

**Tongue River Watershed Meeting Minutes
Ranchester Town Hall, Council Chambers
February 20, 2020**

Emerson Scott, SCCD
Doug Masters, SCCD
Travis Cundy, WGF
Brad Bauer, SCLT
Carli Kierstead, TNC

Peter Clark, Ranchester Mayor
Norm Anderson, Dayton Mayor
Mark Reid, Sheridan County
Trey Patterson, Padlock Ranch
Kevin Gorzalka, Padlock Ranch

Drew King, White Ranch
Mark Wallace, Landowner
Karl Kukuchka, Landowner
Carrie Rogaczewski, SCCD
Jackie Carbert, SCCD

Meeting Opening and Introductions

Emerson Scott called the meeting to order at 6:00 pm and introductions were made.

2019 Monitoring Summary

Preliminary Results: SCCD monitored on 13 sites last summer: six on the mainstem of the Tongue River and seven on the major tributaries including Prairie Dog Creek, Goose Creek, Wolf Creek, Fivemile Creek, Columbus Creek, Smith Creek, and Little Tongue River. Samples were collected five times from May-July and five times from July-September. Sampling included instantaneous temperature, pH, conductivity, dissolved oxygen, discharge, turbidity and *E. coli* at all sites. Continuous temperature was measured at five mainstem sites (TR01, TR03, TR05, TR07, and TR09); macroinvertebrate sampling and habitat assessments were done at the same sites in September.

Instantaneous temperatures exceeded the standard of 20°C at some point from July-September at 11 out of the 13 sites, apart from at the two uppermost sites (Little Tongue River and TR09). Continuous temperatures also exceeded the standard at all sites except for TR09. All pH measurements were within the standard of 6.5-9 Standard Units (SU). Overall, averages have been around 8 SU in the TR watershed, in 2019 and other years. Conductivity values typically increased from upstream to downstream and late season averages were generally higher than the early season. Conductivity at most sites ranged between 0-1000 µs in 2019. Several dissolved oxygen measurements were below the recommended concentration of 8 mg/L in the water column to support early life stages (five at TR01, three at TR03, and one at TR05). All tributaries were above the dissolved oxygen standard except for two samples from Wolf Creek. Overall dissolved oxygen ranged from 7-12 mg/L across all sites in 2019.

As expected, discharge (flow) was exceptionally high in the early season due to flooding. Discharge could not be calculated for several sites during the early season, and some even into the late season, due to gauges being submerged or swept away during high water. SCCD uses hydrographs to compare collected data with historical and daily discharge data from the USGS and SEO. Handouts were distributed with hydrographs from TR01 and TR09.

Turbidity values typically increased from upstream to downstream. Tributaries were higher than adjacent mainstem sites. Average early season turbidity was higher overall in 2019 than in 2016 and other years. Tongue River sites usually range from 0-100 NTUs, with some spikes up into the 300's during the early season. A turbidity sample of 1430 NTU was taken at Wolf Creek on July 9.

WDEQ's standard for *E. coli* bacteria is 126 cfu/100 mL. Portions of the Tongue River, Prairie Dog Creek, Goose Creek, Wolf Creek, Fivemile Creek, Columbus Creek, Smith Creek and the Little Tongue River are listed as impaired for recreational use because of bacteria. SCCD collects five samples from the early season and five from the late season and calculates a geometric mean on each set. Comparisons are

generally done with the geometric means. Bacteria concentrations exceeded the standard at all sites, mainstem and tributaries, during the early season, apart from at TR09. The late season geometric means did not exceed the standard on any mainstem sites; however, all tributary geomeans continued to exceed except for at Columbus Creek.

Comparisons across sites, seasons and years become more difficult (chart handouts). Late season means are usually lower and less variable than early season means; tributaries tend to have more exceedances than mainstems; and uppermost sites tend to have lower concentrations. Bacteria fluctuations can be due to many factors such as water temperatures, flows, and sediment. This variability can make it difficult to observe measurable improvements or changes within the watershed over the short-term, but the hope is that over the long-term positive improvements will become more apparent. SCCD will be looking into some alternative ways to analyze and present the data.

Load Reduction Estimates/Priorities: Load reduction requirements are calculated for each subwatershed for each monitoring year. All four Tongue River subwatersheds were in the low category, along with the Columbus Creek watershed. The remaining six tributary subwatersheds were in the medium reduction category. There were no subwatersheds with a high or very high reduction required in 2019.

All Tongue River subwatersheds remained the same from 2013-2019, apart from the Upper Tongue which went from a medium to low reduction requirement category. The reduction needed for the Upper Tongue subwatershed was based on two out of ten samples that exceeded at TR09; otherwise the geometric mean did not exceed the standard. The Five Mile subwatershed improved from a very high category in 2013 and a high category in 2016 to a medium reduction in 2019. Columbus Creek also improved from a medium category in 2013 and 2016 to low in 2019. Smith Creek was in the low category in 2013 but has remained in the medium category in 2016 and 2019. Wolf Creek was low in 2013 and 2016 to but declined to a medium reduction requirement in 2019.

SCCD uses the load reduction maps to provide a visual of the general changes in reduction requirements over time. The maps aren't necessarily intended to determine specific water quality trends in the watershed but can be used to help prioritize projects or areas of concern. The reduction category is one of many criteria used in determining whether a project is eligible for funding. Just because a project falls in a subwatershed with a low reduction requirement does not mean it won't be funded.

Plan Progress and Project Updates

Progress Register/Completed: The progress register was developed in the early 2000's to document projects within the watershed that might not result in short-term changes in water quality. The projects that are on the Progress Registers are primarily those done through the SCCD office; however, Jackie has been working on including NRCS projects that SCCD was involved with that contribute to water quality efforts. So far, projects through 2015 have been added. There have been 72 improvement projects completed in the watershed since 2001 including 18 fencing and stockwater projects, 10 stream stabilization projects, 10 septic system replacements, eight pet waste station installations, seven diversion improvements, seven irrigation projects, four riparian buffers and one reservoir project. Most projects are located within the upper and middle portions of the watershed. The Upper and Middle Tongue, Smith, Little Tongue, Columbus and Fivemile subwatersheds were listed as high priorities for treatment in the watershed plan. The idea is that projects in the upper subwatersheds will also enhance water quality in the lower portions of the watershed.

Discussion was had among the group regarding the use or implementation of wetland enhancements and riparian buffer projects, particularly on land with livestock near waterbodies. Wetland enhancement or creation can be very complex, time-consuming and expensive. SCCD does offer cost-share assistance for riparian buffer projects. An article on the practice was included in the most recent watershed newsletters.

There was discussion on adding a monitoring site below the Tie Flume logging project. The District has historically avoided sampling in response to a specific change in land use. Turbidity and bacteria are highly variable and affected by many outside factors (weather, flow). Additionally, the District has been careful about targeting (or appearing to target) a specific group. Rather, the focus has been to monitor overall changes within the watershed over time.

Completed Activities/Milestones: The stream stabilization project in and above the town of Dayton was completed this past year, which included 16 landowners. The total cost for the project was approximately \$520,000, with the majority of the funding coming from grants. As mentioned earlier, the process of adding NRCS projects onto the progress register is underway. There are some additional willow plantings planned for this spring. Carrie reminded the committee that willow plantings are currently offered as a free service to landowners. Other completed activities include distribution of the annual watershed newsletter, updates to the Ranchester and Dayton Town Councils, water quality display and activities at Third Thursday, a project tour that included a stop at the Dayton project, and Emerson manned a booth for SCCD during Dayton Days.

Upcoming Projects/Activities: As in past years, fencing, stockwater and septic project requests are down. There have been a few requests for stream work, particularly on the Little Tongue River. SCCD would like to bring in some more stockwater and/or fencing projects. SCCD and NRCS received Emergency Watershed Protection (EWP) funds to address flooding damages; 10 of the EWP projects are in the Tongue River watershed. SCCD, in partnership with NRCS and multiple other organizations, submitted a new proposal for the Regional Conservation Partnership Program (RCPP) in December. If awarded, the program will allocate USDA funds for a myriad of projects targeted at improving water quality and habitat in the Upper Tongue River watershed (handout). The amount requested was approximately \$5.5 million.

Tongue River Initiative Partner Updates

Wyoming Game and Fish: Travis Cundy with the Wyoming Game and Fish (WGF) provided updates on the department's work within the Tongue River watershed. WGF has volunteered monitoring for the stream restoration project in the Town of Dayton. The monitoring will include some habitat index assessments and potentially some drone video during low flows. The WGF continues to support fish passage and stream work projects, as well as invasive grass treatments on state land.

The Nature Conservancy: Carli Kierstad with The Nature Conservancy (TNC) provided updates on her work with the Crow Tribe. The Crow Environmental Health Steering Committee approached Carli regarding water quality issues on the Little Big Horn River in Montana. Carli has been serving as the link between the group and other partners within the Tongue River Initiative. The intent is to collaborate and help guide the group's approach to tackling the complex water quality issues within their watershed.

Sheridan Community Land Trust: Brad Bauer with the Sheridan Community Land Trust (SCLT) informed the group that there will be a video showing at the Hub about the Black Diamond Trail and the area's

coal mining history. Two new easements were completed in 2019; SCLT is working on two more for this year. SCLT is also working with WGF and TNC on a mule deer migration study that will help determine the migration patterns of the mule deer in this region. SCLT will use information from the study to promote wildlife friendly fences and easements in areas that are used as migration corridors.

Other Updates/Comments

Expected completion for the Tongue River TMDL is 2022. There have been no new updates on the Montana TMDL for conductivity. Peter Clark, Mayor of Ranchester, pointed out that WWDC Level 1 Municipal Watershed Wildfire Hazard Mitigation Assessment funding for the Towns of Ranchester and Dayton had been separated from the initial project and is being considered as a Phase II project. There was some concern about language in the legislation that would require a 10% match from a Level 1 project sponsor. Carrie is still working on signs for the Town of Ranchester and will also be working on signage for the river project in Dayton.

The meeting was adjourned at 7:20 p.m. The next meeting is tentatively scheduled for February 2021.

Submitted by Jackie A. Carbert, Program Specialist