



June 15, 2022

Oregon Public Utilities Commission
PO Box 1088
Salem, OR 97308-1088

RE: Wildfire Risk Mitigation Plan Submission

To Whom It May Concern:

The Canby Utility Board of Directors approved Canby Utility's Wildfire Risk Mitigation Plan (WRMP) during its June 14, 2022 board meeting. The attached WRMP is now being submitted to the Oregon Public Utilities Commission for review in accordance with the requirements set forth by SB 762.

If you have questions about the plan, please contact Jason Berning at 503-266-1156 x 322.

Sincerely,

A handwritten signature in blue ink that reads "Melody Thompson". The signature is written in a cursive, flowing style.

Melody Thompson
Canby Utility Board Chair

MT/bb

Enclosure (1)



2022 Wildfire Risk Mitigation Plan



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Executive Summary

Canby Utility (CU) owns and operates electric distribution facilities presently servicing approximately 8,000 customer connections within the city of Canby. This Wildfire Risk Mitigation Plan (WRM Plan) aims to mitigate risk and respond to utility-caused wildfires in our service area.

Over the past several years, wildfires have been increasing at alarming rates. Warmer temperatures and a dryer climate have provided the perfect storm for wildfires in the Pacific Northwest. The 2018 wildfires in California have proven just how deadly and devastating wildfires can be on residential and business communities, and more recently, the 2020 Riverside and Beachie Creek wildfires combined caused an unprecedented fire danger that destroyed homes and properties in communities west of the Cascades and even threatened our community by forcing Canby into a Level 2 emergency evacuation status. Other nearby fires, such as the RSG Forest Products mill fire that started on Macksburg Road just north of the town of Molalla, were started when a tree fell on live powerlines that spread to a nearby lumber mill along Canby's rural south eastern border.

As a result of the recent wildfires in Oregon, the legislature passed Senate Bill 762. This comprehensive piece of legislation aimed to improve wildfire preparedness through three key strategies: creating fire-adapted communities, developing safe and effective responses, and increasing the resiliency of Oregon's landscapes. Specifically, the law requires utilities, such as CU to prepare wildfire mitigation measures in high-risk areas of wildfire where powerlines and electric equipment are located.

CU's goal in this WRM Plan is to ensure public safety, reduce risk to life and property, and ensure our Board's mission is achieved by providing safety and reliable electricity while complying with applicable regulatory requirements or changes in the law.

Wildfire Policy Statement

CU's WRM Plan provides direction to staff on public awareness, communications, construction, and equipment standards within high-risk wildfire areas, collaboration with community stakeholders and first responders on risk mitigation, and identifying preventative measures to reduce or eliminate the risk of wildfires caused by CU's electric infrastructure and activities.

CU will monitor the National Weather Service reports for Red Flag Warnings, which notifies the public of warm temperatures, very low humidities, and stronger winds that are expected to combine to produce an increased risk of fire danger

Wildfire Risk Background

With a city limit of approximately five square miles, Canby is relatively protected from the risk of a catastrophic wildfire event due to its location, small service area, minimal wildland-urban interface, and access to emergency services. Response to a wildfire will likely be immediate, with the Canby Fire District having its primary fire station on S. Pine Street in the city limits, a newly constructed fire station annex on N. Territorial Road in the city limits, and a rural fire station located within a mile south of Canby on Highway 170. Canby's small size makes access and response to emergencies favorable. In addition to Canby's emergency services within the city, the nearby town of Aurora is home to Columbia Helicopters, who provide aerial firefighting in wildfire events, which would be another resource for Canby Fire District to seek assistance from if needed.

CU provides electric and water service to Canby customers, with approximately 8,000 residential, commercial, and industrial electric connections. CU's five-member Board of Directors is committed to creating a plan that takes an active approach to reducing fire-related risks for its customers.

Utility Facilities

CU is located at 1265 SE 3rd Avenue in Canby, Oregon. This location serves as our headquarters and is where we conduct our daily operations.

CU owns two power substations. The Westcott Substation is located off N. Redwood Street and is adjacent to the Portland General Electric's (PGE) Twilight Substation. The Knights Bridge Substation is located off S. Barlow Road, adjacent to PGE's Canby Substation located at the intersection of Knights Bridge Road and S. Barlow Road. CU's two substations are fed power through PGE's 57kV transmission lines that also feed their adjacent substations. CU's distribution system begins at these substations and distributes power to customers within the city limits and a short section just outside the city to the west, see CU's Service Territory map (enclosed).

CU's total electric distribution system consists of 112 miles of overhead and underground lines. Nearly 80% of those lines are underground. CU's system is fed by eight 12kV feeders with about 72 customers per mile of line.

Power Generation

CU does not have any power generation facilities. All generation is provided by the Bonneville Power Administration (BPA) and sold to CU. The power purchased by CU is delivered from BPA to Canby over PGE's transmission facilities. CU's transmission consists of less than 100 feet of line interconnecting PGE's substations to CU's owned substations.

Goals

The main objective of CU's WRM Plan is to mitigate and prevent wildfires caused by electric utility infrastructure while providing safe and reliable power to its customers. To achieve this objective, CU will identify and implement its activities based on the industry's best practices, pursue cost-effective measures, and establish policies and procedures for system improvements where needed to mitigate the risk and impact of utility-caused wildfires. CU will develop new strategies for public outreach and awareness.

CU's WRM Plan goals complement its board-adopted mission statement, which states, in part: "... to efficiently provide fair, honest, and responsible hometown service to our customers by furnishing adequate amounts of safe, reliable electricity ... with a balanced, flexible approach to the environmental concerns and future needs." CU's WRM Plan also identifies its ongoing efforts to create a fire-adapted community, develop a safe and effective response, and increase the resiliency as it looks for ways to lessen the threat of causing a fire ignition from power lines and electrical equipment.

Hazard Identification and Analysis

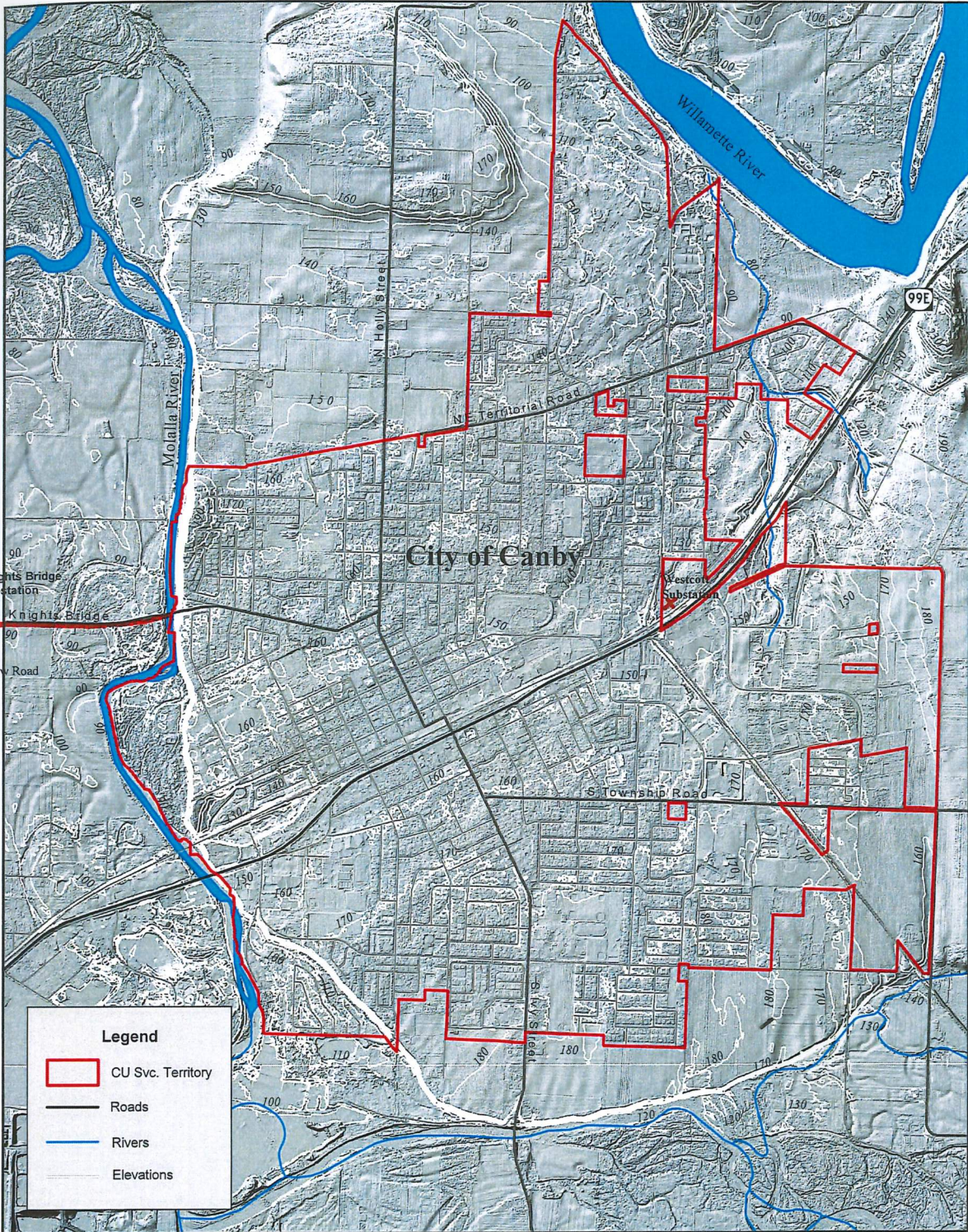
CU serves an approximate five-mile radius within the city of Canby. According to the U.S. Forestry Fire Threat Map (enclosed), CU's service territory is in a low-risk wildfire area. The city does not have any Oregon Department of Forestry properties within its boundaries. CU has a high percentage of conductors underground lessening exposure.

CU has identified its higher probability areas of wildfire and will implement strategies to lessen the likelihood of an event, utilizing best practices methods to ensure safety. The areas identified include somewhat dense vegetation of trees, grasses, and other plants that extends from CU's Knights Bridge substation, easterly along the public right-of-way, across the Molalla River into Canby's city limits, and the adjacent CU owned land along the Molalla River for its water intake facilities.

Other areas considered include locations where overhead distribution lines exist within the city. In these areas, CU's right-of-way vegetation maintenance program takes prudent measures to reduce powerlines from coming into contact with fuel sources, such as trees, tree limbs, and other vegetation.

Fortunately, CU's risk of causing wildfire is substantially reduced by having nearly 80% of its powerlines being underground. New construction projects are designed to serve power from underground infrastructure that minimizes wildfire risk now and into the future.

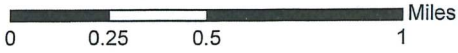
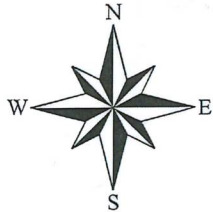
CU's distribution system is monitored by visual inspections and a Supervisory Control and Data Acquisition (SCADA) system. Wildfire risk hazards that are discovered, will be addressed and corrected timely. CU will take a systematic approach to refine and improve its practices, maintenance, system protections, system hardening, and restoration of services through wildfire prevention strategies.



Legend

- CU Svc. Territory
- Roads
- Rivers
- Elevations

Canby Utility Service Map



The information depicted on this map is for general reference only.
 The City of Canby cannot accept any responsibility for errors, omissions, or positional accuracy.



Map Viewer

Search...



Sign in



Layers

Overall Wildfire Risk

- Very high
- High
- Moderate
- Low
- Low benefit
- Benefit

Wildfire Risk to Assets

Wildfire Risk to People and Property

Wildfire Threat

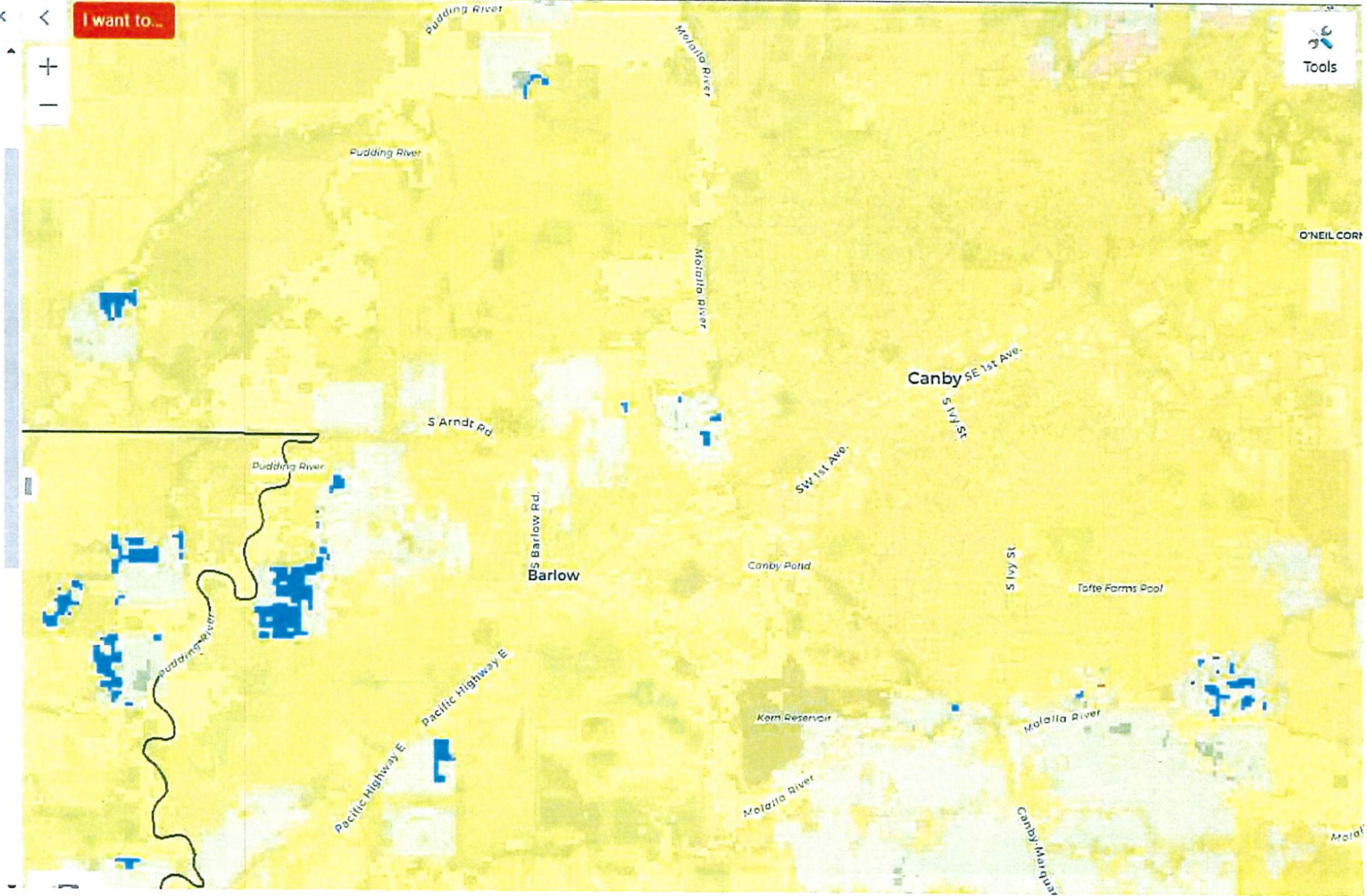
Burn Probability

- 0
- Low (≤ 1 -in-10,000)
- Low - Moderate (1-in-10,000 to 1-in-5,000)
- Moderate (1-in-5,000 to 1-in-1,000)
- Moderate - High (1-in-1,000 to 1-in-500)
- High (1-in-500 to 1-in-100)
- High - Very High (1-in-100 to 1-in-50)
- Very High (1-in-50 to 1-in-25)

Average Flame Length



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Layers

Overall Wildfire Risk

- Very high
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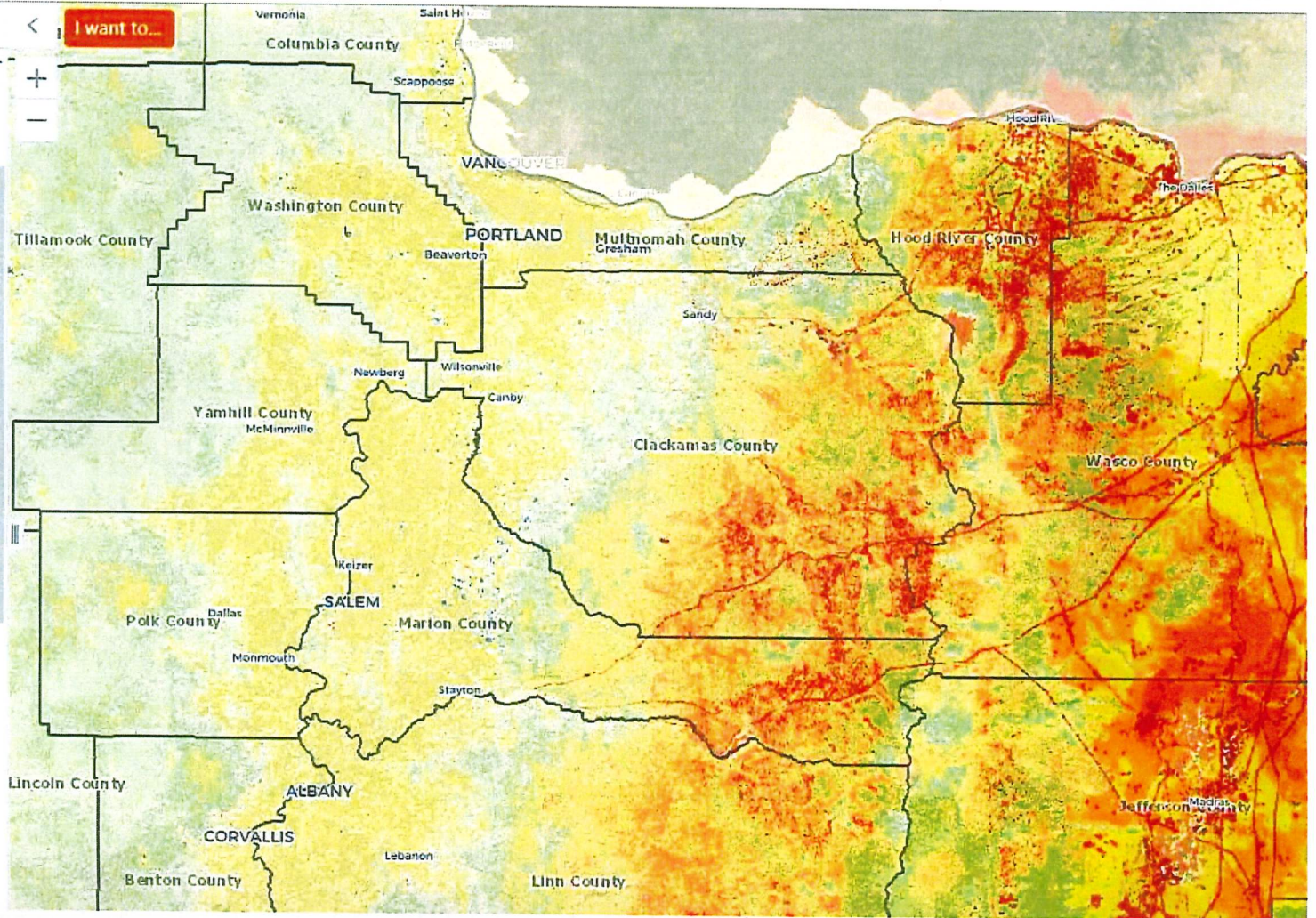
Wildfire Risk to Assets

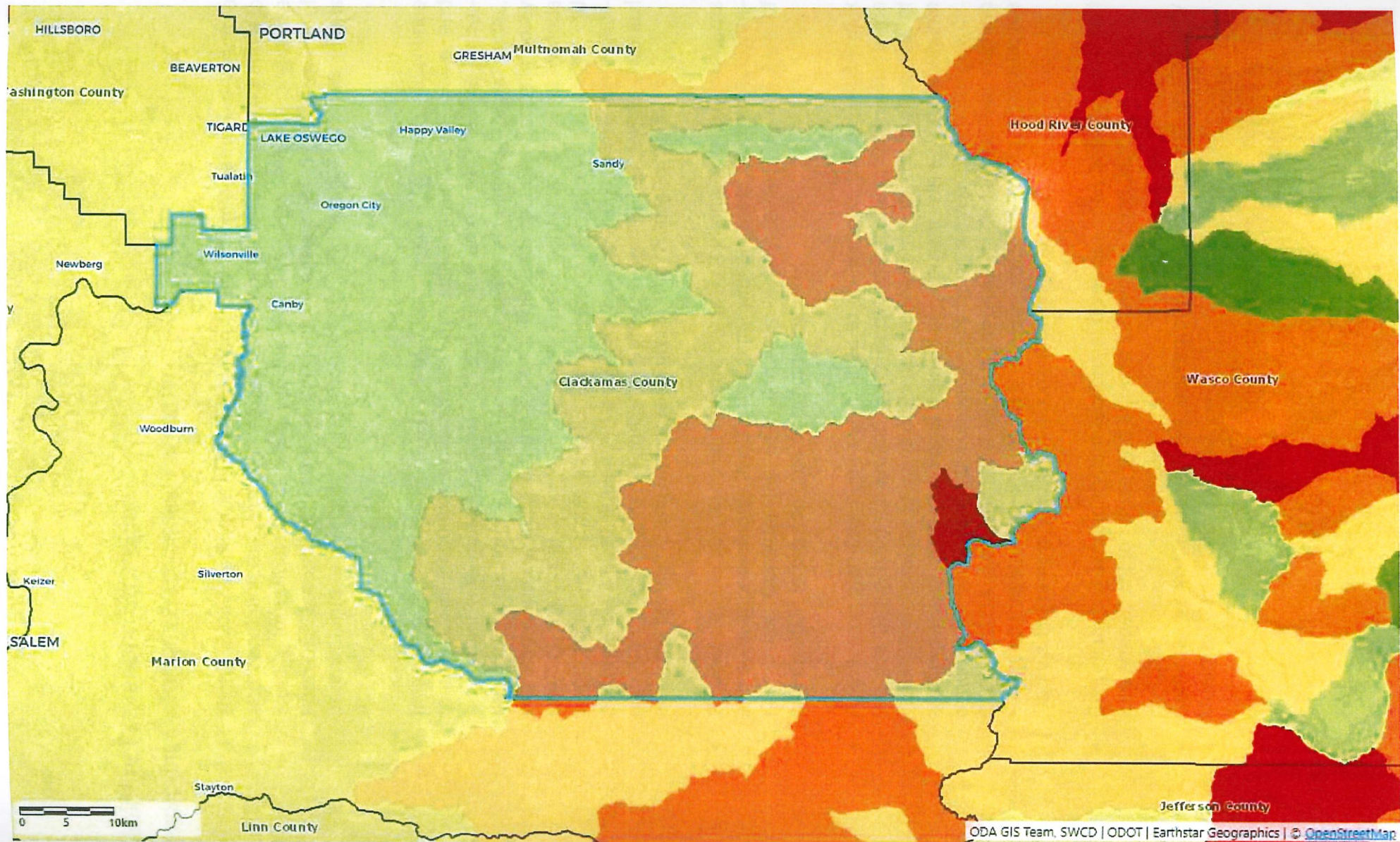
Wildfire Risk to People and Property

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- Moderate - High (1-in-1,000 to 1-in-500)
- High (1-in-500 to 1-in-100)
- High - Very High (1-in-100 to 1-in-50)
- Very High (1-in-50 to 1-in-25)





Wildfire Prevention Strategies

Improving Operations Practices and Response:

- Right-of-way vegetation maintenance program – Continue the two-year tree and vegetation management in the public right-of-way. Continually strive to identify trees that are a hazard to the CU distribution system and make appropriate corrections before Oregon's fire season. Develop a list of potential areas of concern to monitor for additional mitigation efforts actively.
- Inspection of overhead powerlines and power poles program – Continue routine visual inspections of overhead powerline infrastructure, poles, and equipment with more attention focused on the areas identified as higher-risk. The inspections are performed through the use of aerial bucket trucks, climbing of poles, and from the ground. The inspections are completed by qualified electrical workers. CU maintains a schedule of when various inspections are completed, all of which are done at least annually. CU performs enhanced equipment inspections on its feeders in those higher-risk areas by utilizing advanced infrared equipment to locate potential electrical problems and eliminate failures in the distribution system.
- Review construction and material standards – Continually review standards and seek improvements to utilize system hardening technologies in higher-risk areas. Consider the use of materials best suited for the type of construction to provide greater protections.
- A switching plan has been established to de-energize the two higher-risk feeders along Knights Bridge Road and transfer the power load to the Westcott Substation feeders. This action will eliminate the highest risk of wildfire caused by powerlines and electric equipment in this area and enable continuity of service for most customers by being served by another source. CU's SCADA system will be vigilantly monitored during red flag warning events so that staff can immediately de-energize the feeder and transfer the load via the remotely-accessed computer system.
- Ensure that all secondary connections at poles are appropriately taped and wire shaped not to cause arcs or other hazardous conditions.
- Continue to install powerlines underground in accordance with Canby Municipal Code, Chapter 16.

- Monitor the National Weather Service website and, if available, sign-up for alerts that provide notification on the issuance of Red Flag Warnings for wildfire favorable weather.
- Increase communication frequency with operations staff and General Manager in preparation for the fire season to discuss risk mitigation during Red Flag alerts. Equip vehicles with fire mitigation tools and equipment to be ready for use during the fire season should a fire occur.
- Collaborate with CU's SCADA team to ensure that switching procedures are reviewed and understood so that the identified feeders can be immediately switched out of service should an event dictate the need to de-energize the feeder. In addition to monitoring the SCADA system, blocking reclosing on the two identified feeders in place of switching may be done depending on risk conditions.
- Develop or revisit mutual aid agreements with other utilities in Oregon to prepare for an event. Agreements include personnel, equipment, and materials necessary to respond to an event or recover from damages caused by a wildfire.

Improve Collaboration between Community Stakeholders and First Responders:

- Engage city leaders and emergency responders in discussions on the risks of electric utility-related wildfire causes during routine emergency operations meetings.
- Schedule a pre-fire season planning session with Canby Fire District for strategic planning in preparation for the fire season. Share the WRM Plan and CU's identified high-risk areas, including feeder locations and implement strategies designed to lessen the likelihood of an event.
- On Red Flag Warning days, check in with Canby Fire District to review issued warnings and discuss coordinating their Incident Command expectations in response.
- Present CU's planning efforts and response to a utility-caused wildfire at a Canby Area Chamber of Commerce meeting to prepare the business community for potential power interruptions.

Standards, Material, and Strengthening system:

- Continual development and review of CU's standards and specifications with scheduled review cycles to allow for best practice improvements and incorporation of new technologies. These standards will guide construction, design, and materials used in its operations. If emerging technologies or design practices are introduced between CU's review cycles, CU will make its best effort to incorporate the new technology and practices into the work to prevent contact between infrastructures and fuel sources.
- Identify existing at-risk poles, conductors, crossarms, insulators, and cutouts. Consider replacing materials with products that offer greater protection in those areas. Examples may be the use of steel poles and fiberglass products.
- Where practical and affordable, transfer existing overhead powerlines to underground.

Strategy-Reclosing, De-energization, and Substation System Information:

CU's WRM plan includes isolating the two feeder lines originating from the Knights Bridge substation through a process to de-energize the lines and transfer the load to another substation that will enable most customers to maintain reliable electric service. Some customers will be without power when this occurs due to the inability to maintain service and protect the environment from wildfire risk at the same time. Switching the load from those feeders to the Westcott substation is completed via remote access using the utility's SCADA system. This process will be managed by designated and trained CU staff. If the SCADA system is compromised or fails, CU staff will perform manual switching processes following established procedures. A qualified electrical worker would do this work.

For informational purposes, the Knights Bridge substation has one 15/20/25 MVA transformer serving a single 12.47kV distribution rack with two feeders (1 and 2) and a transfer bay. In addition to transformer differential protection, fast bus protection is enabled to act effectively as a 12.47kV bus differential protection element within the substation. Transformer overcurrent protection is configured to pick up approximately 145% (phase) and 50% (ground secondary) of transformer full load amps (FLA). Transformer curves are configured to stay below the transformer damage curves while allowing maximum room for downstream feeder coordination. Feeder overcurrent protection is configured to pick up at 720 A (phase) and 331 A (ground), with an instantaneous setting that acts as a "fast" fuse

saving curve for trip #1 in a reclosing sequence that includes one “fast” operation and two “slow operations.

CU is confident that its plan to de-energize feeders in a high-risk situation will eliminate Canby’s exposure to utility-related wildfire events.

Strategy-Public Safety, Education, and Notification:

- In the event of a wildfire threat, CU will engage in discussions with city officials and fire personnel as previously discussed in this plan and collaboratively develop a crisis communications plan related to an emergency that could develop. CU management will give these partners status updates if power is interrupted.
- CU will post emergency alerts on its website of anticipated or current power shutdowns in identified, high-risk areas, and encourage the City of Canby and the Canby Fire District to do the same.
- CU will make every effort to contact affected customers by phone or in person when the feeder will be de-energized and the expected duration. Staff will also provide those customers with information on the City’s Emergency Operations Center should it be activated.
- Provide access to links to resources and information about Wildfire Risk on our website, and include articles in the CU’s Reporter newsletter that is distributed to customers along with their utility bills.
- Issue public releases to the news media and local social media pages.

Restoration of Service:

- Should CU proactively de-energize powerlines, the lines will be re-energized following these steps:
 - 1) Patrol and visually inspect overhead facilities in high-fire risk areas to ensure they are clear of hazards, damage, or vegetation before re-energizing the two feeders.
 - 2) If facilities are damaged, they will be isolated. Then the sections of overhead lines not damaged can be re-energized to restore power to customers. To the extent that additional resources are needed to repair the system, CU will request assistance through mutual aid agreements

or available electrical contractors to obtain materials and qualified personnel to help in the restoration process.

- 3) All damaged facilities or vegetation issues will be documented and photographed before being repaired or cleared.
- 4) Repairs to damaged facilities will be performed to CU's design standards and completed by qualified electrical workers.
- 5) CU will restore electric services to homes and businesses as soon as possible after the wildfire risk has ended.

Plan Implementation, Monitoring, and Review:

- The CU board will adopt the WRM plan, and it will then be submitted to the Public Utilities Commission for approval before June 30, 2022.
- CU staff will monitor for emerging technologies and operational practices that will assist in hardening CU's distribution system and preventing utility-caused wildfires. The plan will be shared with Canby Fire District personnel during pre-fire season meetings and CU operation meetings.
- CU staff will conduct an annual review of the plan on or before June each year, before the start of the fire season, to look for ways to improve the plan, incorporate changes made throughout the year, and adopt any new provisions.

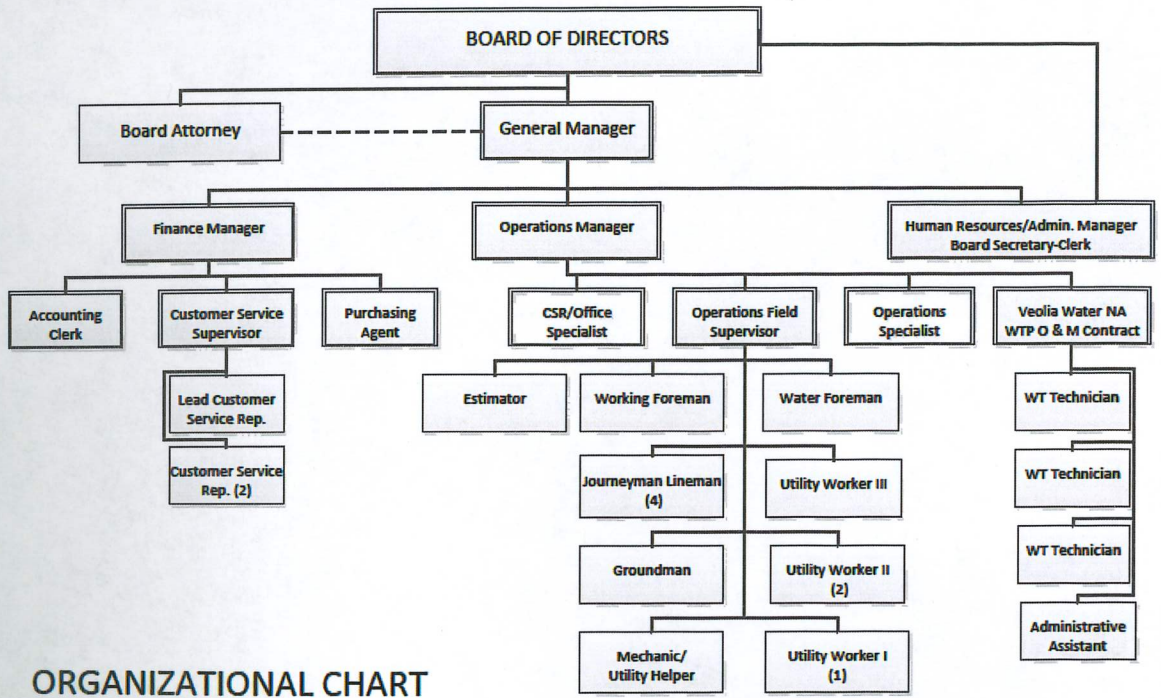
Chain of Command and Responsibilities in a Wildfire Event

General Manager:	<ul style="list-style-type: none">• Responsible for the overall management and decision-making for CU's Electric power system.• Serve as a Public Information Officer (PIO) for the media; authorize and release information to the news media.• Assign staff to Emergency Operations Center (EOC) to serve as a liaison between CU and other agencies.• Supervise or monitor supervision of all CU personnel and ensure their safety and welfare during an emergency event.• Notify the Board of Directors, Mayor, and City Council of the CU's response to the emergency, and
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	<p>provide periodic updates on incident status and activities.</p> <ul style="list-style-type: none"> • Ensure that all regulatory agencies impacted by the emergency are notified. • Request emergency assistance from local agencies, including police, fire, and medical. • Ensure coordination between CU staff and external emergency response agencies if EOC is not activated.
<p>Operations Manager:</p>	<ul style="list-style-type: none"> • Aid the General Manager in the planning and decision-making process. • Responsible for the operational management of CU's power facilities. • Supervise operational staff, including electric and water crew activities, during an emergency event. • Enforce the use of protective clothing and equipment • Provide updates to the General Manager and others; work with operational staff from other agencies in coordinating response efforts. • Determine the need for additional resources (personnel, equipment, tools, etc.); utilize mutual aid partners for support during and post-emergency activities. • Develop and manage critical operations to meet incident objectives established by General Manager and report to (EOC) when appropriate. • Document all significant actions and information.
<p>Customer Service Supervisor:</p>	<ul style="list-style-type: none"> • Post emergency alerts on CU's website, including Red Flag Warnings that have the potential or actual need for electric service interruptions. • Contact City and Canby Fire District staff requesting they also post notices on their websites. • Ensure customers affected by the power interruption are notified timely and updated on the status of power restoration efforts. • Oversee that all customer communication and outreach are timely and accurate. Update operations staff on any issues reported by the public. • Ensure operations staff is aware of any known critical care customers, such as a person living in a residence who uses life-sustaining medical services requiring power.

- Prepare customer newsletters and other correspondence for customers to be aware of CU's planned response to Red Flag Warning conditions.

Organizational Chart



**ORGANIZATIONAL CHART
2022**

Rev. 04/7/2021