

# MEETING SUMMARY

## SMP Work Group Meeting

June 16, 2021

12:30 PM – 4:30 PM

Location: Remote meeting via Microsoft Teams

**Attendees:** Lesley McWhirter (Reclamation), Jenny Ward (Reclamation), Ken Leib (USGS), Rachel Gidley (USGS), Suzanne Paschke (USGS), Creed Clayton (FWS), Jedd Sondergard (BLM), Dave Kanzer (CRWCD), Raquel Flinker (CRWCD), Alex Funk (CWCB), Allen Distel (BPWCD), Steve Anderson (UVWUA), Cheryl DeJulio (UVWUA), Paul Kehmeier (DCD), Kenan Diker (CDPHE)

---

## Introductions and Discussion of Agenda

The agenda was accepted. A summary of today's meeting will be sent to the SMP Workgroup. Lesley provided a brief background on the Selenium Management Program for the benefit of two new Workgroup members.

Bonie Pate (CDPHE) retired and has been replaced by Kenan Diker. Kenan is using two segments which have been removed from the 303(d) list as success stories in his reporting to the Environmental Protection Agency (EPA). He indicated the CDPHE has a grants program of ~\$1M a year for BMP implementation to restore watersheds.

Rachel Gidley was introduced. Rachel is new with the GJ USGS office and has been there for about a year.

---

## Science Team Update

The USGS gave an update on the "30 Well Network". In the 2019 SMP Gunnison River Basin Annual Progress Report, it was reported that one of the wells in the Network was destroyed by a landowner. During the meeting, it was reported that another well was lost from the Network due to a landowner request that well ownership be transferred from the USGS to themselves. This change in well ownership was completed in 2021. This leaves 28 wells which continue to be monitored in the Network. Monthly water-level measurements will continue through September 2021. The USGS no longer has a volunteer to help with this data collection effort. The Science Team will need to discuss continued water-level monitoring beyond September 2021.

Two USGS reports have recently been published:

Mast, M.A., 2021. Characterization of groundwater quality and discharge with emphasis on selenium in an irrigated agricultural drainage near Delta, Colorado, 2017–19: U.S. Geological Survey Scientific Investigations Report 2020–5132, 34 p., <https://doi.org/10.3133/sir20205132>.

Temporal Influences on Selenium Partitioning, Trophic Transfer, and Exposure in a Major U.S. River, Jessica E. Brandt, James J. Roberts, Craig A. Stricker, Holly A. Rogers, Patricia Nease, and Travis S. Schmidt, *Environmental Science & Technology* 202155(6), 3645-3656, <https://pubs.acs.org/doi/full/10.1021/acs.est.0c06582>.

When Travis Schmidt is available to do a presentation on the Temporal Influences report, the SMP Workgroup should discuss if there are alternative or better ways to study or track selenium than what is currently done.

The sediment fingerprinting study is underway. This study is being funded by the Species Conservation Trust Fund (SCTF). The Science Team will ask Carl Bern at the next Science Team meeting to give an update on this study. The purpose of the study is to develop a model to understand the sources of selenium on sediment.

The Lower Gunnison GIS Model report is undergoing peer review and is expected to be published in late 2021. The study is an update to previous models. Instead of ranking contributing areas, the model produces salinity and selenium yield maps and GIS files which will be available in the associated data release. The model is a multiple linear regression model based on geospatial variables and selenium data. It is not process based, but is a statistical representation. The model is not dynamic, it is relative to the time period of the data used to generate the model. The model will provide a baseline of conditions that can be used for targeting areas which are the greatest sources of selenium loading.

The update to the SMP Science Plan is underway. The update is intended to adjust science priorities based on information obtained in studies which have been conducted since the draft SMP Science Plan was initially prepared in 2014. The bulk of the updated plan will discuss monitoring and research needs. An outline of the updated plan was presented. The updated plan has an expected publication date of late 2021 or early 2022.

---

### **Report on the May 10 hearing to delist the lower Gunnison River from the 303d list for dissolved Selenium**

As part of the hearing on the 303(d) list of impaired waters, the Colorado Department of Public Health and Environment reviewed data and deemed the mainstem Gunnison River from Delta to Whitewater (66 miles) to be in compliance for selenium. The final action of delisting this river segment from the 303(d) list for selenium is close to being finalized. The consultation process between the State and the EPA has occurred.

This is an important milestone, because it shows that the SMP has achieved one of its main objectives—compliance with the Clean Water Act. The other main objective related to recovery goals for the Colorado River endangered fish species is still in progress. Dave Kanzer indicated the River District would be interested in doing a joint press release with any interested agencies to get as much press as possible on the delisting to help show that the SMP is making progress.

Selenium monitoring will continue in this river segment. Monitoring will inform if the trend is going down or up. If the trend is going up, CDPHE can use that information to focus on that

area for BMP funding, as previously mentioned by Kenan Diker during the meeting introductions.

The EPA's 2016 water quality criterion for selenium provides recommendations to states and tribes authorized to establish water quality standards under the Clean Water Act. The 2016 selenium criterion recommends that states and authorized tribes adopt a multi-media criterion into their water quality standards. The 2016 criterion includes four elements: egg-ovary [mg/kg dw], whole body [mg/kg dw], muscle [mg/kg dw], and water [ $\mu\text{g/L}$ ]. The EPA recommends that states include all four elements in their standards. The 1999 water quality criterion for selenium only included a water [ $\mu\text{g/L}$ ] element, and the standard was 5  $\mu\text{g/L}$ . The 2016 water quality criterion for selenium has been lowered to 1.5  $\mu\text{g/L}$  for lentic waters and 3.1  $\mu\text{g/L}$  for lotic waters.

It was questioned how the 2016 recommendations for monitoring come into play, such as the recommendations for fish tissue sampling. The new EPA standards will become the standard in Colorado, but it is uncertain when this will occur. If or when the state of Colorado implements the EPA standard, the Gunnison River segment would go back on the 303(d) list if selenium concentrations exceed that lower threshold. The timeline for the State of Colorado finalizing the new selenium standard is unknown at this point, but Kenan believes the State is getting close to finalization. The State can collect samples and present an argument for a different standard if appropriate. It was clarified that the FWS hasn't taken fish tissue samples since Barb Osmundson retired.

---

### **Next Generation Water Observing System (NGWOS) update**

Suzanne presented information on the NGWOS. The NGWOS is a combination of programs for intense monitoring, observations, predictions, and assessments in the Upper Colorado River Basin. Salinity has been identified as a high-priority issue to consider in the basin. Selenium is on the list of water quality parameters. A plan is being developed to assess prediction and assessment needs and observation and monitoring needs in the headwaters. Anyone who would like to be included on the NGWOS email distribution list is encouraged to contact Suzanne.

---

### **Species Conservation Trust Fund update**

Funding was available for the SMP through the last SCTF bill but, due to COVID, all the funding for SCTF programming statewide got pulled back to help balance out other areas of funding in the state. Therefore, there is no funding available in the SCTF at this time. Alex Funk will not know if funding will be available for next year until this fall. If there is any immediate work that needs to happen, Alex could consider funding through the basin fund MOA if there is a nexus with participating projects. There are also some State grant programs which may be an option. The Science Team will discuss possible projects and will present them to the Workgroup.

## **Update on Action Items from July 29, 2020 Work Group meeting**

Ken had an action item to verify the accuracy of the data points in the 2018 Selenium concentrations graph against the data on USGS' "real time" website and calculate the 5-year 85th percentile value. Ken explained that instantaneous sample sites are plotted against a model of selenium in the Gunnison River near Grand Junction. The model tends to over predict selenium levels. Ken thinks the model is over predicting because the model was developed using selenium data from 10 to 15 years ago when the selenium levels were higher. Over time, the levels have been decreasing, which could cause the model to over predict selenium levels. Ken also pointed out that the model is under predicting selenium levels at the Colorado/Utah Stateline, which may indicate an increasing trend in selenium at this location.

Ken presented an update on the SMP surface water monitoring program. In FY2021, monitoring was discontinued at three sites (Smith Fork at 38.5 Rd Bridge Near Hotchkiss, Smith Fork Near Crawford, and Tongue Creek at Cory). One site was added (Squaw Creek at Mouth of Cimarron). A five parameter node (5P) was added to the North Fork Gunnison River near Lazear site. The Science Team will discuss the sites and make sure we are leveraging the data collected.

The Science Team will discuss a second year of Smith Fork monitoring when they meet and discuss next year's priorities. Funding a second year of monitoring was initially raised due to the removal of some monitoring sites in the Smith Fork basin.

---

## **Other Topics**

No other topics were presented.

---

## **Review and update Draft SMP 2020 Annual Report and Action Plan**

Jenny went through outstanding comments in the draft report and action plan. Jenny will finish addressing the comments and will send a draft report out to the entire Workgroup for final review.

---

## **Schedule for next SMP Meeting**

A Science Team meeting will be scheduled prior to the next Workgroup meeting. The Science Team meeting will be scheduled within the next couple months.

## **ACTION ITEMS**

- A Science Team meeting will be scheduled for some time in the next couple of months. Possible topics to be discussed include:
  - Develop a priority list of SMP projects for FY2022 for presentation to the Work Group.
  - Need for a second year of Smith Fork monitoring.
  - Continued sampling of the 28 Well Network beyond September 2021.

- Review surface water quality monitoring sites and how to leverage the data collected.
  - Update from Carl Bern on the sediment fingerprinting study.
- Lesley will send out the draft 2020 Annual PBO Report and Action Plan to the SMP Workgroup for any last comments before finalization.
- Dave and Lesley will coordinate on scheduling the next Science Team and SMP Workgroup meetings.