendations in Scope of Work 3 and the rationale for the geographical locations of real-time sampling locations. A recommendation for the San Marcos location is pending further input from various program partners. Ben Schwartz stated that USGS is preparing to move their instruments; however, in the last storm event there was damage to the Aquarena station. Nathan Pence clarified that EAHCP does not have the jurisdiction to mandate USGS’ determination of their relocation site. Nathan Pence provided an overview of stormwater sampling recommendations in Scope of Work 3. Clarification to slide text: “Sampling of IPMP is not required by EAHCP.” He also recommended that the first flush is captured through sampling, and that EAHCP try to capture more samples earlier and later during each event. Nathan Pence – blue line is conductivity. First lead sample is pre-peak, during peak, and post-peak. For the most part, there is consistency between hydrographs for when samples are occurring during each event. The red line on the graph indicates temperature. Temperatures drop during storm event. Ben Schwartz recommended that additional samples be conducted more frequently (i.e. six samples instead of three, or one every five minutes as opposed to fifteen, per se) during the rising limb of the hydrograph. Pre-storm samples do not change much from baseline to baseline. Clarification –recommending instead of 3 samples x 7 locations = 21 total; doing 5 samples x 7 locations = 35 total. EAHCP can require in the sampling team’s contract, that when the storm event allows, they collect more samples during the peak. Melani Howard stated that the Work Group can make recommendations of certain locations within each system where additional samples during each event should be collected to further the program. Ben Schwartz emphasized that less sites, more samples, and focus on the mouth of the tributary. Nathan Pence provided a summary of passive diffusion sampling recommendations in Scope of Work 3.*

*Nathan Pence provided an overview of groundwater sampling recommendation in Scope of Work 3. EAA is doing monthly, quarterly, event sampling. During low flows, neither EAA nor EAHCP is able to pick in advance which wells will be sampled. Real-time conditions and the amount of water in the wells, constrain which ones are capable of being sampled and this cannot be predicted ahead of the event itself. No objections to this recommendation. Nathan Pence asks if the work group comfortable with Scope of Work 3 being included as the recommendation that is included in the final report. Charlie Kreitler requested a statement that addresses the concern about how all the data that is being collected will be researched and analyzed. Meeting facilitators to add a recommendation that the data is not just collected, but analyzed in a way that contributes to the body of knowledge regarding how water is moving through the system. Steve Raabe made motion to approve Scope of Work 3 to be included in report. Charlie Kreitler seconded. Ben Schwartz supported Charlie Kreitler's recommendation that a robust section describing how EAHCP use the data is included, and that efforts go beyond simply capturing the data. No objections to Scope of Work 3. The group agreed by consensus to recommend Scope of Work 3 in the report. Work Group approved Alternative #3, with the addition of:*

- *Add two stormwater samples at each location to the initial rise of the hydrograph, keeping the same 3 original samples as identified (onset, peak, and tail) in the original SOW, for a total of 5 samples per location. It is understood that due to timing, 5 samples at each location may not be feasible; therefore, the 5 samples, rather than just 3, should be prioritized for locations near tributary outflows (making Sessoms and Purgatory the first priorities)*
5. Presentation and discussion of nutrient monitoring within the Comal and San Marcos systems through the EAHCP and other programs.  
*Alicia Reinmund-Martinez provided an overview of National Academy of Sciences (NAS) recommendations concerning nutrient monitoring. Bob Hall described characteristics of the systems and nutrients affecting species in each. Between EAHCP WQ, BioMP, and CRP all three nutrients of concern (nitrate, ammonia, and soluble reactive phosphorus) are being sampled. Recommendation is to drop nutrient sampling from the Water Quality Program because nutrients of concern are being covered by BioMP Program and CRP. At the detection limit used for soluble reactive phosphorus (SRP), there have been 95% non-detects. Dilemma is that detection limit is too low. Ben Schwartz suggested that a more reasonable number between 2 micrograms/L and 50 micrograms/L and be considered for testing due to potential additional cost related to testing at 2 micrograms. Does work group agree to specific nutrients of concern? The Work Group requests that the next meeting agenda be to discuss research relating to the nutrients of concern. —nitrate, ammonia, and SRP—were agreed to; and further agreed that SRP was the only one worth pursuing further due to detection limits/ability to modify. Before an action would be taken, WG asked at next meeting to be presented with a breakdown of SRP results and table showing gradation of costs as detection limit is decreased; staff will meet with Weston Nowlin to get more details; staff will formulate a recommendation.*
  6. Presentation and discussion of the Draft Report.  
*Work Group members are to review the draft and send comments by end of week, so that report can be revised and an updated report can be presented on May 11.*
  7. Consider future meetings, dates, locations, and agendas.  
*The Work Group's next meeting will be help May 11th at the San Marcos Activity Center (Room 1), 501 E. Hopkins, San Marcos, TX 78666.*
  8. Questions and comments from the public.  
*No questions or comments.*
  9. Adjourn.

*11:59 a.m., Steve Raabe concluded the meeting.*