Our Mission

The Mission of the Powder Basin Watershed Council is to facilitate community-supported maintenance and restoration of streams, rivers, and lakes within our watersheds.

Powder Basin Watershed Council

https://www.powderbasinwatershedcouncil.org/

2024 Annual Report

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EXECUTIVE SUMMARY

The Powder Basin Watershed Council (PBWC) is a 501(c)(3) nonprofit organization based out of Baker City, Oregon whose mission is to "Facilitate community-supported restoration and maintenance of the streams, rivers and lakes in our watersheds." Our geographic focus is the Powder Basin of northeastern Oregon, encompassing three subbasins; the Powder River subbasin, Burnt River subbasin and the Brownlee subbasin. The PBWC advocates for quality watershed management among landowners in Baker, southern Union, and northern Malheur Counties by promoting a holistic approach that engages a diverse group of interested stakeholders for the purposes of ecological restoration, water quality monitoring, watershed planning, and educational programming.

In 2024, our dedicated staff and Board of Directors promulgated another year of program growth and stability by continuing to build our portfolio of on-going and completed watershed restoration actions and planning for the future. We are working on our first Watershed Restoration Action Plan that will guide our future watershed restoration efforts for the period 2025 through 2035. The plan will be completed by May of 2025.

Completed and on-going restoration actions include seven projects, four completed in 2024 and three that will be completed in 2025. Completed projects include Pine Creek Fish Habitat Enhancement, Cusick Creek Restoration Phase II, Camp Creek Ecosystem Resiliency and Higgins Reservoir Water Development. Ongoing projects include Cusick Creek Restoration Phase III and Trout Creek Ecosystem Resiliency and Johnny-Bill Irrigation Efficiency. Collectively, these projects involve approximately eight miles of stream. Our funding partners for these projects include the Oregon Watershed Enhancement Board, U.S. Forest Service, Oregon Department of Fish and Wildlife, Oregon Conservation and Recreation Fund, Idaho Power Company, Natural Resources Conservation Service, and the Roundhouse Foundation. Large in-kind contributions were also made by the private landowners involved.

In addition to these restoration actions, we have a robust suite of twelve restoration/conservation opportunities in development for future implementation ranging from securing conservation agreements for Greater sage-grouse to preparing historic wet meadow systems for beaver recolonization, and channel/floodplain restoration to irrigation efficiency.

The scientific bases for our restoration/conservation actions are supported by numerous internal/external watershed assessments and planning documents as well as our Water Quality Monitoring Program which includes measuring several water quality parameters at 58 sites throughout the Powder River, Burnt River and Brownlee Subbasins. These water quality data help identify watershed limiting factors and target/prioritize our restoration work.

Our outreach, landowner engagement and education activities are what build our future restoration/conservation actions. Our restoration opportunities result from on-the-ground site visits with landowners/mangers where a concept is agreed upon for future actions. These site visits result from the array of outreach and educational activities that we engage in as well as support from our many partners.

INTRODUCTION

Initially, known as the Baker County Water Advisory Board, the Powder Basin Watershed Council (PBWC) consisted of professionals in natural resource management and water resources. In 1995, the state of Oregon authorized and began funding watershed councils throughout the state to bring the public into the process of improving the states' watersheds. Originally under the auspices of the Baker County Commission, the PBWC formed an independent 501I(3) corporation in 2008. The PBWC was run entirely by volunteers. This included the developing of projects, compiling and publishing data in watershed assessments, and managing the organization. Eventually, funding was acquired to hire a coordinator which served as the organization's backbone and now the PBWC has a full-time Executive Director funded primarily by a watershed council capacity grant from the Oregon Watershed Enhancement Board (OWEB).

The PBWC implements its Mission to facilitate community-supported maintenance and restoration of streams, rivers, and lakes within our watersheds across the Powder River, Burnt River and Brownlee subbasins. The PBWC's Vision is that the Powder Basin watersheds are healthy and meet the needs of the people and the environment.

2024 brought further strengthening of the organization, supported primarily by continued success in the development and funding of a diversity of aquatic restoration projects, acceptance by the landowner community of PBWC's role as Sage-grouse Candidates for Conservation with Assurances program (CCAA) lead in Baker County and development of a Watershed Restoration Action Plan to be completed in early 2025. In 2024, we showed commitment to "finishing what we started" by completing several projects including: Pine Creek Fish Habitat Enhancement, Higgins Reservoir Water Development, Camp Creek Ecosystem Resiliency, and Cusick Creek Restoration Phase II. We also have several projects under development including Uplifting Anthony Creek for Native Trout and Beaver, Keeping it Cold at Schneider Meadows, Ritter Creek Restoration and Eagle Creek Floodplain Restoration.

Implementation activities occurred on seven restoration projects including Camp Creek Ecosystem Resiliency, Pine Creek Fish Habitat Enhancement, Cusick Creek Restoration Phase II, Cusick Creek Restoration Phase III, Higgins Reservoir Water Development, Trout Creek Ecosystem Resiliency and Johnny-Bill Irrigation Efficiency. Project development and implementation in 2024 also exemplifies our strengthening partnerships with the Wallowa Whitman National Forest, Idaho Power Company, Trout Unlimited and Sage-grouse Local Implementation Team.

As the organization has grown, so has the need for administrative support. In 2024 we hired Corey Jonas as a half-time administrative assistant to help with the growing administrative work. Corey has proven to fill some important personnel gaps with his diverse set of skills including assistance with project implementation. With our growing portfolio of implementation projects, there is a need for additional staffing to implement these projects. With his diverse skill sets, Corey helped us complete our project work in 2024 as we make plans to hire another full-time restoration coordinator in 2025.

Water Quality Monitoring Specialist, Justin Thorson, was successful this year in acquiring another three years of funding from OWEB to continue our Long-Term Water Quality Monitoring Project. While we were not successful in funding an effectiveness monitoring project in 2024, we will continue this effort in 2025 to build a strong adaptive management approach into our program.

MONITORING & ASSESSMENTS

2024 was an eventful year for the PBWC's monitoring program, with several monitoring projects undertaken and funded. Important strides were made regarding the long-term water quality monitoring program, macroinvertebrate monitoring, project monitoring, and grants to continue and expand the monitoring program at the PBWC.

Long-Term Water Quality Monitoring

The PBWC's main monitoring activity is through the Long-Term Water Quality Monitoring Program (LTWQMP), which has been in place since 2013 and provides the PBWC valuable information on the status and trends of stream water quality and guidance on restoration priorities in the basin. Since restarting the program in 2022, after a hiatus due to COVID 19, various efforts have been undertaken to improve data quality and coverage as well as increasing volunteer support and data collection for these monitoring efforts.

Figure 1. Grab sample site near Clarks Creek Bridge on the Burnt River.

In particular, the PBWC has made strong progress on improving data quality as part of our monitoring efforts using the precision standards set by the Oregon Department of Environmental Quality (ODEQ) for their Volunteer Water Quality Monitoring Program. These standards are based on the difference between two measurements taken at each site visit, with closer measurements resulting in higher grades. A and B grade data are for the highest quality which can be used for identifying the status and trends in water quality at sites as well as for analysis. C and D grade data fall outside the acceptable precision thresholds and cannot be used to determine status and trends in water quality. Improving data quality has been a priority for the PBWC's monitoring efforts, which include volunteer training, split sampling with the Monitoring Coordinator, and identifying which sites have consistently lower data quality along with developing strategies to improve them. We made strong progress on these efforts in 2024 for the grab sample, water temperature, dissolved oxygen, and bacteria and nutrient monitoring components of this project.

Grab samples for conductivity, pH, and turbidity were taken at 58 different sites located in all three sub-basins and in several proposed and currently active restoration projects. In total, there were 68 sample trips, covering 317 site visits by 13 different PBWC employees, partners, and volunteers. Data quality was also similar-to or better-than previous years, with A grade quality data for >95% of collected conductivity and pH measurements, and for >90% of collected temperature, dissolved oxygen (DO), and turbidity measurements. The only issue encountered that limited the capacity to collect the highest quality data was that DO caps on 2 meters expired during field season, leaving volunteers unable to take samples at sites in the Lower Powder, Eagle Creek, Pine Creek basins for most of June and July.

Among sites sampled for pH, ten had measurements outside of the 6.5 to 9 pH thresholds set by the Oregon Department of Environmental Quality (ODEQ), with two sites on the Powder River in the lower watershed, one site in the North Fork Burnt River (NFBR) in Whitney Valley, and one site on the Burnt River below Unity Dam having pH measurements outside the threshold for more than 25% of measurements collected. Similarly, one site on the North Powder River and one site on the lower Powder River had DO measurements under the 6.5 mg/L DEQ threshold. Eight sites had turbidity measurements above 20 nephelometric turbidity units (NTU's), indicating high levels of erosion and sedimentation. Sites with particularly high levels were found on Goose Creek and on the Powder River near Haines and upstream of Keating Valley. Several sites in the Cracker Creek watershed had a rapid onset turbidity event in May, likely due to recreational mining, with some measurements over 800 NTU's.

Similar improvements were made regarding monitoring undertaken using water temperature loggers in 2024. In total, temperature loggers were installed at 52 sites, with the PBWC installing loggers at 37 sites and the Wallowa-Whitman National Forest (WWNF) installing 15 loggers at locations in the North Fork Burnt River watershed. 311 audits were taken during the field season to assess logger accuracy, which is more than 2023 (275 visits) and 2022 (183 visits). No PBWC loggers were lost during the field season, although one WWNF logger was lost on the Lower North Fork Burnt River. One missing logger from 2020 was recovered at our Upper Silver Creek site, which has been useful in filling in past data gaps at this important site. Overall, there was a higher proportion of A grade data in 2024 (88.9%) than in previous years (85.4% in 2023 or 67.5% in 2022) for temperature logger field audits.

Among the 12 sites in the basin monitored for Bull Trout suitability, all but one exceeded the 12 °C standard for maximum temperature at some point during the 2024 field season. July and August were the periods with the highest proportion of days with temps above the threshold, while May and October had temperatures below the standard. Sites with 40% or more days with temps above the threshold were found in upper Eagle Creek, Wolf Creek, and Fruit Creek. One location in upper Meadow Creek was the only site to never exceed 12 °C during the field season.

Figure 2. Temperature logger installation at Lower Meadow Creek in the Pine Creek Sub-basin.

Among the 41 sites monitored for Redband Trout under the cool water standard, 33 had daily temperatures above the 20 °C threshold, with 11 sites having more than 50% of days above the threshold. Sites with daily temperatures always below the standard were found in Camp Creek and Trout Creek (North Fork Burnt River tributaries) as well the South Fork Burnt River, while sites with more significant temperature issues were found in the Lower North Fork Burnt River, the mainstem of the Powder River below Baker City, and in the mainstem of the Burnt River below the canyon reach. July was the month with the most common number of days above 20 °C, with the fall period generally cooler and with fewer occurrences of temperature exceedances.

Dissolved oxygen (DO) monitoring is another component of the LTWQMP that helps the PBWC identify the status of Redband Trout and Bull trout streams using loggers that record DO and temperature. DO Loggers were only installed at sites for short periods of time to capture conditions during the spawning season for each species, with loggers installed at 12 sites during the spring (May – July) for Redband Trout, and 7 sites during the fall season (Sept – Oct) for Bull Trout. Several actions were taken to improve DO logger accuracy, including factory recalibrations by the manufacturer, a new field calibration program, and improved field data

audit procedures. All of these changes resulted in improved data accuracy for dissolved oxygen measurements, with a higher proportion of A grade data in 2024 for oxygen audits (80%) than previous years (19% in 2023 and 20% in 2022).

Figure 3. Spawning Bull Trout seen in Upper Silver Creek.

Several sites had DO levels in excess of 10.5 mg/L, a level that is accepted as being ideal conditions for successful egg incubation in Trout. These measurements were mostly found at sites monitored in the spring. Sites with 25% or more of DO measurements above 10.5 mg/L were found on the Powder River downstream of Mason dam, on Deer Creek, Cracker Creek, and the North Fork Burnt River in the spring and on Cracker Creek in the Fall. Baseline DO levels were above the 8 mg/L level for Bull Trout for all sites except for the Meadow Creek monitoring site, where 20.5% of measurements were below the minimum threshold. Our planned restoration on Meadow Creek is expected to improve the DO issues by increasing late season flows and providing greater channel complexity to circulate water.

The final component of the PBWC's LTWQMP is *E. coli* and phosphorus monitoring in the Burnt River subbasin. In 2024, the PBWC and the Burnt River Irrigation District (BRID) collected samples during seven trips and 35 site visits. Sampling was heavily impacted by the Durkee fire in July, particularly throughout the Burnt River canyon and around Huntington. Despite the reduced number of sample runs, the monitoring was able to identify several patterns in bacteria and nutrient concentrations between sites, throughout the field season, and between previous field seasons. *E. coli* concentrations were generally higher in late summer and early fall and at sites on the Burnt River at Clarks Creek bridge and near Lime, where concentration exceeded DEQ's 260 colony forming unit per 100 mL standard on four of the seven trips.

Phosphorus concentrations were generally higher earlier in the Season (May, June), with concentrations generally increasing in a downstream direction. In comparison to 2022 and 2023, concentrations of both E. coli and phosphorus were generally similar during most months among sites but were around 50% higher in September than other years.

Figure 4. Large Beaver dam seen on the North Fork Burnt River.

2024 was the final year for water quality data collection under the current OWEB grant (grant number 221-5058-19515). Completion of this grant in 2025 will inlcude finalizing data submission to the ODEQ and writing the final technical report. The final report will contain overviews of sampling parameters and standards and will go into detail describing trends in parameters at each site. The report will also provide comparisons to past data collection efforts to assess trends in water quality in the basin and provide recommendations on geographic focus areas for restoration. The report is expected to be completed by the end of 2025 and will be reviewed by the PBWC board as well as partner organizations such as WWNF, BRID, ODEQ, and Baker County.

Future Funding support for water quality monitoring for the period 2025 through 2027 is provided by another grant from OWEB (grant number 224-5052-23630) and cash contributions from the Burnt River Irrigation District.

PBWC Strategic Plan strategies addressed: 6.A, 6.B

Powder Basin Macroinvertebrate Status and Trend Monitoring

Macroinvertebrate Monitoring was a new addition to the PBWC's monitoring efforts in 2024. These surveys were a continuation of efforts undertaken in 2018 and are funded by OWEB (grant number 223-5048-23000) and the Wildhorse Foundation. Macroinvertebrate samples were collected in September and October using targeted riffle and transect methods at 42 sites throughout basin, including eight sites in the Baker City Watershed, four sites in the Elkhorn Wildlife Area, two sites in beaver dam ponds, eight sites in the PBWC's North Fork Burnt River restoration projects, and twenty 2018 revisit sites.

Grab sample and temperature monitoring data were taken alongside the macroinvertebrate samples at revisit and North Fork Burnt River restoration sites to identify important limiting factors (i.e. DO, temperature, turbidity, etc…) as well as aid in finding locations where restoration might improve stream function. The macroinvertebrate samples will also be used to assess trends in biodiversity since 2018, evaluate the impact of restoration on macroinvertebrate communities, and identify differences between beaver dam influenced locations vs. non influenced locations. Cole Ecological out of Portland, Oregon received the samples and will be completing the specimen identification, while the ODEQ will calculate the biodiversity indices used for the analyses. The Final Report for the project is expected to be completed Spring or Early Summer of 2025.

Figure 5. Adult Pteronarcys Stone fly near Eagle Creek.

Project Monitoring Camp Creek and Trout Creek Restoration Projects

Alongside status and trends monitoring, restoration project effectiveness monitoring encompasses another important part of PBWC's restoration work. Monitoring was completed at 13 Valley-wide transects at various locations below Alder Creek Meadow on Trout Creek to catalog pre-project conditions and assess project effectiveness. Important components included measuring elevations of the stream channel, floodplain, and side channel features, measuring vegetation height, location, and composition, and documenting important features such as wetlands and beaver activity. The Camp Creek project also required turbidity monitoring to ensure compliance with project removal-fill permits and limit negative impacts of restoration work on sensitive species like redband trout. All implementation crew members were trained to both collect and record turbidity measurements and were versed in procedures to limit excess turbidity.

Figure 6. Transect monitoring site on Trout Creek.

Volunteer Monitoring Updates

Volunteers compose an important part of the PBWC's monitoring efforts, particularly for sites far from the PBWC's office in Baker City. Overall, in 2024, 7 volunteers spent 222.5 hours collecting water quality data, assisting with macroinvertebrate sampling, travelling to sample sites, and completing calibration checks on sample equipment. These numbers are an improvement on both 2022 (5 volunteers @ 122 hours) and 2023 (5 volunteers @ 119.75 hours). Two long-time volunteers/teachers, Tonya Humbert from the Burnt River High School and Troy Tubbs from Pine-Eagle High School, left the volunteer program due to new positions and shifting teacher responsibilities, but two new volunteers, John Runyon and Pine-Eagle teacher Debi Lorence, joined the program. They were joined by long-time volunteers Karen Riener and Ben Titus, as well as more recent member Mike Beaty. PBWC staff and partners (BRID and

WWNF) also collected samples in 2024, including temperature logger deployment, bacteria and nutrient sampling, and macroinvertebrate sample collection.

Monitoring Grants

The most important happening in 2024 was the continued funding of the Long-Term Water Quality Monitoring Project by OWEB for the 2025-27 period (grant number 224-5052-23630). In addition to continued grab sample and temperature monitoring at 36 existing sites, the project will include monitoring at 12 new and previously monitored locations to assess water quality conditions and identify potential restoration areas. Also included are plans to monitor DO in spring and fall at 14 existing sites and 8 new sites to assess Redband Trout and Bull Trout spawning conditions. Our *E. coli* and phosphorus monitoring program will be expanded to include sampling at 4 existing sites and two new sites in the Burnt River subbasin and 6 new sites in the Powder subbasin. In a first for the PBWC, the Burnt River bacteria and nutrient sampling will include eDNA monitoring, which will be used to compare source attribution from humans, cattle, and wildlife and focus mitigation efforts on effective solutions.

The PBWC also applied to OWEB to fund an effectiveness monitoring program for our restoration and improvement projects in the basin. The major components of this project included water quality monitoring to assess if restoration can address these concerns, measurements of vegetation and stream morphology to track changes over time, and surveys to assess BDA and PALS impacts and integrity. The PBWC also included input from Steve Sullivan, a Utah State University graduate student, to incorporate drone monitoring in the broader effectiveness monitoring program. While several facets were well received by the OWEB monitoring review team, the project was not recommended for funding for the 2024 funding cycle. We will reapply to OWEB for effectiveness monitoring funds, addressing feedback on the 2024 application. In response to OWEB's comments, we will remove the water quality monitoring aspects to focus monitoring efforts on vegetation, stream morphology, beaver activity, structure integrity, and drone monitoring. The grant will also focus on two projects rather than all current and proposed projects, with the most likely candidates being the Camp Creek and Meadow Creek or Anthony Creek projects. With these changes, our effectiveness monitoring program will have significantly improved chances of funding for the upcoming OWEB grant funding cycle in 2025.

Powder Basin Groundwater Records Review

Project Background:

The PBWC developed a project in collaboration with the OWRD and the Oregon Department of Geology and Mineral Industries (DOGAMI) to utilize the existing data on groundwater resources to determine whether groundwater is declining within the Powder Basin. There is growing concern that areas within the Powder Basin may be at risk for declining groundwater levels. Changes to groundwater levels often have long-lasting direct effects to stream flow, fish habitat, water quality, and agricultural operations.

Based on conversations with the public and OWRD staff, it was determined that the most logical first step in assessing the current status of groundwater in the Powder Basin was to review existing data that is stored by OWRD. The goal of this project is to summarize existing data, identify trends in groundwater levels over time, extract geologic data that is relevant to groundwater storage and determine data gaps. The project focus area is the Baker Valley.

PBWC's role in this project is to develop a database to organize data on groundwater levels and well lithology, then populate the database from information gathered from OWRD well logs. OWRD and DOGAMI will then use this data in modeling exercises to characterize the groundwater resource in Baker Valley.

We developed the database and began populating with data from wells logs in late 2020. After a hiatus in 2021 and 2022, data entry into the groundwater database began again in 2023.

2024 Update:

The work is now complete involving data entry for information from 579 sites in the basin, with most of these located in the Baker Valley. Well depth, construction type, bedrock geology, and groundwater elevations will be used to assess trends in groundwater elevations throughout the basin and explore the geology in the region. With data entry now complete a technical report is in preparation under guidance of Phil Marcy of OWRD and Jason McClaughry of DOGAMI.

Funding for the project was provided by a grant from OWEB (grant number 220-5043-17407).

PBWC Strategic Plan strategies addressed: 6.B

STAKEHOLDER ENGAGEMENT

Powder Basin Stakeholder Engagement

Project Background:

Fall of 2022, we received an OWEB grant (grant number 222-5049-22249) to provide organizational capacity to develop restoration project opportunities. This project includes three focus areas, the Pine Valley portion of the Pine Creek Watershed, the Powder River and tributaries upstream of Jimmy Creek, and the Burnt River and Tributaries upstream of and including Camp Creek. Within these areas we will engage with stakeholders and landowners in the development of three project types: beaver restoration and mitigation, irrigation system modernization and fish passage improvements. In the face of climate change, restoration practitioners and the community are seeing the restoration of beavers on the landscape as a necessary tool to increase the residence time of water in our watershed. Recent drought conditions have emphasized the need for more efficient use of irrigation water to maintain instream flows and ensure that users have water available to produce food. Improving and

maintaining passage for bull trout in the Pine Basin is identified as a needed action in the US Fish and Wildlife Service Bull Tout Mid-Columbia Recovery Unit Implementation Plan. We will use one-on-one personal contacts, through trusted sources, our newsletter (The Thalweg), development and directed mailings of informational brochures, and in-the-field workshops to engage landowners and the community to develop restoration project opportunities. Partners include the Idaho Power Company and Powder Basin community.

2023 Implementation:

The Watershed Restoration Coordinator, Madison O'Bryant, joined the PBWC in January of 2023 to implement the Stakeholder Engagement objectives detailed above. Community engagement work commenced with meeting PBWC Board Members, partner organizations, and members of the community to recruit participants for the PBWC's Strategic Plan Refresh and action planning process. Developing these relationships was critical for meeting diverse stakeholders and landowners across the basin who may be interested in working with the PBWC in the future. 2023 project implementation included participating in Idaho Power Company's Water Efficiency Program (WEP) project review and developing an irrigation efficiency project in partnership with IPC and a private landowner in the Pine Valley. Another irrigation improvement project was identified in 2023 using personal contacts with a private landowner in the Burnt River Subbasin who is interested in piping and/or lining irrigation ditches. This project did not lead to an immediate funding opportunity but will be incorporated in the PBWC's Action Plan timeline for future work. One fish passage improvement project was identified in 2023 on the National Forest upstream of the Camp Creek Ecosystem Resiliency project. This project was funded in 2024, and we are currently coordinating implementation. No beaver coexistence or restoration projects were identified within any of our focus areas in 2023.

2024 Implementation:

Burnt River Subbasin: Community outreach in 2024 began with promoting the PBWC's Action Planning process. The PBWC Watershed Restoration Coordinator gave a presentation to the Burnt River Irrigation District Board of Directors to reintroduce the action planning process, and this led to PBWC staff participating in the annual Unity Weed Board Banquet and hosting a community meeting at Hereford Hall. Both events garnered participation and feedback in the PBWC's action planning process and helped develop relationships with the community to identify future project opportunities. In 2024, three project opportunities were identified within the Burnt River Subbasin. On the North Fork Burnt River, two projects will address fish passage and irrigation efficiency on the Big Flat Ditch. On the South Fork Burnt River, the third project will address fish passage and improved ecosystem function on Bull Run Creek. We hosted our 2nd annual "Beaver Dam BBQ" on Camp Creek during late summer. Volunteers who participated in this event were the same as last year, and no project opportunities were identified from this event. An encounter with a local resident during the BBQ did spark the development of informational signage for Camp Creek which was distributed throughout the project reach. We anticipate informational signage will increase opportunities to connect with residents downstream of the project site which could lead to future restoration projects.

Powder River Subbasin: Community outreach for the Powder River Subbasin included engaging with the Powder Valley Water Control District at our first action planning meeting and hosting two other action planning meetings where attendance was low. We also hosted our annual Powder River Spring Cleanup which was attended by many people within the Baker City community. None of these events led to project opportunities and we have developed a plan to increase our involvement with this community during the second phase of our engagement process which will be discussed below.

Brownlee Subbasin: Participating in Idaho Power Company's Water Efficiency Program in 2023 helped us develop a relationship with a private landowner in the Pine Valley. We are currently implementing the project we developed with the landowner in 2023, and we are beginning to develop another project with this landowner to address irrigation efficiency improvements on another portion of the property. This landowner also provided us with contact information for a neighbor who is seeking assistance with another irrigation efficiency project in the same area. Finally, our relationship with Idaho Power Company resulted in a third project identified within the Pine Basin in partnership with the Wallowa-Whitman National Forest which will improve system function of Meadow Creek within the Schneider Meadows project reach.

Beaver Restoration and Mitigation: No project opportunities for beaver restoration or coexistence were identified during 2024. Before wrapping up this project in spring of 2025, there are three objectives left to complete. These objectives include hosting a final beaver workshop focused on coexistence, distributing a version of our newsletter, The Thalweg, dedicated to beavers, and mailing a brochure about beaver benefits/coexistence. In 2024, we created the beaver brochure and distributed it at events in the Burnt River Subbasin. We will adapt this brochure to be relevant to the entire Powder Basin and will distribute it to our mailing list (nearly 500 contacts) in winter/spirng of 2025. We may have enough funding to create and distribute the beaver version of the Thalweg in winter 2025, but we will likely complete this objective and our third beaver workshop during the second phase of the project which will be discussed in the next section.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.C, 1.D, 3.A.

Powder Basin Engagement Phase II

Project Background:

During fall 2024, we developed a second phase to our current engagement grant which will continue community outreach within specified focus areas throughout the Powder Basin to identify and develop restoration projects aligned with our mission (OWEB grant application 225-5024-23999). This project will also expand our current focus areas to address Eagle Creek and the "Fish the Powder" project reach along the mainstem Powder River from Mason Dam downstream to Hughes Lane.

Powder Basin Engagement Phase II will continue work outlined in the PBWC's 2022 engagement grant (OWEB 222-5049-22249) and advance restoration strategies identified during phase I of the PBWC's "Fish the Powder" project (OWEB 220-5023-17032). The goal of Phase II engagement is project development throughout the basin to support watershed function, water quality/quantity improvements, fish passage remediation, and aquatic habitat improvements. Factors limiting watershed function are common to our 4 focus areas, which include: 1. Pine

Valley portion of the Pine Creek watershed, 2. Powder River, Eagle Creek tributary, and all tributaries upstream of Jimmy Creek, 3. Burnt River and all tributaries upstream of/including Camp Creek, and 4. "Fish the Powder" reach of the Powder River from Mason Dam to Hughes Lane. Limiting factors include channel incision and reduced floodplain connectivity, lack of native stabilizing riparian vegetation, water quality impairments (temperature, nutrients, sediment), limited aquatic habitat complexity, and barriers to aquatic organism passage. Engagement with the Powder Basin community is critical for improving watershed function to mitigate climate change impacts. Observed and predicted climate impacts addressed by this project include decreased snowpack, earlier spring runoff, reduced summer flows, and increased frequency/severity of drought and wildfire. Project development includes 4 areas: 1. Beaver restoration/mitigation and stream function, 2. Irrigation system modernization, 3. Fish passage improvements, 4. Aquatic habitat improvements.

Phase I feedback regarding the novelty of beaver restoration/mitigation in Baker County means additional engagement is necessary. During phase II, we will host our 3rd and final beaver workshop dedicated to coexistence and we will adapt our approach of engaging with private landowners. To maximize opportunities for direct contacts, phase II engagement includes presentations to agricultural organizations, participating in local events hosted by the agricultural community, and providing project tours of a completed beaver restoration project (seeing is believing). Most presentations and events will take place in Focus area 2 (Powder River Subbasin) where we need additional engagement to further relationships. We will also adapt our beaver benefits narrative to better address how beavers can help build resiliency to drought and wildfire which are critical issues currently impacting our communities.

Phase II of the "Fish the Powder" project will advance restoration strategies identified during phase I of the project. To accomplish this goal, we will hire an additional full-time Watershed Restoration Coordinator in spring/summer of 2025 should this funding request prove successful. This coordinator would focus on project development along the Powder River between Mason Dam and Hughes Lane. Engagement work would occur with both public and private land managers to develop 10 project opportunities. Project opportunities would then be prioritized and advanced to the next phases which would provide additional funding to sustain the new coordinator position. Outreach activities include hosting booths at local events, coordinating meetings with relevant organizations managing the Leo Adler Memorial Parkway, coordinating with the Forest Service regarding the section of the Powder below Mason Dam, and hosting a public meeting with people originally and currently engaged with the project to discuss identified opportunities and next steps.

This Phase II Engagement grant was presented to the OWEB regional review team in December, and we anticipate a funding decision in spring of 2025.

RESTORATION OPPORTUNITY DEVELOPMENT

Sage-grouse CCAA Program

Through on-going OWEB Focused Investment Partnership (FIP) funding via the Baker Local Implementation Team (LIT), PBWC houses the Baker and Union Counties Sage-grouse

Candidate Conservation Agreement with Assurances (CCAA) Coordinator position and work. This staff position supports efforts of the State of Oregon to conserve and maintain Greater Sage-grouse populations and healthy sagebrush rangelands in central and eastern Oregon by specifically working with private landowners to enroll them in the Sage-grouse CCAA program. This position focuses on continually increasing enrollment of private landowners into the program through education and outreach, supporting existing enrollees with technical assistance and conservation project work expertise. A new CCAA Coordinator was hired in December of 2023, and began work in the position in mid-February 2024.

Since inception of the CCAA program in Oregon, 16 landowners have committed to joining the program with the intention to enroll ~101,700 acres of private land into stewardship for sage-grouse conservation in Baker and Union Counties. As of 2024, 8 of the landowners and 47,183 acres were fully enrolled with the USFWS; and eight more properties (50,537 acres) are still in progress of plan development. Specific progress of the CCAA program Coordinator position and tasks in 2024 included:

- Completion of 7 USFWS required annual reports for currently enrolled properties.
- CCAA program enrollment of 1 new property (963 ac).
- Sign-up of 2 new landowners (3,892 ac), and intent of enrollment of an additional 945 ac for 1 existing landowner plan.
- Fieldwork was conducted on 3 properties to gather necessary baseline habitat evaluations, photos, and property feature determinations to continue development of the site-specific plans for enrollment.
- Development of a "Changed Circumstance Conservation Measure" report required to be submitted to USFWS for wildfire habitat loss to 1 enrolled property (640 ac).
- Fieldwork was conducted to set-up post-fire photo and habitat point monitoring sites on 2 other properties (~5,000 ac) affected by summer wildfire loss.
- Production of post-wildfire ESR (Emergency Stabilization and Rehabilitation) GIS mapping and landowner reports (4 properties; enrolled and in process of enrollment).
- Riparian site evaluations of 8 creeks on 5 enrolled and being enrolled CCAA properties for consideration of mesic/riparian habitat restoration project viability to support sage-grouse mesic habitat uplift in Baker County, and watershed function improvement opportunities that support the goals of the Baker LIT and PBWC.

Additional work activities conducted by the CCAA Coordinator in 2024 included:

- Conducted the spring 2024 CCAA Advisory Board meeting with interagency personnel and landowner board members to update the Board on program status and obtain feedback for continued success of the CCAA program. (The fall 2024 meeting was postponed to 2025 because of lack of available member attendance).
- Presented at the OWEB Board of Directors Spring Meeting on the Baker-Union CCAA program with 2 CCAA guest landowner program stories, April 2024 (Baker City, OR).
- Attended the 2024 Oregon Rangeland Monitoring Program (virtual) and Rangeland Ecology and Management Field Course (in-person) training courses, May 2024.
- Attended the Western Association of Fish and Wildlife Agencies Biennial Sage and Columbian Sharp-tailed Grouse Workshop, August 2024 (Wenatchee, WA).
- Attended and contributed to 5 CCAA program Annual Report Working Group meetings to update CCAA Annual Reporting process to be implemented in 2024.

- Attended and contributed to 3 All-Counties CCAA Program Coordinator meetings.

2024 was another successful year for the Baker-Union CCAA program. The program continues to gain local landowner enrollment interest and continues to thrive under management by PBWC. In 2024, 4 years after coming under PBWC management, the program has demonstrated success in its community education and outreach efforts and has gained acceptance and program growth in Baker and Union Counties with PBWC. In 2024, the CCAA staff position also increased its collaboration with the whole of PBWC staff work, and the objectives and mission of PBWC, functioning as an upland component of watershed health with PBWC. The CCAA Coordinator role and grant funding source (OWEB FIP) has also shifted to be more of a technical assistance perspective and function of duties in 2024; and in the future will be more focused on prioritizing continued development and enrollment of the current landowner properties already signed on for the Sage-grouse CCAA program, and continued conservation work that achieves the goals of the Sage-grouse CCAA program and PBWC. Continued community outreach and education will continue as a second priority. An additional half-time staff position is also expected to join the CCAA Coordinator role to successfully accomplish the workload of the CCAA program in 2025.

PBWC Strategic Plan strategies addressed: 2.A, 2.B, 2.C and 2.D; 3.A and 3.F; 4.B, 4.C, 4.F; 6.B

Designing for Beaver in the North Fork Burnt River Basin

Project Background:

The PBWC has established a working partnership with the WWNF, Whitman Ranger District whereby the PBWC assists the WWNF in accomplishing its natural resource goals and objectives by bringing additional expertise and funding to implement projects on WWNF lands. The current emphasis of the partnership is implementing actions in the North Fork Burnt River watershed to facilitate beaver recolonization and overall ecosystem resiliency. The Camp Creek Ecosystem Resiliency Project is the first of these projects with planning underway for another project on Trout Creek to begin implementation in 2024. In addition to these streams, there are numerous miles of stream in the watershed that are potentially sites for low-tech process-based restoration (LTPBR). A Beaver Restoration Assessment Tool (BRAT) assessment of the Burnt River watershed report (Macfarlane et al. 2019) provides PBWC with strong guidance on where to implement LTPBR. The proposed project will assess, design and complete all needed permitting and environmental compliance work on six streams in the North Fork Burnt River watershed including upper Trout Creek, Alder Creek, Gimlet Creek, Dry Creek, China Creek and California Gulch. Segments of these streams to be assessed will total approximately 13 miles. Assessment work will include aquatic/vegetation inventories, digital mapping, on-site field visits to determine appropriate project approach for each stream, table-top exercises to determine initial LTPBR restoration structure locations, field visits to ground truth structure layout, coordination with WWNF range staff to develop actions to address ungulate grazing (where needed), waterway alteration permitting and National Environmental Policy Act compliance. The result will be implementation-ready projects. WWNF staff will participate in the assessment/design and complete NEPA/Heritage. OWEB funds will support PBWC staff to complete the work.

The project as described above is a direct response to our failed spring 2023 application to OWEB to fund the Trout Creek Ecosystem Resiliency project. The spring application was not funded as a design layout was not in-place. We hoped OWEB would fund the project prior to completion of the design. However, the Region 5 Review Team did not support this approach. Thus, we submitted the Designing for Beaver application to secure funding for LTPBR project design development in the North Fork Burnt River, to front-load the development process and avoid the need to individually fund project development for each site.

2024 Updates and Implementation Timeline:

As anticipated, this project was awarded funding by OWEB in the spring of 2024 (grant number 224-5020-23252). At the time funding was awarded, PBWC staff were engaged in the action planning process and preparing for a busy field season where we planned to implement both the Camp and Trout Creek low-tech process-based restoration projects simultaneously. Due to limited capacity, the work associated with this Technical Assistance grant will not begin until early 2025. Our first step in implementing the project will be coordinating with our Forest Service partners to develop a letter of support for the project from the new District Ranger. We will then begin project design on Dry and Gimlet Creeks (if appropriate) spring 2025 as the Forest Service is already working through environmental compliances and permitting requirements in these areas. We plan to conduct AQI surveys of prioritized streams in 2025 for those streams that the Forest Service does not have current inventory data. Once project designs are complete, we will begin applying for OWEB implementation funding in 2026.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.D, 1.E, 2.A, 2.B, 3.C, 3.E

Powder Basin Watershed Action Planning

Project Background:

A long-term goal of the PBWC, fall of 2022 we received an OWEB (grant number 222-5041-22257) to fund a refresh of the Strategic Plan and development of a Watershed Restoration Action Plan with specific focus areas within our geographic scope (Brownlee, Powder and Burnt River Subbasins). While we currently have a Strategic Plan that guides overall operations, this plan lacks specific focus with respect to geography, limiting factor, action type or community need. The PBWC's geographic scope is quite large (1,603 square miles). In consideration of our foreseeable operational capacity, effectively developing and implementing actions over such a wide geography, without focus, limits our ability to achieve demonstrable results meeting specified watershed/community needs. We would like our future actions to move from being opportunity-based to strategic, with geographic and action-type focus. To accomplish this, we hired a Watershed Restoration Coordinator in 2022 to lead the PBWC in a planning and community engagement process resulting in a watershed restoration action plan in support of our Mission. In development of the Action Plan, we will give specific consideration to the following: 1) geographies with documented watershed needs, 2) action types with demonstrated effectiveness for the identified watershed need, 3) actions located where probability of meeting restoration objectives is high, 4) sensitive fish and wildlife species needs, 5) biological and

landscape resiliency to climate change, 6) connection between community vitality and health of natural resources, 6) needs of underserved communities and people groups, and 7) available partnerships. We have developed a list of 25 individuals, organizations, and agencies to engage in this process and we expect the scope of engagement to broaden.

The Watershed Restoration Coordinator, Madison O'Bryant, joined the PBWC in January of 2023 to implement the Strategic Action Planning objectives and community outreach described above. Work began during the winter and spring of 2023 with review of relevant watershed assessments/plans and meeting with key partners to formulate the foundation for the "Strategic Plan Refresh" process. The goal of this process was updating the current Strategic Plan to be representative of various interests, community concerns, current and future PBWC work, and current environmental needs. The Watershed Restoration Coordinator used the contact list developed by PBWC staff to engage with various agencies, members of the community, and PBWC board members to raise awareness of the planning process and to officially invite participants. Several participants also committed volunteer hours as in-kind match for the project which is critical to achieving project goals.

2023 Implementation (Strategic Plan Refresh):

Three Strategic Plan Refresh meetings were held in Baker City with PBWC staff, PBWC Board of Directors, various agencies, and members of the community. Each meeting averaged 20 participants, with many individuals participating in all three meetings. Meeting topics addressed a list of objectives detailed by the PBWC Board of Directors in 2022 to help organize the planning process. During the first meeting, the Watershed Restoration Coordinator presented the PBWC's accomplishments from the operational period of the existing Strategic Plan (2018-2022) and facilitated a discussion regarding the relevancy of these accomplishments to achieving PBWC goals. This meeting helped identify community concerns, strengths/weaknesses of past PBWC actions, and future opportunities for improving actions to accomplish organizational goals. Notes from this meeting directed the 2nd Refresh meeting where participants provided feedback on updating 2018-2022 goals and strategies. This meeting highlighted opportunities to expand and/or condense existing goals and strategies to advance the PBWC's Vision and Mission more effectively during 2023-2027. Finally, the 3rd Strategic Plan Refresh meeting addressed updates to the basin and subbasin descriptions in the existing plan. While many of the limiting factors impacting the basin remained the same, the Watershed Restoration Coordinator presented updated information on impaired water bodies throughout the Powder Basin, information regarding the upcoming Total Maximum Daily Load (TMDL) for bacteria (E. coli), and information on current climate predictions for the state of Oregon. Participants then discussed expanding or condensing the existing impairments and recommendations for each subbasin described in the 2018-2022 Strategic Plan. Ultimately, feedback from participants given during each Refresh meeting and reviews of draft planning documents were imperative for accomplishing our Strategic Plan update during 2023 and for developing a document which provides a solid foundation for future Action Planning endeavors. The updated 2023-2027 Strategic Plan provides readers an overview of the Powder Basin, updated impairments/recommendations for each subbasin, updated goals and strategies for accomplishing the PBWC's vision and mission, and various resources throughout the document for people

interested in learning more about their watershed. To view the PBWC's 2023-2027 Strategic Plan, please visit our website at https://www.powderbasinwatershedcouncil.org/.

2023 Implementation (Action Plan Development):

Action Plan development began in late November of 2023 and continued throughout the winter and spring of 2024. The goal of the Action Plan is to create a 10-year framework for future PBWC work which details geographic focus areas for each subbasin and potential restoration actions to address limiting factors. There are two teams involved in the creation of the Action Plan including a Technical Team of local natural resources experts and a Stakeholder Group. The Technical Team is responsible for reviewing current watershed plans and assessments for the three subbasins encompassed by the Powder Basin and for providing recommendations regarding the prioritization of geographic focus areas and potential restoration actions. The Watershed Restoration Coordinator presents Technical Team recommendations to the Stakeholder Group who provide feedback on what to include in the final Action Plan. The planning process will progress by addressing each subbasin individually. In February 2024 we will host a Stakeholder Engagement meeting in Hereford, Oregon, with members of the Burnt River community. We anticipate beginning planning endeavors for the Powder River Subbasin in March and then progressing to the Brownless Subbasin in April and May.

2024 Implementation (Action Plan Development):

All action planning meetings for the Powder Basin were completed during the winter and spring of 2024. As soon as meetings were complete, PBWC staff transitioned to fulltime project implementation. PBWC capacity was limited due to implementation and engagement work during the summer and early fall, meaning development and review of the Action Plan was pushed to winter 2025. During the first meetings regarding the Burnt River Subbasin, feedback from the Technical Team and the Stakeholder Group was used to develop a prioritization matrix for determining geographic focus areas and potentially prioritizing future projects. The prioritization matrix incorporates several of the specific considerations detailed in the original Technical Assistance (TA) grant for the planning process. Parameters most heavily weighed are current ecological condition (function, functioning at risk, impaired) and restoration potential (depositional valley vs. high gradient reaches). Other parameters include partnership potential, potential to further current PBWC work, community importance and feasibility, and importance of area for ESA listed species and/or species of concern. Five geographies were prioritized for the Burnt River Subbasin, 15 geographies were prioritized for the Powder River Subbasin, and 5 geographies were prioritized for the Brownlee Subbasin. Prioritized geographies will be broken up in the Action Plan by hydrologic unit codes and specific water bodies if appropriate. Limiting factors will be detailed for each prioritized geography and actions to address limiting factors will also be listed. Initial actions will include recommendations from PBWC staff and specific projects already outlined for prioritized areas. Finally, the Action Plan will include a timeline of future actions which will function as the PBWC's roadmap for future restoration work. A complete draft of the Action Plan will be circulated for comment to both the Technical Team and Stakeholder Group in early 2025. A final draft will be adopted in late winter/early spring of 2025, with completion planned by the end of May 2025.

PBWC Strategic Plan strategies addressed: 5.C.

Uplifting Anthony Creek for Sensitive Trout and Beaver

Background:

Resulting from our work monitoring water quality on the ODFW Elkhorn Wildlife Area elk feeding sites on the North Powder River and Anthony Creek, the wildlife area manager asked the PBWC to develop habitat restoration projects on both sites. In 2022, we agreed to first develop restoration designs for the Anthony Creek site.

Through Summer and Fall 2022 we worked with ODFW to develop a project approach and submitted an application to OWEB in October to fund alternatives assessment and design. The project was funded May of 2023 (OWEB grant number 223-5018-22501).

The project is located on a 1.5-mile reach of Anthony Creek, a tributary to the North Powder River within the ODFW Elkhorn Wildlife Area. Anthony Creek is occupied by several species of trout including native Bull Trout and Columbia Basin redband trout and non-native Brook Trout. The project reach is primarily utilized by redband trout and Brook Trout and Bull Trout are documented to occupy Anthony Creek approximately two miles upstream from the project site. It is likely beaver occupied the reach historically, but their presence is not currently evident. Implementation of this project has potential to extend Bull Trout occupancy downstream to the project reach, which will be a focus of the design. Documented water quality impairments include 303 (d) listings for temperature and *E. coli* bacteria in summer months. Habitat impairments for native trout include lack of instream habitat quantity and diversity and impaired fish passage. The project will address water quality and aquatic habitat deficiencies in Anthony Creek by designing actions to improve livestock grazing management and in-channel restoration actions to: reconnect the incised stream with the historic floodplain; increase the number of quality pools; increase the loading of large wood material in the channel and encourage beaver recolonization. We will expand the existing riparian buffer fence, based the designed project footprint. We will assess opportunities for accomplishing our goals and objectives through collection of geomorphic/hydrologic/habitat data, development/assessment of alternatives, selection of preferred alternative(s) and design of the preferred alternative for accomplishing project objectives. ODFW has committed to both in-kind and cash support of the project.

2023 Implementation:

We implemented a competitive Request for Proposal (RFP) process to hire an engineering/design firm to develop restoration designs. In June we contracted with RivHab Engineering Design out of Boise, Idaho to develop project designs. 2023 accomplishments include PBWC collection of aquatic inventory data for the project reach, RivHab collection of field data to support project design, RivHab development of 15% conceptual design alternatives and selection of the preferred alternative by the project review team (PBWC, ODFW and USFWS). The preferred design approach includes large wood placements, channel fill associated with large wood placements, opening of historic channel outlets, construction of beaver dam analogs (BDAs) and beaver suitable ponds along side-channels, and moving of the elk feeding site infrastructure (hay

shed) out of the active floodplain. Completion of 30% designs are expected February 2024, with final design completion on schedule for July 2024.

2024 Implementation:

The 90% design package was completed Fall of 2024. Once the design was completed, we met with ODFW to determine project schedule and have an initial discussion on sourcing funds for construction. We decided that construction would take place over two years, 2026 and 2027. The low-tech, process-based restoration work (BDAs) will occur summer of 2026 with the channel fill and large wood placements occurring in 2027.

We planned on having funds within the OWEB TA grant to complete permitting, cultural resources and Bull Trout consultation, however all the funds were used to complete the design and cultural resources work. As a result, Fall of 2024, we applied for another OWEB TA grant to fund permitting and Bull Trout consultation. The grant has been recommended for funding by the OWEB Region 5 Review Team, so we anticipate permitting and consultation work will proceed spring of 2025.

In 2025 we will work with ODFW to develop a funding plan for project implementation and seek funding.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.C, 1.D, 1.E, 3.C

Over the Log Weir and Through the Culvert: Camp Creek Aquatic Organism Passage Phase I

Project Background:

During the fall of 2023, PBWC staff and the Wallowa-Whitman National Forest began developing a partnership project to address three structures on Camp Creek which currently impede aquatic organism passage. Phase 1 of this project will address the first culvert at the downstream end of the project reach and will remediate the passage barrier created by a log weir. A future phase of this project will address the second culvert at the upstream end of the project reach.

Phase 1 of "Over the Log Weir and Through the Culvert" will address two structures impeding aquatic organism passage and limiting watershed function along Camp Creek in Baker County, Oregon, approximately 7.5-miles west of the city of Sumpter. Camp Creek, a major tributary to the North Fork Burnt River (NFBR), is a perennial stream system which flows through the Wallowa-Whitman National Forest before entering private agricultural lands downstream. Both the NFBR and Camp Creek watersheds provide important habitat for several state and federal focus species including Columbia Basin redband trout, Columbia spotted frogs, and beavers. Throughout the Camp Creek watershed, current and historic land use practices limit watershed function and the availability of quality, connected, habitat to sustain resilient populations of focus species. This project will improve watershed function, increase system resiliency to

climate change, and expand access to 16.2-miles of quality aquatic habitat throughout the Camp Creek watershed.

Figure 7: Log weir limits fish passage on Camp Creek.

To accomplish this goal, we will first address Culvert 1 at the beginning of the project reach which is both perched, undersized, and creates a 2' step blocking fish passage. This culvert disrupts natural stream function by limiting sediment/woody debris transport and concentrating stream flows. Lack of substrate and woody debris transport limits downstream aquatic habitat complexity and channel aggradation while concentrated flows contribute to head-cut formation and vertical channel erosion. A single-radius arch culvert with precast concrete footings is the preferred design method for replacing existing infrastructure. This solution is an open-bottom culvert which meets state fish passage criteria of stream simulation. Stream simulation is the process of emulating natural channel features and function throughout a road crossing structure to prevent impacts to aquatic organism passage and altered stream function. Natural channel structure eliminates gradient steps, creates complex flow/pool diversity to benefit various aquatic species, promotes sediment/wood transport, and prevents the acceleration or restriction of stream flow.

The 2nd structure we will address occurs near the top of the project reach. This perched log weir is part of a historic restoration project to prevent upstream migration of an active head-cut. While the log weir successfully arrested erosion, the channel below the structure remains incised, disconnected from the floodplain, and the log weir creates a 3.5' step preventing fish passage. Our preferred design method is restoration of the channel below the weir using fill and wood placements. Fill and wood placements will eliminate the passage barrier, improve floodplain connection, improve aquatic habitat complexity, and increase natural stream function.

Funding support for this project is by a grant from OWEB (grant number 224-5034-23626).

2024 Funding Award and Implementation Timeline:

During winter 2023, we made an initial funding request for the work associated with this project to ODFW through their new Private Forest Accord (PFA) grant program. Unfortunately, our funding request was unsuccessful. In spring 2024, we applied for funding through OWEB's 2024 spring open solicitation cycle and our application was successful, ranking 1 out of 15 for restoration grants. Funding for the project was awarded in late October of 2024. 90% designs have been developed by the Wallowa-Whitman National Forest as in-kind match for the project. We are currently coordinating with the forest to complete all required permitting. We will hire a contractor to complete the work associated with the culvert winter/spring of 2025 and we anticipate the culvert replacement will be implemented during the fall of 2025. Log weir remediation will be implemented during summer 2026. If the Whitman Ranger District cannot install the log weir as part of their in-kind match as anticipated, we will submit an additional funding request for this work in 2025 through the Oregon Conservation and Recreation Fund. PBWC Strategic Plan strategies addressed: 1.A, 3.C.

Love Reservoir Mesic Restoration for Ritter Creek Phase I

Project Background:

This project is an exciting partnership effort between the PBWC and the Baker County LIT to improve mesic habitat for Sage-grouse within the Baker Priority Area for Conservation (PAC). Sage-grouse hens and chicks rely on mesic habitats including wetlands, riparian areas, wet meadows etc., during late summer months for abundant forage and concealment. With climate change, we anticipate an increased frequency and severity of drought due to warming temperatures and declining snowpack. Sage-grouse will be particularly vulnerable to these events meaning mesic habitat restoration and expansion is critical for improving reproductive success and increasing resiliency to drought and climate change.

The Baker LIT and associated partners completed a prioritization exercise to guide mesic habitat restoration project development. Two prioritized mesic areas were visited by the Baker LIT and the PBWC in late summer of 2023 before selecting Ritter Creek for future implementation efforts. Ritter Creek is a degraded system which is limited by channel incision, active head-cutting, lack of native stabilizing riparian vegetation, and lack of floodplain connection. These issues are exacerbated by an undersized culvert upstream of the project reach which likely concentrates flows throughout the system and limits natural stream function. During the fall of 2023, the PBWC Watershed Restoration Coordinator and the Baker Sage-Grouse LIT Coordinator developed a Technical Assistance grant application for Ritter Creek to pursue funding to hire a qualified consultant or engineer to develop 90% designs for instream restoration work and a culvert replacement. Designs will address improving natural stream function, increasing channel aggradation, floodplain expansion/reconnection, increasing the residence time of water within the system, and improving water table elevation to support abundant riparian vegetation. Ultimately, we would like to use low-tech process-based restoration to accomplish our goals, but more invasive techniques may be necessary due to the extent of channel incision. The engineer or qualified consultant hired in 2024 will be responsible for developing three

alternate designs which detail solutions ranging from light to more invasive applications. The preferred design will be selected from presented alternatives by a Mesic Restoration Design Team comprised of PBWC Staff, the Baker LIT Coordinator/associated partners, the landowner, and other relevant individuals. This Technical Assistance grant was funded by OWEB in winter of 2024. Project implementation will begin spring of 2024 with contractor bid tours and solicitation, assembling a Mesic Restoration Design Team to provide feedback throughout the design process, and outreach efforts with downstream water users to discuss project benefits/concerns.

Figure 8: Active head-cut migration on Ritter Creek.

2024 Implementation:

Implementation of this project began in spring of 2024 through a request for proposals which was distributed to multiple qualified engineering firms in Oregon and Idaho. Both RivHab Engineering and Resource Specialists Inc. (RSI) participated in the project bid tour and submitted project proposals. PBWC staff (including the CCAA Coordinator) reviewed and scored the proposals. RSI was ranked highest and was selected for the contract. To date, we have completed the onsite kick-off meeting which included the initial meeting between RSI and the landowner, initial feedback on project components from the Mesic Restoration Design Team, and RSI has collected all necessary data to begin design development. In November 2024 we hosted an alternatives analysis meeting where RSI presented three different restoration solutions to the landowner and design team. During this meeting, we determined an approach which combines both low-tech and engineered restoration techniques as the most appropriate for

accomplishing our objectives. 30% designs for instream restoration will reflect low-tech post structures in the downstream section of the project reach, channel fill at the most active head-cut upstream, a constructed riffle upstream of the channel fill section, no instream work in the reach near the homestead due to concerns regarding heritage impacts, and low-tech post structures/channel fill in the section upstream of the homestead encompassing the final head-cut. 30% designs will be completed in January, 2025 and presented to the design team for comment in February. Heritage surveys will be completed in April or May, 2025 as soon as roads are passable. The culvert was advanced immediately to 90% design, and we will complete our fish passage application for this project objective winter 2025. We will apply for implementation funding fall 2025 during the last cycle of the FIP. Design costs and permitting work for this project were more extensive than originally anticipated, and we submitted a second Technical Assistance grant to OWEB during the fall of 2024 for funding to complete all necessary permitting requirements and environmental clearances. Please see Love Reservoir Mesic Restoration for Ritter Creek: Phase II below for information.

Funding for this project is provided by OWEB (grant number 224-8206-23393) through the Sage-grouse Focused Investment Partnership (FIP).

PBWC Strategic Plan strategies addressed: 1.D, 2.D.

Love Reservoir Mesic Restoration for Ritter Creek Phase II

Project Background:

Completing necessary cultural resources surveys, permitting requirements, and obtaining environmental clearances is imperative for finalizing project designs in 2025 and preparing for project implementation in 2026. We are currently working with a qualified engineering firm, Resource Specialists Inc., to complete 90% designs for the culvert replacement and instream restoration work on Ritter Creek to address limiting factors. Developing 90% designs encompasses phase I of this restoration project (OWEB 224-8206) which we will complete in fall of 2025. Obtaining environmental clearances is phase II (2025 through early 2026) and project implementation is phase III (summer 2026).

As we select our preferred instream restoration alternative and advance our project design in winter/spring of 2025, cultural resources investigations will be necessary for identifying areas of interest. Areas of interest will inform final project designs (locations of potential cut zones) and our implementation strategy (staging areas, equipment movement, etc.). We will hire a qualified archaeologist to conduct site investigations, develop technical reports, and to assist with report submittal to the State Historic Preservation Office (SHPO). After SHPO and tribal review, the contracted archaeologist will also conduct additional site investigations if necessary.

After conducting cultural resources investigations and advancing to the 60% design phase, we will coordinate with the ODFW District Fish Biologist and Fish Passage Coordinator to identify the correct pathway for obtaining fish passage approval. Depending on our preferred instream restoration alternative, two applications may be necessary to address varying instream restoration techniques.

Once 90% designs are complete, we will apply for a removal-fill permit with the Department of State Lands (DSL) and the US Army Corps of Engineers. We will coordinate with local US Fish and Wildlife staff to complete a nationwide 27 permit to address Army Corps requirements, which will also address 404 Clean Water Act permitting. We will hire a qualified wetland consultant to guide us through the state permitting process with DSL and the 401 Water Quality Certification process with the Department Environmental Quality. Removal-fill permitting is complex and there are various pathways for completing the application and obtaining environmental clearances. Hiring a wetland specialist will ensure our application is completed correctly and processed efficiently. This will prevent any delays in project implementation. Ninety percent designs and the Wetland Characterization Map developed by the engineer will be submitted alongside both federal and state applications to support permitting requirements. If necessary, we will also submit a full wetland delineation completed in partnership with the engineer and hired wetland consultant.

Ninety percent designs and a No-Rise Certification Memo completed by the engineer will be used to apply for land use permits through Baker County. Permits will include a floodplain development application and a right-of-way development application for the culvert replacement.

2025 Funding Award and Implementation Timeline:

Costs for design and permitting work for the Ritter Creek project were more extensive than anticipated in our original application. Cost for cultural resources investigations has increased significantly due to lack of capacity statewide. To ensure we are implementation ready in summer 2026, we submitted another technical assistance application through the Baker sage-grouse Focused Investment Partnership (FIP) for this project during the fall of 2024 to secure funding for all permitting requirements. The application was reviewed and approved by both the Baker Local Implementation Team (LIT) and OWEB Technical Review Team in fall 2024. We anticipate receiving a grant agreement for this funding in February 2025. We will complete all permitting and environmental compliances in 2025 and early 2026.

Funding for this project is provided by OWEB (grant number 224-8206-24082) through the Sage grouse Focused Investment Partnership (FIP).

PBWC Strategic Plan strategies addressed: 1.D, 2.D.

Keeping it Cold at Schneider Meadows

The PBWC is working in partnership with the Idaho Power Company (IPC), WWNF and RivHab Engineering Design to develop a restoration project on a 2/3-mile reach of Meadow Creek (tributary to Clear Creek in the Pine Creek Basin) within Schneider Meadows. Schneider Meadows is a critical source of cold streamflow within spawning and rearing habitat for ESA Threatened Bull Trout. The IPC is funding design and permitting work by RivHab to develop a project intended to restore degraded conditions of the meadows in support of Bull Trout per forthcoming requirements under the Federal Energy Regulatory Commission Hydroelectric Relicensing for IPC's Hells Canyon Complex on the Snake River. The project design is

competed to the 90% phase and employes low-tech process-based restoration techniques, and strategic channel fill to reconnect the incised Meadow Creek channel with the historic flooplain/meadow.

Initial Funding for Phase I of the project (implementation of low-tech process-based restoration over the lower half of the project site) has been secured from the Idaho Power Company and WWNF. Fall of 2024 we applied to OWEB for funds to implement Phase II of the project (Stage 0 restoration), but the project was not recommended for funding by the OWEB Region 5 Review Team. We plan to reapply for OWEB funding winter of 2025. Meanwhile we will work with partners to secure removal-fill permitting for both phases of the project. We want to have removal-fill permits in place when we reapply for Phase II OWEB funding.

With Phase I funding secured, we plan to proceed with implementation of Phase I summer of 2025.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.D, 2.B, 3.E

Fish the Powder Restoration Initiative

Project background:

The concept for the Fish the Powder project started in early 2019 when a passionate Baker City resident approached the PBWC with hopes to improve the Powder River's fishery. The idea gained momentum and the PBWC gained support from numerous agencies including ODFW, WWNF, Trout Unlimited, and the city staff of Baker City. To improve the Powder River fishery, the PBWC must first understand the current conditions. To accomplish this task the PBWC decided to pursue an aquatic habitat inventory.

To determine public interest in the project, The PBWC sent letters to all 199 landowners in the reach and received positive responses from 59 of them. A public meeting was also held to share the project with the public and scope public interest.

In the fall of 2019, the PBWC secured OWEB funding for the fish habitat survey.
ODFW, under contract with the PBWC conducted the habitat inventory work in September 2020. ODFW provided the survey data and report, December of 2021. Of the 199 properties in the eight-mile project reach, we received permission to conduct habitat inventory on 36 of these properties totaling 6.8 miles of stream (2.94 miles private ownership and 3.9 miles public ownership).

In 2022, a Technical Team of natural resource experts reviewed the survey data and assembled recommendations for accomplishing the goal of making fishing better including:

1. Complete PBWC watershed restoration action planning process to determine relative restoration priority/need of the Hughes Ln. to Mason Dam reach of the Powder River.
2. As opportunities are assessed/developed to address fishery limiting factors described below, pursue opportunities to improve public access for fishing/recreation.

3. Inventory Points of Diversion (POD's) within reach and develop prioritized list of screening and passage improvements. Based on this, seek opportunities to address screening and passage at priority sites.
4. Assess opportunities to improve instream habitat on private properties within the "canyon reach".
5. Develop opportunities to improve stream/floodplain function, aquatic habitat diversity and public access on the WWNF.
6. Assess opportunities to improve pools associated with existing weirs within Baker City.
7. Implement public awareness campaign regarding benefits of riparian vegetation.

Technical Team members included Tim Bailey, PBWC Executive Director (retired ODFW District Fish Biologist); Sarah Brandy, Aquatics Program Leader, WWNF; Will Glenn, District Fish Biologist, WWNF; Bob Hassmiller, District Hydrologist, WWNF; Joe Lemanski, District Fish Biologist, ODFW; and Levi Old, Trout Unlimited Northeast Oregon Restoration Director.

A public meeting has held in March 2022, to present the Technical Team findings and receive public input. The OWEB grant to complete the habitat survey and develop a restoration strategy (above), has been completed and closed-out. Based on the outcome of PBWC's watershed restoration planning process, the PBWC will re-engage with project stakeholders and develop a plan to seek funding to continue work on this initiative.

2024 Updates:

The restoration strategies identified by the Technical Team during the first phase of this project will be carried forward in a second phase focused on community engagement and project development. During the fall 2024 OWEB open-solicitation grant cycle, we submitted an engagement grant which included objectives for Phase II of the "Fish the Powder" initative. This request would provide funding to hire another full-time Watershed Restoration Coordinator who would focus on developing project opportunities specifically within the "Fish the Powder" project reach which encompasses the Powder River from Mason Dam to Hughes Lane in Baker City. Engagement work would occur with both public and private land managers to develop 10 project opportunities. Project opportunities would then be prioritized and advanced to the next phases which would provide additional funding to sustain the new coordinator position. Outreach activities include hosting booths at local events, coordinating meetings with relevant organizations managing the Leo Adler Memorial Parkway, coordinating with the Forest Service regarding the section of the Powder below Mason Dam, and hosting a public meeting with people originally and currently engaged with the project to discuss identified opportunities and next steps. The Phase II Engagement grant was presented to the OWEB regional review team in December. A funding decision will be made early spring of 2025.

Original funding for Phase I of the project was provided by OWEB (Grant number 220-5023-17032).

PBWC Strategic Plan strategies addressed: 1.A, 1.E, 3.A, 3.B, 3.C, 3.E, 4.B, 4.D

RESTORATION ACTION IMPLEMENTATION

Camp Creek Ecosystem Resiliency

Project Background:

This project is on Camp Creek in the North Fork Burnt River (NFBR) watershed, approximately 45 miles southwest of Baker City, north of Whitney Valley on lands administered by the WWNF. Watershed issues being addressed are: 1) degraded groundwater recharge and water storage functions, 2) limited water table maintenance supporting narrower riparian vegetation communities, 3) limited zones for water quality filtering, and 4) excessive bank erosion resulting in streambeds with abundant fine silts. Throughout the 2.5-mile project reach the creek is incised, not connected with its broad historic floodplain, and beaver are not present. The result is a stream with a current riparian vegetation community consisting of sagebrush and/or lodgepole pine, instead of multiple species of willow, simplified aquatic habitat and one that is more efficient at routing water out of the system. Both Camp Creek and the NFBR experience low summer base flows and water temperatures that exceed state water quality standards (303 d water quality impaired for water temperature). The project involves utilizing low-tech process-based restoration techniques (beaver dam analogues – BDAs) to reconnect Camp Creek with its historic floodplain and facilitate restoration of the native willow community by fencing to exclude ungulates from six protection areas averaging 0.80 acres in size. This is a collaborative project between the PBWC, ODFW, and the WWNF. The project is supported by funding from the OWEB, the ODFW Conservation and Recreation Fund, Roundhouse Foundation and Wallowa Whitman National Forest.

2021-2022 Updates:

In 2021 and early 2022, the PBWC applied for and received project funding from OWEB and the Oregon Conservation and Recreation Fund. The Wallowa Whitman National Forest also provided funding for the project. Implementation was delayed in 2022 to complete the National Environmental Policy Act process for the project as well as develop and implement an agreement between the project partners, PBWC and WWNF. Both activities have been completed. In 2022, we utilized the Baker Resources Coalition student intern crew to collect pre-implementation monitoring data including valley wide transects measuring surface elevation, vegetation, and wood as well as aquatic features. The entire reach was surveyed using the ODFW Aquatic Inventory “wood” methodology to document the density and volume of wood within the channel.

2023 Implementation:

Project implementation began the summer of 2023 with the Construction of 51 beaver Dam analogs (BDAs) and directional felling of 116 conifer trees (primarily Lodgepole Pine). BDA construction was completed by four youth/young-adult crews with direction and oversight by PBWC staff. Work crews included: 1) a five-person young adult crew with the Northwest Youth Corps that worked on the project for three weeks in June and July harvesting post materials from

the project area for BDAs and constructing BDAs; 2) a high school intern crew (four Baker High School interns and one young adult crew chief) with the Baker Resources Coalition that spent two weeks on the project in July constructing BDAs; 3) an Oregon Youth Corps crew employed through the Training and Employment Consortium, comprised of 4-6 local high school-aged youth and an adult crew chief, worked on the project for five weeks in July and August building BDAs; and a seven-person young adult volunteer crew from the Baker Technical Institute that spent approximately two weeks on the project in July and August building BDAs. These crews constructed 48 of the 51 structures completed in 2023. The remaining three structures were completed by volunteers as part of PBWC's "Beaver Dam Barbecue", a workshop to educate landowners and the public about the watershed benefits of beavers. Directional conifer felling was completed by qualified PBWC staff. Construction of 1 BDA started during the "Beaver Dam BBQ" was completed by Baker High School students who attended a field day on Camp Creek in October of 2023 hosted in partnership with the Wallowa-Whitman National Forest. Beyond constructing BDAs, students also participated in several other stations during the 2023 field day where they learned about water quality monitoring, upland vegetation encroachment into the riparian zone, songbirds, macroinvertebrate sampling, stream channel morphology, and rewilding.

2024 Implementation:

Project implementation was completed during the fall of 2024. Four youth crews comprised of local high school students worked on the project during the summer of 2024 installing the remaining 23 beaver dam analogues, 5 post assisted log structures, and constructing 6 buck-n-pole fencing exclosures totaling 4,871-feet and 5.21-acres. A college-aged seasonal technician was hired for the summer to help oversee youth crews, help with implementation, and to assist with various monitoring activities.

2024 youth engagement with the project began with 2 youth crews through the Training and Employment Consortium (TEC) totaling 8 kids and 1 adult crew lead who were engaged with the project for nearly a month and a half. Both TEC crews completed a significant portion of the remaining work on the project through their efforts building temporary bridges, distributing fencing materials, constructing buck-n-pole fencing exclosures, driving posts/weaving materials for BDAs, and moving felled trees into the channel for post assisted log structures (PALS). One member of the TEC crew was also involved with the group during implementation in 2023, and it was interesting to hear their insights on how the project has changed a year later. The Baker Resources Coalition (BRC) was engaged with the project for the third year in a row with their 2024 summer internship crew totaling 4 kids and 1 young adult Crew Chief. 2024 BRC interns participated in the project for 2-weeks and helped distribute fencing materials, construct buck-n-pole fencing exclosures, and participated in driving posts/weaving materials for BDAs. The final youth crew engaged with the project was the Beef Northwest 2024 summer internship crew. This crew was also comprised of local high school students and 5 interns and 1 young adult crew lead assisted with the Camp Creek project for a week. The Beef Northwest interns wove materials for almost all BDAs in the lower project reach and added additional weave to BDAs in both the upper and lower reaches where necessary. PBWC staff returned to the project site later in the fall to directionally fell trees, build fence gates, and to construct a postless BDA for comparison to our standard BDA construction method.

Figure 9: BRC 2024 summer interns pose with the post-driver.

2024 Volunteer Events:

PBWC staff hosted 2 volunteer events to complete the remaining work on Camp Creek in 2024 which also provided an educational opportunity for the community to learn more about watershed restoration, Camp Creek project objectives, and why beavers are important ecosystem engineers. After youth crews staged fencing materials in June, PBWC staff hosted a "Buck-n-Pole BBQ" where 9 volunteers participated in constructing exclosure fencing within the meadow portion of Camp Creek. Volunteers learned about protecting existing riparian vegetation from browse and how we anticipate willow density to increase over time. Our 2nd annual "Beaver Dam BBQ" was hosted in September of 2024 and 9 volunteers helped construct three of the remaining BDAs on Camp Creek. Volunteers learned about how historic land use practices have influenced Camp Creek and why emulating beaver activity can help restore system function.

Observations:

Within both reach 1 and 2 of Camp Creek, we installed seventy-four beaver dam analog structures, 5 post assisted log structures, felled hundreds of trees, and constructed 6 fencing exclosures totaling nearly a mile of fence protecting over 5-acres of riparian habitat. Beavers are active in the lower project reach and there is evidence they are maintaining one of the BDAs. A beaver sign survey in late summer 2024 demonstrated most current and past activity is centered in the lower project reach, but historic activity is present in both reaches and in the dredge tailing ponds near Pinus Creek. A graduate student with Utah State University volunteered to take drone imagery of the project during both high flows and base flows in 2024 and will repeat flights in 2025. Drone imagery will be used to observe how the system has changed over time post project implementation.

PBWC Strategic Plan strategies addressed: 1.A., 1.B, 1.D, 2.A, 2.B, 3.B, 3.C, 3.D, 3.E, 4.A, 4.B, 4.C, 6.D

Figure 10: 2024 Beaver Dam BBQ participants construct BDA.

Cusick Creek Restoration Phase II: The Restoration Continues

Project Background:

Cusick Creek is located approximately 30 miles North of Baker City and 10 miles East of North Powder. The Cusick Creek watershed drains approximately 14 square miles and flows into Thief Valley Reservoir on the Powder River. The upper reach (Phase II: ~6,000 feet of stream length) of Cusick Creek is confined to a moderately narrow canyon and due to past land management practices has become more incised with moderate to severe bank erosion. Fish habitat and the properly functioning of the stream have been greatly compromised in these reaches. The lower reach (Phase I) has been restored to a functioning stream. Project elements include: pull the banks back at 11 locations to a stable 3:1 ratio; protect the toe of pulled back banks with 27 whole tree logs, 31 (3'x3'x3') ballast rocks and 200 willow clump plantings behind the revetments/rootwads; re-direct the thalweg away from vulnerable banks; install 17 vertical post structures (VPS) J-hooks; install 22 rootwads; increase flood plain capture/create new wet meadow habitat; install 28 VPS structures to slow water and spread it out onto the flood plain, capture fine sediments and enable it to be deposited on the flood plain; remove 1,300 feet of road that is impinging on the flood plain; re-locate the road to an uphill site; grade 11 areas along 3,003 linear feet (total of about 1 acre) to increase flood plain connection by removing

about 4-6 inches of topsoil above ordinary high-water mark (selected areas will not impact existing sedge/rush mats); plant 4,000 willow cuttings in trenches where pull backs/riparian cuts occur; plant 500 willow whips as part of the VPS and VPS J-Hook Barbs; plant the bank pull backs with cottonwood, aspen, alder, current, rose and dogwood; cage All plantings; and rehabilitate approximately 1,000 feet of the old ditch to create a grassed swale. Partners are the PBWC, Diebel Contracting LLC, RSI engineering, NRCS, and the landowners Bruce and Carol Hummel (Thief Valley Ranch). Funding support for the project is from OWEB (Grant 221-5009-18948) and Natural Resources Conservation Service (NRCS).

In the summer of 2020, the PBWC collaborated with Diebel Contracting, LLC. And landowners of Thief Valley Ranch to develop and apply to OWEB to implement Phase II of restoration actions on Cusick Creek, a tributary to the Powder River. The grant was awarded spring of 2021.

Thief Valley Ranch had worked with the Keating Valley SWCD to implement Phase I actions on Cusick Creek 2013-2015. Then the Malheur Watershed Council received an OWEB grant to design Phase II of Cusick Creek Restoration on a reach upstream of Phase I and still on the Thief Valley Ranch.

In 2021, the PBWC and Diebel Contracting, LLC., entered into a contract for Ken Diebel to assume primary project management responsibilities. The PBWC Executive Director shares responsibilities for project management aspects.

2022 Implementation:

In 2022, the project progressed as planned. The instream work was finished just before the close of the October 31in-water work window. All bio-barbs, large wood, bank pull backs, and VPS structures are in place. A new road has been built to ensure the owner has access to his property, but it is well out of the flood plain. Almost 2,000 shrubs and trees have been planted. All bare areas created by the bank pullback have been seeded with an appropriate grass seed mix. The "old channel" left over from Phase I has been filled-in and seeded. It will function as a grass swale and an overflow channel.

2023 Implementation:

The remaining planned project elements were completed in 2023 including: 1) a Natural Resource Conservation Service (NRCS) funded fencing project that will protect the new project from livestock grazing, 2) building more buck and pole fencing for protecting aspen and cottonwood groves, 3) caging plantings to protect from elk and deer, and 4) doing more plantings and grass seeding to fill-in for anticipated mortality. All work as described in the OWEB grant application has now been completed. Due to diligence of the landowner and contractors, the planned work was completed significantly under budget. In December of 2023, the PBWC requested OWEB to approve a project extension to December 31, 2024 to allow the landowner to implement additional work to increase project benefits, utilizing the unspent funds. OWEB approved our extension request to implement additional work including: 1) additional shrub planting and plant protection, 2) reseeding areas were seed survival was low, and 3) controlling noxious weeds and invasive annual grasses within the treatment area.

Figure 11. Cusick Creek showing bank pull-back, floodplain grading and wood structures.

2024 Implementation:

Additional large wood placements, planting, plant protection, seeding, and invasive vegetation control were implemented in 2024, bringing the project to completion.

Funding for the project were provided by OWEB (grant number 221-5009-18948), and the Natural Resources Conservation Service (EQIP Program).

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.D, 1.E, 2.B, 2.C, 3.E

Cusick Creek Restoration Phase III: Aspen Restoration and Conifer Resiliency

Project Background:

This project is on Cusick Creek near Thief Valley Reservoir, which is on the Powder River. The project includes excluding cattle, deer and elk from six priority aspen stands and thinning a stand of ponderosa pine adjacent to Cusick Creek. The cattle, deer and elk are clipping the aspen sprouts year after year, which is threatening the existence of the stands. Hawthorn and shrubs are shading out the aspen. The hawthorn is dominating the stands which is leading to poor species diversity. We will install 2,650 feet of 7-foot tall buck and pole fence. This will exclude grazers from about 10 acres. To improve plant diversity, reduce competition, and stimulate aspen sprouting, we will remove hawthorn shrubs with a tracked excavator. The ponderosa pine stand adjacent to Cusick Creek is 12.6 acres in size and is currently overstocked. The overstocked nature of the stand and drought are causing tree mortality from infestation of bark beetles. Reducing the stocking rate will improve tree health and make the stand less susceptible to

wildfire. Funding support for the project are from OWEB (Grant 222-5002-19852), ODFW and NRCS.

In the fall of 2021, the PBWC worked with landowners of Thief Valley Ranch and Ken Diebel to develop and submit a restoration application to OWEB. Project funding was awarded by OWEB May of 2022.

2022 Implementation:

Summer of 2022, the landowner completed construction of the access trail that will facilitate other project activities. In addition, the landowner removed hawthorn from aspen restoration sites and conducted pre-commercial thinning within some of the ponderosa pine stand. The wood material thinned was removed for the purpose of providing the logs and rootwads needed for the Phase II project. The material was transported to the Phase II project area and installed as part of Phase II construction fall of 2022.

2023 Implementation:

Project activities in 2023 included construction of buck and pole fencing around all planned aspen restoration sites, completing all the OWEB funded project elements described in the grant application. As with the Phase II project, the landowner and contractors were successful in completing the project work at substantial cost savings. In December of 2023, the PBWC requested OWEB to approve a project extension to December 31, 2024 to allow the landowner to implement additional work to increase project benefits, utilizing the unspent funds. OWEB approved our extension request to implement additional work including: 1) treating additional aspen stands on the property, 2) Reseeding areas were seed survival was low, and 3) controlling noxious weeds and invasive annual grasses within the treatment area.

2024 Implementation:

Forestry work was implemented to reduce the density of the ponderosa pine stand adjacent creek, primarily thinning. Much of the harvested wood material was placed within the Cusick Creek Phase II project area. Additional hawthorn removal, buck and pole fencing to aspen, planting, seeding of disturbed areas and invasive vegetation control were implemented in 2024. Additional planting is planned for Fall 2025.

Funding for this project is provided by OWEB (grant number 222-5002-198520 and the Oregon Department of Fish and Wildlife.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.D, 1.E, 2.A, 2.B, 2.C

Higgins Reservoir Water Development

The water development project near Higgins Reservoir on Secret Valley Ranch, near Unity, Oregon was completed spring of 2024. The project objective was to provide an additional upland water source for livestock in the northwest corner of the ranch near Higgins Reservoir that would disperse livestock grazing into upland habitats of the pasture and reduce grazing pressure on the

creek riparian corridor and potential mesic habitat available for Sage-grouse. The water development was identified as a productive conservation measure supporting the Baker Sage-grouse LIT's goals outlined in the Baker LIT FIP Strategic Action Plan.

Livestock were not utilizing this area of the ranch because of the steep topography near the reservoir that made it difficult for them to access water; thus, they were congregating their grazing in the canyon along the in-flow creek. The water development was designed to pull water out of the reservoir to water troughs that were more accessible to the livestock. The water development consisted of a solar-powered submersible water pump installed in the reservoir that pumps water to two livestock tire troughs (1,200 and 800 gallons) set 30 feet from one another.

Figure 12. Livestock watering troughs installed adjacent to Higgins Reservoir.

The system is an open-loop system that fills the water troughs from the reservoir and then pipes unused water back into the reservoir at ground level. This system maintains fresh water and full troughs without overflow. Wildlife escape ramps were also installed in the water troughs. The system is shut down and the troughs drained when livestock are not being grazed in the pasture. The solar panel and water pump are removed and stored by the landowner when not in use to preserve their life expectancy and function. Yearling cattle are grazed in the pasture for 60 days (~15 May-15 July) each year. In addition to the water development, the landowner fenced off the riparian corridor of the upstream creek in 2022 and installed 2 livestock access points for

watering. This effort better manages livestock use of the creek and improves the riparian and mesic health of the area. The landowner also employes a rider on horseback that moves the cattle into the uplands 2-3 times/week to better distribute their grazing across the pasture. The landowner continues to manage invasive weeds along the creek and dirt road access on an annual basis to maintain the vegetative health of the creek and uplands in the pasture.

Funding for the project was provided by OWEB (grant number 222-8206-22241).

PBWC Strategic Plan strategies addressed: 2.A, 2.B, 2.C, 2.D

Idaho Power Company Water Efficiency Program

The Idaho Power Company Water Efficiency Program (WEP) is a grant opportunity for landowners in the Pine Valley portion of the Pine Creek basin who are interested in making irrigation efficiency improvements (converting from flood to sprinkler irrigation, for example). The goal of the program is to increase water quality and quantity throughout stream systems in the Pine Valley which are designated critical habitat for ESA listed Bull Trout. The program is offered on a 2-year cycle, and the next offering will be spring of 2025. The PBWC assisted the Idaho Power Company (IPC) with implementing its 2023 Water Efficiency Program (WEP) in the Pine Creek Basin by participating on the project review team, implementing a service agreement to administer IPC funds to implement projects, and partnering with a recipient of the 2023 IPC WEP funds to pursue additional project funding through the Oregon Watershed Enhancement Board (Figure 4). Three projects were selected from ten applicants. The following is a description of the approved projects:

- The Pine Eagle School District project received $10,000 of funding to complete a sprinkler project on 10 acres. This project proposes converting from flood irrigation facilitated by gravity pipe to a sprinkler system with a pump and Lateral Move Machine. Project implementation was completed during the spring and summer of 2024.
- The DelCurto project was awarded $45,000 from the IPC Water Efficiency Program (partially funding the project) for the purchase of certified used wheel lines to facilitate the conversion of 135 acres of flood irrigated hay and pastureland to sprinkler irrigation. This project diverts water from East Pine Creek, via the Oliver-Sullivan Ditch. Conversion from flood irrigation to sprinkler irrigation will increase water use efficiency and reduce flood tail water runoff carrying excess nutrients and sediment from entering East Pine Creek. This project was awarded OWEB funding fall of 2023 and implementation began early 2024. For more information, please see the section regarding the Johnny-Bill Irrigation Efficiency Project.
- The Jackson project was awarded $45,000 from IPC's Water Efficiency Program (partially funding the project) towards the completion of two center pivots on 81 acres. Currently, all tail water runoff from flood irrigation on this property flows into Clear Creek and Pine Creek carrying excess sediment, nutrients, and waste. Additional project funding was requested by the Eagle Valley SWCD from OWEB through a large grant during the 2023 spring funding cycle. This project was awarded OWEB funding fall of 2023 and implementation of the first phase of the project began during the summer of 2024.

PBWC Strategic Plan strategies addressed: 1.A, 1.C, 1.E, 3.E

Johnny-Bill Irrigation Efficiency

Project background:

The Johnny-Bill Irrigation Efficiency Project encompasses 135 acres of flood irrigated hay and pastureland within the Pine Valley portion of the Powder Basin. Streams within the Pine Creek watershed and the Pine Valley provide important habitat for bull trout, an Endangered Species Act (ESA) Threatened species. The goal of this project is to improve water quantity and quality in East Pine Creek through increased irrigation efficiency, off-channel watering developments, and fencing the riparian zone to exclude cattle from the creek. Presently, this property is flood irrigated which is inefficient due to deteriorated ditches which have widened and incised and unlevel ground which leads to areas of high saturation and dry spots. Flood tail water runoff flows directly into East Pine Creek, carrying excess sediment and waste. Water quality and quantity are both concerns for East Pine Creek which is 303(d) listed as impaired for temperature year-round. One half center pivot will be installed in conjunction with 5-wheel lines and a mainline pipe to facilitate the sprinkler system. Sprinkler irrigation will improve water efficiency, allowing more water to remain in East Pine Creek throughout the irrigation season, reducing water temperature and improving fish habitat. Sprinkler irrigation will also improve water quality by eliminating flood tail water runoff into the creek. Riparian fencing will be installed on unfenced portions of the creek and off-channel watering sites will be developed to further eliminate erosion, sedimentation, and to protect riparian vegetation.

This project is a collaborative endeavor between the landowners, Idaho Power Company, the PBWC, and the Oregon Watershed Enhancement Board. During the spring of 2023, this project was awarded $45,000 through IPC's Water Efficiency Program to facilitate the purchase of wheel lines. Funding for the project is provided by both the Idaho Power Company and OWEB (Grant 223-5030-22966).

2024 Implementation:

Implementation of this project began in 2024 with the landowner purchasing and installing the center pivot for the northeast portion of the property as in-kind match for the OWEB grant. Three used wheel lines were purchased using IPC WEP funds in spring 2024 and the landowner is coordinating with Warrington Irrigation to conduct any necessary maintenance to ensure all sprinkler equipment is functional. To facilitate the best pond for the new pump station, an additional point of diversion is necessary in the Northeast corner of the property. PBWC staff and the landowner developed an application for the additional point of diversion with assistance from our local Water Resources Department which was submitted in March of 2024. We anticipate an approved transfer in spring of 2025.

During the summer of 2024, PBWC staff and the landowner coordinated with Warrington Irrigation out of Ontario to complete the installation of the mainline pipe, pumpstation, and risers throughout the property. Our plan was to install the livestock watering pipeline in the same trench as the main-line pipe, but this was not possible due to contractor concerns. The livestock watering pipe was ripped-in following a more efficient pathway during the fall of 2024 and installation of the concrete trough pads and troughs will be completed by spring 2026. There will

likely be an additional funding request to complete the installation of the trough pads/troughs through a second phase of this project which will extend the sprinkler and livestock watering system across the road to another section of the property. A WEP application will be submitted for the new project spring 2025 along with an OWEB application. The northern portion of the riparian fence has been installed and the southern portion will be completed in late fall of 2025 after IPC has completed remediation of a fish passage barrier near the fencing location. We will work with the landowner to update their grazing strategy once the sprinkler system is functional in 2025.

Figure 13: Completed pump station.

2024 Field Tours:

The PBWC Board of Directors toured the project site during late summer 2024. The PBWC Watershed Restoration Coordinator and landowner detailed the objectives of the project, facilitated discussion regarding the benefits of the project to both fish and livestock production, and the landowner provided a demonstration of a functional sprinkler system in the northeast portion of the property. Board members had the opportunity to ask questions and will likely return to see the completed Johnny-Bill project in the future.

PBWC Strategic Plan strategies addressed: 1.C, 2.B, 3.E.

Pine Creek Fish Habitat Enhancement

Project Background:

This project is located on the Corrigan property within and adjacent to Pine Creek, approximately six miles upstream from the town of Halfway. Pine Creek has been the focus of

attention for fish recovery during the past decade due to efforts by ODFW and IPC to re-establish migratory bull trout from the current population that resides high in the headwaters of Pine Creek year-round. In addition, Columbia Basin Redband Trout, which are considered a species of concern in Oregon, reside throughout the Pine Creek system year-round. In 2010, Pine Creek experienced a 30-year recurrence interval flood event, which highlighted to many landowners the poor health that the stream system is in. Because of this, landowners have been interested in working with us to improve function of the watershed. The goal of this project is to enhance fish habitat, while addressing concerns of the landowner regarding damage from past and future flooding. By using engineered log structures to deflect high flows and stabilize approximately 170 feet of eroding banks, managing livestock grazing through installation of a riparian buffer fence, and planting of native willows, there will be multiple benefits to Pine Creek. Benefits include reducing sediment inputs, increasing shade to lower water temperatures, more overhanging vegetation to provide hiding cover for fish and increasing the diversity of fish habitats through pool formation and establishment of backwater habitats. Partners on this project include the landowner and IPC. IPC will provide a $14,505 cash contribution for rootwad installation, riparian fencing installation, and an in-kind donation of boulders and willow whips for the project ($4,928 value).

In the summer of 2020, the PBWC submitted an application to OWEB to fund the project, but funding was not awarded. PBWC worked with the landowner to address OWEB Region 5 Review Team comments and resubmitted the project for funding in April 2021. The OWEB Board approved the project for funding in October 2021. This enhancement project was the result of a project design completed as part of Upper Pine Creek Flood Restoration Design, OWEB Grant 217-5049-14218.

In 2022 we worked on project removal-fill permitting with plans to implement the instream bank stabilization, and fish habitat improvement work fall of 2023.

An archaeologist with the IPC completed an on-site assessment of historic properties (site survey) and provided a technical memo providing the results. This was provided at no cost.

We contracted with EcoWest Consulting to do wetland assessment work and assist with removal-fill permitting. EcoWest determined appropriate removal-fill permitting pathways for the project. To fit within the chosen permitting pathways, Resource Specialists Inc. (RSI) made minor modifications to the design plans and supporting information. Final permitting documents were submitted to the Oregon Department of State Lands and US Army Corps of Engineers in early 2023. All permitting authorizations were in place by June 2023.

<u>2023 Implementation:</u>

The bank stabilization treatment was installed from September 21-29, 2023 according to the final design plans. Materials used included 49 cubic yards of ballast boulders, four cottonwood rootwads and 26 cottonwood logs. All ballast rocks were imported to the site from an upland source and stockpiled on the Corrigan property adjacent to Holbrook Creek Road. The majority of cottonwood rootwads and logs were salvaged from the Tarter Slough Diversion Project (implemented by the Eagle Valley SWCD and Idaho Power Company in 2022) and delivered to

the stockpile adjacent to Holbrook Creek Road in August of 2022. Six pieces of cottonwood log were salvaged from blowdown logs in pastures on the Corrigan property. These materials were hauled to the project work site from the staging area on September 21, 2023, using a Hydrema all-terrain dump truck that exerts very low ground pressure (Figure 7), resulting in insignificant ground disturbance along the travel route from the staging area to project work site. All bank stabilization work was done with a John Deere 130 Excavator from the top of bank (Figure 8). The excavator did not access the channel.

As the project site is on a side cannel of Pine Creek, work area isolation/dewatering was accomplished by installing a coffer dam of sandbags at the upstream extent of the side channel.

To restore riparian vegetation along the bank treatment, willow and cottonwood cuttings were collected from the project site and immediately placed within the constructed bank treatment. After the cuttings were placed, they were backfilled with channel sediments and then trimmed to facilitate root development.

2024 Implementation:

Figure 14. Riparian Buffer fencing installed along Pine Creek.

To protect the treatment area from grazing livestock and facilitate livestock management within a 6.75 riparian pasture, the PBWC contracted with a local fencing contractor to construct a 1,340 foot, 4-wire riparian buffer fence as shown in the Project Completion photos. Two watergaps using livestock panels were installed to provide livestock access to stream water. The fence was constructed per NRCS specifications. The fencing was installed mid-June, 2024.

PBWC Strategic Plan strategies addressed: 1.A, 1.B, 1.D, 2.B, 3.E

Trout Creek Ecosystem Resiliency

Project Background:

This project is on Trout Creek in the North Fork Burnt River watershed, approximately 40 miles southwest of Baker City, southeast of Whitney Valley on lands administered by the Whitman Ranger District of the WWNF. Watershed issues addressed are: 1) degraded groundwater recharge and water storage functions, 2) limited water table maintenance supporting narrower riparian vegetation communities, 3) limited zones for water quality filtering, and 4) excessive bank erosion resulting in streambeds with abundant fine silts. Throughout the 2.5-mile project reach, the creek is incised, not connected with its broad historic floodplain, and beaver are not present. The result is a stream with an altered potential riparian vegetation community including upland species, simplified aquatic habitat and one that is more efficient at routing water out of the system. Both Trout Creek and the North Fork Burnt River experience very low summer base flows and water temperatures that exceed state water quality standards (303 d water quality impaired for water temperature). The project approach includes utilizing low-tech process-based restoration techniques (beaver dam analogues – BDAs and post-assisted log structures – PALS) to reconnect Trout Creek with its historic floodplain, facilitating restoration of the native willow community by fencing to exclude ungulates from four protection areas (totaling 5.54 acres) and developing upland water sources for domestic livestock.

Funding for the project has been secured from OWEB (grant number 224-5006-23251) the Oregon Conservation and Recreation Fund and the Wallowa Whitman National Forest.

2024 Updates:

While we were prepared to implement construction of BDAs and PALS in 2024, a combination of permitting delays and wildfire risk prevented our plans. The U. S. Army Corps of Engineers removal-fill authorization was not received until the later part of July. The in-water work window for the project (July 1 to October 31) and availability of the youth crews for project construction make the viable construction window July 1 to mid-August. In addition, 2024 turned out to be an extreme year for wildfire risk with the Wallowa Whitman National Forest Implementing a general shutdown of construction activities (Industrial Fire Precaution Level IV) on July 23rd. While we could likely have received a waiver to implement construction activities once the removal-fill authorization was received, given extreme wildfire conditions, we chose not to put our crews at risk in such a remote area as the project site.

We did complete some preparatory work in 2024 including clearing of routes for ATV/UTV access for construction, harvest and staging of 600 lodgepole pine posts for BDA/PALS construction and staging of fencing materials for the lower buck and pole riparian exclosures.

PBWC Strategic Plan strategies addressed: 1.A, 1.B. 1.D, 1.E, 2.A, 2.B, 3.C, 3.D, 3.E, 4.A, 4.B

OUTREACH & EDUCATION

Baker Resources Coalition

The PBWC, again in 2024, partnered with the Baker Resources Coalition to be the employer of record for four Baker County high school student interns and a college aged crew chief. The student interns did wildfire mitigation work on five properties along the face of the Elkhorns, assisted with evaluating forest monitoring plots on the WWNF and constructed beaver dam analogues for the PBWC on the Camp Creek Ecosystem Resiliency Project. In addition, PBWC staff provided management and administrative support by serving as the Fiscal Sponsor for a grant from Coalitions and Collaboratives, Inc. that made the program possible in 2024, and assisted with recruitment, hiring and supervision of the interns and crew chief. The Baker Resources Coalition became their own non-profit entity in 2024, and two PBWC staff members currently serve on the BRC board to maintain our partnership. The 2025 BRC Crew will be engaged with PBWC work again constructing BDAs on Trout Creek.

2024 Guest Speakers

In 2024, the PBWC hosted one speaker to facilitate engagement with the public. Ellen Morris Bishop, a local geologist, gave a talk entitled, “When Yellowstone Came to Baker County: The Biography of a Hotspot”. The talk was given at the public library in Richland, Oregon and was well attended by folks from throughout the region.

2024 High School Field Day

With funding support from the Roundhouse Foundation, PBWC staff partnered with WWNF staff to host the 2nd annual Education Field Day at the Camp Creek Ecosystem Resiliency project site for 30 high school students from both Baker High School and Unity High School.

Our 2024 field day focused on expanding students’ understanding of their current ecology curriculum. Students from Unity High School also joined our 2024 soiree thanks to impeccable coordination by Shawn Klaus, Executive Director of the Burnt River Irrigation District. Expanding outreach to Unity High School was a great success, and we look forward to incorporating more of their current curriculum into future events. Field Day stations provided hands on experience for students working with local natural resource professionals to collect relevant data and learn more about ecological processes. The field day also connected local youth with their public lands to help them discover how healthy watersheds provide critical services including clean drinking water, productive fisheries, and outdoor recreation, supporting our economies, environment, and quality of life.

The students from Unity High School included a group of foreign exchange students hailing from places like Hungary, Hamburg, and Turkey. We were excited about having the opportunity to make an impact on kids from such diverse backgrounds and to learn about their unique experiences with natural resources. The kids split up into 4 groups, with students from Unity and Baker intermingled to promote collaboration between students who normally wouldn’t interact

with one another. Each group spent around 1 hour at each station, then the kids rotated to the next station.

Station 1 (Bob Hassmiller, WWNF; Ethan Brandt and Kirsten Ressel, ODFW): At station 1, the kids split their hour of time between two activities students worked with Bob to walk vegetation transects perpendicular to Camp Creek where they documented willows they encountered, including size class. Using the number of willows per each transect a calculation can be made to estimate the density of willows within the meadow reach of Camp Creek. Estimating willow density is important for understanding the quality of riparian habitat available for beavers within the system and whether they can persist in an area. Willow density measurements can help inform future restoration actions on Camp Creek including plantings, exclosures, and a second phase of beaver dam analogue construction. Students then donned their waders to assist Ethan and Kirsten with netting fish stunned by the electrofisher (no fish were injured). Camp Creek historically would have provided habitat for anadromous fish (salmon), but is now home to redband trout, dace, suckers, and other aquatic organisms. Students learned how to identify and measure different fish species and will use the collected data to calculate species diversity. The kids were amazed at the diversity and number of fish they could catch using this sampling technique; good job guys!

Figure 15: Baker and Unity high school students construct final BDA on Camp Creek.

Station 2 - Macroinvertebrate Sampling (Justin Thorson, PBWC; Will Glenn, WWNF): The diversity of macroinvertebrates can better reflect the long-term water quality of a site compared to a single sample of chemical constituents that only provides a snapshot in time. Students used kick-nets and buckets to collect macroinvertebrate samples which were later identified using a taxonomic key. The data collected by students will be used by the PBWC in our water quality monitoring program to inform future restoration projects and to evaluate how the installation of

beaver dam analogues on Camp Creek has influenced diversity. The kids had fun holding the nets and kicking the water around to catch those little buggers.

Station 3 - Field Tour (Morgan Soloman, WWNF): Morgan walked the students along the historic floodplain of Camp Creek identifying sagebrush, lodgepole pine, and other upland species which were encroaching into the riparian area due to channel incision. The tour continued near the active floodplain of Pinus Creek where students learned to identify native riparian vegetation including sedges, rushes, and various tree species. The hill slope of the Camp Creek valley was the culmination of the tour where students learned how to identify different upland trees and plant species by the shapes of their leaves. Students learned about the importance of healthy aspen stands and why the buck-n-pole fencing was constructed to protect them from browse.

Station 4 – Beaver Dam Analog Construction (Corey Jonas and Madison Di Lorenzo, PBWC): Students participated in the construction of their very own beaver dam analogue (BDA) and completed the final dam for the Camp Creek Ecosystem Resiliency project. The posts had already been pre-pounded into the ground in the creek, so all that was left was the weaving of the willows, placing of the mattress material, and monitoring the turbidity of the water. Students got to see how fast they can create an effective dam doing this. They became busy little beavers. Students learned about the historic removal of beavers and other land use practices which lead to the degradation of Camp Creek system and how man-made dams can increase ecosystem function and set the stage for beaver recolonization. Beaver dams don't just create a place for beavers to live! The ponds that beaver dams create are important habitats for other wetland animals, including birds and fish. These ponds also help control soil erosion and reduce flooding. Finally, students learned how reconnecting Camp Creek with its floodplain can increase the quantity and quality of native riparian vegetation which not only benefits beavers, but the system as a whole. The roots of riparian trees and shrubs help hold streambanks in place, preventing erosion. Riparian vegetation traps sediment and pollutants, helping keep the water clean.

In conclusion the students, organizers, and teachers all had good fun on this very scientific day of discovery. From vegetation identification to electro-fishing, hiking to dam building, and everything in-between the students practiced real sampling/restoration techniques and learned hands-on skills relevant to becoming a natural resource professional. The PBWC mission to facilitate community-supported maintenance and restoration of the streams, rivers, and lakes within our watersheds, was echoed in this field day. The PBWC staff along with our partners enjoyed this year "Kids Field Day" and look forward to hosting it in the future.

2024 Powder River Spring Cleanup

The PBWC partnered with Solve Oregon and North 7 Brewery to carry out trash removal and improvement along the Powder River through Baker City on April 20th, 2024. Free food, water, garbage collection supplies, and gifts from North 7 were provided as incentives to volunteers. The PBWC's efforts focused on trash removal in three sections of the Powder River along the Leo Adler Memorial Parkway, including Kirkway Park, Geiser-Pollman Park, and Central Park. Twenty-four adult and three youth volunteers spent 3-hours removing 250 pounds of trash from the river, enough to fill the 1.5-yard dumpster provided by Baker Sanitary. Karen Riener was the

recipient of first annual “Weirdest Garbage Award.” Karen not only found a full bicycle in the creek, but also helped find a waterlogged suitcase and bag full of clothes which were returned to their owner in La Grande. Other interesting finds included a ninja throwing star.

COUNCIL ADMINISTRATION

In 2024 Karen Riener stepped down from the position of Secretary but remains a Director at Large. There were no other changes to the Board in 2024. The PBWC Board of Directors includes the following individuals as of December 31, 2024:

Director	Position	Residence
Dorothy Mason	President	Baker City
Ben Titus	Treasurer	Baker City
Karen Riener	Director at large	Richland
Shawn Klaus	Director at large	Hereford
Margaret Durner	Director at large	Halfway
Curtis Martin	Director at large	North Powder

FINANCIAL STATUS

Balance Sheet Summary– December 31, 2024

ASSETS	
Current Assets	
Checking/Savings	163,351.23
Accounts Receivable	6,586.05
Other Current Assets	8,788.47
Total Current Assets	178,725.75
TOTAL ASSETS	**178,725.75**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	5,932.43
Other Current Liabilities	82,346.66
Total Current Liabilities	88,279.09
Total Liabilities	88,279.09
Equity	90,446.66
TOTAL LIABILITIES & EQUITY	**178,725.75**