

## River Watch Items for the November 2022 UWP Board Meeting

- River Watch items of interest:
  - Samples from 6 River Watch sites were collected between 29 October and 6 November 2022. Due to October snowfall sampling at the higher altitude sites was terminated for the year. Low-flow nutrient samples were collected at all six of our lower sites. In addition, two macroinvertebrate sampling events were conducted at the CR24 site on the Uncompahgre River on 29 October, and at the Dallas Creek site on 1 November. For the CR24 event all seven RW volunteers participated. All samples will be shipped to CPW on Tuesday, November 8<sup>th</sup>.
  - Our newest RW volunteer, Ali Dahl, completed the October River Watch training in Cedaredge. She then participated in one of the macro sampling events, and one of our standard November sampling events.
  - The macroinvertebrate data from our sampling event on Cow Creek in November 2021 has been entered into the River Watch database.

- Precipitation, streamflow and reservoir storage:
  - October started wet and ended wet. On November 6<sup>th</sup> the Gunnison Basin had 120% of its median precipitation for that date, and 213% of its snow water equivalent (SWE). In the Uncompahgre Watershed the Idarado SNOTEL site had 100% of its median precipitation and 300% of its median SWE.

- Streamflow on the Uncompahgre at the USGS gauge near Ridgway is shown in Figure 1. After the early October storms streamflow gradually decreased to somewhat below median flow of ~78 cfs on October 23<sup>rd</sup>. Flow increased again with the late October storms and began a pattern of melt and runoff that continued through the end of the period. By November 7<sup>th</sup> flow was slightly above the median of 70 cfs.

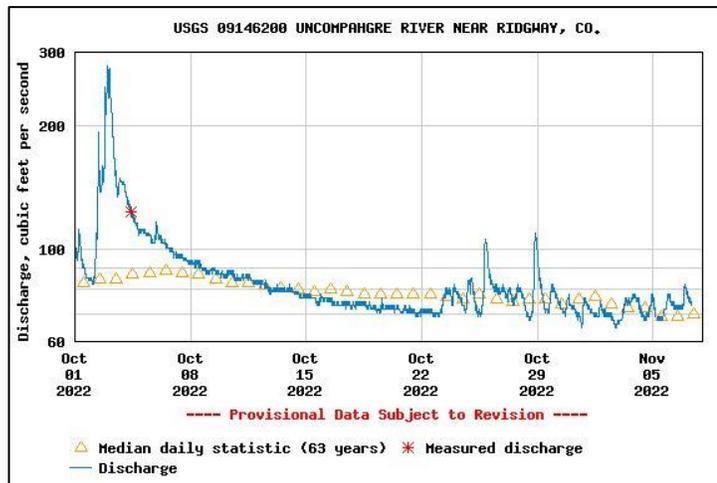


Figure 1. Streamflow from the USGS gauge near Ridgway from 1 October to 7 November 2022.

- For the period shown in Figure 1, Ridgway Reservoir storage went from 62,500 acre-ft to 65,200 acre-ft, a gain of 2,700 acre-ft and about 3,200 acre-ft above the median for the date.
- The 2022 Water Quality Control Commission 303(d) List of Impaired Stream Segments in the Upper Uncompahgre Watershed:
    - The attached Table 1 condenses the 2022 303(d) List into the main segments in the Upper Uncompahgre Watershed. For assessment of impairment water quality data the five years between 2015 and 2019 were used. Several segments, including the four TMDL sites monitored in 2021 and 2022 by River Watch (05\_B, 06a\_A, 07\_A, 09\_D), had insufficient data to change the 303(d) List from earlier years. The recent River Watch data should allow a more complete assessment for the next 303(d) List.

Table 1. 2022 303(d) List of impaired stream segments in the Upper Uncompahgre Watershed. M&E refers to parameters being **Monitored and Evaluated**. (D) refers to a dissolved concentration and (T) refers to a total concentration. TMDL indicates the metal concentration exceeds standards, but a total maximum daily load (TMDL) had been established. Blue shading indicates the segment is sampled by one or more River Watch sites.

Segment	Listed Portion	Impaired Use(s)	303(d) Parameters	M&E Parameters
COGUUN02_B	Uncompahgre River: Source (Poughkeepsie Gulch) to point above Silver Creek	Aquatic Life	pH	
		Aquatic Life	Cadmium (D) - TMDL	
		Aquatic Life	Zinc (D) - TMDL	
		Aquatic Life	Copper (D) - TMDL	
		Aquatic Life		Lead (D)
		Water Supply		Arsenic (T)
		Water Supply	Manganese (D)	
		Water Supply		Cadmium (T)
COGUUN02_C	Uncompahgre River: Point above Silver Creek to point above confluence with Red Mtn Creek	Aquatic Life		Lead (D)
		Aquatic Life	Cadmium (D) - TMDL	
		Aquatic Life	Copper (D) - TMDL	
		Aquatic Life	Zinc (D) - TMDL	
		Aquatic Life		pH
		Water Supply	Manganese (D)	
COGUUN03a_A	Uncompahgre River: Point above confluence with Red Mtn Creek to point above confluence with Cascade Creek	Aquatic Life	Cadmium (D) - TMDL	
		Aquatic Life	Copper (D) - TMDL	
		Aquatic Life	Zinc (D)	
		Aquatic Life	pH	
		Water Supply	Manganese (D)	
		Agriculture	Copper (T)	
COGUUN03b_A	Uncompahgre River: Point above confluence with Cascade Creek to point above confluence with Dexter Creek	Aquatic Life	Iron (T) - TMDL	
		Aquatic Life	pH	
		Water Supply	Manganese (D)	
		Water Supply	Arsenic (T)	
COGUUN03d_A	Uncompahgre River: Point below confluence with Dallas Creek to inlet of Ridgway Res	Aquatic Life	Cadmium (D) - TMDL	
		Aquatic Life	Copper (D) - TMDL	
		Aquatic Life	Iron (T) - TMDL	
COGUUN05_B	Commodore Gulch and its tributaries	Aquatic Life	Cadmium (D)	
		Aquatic Life	Copper (D)	
		Aquatic Life	Lead (D)	
		Aquatic Life	Zinc (D)	
COGUUN05_C	Governor Basin	Aquatic Life	Cadmium (D)	
		Aquatic Life	Copper (D)	
		Aquatic Life	Zinc (D)	
		Aquatic Life	Lead (D)	
		Water Supply	Manganese (D)	
		Water Supply	Lead (T)	
COGUUN05_D	Silver Creek	Aquatic Life	Lead (D)	
COGUUN05_E	Sneffels Creek below Governor Basin	Aquatic Life	Cadmium (D)	
		Aquatic Life	Zinc (D)	
		Aquatic Life	Macroinvertebrates	
		Aquatic Life	Lead (D)	
		Water Supply	Manganese (D)	
COGUUN06a_A	Red Mtn Creek: Source to point above confluence with E. Fork of Red Mtn Creek	Aquatic Life	Zinc (D) - TMDL	
		Aquatic Life	Silver (D)	
		Aquatic Life	Copper (D)	

<b>Segment</b>	<b>Listed Portion</b>	<b>Impaired Use(s)</b>	<b>303(d) Parameters</b>	<b>M&amp;E Parameters</b>
COGUUN07_A	Gray Copper Gulch: Source to confluence with Red Mtn Creek	Aquatic Life	pH	
		Aquatic Life	Lead (D)	
		Aquatic Life	Copper (D)	
		Aquatic Life	Zinc (D)	
COGUUN08_A	Mineral Creek: Source to confluence with Uncompahgre River	Aquatic Life	Copper (D)	
		Aquatic Life	Zinc (D)	
		Aquatic Life	Cadmium (D)	
		Water Supply		Manganese (D)
COGUUN09_B	Sneffels Creek: From point 1.5 miles abv confluence with Imogene Cr to confluence with Imogene Cr	Aquatic Life	Lead (D)	
		Aquatic Life	Zinc (D)	
COGUUN09_C	Canyon Creek: From confluence of Imogene Cr and Sneffels Cr to the Uncompahgre River	Aquatic Life		pH
COGUUN09_D	Imogene Creek: Source to confluence with Sneffels Cr	Aquatic Life		Copper (D)
		Aquatic Life	Cadmium (D)	
		Aquatic Life	Zinc (D)	
COGUUN10a_B	Alkali Creek and its tributaries	Aquatic Life		Selenium (D)
		Aquatic Life	Iron (T)	
		Water Supply	Arsenic (T)	
COGUUN10a_C	Cow Creek: From confluence of Nate Creek to the Uncompahgre River	Water Supply	Arsenic (T)	
COGUUN11_G	Dallas Creek	Aquatic Life		Temperature
		Water Supply	Arsenic (T)	
COGUUN19_A	Ridgway Reservoir	Aquatic Life		Lead (D)
		Aquatic Life	Temperature	