

Henry's Fork Watershed Council Meeting Minutes

October 19, 2021

Introductions and Community Building

Jamie Laatsch, co-facilitator from the Henry's Fork Foundation (HFF) welcomed everyone to the virtual meeting via Zoom. The group went around with introductions and then called for a moment of silence before opening for announcements and community building.

Upper Snake Field Office Aquatic and Riparian Habitat Restoration

Jeremy Casterson, Bureau of Land Management

Work began when the Yellow-billed Cuckoo (YBC) was listed in 2014. On the Henry's Fork, South Fork and Main Snake, yellow billed cuckoo have been detected in several places. Money was available specifically for YBC projects. How can we capture this funding opportunity and improve habitat for YBC? BLM has an active invasive species program, so they thought they could marry the two. Started treating Russian olive and planting cottonwood behind it. They have treated 800 acres to date. Also, tamarisk removal started in 2018 with 300-400 acres treated per year. From 2018-2020, held stakeholder meetings to discuss wetland mitigation priorities. Looking for opportunities to capitalize on beaver dam analog and beaver reintroductions.

How can we make BLM managed lands available to capture opportunities for aquatic and riparian restoration, and efficiently plan and implement multiple projects a year on BLM lands? One programmatic EA with project- specific design done through Determinations of NEPA Adequacy (DNAs). Field season 2022: project planning. NEPA Season 22/23: prepare DNA and decision. Field season 2023: implement project and plan next project. Programmatic Restoration EA currently in development stage. Resources from state office and IDFG. Have funds for Programmatic EA, on track for April '22 completion. Projects would include two main categories: Aquatic Habitat Restoration and Riparian Habitat Restoration.

Aquatic Habitat Restoration tools in toolbox: streambank stabilization, in-stream structures, floodplain connectivity/habitat complexity, stream crossings, etc. Riparian Habitat Restoration: plantings, plant material collection, restoration protection measures, etc. Potential projects like shaping and stabilizing eroded streambanks, plus plantings. Possibly reactivation of old side channels as well.

BLM Upper Snake East Travel Management Plan

Monica Zimmerman, Bureau of Land Management

1.8 million acres are managed by the BLM Upper Snake field office. Because that is so much acreage, they split it into travel management areas. The Upper Snake East Travel Management Area is 126,300 acres and has 850 miles of inventoried routes. Travel network supports rights-

of-way (routes that cross BLM to get to private land or cell tower, for example), permitted uses (for example, used to get to fence line or water trough), recreational uses (motorized or non-motorized), and administrative access (to accomplish mission on the ground). This land includes habitat for threatened and endangered species like grizzly bears, lynx, Yellow-billed cuckoo and lady tresses orchid. BLM will consult with the US Fish and Wildlife Service (USFWS) on those species. That influenced shape of this travel management area, to include all those in just one.

The planning process is comprehensive and will look at all access needs and incorporate prescriptions for all motorized, mechanized, and non-motorized travel and access that occurs on public lands. Also, the process takes an interdisciplinary approach as many different resource aspects are affected by travel, from fisheries to archaeology to recreation. The process will incorporate internal and external input from cooperating agencies, communities and interest groups.

There will be four key program components: land use planning, route inventory/evaluation, route designation, and implementation. Land Use Planning and Route Inventory and Evaluation are complete. In 2016, BLM started holding public meetings for comment on route inventories. The process has been on hold since 2017. Now, the process is in the stage of route designation and BLM will be reaching out to the public this winter and next year. BLM will release draft alternatives for public comment, then draft travel management plan for review.

USBR Upper Snake Reservoir Operations Update

Brian Stevens, US Bureau of Reclamation

The Upper Snake Reservoir system is currently 14% full with 1.17 MAF less than last year. This is 38% of the 1991-2020 average. Palisades got quite low this year and is currently 5% full. Thankfully it is gaining storage now. This will be the reservoir that will be harder to fill and will be a driver for much of winter and summer operations next year. We are essentially at period of record lows for Jackson and Palisades reservoirs right now. This summer had high demand and lower than forecasted runoff for those two reservoirs.

Island Park Reservoir is looking good. It is close to the 50th percentile and is likely to fill next year around May. Outflow is currently ~110 cfs, and we anticipate that will be adjusted throughout the winter strategically timed for fill and other considerations. Grassy Lake may be more difficult to fill. We would need 100% of average precipitation to fill Grassy and still may not fill until late June. Ririe Reservoir is targeting 40,500 by November 1st. Refill at American Falls Reservoir doesn't look promising at this point. Soil moisture improved recently to the point where it will probably be better in next year's runoff season than it was in 2021. This is a bright spot for the area. We are anticipating better runoff next year.

To get to 100% of allocation (fill all reservoirs), we would need 125-130% of average precipitation for the year. Poor runoff and high diversions in the Upper Snake as a whole means this winter will be quite different from last winter storage-wise. At Jackson, the plan is to maintain 280 cfs target through the winter. For Palisades, in late Oct or early November flows

will reach winter flows of 800 cfs. At Island Park, aim to maintain ~110-125 cfs, then recheck and adjust throughout the winter months. American Falls: maintain 925 cfs until at least late November, potentially early December, then go to minimum gate opening, which is approx. 350 cfs.

Henry's Fork Water Year 2021 Review

Rob Van Kirk, Henry's Fork Foundation

Water year 2021 was the driest since 2016 and by most measures even drier than 2016. Snow water equivalent peaked nearly three weeks earlier than average, on March 26 at 78% of average, compared with March 31 at 86% of average in 2016. Water-year precipitation was 81% of average in 2021, compared with 88% of average in 2016. However, springtime temperatures were cooler in 2021, which preserved the meager snowpack until early June. Mean temperature during June and July set a new record high by over 1 degree F at 60.6, compared with 52.4 degrees on average. Water-year total natural flow was 76% of average, compared with 74% of average in 2016. However, April-September natural flow was only 69% of average, compared with 70% of average in 2016. Winter flow was higher in 2021 because it followed four near-average water years, whereas 2016 followed three below-average years.

Administrative water availability was poor for irrigators in the Henry's Fork watershed. Fremont-Madison Irrigation District received only 74% of its storage allocation, and natural-flow priority dropped to 11-05-1895 on June 19, vs. July 11 on average. Numerous rights on Fall River have this priority date, with many more on Fall River and the Henry's Fork slightly ahead of this one in 1895. As a result, total April-September diversion was 92% of average, compared with 98% of average. Total injection into the Teton River from the Crosscut Canal and Exchange wells was 58,831 ac-ft, compared with 59,551 ac-ft in 2016; 59% of total injection was delivered through the Crosscut in 2021 vs. 53% in 2016. The irrigation system was managed this year with a streamflow target of 350 cfs downstream of all diversions (at Parker) on the Henry's Fork, as was also done in 2020. Mean streamflow over the period of Island Park Reservoir draft was 427 cfs, with a coefficient of variation of 35%. In 2016, when St. Anthony was used as the target location, mean streamflow at Parker was 473 cfs, with a coefficient of variation of 45%. Despite the lower mean, streamflow at Parker fell below a daily average of 200 cfs on only 3 days in 2021 vs. 11 days in 2016. Mean streamflow during Island Park draft in the South Fork Teton River downstream of Rexburg Irrigation Canal was 120 cfs in 2021, vs. 213 cfs in 2016.

Island Park Reservoir draft started on June 10 and ended on September 17, within a few days of the draft period in 2016. However, the reservoir actually filled a little during two rainy periods in August this year. September-30 content in Island Park Reservoir (aka "reservoir carryover" for this analysis) was 60,462 ac-ft, compared with a long-term median of 62,000 ac-ft. Statistically, the three most important variables determining reservoir carryover are watershed-total natural flow (72% of variability explained), watershed-total diversion (an additional 3% of variability), and streamflow in the Henry's Fork at Parker (an additional 9%). After accounting for natural flow, reservoir carryover exceeded the expected value by 25,586 ac-ft in 2021, while it fell below the expected value by 6,281 ac-ft in 2016. After accounting for natural flow,

diversion, and Parker streamflow, reservoir carryover exceeded expectations by 8,996 ac-ft in 2021, while it fell below the expected value by 15,710 in 2016. Thus, reservoir carryover this year was 24,706 ac-ft greater than in 2016, even after accounting for the major variables that affect reservoir carryover. This improved carryover was due to a number of factors, including better anticipation of low administrative water availability by irrigators, more physical water in the Henry's Fork watershed relative to basin-wide administrative water availability, use of the Parker streamflow target vs. St. Anthony, an additional 2,000 ac-ft of storage used from Grassy Lake, rain in late July and mid-August, and remote-control irrigation infrastructure installed in 2020. Although low administrative water availability and rain worked in favor of water savings, they generally worked against agricultural producers in the watershed. Rain resulted in lower grain and hay yields in many locations. Island Park Reservoir carryover has exceeded the expected value by an average of 8,541 ac-ft over the last four water years due to increased precision in water management.

My April-1 predictive model overestimated natural flow by 20%, primarily because precipitation was very low during April, June, and September and temperatures were so high during June and July. However, the model performed very well at predicting Island Park Reservoir carryover. Because of good carryover, winter outflow from the reservoir will be much greater than it was following the 2016 irrigation season and greater than would be expected for a year this dry. Outflow will be held near 100 cfs until late November, when the Henry's Fork Drought Management Planning Committee will meet to set a winter outflow. Current conditions suggest that outflow will be at least 200 cfs, enough to allow the power plant to resume generation. Regardless of how full the reservoir is at the end of November, outflow will be limited by poor inflow, which is forecast to be the 5th lowest on record. Within the statistical margin of error, it is possible that inflow could be the lowest in a record that dates back to 1935.

HFF has just completed its first year of work funded by a USBR WaterSMART applied science grant. Over the year, we obtained permits to install new stream gages at the Buffalo River and Teton River at Harrops Bridge, completed the structure of a groundwater model for Teton Valley, automated the computer code that produces all of the daily water report data, outlined a new hydrologic data website, completed data collection for development of a groundwater-surface water model for the lower Henry's Fork, started outreach for a system optimization model, and are in the process of moving all of our hydrologic data, computing, and code to secure cloud storage and servers. HFF recently hired Shaw Holwegner as Technical Coordinator. Shawn brings decades of IT and coding experience to this project and will greatly accelerate the pace of our work on the WaterSMART and related projects.

Community Building and Wrap Up

Aaron Dalling, co-facilitator from Fremont-Madison Irrigation District (FMID) called for one minute of silence to reflect on the meeting and prepare any final announcements or comments.

Keith Esplin, Eastern Idaho Water Rights Coalition (EIWRC) wanted to thank Aaron Dalling and Rob Van Kirk -- last month EIWRC had a legislative water college field tour in the Blackfoot area

and both Aaron and Rob gave presentations. The group toured recharge sites and Idaho Department of Fish and Game (IDFG) hatchery at Springfield. Rob Van Kirk was the keynote speaker. 13-14 legislators from Eastern Idaho and congressional staffers participated; 45 people total. Aaron presented about the water system. EIWRC hopes to repeat the tour every election cycle.

Brian Stevens, USBR shared that there are a couple of openings with NRCS over in Boise. Hydrology trainee summer intern and hydrology recent graduate opening.

Rob Van Kirk, HFF shared that Keith and EIWRC's event was a great event, with good information and was well organized. Rob really appreciates all of Keith's work. Aaron Dalling echoed those sentiments.

Melissa Guerricagoitia, USBR thanked HFF for the WaterSMART report, as she is the coordinator for that program. If folks need any help feel free to reach out to her.