

MINUTES

SMP Work Group

December 17, 2015

10:00 am – 3:00 pm

Location: Center Spruce Conference Room, US Forest Service Office, 2250 Hwy 50, Delta, Co.

Conference Call Line: 1-866-541-2318

Passcode: 6191202

Attendees: John Sottolare (Reclamation), Lesley McWhirter (Reclamation), Brent Uilenberg (Reclamation), Jenny Ward (Reclamation), Ken Leib (USGS), Judith Thomas (USGS), Barb Osmundson (FWS), Mike Baker (Interested Party), Paul Kehmeier (Local Farmer), Sonja Chavez de Baca (CRWCD), Allen Distel (BPWCD)

Conference Call-In: Theresa McGovern (NRCS), Steve Miller (CWCB)

10:00 – 10:15 **Introductions**

10:15 – 12:30 **Species Conservation Trust Fund Proposed SMP Activity Table for 2016**

- USGS prepared a table and the Science and Technical Subcommittee prioritized actions to be recommended for funding in 2016 with Species Conservation Trust Fund (SCTF) monies (see Attachment A). The table lists actions which could be undertaken by the USGS; however, activities are not limited to actions by the USGS.
- The yellow coded items in the table have been recommended by the Science and Technical Subcommittee as higher in priority. These items sum to \$359,000.
- The blue coded items in the table are items which are secondary recommendations should additional funding become available.
- The table lists \$1.2M in recommendations. Funding up to \$250,000 is available in 2016 (not limited to the SMP) from the Colorado Water Conservation Board (CWCB) SCTF, with an additional \$110,000 of left over monies from 2015. There is the potential that the CWCB may have up to \$500,000 funding for 2016.
- Ken presented the yellow and blue items in the table, and the SMP workgroup discussed these items.
 - Item #1 (yellow) – Groundwater Level Measurements for 2016: This is a continuation of monitoring the existing 30 well network for an additional 12 months. Ten sites will be continuously monitored for water levels, and all 30 wells will be measured once a month. This work tracks trends and helps the SMP to better understand seasonal groundwater fluctuations.

- Item #2 (yellow) – Groundwater Quality Sampling: This is a continuation of previous age dating work. It will help determine groundwater residence time and give us a better understanding of the wide variation in the concentration of selenium (Se) detected within the groundwater system. The project will also help define the response time of Best Management Practices (BMPs) and other land use changes.
- Item #3 (yellow) – Estimating Groundwater Inflow and Selenium Loading to Streams: The USGS has new equipment which uses infrared to map groundwater inflow to surface-water areas. This could help us to potentially target high concentration areas where in-situ treatments or synoptic monitoring sites could be located. With this technology, selenium sources could be better defined and differentiated, e.g., from one side of a creek or the other. This information will improve our understanding of surface-water Se loading vs. ground water quality.
- Item #4 (yellow) – Sediment Sampling: This work will involve determining the amount of selenium bound to suspended sediment at two new sites upstream of the Loutsenhizer and Sunflower drains. This information will help characterize concentrations of Selenium available to the food web in suspended sediment. Sediment is entering critical habitat at a greater rate than it is leaving, creating a sediment sink. If the sediment is a source of selenium, sediment could possibly be controlled with BMPs or in-stream remediation projects.
- Item #5 (yellow) – Pharmaceuticals in Lower Gunnison River Basin: This work will involve testing ten wells within the 30 well network for persistent pharmaceuticals. These pharmaceuticals can be used as a tracer to help determine the influence of septic water into groundwater, and could help target in-situ groundwater treatment projects. This work was originally part of a larger EPA SW study; however, this project would enable USGS to continue sampling GW in the Lower Gunnison Basin. Ken is working to see if he can continue coordinating with the EPA to continue the work/shared funding.
- Item #6 (yellow) – Toxicology Studies: This is part of the Upper Colorado River Monitoring Program and Ecosystem Model being managed by Travis Schmidt (USGS). Fish tissue will be collected from 200 fish (both, endangered and surrogate species) by non-USGS entities, at no cost to the SMP, in order to measure mercury levels. The SCTF funding would go towards paying to analyze the samples for selenium as well. This data will be used in the model, and the information will be transferrable to the Gunnison Basin.
- Item #7 (blue) – Sunflower Drain Sampling and Gage: This would set up a sampling site in an area of high selenium concentrations where future selenium reduction efforts could be focused. There is currently an active SW gage there that is maintained by Trout Unlimited (TU) and The Nature Conservancy (TNC) for the purpose of detecting

spills. If the gage and sampling extends beyond two years, the SMP will need to figure out a longer term funding source, as SCTF monies are not intended for operation and maintenance work. If the CWCB does not have sufficient additional funds available, then some existing, ancillary QW sites could potentially be dropped to fund sampling at this site.

- Item #8 (blue) – Feasibility of In-Situ Groundwater Treatment: This work involves preparing scoping documents and a proposal for a potential demonstration project. What we learn from this project will be transferable to other areas where there are selenium loading issues. The goal of this project is to research and identify feasible in-situ groundwater treatment technologies that could potentially be implemented, recommend locations, and the range of selenium concentrations and load that could be removed from the groundwater. The SMP recommended this item should be a higher (yellow) priority item, potentially above the pharmaceutical testing item, and to bump funding up to \$41K to do comprehensive review of this type of technology prior to implementation. USBR Drill crew may be available if project supports the feasibility of doing a follow-up, demonstration project.
- Item #15 (blue) – Real-Time Selenium Equations Update: Since selenium concentrations cannot be continuously monitored at a SW gage site, the USGS has developed regression equations to calculate the selenium concentration based on the standard conductivity, which can be monitored. This is the same technique used to determine continuous TDS (salinity), but the results for selenium are less certain. Past selenium samples were used to develop equations unique to each site, but over time conditions have changed making the equations less accurate. This proposal is to update the regression equations based on more recent samples at 6 real-time Se core sites. Updating the equations is not imperative, as the current values can still be used to indicate short and long-term changes, cause and effect, and how periodic sample values compare to the overall day to day values. On the other hand, the equations are on a public website, so updating them to more accurately reflect actual conditions is important.
- The SMP Work Group had a discussion regarding if we're on the right track for improving Selenium knowledge every year, and whether or not it's best for funds to be spent on science vs. funds being spent for on-the-ground Selenium reduction activities.
 - The Science and Technical Subcommittee needs to have discussion and follow up with the Work Group with regard to how our current studies will help lead us to solutions and selenium reduction, and map out that path. It was agreed that USGS should prepare a summary of the data we have to date, data gaps, and interpretation/conclusions that can be made from that data.

- What kind of on-the-ground projects do we need to provide funding for?
 - Canal lining projects under the Salinity Control Act are likely having a positive effect on reducing Selenium. However, the limited funds available through the State and other SMP partners would not go far in implementing separate lining/piping demonstration projects. Paul suggested focusing on-the-ground projects to those that are less expensive than canal piping/lining.
 - Mike Baker reminded the Work Group that there is an existing Reclamation report evaluating about 50 ideas for on-the-ground Selenium reduction projects.
- Further discussion is needed to find a contracting mechanism to get funding for on-the-ground projects. This has been a source of difficulty in the past.
- The report for the EC Lateral Lining Demo Project was never completed. Reclamation will help provide information with their costs on this project to Sonja, and Sonja will work with the Uncompahgre Valley Water Users Association (UVWUA) to produce the report.
- What is our target? We know the water quality standard and amounts which would need to be removed to obtain the standard, but we do not know if the standard will recover the fish. Mike indicated that a plan exists to accomplish specific targets. There was also a discussion of correlating basin Se trend with salinity trend to help predict what level of salinity reduction could potentially help us meet the Se water-quality standard. It would also be good to know at what point in time we can expect to meet the water-quality standard based on the current Se trend.
- Science helps inform on-the-ground projects. Information is pointing to septic systems as being a problem. The Science and Technical Subcommittee is working on developing ways to identify the extent of septic influence, how to mitigate its effect if needed, and identifying other non-ag sources.
- USGS has about 20 proposed, Statements of Work (SOW) that have been funded over the past four years. Steve will send copies of past Joint Funding Agreements (JFAs) to Ken, and Ken will provide to Reclamation scanned copies of the JFAs/SOWs for USGS studies funded through the SMP. Reclamation will organize the information and distribute it to the SMP Work Group.

12:30 – 1:30 **LUNCH**

1:30 – 3:45 **SMP 2016 Action Plan Table**

- The SMP Work Group went through the 2016 Action Plan table and updated information.
 - John will update the 2016 Action Table and distribute it to the Work Group.
 - It was determined that the table needs to be re-formatted so it functions as a planning document instead of an historical document. Historical information should be tracked separately. John will work on re-formatting the table to make it more useful, and the revised draft table will be distributed to the SMP Work Group for comments and discussed in a future meeting.
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Action Items

- Sonja will work with UVWUA to finalize the report documenting the EC Lateral Canal Lining Demonstration Project.
- Sonja will follow up with Dave Kanzer to schedule a meeting with Trout Unlimited (TU), The Nature Conservancy (TNC), and Regional Conservation Partnership Program (RCPP) regarding monitoring needs in the sub-basin and the existing gage (item #7 above) put in by TU, TNC and UVWUA contractor.
- John will determine Reclamation's cost share for the EC Lateral Canal Lining Demonstration Project and provide that information to Sonja.
- Ken will revise the table of 2016 SCTF funding proposals, coordinate with John and Sonja for review, and send the revised table to Steve.
- John will revise the 2016 Action Plan Table to include the SCTF activities and other updates and distribute it to the SMP Work Group.
- Steve will send Joint Funding Agreements (JFAs) to Ken, and Ken will provide to Reclamation scanned copies of the SOW for USGS studies funded through the SMP. John will organize the information and distribute it to the SMP Work Group.
- John and Mike will find the existing document listing potential on-the-ground projects to control Selenium, and the plan/summary sheets that identify targets. These documents will be discussed at future Science and Technical Subcommittee and SMP Work Group meetings.
- John and Lesley will follow up on the idea of a database clearinghouse, and find out what that might involve.
- The 2015 Gunnison Basin PBO Report is due to FWS by January 31, 2016; however, the USGS internal review of the 2014 trend report may not be complete by that date. Barb does not believe delaying the SMP portion of the report until the USGS has their trend information will be a problem.

The date of the next SMP Workgroup meeting will be determined by a Doodle Poll. Lesley will plan to send out a Doodle Poll in Spring 2016..