



## 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/>

2022 Annual Report

## 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 501(c)(3) corporation in 2008. Initially, The PBWC was run entirely by volunteers. This included the developing of projects, compiling and publishing data in watershed assessments, and the 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.

In 2022, the PBWC emerged from the impacts of the COVID-19 Pandemic and complete staff turnover in 2020, aggressively pursuing the organization's Mission by being engaged in 22 active grants and fiscal sponsorship agreements totaling over \$1.4 million and FY 2022 annual budget of \$493,491. We are engaged in projects including sage grouse conservation, beaver and aquatic habitat restoration, ecosystem resiliency, irrigation system modernization and fish passage improvements.

Fulfilling a long-term goal of the PBWC, we secured funding in late 2022 to move forward with developing a watershed restoration action plan to guide the PBWC's activities over the next ten years. We look forward to engaging with our partners and public in 2023 to create a plan that meets the needs of both our watersheds and communities.

Before the end of the year, we hired Madison O'Bryant as Watershed Restoration Coordinator to lead the action planning effort and engage with stakeholders to develop project opportunities. Earlier in the year, we hired Justin Thorson as Water Quality Monitoring Specialist. He successfully re-launched our water quality monitoring project after a break in funding in 2021. Tim Bailey, Executive Director; Emmy Tyrrell, Sage Grouse CCAA Coordinator; and Val Haworth, Biological Technician round out the PBWC staff.

## MONITORING & ASSESSMENTS

### Long-term Water Quality Monitoring (OWEB Grant 221-5058-19515)

After a one-year hiatus due to a COVID-19 related break in funding, an OWEB grant was secured to fund water quality monitoring 2022 through 2024. In addition to monitoring done as part of the past grant (OWEB 218-5055-15953), measurement of E. coli bacteria and

phosphorous in the Burnt River and continuous monitoring of dissolved oxygen throughout the basin were added.

After an extended recruitment process where the number of qualified applicants was limited, we hired a highly qualified candidate, Justin Thorson, as our Water Quality Monitoring Specialist to lead the project. Justin recently received his Master of Science degree in Fisheries Science at Oregon State University.

Justin successfully re-launched the water quality monitoring program in 2022 with the support of four volunteers that have been long-term participants. The U. S. Bureau of Reclamation (BOR), Wallowa Whitman National Forest (WWNF) - Whitman District, Oregon Department of Environmental Quality (ODEQ), and Burnt River Irrigation District (BRID) were critical partners. The WWNF monitored water temperature at 15 sites in the North Fork Burnt River Watershed. The BRID collected monthly samples of E. coli and phosphorous on the Burnt River and monitored flow on the South Fork Burnt River. The U.S Bureau of Reclamation laboratory in Boise, Idaho did analysis of E. coli and phosphorous samples. ODEQ provided direction and assistance with developing a new Quality Assurance Project Plan (QAPP) and provided training for project volunteers.

Grab samples of dissolved oxygen, conductivity, pH, and turbidity were collected throughout the Powder Basin at 48 sites and water temperature was measured continuously at 30-minute intervals at these same sites, June through October. Continuous dissolved oxygen was measured at 7 sites throughout the Basin during the fall to assess Bull Trout spawning conditions. Water samples for E. coli bacteria and phosphorous analysis were collected at five sites, two-times monthly on the Burnt River, June through October.

#### Sage-grouse West Nile Virus Monitoring (OWEB Grant 222-8206-19959)

In response to a sharp decline in the Baker County, Oregon sage-grouse population, local stakeholders are implementing a multi-faceted strategic plan to reduce all threats to sage-grouse and their habitat. Yet little is known about one threat, West Nile virus (WNV). Sage-grouse are highly susceptible to WNV, but the degree to which WNV may be impacting the local population is largely unknown because, until 2019, disease surveillance was solely focused in agriculture-dominated areas that are not utilized by sage-grouse. The sage-grouse population in the Baker Priority Area for Conservation (PAC) is small (<250 birds) and thus, may be disproportionately affected by disease. Beginning in 2019, the Baker Local Implementation Team (LIT) expanded Baker Valley Vector Control's (BVVC) annual monitoring to sites in late-summer sage-grouse brood rearing habitat. This project combined data collected 2019-2022 to quantify the prevalence of WNV in the Baker PAC to understand the extent to which it may be limiting the local sage-grouse population and identify disease "hotspots" for targeted WNV risk-reduction activities. OWEB funds supported a seasonal employee to work with US Fish and Wildlife Service (USFWS), Oregon Department of Fish and Wildlife (ODFW), Bureau of Land Management (BLM), BVVC, and landowners to implement a mosquito trapping and disease testing program in sagebrush habitat utilized by sage-grouse. The seasonal employee deployed mosquito traps, identified and submitted mosquitos for diagnostic testing, managed all project data, and worked with USFWS to conduct GIS analyses to develop a "hotspot" map representing the risk of WNV. The

seasonal also assisted Oregon State University (OSU) researchers to collect and test sage-grouse blood samples for WNV. Concurrently assessing disease seroprevalence in sage-grouse and the environmental prevalence of WNV will aid in understanding the extent to which this disease may play a role in local sage-grouse population dynamics.

In 2022, several dozen sampling sites needed to be ground-truthed to ensure water sources would persist throughout the sampling season. Our technician, Val Haworth, proceeded to visit many sites as long as access (permission or logistic limitation) wasn't an issue. There are 17 sampling points; all points had consistent monitoring throughout the 6-week sampling period which started the week of 7/18/2022 and proceeded through 8/22/2022. One exception to this was a point that was added after the first sampling week. Coordination was high with BVVC to ensure samples were sent off in a timely manner. Several positive detections were reported from collected mosquitos. The USFWS is using the collected data to provide a final report for the project and will be completed early 2023.

### Baker LIT Restoration Project Monitoring (OWEB Grant 222-8206-19958)

The project location is the Baker LIT planning area, focused on the Baker PAC, (identified as Core Area by ODFW), and an area near Unity, Oregon which includes leks with high attendance that were discovered after the designation of core areas. The Baker LIT planning area includes sage-grouse habitat located in Baker and Union counties. The Baker Sage-grouse Partnership's targeted ecological outcome is to increase the quantity and quality of sage-grouse habitat and ultimately increase the Baker sage-grouse populations. The Baker LIT completed its initial Baker PAC Comprehensive Sage-grouse Threat Reduction Plan (TRP) in 2017. This plan represents the team's local work plan to guide activities to reverse the sage-grouse population trend in Baker County. The Baker LIT planning area encompasses 1.4 million acres of private and Bureau of Land Management (BLM) land (excluding U.S. Forest Service lands because they are typically avoided by sage-grouse); approximately 70% of the planning area is privately owned. Implementation of restoration activities outlined in the TRP and Baker LIT Sage-grouse Strategic Action Plan (SAP) are ongoing. Effective monitoring of the restoration projects is included as a guiding principle in the Partnership's SAP. The Partnership developed a monitoring framework for all LIT restoration projects. Monitoring components include restoration information (geospatial data, implementation details, target restoration goal), landscape condition (ecostate monitoring), and plot-level vegetative surveys. Pre-treatment monitoring occurs as well as annual post-treatment data collection.

Our biological technician, Val Haworth, successfully completed all FIP restoration monitoring points for Tri-County Cooperative Weed Management Area, Baker County, and PBWC restoration projects for the 2022 season. Monitoring occurred in spring (May–June) and fall (September–October) and totaled 30 points. In addition to FIP restoration project monitoring, we (PBWC) worked with USFWS and United States Geological Survey (USGS) (Boise, ID) to pilot a rapid ocular assessment protocol to better understand treatment success/failure and improve the USGS Land Treatment Exploration Tool (<https://chsapps.usgs.gov/apps/land-treatment-exploration-tool/>). According to USGS, “This tool is designed to assist land managers with the rangeland restoration and/or rehabilitation planning process. Using statistical similarity indices, past treatments that most closely match planned treatment areas can be identified based on

climate and topography indices. Similar past treatments can be explored and compared to planned treatments and help identify not only the best path forward, but also justification for the methods used in treatment.” Val was able to complete 101 rapid ocular assessment monitoring points.

#### North Fork Burnt River (NFBR) Stream Gage (OWEB Grant 220-5047-17446)

In 2019, Oregon Water Resources Department (OWRD) announced they were planning to discontinue operation of a stream gage on the North Fork of the Burnt River (NFBR) due to budget constraints. In March 2019, the Wallowa-Whitman National Forest (WWNF) solicited comments on the proposed Patrick Vegetation Management Project (PVM) in the watershed. The project is proposed on 48,753 acres of WWNF-managed land upstream of the NFBR stream gage. In this watershed, many streams are on the Oregon Department of Environmental Qualities 303d list for impaired water quality for temperature and/or habitat conditions. The long period of record (27 years) makes the gage especially valuable for detecting changes in stream flow related to the PVM project. The PBWC requested 2019 funds from OWEB on behalf of a group of partners to partially fund the continued operation of the NFBR stream gage from 2020-2022.

Several entities stepped up to make financial contributions to this effort including Greater Hells Canyon Council, Oregon Wild, OWRD, and local concerned citizens. Several entities submitted letters of support including the Burnt River Irrigation District, Idaho Power, and the WWNF. In April of 2020, the PBWC was awarded OWEB grant funds to continue operating the NFBR gage. Through this funding, the PBWC has supported operation of this gage since October 1, 2019. The gage data will document any management related changes that occur (positive or negative) to stream flows in the NFBR, and potentially help guide future project development.

### **RESTORATION**

#### Powder River Fish Habitat Enhancement Project (OWEB Grant 220-5023-17032)

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. In the fall of 2019, the PBWC secured OWEB funding for the fish habitat survey. The project started outreach for the project in 2019 and received a positive response.

The PBWC contracted the ODFW Aquatic Inventory Team to conduct the fish habitat survey. This project stretches from Hughes Lane in Baker City upstream to the Mason Dam and includes approximately 200 properties. The PBWC made contact with private landowners and secured access to do the survey on 64 properties. The survey was conducted September 2-24, 2020, and was only conducted in locations where permission from landowners on both sides of the river was granted. Surveyors collected measurements on pool depth, bed composition, bank stability,

and streamside vegetation. They also documented barriers to fish movement and any unscreened irrigation diversions.

Approximately half of the project reach (8.0 miles) was successfully inventoried in 2020. In early 2021, staff sent out letters to landowners that had not responded to previous mailings to secure access for an additional survey effort in September 2021. However, the PBWC only received five responses. We determined that this provided an insufficient volume of survey work to have ODFW return for another survey effort.

With survey efforts complete, ODFW completed summary and reporting of the survey data and provided it to the PBWC at the end of 2021.

In 2022, a Technical Team of natural resource experts reviewed the survey data and assembled recommendations for accomplishing the goal of making fishing better. Plans for 2023 include receiving public input on the Technical Team recommendations and finalizing a Strategy. Initial steps toward implementation will include conducting an inventory of fish passage and screening needs throughout the project reach to prioritize project development.

#### Idaho Power Company Water Efficiency Program

The PBWC assisted the Idaho Power Company (IPC) with implementing its 2021 Water Efficiency Program (WEP) in the Pine Creek Basin by participating on the project review team, and implementing a service agreement to administer IPC funds to implement projects. Three projects were selected from seven applicants. The following is a description of the approved projects:

- The Norman project received \$4,989 of funding to complete a sprinkler project on 7 acres. This project uses water from Pine Creek via the foothills ditch. This project was completed in the fall of 2021.
- The Denson project was awarded \$48,178 from the IPC Water Efficiency Program (partially funding the project) towards the completion of two pivot sprinklers on 100 acres. This project diverts water from East Pine Creek, via the Oliver Sullivan Ditch and will improve water efficiency by converting to sprinklers from flood irrigation. Additional project funding was requested from OWEB through a large grant in the fall 2021 funding cycle. This project received OWEB grant funding and was completed the fall of 2022.
- The Joseph Ranches project was awarded \$26,833 from IPC Water Efficiency Program (partially funding the project) towards the completion of two pivot sprinklers on 85 acres. This water is diverted from Dry Creek and will be converted from flood to sprinkler irrigation. Additional project funding was requested through OWEB through a large grant in the fall 2021 funding cycle. The project received OWEB grant funding and much of the project was implemented in 2022. Implementation of a small portion of the project is delayed due to required wetland delineation, with project completion expected by fall 2023.

## Cusick Creek Restoration Phase II: The Restoration Continues (OWEB Grant 221-5009-18948)

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 a contract for Ken Diebel to assume primary project management responsibilities. The PBWC Executive Director will share responsibilities for project management aspects.

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 vertical post structures (VPS) 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.

Work left to do in 2023 includes: 1) A Natural Resource Conservation Service (NRCS) funded fencing project that will protect the new project, 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.

## Cusick Creek Restoration Phase III: Aspen Restoration and Conifer Resiliency (OWEB Grant 222-5002-19852)

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 to restore six aspen clones on the ranch and adjacent to Cusick Creek, implement forestry activities on a ponderosa pine stand adjacent to Cusick Creek, implement limited riparian planting along upper Cusick Creek and construct an access trail to facilitate implementation of these activities. Project funding was awarded by OWEB May of 2022.

Work is progressing on the Cusick Creek Phase III project. Last summer 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 stands. 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.

Initiation of buck and pole fence construction was delayed as the landowner's fencing contractor intended to harvest pole material and construct the fencing was seriously injured in a vehicle accident. We expect the buck and pole fencing and silviculture treatments to the ponderosa pine stands to proceed in 2023.

#### Pine Creek Fish Habitat Enhancement (OWEB Grant 221-5042-19551)

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, 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. We have now determined appropriate removal-fill permitting pathways for the project and expect authorizations in place by summer, 2023. To fit within the chosen permitting pathways, Resource Specialists Inc. (RSI) made minor modifications to the design plans and supporting information. By the end of 2022, EcoWest had permitting documents prepared for submittal.



The contractor implementing the Tarter Slough project for IPC delivered several salvaged logs and rootwads to the project site for project construction.

#### Camp Creek Ecosystem Resiliency (OWEB Grant 222-5016-19918)

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 (303d 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 seven protection areas averaging 0.80 acres in size. This is a collaborative project between the PBWC, ODFW, and the WWNF.

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.

Implementation will occur the summers of 2023 and 2024. We will employ youth from the Oregon Training and Employment Consortium, Northwest Youth Corps and Baker Resources Coalition for project implementation.

#### Higgins Reservoir Water Development Project (OWEB 222-8206-22241)

The proposed water development will occur on Secret Valley LLC property, south of Unity, Oregon on Higgins Reservoir. The Unity area includes leks with high attendance and the sage-grouse population found here is important to maintaining the sage-grouse populations in Baker County. The water development is planned in the NNW corner of the northern most pasture

which overlaps Higgins Reservoir. A water development in the northern most pasture on the property is needed to improve utilization of the pasture and reduce pressure on riparian areas. In addition to supporting the LIT's goals outlined in the Baker Sage-grouse LIT FIP Strategic Action Plan, this specific issue was identified within the landowner's site-specific plan (SSP) as part of their enrollment of the Candidate Conservation Agreement with Assurances (CCAA) program. The water development will be approximately 100 yards east of the reservoir and consist of two, 1,000-gallon tire troughs set 30 feet from one another. Troughs will be fed using a submersible solar pump, have float valves to prevent overflow, and include wildlife escape ramps. Project partners include the PBWC, Baker Sage-grouse LIT, and the landowner.

Progress on the water development has been minimal due to a delay in the grant agreement. However, pre-monitoring using the FIP restoration monitoring protocol and the USGS rapid ocular assessment protocol was completed in 2022. Some site prep was completed fall 2022, but work will not commence until late spring or early summer 2023. The landowner is currently putting together prices for materials and collecting materials for the water development. Despite the delay for the installation of the water development, which was originally scheduled to be completed fall 2022, it is anticipated that the original project completion by fall 2023 will be met. The landowner is planning on completing the water development as soon as weather and ground conditions allow. We anticipate post installation monitoring will occur fall 2023.

#### Uplifting Anthony Creek for Sensitive Trout and Beaver: Alternatives Assessment and Design (OWEB Grant 223-2018-22501)

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 us to develop habitat restoration projects on both sites. In 2022, we agreed to first develop 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 OWEB Region 5 Review Team recommended the project for funding with a rank of 1 out of 6 among Technical Assistance applications, so the project is expected to be funded May of 2023. 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 (CBRT) and non-native Brook Trout. The project reach is primarily utilized by CBRT 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.

## **TECHNICAL ASSISTANCE**

### Powder Basin Watershed Action Planning (OWEB Grant 222-5041-22257)

A long-term goal of the PBWC, fall of 2022 we received an OWEB grant 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 propose to bring on additional staff (Watershed Restoration Coordinator) 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.

By the end of 2022, we recruited and hired a Watershed Restoration Coordinator who will start work in January 2023. We anticipate completing the Strategic Plan refresh by summer 2023 and watershed restoration action plan by spring 2024. This grant funds half of the position.

### Makin' Clarity on the Run (OWEB Grant 221-5048-19501)

This technical assistance project addresses water quality, fish passage, channel instability, and irrigation efficiency issues associated with four irrigation diversions on Bull Run Creek, tributary to the South Fork Burnt River. These diversions currently do not have permanent diversion structures, requiring the water user to annually install push-up dams to divert water. Installation of push-up dams increases sedimentation, blocks or inhibits passage of native redband trout and destabilizes the bed and banks of the stream. In addition, irrigation waters are routed to desired application areas by open ditch, where the water is applied by flood irrigation. This method of delivery/application can lead to significant loss of water. This can cause alterations in the routing of sediment, nutrients and herbicides/pesticides into the waterway. The water user desires to

install permanent diversion structures and ditch piping to accomplish more time-efficient and environmentally sustainable irrigation practices. This project will result in design of permanent diversion structures and irrigation water delivery piping. The design process will explore alternatives, and lead to a 90% engineering design of the selected alternative that best meets the needs of the water user and addresses water quality, fish passage, and channel instability issues.

In April 2022, we contracted with River Structures Consulting to do an alternatives assessment and design to replace existing irrigation diversion push-up dams with permanent fish-friendly diversions at four irrigation points of diversion on Bull Run Creek. The contract also included design of piping for delivery of water from two of the points of diversion that currently have open ditch delivery systems. With a design team including the PBWC, landowner, ODFW, OWRD, and the BRID, we have progressed through the design steps of alternative assessment, alternative selection, 60% design and are now working with the ODFW Fish Passage Program to finalize 90% designs that will result in ODFW fish passage approval. We expect the design process to be completed early 2023.

#### Powder Basin Groundwater Records Review (OWEB Grant 220-5043-17407)

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, identify restoration needs to mitigate declines in groundwater, 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, and 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.

Our Research and Monitoring Coordinator began compiling groundwater level data and extracting lithologic data from well logs in September 2020. This effort was continued intermittently through mid-April 2021, when the position was vacated. As this position's funding was primarily provided by our water quality monitoring program, which was not funded in 2021 due to impacts of the Covid-19 pandemic, we were not able to fill this vacancy. Thus, no further work was completed on this project in 2021. In late 2021, we were awarded an OWEB grant to continue our water quality monitoring program in 2022-2024. As a result, work resumed on entering well log data in late 2022.

## STAKEHOLDER ENGAGEMENT

### Powder Basin Stakeholder Engagement (OWEB 222-5049-22249)

Fall of 2022 we received an OWEB grant to provide organizational capacity to develop 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 Trout 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.

By the end of 2022, we recruited and hired a Watershed Restoration Coordinator who will start work in January 2023. This grant funds half of the position.

### Sage-grouse CCAA Coordinator Biennium 2 (OWEB 222-8206-19954)

In August 2020, the Endangered Species Act Section 10(a)(1)(A) Enhancement of Survival Permit associated with the Baker/Union County Programmatic Sage-grouse Candidate Conservation Agreement with Assurances (CCAA) was successfully transferred to PBWC. The CCAA is an agreement between the USFWS and the PBWC to address the local conservation needs of sage-grouse. In return for conservation measures included in the CCAA, participating property owners receive assurances that no additional conservation requirements will be imposed if sage-grouse are listed under the Endangered Species Act (ESA). To manage the CCAA program, PBWC applied for a grant to fund a Sage-grouse CCAA Coordinator position. The Baker Sage-grouse Local Implementation Team (LIT) awarded the CCAA Coordinator grant using funds from the Baker Focused Investment Partnership (FIP), a grant award provided by the OWEB. PBWC hired the Sage-grouse Candidate Conservation Agreement with Assurances (CCAA) Coordinator (hereafter, Coordinator) who started in February 2021.

In spring of 2022, one property was successfully enrolled under the Baker Programmatic CCAA program adding 5,623 acres. Four letters of intent (LOIs) were signed in 2022. The Coordinator collected baseline inventory for three of the properties totaling approximately 8,600 acres. The fourth property LOI was signed in winter 2022 and baseline inventory of approximately 240 acres will be completed in 2023.

Landowner engagement and outreach improved in 2022. The Coordinator participated in several rangeland workshop outreach events which took place in Unity, North Powder, Medical Springs, and Baker City. Weed board meetings in Baker and Union counties were attended to discuss CCAA updates and encourage enrollment. A newspaper article on the CCAA and awarded funding through the Bipartisan Infrastructure Law (BIL) and a short film on the CCAA (a joint effort through the CCAA Oregon All Counties Steering Committee and SageCon) were some various media products produced in 2022. The Coordinator created a small handout to be given to partners who work extensively with the landowner community, this effort has resulted in more landowner interest/sign-up for the program.

### **OUTREACH & EDUCATION**

The PBWC, again in 2022, partnered with the Baker Resources Coalition to be the employer of record for four Baker County high school student interns. The student interns did wildfire mitigation work on five properties along the face of the Elkhorns, assisted with wildlife fencing on one property, collected forest stand monitoring plot data on the WWNF and collected pre-project monitoring data for the PBWC Camp Creek Ecosystem Resiliency Project.

In 2022, the PBWC hosted three speakers to facilitate engagement with the public. Julie Davies O’Shea, Executive Director of Farmers Conservation Alliance gave a presentation on opportunities to modernize irrigation systems; Levi Old of Trout Unlimited presented on stream/floodplain restoration; and Carol Evans, retired BLM fisheries biologist, presented on riparian restoration.

The PBWC Organized a Powder River cleanup that occurred in early October. A total of 15 volunteers (37.5 volunteer hours) helped with trash collection along 1.5 miles of the Powder River in Baker City. Approximately 100 pounds of trash was removed from the river. North Seven Brewing Co. of Baker City provided drink vouchers to participants.

### **COUNCIL ADMINISTRATION**

There were several changes in the PBWC Board of Directors in 2022. Ben Titus of Baker City joined the Board as Treasurer in March and Shawn Klaus of Hereford joined in July. Ben Norton of Baker City stepped down from his position in November. The PBWC Board of Directors includes the following individuals as of December 31, 2022:

| <u>Director</u> | <u>Position</u>   | <u>Residence</u> |
|-----------------|-------------------|------------------|
| Dorothy Mason   | President         | Baker City       |
| Karen Riener    | Secretary         | Richland         |
| Ben Titus       | Treasurer         | Baker City       |
| Shawn Klaus     | Director at large | Hereford         |
| Margaret Durner | Director at large | Halfway          |
| Curtis Martin   | Director at large | North Powder     |

## FINANCIAL STATUS

### Balance Sheet as of December 31, 2022

#### ASSETS

|                             |                    |
|-----------------------------|--------------------|
| Current Assets              |                    |
| Checking/Savings            |                    |
| Sterling Checking           | 90,340.34          |
| Total Checking/Savings      | 90,340.34          |
| Accounts Receivable         |                    |
| Accounts Receivable         | 2,397.73           |
| Grants Receivable           | -224,287.08        |
| Total Accounts Receivable   | -221,889.35        |
| Other Current Assets        |                    |
| Undeposited Funds           | 11,898.87          |
| Accrued Revenue             | -47,817.10         |
| Total Other Current Assets  | -35,918.23         |
| Total Current Assets        | -167,467.24        |
| Fixed Assets                |                    |
| Furniture and Equipment     | 26,101.83          |
| Accum Depr - Furn and Equip | -22,929.00         |
| Total Fixed Assets          | 3,172.83           |
| <b>TOTAL ASSETS</b>         | <b>-164,294.41</b> |

#### LIABILITIES & EQUITY

|                                       |                    |
|---------------------------------------|--------------------|
| Liabilities                           |                    |
| Current Liabilities                   |                    |
| Accounts Payable                      |                    |
| Accounts Payable                      | 58.17              |
| Total Accounts Payable                | 58.17              |
| Other Current Liabilities             |                    |
| Employee Leave Liability              | 34,580.17          |
| Payroll Liabilities                   | 1,859.67           |
| Worker Compensation Payable           | 2,320.02           |
| Unearned or Deferred Revenue          | -273,857.64        |
| Total Other Current Liabilities       | -235,097.78        |
| Total Current Liabilities             | -235,039.61        |
| Total Liabilities                     | -235,039.61        |
| Equity                                |                    |
| Unrestricted Net Assets               | 62,020.79          |
| Net Income                            | 8,724.41           |
| Total Equity                          | 70,745.20          |
| <b>TOTAL LIABILITIES &amp; EQUITY</b> | <b>-164,294.41</b> |