Henry's Fork Watershed Council Meeting Minutes

March 8, 2022

Introductions and Community Building

Aaron Dalling, co-facilitator from Fremont-Madison Irrigation District (FMID) welcomed everyone to the hybrid meeting. The group went around with introductions and then called for a moment of silence before opening for announcements and community building.

Christina Morrisett, Henry's Fork Foundation (HFF)/Utah State University shared that her email address is changing – contact her at christina@henrysfork.org or christina.morrisett@usu.edu.

ISDA Invasive Species Update
Cole Morrison, Idaho State Dept of Agriculture

Cole's area of responsibility is 14 counties. Invasive Species Law established the invasive species list. It prohibits possession, propagation, transport or sale of Aquatic Invasive Species (AIS). It also outlines authority for mandatory inspection of conveyance for AIS. The law outlines penalties and establishes invasive species fund and sticker. Noxious weed law – duty of landowners to control noxious weeds on their property and cost is their obligation. Two different lists and handled under different legislation. If you want to add or remove something from a list you can submit a one-page petition. Prevention includes roadside check stations where they especially look for quagga and zebra mussels. The mussels disrupt water delivery and drainage and can impact power generation and increase utility costs. They can also damage fisheries and aquatic habitat, degrade water quality, impact recreation and tourism. There is an estimated $114 million impact per year if Idaho becomes infested. The Columbia River Basin is the last river basin in the US that doesn't have Quagga and Zebra mussels.

There are 20 check stations throughout Idaho. Boat traffic has gone up about 10% each year, from 110k inspections per year to 150k. There were also 3x the infested boats this past year than any previous year. Mussels are getting caught in live wells and sea strainers. Local cooperators run the check stations for the Idaho State Dept of Ag. There is a contract process each year. In Fremont County it was the county that ran them, but the county dropped out last year. One of the sites near Henrys Lake was on private ground and will now be developed, so they lost that site.

Flowering Rush gets so thick it can stop up water in canals, spreads easily and is very difficult to kill. Eurasian watermilfoil is an issue in Bear Lake. Plan to survey canals in 2022 around the Snake River.

Current Status of Fish Populations in the Henry's Fork Snake River
John Heckel, Idaho Dept. of Fish and Game

Idaho Dept. of Fish and Game was unable to do population monitoring in 2020 due to COVID restrictions. They conduct these surveys to obtain current information on fish population characteristics, which can inform fishery management decisions. Also, they collect information on age and growth in Box Canyon to estimate natural mortality. Monitoring is done via raft electrofishing and mark/recapture population estimate methods. Box Canyon is surveyed every year. Chester and Vernon are triennial and Mack's Inn is opportunistic, but was surveyed in 2021.

IDFG used boat mounted electrofishing equipment to assess fish populations in the Mack's Inn, Box Canyon, Vernon, and Chester reaches of the Henrys Fork Snake River during May 2021. In the Mack's Inn reach, they estimated 1,246 trout/km ± 656 (95% CI), which included Rainbow Trout Oncorhynchus mykiss (752 fish/km ± 459; RBT) and Brook Trout Salvelinus fontinalis (571 fish/km ± 533, BKT), and the total trout estimate increased from the 2016 estimate (i.e., 338 fish/km ± 323). They estimated Mountain Whitefish Prosopium williamsoni (MWF) abundance in the Mack's Inn reach at 1,085 fish/km ± 358, which decreased from their 2007 estimate (1,132 fish/km ± 306).

In the Box Canyon reach, RBT abundance (2,616 fish/km ± 603) was slightly less than the 2019 estimate (3,061 fish/km ± 237), but greater than the average of the previous 24 surveys (i.e., 1,929 fish/km). They estimated 845 fish/km ± 354 for MWF, which was greater than 2019 estimate of 779 fish/km ± 466. Natural mortality and survival is 52% annually natural mortality. Tends to vary between 45-60%.

In the Vernon reach, they estimated 885 trout/km ± 271, which included Rainbow Trout (803 fish/km ± 438) and Brown Trout Salmo trutta (265 fish/km ± 87; BNT). Trout abundance for all species increased since 2018 estimates; which were 678 trout/km ± 119 for all trout, 503 trout/km ± 94 for RBT, and 185 trout/km ± 42 for BNT. Mountain Whitefish abundance (44 fish/km ± 28) declined since 2016 estimate of 116 fish/km ± 51.

In the Chester reach, total trout abundance (628 trout/km ± 129) was less than 2018 estimate of 699 trout/km ± 120. Similarly, RBT (427 fish/km ± 214) and BNT (275 fish/km ±68) abundances were less than in 2018; 529 ± 77 and 250 ± 33. Mountain Whitefish abundance (90 fish/km ± 81) was also less than 2018 estimate (121 fish/km ± 82).

Overall, trout abundances are higher than average in most reaches. Mountain Whitefish (MWF) abundance is in decline in Vernon and Chester. IDFG would like to do some focused MWF research to learn what their limiting factors are. Brown Trout composition is increasing. Size structure >12" average on all trout in all reaches – good.

2021 Fisheries Program Update
Max Lewis, Friends of the Teton River

Friends of the Teton River (FTR) had a busy year, with efforts focused on annual monitoring, including redd surveys, PIT tag interrogation site operation, electrofishing surveys and stream

temperature monitoring. FTR's fisheries monitoring project goals are to determine long-term trout population trends, provide additional data to fisheries partners and determine efficacy of projects. In 2003, there were less than 500 Yellowstone Cutthroat Trout (YCT) per mile (~3%). In response, FTR was created by local stakeholders. Backpack e-fishing was used to conduct a Teton watershed survey, covering tributaries and the upper river. This allows them to monitor changes in species abundance and composition in wilderness headwater creeks. Eastern Brook Trout are taking over a bit in remote YCT habitat.

FTR assists IDFG in their population monitoring surveys and conduct YCT redd surveys and fish screen maintenance and monitoring. Over 5,000 fish have been PIT tagged in the watershed so far. Tags monitor fish movement. FTR has updated their design for PIT tag arrays to accommodate issues with flooding, etc. Teton Creek is identified as one of the most important spawning tributaries to the main Teton for YCT. FTR is working to assess if Warm Creek on private property might be good candidate for future habitat via restoration. Unfortunately, haven't found any YCT there. Might indicate need for restoration efforts and additional monitoring, a role FTR can fill.

In recent years, all species of trout seem to be decreasing in the Nickerson Reach. At South Fork Teton, there have been increases in the Brown Trout population and they now are greater in number than YCT and Rainbow Trout. It is a concerning trend. In October 2021, FTR conducted their first successful raft based Brown Trout redd survey between Rainey (Big Eddy) and Packsaddle Bridge. They identified a few locations believed to be areas of Brown Trout spawning. FTR also conducts water quality monitoring and will have a report coming up this spring. FTR also has stream temperature gages that can help determine if their recharge program is influencing stream temperatures.

FTR currently fundraising for an eDNA study to determine the extent of Brown Trout in the Teton River. Other 2022 efforts will include Warm Springs Creek and Lower Badger native YCT restoration, PIT tag site upgrades, Brown Trout redd surveys, installing instantaneous stream monitoring equipment, and annual monitoring.

Linderman Dam Project
Arien Chavez, US Bureau of Reclamation

The Linderman Dam restoration project is located just upstream of the old Teton Dam site, just past the Milk Creek confluence. The original structure was built in the 1950s/60s. USBR acquired the dam from the Linderman's and largely dismantled it to make way for Teton Dam in 1972. Some beams and rebar still protrude from the river there and there was a fair drop. Over the years it created quite the hydraulic gradient. Safety was a concern so riffle construction has allowed the river level to nearly level out for upstream vs downstream level. They also flagged remnants of the old dam to alert recreational users that there is still some structure under the water.

The first driver of the project was safety. Then habitat, river and canyon restoration and maintaining pool elevation for irrigation pumps onsite. The work involved constructing a natural riffle downstream of the current dam location, which would improve boater access and safety, improve fish habitat and maintain upstream pool elevation for irrigation pumps. Construction began in fall of 2021, and follow up construction will occur in 2022 or 2023 after high flows.

Construction will occur in the “wet”, which means coffer dams weren’t used to bring in heavy equipment. Hauling in riprap was completed in 2020. Approximately 5,400 tons of total materials. They coordinated with licensed outfitters and the public, ensured they are following environmental requirements, and maintained upstream pool elevation through irrigation season. In-water construction posed minimal disturbance for recreators as only a few boaters passed by during construction. They will also update signage at upstream entry points and upstream on the Teton River.

Community Building and Wrap Up

Kamberlee Allison, co-facilitator from the Henry’s Fork Foundation (HFF) called for one minute of silence to reflect on the meeting and prepare any final announcements or comments.

Kamberlee shared that the next meeting should be in April. A save the date will be coming soon. Please send us any topics or projects you’d like to hear about.