



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Schlossberg, Brown, Carlson, Barofsky and McRae
FROM: Karl Morgenstern, Watershed Restoration Program Manager
DATE: January 20, 2021
SUBJECT: McKenzie Watershed Recovery and Restoration Plan
OBJECTIVE: Provide General Direction for March 2021 Board Action

Issue

The Holiday Farm Fire burned 173,000 acres and destroyed over 430 homes in the middle McKenzie Watershed inflicting significant damage to Eugene's sole source of drinking water. EWEB currently leads the Watershed Recovery Task Force (one of several task forces that are part of Lane County's Emergency Operations Center) in response to the fire to stabilize ash, debris and hazardous waste from destroyed homes, implement erosion control on high priority burned areas, and conduct focused replanting using native species. The following discussion outlines the next proposed phase of recovery efforts EWEB is planning to take advantage of the fire build efforts and with ready partners.

Background

In 2018, EWEB's Board approved a 10-year strategic plan to protect the McKenzie Watershed as EWEB's sole source of drinking water. The programs and partnerships developed in support of implementing this strategic plan are now being leveraged as part of the initial response to the Holiday Farm Fire and to provide large scale watershed restoration efforts over the longer term.

The devastation from the Holiday Farm Fire (HFF) resulted in a direct and immediate threat to water quality. The most immediate threat comes from hazardous substances contained in siding, roofing tiles, insulation, paint, carpeting, furniture, asbestos, and other household items and agricultural materials consumed by the fire and deposited as ash and debris along the river. On October 6, 2020, the Board passed Resolution 2024 authorizing \$1,000,000 for implementing immediate actions in response to this direct threat to Eugene's drinking water (see Board Memo dated 9/25/20).

The focus of EWEB's initial response was to identify high priority properties for intervention and stabilize them until the EPA and State agencies could respond to remove and dispose of the hazardous waste, ash/debris, asbestos, and other materials. In a parallel effort, EWEB worked with the Pure Water Partners (PWP) to pivot the coalition's work towards supporting upriver landowners with burn assessments and erosion control measures.

The following is a chronological summary of the Watershed Recovery Task Force's initial response:

- Expanded the existing network of real-time water quality stations to provide an early warning for high turbidity and organic carbon events to allow Hayden Bridge to adjust treatment

accordingly and increased water quality monitoring using the EWEB Water Quality Lab for many of the analyses;

- Launched outreach effort including tabling at Lane County Events Center, traditional and social media and website to encourage HFF impacted landowners to sign up for waste stabilization and burn assessments. This included use of DocuSign to enable landowners to sign access agreements remotely and track the process more efficiently, as well as posting an EWEB Ambassador at the Vida Relief Center about ten hours/week to help answer landowner questions;
- Conducted an immediate response to stage and cover hazardous waste, pull back ash & debris, and/or install erosion control (wattles and silt fencing) between the destroyed home and the adjacent river or creek at nearly 80 high priority properties;
The GIS team, led by Lane Council of Governments (LCOG), conducted a watershed analysis using burn severity, slope, proximity to water, presence of destroyed structures, etc. to prioritize PWP efforts. The GIS team also built tools to collect burn assessment data and build reports for participating landowners, and established a web-based dashboard for the public to track progress at:
<https://lcog.maps.arcgis.com/apps/opsdashboard/index.html#/4d4d7b5d84d74245b6078c523aaa33a9>;
- Worked with local erosion control experts from the City of Eugene to develop 12 erosion control Best Management Practice (BMP) designs. The PWP partners (McKenzie Watershed Council, Upper Willamette Soil & Water Conservation District, and McKenzie River Trust) conducted burn assessments on over 220 high priority properties to identify hazard trees and design erosion control BMPs tailored to each property;
- Implemented erosion control BMPs (hydroseeding, check dams, wattles, silt fencing, jute mats, etc.) on over 90 properties with the support of Northwest Youth Corps and later, local contractors;
- Established a multi-agency Funding Opportunities Team to work with FEMA and Oregon Emergency Management representatives to develop grant applications for over \$4 million in requests for emergency response reimbursement and future watershed restoration work;
- Given the onset of winter rains and multitude of hazards to public safety and infrastructure due to the fire (potential for debris flows, flooding, fallen trees, large wood build-up on bridges and at Leaburg Dam, plugged culverts, etc.) LCOG built a notification system that allows agency partners and river guides to quickly capture a picture and location of a hazard and send notification to trigger an appropriate response by the responsible agency; and,
- Supported the EPA's mission in late November 2020 to remove and dispose hazardous waste and stabilize the remaining nearly 60 high priority properties with destroyed homes along the river where EWEB did not have signed property access agreements. The Oregon Department of Transportation (ODOT) initiated their response to remove additional hazard trees and dispose of ash/debris, asbestos and other destroyed materials in late January 2021.

The next phase of watershed restoration efforts will focus on revegetation using native plant species provided by the Bonneville Environmental Foundation. The PWP plans to replant nearly 100 acres of high priority burned riparian and floodplain areas while continuing installation of erosion control BMPs and inspection/maintenance of BMPs already in place.

Discussion

As the previous section demonstrates, the combination of Board's initial investment and the existing

upriver partnerships enabled early intervention to mitigate some of the highest risks to water quality. While we are still quantifying the scope and magnitude of damage to the watershed, on-going commitment is needed to protect the McKenzie River and support watershed recovery. The following discussion focuses on establishing the intended outcomes and level of investment towards these efforts in the 2021 water budget amendment and over the next four years.

This investment aligns with EWEB’s 10-Year Strategic Plan by fostering customer confidence (phase I) through the protection of drinking water source(s) and preservation of EWEB’s excellent water quality. It is also aligned with customers’ highest priority EWEB service – providing a clean and reliable drinking water source. To maintain water quality in the face of post-fire impacts requires a multi-barrier approach starting with actions in the source to reduce impacts as much as possible to allow the Hayden Bridge filtration plant to optimize treatment that is then monitored and managed within the distribution system to maintain water quality to the tap. The risks to discontinued investment in watershed restoration include not only increased treatment costs to manage sediment and higher nutrient loads, but also higher risk that some contaminants will break-through and reduced water quality in the distribution system.

The watershed restoration plan includes three categories of investment that the Board can dial up or down based on fiscal considerations and other factors to achieve the right balance for the greatest good. These three categories include: 1) risk-based early actions; 2) longer-term resilience actions; and 3) strategic actions. In general, risk-based actions mitigate the more egregious situations while planning the longer-term resiliency investments to address larger scale issues of flooding, debris flows, and erosion from severely burned timberlands through landscape solutions like floodplain restoration downstream of burned areas. The strategic investment is to design a carbon sequestration program that uses reforestation and conservation of fire-impacted industrial timberlands via acquisitions or conservation easements to create a carbon offset program available to our customers and others. Table 1 summarizes the purpose and types of actions conducted under each of these response categories

Table 1: Watershed Restoration Actions

	Risk-Based	Resiliency	Strategic
Purpose	Early actions to reduce erosion from high burn areas and incentivize smarter rebuilding along the river	Floodplain restoration to spread-out flows, drop-out sediment, and adsorb carbon and floods	Carbon sequestration projects that benefit watershed restoration to launch carbon product line
Actions	Erosion control BMPs; revegetation; incentives for smart rebuilding (e.g. improved septic systems)water quality monitoring & early warning network;	Floodway acquisitions of destroyed homes; large scale floodplain restoration in Quartz Cr., Gate Cr., and Finn Rock Reach	Large scale reforestation of severe burned areas on industrial timberlands to generate carbon off-set credits
Dial-up	Increased acres of replanting and erosion control depends on	Current opportunities may open-up more acquisitions or	Given current opportunities able to convert more severely

	landowner access agreements; Landowner smart rebuild incentives limited by eligibility	conservation easements to conduct larger scale floodplain restoration	burned industrial timberlands into conservation management for generating carbon sequestration credits
Dial-down	Reduction of erosion control and replanting acres and/or landowner smart rebuild incentives forces decisions on where to work	Reduction would force further prioritization of which floodplain opportunities to pursue in an opportunity rich environment	Reduction would focus carbon investments to specific areas in an opportunity rich environment

All proposed actions will be performed using the Drinking Water Source Protection (DWSP) 10-Year Strategic Plan goals of working closely with partners and stakeholders to implement actions that mitigate and protect water quality while promoting long term stewardship of a healthy watershed. It should be noted that the actions proposed for post-fire restoration were already part of the DWSP 10-year strategic plan and essentially EWEB will be accelerating spending now to reduce future need for increased investment.

Funding for 2021 is critical to the success of risk and resiliency programs already started in 2020. To accomplish this work in 2021 we are proposing a budget of approximately \$3.9 Million which includes \$500,000 out of the \$1 Million approved in the fall of 2020. For budgetary context, in the 2020 status report to the Board of the drinking water source protection program, we reported that the total Water Division budget is around \$6 million annually, EWEB annual budget for our source protection program is around \$600,000 and outside matching funding is around \$500,000.

Figure 1: 2021 Proposed Investment Levels

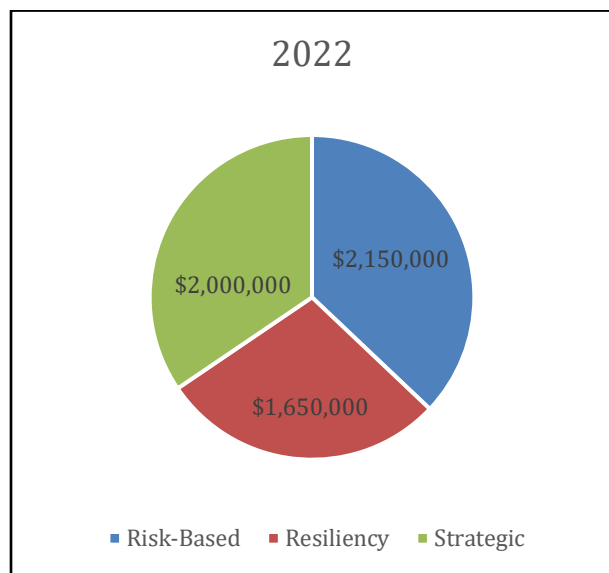


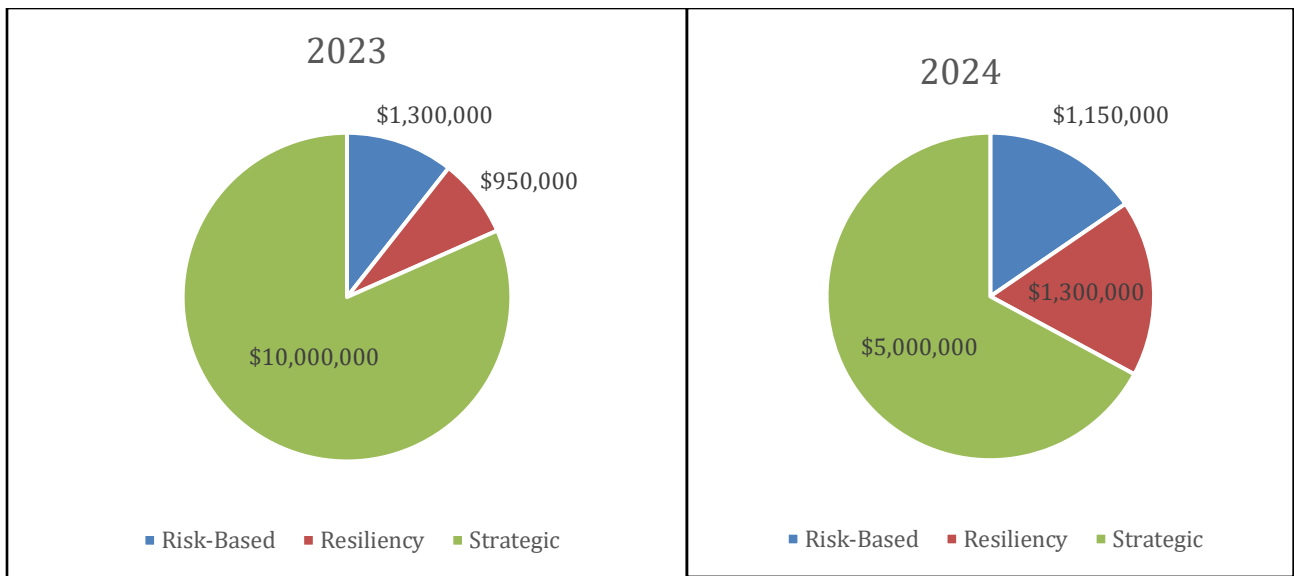
For resiliency actions in 2021, EWEB’s investment will be matched with McKenzie River Trust fund- raising efforts support acquisition of floodway properties with destroyed homes to prevent rebuilding in unsafe areas and facilitate floodplain restoration. These opportunities may not be available once landowners rebuild in existing footprints. In addition, EWEB and partners will work with timberland owners to acquire land or conservation rights in key floodplain areas for large scale restoration. This investment will set the stage for FEMA funding to conduct large scale floodplain restoration projects when funds are available in 2023.

The investment levels to support implementing risk-based, resiliency, and strategic actions over the next four years are reflective of the time-sensitivity for revegetating denuded landscapes, landowner plans to rebuild or sell their properties, and when FEMA grant funding may become available. For example, a risk-based incentive package to encourage landowners to move homes back from the river and increase septic system treatment needs to be offered early in 2021 to allow those who decide to rebuild to take advantage of these incentives.

After the first two years when most properties have either been rebuilt or sold, watershed investments would lean more heavily towards strategic-based actions. Strategic programs, such as carbon credit development programs, represent the easiest method to scale yearly expense on the restoration work. We will focus on spending in years 2022 to 2024 per the normal budget process.

Figure 2: 2022 to 2024 Proposed Investment Levels





To provide funding for the risk and resiliency projects Management will be proposing a surcharge. The surcharge would be scaled based on the board’s desired level of investment. Larger strategic projects may be funded with bonds. We will also be pursuing FEMA and other sources of grant money to offset EWEB ratepayer costs.

In all cases, EWEB’s investments will be leveraged against other funding sources. These include not just FEMA grants, but also State funds such as Oregon Watershed Enhancement Board (OWEB) grants and other Wildfire Recovery funds and funding opportunities available through Lane County. Staff continues to explore any and all opportunities to leverage additional support towards recovery of our watershed.

TBL Assessment

EWEB’s investments in risk-based, resiliency, and strategic actions to restore the McKenzie Watershed after devastating impacts from the Holiday Farm Fire will increase sequestered carbon, create significant economic benefits to local businesses and employment for impacted families.

Recommendation

This backgrounder is for information purposes only to facilitate a discussion with the Board around recommended investment levels for 2021 and how this 2021 spending may fit in over the next four years. This feedback and direction will be used to identify funding sources and to craft the 2021 water budget amendment to fund watershed restoration work. Management will return with a budget amendment at the March 2, 2021 Board meeting.

Requested Board Action

For discussion, feedback, and direction only.