

7.3 Pure Water Partners Program

7.3.1 Purpose

The [Pure Water Partners \(PWP\) Program](#) is a new initiative designed to reward McKenzie landowners who protect high quality land along the river, assisting EWEB in protecting water quality and helping to avoid future water treatment costs.

The program provides annual payments, technical assistance and/or other incentives to participating landowners. It also helps to connect landowners who wish to engage in restoration projects on their land with technical and financial assistance.

Landowners with small residential lots may participate in the PWP Naturescaping Pathway (see Section 7.4 below)

7.3.2 Current Status

EWEB has completed a 2-year PWP pilot project with \$300,000 in grant funds from the Oregon Watershed Enhancement Board (OWEB), which involved working with 15 landowners to develop a riparian assessment and scoring process, conduct landowner assessments, and write assessment reports and management plans that include restoration designs. The two phases of the pilot project provided the opportunity to build and test the programmatic infrastructure with landowners, partners, and others prior to full program roll-out planned for late 2017. The programmatic infrastructure built as part of the pilot project included:

- 1) *PWP Program Boundary* – used various models to define the PWP program boundary based on likelihood of inundation during flood events (LCOG, 2017).
- 2) *Riparian Health Assessment Process* – developed, tested, and enhanced a riparian health assessment process and scoring system using The Freshwater Trust’s StreamBank software to determine which areas are worthy of protection and which need restoration (and what limiting factors are driving the need for restoration) (TFT, 2017).
- 3) *Landowner Agreement Templates* – developed and tested with landowners various versions of long-term landowner agreements that grant rights to EWEB to conduct ecological enhancement and stewardship activities associated with riparian forest protection and/or restoration
- 4) *Business Sponsorship Program* – worked with OSU and the U of O to engage the business community through advisory groups and surveys to develop and refine messaging around PWP and the value proposition for businesses to donate funding and/or products and services to the program. Business sponsorship materials, such as pledge forms and brochures were developed and tested with local businesses, and a list of interested businesses was compiled based on the U of O surveys and focus groups (U of O and OSU, 2012 & 2013).

- 5) *Marketing Analysis* – EWEB engaged the Bell + Funk marketing firm to develop the Pure Water Partners program name, logo and messaging that were captured in two brochures designed to appeal to landowners and businesses.
- 6) *Economic Analysis* – grant funds were used to hire Earth Economics and Ecotrust to conduct an economic analysis of the PWP and calculate a return on EWEB’s future investment in PWP program infrastructure and protection payments to landowners (ROI is 2.4 years) (Earth Economics, 2017).
- 7) *Naturescaping Pathway* – developed, tested, and implemented a Naturescaping pathway for small residential lots to provide incentives and technical assistance to homeowners who create a native riparian buffer between their house and the river. Four landowners have signed naturescaping agreements and went through the workshops and landscape design studio put on by the U of O Landscape Architecture graduate student studio class. Small student teams worked with each landowner to design landscape plans that incorporated naturescaping principles (EWEB, 2015).
- 8) *Fiscal Management System* – used grant funds to acquire advanced accounting software for Cascade Pacific RC&D as the PWP program fiscal agent. All program grant funding and protection/restoration funds from multiple sources (EWEB, USFS, MWMC, business sponsorships, OWEB, etc.) are and will continue to be managed through a Watershed Conservation Fund managed by Cascade Pacific RC&D as a 501c3 (EWEB, 2015). EWEB received two grants in 2017 totaling \$175,000 to design and develop the accounting and legal infrastructure of a Watershed Conservation Fund and test the financial and reporting mechanisms by running various funds through the system for actions on the ground.
- 9) *Funding Intergovernmental Agreements (IGAs)* – EWEB is in the process of drafting funding agreements with the Willamette National Forest and Metropolitan Wastewater Commission to invest in PWP through the Watershed Conservation Fund for riparian restoration actions on private lands that meet their investment goals.
- 10) *Watershed Health Dashboard* – Designed and developed a watershed health dashboard and PWP website as part of the pilot project (www.purewaterpartners.org). This provides tools for landowners and EWEB customers to track watershed health and the PWP program over time, increasing transparency of watershed conservation investments and trends in watershed conditions.
- 11) *McKenzie Action Plan* – worked closely with the McKenzie Watershed Council and host of partners to develop a thorough and detailed action plan that prioritizes watershed conservation actions in specific areas on public and privately-owned lands (MWC, 2016). This plan aligns priorities across federal, state, and local agencies and organizations, allowing the pooling of resources and collaborative approaches to conservation investments over time. The McKenzie Action Plan will be used to help prioritize PWP investments in riparian protection and restoration actions on private property.

12) *Partner Role and Responsibilities* – through the completion of the 2-year pilot project, partner roles and responsibilities were defined and tested. The next step is to memorialize these roles and responsibilities in various IGAs and agreements.

Eleven landowners have agreed to move forward and participate in the PWP program by signing agreements for protection/restoration or naturescaping. Working with landowners has been extremely helpful in developing PWP and fine-tuning some of the details in everything from process to site assessments to landowner agreements. In addition, creating these positive relationships with landowners during the development process will help to engage other watershed landowners down the road. EWEB is now poised to roll out the PWP program to a broader set of landowners.

7.3.3 Background

In the McKenzie watershed, development along the river has resulted in over 200 structures built in the floodway and nearly 1,200 in the 100-year floodplain. Development along the river leads to loss of riparian vegetation, increased nutrient and pesticide use, increased impervious surface and stormwater runoff, and contamination from septic systems.



New development right along the McKenzie River

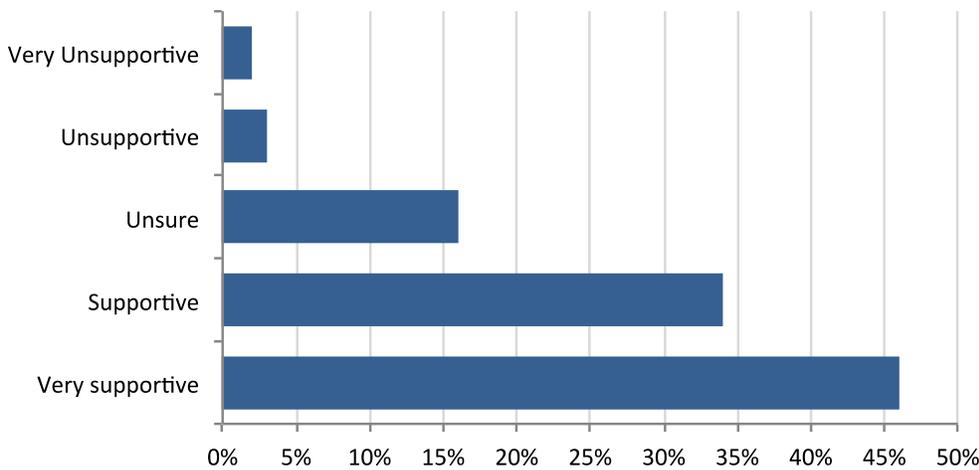
While the current drinking water quality of the McKenzie River remains very high, human activity and development within the watershed poses significant challenges for the long-term protection of this valuable drinking water source. For instance, the number of residential

properties in the watershed has doubled from 1,342 to 2,600 since 1970, with over 300 residences being built since 2010 (UO, 2009). Back in 2010, EWEB joined Lane County, local watershed councils, and other organizations in trying to implement a Floodplain Ordinance and Drinking Water Protection ordinance that limited future development in the floodway and riparian area, which subsequently failed and angered many landowners. In response, EWEB source protection staff began to work with landowners on exploring voluntary approaches to limiting development close to the river and maintaining water quality. These efforts created a foundation for EWEB’s Pure Water Partners Program (PWP), which capitalizes on existing community interest to protect high quality riparian habitat and reward landowners who engage in positive land stewardship activities. The primary goal of the PWP is to protect relatively intact and healthy riparian areas along the McKenzie River and some of its key tributaries. A secondary goal is to connect landowners who wish to engage in restoration on their land with technical and financial assistance from project partners.

Ratepayer Support for Programs Benefitting Water Quality

In 2012, 411 EWEB ratepayers living in Eugene completed a survey about their perception of the McKenzie Basin. Respondents described their knowledge of water quality, their understanding of risks to water quality, and how much money they would be willing to pay for source water protection. Surveyed ratepayers showed a high level of support for programs to improve and/or maintain water quality in the McKenzie Basin. Among other things, the survey asked “In general, how supportive or unsupportive would you be of establishing programs or activities to maintain the environmental benefits provided by the McKenzie Basin?”

Figure 7-5: EWEB Residential Ratepayer Support for Watershed Protection Programs



Source: University of Oregon and Oregon State University, 2013.

Figure 7-5 shows that 80% of survey respondents indicated that they were supportive or very supportive.

Ratepayers were also asked to indicate how much they would be willing to pay per month to fund water quality improvement projects. Ratepayers showed a high level of support for fees up to \$1/month. Ratepayer support drops off at a \$3/month fee. Table 7-6 shows EWEB ratepayers willingness to pay for water quality improvement projects.

Table 7-6: EWEB Residential Ratepayer Willingness to Pay for Water Quality Source Protection

Monthly Payment	Yes	Unsure	No
50 cents per month	72%	10%	18%
\$1 per month	64%	12%	24%
\$3 per month	39%	19%	43%
\$5 per month	22%	18%	61%
\$10 per month	9%	14%	77%

Source: University of Oregon and Oregon State University. "Protecting the McKenzie River Watershed: A Survey of Eugene Residents."

There are a number of examples of watershed protection fees around the country that appear as line items on utility water bills (see Section 9.1).

Landowner Interest in a voluntary incentive-based program

The second survey, also conducted in 2012, asked landowners in the McKenzie watershed to indicate their personal involvement and interest in programs to protect water quality. The landowner survey was provided to 598 private non-industrial landowners in the basin whose properties were located within one mile of the McKenzie River and/or its tributaries. The research team received 272 total responses yielding a response rate of 45.5%.

Approximately 18% of the respondents had previously participated in a voluntary conservation program, and 44% of respondents reported a high likelihood of enrolling in a voluntary program that would benefit water quality or quantity.

On the other hand, survey responses show that landowners are least likely to enroll in programs that either store carbon through alternative forest management practices or programs that enable the restoration of degraded stream and floodplain areas. Respondents showed the most support for a program benefiting water quality, followed by protecting and maintaining healthy floodplain areas and streamside forests. Responses also showed that these three conservation program types elicited the least amount of uncertainty across all five of the conceptual programs described by the survey (see Table 7-7).

Table 7-7: Likelihood of survey respondents to enroll in a voluntary conservation program within the next five years

Conservation Programs	Extremely Likely	Very Likely	Somewhat Likely	Not Very Likely	Not At All Likely	Don't Know	Total
Benefiting water quality or quantity	4%	17%	23%	12%	22%	22%	100%
Protecting and maintaining healthy flood plain areas (forest and other natural vegetation)	7%	14%	21%	12%	24%	23%	100%
Protecting and maintaining healthy streamside forests	7%	16%	16%	14%	24%	22%	100%
Enabling restoration of degraded stream and floodplain areas	4%	9%	17%	17%	26%	27%	100%
Storing carbon through alternative forest management practices	4%	7%	15%	15%	28%	31%	100%

Watershed Protection as a Treatment Cost Avoidance Strategy

The rationale for watershed protection is rooted in the concept of cost avoidance. In short, maintaining healthy natural systems reduces the need for water treatment, which reduces the capital and operations and maintenance costs associated with water treatment facilities. Cleaner raw water entering a treatment plant reduces the need for chemical inputs and formation of disinfection by-products as part of the treatment process.

EWEB staff worked with U of O School of Business to conduct a detailed cost avoidance study that modeled how changes in water quality would impact chemical treatment costs. The results indicate a nearly doubling of daily chemical treatment costs when turbidity levels in the river exceeded approximately 20 NTU (Skov et al., 2013). EWEB assessments and other research indicates that other costs avoided through investments in watershed protection include the need for additional physical treatment associated costs, regulatory triggers and costs (disinfection byproduct formation, plant effluent NPDES, raw and finished water quality, ESA species), restoration costs (riparian forest and wetland restoration), and reduced revenue from loss of public trust in its drinking water quality (WRI, 2013; EPA, 2012; Earth Economics, 2012).

The PWP program is an incentive-based strategy that aims to protect existing healthy riparian areas and restore degraded riparian forests along the McKenzie River through voluntary actions. As such, the PWP provides a more palatable alternative to additional land use regulation.

Acknowledging the value of healthy riparian areas, the PWP program seeks to reward landowners for management practices that benefit water quality. These rewards include financial incentives such as cash payments or vouchers for in-kind services such as developing landscape plans or implementing riparian area plantings. This incentive-based approach not only rewards good land management practices but also incentivizes property owners to restore degraded portions of their land, ultimately improving the ecological health of the watershed (OSU, 2012a).

In 2016, EWEB received grant funds from OWEB to conduct an economic analysis of the PWP and calculate a return on investment (ROI) for EWEB funds used to support the PWP (see Section 2.1). This was a very conservative analysis as it could only accurately model sediment and nutrient avoidance and removal from riparian forests and carbon sequestration value. As indicated earlier, the ROI for EWEB investments in PWP programmatic infrastructure and payments for long-term protection of healthy riparian forests was estimated at 2.4 years (Earth Economics, 2017).

For more information about the PWP program, see the University of Oregon Pilot Project Evaluation (UO, 2015) or visit www.purewaterpartners.org.

7.3.4 Regulations

Lane County riparian regulations include setback requirements for development and restrictions on the amount of vegetation that can be removed, but, as a UO study found, these regulations are not consistently enforced (UO, 2009). In addition, it is not unusual for landowners to get a variance for certain development standards.

Recently, the Federal Emergency Management Agency (FEMA) has been required by the National Oceanic and Atmosphere Administration Fisheries Service (NOAA Fisheries) to identify measures that will reduce negative impacts on salmon, steelhead and other species through its administration of the National Flood Insurance Program (NFIP). This would likely involve implementing new regulations limiting future development in floodplains and within a certain distance of rivers containing salmon. There is much uncertainty about what the new regulations might look like and some Oregon cities and counties are extremely concerned about the effect that this could have on development within their jurisdictions. EWEB source protection staff are hoping that the Pure Water Partners Program might be able to mitigate for some of the regulations and we will be following the implementation of this Biological Opinion closely. There will be interim measures in place by March 2018. If regulations in the future require landowners to protect the riparian areas that are under PWP agreements, EWEB has a clause in the landowner agreement that allows for renegotiation of terms or cancelling the agreement if actions are required under future regulations.

For more information, see the Department of Land Conservation and Development: http://www.oregon.gov/LCD/Pages/NFIP_BiOp.aspx.

7.3.5 Outreach

EWEB has worked with Bell & Funk to design the PWP program logo and produce brochures for both landowners and businesses that we can mail or distribute at local events (see Figure 7-1).

Figure 7-1. Pure Water Partners Program Logo



EWEB plans to do outreach to landowners about the PWP programs in partnership with the McKenzie Watershed Council, McKenzie River Trust, and Upper Willamette SWCD. This will take the form of targeted mailings to landowners, one-on-one contact, and public workshops. In addition, we will be relying partly on our pilot project landowners to be ambassadors for the program and help to recruit other McKenzie landowners. (In fact, this is happening already.) The PWP was successful in being awarded a grant from OWEB in 2017 for \$49,000 to fund recruitment of 40 landowners, of which 20 would be projected to sign PWP agreements over the next 2 years.

Landowner outreach will be focused and targeted to achieve the greatest chance for success and best value for EWEB's investments. Outreach will first focus on reaching out to landowners who have already worked with EWEB as part of the Septic System Assistance program, Healthy Farms Clean Water program or other efforts. In addition, inundation modeling, LiDAR analysis, future build-out analysis, and economic ROI calculations on tax lot scale will help us to target landowners whose properties would be most valuable for this program.

In order to recruit business sponsors for the program, EWEB staff (including Communications, Marketing & Research) will make one-on-one contact with area businesses to explain the PWP program and the various options for support. Lists of prospective business sponsors were developed during the pilot project work that engaged businesses as part of OSU/U of O research and business advisory groups (U of O, 2015a). These lists will be used to target businesses who have already expressed interest in PWP and have advanced knowledge of the program to recruit "founding" business partners.

7.3.6 Current and Potential Partners

- Cascade Pacific Resource Conservation & Development
- Lane Council of Governments
- McKenzie River Trust
- McKenzie Watershed Council
- Metropolitan Wastewater Management Commission

- Oregon Watershed Enhancement Board
- Oregon State University
- The Freshwater Trust
- University of Oregon
- Upper Willamette Soil & Water Conservation District
- Willamette National Forest, McKenzie Ranger District

7.3.7 Long Term Vision

Landowners will be educated and informed about the importance of healthy riparian areas to drinking water, recreation, tourism, and fish and wildlife habitat. Landowners will embrace the PWP program and participation will increase over the years. Landowners will also be ‘ambassadors’ for the program and help to spread the word by talking to their friends and neighbors. New funding sources will be plugged into the Watershed Conservation Fund, increasing the pace and scale of protection and/or restoration in the McKenzie Watershed. Over the next ten years, more than 50% of the acres in the PWP program boundary will be under agreement for long-term protection and/or restoration.

7.3.8 Recommendations Going Forward

The pilot project has been extremely helpful in designing the overall PWP program with landowner buy-in and we are now ready to scale up and enroll additional landowners.

EWEB plans to roll out the PWP program as a “soft” launch in the fall 2017 to not interfere or confuse messaging with McKenzie River Trust’s Home Waters fundraising campaign. This will allow completion of programmatic infrastructure development as part of a soft launch and leverage momentum from MRT’s campaign to do a full launch in 2018. This coincides with an OWEB technical assistance grant received in spring 2017 to conduct outreach efforts in concert with the McKenzie Watershed Council and UWSWCD and recruit new landowners to the program. It is recommended that the following efforts be conducted over the next 2 years to launch the PWP program:

1. Complete signing long-term agreements with the existing landowners who participated in the PWP pilot project and whose input helped design and develop the program. Many of these landowners have indicated their interest in being ambassadors for recruiting other landowners.
2. Develop and test the Watershed Conservation Fund using grant funds received from the U.S Endowment for Forests and Communities. This is a 2-year grant that funds legal and accounting expertise to design and build the fiscal management infrastructure, allowing for efficient use of outside funding for projects on the ground and reporting back to the funder to satisfy their requirements.
3. Complete development and signing of IGAs with USFS Willamette National Forest and Metropolitan Wastewater Management Commission to allow these funding sources to be used on PWP projects through the Watershed Conservation Fund.

4. Develop and implement a landowner outreach plan that provides strategic focus as part of OWEB grant to engage 40 landowners over a 2-year period with 50% success rate for signing PWP long-term agreements for protection and/or restoration activities.
5. Complete development of LiDAR algorithms that can analyze the 2009 and 2016 LiDAR flights for changes in canopy cover/riparian forests, new building structures and roads, and geomorphic changes in river channel and floodplain. This provides a baseline for future LiDAR flights to measure changes on a watershed scale to assess if the PWP program is having a desired impact on watershed protection over time.
6. Develop and enter into various agreements between PWP partners to memorialize the roles and responsibilities each plays in the PWP program for long-term consistency and efficiency. This allows any partner to promote the PWP and efficiently coordinate and direct incoming inquiries and work to the right place for timely response.
7. Engage the business community and sign-up the first 10-12 sponsors for PWP as founding members whose funds go through the Watershed Conservation Fund, providing tax benefits back to the businesses.

Outside Funding

OWEB continues to work with the watershed council, SWCD, Cascade Pacific RC&D, USFS, TFT, and other partners to apply for grants, both for program development and operation, as well as for specific on-the-ground projects with landowners. OWEB will be a likely source of funding, as well as the Metropolitan Wastewater Management Commission, the USFS (via stewardship contracting receipts), business sponsors, and others. The following is a summary of potential outside funding opportunities over the next 10 years:

- MWMC funds for riparian restoration projects that increase shade and provide water quality temperature credits toward compliance with their NPDES permit.
- USFS WNF retained receipts from stewardship contracting timber sales. Portion of retained receipts will be used on PWP riparian restoration projects that benefit Chinook salmon habitat.
- Business sponsorship for watershed protection that maintains clean water for our community.
- OWEB funds for increasing restoration and protection of salmon habitat.
- Trust and foundation funding for programmatic development and transferability for scaling up conservation.
- Mitigation funds from floodplain development, transportation projects, and hydropower impacts to salmon (BPA).
- Upper Willamette Soil & Water Conservation District future tax base with a portion dedicated to watershed conservation through the PWP program.

- Downstream water utility investment in the Upper Willamette as a source protection strategy for Willamette Basin (Corvallis, Tualatin, Hillsboro, Wilsonville, Sherwood, etc.).
- Potential for public-private partnership to package PWP program components for sale to other utilities pursuing watershed protection across the west.