

White River Algae Meeting

July 19, 2018

2:00 @ Sheriff's Training Room

Meeker, CO 81641

Welcome: Facilitator, Callie Hendrickson, welcomed everyone. She expressed the purpose of the meeting is to convey progress reports from the Conservation Districts and the USGS.

Callie updated the group on what the Technical Advisory Group (TAG) had seen on their White River Tour earlier that day. They collected a sample of the Cladophora algae out of the river to pass around the room to see what this particular algae looks/feels like. She also showed pictures that they had taken while on the trip to show how the algae had changed over the past month.

USGS Update: (See Attachment A) USGS Western CO Office Chief, Ken Leib, explained the USGS involvement with the White River Algae Study and gave a progress report of what their crew has done thus far. They have measured streamflow rate, water depth, embeddedness, velocity profiles, and water temperature. Water quality sondes are currently being deployed at the 20 study sites. They collected nitrate samples at 6 locations as initial steps for isotope sampling. Results showed the nitrate levels were too low to run the isotope analysis. The isotope sampling could be tried again at another time of year when nitrate levels are higher and not as diluted as they are this time of year. Ken noted that the river is approximately two weeks ahead of schedule. They have not detected any benthic algae in the South Fork of the River. "Lower sites" closer to Meeker have little to no algae showing now.

Questions/ statements from audience:

Bob Dorsett: Is USGS doing insect counts? TU is doing some counts this fall, most of their sites coincide with the USGS Sites. TU has also done some preliminary counts earlier in the year.

Bob Dorsett: Is CPW doing fish counts? CPW is planning to do some this Fall.

Pat Krause, Brett Harvey: Elk Creek Ranch and Westlands Ranch have both noticed that insect life is more abundant than previous years.

Alden Vanden Brink: Rangely Town staff have to clean their intake screen several times a day and it was noted that the algae seems to be "worse" than last year. The algae is above and below the Taylor Draw Dam/Kenney Reservoir. Algae near Rangely is the same algae as what is up steam from Meeker-Cladophora. The algae is negatively impacting several irrigators and recreationists. Rangely did a 11,000 CFS release of Kenney Reservoir on 7/19.

Joe Livingston: Are there similar reports of this algae in other rivers? The Yampa River and Elk River do have algae issues, but it has not been determined that it is the same as the White River (Cladophora). Other rivers out of state have similar problems.

Conservation Districts' (CD) Update: Callie explained the interest of using a drone to get aerial footage of the algae in the White River. Leif Joy is providing the drone and the skill to get the footage. Although not required, the CD Board of supervisors felt that it would be important to get permission from all land owners, to fly the drone over the River along their property to get aerial footage of the algae. CD staff

has worked diligently in contacting landowners half a mile upstream and half a mile downstream of all 21 USGS study sites and getting their signature on a release form that gives the CD permission to photograph those stretches with a drone and explains the responsibilities that the CD will have over the footage that we will collect. Callie also reminded everyone to visit the CD website to find more information on the project as well as locate a map that includes all USGS study sites.

Guest Questions/ comments:

Reed Kelley: What is the Green slime in the irrigation ditches? Many different types of algae/moss grow in water ways. "Slime" has always been in irrigation ditches.

Roy Wedding: A School District staff member pumps water out of the town ditch and has never seen the "slime" before this year.

Bob Dorsett: A preliminary report on further analysis of headwater climate data was emailed to several people involved in the White River Algae study. It states that temperature trends have increased over the years. There is less water, increasing temperatures and decreasing flows that are all contributors to algae.

Bob Regulski: Note was made that CFS is low, approximately 300 CFS.

Pat Krause: Note was made that at Westlands, there is not as much algae at this time as compared to previous years when there is usually more.

John Wix: John and Shawn Welder have been monitoring eight locations on the River. John showed several photos of their discoveries about where the algae is/ isn't and where "river bugs" are/aren't. They notice a big difference between areas that have been sprayed for mosquitos and areas that have not. There are healthy rocks (no algae) in the South Fork above Westlands. Unhealthy rocks were found in the North Fork where aerial spraying for mosquitoes has been done for many years. He noticed green "tufts" in the South Fork last year for the first time.

Brett Harvey: Note was made that fishing has been outstanding. Notice of great "bug" hatches are happening.

Question to USGS was made by Callie regarding whether it would be beneficial to try to do the Isotope testing again. Should funding go towards a continued study on isotopes or should they be used for something else? Ken was in support of trying again and recommended doing the testing either this Fall or next Spring if the TAG wants them to. A consensus of the TAG was made, they would like USGS to try the Isotope testing again at the appropriate time. Discussion was had on what the group could do to help find when/where nitrate levels would get to a point that USGS could come do an official test for nitrate. Andrew Skibo offered to lend out a spare (nitrate sampler) to someone willing to do a "screening" for higher nitrate levels. Consensus was made by the TAG to do a "screening" for nitrate levels. If levels rise to a point where USGS can get a reading, then they will be notified and will come get proper samples themselves. Callie will work with TAG members to accomplish the screening.

Study Funding: 100% of funds have been received for the 2018 studies. Callie explained what grant applications have been submitted for 2019 funding. Applications were submitted to the Yampa-White-Green Basin Round Table and the Colorado State Conservation Board.

Next meeting: Next meeting will be when USGS has more to report. At that meeting and after the report from USGS, the TAG will evaluate the SOW and decide if USGS should continue as planned or if the approach should change.

Attachment A

The work on the White River being done by the USGS Grand Junction Area Office is on schedule and budget for the 3rd and 4th quarter of Federal fiscal year 2018. The following field work has been completed or is currently underway as of 7-9-2018:

-The USGS has completed its high flow measurements for snowmelt runoff for 2018. Streamflow rate, water depth, embeddedness, water surface elevation, velocity profiles, water temperature, and hydrophone monitoring are complete at the 20 sites selected for sampling. This information will apply to our streamflow threshold analysis intended to identify streamflow rates critical to channel remobilization and subsequent scouring potential of algae. Runoff was moderate this year, so this data set will likely define the low end of what is needed to entrain particles. This data is valuable for defining the lower end of the streamflow scour potential in the White River. However, a high flow year is needed to fully define the range of streamflow needed to scour algae in the White River.

- The USGS collected nitrate samples at 6 location on the mainstem of the White River as part of the initial preparation for isotope sampling. Sites were strategically located downstream of areas where different sources of nitrogen might be occurring (fish feeding, fertilizing, septic systems). Sites were also chosen that were upstream of the aforementioned potential sources and were thought to represent a more natural or background condition. Sample results indicated that there was not enough nitrate in the water (at all sample sites) to effectively run the isotope analysis. All sites were below detection and a minimum of 0.03 ug/l are needed to run isotope analysis. As a result, the USGS has not sent in any isotope samples for testing. The remaining funding can be reallocated to another task (more samples or measurements for other tasks), or the USGS can discuss trying the isotope samples later in the year if nitrogen levels increase.

- The USGS is currently deploying water quality sondes (DO, pH, Water temp) at the 20 sites on the White River. Each sonde will run continuously for one week. This task is an assessment of selected habitat conditions and will also provide data for the final statistical analysis. 2018 is shaping up to be a dry year with low runoff and could be a period where fish vitality is compromised due to low streamflow, high water temperatures, and low dissolved oxygen. The sonde deployment will provide data that can ultimately help wildlife managers and stakeholders better understand if these field parameters are at critical levels.