

Henry's Fork Watershed Council Meeting Minutes

October 10, 2023

Introduction and Community Building

Jasper Davis from the Henry's Fork Foundation (HFF) welcomed everyone to the hybrid meeting. Jasper acted as co-facilitator on behalf of Jamie Powell, who was on leave at this time. The group went around with introductions and then called for a moment of silence before opening for announcements and community building.

HAB Tool Demonstration

Tyler King, United States Geological Survey (USGS)

USGS recently came out with a new HAB tool. Tyler walked the participants through a demo of the various tool features and how to use them. Rob Van Kirk and Jack McLaren mentioned how the HAB data for the Island Park Reservoir and the Henry's Fork matches the water quality data that HFF collects, and Jack said that it has already been an extremely useful tool in regard to Island Park Reservoir research.

Property Owner Perspective of Wake Boats on IP Reservoir

Bryan Beitler, Property Owner

Bryan has been a property owner in Rancho McCrae since 1985, and he worked for the USFS out of Island Park as a summer employee in the 70s. The Rancho McCae water-front includes many docks, active boaters, and water sports activities. There is also a community launch ramp. A busy day out on the reservoir in the 90's used to be about finding the best place to anchor in Trude Bay to catch some fish, but now things are a little different.

IP reservoir has always been a boating-oriented body of water. It has transitioned from a water skiing/fishing lake to a water sports lake (both motorized and non-motorized). Wake boats are relatively new to IP reservoir. Damage has occurred to many of the existing wood docks from the waves, and it is expensive to replace these docks once they have been damaged.

Regulations state that there is to be a 100' no-wake zone from any dock, structure, boats, and persons in the water. Wake boats are legal, but many times the operators are unaware of the disruption associated with wave action. Even from a safe distance, where the motorists are being careful, the wave action has eroded the banks as well as been strong enough to feel from quite a distance away. There has been tension between wake boat operators and private landowners due to the fact that some landowners have confronted the water motorists.

Many properties are rented out, and many of the renters are unfamiliar with the regulations. Many docks extend 100' into the lake. With a 100' dock and a 100' no-wake zone, it would be hard in some sections to run a wake boat and follow the regulations. There is a recent concern in regard to invasive species found in other parts of the state that it there aren't enough inspection stations near the reservoir to clean the wake boats.

The property owners have written letters to the 3 Fremont County Commissioners in 2019. No apparent action with respect to regulations resulted. Letters were also written to 6 IDPR personnel. One returned the letters and said resources were being allocated to boating education, which included direct mailing to 10,000+ Idaho boat owners.

There needs to be compromise between property owners and wake boat operators to ensure the safety of others. The Fremont County Commissioners are the only one who can change boating regulations.

Wake Surfing and Water Quality on IP Reservoir

Jack McLaren, Henry's Fork Foundation

Island Park Reservoir is, in essence, two lakes in one. There is the west side (which is shallow, wide, polymictic, warm, turbid), and the east side (which is deep, narrow, dimictic). Most of the time, the water from the west and east sides do not mix (which is due to temperature and density differences). Wind, waves, and algal blooms can all hurt water quality and increase turbidity. When these various instances happen, sediment plumes form and move along the bottom of the dam. These sediment plumes are more intense with greater temperature differences between the west and the east sides. The sediment in these situations usually takes several days to reach the dam.

Most of the sediment comes from the west side of the IPR, which has about 10-20 feet of fine sediment at the bottom. The west side is also extremely productive in terms of nutrients and tends to be more prone to getting algal blooms.

To improve water quality in IPR and downstream, it is important to try to stop density currents before the start. This could happen by reducing turbidity on the west side of IPR through sediment and shoreline stabilization or by reducing algal blooms. Preventing the passage of density currents through IP Dam could be possible by instituting dam-side physical infrastructure such as variable outflow gates. HFF has been working on a D.I.R.T.T. plan (developing infrastructure to reduce temperature and turbidity) to look at options of reducing turbidity.

There is some evidence to suggest that wake boats can have an effect on turbidity. Wake surfing boats are designed to create large wakes that can be used for wake surfing. Ballast tanks are designed to help improve the size of a boat's wake. Wakes and prop wash can cause ecological damage. Wake surfing can cause the suspension of bottom sediments as well as cause shoreline erosion. In other states, regulations require that power boats must remain within 200 feet of shore or over water less than 15-20 feet deep due to the negative effects of wake surfing. Less than half of IPR falls within these recommended limits.

Satellite imagery (such as with USGS's HAB tool) have shown that when there are 100s of boats (such as on July 4, 2023) there is a spike in turbidity on the west side of the reservoir. HFF's data showed that there was a minor turbidity increase downstream of the reservoir within 1 week of July 4th, but this was a minor event and is dependent on a variety of factors. Wake boat ballast tanks can also make it easier for invasive species to be transported.

If IPR was to adopt recommendations/regulations from other states, it could prevent the transport of invasive species as well as reduce the degradation of downstream resources. However, there is still little evidence of the direct effects. Changing regulations could cause wake boat use to shift to areas that are

more prone to HABs and ecological damage. HFF will continue working with partners and monitoring water quality to find ways to reduce temperature and turbidity.

Quagga Mussell Update

Cole Morrison, Idaho State Department of Agriculture (ISDA)

One mussel can produce 30,000-1,000,000 veligers per day, which can move downstream with currents for up to 30 days before it settles. The movement of veligers downstream is just as concerning as settled mussels. Quagga mussels can clog pipes and have a significant ecological impact. They can cost Idaho hundreds of millions of dollars.

ISDA came up with a collaborative treatment plan to work quickly to eradicate the presence of quagga mussels. The only treatment option that made sense in this situation was the use of molluscicides, which are the best way to eradicate the current adult infestation. There are several types of molluscicide choices for water application (chelated copper, niclosamide, potassium chloride, and pseudomonas bacterium bio molluscicide). Chelated copper was the best treatment option. Chelated copper is better in this situation than copper sulfate because chelated copper allows copper to stay in solution, providing a longer extended-release time. There are three areas that were treated: Pillar to Centennial, Shoshone to Pillar, and the Twin Falls Pool.

The 3 step treatment plan created includes: copper treatments, a follow-up with niclosamide, and spring pseudomonas. Watercraft will be used to treat standing pools of water, in order to maintain a 1ppm treatment rate. The copper chelate will be allowed to free flow downstream (~16 miles) so that it could dissipate gradually. The goal was so that it could provide a lethal dose to any free-floating veligers. Once the copper reaches the 16-mile point at the Highway 46 Bridge, it is expected to be diluted by more than 70% from stream/spring input. As the copper moves downstream, an additional 5-15% will be broken down through sorption into organic matter. ISDA staff pre-surveyed this area and looked for any areas of concern prior to creating this treatment plan. The treatment plan is expected to end by October 14.

Upper Snake Basing Water and Reservoir Operations Update

Jeremy Dalling, U.S. Bureau of Reclamation

The U.S. Bureau of Reclamation (USBR) is part of the Department of Interior, and, in our region, they operate reservoirs above Milner Dam. The Minidoke/Palisades project generated \$1.2 billion from irrigated crops, \$41 million from power (in 2021), \$2.6 billion in formal flood prevention since the life of the project, and \$62 million from recreation (with over 650,000 visits).

Milner dam (located in southern Idaho) functions by accruing excess, when available, to supplement natural flow when it would otherwise be insufficient. The goal each year is to completely fill the reservoir system without spilling storable water past Milner as well as to operate the system in a way that will achieve the greatest practicable conservation of water above Milner. This can be done by storing water as high up in the system as possible. In 2023, there was 15,000 AF rented from Upper Snake Water Users.

By the end of the 2023 water year, Island Park ended at 98% of average, and Henry's Lake ended at 102% of average. Current storage in the Upper Snake Reservoir System: Little Wood is 44% full, Upper Snake River Reservoir System is 44% full, Above Heise (Jck and Pal) is 60% full, Palisades is 56% full,

Henry's Fork Reservoirs are 76% full, Island Park is 68% full, Ririe Reservoir is 57% full, and the Lower System (American Falls and Lake Walcott) is 21% full.

The American Falls Pool Elevation was above the median in 2023 and is likely to carryover 240-260 more KAF than last year, and it came within 105 KAF of spilling in June 2023.

Water Year 2023 Summary

Rob Van Kirk, Henry's Fork Foundation

Water Year 2023 had above-average precipitation. The peak snow water equivalent (SWE) was 19% above average, and precipitation was 11% above average. Snowmelt started late but ended early. There was highly variable temperature throughout the year. The 2023 water year was 1 degree F below the 1989-2022 average. There was short-term drought improvement and moderate medium-term improvement, but long-term drought continues.

Water year 2023 started with record low baseflows and above-average precipitation but ended up at 92% of the average water supply. This was the 4th consecutive year that natural flow was below the average. All of the irrigators on the Henry's Fork received their full storage allocation. Diversion in July was the highest since 2015.

IP Reservoir outflow during winter 2022/2023 was 213 cfs (vs the 354 average). The ice-off target was approached by April 24, and a springtime freshet was delivered April 25-April 28. Ice-off ended up being May 11, and the reservoir was completely filled by June 18. Draft started 3 days later than average on July 2. Peak outflow was ~1600-1700 cfs in July (the highest since 2013), and draft ended on August 25 (the earliest date on record). Currently, IP Reservoir is 62% full, vs 44% on average.

Community Building and Wrap Up

Aaron Dalling closed the meeting with a moment of silence. The next meeting will be the Annual Watershed Conference on December 5.

Rob Van Kirk announced that the Annual Watershed Conference in December will mark the Henry's Fork Watershed Council's 30th anniversary. As such, he will work with Jasper Davis to determine how the 30th anniversary will be celebrated at the conference.