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Re: North Fork Colorado River Aquatic Macroinvertebrate (Bug) Monitoring Results

Study Area

The study area was broken into four approximately equal reaches based on access and available habitat. Reach 1 (downstream) is located above the confluence of the North Fork of the Colorado River and Shadow Mountain Reservoir and downstream of the US 34 bridge. This reach was dominated by large boulders in the stream bed sometimes making it hard to find high quality habitat. Reach 2 is located on Supply Creek just above its confluence with the North Fork of the Colorado River. This reach was more entrenched and located in a hay meadow. Reach 3 was located just upstream of the Red Top Ditch diversion near the Grand Lake Golf Course. This reach was gravel dominant and located in a wide valley section just above the area where the river becomes constricted by glacial moraine material. Reach 4 (upstream) was located within an inholding in Rocky Mountain National Park just downstream of the confluence of the North Fork of the Colorado River and Bowen and Baker creeks. This reach visually had the best habitat with pool riffle sequences and a cobble dominated stream bed.

Methods

Bugs were collected using a Hess Sampler in riffle habitats. Eight samples were collected in each reach across as many different riffles as possible (32 individual grab samples in total) and composited into one sample per reach. Samples were preserved with ethanol and sent to the Bug Lab at Utah State University for processing.

Preliminary (Qualitative/Visual) Results

Reach 1 - NF Colorado River above Shadow Mountain Reservoir:

- Since reach 1 was the most difficult to sample due to large boulders and a lack of cobbles and gravel, overall abundance and stream health is expected to be lower. When cobbles were observed, they were highly armored which indicated an immobile stream bed.

Reach 2 – Supply Creek:

- Reach 2 had a mix of boulders, cobbles, and gravel in a more entrenched meadow stream. Boulder sections were immobile while gravel sections were mobile. The reach was visually caddis dominant.

Reach 3 – NF Colorado River above Red Top Ditch:

- Reach 3 was gravel dominant. The gravel was moderately mobile. This will likely result in lower stonefly counts. No large stoneflies were observed.

Reach 4 – NF Colorado River below Bowen and Baker Creeks:

- Reach 4 appeared to be very healthy with a cobble and gravel stream bed. Numerous large stoneflies and various mayflies were observed. The stream bed was very mobile which creates high quality bug habitat.