Items for the November 2024 UWP Board Meeting

- River Watch items of interest:
  - Details for October sampling are found in the October WRWG notes. After the snow events in late October and the first week of November, sampling at the higher elevation River Watch sites has been discontinued for the winter. Four of the six lower sites were sampled on the 7th and 9th of November, and the remaining two sites will be sampled on the 15th. Low flow nutrient samples will be collected at all six sites, and we expect to ship the samples to CPW on November 26th.
  - Leslie Kaminski has decided to drop out of our River Watch group, so going into December we will be down to six River Watch volunteers. This presents no real issue for the next several months, since we will still have two volunteers per site for the winter months. However, adding at least one volunteer for next summer, when sites increase to 14 or 15, will be helpful.
- Snowpack and Streamflow:
  - After a slow start to the 2025 water year, storms in late October and early November brought the Gunnison Basin to 215% of its median snow water equivalent (SWE) as of November 9th. The average basin SWE over 14 SNOTEL sites was 2.8 inches. For the same date In the Uncompahgre Basin, the Idarado SNOTEL had 1.9 inches of SWE; 215% of its 1.3 inch median. The Red Mtn Pass SNOTEL had 5.5 inches of SWE; 220% of its 2.5 inch median.
  - For the period 1 June through 10 November the discharge graph for the USGS gauge near Ridgway showed stream discharge was below median discharge from 3 July through 9 August, significantly above median discharge during the monsoon period in August, and then again below median discharge from 3 September through 28 October. On 9 November the discharge was measured at 64.8 cfs, slightly below the median of 70 cfs.
  - The discharge graph for the USGS gauge below Ridgway Reservoir showed that reservoir releases had been dropped to about 63 cfs during the first week of November. The median discharge for the period from November through early February is 45 to 50 cfs. These winter flows could be impacted when the Project 7 water treatment plant comes online in a few years. The plant is initially expected to draw 6 million gallons per day (equivalent to a flow of 9.3 cfs) from the penstock at the dam, about 20% of the median wintertime release from the reservoir. However, the plan for the plant is to increase intake to an intermediate flow of 8 million gallons per day (12.4 cfs, ~26% of median winter releases), and eventually to 12 million gallons per day (18.6 cfs, ~39% of median winter releases).
  - As of November 9th, Ridgway Reservoir was holding 68,670 acre-feet of water, compared to the median storage of 61,900 acre-feet for that date. The historical median storage curve indicates that storage tends to increase starting in mid-September and continues to increase until about 21 March.
- River Watch Reporting

  I began an update report using River Watch data archived as of December 31st, 2023, which will include analysis of all UWP River Watch data from 2022 and 2023. Summary statistics will be presented for all sites, but more detailed analysis will focus on data from five TMDL sites: Upper Red Mtn Creek, Commodore Gulch, Gray Copper Gulch, Imogene Creek, and Sneffels Creek at Camp Bird. Some of the initial results were presented in the River Watch update report for the October WRWG meeting. Some additional results from one TMDL site are given below.

  - Figure 1 shows box plots for the logarithms of concentrations of seven metals analyzed from 16 water samples taken from Commodore Gulch between 2021 and 2023. The chronic aquatic life Table Value Standards (TVS) and water supply standards are shown by red and black line segments. TVS are computed from equations using the average hardness of all 16 samples. Aquatic TVS are exceeded if the 85th percentile of the dissolved concentration is greater than the TVS for cadmium, copper and zinc. For iron the chronic standard is exceeded if the 50th percentile of the total concentration is greater than the site-specific chronic standard (1000 µg/liter). Figure 1 indicates that the aquatic life TVS for cadmium, copper, and zinc were exceeded, while the iron standard was attained. There is currently no TVS for aluminum in the Uncompahgre watershed, so no standard is shown for the aluminum box plot (far right in Figure 1).

Water supply standards for total lead and dissolved manganese are also shown with their box plots in Figure 1. The manganese standard was exceeded while the lead standard was attained.

Plots like Figure 1 are being developed for all the UWP River Watch sites.

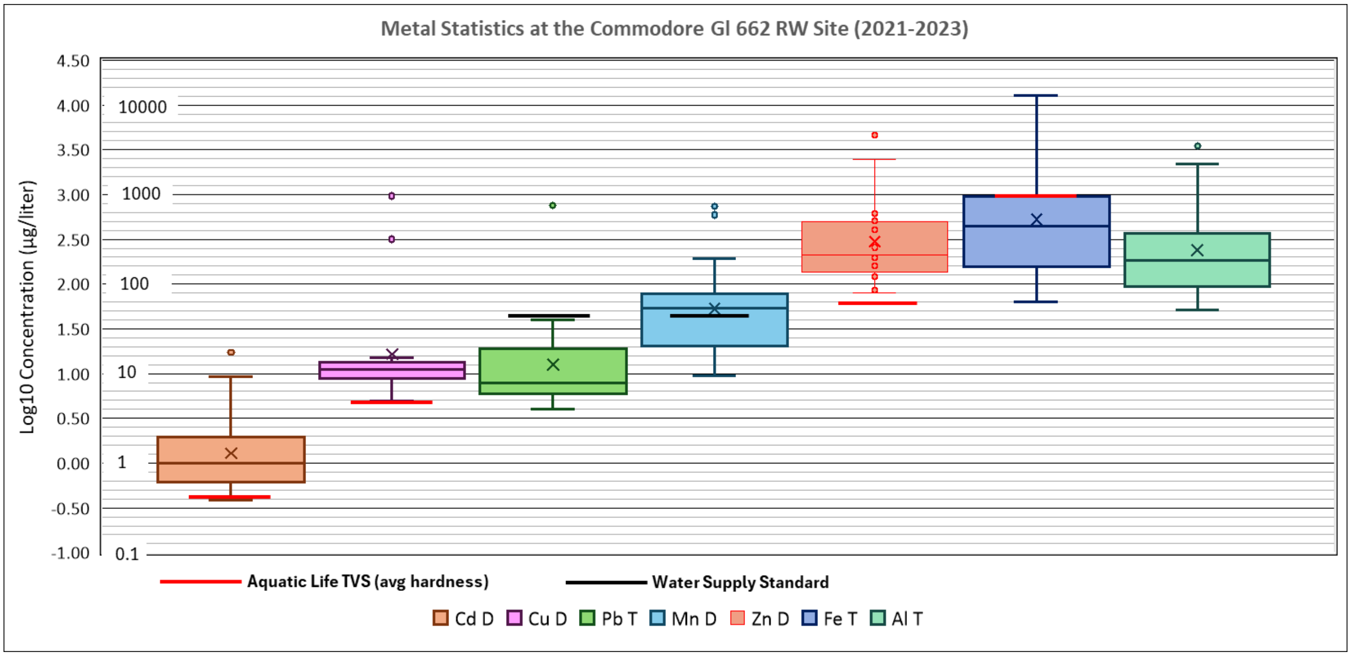

Figure 1. Box plots of the logarithms of concentrations of seven metals from 16 water samples collected from Commodore Gulch. Red line segments show the aquatic life chronic Table Value Standards (TVS) based on average hardness. Black line segments show chronic water supply standards. Note the digital equivalents of the logarithms are shown on the right side of the vertical axis.