River Watch Items for the August 2025 UWP Board Meeting

- River Watch items of interest:
  - August River Watch sampling was completed between August 1st and August 9th. As in July only the East Fork of Dallas Creek was not sampled due to the USFS road into the Blue Lakes trailhead being closed.
  - Virginia Weiskopf (RiverCorps) made streamflow measurements at 9 of the 14 River Watch sites coincident with August sampling events. Table 1 shows June, July and August streamflow measurements and a comparison with August StreamStat model results. The differences between measurements and model results indicate August discharges were below average at all sites except Governor Basin. Measurements at several sites were challenging due to the very low flows.

Table 1. June, July and August streamflow measurements using Tracker 2 Flow Meter. Last two columns show average August streamflow estimates from the USGS StreamStat model and percent difference from August measurements. Blue shading indicates estimated values.

	Tracker 2	Tracker 2	Tracker 2	USGS SteamStat	Percent
RW Site	June Discharge	July Discharge	August Discharge	August Avg Discharge	Difference
Cow Cr	296.0	48.1	6.4	-	
Dallas Cr	51.8	31.1	3.1	-	
RM Cr MM81	-	3.8	0.6	3.7	-81.65%
Commodore Gl	-	2.4	0.3	4.5	-176.72%
Gray Copper Gl	21.5	2.3	1.2	2.9	-76.04%
RM Cr Crystal Res	89.6	17.5	8.5	18.5	-57.26%
Governor Basin	7.6	4.1	2.5	2.1	9.64%
Sneffels Cr at Atlas	41.8	16.3	3.3	7.0	-22.87%
Sneffels Cr at Camp Bird	65.2	25.4	5.0	10.7	-22.52%
Imogene Cr	-	15.5	2.8	6.4	-23.29%

  - Barbara Bennett with the Water Quality Control Division, and lead scientist for the Uncompahgre Watershed TMDL, accompanied UWP River Watch volunteers for sampling at sites along US 550 on August 5th and Camp Bird Road sites on August 6th. The August 5th trip turned into a lengthy ordeal with the group being trapped above the fatal auto accident on 550, and Virginia returning us to Ridgway over Ophir Pass in a Subaru.

    Jeff Litteral joined us on August 6th and gave Barbara a myriad of details on draining mines in the Sneffels, Imogene and Canyon Creek drainages. At the Governor Basin site we discovered that the stream might be impacted by a waste rock pile about 100 yards above the sampling site. We also learned from Barbara that the deadline for submitting data for the TMDL is still up to two years away, and she would advise us when that will occur.

- Precipitation and Streamflow:
  - The USGS stream gauge near Ridgway showed that discharge dropped below the median curve on about June 17th and has shown a steadily increasing separation from median flow since then. The biggest difference between discharge this year and 2024 has been due to the lack of monsoon rains this season. Last year the precipitation gauge at Governor Basin had 6.66 inches of rain between June 1st and August 9th, compared to this year when the total was 1.52 inches. On August 10th the discharge at Ridgway was 64.8 cfs, compared to the median of 149 cfs and the 25th percentile of 105.2 cfs.
  - The USGS gauge on Dallas Creek indicated that discharge dropped below the summer CWCB instream flow level of 20 cfs on about the 18th of July and discharge has been decreasing since then. For the past week the diurnal variation in flow has been between about 1.5 and 4 cfs. On the evening of August 10th discharge was down to 0.8 cfs. The median for the date is 45.2 cfs and the 25th percentile is 24 cfs.

- Streamflow measurements at the Dallas Creek River Watch site have also been made by Virginia Weiskopf on the dates shown in Table 2. Using the average stream velocity from the flow meter data, the flow at the USGS gauge 3.25 miles downstream was estimated for each event. Table 2 indicates the approximate decrease in flow between the two sites. The last two entries in Table 1 show the discharge in the ditch running through Ridgway, mostly representing return flow from Dallas Creek into the Uncompahgre River.

Table 2. Comparison of discharge measurements between the Dallas Cr River Watch site and the Dallas Creek USGS site 3.25 miles downstream. The USGS measurement was delayed by a travel time based on stream velocity determined by the Tracker 2 flow meter. The last two rows show discharge in the irrigation ditch in Ridgway near the San Miguel Power building.

		Tracker 2		USGS Gauge	CR24 to USGS
RW Site	Date	Discharge	USGS Site	Discharge	Difference
Dallas Cr at CR24	04/11/25	13.39	3.25 mi downstream	9.39	-4.0
Dallas Cr at CR24	04/23/25	6.29	3.25 mi downstream	3.45	-2.8
Dallas Cr at CR24	05/04/25	7.14	3.25 mi downstream	0.26	-6.9
Dallas Cr at CR24	06/09/25	52.39	3.25 mi downstream	39.70	-12.7
Dallas Cr at CR24	07/08/25	31.14	3.25 mi downstream	25.80	-5.3
Dallas Cr at CR24	08/09/25	3.12	3.25 mi downstream	1.34	-1.8
Dallas Ditch - Ridgway	07/08/25	2.41			
Dallas Ditch - Ridgway	08/09/25	1.37			

- Dissolved Oxygen (DO) measurements

UWP River Watch volunteers have only recently made DO measurements at our higher altitude sites along US550 and Camp Bird Road. The titration method (the Winkler Method) we use determines the amount of DO in the stream, and the percentage of saturation at the stream temperature. Given that colder water "holds" more DO than warmer water, volunteers questioned why saturation percentages (mid-60s) at the higher altitude sites tended to be lower than saturation percentages (mid-70s) found at the lower altitude sites. The answer being that the saturation percentage also depends on atmospheric pressure. One hundred percent saturation at sea level pressure is reduced to about 66.5% at the altitude of our highest River Watch site on Red Mtn Creek (10,880 ft). At a lower site like Cow Creek at 6,600 ft the DO saturation value is about 78.3% of the saturation at sea level.