

## River Watch Items for April 2021 UWP Board Meeting

- UWP River Watch volunteers completed water quality sampling and testing at our six sites between April 1<sup>st</sup> and 5<sup>th</sup>, 2021. John Kaser from the Montrose area accompanied Arlen on his sampling trip on April 5<sup>th</sup>, and also observed the lab testing.
- Streamflow stats: Flow is up from March with the gauge at Ouray peaking above 100 cfs; median is about 60 cfs. The Ridgway gauge varied above/below about 50 cfs; median is about 75 cfs in early April. The gauge below the reservoir is still steady at 36 cfs, while the median has varied from 100-160 cfs between 3/23 and 4/2. Water storage in Ridgway Reservoir is still increasing, currently at about 55,700 acre-ft (about 80% of the median for early April).
- Snowpack and precipitation update. On 2 April the Gunnison Basin was at 86% of the 30-year median snowpack, up from 81% in early March. Idarado and Red Mtn Pass SNOTEL sites were at 91-92% of early April median snowpacks, up slightly from March.
- River Watch volunteers are scheduled for a site visit from Megan McConville (River Watch Program Manager) on April 8<sup>th</sup>. She will bring samples for unknown tests, review QA/QC protocols, deliver supplies and answer questions regarding the addition of sites for the TMDL study this coming summer. Meeting summary will be provided.
- Regarding the TMDL project, Eric Funk was contacted to see if he could add a River Watch site on Imogene Creek, a stream segment noted by CDPHE as lacking sufficient data. He is reluctant to add a site that would require an additional hour of travel time to his current set of sampling sites, but he has made no decision yet. The next meeting with CDPHE and River Watch is on April 21<sup>st</sup>.
- Past data from Imogene Creek (segment COGUUN09\_D) were reviewed. Five sites with data on Imogene Creek and one on Richmond Creek (a tributary) were found for dates in 2012, 2013, and 2016. The Google Earth map in Figure 1 shows the site locations, starting with IC-1 above Camp Bird #3, and ending with IC-05 just above Camp Bird. Sites IC-03 and IC-04 are above and below the confluence of Richmond Creek and Imogene Creek.

Imogene Creek is a metal impaired segment for zinc and cadmium. Figures 2 and 3 show concentrations of these two metals at Imogene Creek sampling sites in Sept 2012, June 2013, July 2016, and Sept 2016. The first and last dates would represent relatively low flow, while the middle two dates would represent relatively high flow. Site locations are shown in Figure 1. The marked increase in concentrations from IC-01 to IC-02 reflects the apparent (negative) impact of Camp Bird #3. At sites IC-02, IC-03, and IC-05 concentrations are higher during low flow conditions. Along the length of the creek, for any given date, concentrations generally decreased below IC-02 as the creek descended and flow presumably increased. Richmond Creek had very low concentrations of both metals and likely added to the dilution effect. An exception to the downstream concentration decrease was found in Sept 2012 where both zinc and cadmium concentrations increased slightly from site IC-04 to site IC-05.

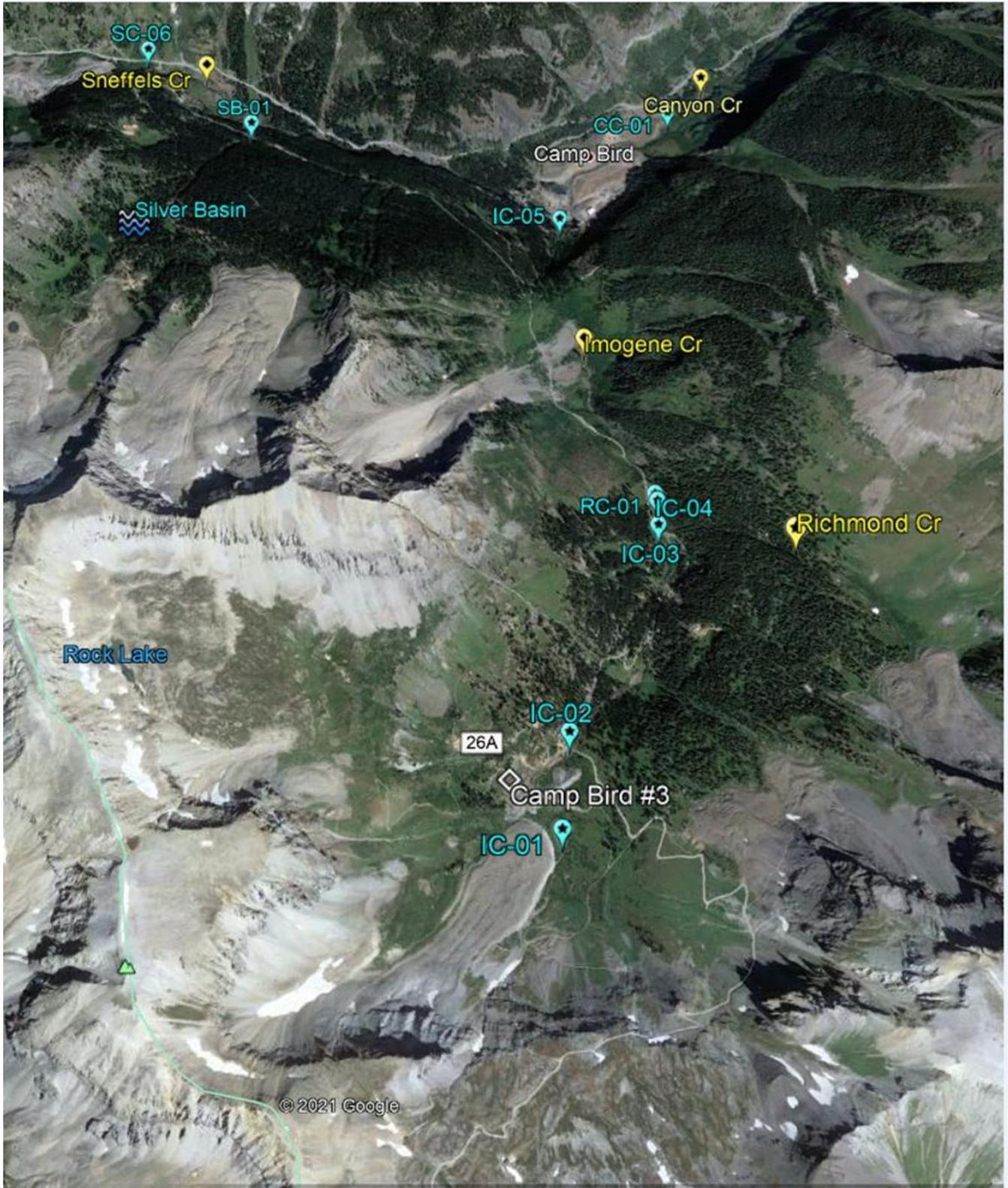


Figure 1. Map image showing the Imogene Creek drainage and portions of the Sneffels and Canyon Creek drainages. Water quality sampling sites are shown in blue. Site IC-05 on Imogene Creek above Camp Bird is the one being considered as an addition to River Watch sampling for a TMDL study.

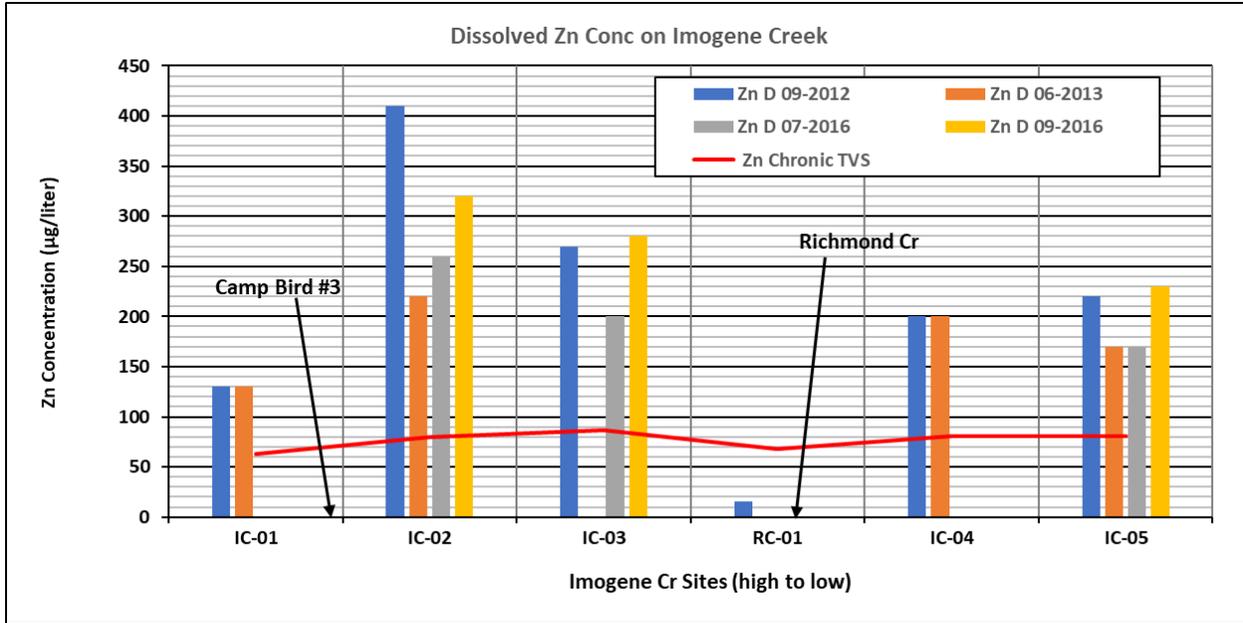


Figure 3. Dissolved Zinc concentrations at Imogene and Richmond Creek sites from samples taken in Sept 2012 (blue), July 2013 (tan), July 2016 (gray) and Sept 2016 (yellow). Red line is the chronic table value standard for aquatic life. Missing bars indicate dates when no samples were collected.

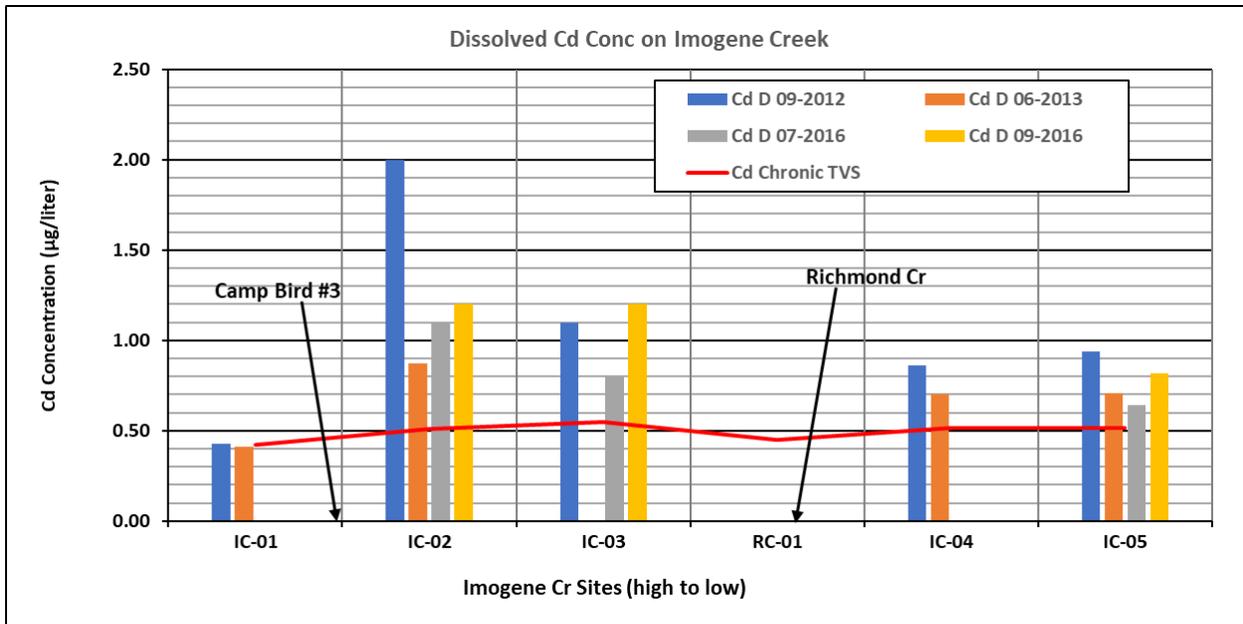


Figure 2. As in Figure 2, except showing dissolved cadmium concentrations.