Henry's Fork Watershed Council Annual Watershed Conference
Meeting Minutes

December 7, 2021

Introductions and Community Building

Aaron Dalling, co-facilitator from the Fremont-Madison Irrigation District (FMID) welcomed everyone to the Henry's Fork Watershed Council annual watershed conference, with presentations centered around infrastructure. The group went around with introductions and then called for a moment of silence before opening for announcements and community building.

Keynote Speaker
Assistant Secretary for Water and Science, Tanya Trujillo, US Dept. of the Interior

Assistant Secretary Trujillo began her remarks by acknowledging the Council's long history of collaboration and recalling that her first rafting trip ever was on the Middle Fork of the Salmon River. Ms. Trujillo works on water policy primarily with U.S. Bureau of Reclamation and U.S. Geological Survey (USGS) but also with other Department of Interior agencies, including the Fish and Wildlife Service, Bureau of Land Management and Bureau of Indian Affairs. The effects of climate change, especially increased frequency of drought and variability in water supply, are the biggest challenges facing water resource managers in the western U.S. In addressing these challenges, she is particularly supportive of voluntary conservation programs for agricultural producers and projects that retain working landscapes in the western U.S.

The bipartisan infrastructure bill signed by President Biden on November 15 provides a once-in-a-generation opportunity to address current and future challenges as well as bring existing infrastructure up to date. On the side, the bill will fund expansion of its Next Generation Water Observing System (NGWOS), which in the western U.S., currently includes the upper Colorado River basin. A basin in the Pacific Northwest will soon be added to the NGWOS.
Most relevant to the work of the Watershed Council, the bill will provide $83 billion over 2022-2026 to the U.S. Bureau of Reclamation. Major program areas funded by the bill are:

- $1.15 billion: water storage, groundwater storage, and conveyance
- $100 million: small surface and groundwater storage projects (2,000-30,000 ac-ft)
- $3.2 billion: aging infrastructure upgrades
- $1 billion: water recycling
- $250 million: desalination
- $1 billion: rural water projects
- $500 million: dam safety
- $300 million: Colorado River drought contingency

- $250 million: aquatic ecosystem restoration
- $100 million: cooperative watershed enhancement
- $50 million: Colorado River endangered species recovery
- $400 million: WaterSMART

More information on these programs can be found at https://www.usbr.gov/bil/

The WaterSMART program in particular has already contributed substantially to water planning and management in Idaho, providing $10 million in funding spread across 50 projects since 2016. In the Henry's Fork watershed alone, $1.5 million in WaterSMART funding has been awarded to over 10 projects, including the Henry's Fork basin study, Linderman Dam upgrades, small irrigation infrastructure improvements, and hydrologic modeling. The new infrastructure bill will expand grant opportunities through the WaterSMART program.

Idaho Water Project Funding
Wesley Hipke, Idaho Dept. of Water Resources

Funding is available from three sources. Idaho State Surplus with $1.4 billion as of August. Western Water Infrastructure allows the Governor and legislature to decide where funds go. Idaho Water Resource Board is to provide projects that benefit basin wide goals. American Rescue Plan Act (ARPA) $1.2 billion, which is a large amount for state government. Investment on water, sewer and broadband infrastructure. The Governor supports long-term investment in these. The Governor and legislature decide on allocation of funds.

Draft guidelines: clean water/drinking water revolving fund. In 2016, the EPA added aquifer recharge to the guidelines. This might make room for upper valley recharge? Other projects could include storage and treatment in Mountain Home and the raising of Anderson Ranch. There is $1.5 billion for WIN Act projects, which might include Anderson Ranch and others. $100 million for small surface and groundwater storage projects. There is $3.2 billion in the aging infrastructure account. $1 billion to fund water projects. $250 million for aquatic ecosystem projects. $400 million for WaterSMART, including $100 million for the Cooperative Watershed Management Program and $100 million for Watershed Enhancement Projects.

Water User Perspective on Infrastructure Projects
Paul Arrington, Idaho Water Users Association

Because of the availability of large amounts of funding for water infrastructure, 80% of the work of the Idaho Water Users Association is currently devoted to facilitating distribution of this funding to address needs in Idaho. Last year, Idaho had a budget surplus of $300 million, of which the legislature appropriated $50 million to water infrastructure, and the state could have a surplus of $1.5 billion this year. One of the biggest needs in Idaho is replacing/upgrading aging infrastructure. The average age of water infrastructure in Idaho is 70 years and across the Pacific Northwest is 80 years. As an example, lining is being replaced in the New York Canal,

which runs along a hillside above downtown Boise, to make water delivery more efficient and reduce potential for canal failure. So far, only 6 of 17 miles of lining has been replaced, at a cost of $400 million. The current rate of repair is only a few hundred yards per year. Elsewhere in southwestern Idaho, there are a large number of siphons and tunnels in need of repair for both safety and water delivery improvement. An assessment of U.S. Bureau of Reclamation facilities estimated a need for $3.2 billion to upgrade Reclamation facilities in the state, and very few of the existing irrigation delivery systems are automated. So, there is a great need for infrastructure improvement across the state, but the question is how to efficiently and quickly distribute state and federal funding to get projects done on the ground. Both Reclamation and the Idaho Water Resource Board have identified the need for increased administrative capacity to make this happen, and the Water Resource Board is requesting 17 new full-time positions in both the Board's staff and Idaho Department of Water Resources. Reclamation has also identified needs for additional administrative staff to get funding on the ground as quickly as possible. Three programmatic mechanisms in particular are likely to provide much of the funding. The first is flood management, which can be used to minimize and mitigate risk of flooding. Twin Falls Canal Company has used flood mitigation funding to construct retention basins, which have additional benefits to water quality. State agricultural best management practice funding (analogous to federal Clean Water Act section 319 funding) pairs nicely with WaterSMART grants to achieve multiple objectives such as water delivery efficiency and water quality improvements in a single project. The aging infrastructure program in the federal bill will address needs to upgrade Reclamation infrastructure, but there is a lot of non-federal infrastructure in Idaho in need of upgrade. A state-level program analogous to the federal program is needed to address this infrastructure. The most important thing is to get the administrative mechanisms in place as soon as possible to get the funding out on the ground.

IWRB Recharge Projects – Upper Valley
Wesley Hipke, Idaho Dept. of Water Resources

Current managed recharge infrastructure in the lower valley (downstream of Minidoka Dam) currently has a capacity of 300 cfs in canals and 2,100 cfs in off-canal basins. The upper valley (upstream of Minidoka) infrastructure is just the opposite, with around 2,000 cfs of capacity in canals and 450 cfs in off-canal basins. In the lower valley, water for managed recharge is predictably available every winter from November through March, whereas in the upper valley, it is available primarily from February through April and then only in about one-half of all water years. In those years, as much as 8,000 cfs can be available, including around 4,000 cfs in the Henry's Fork. However, once irrigation season starts, canal seepage does not count as recharge, and only water that can be delivered to off-canal basins can be counted as administrative managed aquifer recharge. The Department of Water Resources has conducted an assessment of potential recharge sites in the upper valley, using aquifer retention and response times produced by Enhanced Snake Plain Aquifer Model (ESPAM) version 2.2, the most recent update of the model. ESPAM2.2 estimates of retention and response changed a little from those produced by version 2.1. For example, the 5-year retention volume for recharge at Egin Lakes dropped from 59% to 47% between the two model versions. [The five-year retention volume is the fraction of recharge volume that remains in the aquifer in five years.] When the managed

recharge program was started, emphasis was placed on high retention times in order to achieve maximum increase in aquifer storage per unit of water recharged. However, more emphasis is being placed now on recharge sites that may have lower retention times but have 50% response times on the order of 6-12 months. [The 50% response time is the time at which 50% of the recharge volume remains in the aquifer and 50% has discharge to the river.] The advantage of recharge in the upper valley with this range of response times is that the effect of water recharged during the February-April window returns to the river during the subsequent fall and winter, where it contributes to fill of American Falls Reservoir or can be used again for recharge in the lower valley.

The criteria used for selection of new recharge sites in the upper valley are:

- Natural basin
- 5-year retention of at least 15%
- Depth to water of at least 50 feet
- Land not already being used for agriculture or municipal development
- No administrative or physical restrictions to site access

Four potential sites were selected for assessment: 1) Swan Highway (near Ririe), 2) Hells Half-acre near Blackfoot, 3) Mud Lake, and 4) Egin Phase III. Although Mud Lake and other natural basins in that area met the site selection criteria, water cannot be delivered to those sites by gravity feed. The cost of delivering water through pressurized pipelines was estimate at $70 million a few years ago but is now estimated at $350 million, which is currently too expensive to warrant further investigation. The Swan Highway and Hells Half-acre sites did not offer good opportunities for other reasons, leaving Egin Phase III as the most promising site for development in the upper valley. The current Egin facilities (phases I and II) provide roughly 303 acres of basin area and 150 cfs of recharge capacity. Phase III would add another 291 acres of basin area and an additional 150-250 cfs of capacity. Additional capacity could be obtained by adding Quayles Lake, but that area has been farmed in the past and so may not have high enough infiltration rate to serve as a recharge basin. The Phase III development would involve around 11,000 linear feet of new canal or pipelines, at a cost of around $30 million, depending on which engineering design is used. Current designs keep the recharge infrastructure to the south and east of the Sand Mountain Wilderness Study Area (WSA), which increases costs relative to designs that would allow water to be delivered due west of the existing site onto the WSA. Regardless $30 million is still a low enough cost to warrant development. Although this was initially considered a high cost relative to that of lower-valley sites a few years ago, the lower-valley developments were the “low-hanging fruit” of managed recharge on the Eastern Snake Plain Aquifer. New sites will be more expensive now that the inexpensive ones have already been developed.

Aging Infrastructure

Aaron Dalling, Fremont-Madison Irrigation District

There are many canal companies within FMID, over 40 and they are independent companies. Projects with aging infrastructure:

- Island Park Outlet Tunnel- estimated cost $10,000,000
    - Concrete crumbling in outlet tunnel
    - Some patches done already but still more to do
- Grassy Lake Pipe Leak – estimated cost $750,000
    - Leak in pipe prior to any valves
    - Potentially have to drain reservoir to relieve pressure and fix
    - ~10 year period to address issue
    - Short term fix was to saddle the pipe
- Cascade Creek Diversion Dam
    - Log dam used to help divert water from Cascade Cr to fill Grassy, if needed
    - Rotting logs pushing out back side of dam
    - Head gate concrete issues as well
- Crosscut Canal - $200,000
    - Concrete crumbling on front and back of pillars
- Canals within FMID
    - Lots of canals need attention – examples below
    - Chester Canal on Fall River - $140,000
        - Concrete crumbling at headgate
    - Island Ward Canal on Teton River $120,000
        - Crumbling concrete
        - Dated headgate infrastructure
    - Egin Canal on HF
        - Concrete cracking and poor condition
        - Veg growing out of cracks
    - Farmers Friend on HF
        - Concrete issues
    - Rexburg Irrigation on TR
        - Minor concrete issues but big cracks
    - Teton Island Feeder
        - Concrete crumbling off edges
        - Better options than putting pipe in concrete and using boards for adjusting
    - Rexburg Irrigation
        - Did some patchwork but concrete deteriorating
        - Dangerous dealing with boards during high water
    - Teton River Splitter – $1,000,000
        - Gearboxes in poor shape
        - Gates difficult to move during high and low conditions

    - East Teton Canal- TR siphon-$3-5 million
        - Crumbling concrete
    - Enterprise Canal – TR siphon - $5-7 million
        - Concrete cracking
        - Pipe is dated
        - 2,000 ft

List of projects that have been completed:

- Grassy Lake spillway replacement
    - FMID funded ~$1 million
    - USBR funded rest
- Gate chamber pipe recoating - $200,000
- Farmers friend canal - Gate replacement
- Fall River Canal - Replaced gates and concrete
- Teton Island Feeder - Headgate replacement
- Marysville pipeline
- Modernization on various structures - Check structures, Canal headgate automation

Recent WaterSMART Grants 2018-2021

    - Flow meters
    - Automation (Teton Splitter, Crosscut, Henry's Lake)
    - Automation/measurement Egin Bench canals
    - SE Idaho, Consolidated, Salem Union, Teton Island Feeder
    - Chester Canal headgate
    - Total federal cost share of the projects above - $550,000
- Ririe
    - FMID has 30% share in Ririe
    - Spillway crumbling and needing replacement 5-10 years
    - FMID involved in resolving issue

Status of Fall River's FERC Licenses in the Henry's Fork Watershed
Dave Peterson, Fall River Rural Electric Cooperative

Dave Peterson presented four hydroelectric projects due for Federal Energy Regulatory Commission (FERC) re-licensing in the next 25 years: Felt, Island Park, Chester, and Buffalo River. The Felt Dam project was built in 1985, with a FERC license issued in 1983 that will expire in 2023. License renewal will require public meetings and public comments will be solicited when the new license is drafted. The three other projects have longer time horizons—the Island Park license was issued in 1988 and will expire in 2038, the Buffalo River license was issued in 2004 and will expire in 2044, and the Chester license was issued in 2008 and will expire in 2048.

Conversation then turned to the hydroelectric facility at Island Park. This facility had issues with dissolved oxygen that were resolved by FRREC who worked with the Henry's Fork Foundation and Fremont-Madison Irrigation District. An audience member made the connection that the need to restore the outlet tunnel at the dam (presented by FMID earlier in the conference) might also create dissolved oxygen issues downstream, and FRREC could play an important role in keeping water in the river by running water through their power plant during outlet tunnel restoration. However, there was mention that the hydroelectric facility could trip and dewater the river.

Ashton Hydroelectric Project (FERC No. 2381) Relicensing
Briana Weatherly, PacifiCorp

Construction completed in 1918, the Ashton Hydropower project's current FERC license will expire in December of 2027. As per license, rainbow trout are stocked in Ashton Reservoir each year. A Wildlife Enhancement Plan was completed in 2016, part of the plan includes an osprey nesting program.

PacifiCorp intends to use the Traditional Licensing Process (TLP), which includes:
Stage 1: (Now – Jan 2023) consult with stakeholders, submit preliminary application document, notice of intent, and TLP request letter. Also, public meetings, site visits, and development of site-specific study plans. Stage 2: (2023-July 2025) implement studies and develop reports, then prepare and submit draft license application. Stage 3 (July – Dec 2025) prepare and submit the final license application.

Potential considerations include maintaining and possibly enhancing amenities like parking and restrooms and upgrades to help with fish entrainment.

How power outages typically occur: 1) Powerline overloads - this typically happens in the summer months due to high demands, 2) Voltage imbalances. How the power plant responds to an outage: outage triggers a bypass to open which releases 320cfs of water. Additionally, PacifiCorp plans to automate the power failure bypass release.

Conservation Perspective on the Infrastructure Bill
Kira Finkler, Trout Unlimited

Trout Unlimited (TU) views the Bipartisan Infrastructure Law ("BIL") as an unprecedented investment of $1.2 trillion in total spending over five years. This represents a significant infusion of federal funding for U.S. public works across various agencies. TU is well-positioned to help ensure that these funds are injected into high priority projects. Today, we leverage $30 million annually in federal and state funding to complete, on a collaborative basis with partners such as all of you, projects on the ground and in the nation's rivers and streams.

With our science-based restoration priorities and our deep partnerships with natural resource agencies, we intend to see that these funds support projects that help deliver transformational results for people, fish, and habitat. But the bill is also a lost opportunity. For example, it does not to provide any direct funding for Rep. Mike Simpson's (R-ID) historic plan to remove four dams on the lower Snake River and invest in regional infrastructure alternatives. After more than 30 years and $17 billion in mitigation, there is a continued steep decline of what was once one of the most prolific salmon and steelhead producing rivers on the West Coast and what could be the largest wild salmon and steelhead stronghold in the continental United States. TU, regional Tribes, and other stakeholders have advocated strongly for congressional support of Rep. Simpson's proposal. Numerous scientific studies affirm that the only way to recover Snake River salmon and steelhead is to remove the four dams. Please go to www.simpson.house.gov to learn about Rep. Simpson's plan.

TU works with partners at all levels and seeks collaborative solutions focused on funding western water priorities as part of infrastructure spending. We find that there are many areas of common agreement such as supporting healthy watersheds as part of our essential water infrastructure. Several broadly supported priorities were funded in the BIL, for example, through the Reclamation Title's support for multi-benefit irrigation infrastructure projects and watershed health projects. The BIL contains funding for both existing programs as well as new programs. A few highlights of the new programs include:

>a Department of Transportation National Program to fund culvert removal, replacement, and restoration ($800 million each year over the next five years) and
>a Department of the Interior Program to fund multi-benefit projects to improve watershed health focusing on habitat restoration in river basins impacted by Reclamation projects ($100 million through 2026).

Two Idaho specific examples represent the types of projects TU will work to secure funding for via the BIL – the Diversion 45 Fish Passage and Dam Remediation Project in the Big Wood and the Conant Creek Canal Lining & Automation Project led by the Henry's Fork Foundation and the Conant Creek Canal Co.

The BIL contains over $1 billion for water storage projects. One project in Idaho is the proposed Anderson Ranch Dam Raise that will cost approximately $90 million for 29,000 acre-feet of additional storage. TU recognizes that storage is one tool to address imbalances between water supply and demand. However, we also note that other tools such as water conservation and efficiency or precision water management can often yield additional supply at lower costs. A 2016 study prepared for the Idaho Water Resources Board stated that "substantial water demand reductions are possible through conservation." Limited water supplies create problems for everyone, and the best solutions take all needs into account. That is why we have encouraged the Bureau of Reclamation to develop and execute collaborative processes to evaluate water storage projects consistent with the State Water Plan. Reclamation's final feasibility report for the Anderson Ranch Dam raise identifies two primary planning objectives and one of the two is to "enhance fish and wildlife within the Boise River basin or

downstream." As such, TU wants to ensure the agency mitigates any adverse effects caused by the dam raise on these important natural resources.

Going back to 2017, when Reclamation first started working on this dam raise, TU members have been writing letters, meeting with Reclamation staff, and attending open houses. We submitted written on the Feasibility Study EIS in 2019 & the Draft EIS in 2020. We always focused on constructive suggestions.

Impacts to river flow, decreased wetted floodplains, and the streamflow maintenance account are some of the concerns we have raised. Since the WIIN Act (section 4007) requires Reclamation to determine that a share of the project benefits are federal benefits, we have recommended they dedicate a portion of the new storage to increased winter flows in the South Fork and Lower Boise River.

Community Building and Wrap Up

Jamie Laatsch, 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.

Keith Esplin, Eastern Idaho Water Rights Coalition shared that they would be hosting their annual meeting on Tuesday, Dec 14th and Congressman Simpson would be giving a presentation on his salmon and dam proposal. It will be at 9 am on the waterfront at Snake River Landing.