EWEB's Drinking Water Source Protection
10-Year Strategic Plan
(2018-2028)

Drinking Water Source Protection (DWSP) Program Goal:

To measure the balance between watershed health and human use over time and implement actions that maximize the benefits EWEB receives through its investments in the McKenzie River Watershed.

Primary Objectives to Accomplish the Goal:

1. Plan and implement actions that maintain source water quality in a way that balances risks with benefits in partnership with others;

2. Prioritize source protection efforts that provide the greatest benefit to water treatment and electric generation in the McKenzie Watershed; and,

3. Promote public awareness and stewardship of a healthy watershed through targeted actions and programs.

Based on these goals and objectives, our long-term strategic approach is to operationalize source protection efforts in a way that aligns priorities, leverages resources, and integrates with partner actions and leadership through long-term agreements.

Main Programmatic Elements for Long Term Source Protection:

EWEB's drinking water source protection program follows the American Water Works Association (AWWA) G-300 standards for developing, implementing, and measuring effective source protection programs. The following summarizes the main programmatic elements of EWEB's approach to protecting the McKenzie Watershed. The attached map provides a geographic prioritization of EWEB investments and the main threats addressed by each program (see attached map).

Water Quality and Watershed Health Monitoring (Entire Watershed)

EWEB will measure and collect information on water quality in the McKenzie Watershed that informs water treatment operations around toxins, emerging contaminants, trends,

episodic events that impact the river and treatment, and other changes in watershed health.

1. *Constituent monitoring* consists of quarterly baseline monitoring, storm event monitoring during first flush winter and spring storms, and investigative monitoring that focuses on episodic events.
2. *Harmful algal bloom monitoring* is conducted in the upper watershed between April to September to assess and quantify algal type and production of toxins in reservoirs and at intake.
3. *Continuous monitoring* occurs at various USGS and EWEB operated gaging stations in the lower and middle portion of the watershed to assess changes in general water quality, stream flow, and optical properties (UV and florescence) in real time to identify potential problems and trends that may impact drinking water quality and treatment.
4. *Monitoring data management and analysis* is conducted to interpret water quality trends, identify emerging issues, increase knowledge and understanding of watershed conditions and impacts from climate change, and provide regular reporting to treatment plant, management, Board and public through a variety of outlets.

McKenzie Watershed Emergency Response System (MWERS) (Entire Watershed)

EWEB will maintain a watershed emergency response system in close partnership with first responders that allows for efficient and effective response to hazardous material spills, which will reduce the magnitude and duration of impacts to the McKenzie River. This GIS-based web application provides critical information to first responders by allowing them to search for pre-determined spill response strategies, equipment, critical resources, and personnel; generate reports with travel times based on flow rates; and coordinate and communicate response efforts. Partners conduct interagency annual training and drills using interagency spill response trailers staged throughout the watershed to maintain and hone skills using this equipment and test pre-determined response strategies.

Urban Runoff Mitigation (Lower Watershed Focus)

EWEB will implement actions that mitigate, treat, and/or eliminate urban runoff from all five stormwater outfalls upstream of the Hayden Bridge intake. Project work will include constructing wetlands that will treat and buffer urban runoff and capture hazardous material spills for cleanup. These will be located immediately upstream of the Hayden Bridge intake at the 52nd Street outfall and at the confluence of Cedar Creek with the McKenzie River. These two wetland projects will treat/buffer urban runoff from four of the five outfalls above EWEB's intake. The remaining stormwater outfall will be addressed by re-routing stormwater runoff from the 42nd Street stormwater basin to the Q Street channel. This will eliminate outfall discharges to Keizer Slough. This will be a City of Springfield project that leverages EWEB investments in the 52nd Street wetland project.

Pure Water Partners (PWP) (Middle and Lower Watershed Focus)

EWEB will invest in the protection of riparian and floodplain forests as effective natural systems for treatment of pollutants, mitigation of floods, reduction of sediment, and increasing fish habitat that benefits water treatment and electric generation. EWEB's Pure Water Partners program is designed to reward good stewardship through incentives to landowners who maintain healthy riparian areas over the long term while facilitating restoration on degraded portions of their properties. Through this program, partner agencies conduct riparian health assessments to measure and identify riparian conditions on landowner properties that need restoration or which qualify for protection of healthy riparian forests. EWEB (or future Pure Water Partners legal entity) enters into long-term agreements with interested landowners that outline allowable uses in a management plan, provide incentives/compensation to the landowner, and/or assist the landowner in finding funding for restoration work. The McKenzie Watershed Conservation Fund, managed by Cascade Pacific Resource Conservation & Development (dba Pure Water Partners), manages funding from multiple sources (EWEB, Metropolitan Wastewater Management Commission, USFS Willamette National Forest, Oregon Watershed Enhancement Board, foundations, business sponsors, etc.) for protection and restoration actions on the ground. A governance structure will be developed by 2019 to create the Pure Water Partners as a legal entity that oversees and directs Fund management and could hold landowner agreements.

The PWP program boundary is based on mapped areas in the watershed that have a high likelihood of inundation and where healthy riparian forests would have the greatest benefit to treat pollutants, reduce erosion, mitigate flood impacts, and increase fish habitat.

Acquisition/conservation easement opportunities in high priority areas will become more plentiful as the PWP program engages hundreds of landowners. Establishing a mechanism to take advantage of these opportunities is critical to moving the 15-20 year PWP agreements into permanent protection. The McKenzie Watershed Council currently manages Generation funds (per FERC license Articles 412 and 413) for acquisitions & conservation easements that are then held by the McKenzie River Trust, and this mechanism could be used to leverage future opportunities that arise through PWP.

Septic System Assistance (Middle and Lower Watershed Focus)

EWEB will work with McKenzie homeowners to reduce the impacts of septic systems on water quality. The septic system financial assistance program provides a 50% cost-share assistance to homeowners to pay for inspection, pump-out, and completion of minor repairs. Homeowners with failing septic systems may apply for zero-interest loans (loan program is currently administered by EMS) to repair or replace these failing systems.

Healthy Farms Clean Water (Middle and Lower Watershed Focus)

EWEB will work with McKenzie farmers to reduce chemical use and increase riparian buffers that benefit water quality. The Healthy Farms Clean Water program focus areas include reducing chemical use and storage on farms by offering cost-share and technical assistance from partners to reduce pesticide use through on-farm projects, agricultural chemical removal events, nutrient management and organic certification. In the future, farmers can access zero-interest loans (administered by EMS) for projects that benefit water quality, allowing them to leverage Federal NRCS funds that require landowner match. This program recognizes the value of farmland as a preferred floodplain land use to increased development.

Healthy Forests Clean Water (Middle and Upper Watershed Focus)

EWEB will work with partners to increase forest health that reduces wildfire risks, protects water quality, increases fish and wildlife habitat, and generates revenue for watershed restoration that benefits water treatment and electric generation. The Healthy Forests Clean Water program consists of two main components. First, EWEB participates in a stewardship contracting collaborative process with the US Forest Service and other watershed partners. Through this effort, retained receipts generated from timber harvests on federal lands stay in the watershed and can be used to fund restoration projects on the Willamette National Forest and on private land through the Pure Water Partners program. The second part is to manage EWEB's Leaburg Forest to increase habitat that benefits Generation FERC license requirements and protect water quality while generating revenue through small patch cuts and thinning.

For more details about each of these programmatic elements and the threats they are designed to address, please see EWEB's Strategic Planning Technical Report (2018-2028). This comprehensive report was developed to support the planning process that generated this strategic plan.

Operationalizing Source Protection

There are two elements to operationalizing the DWSP program: one is through greater integration with Hayden Bridge and electric Generation; and the other is through establishing programmatic infrastructure that allows consistent and predictable engagement across the main DWSP elements by EWEB and its partners.

EWEB's source protection staff will work to integrate the DWSP program with Hayden Bridge, provide value to water treatment decisions and increase efficiency of water quality work. Some of these efforts will include spill notification, response, and monitoring; reducing analytical costs through shared use of outside laboratory services and using the Hayden Bridge Water Quality Lab for regular DWSP analysis; using daily operator logs to add source protection observations, trends, and events that add value to treatment decisions; providing seasonal and episodic event information around organic carbon load, characteristics, DBP potential, and

taste & odor issues; looking at emerging watershed issues, trends, impacts, changes, timing, and flows; and, exploring efficiencies that can be achieved by working with the water quality lab.

Source protection will also support the McKenzie Hydroelectric Generation facilities through testing and maintaining effective spill response capabilities that could reduce impacts from EWEB hydro-plant releases, providing habitat mitigation opportunities that leverage partner investments and resources to increase scope and impact of Generation efforts, and strengthening relationships with key partners (USFS, DEQ, ACOE, ODFW, MF&R, Lane County, ODOT, USGS, UO, OSU) that add value to Generation operations and FERC license management.

Finally, operationalizing source protection is happening through establishment of: programmatic infrastructure (largely completed) allowing for more efficient, effective, and consistent approaches by EWEB and its partners to watershed protection and restoration actions; and, long-term IGAs and agreements with partners to memorialize roles, responsibilities, funding, and priorities. Staff will continue to report on metrics/measurements of success and engage our customers through the PWP program, website and other venues.

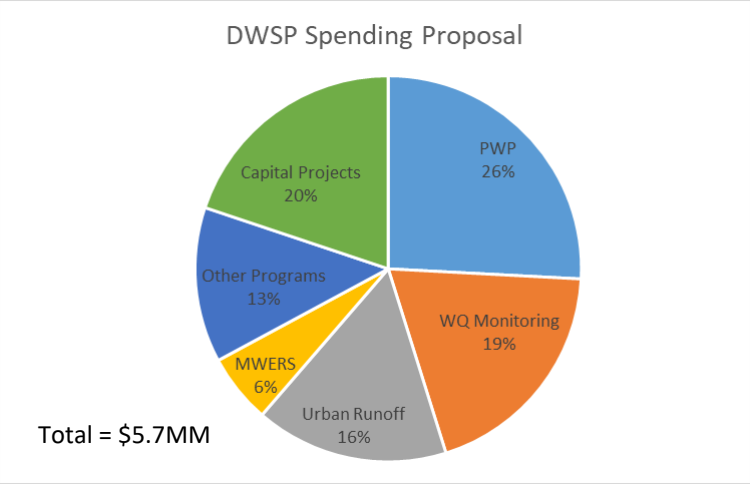
Alignment with the 2017 EWEB Strategic Plan

EWEB's Source Protection Program aligns with EWEB's 10-Year Strategic Plan by fostering customer confidence (phase I) through the protection of drinking water source(s) and allowing EWEB to maintain excellent water quality. Source protection can also support the development of emergency water sources (decentralized wells) through water quality monitoring of wells and small scale source protection assistance in the immediate area around these wells, which aligns with resilient delivery (phase II). Source protection opens up opportunities for customers to be involved in other services through EWEB around ecosystem service markets and carbon off-set markets (phase III). Source protection efforts align well with the organizational core values, especially with being responsible through local stewardship of critical natural resources with prudent use of our customer's limited funds. In response to the affordability initiative, the source protection program reduced costs by 10-15% without impacting the programs capability to effectively do this important work on behalf of our customers. Finally, EWEB's mission statement to 'enhance our customers' vitality by delivering drinking water [and electric services] consistent with the values of our customer owners' is very relevant to the source water protection program. Customer surveys consistently show water quality and watershed protection as the highest values and priorities for EWEB.

Financial Impact of the DWSP Strategic Plan:

The DWSP Strategic Plan proposes activities over the next decade, including a 5-year outlook of expenditures of approximately $5.7 million with $4.6 million allocated to programs and $1.1 million in capital investment. EWEB spending levels on DWSP will typically range between $1.0 - $1.5 million in any particular year. The DWSP Strategic Plan proposes spending in the following areas.

Strategic Area	5-Year Spending
PWP	$1,470,000
WQ Monitoring	$1,100,000
Urban Runoff	$920,000
MWERS	$330,000
Other Programs	$740,000
Capital Projects	$1,130,000
Total	$5,690,000



The DWSP program supports EWEB revenue generation of approximately $900,000. Additionally, the external programs and projects included in EWEB's DWSP Strategic Plan (e.g. Pure Water Partners) is forecasting outside funding sources of approximately $3 million over the next five years.

McKenzie Watershed Source Protection - General Focus Areas

Lower McKenzie

Primary Threats:
Urban Runoff
Truck Spills
Rural Residential/Septic
Agriculture
Illegal Camps
Industrial Releases

Programs:
Urban Runoff Mitigation (D)
Septic System Assistance (D)
Healthy Farms Clean Water (Ag)
Pure Water Partners (D, Ag)
Illegal Camping (D)
Baseline Monitoring (All)
Storm Sampling (All)
Continuous Monitoring (All)
MWERS (S)

Middle McKenzie

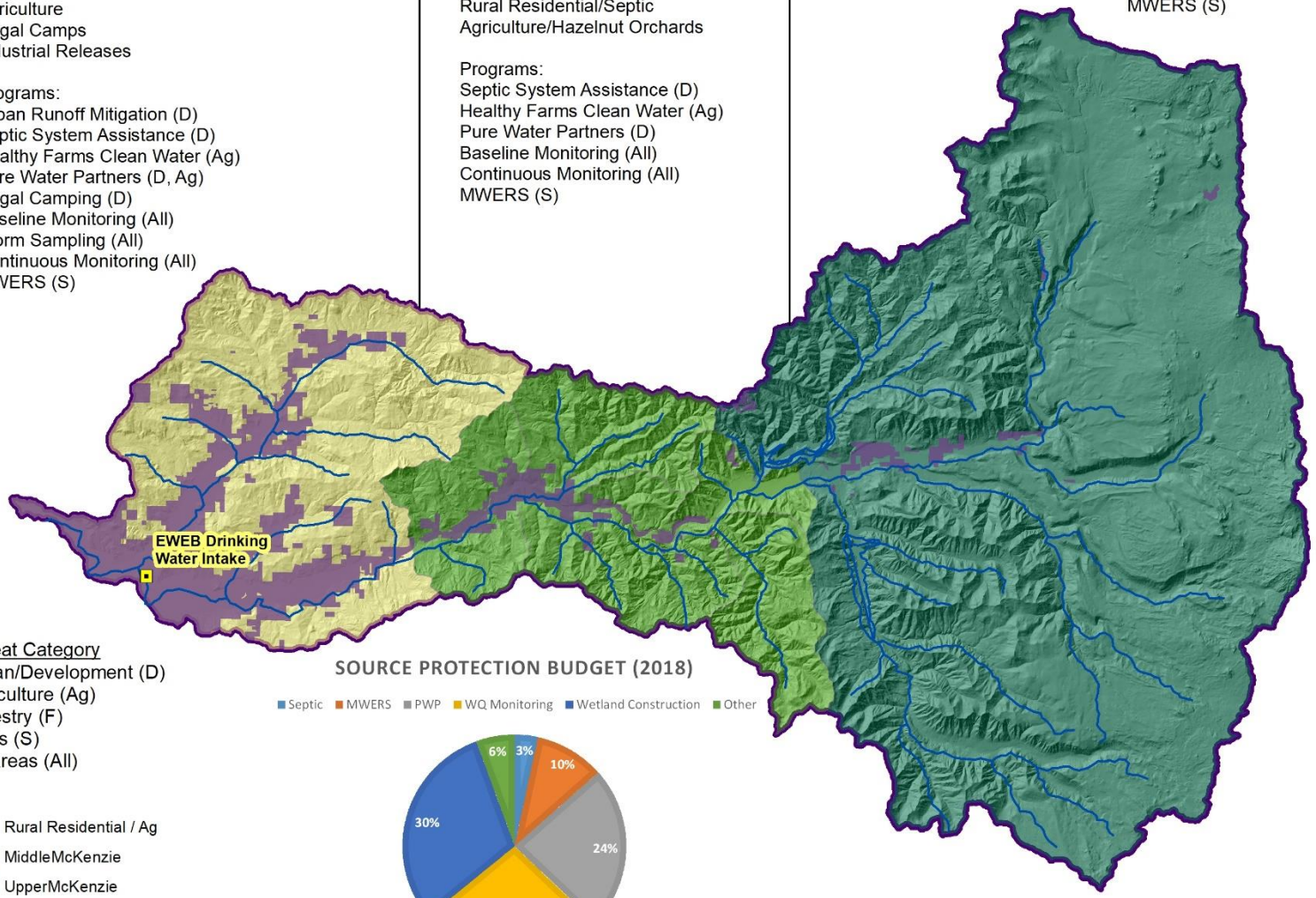
Primary Threats:
Truck Spills
Forest Fires/Fire Suppression
Private Industrial Forestry Activities
Rural Residential/Septic
Agriculture/Hazelnut Orchards

Programs:
Septic System Assistance (D)
Healthy Farms Clean Water (Ag)
Pure Water Partners (D)
Baseline Monitoring (All)
Continuous Monitoring (All)
MWERS (S)

Upper McKenzie

Primary Threats:
Truck Spills
Forest Fires/Fire Suppression
Harmful Algal Blooms (HABs)

Programs:
Stewardship Contracting (F)
Baseline Monitoring (All)
HAB Monitoring (All)
MWERS (S)



Threat Category
Urban/Development (D)
Agriculture (Ag)
Forestry (F)
Spills (S)
All Areas (All)

Rural Residential / Ag
MiddleMcKenzie
UpperMcKenzie
Lower McKenzie
McKenzie Watershed Bndry

SOURCE PROTECTION BUDGET (2018)

0 5 10 20 Miles

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