Pure Water Partners

A collaborative response to the Holiday Farm Fire

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Discussion Summary

- Initial Response – the early days
- Watershed Recovery Task Force/Pure Water Partners response and restoration efforts
- Watershed Restoration Plan
- Watershed Recovery and Restoration Funding Picture

Threats

Toxic ash, debris, asbestos, hazardous materials, metals, nutrients, sewage, sediment, and organic matter washing into waterways.

Photos taken shortly after having access to fire impact area

Launched Immediate Actions

Within 1 Week after Board approved $1 million for response:

- Web portal in place to sign up landowners
- GIS field tools developed (version 1.0)
- 8 surveyors trained & burn assessments in full swing (14 completed)
- Hazard tree crews from Eugene supporting
- 11 erosion control BMPs researched & developed
- 33 destroyed homes ash/debris stabilized w/erosion control
- NYC crews trained to install erosion control and making wattles

PURE WATER PARTNERS

Holiday Farm Fire Erosion Protection

Sediment Fences

What are they?

Sediment fences are made of 4' woven geotextile fabric with wooden or metal stakes. They are available commercially as a pre-assembled product or can be made with materials from hardware stores. Sediment fences effectively trap sediment by ponding water to settle sediment when installed correctly (see back - Figure 1).

Where should they be used?

They are not intended to be installed in areas with concentrated surface flow like creek beds or ditches. Instead, they should be implemented in areas where runoff is more dispersed over a broad flat area. Sediment fences should be used in areas with low to moderate slopes. Sediment fences should be installed parallel to the contour of the slope and anchored into the soil **(Photo 1).**

Sediment fences come in two basic types:

• Non-pocketed sediment fence can be installed without trenching, by laying the bottom 6" of fabric flat on the soil, uphill, and piling soil/rock on the flap of fabric to create the "dam" effect. This is can be done on rocky soils and steep slopes.

• Pocketed sediment fences have sewn-in pockets for the wood stakes, and require that the bottom 6" of the fence be buried in the soil to prevent surface flow from running under them - typically by trenching. This can be a challenge on steep slopes, or in rocky soils.

Photo 1. Sediment fence installation

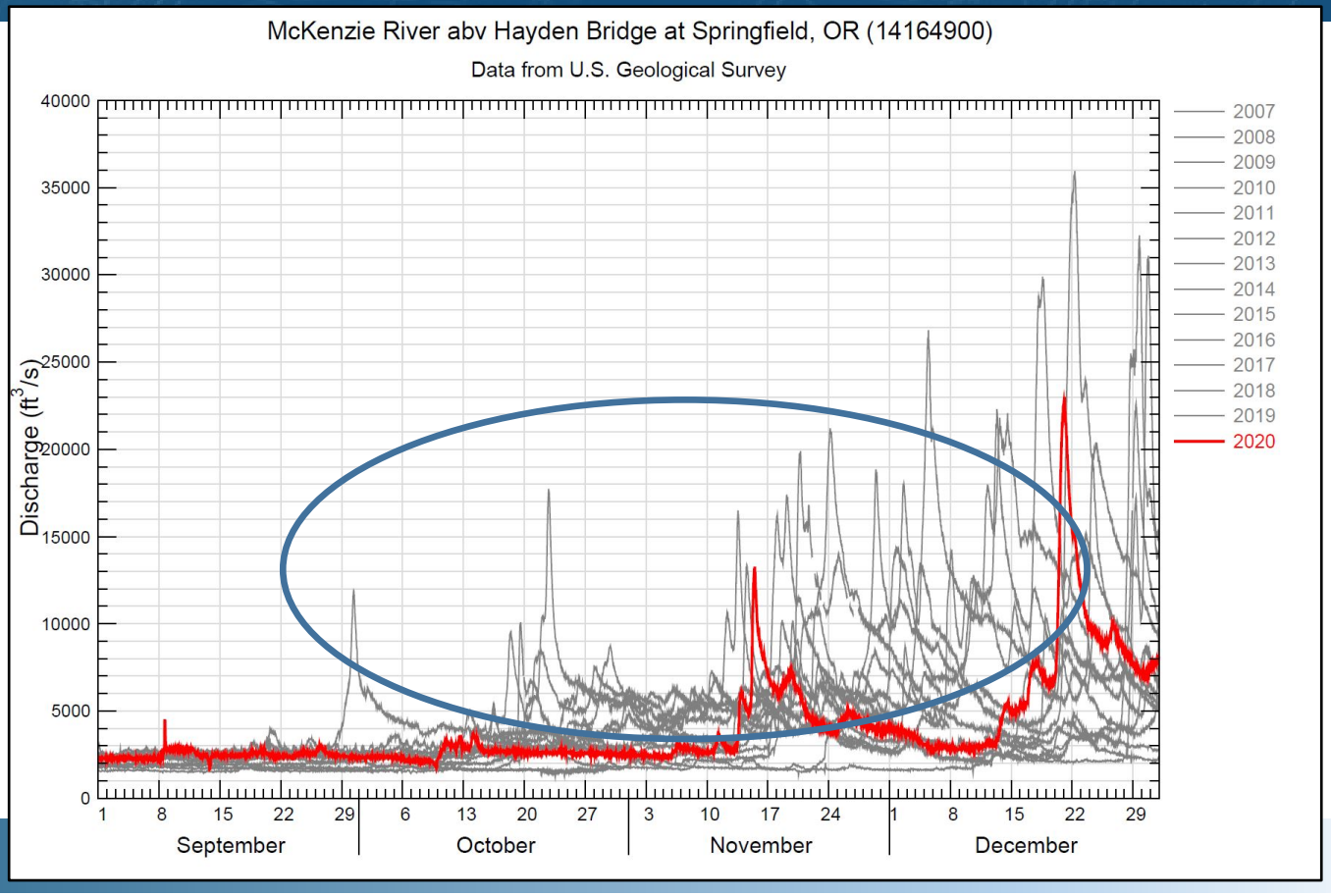
Resources:

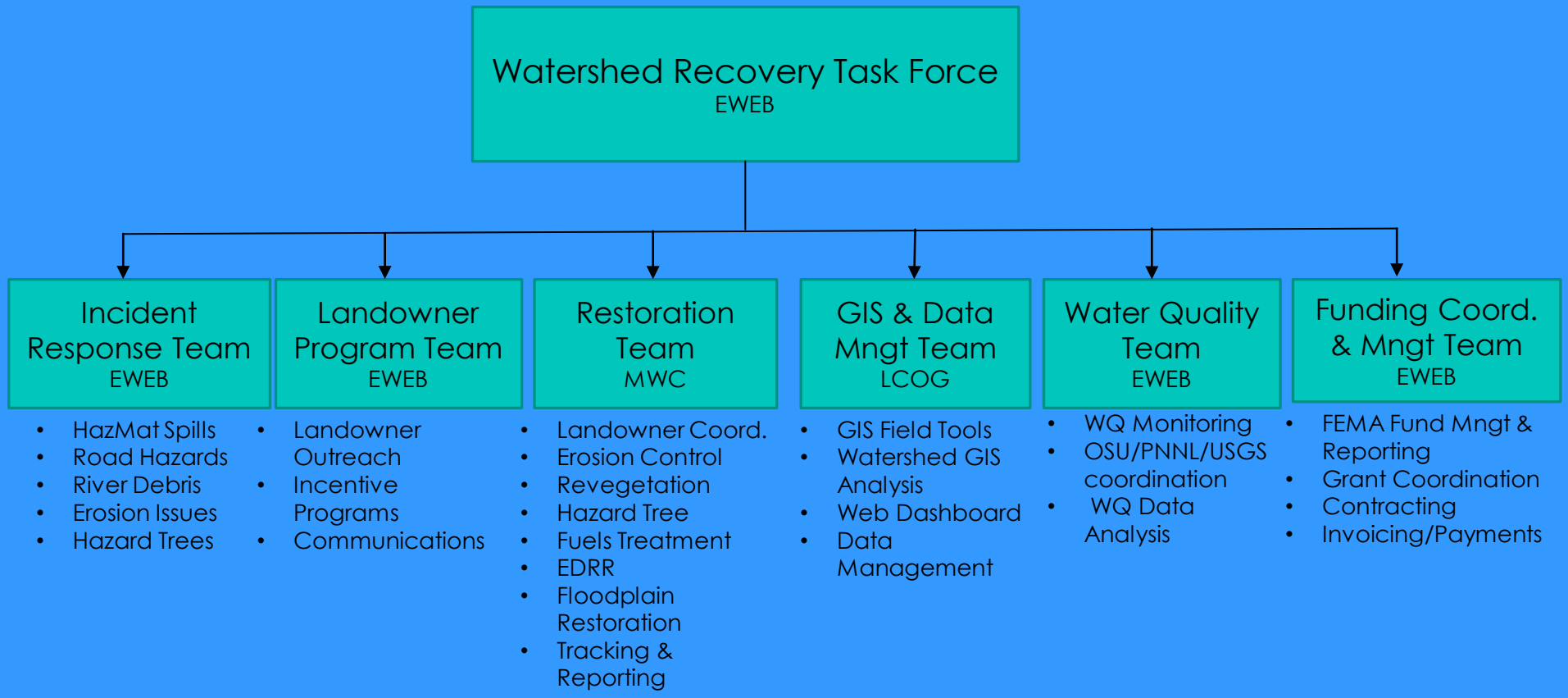
The Pure Water Partners (PWP) program is working to place silt fences on select sites as part of an integrated approached to erosion management on private properties impacted by the Holiday Farm Fire. If you are interesting in assistance with erosion control and riparian restoration please sign up for a PWP site assessment by visiting ***www.purewaterpartners.org***

Visit ***www.purewaterpartners.org*** to request a site assessment or for more information

Responding in Race Against Fall Rains

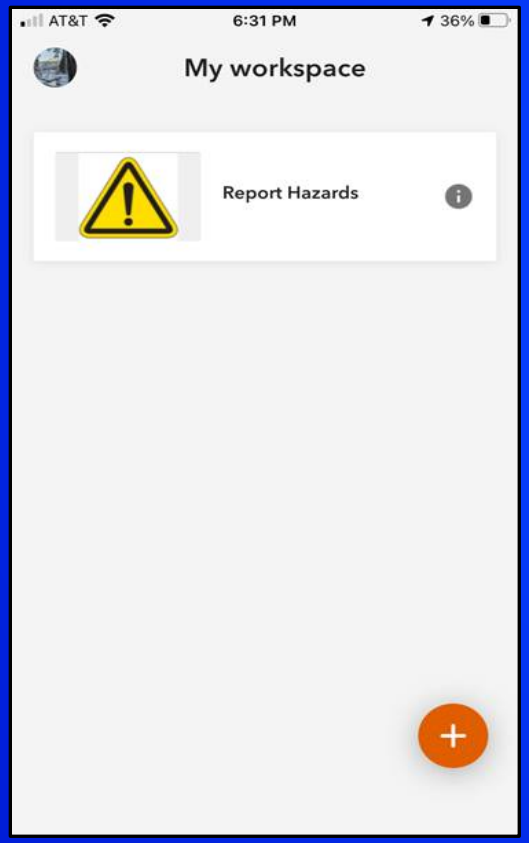
Thankfully only one Major storm over 3.5 Months after the HFF.

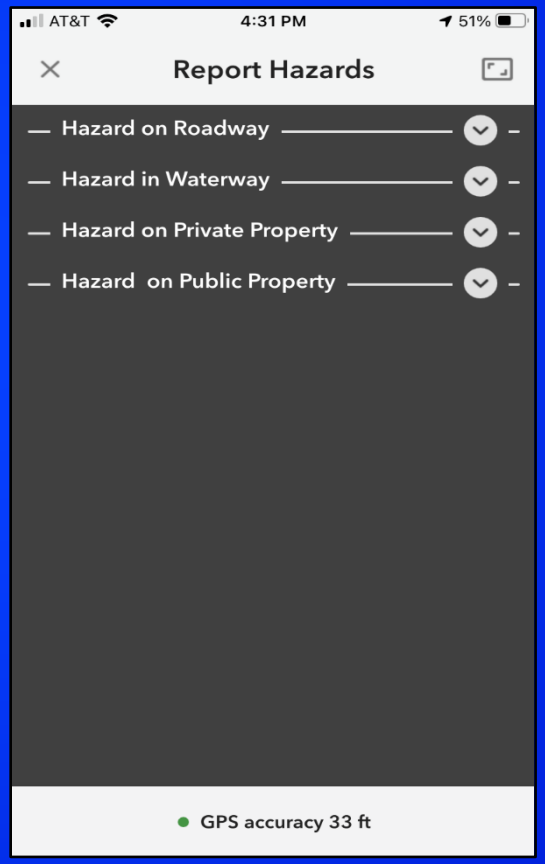



Watershed Recovery Task Force
EWEB
Incident Response Team
EWEB
HazMat Spills
Road Hazards
River Debris
Erosion Issues
Hazard Trees
Landowner Program Team
EWEB
Landowner Outreach
Incentive Programs
Communications
Restoration Team
MWC
Landowner Coord.
Erosion Control
Revegetation
Hazard Tree
Fuels Treatment
EDRR
Floodplain Restoration
Tracking & Reporting
GIS & Data Mngt Team
LCOG
GIS Field Tools
Watershed GIS Analysis
Web Dashboard
Data Management
Water Quality Team
EWEB
WQ Monitoring
OSU/PNNL/USGS coordination
WQ Data Analysis
Funding Coord. & Mngt Team
EWEB
FEMA Fund Mngt & Reporting
Grant Coordination
Contracting
Invoicing/Payments

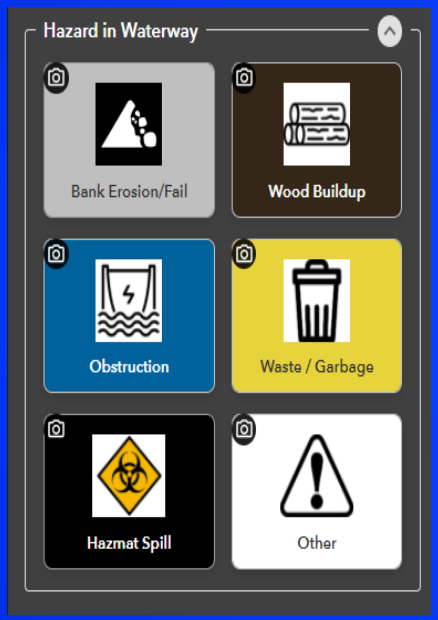
INCIDENT RESPONSE TEAM

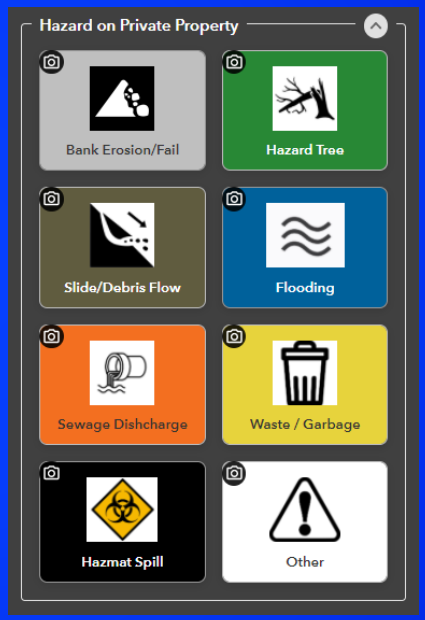
McKenzie Hazards Reporting System is used by over 25 agencies & organizations working in the watershed (including the river guides)

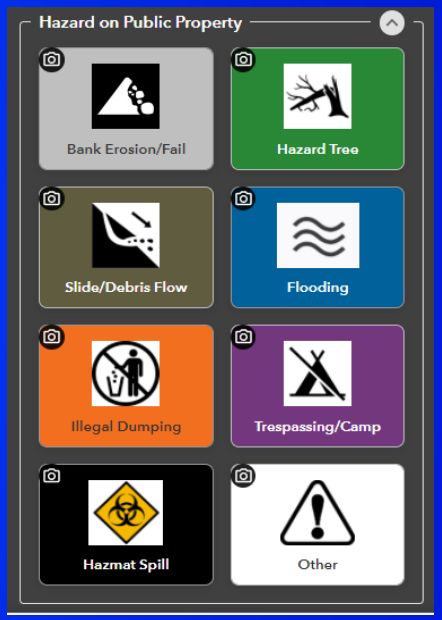




For each hazard category you can then select the type of hazard

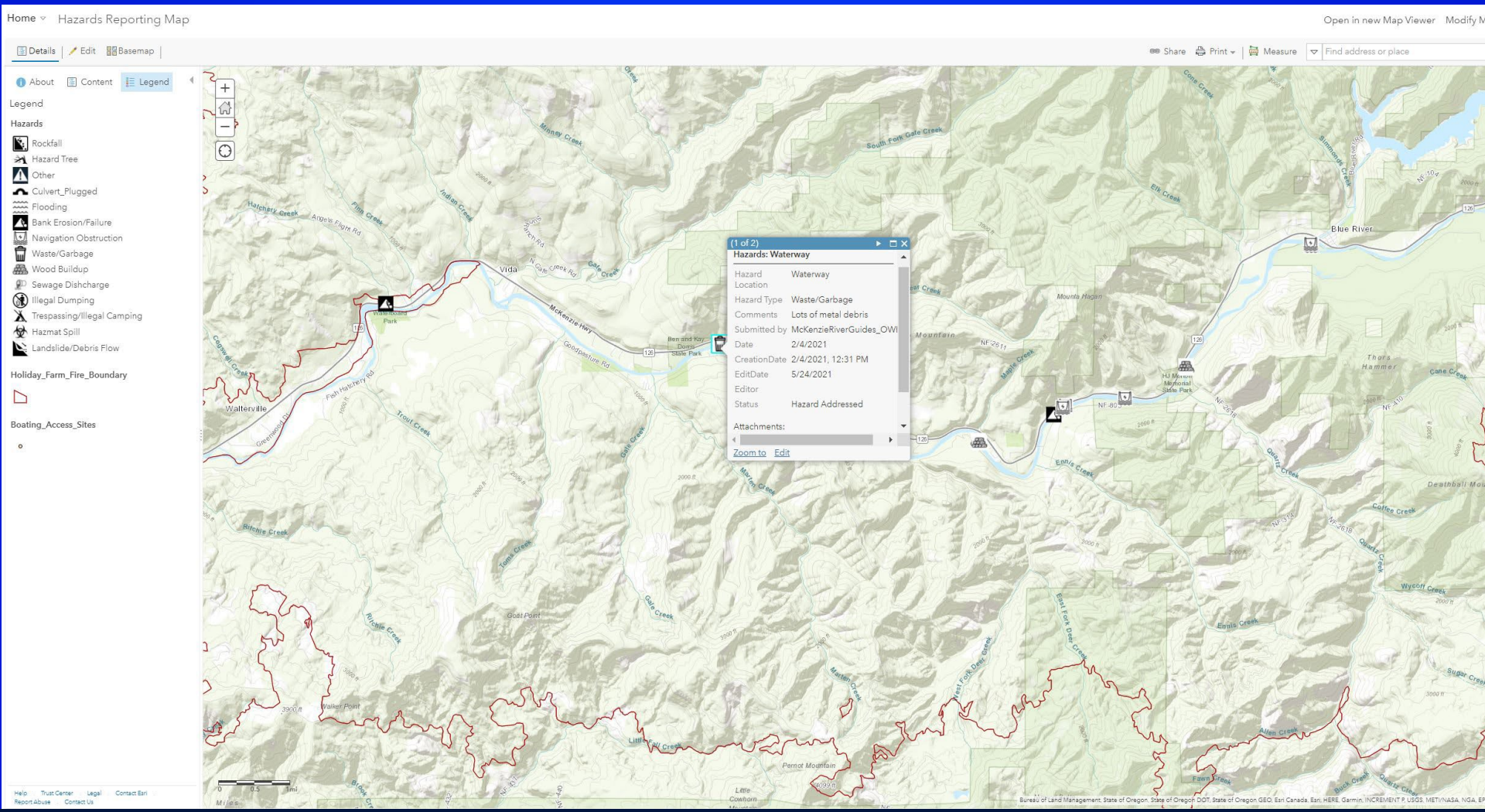






Once selected sends text and email notification to all participants

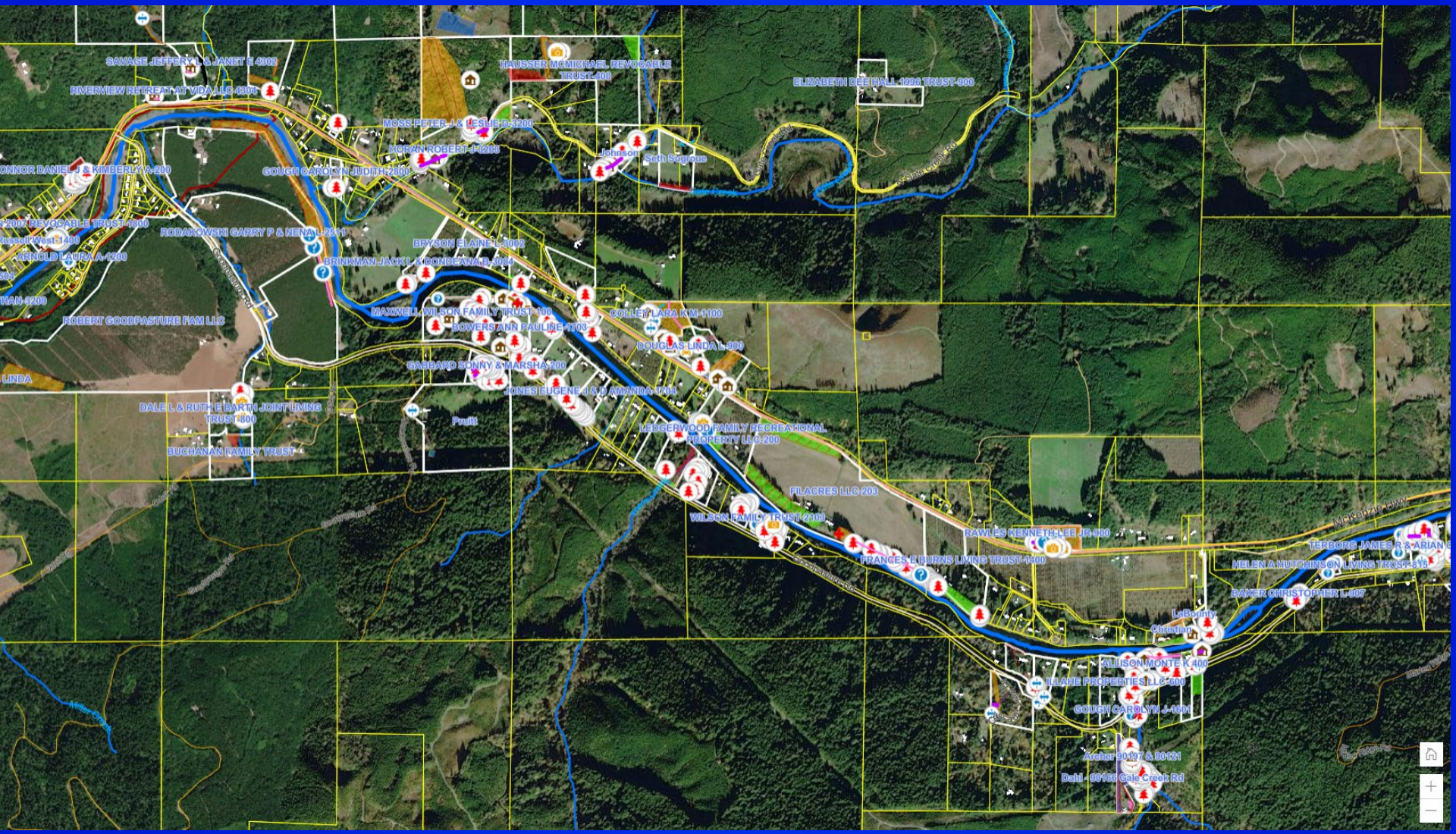
Hazards reported using the Quick Capture App show up on shared ArcGIS online map



Landowner Incentives Team

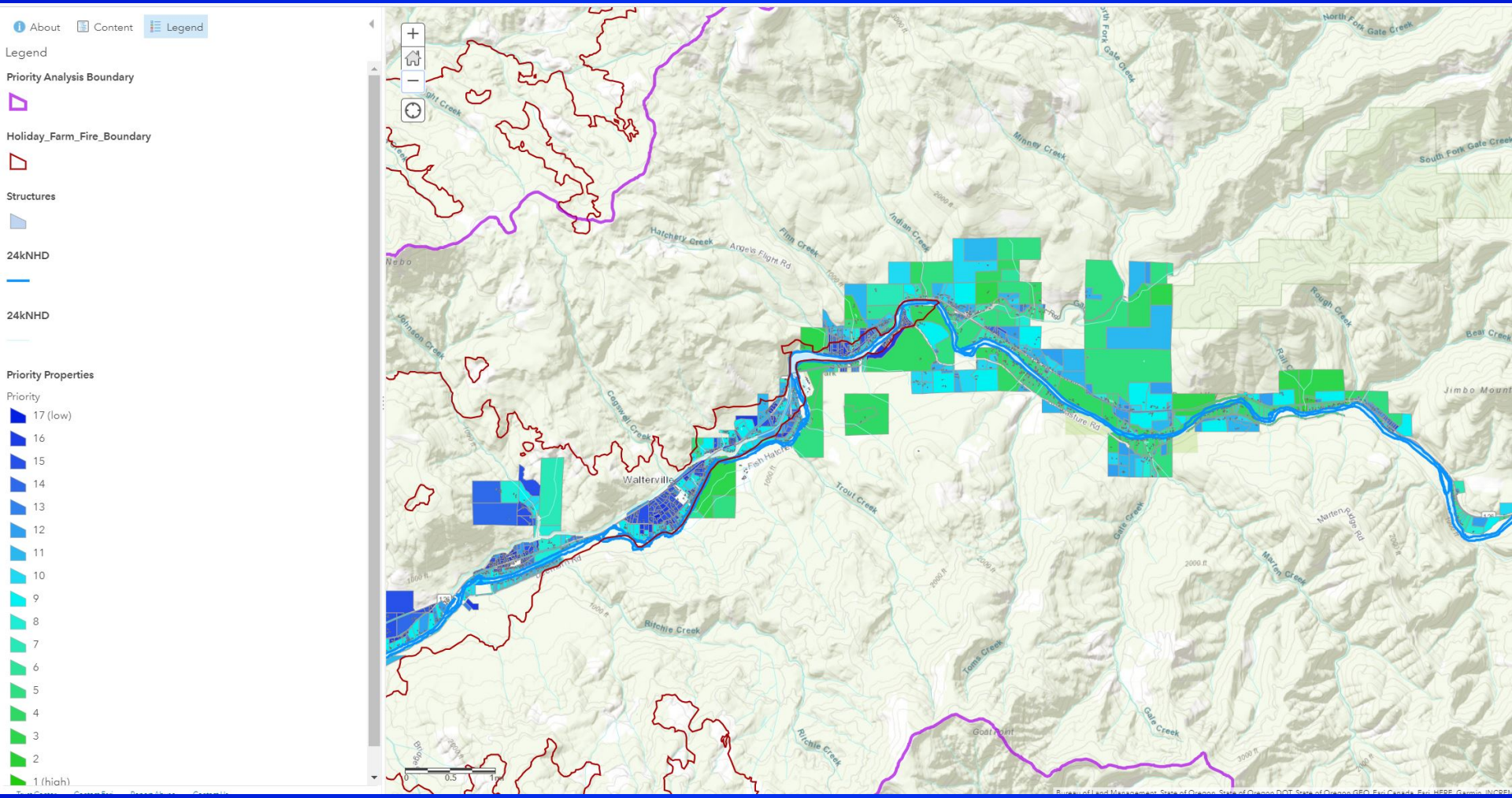
- Landowner portal to request burn assessments, use DocuSign for ease of signing agreements
- Rebuild incentives to protect WQ
  - Rebuild farther back from the river (up to $2,000)
  - Septic system upgrade grants (up to $5,000)
  - Septic system/infrastructure 0% interest loans (up to $20,000)
  - Funding to underground electric lines to homes

GIS and Data Management Team

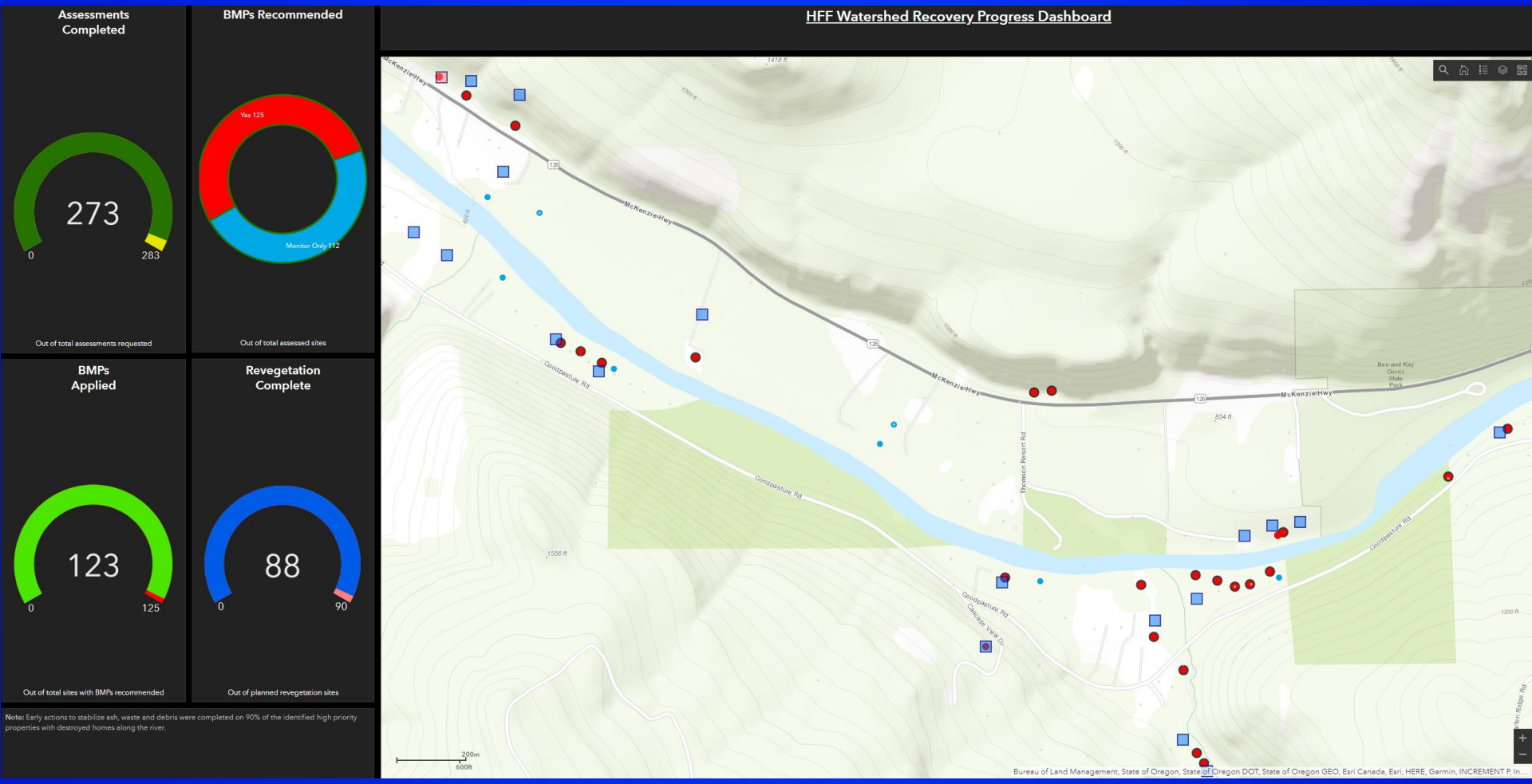


Developed field tools for assessing properties for treatments

Conducted GIS analysis using burn severity, slope, destroyed homes, proximity to river to prioritize where we work



Created public facing dashboard feed by field tools/applications to track restoration work.



Water Quality Team

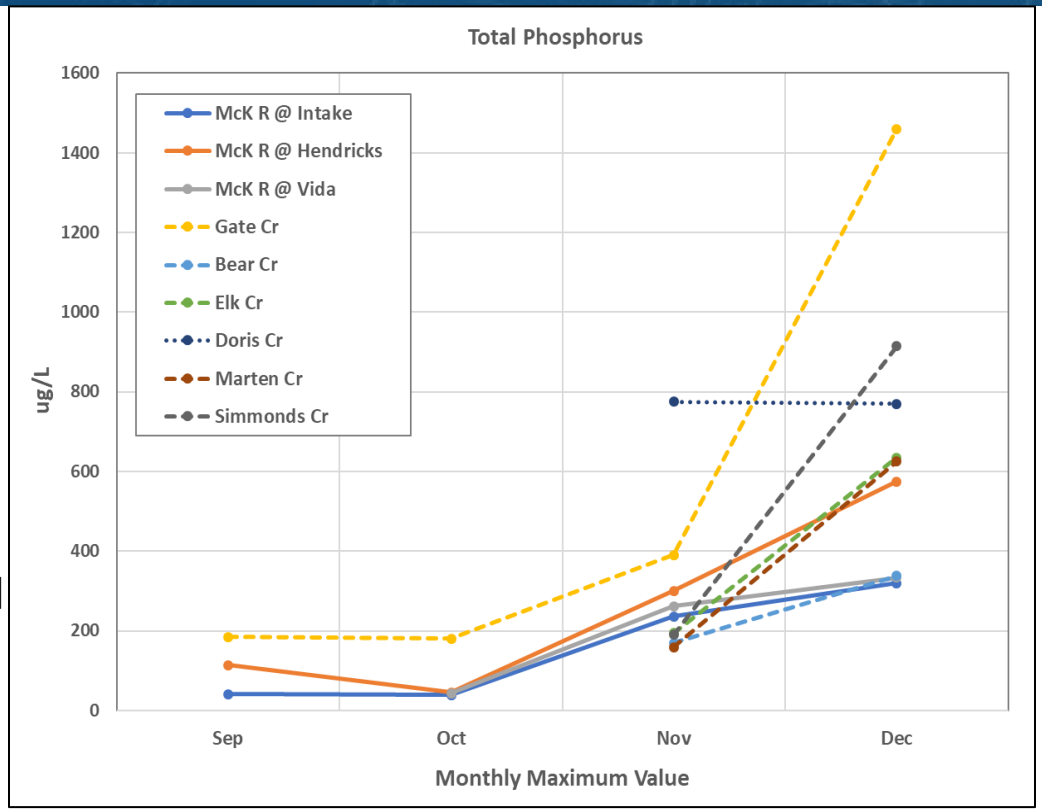
- Conducted 8 storm and 16 baseline monitoring events since HFF
- Currently have 8 USGS and 6 EWEB real-time WQ stations as and early warning network (provides text/email notifications)
- Working closely with OSU, USGS, and PNNL

Water Quality Impacts

Increasing concentrations of metals, nutrients, solids, bacteria, and organic carbon during storm events.

No change to water quality during base flows or without storms.

Regardless, concentrations in raw water are well below any health-based criteria or MCLs.

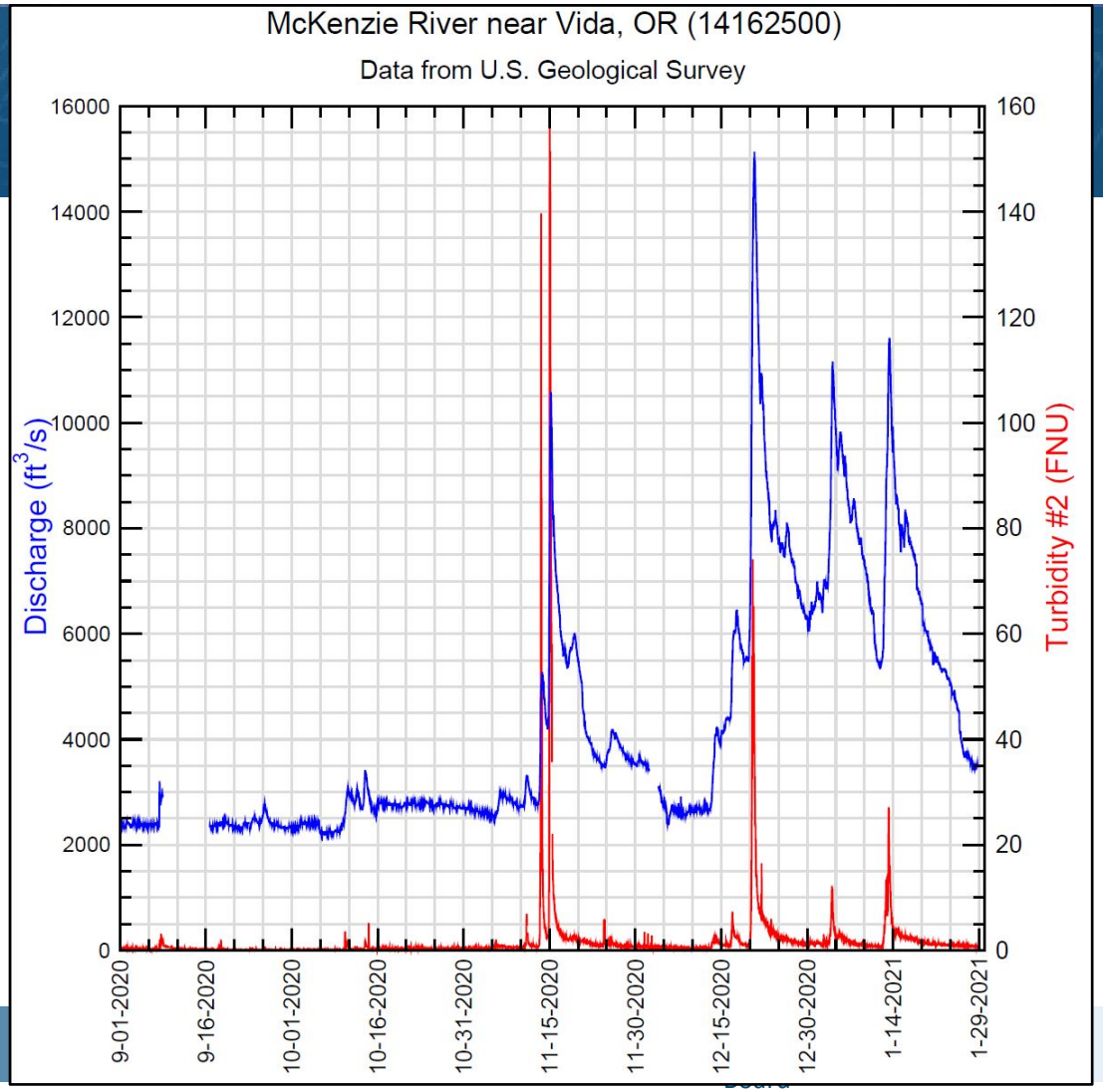


Turbidity

Turbidity shows the amount of suspended sediment in the water.

November turbidity was as high as the April 2019 flood which had over twice the flow.

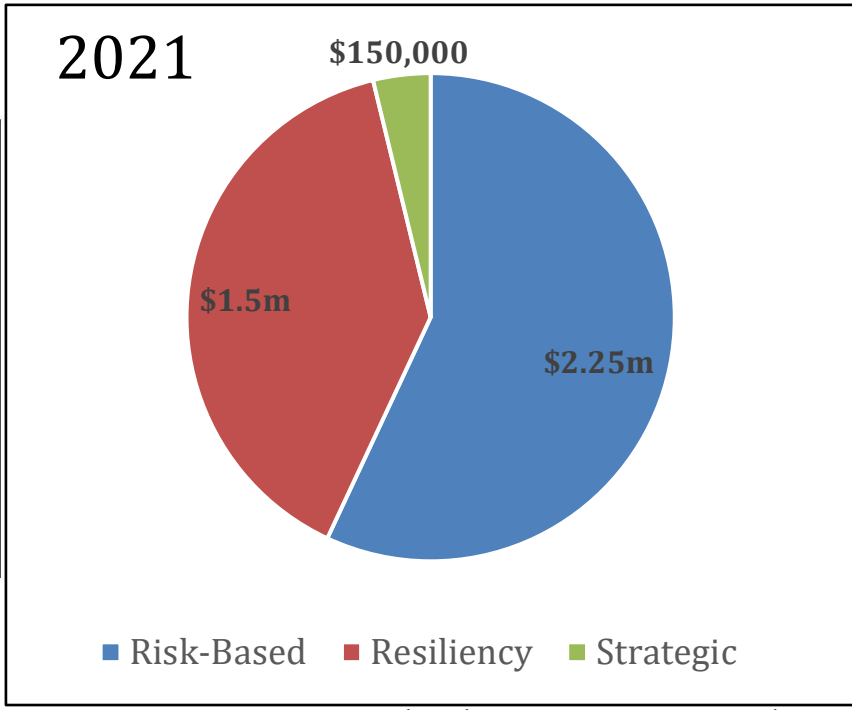
Turbidity has decreased each subsequent storm since November.



Watershed Restoration Plan

	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

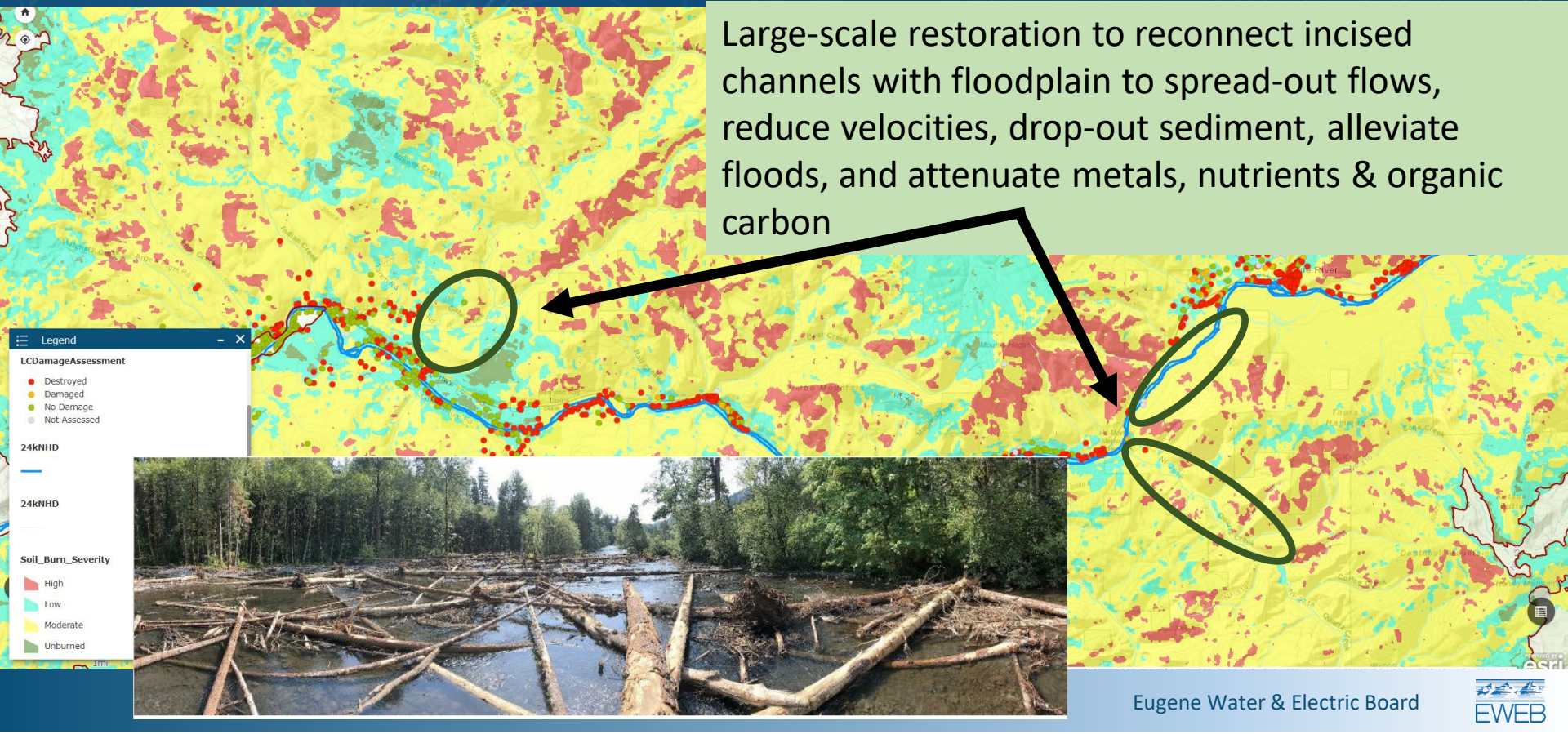
Risk-based continues current actions plus next phase of response, revegetation & providing incentives for smarter rebuilding



EWEB HFF Watershed Recovery Funds

Resiliency Actions

Large-scale restoration to reconnect incised channels with floodplain to spread-out flows, reduce velocities, drop-out sediment, alleviate floods, and attenuate metals, nutrients & organic carbon



Funding Picture

- EWEB Commitment to date $4.4 million
- Working on 4 FEMA grant requests totaling ~$6 million
- Lane County/EWEB Wildfire Committee funding request for ~$7.5 million
- Sen. Prozanski ($150,000); Rep. Holvey ($350,000), DeFazio ($2 million)
- ODF ($198,000), OWEB ($83,000) assistance
- Numerous other grant requests in process

Restoration Team

Cooperative management approach (EWEB, CPRCD, MRT, MWC, & UWSWCD)

Outstanding collaboration with local contractors and Northwest Youth Corps

Leveraged existing partnerships with private landowners, City of Eugene, etc.

Built the plane while flying to survey over 270 sites with 235 landowners.

Erosion Control

Top short-term priority on riparian areas and mod-high intensity slopes

Developed Best Management Practices (BMPs) based on federal/NGO guides, and COE Erosion Control Specialist.

Applied on 123 sites by NWYC and private contractors

Additional work/monitoring planned for fall of 2021

Erosion Control BMP’s

Revegetation – Short Term

Riparian area priority

Private proprieties w/ 7-year agreements & planting plan for landowner review

210,000 plants on ~ 85 acres planted on 89 in 2021

Funding support from EWEB, OWEB, Bonneville Environmental Foundation and Arbor Day Foundation

Revegetation – Long Term

Expand priority areas beyond to riparian areas to included large floodplain, rights-of-way, and some upland sites

Maintain long-term agreements

Planning on ~ up to 500,000 plants

Currently developing funding partners to leverage EWEB investment

Revegetation – Photo Gallery

Plant Establishment

Long-term commitment to help ensure free-to-grow status.

Northwest Youth Corps & private contactors

Use of local chips to mulch plantings

Multiple treatments over summer/fall 2021

Noxious Weeds

Early Detection Rapid Response program to survey and treat on private lands

Use existing iMaps application

Coordinated with work on federal and County lands

Local (EWEB) & federal (BLM) funding

Fuels Treatment

ODF administered grant (E-board)

Prioritized landowners enrolled in PWP and conservation lands (MRT)

Developed BMP with ODF, NWYC and private contractors

Fills a huge need and working to incorporate into future SOW

Questions?