



Project O.1-Food base



Project O.4-Vegetation

Spring Disturbance Flow--Initial Reports from the Field

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U.S. Department of the Interior
U.S. Geological Survey
Project E-Nutrients



Project O.2-Sediment



Project O.3-Aeolian

Low Flow River Trip-March 10-23



Lots of bad weather



Scouting/Different runs



Information exchange



Fish stranding study

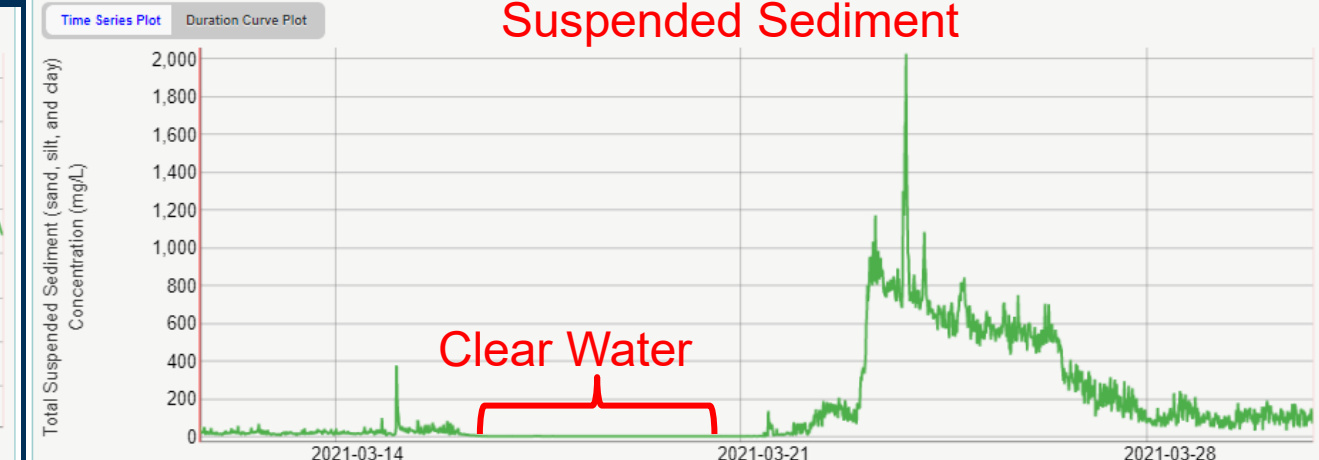
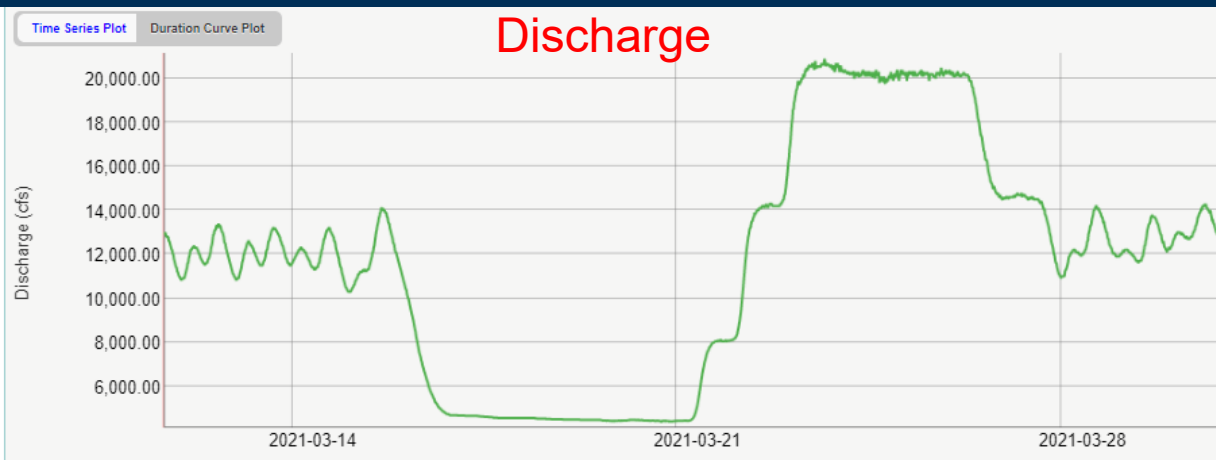
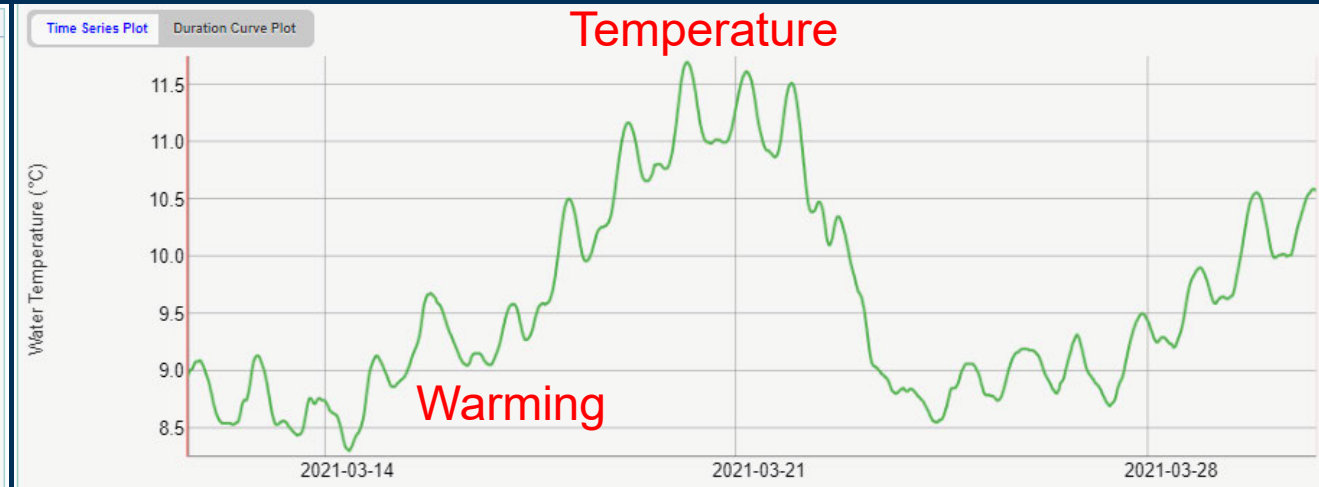
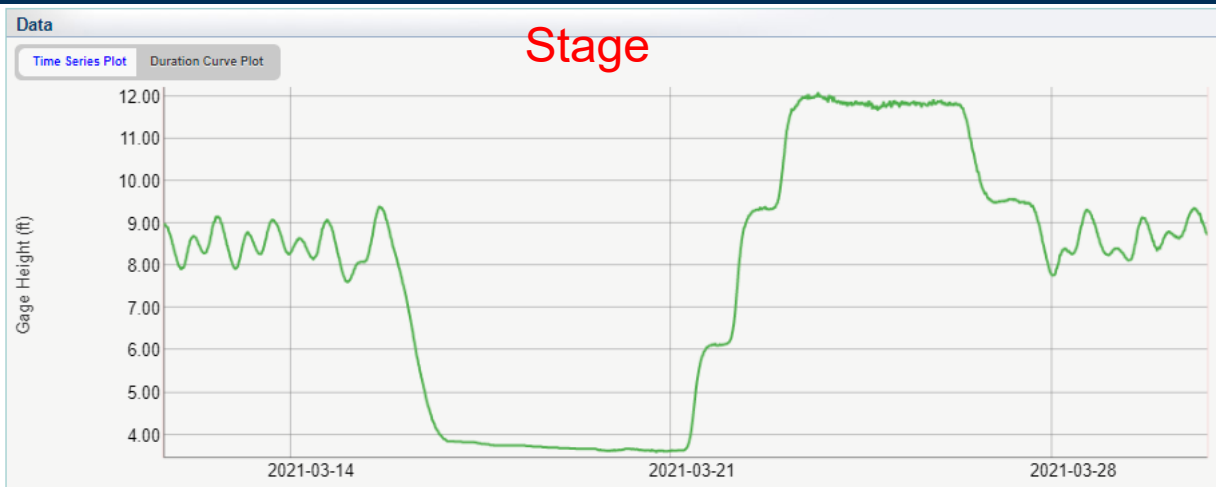


Benthic Invertebrate Sampling

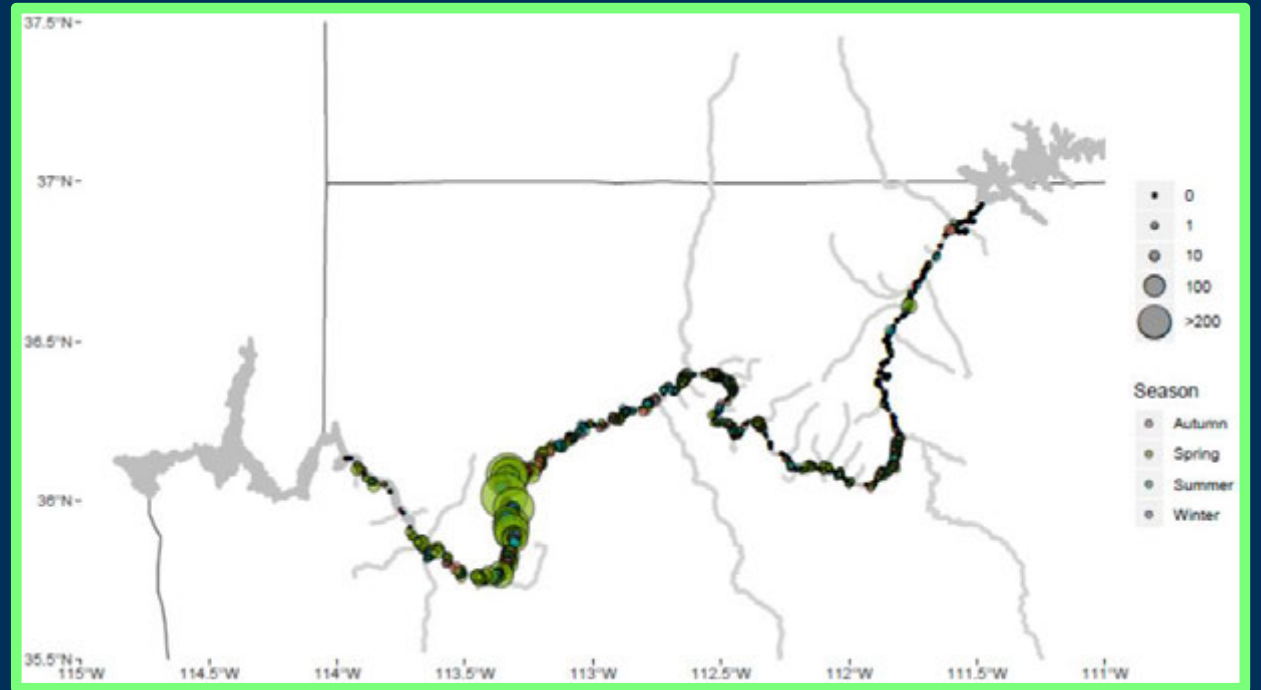


Photo matching

Grand Canyon Gage



Benthic sampling from RM138-224



Hydropsychids (Fall Cyn) ~0 abundance pre-2018

Map courtesy of Anya Metcalfe, USGS,
Unpublished data subject to change, do not cite

-Benthic sampling showed Hydropsychid's abundant starting at Parashant

-Benthic samples will be compared to historic benthic data

Bottom line: Light traps +/- reliable indicator of benthic invertebrate

Fish Sampling

- Small numbers (<5 fish per pool, often no fish caught)
- Stranded fish usually small (<30 mm TL)
- More non-native than natives
- Species captured:
 - Fathead minnow
 - Plains killifish
 - Speckled dace
 - Flannelmouth sucker
- Only 1 large fish (FMS; 250mm) observed dead via stranding at RM 208 camp.
- No humpback chub found in isolated pools



Bottom line: No evidence of wide-spread stranding

Low Flow: Tool for Ecological Disturbance

