BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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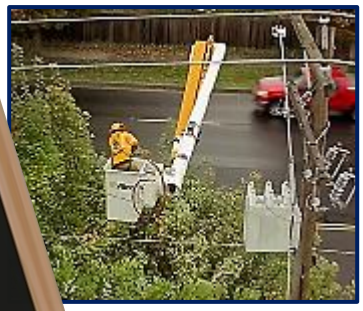
REPRESENTING AVISTA CORPORATION

Avista Utilities
Wildfire Resiliency
2023 Year End Report

January
2024



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The Wildfire Resiliency Plan

Why does Avista have a Wildfire Plan?

The most straightforward answer to that question is one word: Risk. The risk of wildfire is ever present in the western United States. The threat of wildfires is increasing both as a function of accumulating fuels, expanding development in the wildland-urban interface, and as a result of changing climate.[1] Avista has responded to hundreds of wildfire events throughout our history, including massive events such as the 1910 Big Burn which ravaged Idaho's Silver Valley, up through more recent events such as the 1991 Spokane Firestorm, the 2020 Labor Day fires, and the 2023 fire that impacted the Medical Lake, Washington area.

Though Avista has an extensive history of responding to fire events, it lacked a comprehensive, risk-based approach until 2020. Avista published its first Wildfire Plan in June of 2020, the culmination of 18 months of development. We started implementing this Plan in the second half of 2020. The combination of 2021 and 2022 then served as the test bed for gathering direct feedback from employees, fire agency professionals and other experts, regulators, peers, and customers that has shaped the Plan and helped to continually improve and refine it as we move forward. While many of the elements of the 2020 plan remain relevant, we continue to update this work with the benefit of experience and hindsight, helping further focus Avista's approach to mitigating the risk of wildfire. In this report we will highlight the progress and milestones since 2020, specifically the accomplishments made in 2023.

Our Plan, which we believe to be robust, thoughtful, and comprehensive, includes programs and strategies that will help reduce wildfire risk for our customers, infrastructure, and the communities we serve. It focuses on reducing the likelihood of a wildfire caused by Avista's electric operations, protecting the safety of our customers and employees, safeguarding our infrastructure, as well as preparing ourselves, our system, and external partners for a wildfire event. The Plan addresses these challenges through four primary program areas:

1) Infrastructure Grid Hardening
2) Enhanced Vegetation Management
3) Situational Awareness
4) Emergency Operations and Response

We note that Avista's Wildfire Plan leverages several existing asset programs and operating practices, building upon them whenever possible. Many of these programs already have

[1] For an informative look at this, please see the U.S. Forest Service Report "Confronting the Wildfire Crisis," January 2022, https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/Confronting-the-Wildfire-Crisis.pdf

demonstrated benefits related to reducing the risk of fire or in making the electric system more resilient, such as vegetation management and steel pole replacements. The Wildfire Resiliency Plan adds additional funding and creates a focus for these programs specifically related to high fire threat areas. Other programs suggested by the Plan are new to Avista, including LiDAR and satellite imaging, cross-training with external fire professionals, and the creation of a fire-weather risk monitoring system. All of the Wildfire programs, new or re-tooled, work in concert to provide a well-rounded and thorough approach.

Capital and Operating Expenses for Avista's Wildfire Resiliency Plan through 2029 are shown below, after which we will discuss each of the program areas and their related metrics and expenditures.

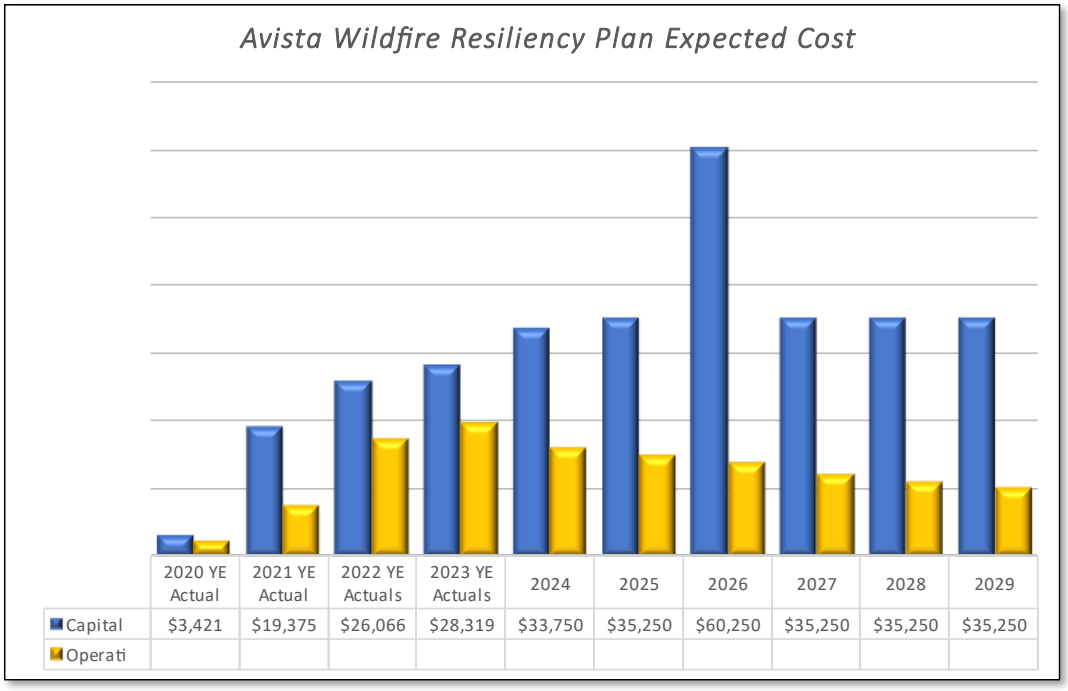


Figure 1. Avista's Wildfire Resiliency Plan Actual and Projected Expenditures

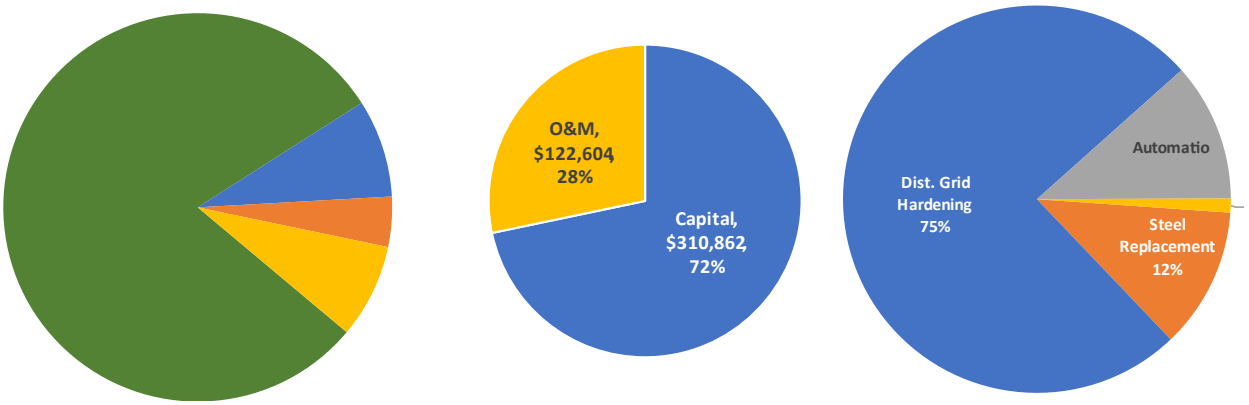


Figure 2. Wildfire Plan Cost Breakout

Note that the additional $25 million in capital shown for 2026 indicates the implementation of the Enhanced Grid Hardening Program the Company is currently evaluating. This program, an addition to our existing Distribution Grid Hardening Program, involves undergrounding conductor in specifically identified high fire threat areas (described in more detail below). This strategy would increase our capital budgets from that point forward by an amount that will be determined after our first year of experience with this new approach. Operating expenses, however, are expected to peak in 2023 and then gradually decline as subsequent year vegetation inspections hopefully reveal fewer risk/hazard trees due to our vigorous efforts to mitigate them.

Infrastructure Grid Hardening

GRID HARDENING

UPGRADES TO REDUCE THE NUMBER OF EQUIPMENT FAILURES AND TO PROTECT POLES & EQUIPMENT FROM THE IMPACT OF WILDFIRES.

Distribution and Transmission Grid Hardening is the single largest capital investment in the Wildfire Plan, comprising about 88% of total wildfire capital expenditures.[2] A Grid Hardening program existed at Avista before the Wildfire Plan, but was condition-based and aligned with reliability objectives. The Wildfire Plan's Grid Hardening program expands these efforts to focus primarily on safety objectives, including elements designed to reduce the number of spark ignition events, specifically in high fire threat areas.

Fiberglass Crossarm

The major focus areas of Grid Hardening, described below, include:

- *Distribution Grid Hardening*
- *Enhanced Grid Hardening (future)*
- *Conversion of Transmission Wood Poles to Steel*
- *Fire Resistant Wood Pole Wraps*
- *Enhanced Transmission Inspections*

Replacing a bad transmission crossarm

Distribution Grid Hardening. Though Avista has well-established conditioned-based replacement programs such as Wood Pole Management and Grid Modernization, these programs are broadly aligned with customer service reliability objectives. The Wildfire Distribution Grid Hardening program targets portions of circuits located in high fire risk areas with the goal of reducing spark ignition potential related to outages. It achieves this by replacing aging and deteriorated poles, substituting wood crossarms with fiberglass, changing out obsolete wire with more resilient modern steel-reinforced aluminum wire, installation of wildlife guards to reduce animal-related events,

[2] This includes distribution grid hardening, transmission steel pole replacement, and transmission inspection program capital expenditures.

eliminating uninsulated open wire secondary districts, installing wedge-connected stirrups to provide protection and strength at hot tap connection points, and undergrounding conductor when cost-justified.

Enhanced Grid Hardening. As mentioned above, Avista has had a robust grid hardening program in place for many years. This program has historically focused on improvements made to overhead distribution in order to mitigate outage risk and increase reliability and, in recent years, to reduce the potential for sparks in high fire threat areas (wildfire risk). Grid hardening efforts should reduce the potential for outages and equipment failures that increase the risk of wildfire during fire season. Avista sees the necessity of increasing these efforts in high fire threat areas through the use of selective undergrounding. We are calling this approach Enhanced Grid Hardening.

Undergrounding power lines

While Avista has conducted some small-scale undergrounding as part of the existing grid hardening program, the current percentage of this work is less than 1%. Avista is in the process of evaluating the costs and value to customers and communities of including additional undergrounding as part of our Distribution Grid Hardening Program. There are many cases where sections of distribution conductors do not pose highly probable threats to nearby communities, including urban areas that are largely unburnable or with available firefighting resources, or long sections of line with many miles between one customer and the next. Both of these cases show lower wildfire risk than would be necessary to invest in Enhanced Grid Hardening. Thus, Enhanced Grid Hardening work would be strategically applied in specific areas where large fire growth potential is coupled with proximity to communities which are excessively vulnerable to total loss in the event of a wildfire. These areas would be identified, risk-ranked, and prioritized for sectional undergrounding of existing overhead conductor. By focusing on areas where the wildfire growth modeling suggests large scale loss to communities and high impacts to homes, people, and communities, we are able to provide a direct risk reduction without using a blanket undergrounding policy. This approach will allow Avista to mitigate the most risk for the least cost related to conversion to underground, allowing resources to efficiently eliminate risk at a surgical rather than a system-wide level. The impacts, benefits, and costs of the Enhanced Grid Hardening Program are currently being evaluated.

Above is a high canopy fire, below is a fire in low-level vegetation

Transmission Steel Pole Replacement. Transmission lines are particularly vulnerable to wildland fires but are generally not a significant driver in fire ignition events for

Avista. Conversely, the impact of fire on transmission structures can be significant when it does happen. Aside from the potential for extended outages, the replacement cost of a single transmission structure can be $50,000 or more, and damages to conductor can escalate into the millions of dollars.

Avista steel transmission poles survive the Snake River Complex Fire

Avista has systematically replaced wood transmission poles and structures with steel since 2006, typically for poles which were damaged or failed, or in the course of routine transmission line build projects. New construction is almost exclusively steel. The combination of system hardening and well-maintained rights-of-way has increased the fire resiliency of our transmission system. In fact, transmission fire ignition events are relatively rare for Avista. From 2009 to 2023 there were 4 individual transmission incidents listed as spark ignition events in our Outage Management System (about 0.3% of the total sustained transmission outages).[3] The Wildfire Plan is focused on making the transmission system more resilient to the threat of wildfire specifically in high fire risk zones by replacing wood poles with steel in areas likely to be impacted by wildfire, prioritized by WUI zone location, vegetation type, historical fire patterns, and potential for impact (such as lines serving power plants). We have also added a new technology, fire resistant wood pole wraps. Steel replacement work is primarily done in high canopy areas where steel poles would be the best choice versus low-vegetation areas such as crop or rangeland where fire protection may be provided with fire mesh wrap at the base of the wooden pole, a much less expensive option.

Transmission Wood Pole Fire Mesh Wrap. Avista is using Genics fire-resistant mesh wrap to protect wood poles in low vegetation level areas such as fields, farmlands, and range zones. It is sturdier than fire-resistant paint, can withstand extreme weather, and is considerably less expensive than replacing a wood pole with steel.[4] Pole wraps are used in areas subject to routine grassland or sage-shrub fires, fires that typically do not reach to pole top levels. The mesh has been proven to be more effective than the fire-resistant paint we have used in the past, and for approximately the same installation cost and installation time per pole. The mesh requires no maintenance and is much more

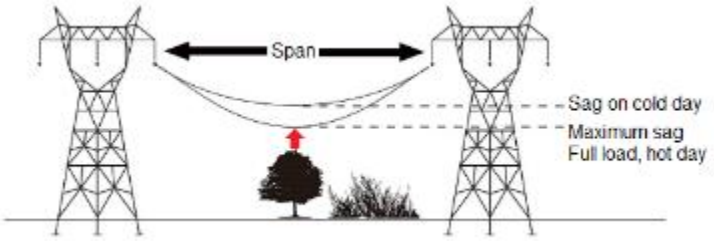
Fire resistant paint tends to fail in about 3-5 years and must be reapplied.

Fire mesh can last more than 20 years and requires no maintenance.

[3] This data was pulled from the Outage Management System for 2009 to 2023.
[4] Replacing a steel pole averages about $25,000 to $50,000 per pole or more. Steel mesh wrap costs about $200 per pole.

durable than paint (which typically lasts about 5 years). They have an estimated life of over 20 years.[5] [6]

Transmission Inspections. Avista's Transmission Engineering has conducted annual aerial and ground inspections for many years as required by FERC regulations.[7] Current inspection programs (ground and aerial) are geared towards identifying reliability risks (e.g., osprey nests, gunshot insulators, cracked crossarms, woodpecker damage, etc.). The Wildfire budget provides funding to both focus on and more quickly mitigate issues that are more related to potentially causing a spark, such as corroded attachment hardware, unauthorized attachments, and logging, slash piles, or other construction activities near powerlines. The Wildfire Plan further adds LiDAR inspections to the existing transmission inspection methods, which can specifically identify vegetation-related risk and additional issues such as ground profile changes, line sag, ground proximity, and thermal issues that may be difficult to see using traditional inspection methods. By supplementing aerial and ground patrols with additional fire-focused inspections such as thermal imaging, high resolution photography, and direct electrical testing, Avista is better able to identify potential fire hazards.



Installing a Fiberglass Crossarm

Grid Hardening Goals. Distribution Grid Hardening is now up to its expected pace of about 211 miles per year. We have grown this program since the Wildfire Plan was initiated in 2020 (actual Wildfire-related work began about mid-year in 2020) when we were able to achieve about 61 miles. We anticipate continuing at or near the current pace through 2029, though this goal may be modified as the Company moves toward implementation of the Enhanced Grid Hardening program mentioned above.

The number of steel transmission poles placed each year is variable, as it is dependent upon budget allowances, resource availability, outage availability, and the aspects of each work area (such as terrain, access, type of pole required, soil type, etc.) thus the changeability in the number of poles placed each year. The cost of each project, whether it be on a per pole or a per mile basis, is heavily dependent upon project complexity, which is driven by scope such as full or partial rebuild, inclusion of distribution underbuilds, etc. as well as location, access, terrain, soil conditions, voltage level, etc. A goal is set at the beginning of each year based on consideration of these factors.

[5] This is a new product so the actual longevity has not been proven, but some wood pole manufacturers estimate it may last the life of the pole if it doesn't experience a major fire. https://blpole.com/downloads/BLP/Fire-Mesh-Sell-Sheet.pdf

[6] "Fire Protection for Wood Utility Poles and Crossarms," Woodpoles.org, 2023, https://woodpoles.org/Issues/Fire-Protection

[7] FERC Reliability Standard FAC-003, https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-003-4.pdf requires inspection of 100% of the interconnected transmission grid annually. Avista's Transmission Maintenance Inspection Plan (TIMP) further requires inspection of all transmission lines each year.

The number of poles wrapped with fire-resistant mesh is based upon the cost of the mesh and how many wraps can be purchased, as well as access to the poles and crew availability. The "wrapping crew" has become much faster as they have gained experience and have exceeded their targets each of the past three years.

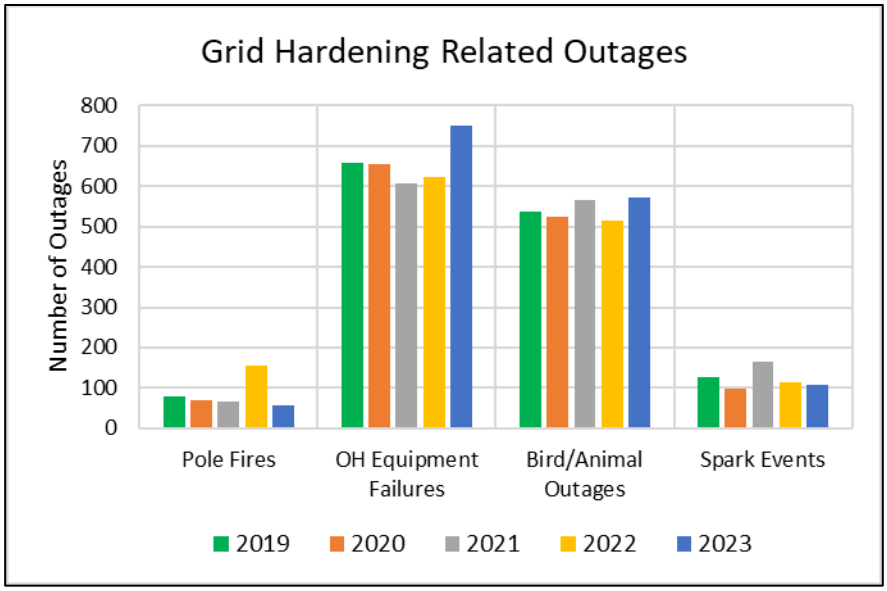


Figure 3. Grid Hardening Related Outages

Grid Hardening Metrics. We collect a variety of metrics in the Grid Hardening category. This includes overhead equipment outages, for as we replace outdated and other equipment that could create a spark or add additional protection measures such as wedge-connected stirrups, the number of these outages should go down, reducing the risk of this equipment starting a fire. We also track metrics such as the number of animal-related outages (protecting birds and animals from being electrocuted, causing outages, or creating fires), and the number of spark events on both the transmission and distribution systems. Over time, a reduction in these types of outages or events should help show the benefit of our grid hardening programs.

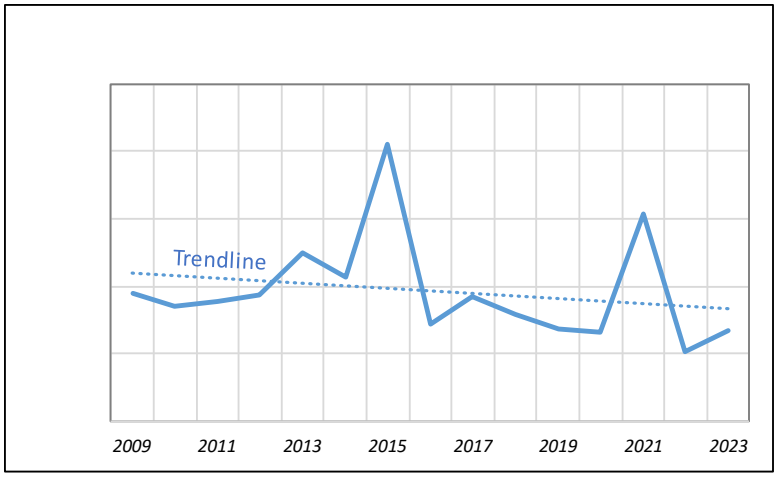


Figure 4. Number of Avista Pole Fires. Note that both 2015 and 2021 had record breaking heat waves along with long periods of dry spells and intermittent light rain, ideal conditions for pole fires.

On average, there are approximately 97 pole fires annually,[8] and the vast majority are related to wood-on-wood contact between crossarms and poles. Over time insulators and wood crossarms become contaminated by dust and dirt, creating a path for leakage current. When a period of hot dry weather is followed by a light rain, leakage current increases, creating the right conditions for pole fires.[9] An important goal of grid hardening is to reduce the number of pole fires, which can lead to wildfires under the right conditions. Pole fires, together with

[8] Based on the five-year average from 2009 to 2023. Note that 2015 was an especially bad year for pole fires based on the weather conditions at that time, a hot dry summer followed by fall rains. This was also the case in 2021.
[9] Steve Torres, "Utility Extinguishes Risk for Pole-Top Fires," T&D World, January 27, 2014, https://www.tdworld.com/electric-utility-operations/tools-and-technologies/article/20963905/utility-extinguishes-risk-for-poletop-fires

equipment failures, are mitigated by replacing aging and deteriorated poles, replacing wood crossarms with fire-resistant fiberglass crossarms, changing out obsolete conductor, and replacing or upgrading other equipment.

Pole Fires (Note: these are not Avista poles)

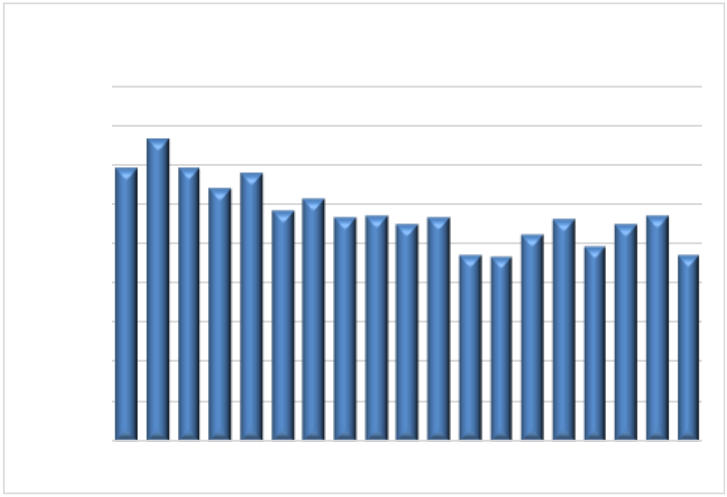


Figure 5. Number of Avista Fiberglass Crossarm Installations

Avista, like many utilities, has been replacing wood crossarms with fiberglass crossarms since the early 2000s. Fiberglass crossarms are smooth and resistant to contamination, do not rot or degrade over time, and are much lighter while being up to six times stronger than wood.[10] In addition, fiberglass crossarms are inherently self-extinguishing, so perform well in fire situations. They also provide improved electrical insulation. They may also help reduce costs, because two wood crossarms can often be replaced with one fiberglass crossarm.[11] Avista has never experienced a pole fire with a fiberglass crossarm.

Note that it will be many years until all wood crossarms are replaced with fiberglass, as Avista has nearly 228,000 wood distribution poles.

More Grid Hardening Metrics are shown below.

Infrastructure Program Metrics	2020	2021	2022	2023
Distribution Grid Hardening (miles)	61.2	150.5	180	214
Wildfire Transmission Steel Pole Conversion (units)	n/a	169	118	102
Other Transmission Steel Pole Conversion (units)	1,821	847	514	622
Transmission Wood Pole Wrap (units)	1,235	1,938	1,454	1,533

Figure 6. Grid Hardening Program Metrics Summary

[10] Terry Shank, "Fiberglass Crossarms as the Wood Alternative: More than the Simple Reasons," June 5, 2020, https://www.creativecompositesgroup.com/blog/fiberglass-crossarms-as-the-wood-alternative-more-than-the-simple-reasons

[11] Megan Headley, "Utilities Ready to Invest in FRP Solutions," March 5, 2020, http://compositesmanufacturingmagazine.com/2020/03/utilities-ready-to-invest-in-frp-solutions/

Distribution Grid Hardening Program Metrics	2020	2021	2022	2023
Percent of Distribution Grid Hardening Projects Planned vs Completed	92%	74%	90%	101%
Miles of Distribution Grid Hardening Planned	66.5	204	201	211
Miles of Distribution Grid Hardening Completed	61.2	150.5	180	214
Circuit Miles of Overhead Conductor Installed/Replaced	61	149	179	209
Underground Miles Constructed	0	1	1	5
Number of Wildlife Guards Installed	588	1363	2555	2299
Number of Crossarms Installed	666	977	1636	1448
Number of Distribution Steel Poles Installed	0	16	31	2
Number of Distribution Wood Poles Installed	32	115	323	375
Number of Open Wire Secondary Districts Removed (by Polygon)	0	3	4	7
Number of Wedge/Bail Clamps at Hot Tap Connection Points Installed	200	2550	4785	4738
Number of Lightning Arrestors Installed	191	599	467	851
Number of Cutouts Installed	208	550	949	914
Number of Insulators Installed	3023	4615	9563	7888
Number Distribution Fire Resistant Mesh Installed	6	201	100	49

Figure 7. Distribution Grid Hardening Metrics

Transmission Steel Replacement Poles Installed	2020	2021	2022	2023
Transmission Steel Replacement Poles Installed: Wildfire Only	n/a	169	118	102
Asset Condition/New Projects Poles Installed	n/a	812	476	526
Failed/Damaged Replacement Poles Installed	n/a	35	38	4
Planned/Ad Hoc Transmission Poles Installed	n/a	0	0	92
Total Non-Wildfire Transmission Poles Installed	1,821	847	514	622
Number of Transmission Wood Pole Fire Resistant Wraps Installed	1235	1938	1454	1533

Figure 8. Transmission Grid Hardening Metrics

Note: Did not begin installing wildfire-specific steel poles or differentiate reason for installation in Wildfire metrics until 2021.

Grid Hardening											
Budget (in thousands)	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024	2025	2026	2027	2028	2029	Total
Transmission Inspections	$1	$1	$84	$0	$200	$200	$200	$200	$200	$200	$1,286
Transmission Steel	$74	$5,455	$4,021	$3,623	$3,788	$3,960	$3,960	$3,960	$3,960	$3,960	$36,759
WA Grid Hardening	$1,513	$7,134	$9,985	$11,594	$13,528	$13,740	$28,740	$13,740	$13,740	$13,740	$127,455
ID Grid Hardening	$1,602	$4,714	$5,945	$7,452	$8,948	$9,160	$19,160	$9,160	$9,160	$9,160	$84,460
WPM & Make Ready GH	$0	$16	$3,626	$2,375	$2,788	$3,000	$3,000	$3,000	$3,000	$3,000	$23,805
Total Grid Hardening (Cap)	*$3,190*	*$17,319*	*$23,661*	*$25,044*	*$29,252*	*$30,060*	*$55,060*	*$30,060*	*$30,060*	*$30,060*	$273,766
Total Wildfire Capital Budget	*$3,421*	*$19,375*	*$26,066*	*$28,319*	*$33,750*	*$35,250*	*$60,250*	*$35,250*	*$35,250*	*$35,250*	$312,181
GH % of Capital Budget	*93%*	*89%*	*91%*	*88%*	*87%*	*85%*	*91%*	*85%*	*85%*	*85%*	*88%*
Transmission Inspections	*$137*	*$172*	*$251*	*$74*	*$150*	*$150*	*$150*	*$150*	*$150*	*$150*	$1,534
Transmission Pole Wraps	*$178*	*$421*	*$720*	*$655*	*$550*	*$550*	*$550*	*$550*	*$550*	*$550*	$5,274
Total Grid Hardening (O&M)	*$316*	*$593*	*$971*	*$729*	*$700*	*$700*	*$700*	*$700*	*$700*	*$700*	$6,809
Total Wildfire O&M Budget	*$2,430*	*$7,602*	*$17,273*	*$19,727*	*$16,122*	*$14,905*	*$13,812*	*$12,130*	*$11,050*	*$10,160*	$125,210
GH % of O&M Budget	*13%*	*8%*	*6%*	*4%*	*4%*	*5%*	*5%*	*6%*	*6%*	*7%*	*5%*

Figure 9. Grid Hardening Capital Actuals & Budget

Enhanced Vegetation Management

ENHANCED VEGETATION MANAGEMENT
REMOVING DEAD, DYING, AND DISEASED TREES THAT COULD STRIKE POWERLINES.

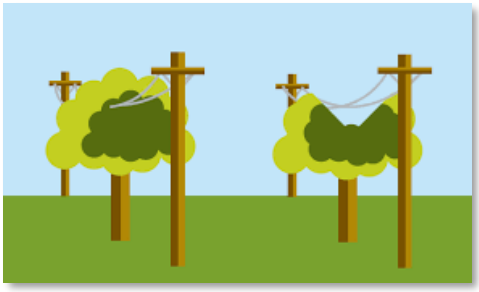
Avista Vegetation Management Work

Avista has had a robust vegetation management program in place for many years. This program, the Routine Vegetation Management program, has a budget that includes cyclical program maintenance, customer service requests, local office area requested work, a tree replacement program (Right Tree Right Place), and risk tree inspection and mitigation. This program is cadence-based, with a goal of addressing the entire system over a five to seven-year period, or about 20% (about 1,500 miles) of the distribution system annually. Historically, cycle-trimming and risk tree inspections were conducted in tandem with one line-clearance contractor. The work included performing routine annual vegetation management consisting of a combination of cycle-trimming along with risk tree ("danger tree") inspections. Avista's definition of a risk or danger tree is a tree with the potential of imminent fall-in hazard to energized facilities. Like most utilities, Avista targets the dead, dying, and defective trees which are more likely to fail than green, healthy trees. However, in many cases, trees that fall into lines are located outside of prescribed rights-of-ways and so are not subject to routine maintenance.

As part of Avista's Wildfire Resiliency Plan, distribution vegetation management was identified as an area of risk that could be addressed through an enhancement of the existing program. Thus, in 2020, the Vegetation Management Program was separated into two distinct programs with routine maintenance (cycle trimming) remaining in the general vegetation program but risk or danger tree aligning with the Wildfire Plan, including its own goals and budget. Identified areas of enhancement include an annual risk tree inspection program that encompasses the entire transmission and distribution grids, an "offshoot" of the Right Tree Right Place Program called the Safe Tree Program that increases emphasis of tree removal targeted specifically in high fire risk areas (WUI 2 and 3), and use of sophisticated inspection technologies including LiDAR and satellite imaging. The goal for this wildfire-focused vegetation program is to perform risk tree inspections and removals across 100% of the transmission and distribution systems on an annual basis rather than the routine program's five-year cycle. This enhanced program also includes partnering with external agencies to reduce fuel loading near our facilities. These elements are described in more detail below:

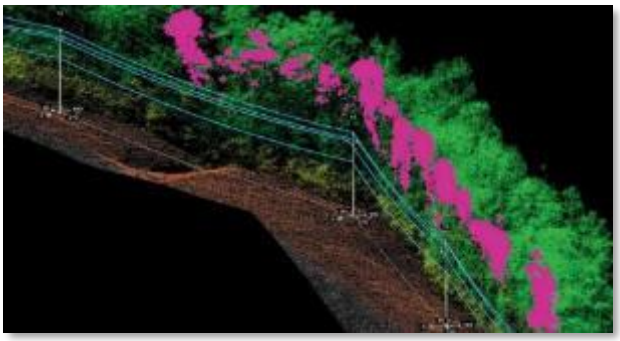
Risk Tree

- *100% (Systemwide) Annual Risk Tree Inspections*
- *Transmission System LiDAR Imaging*
- *Distribution System Satellite Imaging*
- *Fuel Reduction Partnerships*
- *Safe Tree Program*



Annual Risk Tree Inspections. During a risk tree inspection, any and all risk trees are identified and planned for mitigation on both the transmission and distribution systems. A "risk tree" is one with the potential of imminent fall-in or contact hazard to the energized facilities, a visibly dead, diseased, or dying tree, or one which possesses obvious structural defects that could fall into the conductor.[12] These trees are trimmed or removed to eliminate potential for fire ignitions and outages. Distribution Enhanced Vegetation inspections consist of ground-based visual inspection of about 6,500 miles of the non-urban distribution system, which when combined with satellite data acquisition, covers 100% of the distribution system (7,675 miles). There is not a rural/non-rural distinction for transmission risk tree inspection, and so with a combination of ground-based, aerial, and LiDAR inspection, 100% of the transmission system (2,270 miles) is planned for inspection each year. The Vegetation Management team has the goal of mitigating risk trees found within six months of identification if feasible.

Transmission LiDAR Imaging. Avista inspects transmission powerlines via ground and aerial patrols annually as part of our NERC compliance requirements. In order to enhance vegetation inspections related specifically to wildfire risk, Avista added the additional layer of LiDAR data collection for the transmission grid to identify risk trees as well as encroachment or other vegetation issues. LiDAR works well for transmission because most transmission lines have open linear rights-of-way like roads and railways (as shown in the photo on the left), allowing LiDAR data to be primarily collected via a fixed wing aircraft or helicopter. The survey grade data LiDAR provides has sub-centimeter accuracy, and when combined with associated high resolution photographs, provides vegetation planners with a very robust assessment of both encroachment and risk tree hazards.



LiDAR Imagery Indicating Encroachment

Avista Transmission Corridor

[12] This is in part regulated by ANSI A300 (Part 9)-2017 Tree Risk Assessment - a. Tree Failure. ANSI A300 Standards, https://treecareindustryassociation.org/business-support/ansi-a300-standards/

Distribution Satellite Imaging. Inspection methods for distribution vegetation work are primarily ground-based visual inspections due to the convoluted nature of distribution circuits, along with the associated narrow corridors and the complexities of capturing the volume of work that amasses over the 5-year Routine Inspection Program cycle. The Wildfire Plan incorporates digital satellite analysis into the existing distribution vegetation inspections, providing a large volume of geospatial information that facilitates the monitoring of vegetation across the entire system, enabling deeper and more regular vegetation management intelligence, including change detection. Avista partnered with a satellite imaging company called AiDash to capture this data. This new technology is providing a high level of detail regarding the health of vegetation across the system as well as encroachment issues. Though satellite-based data is not as precise as LiDAR, it is a much more effective tool for collecting data over the wide trunk-and-lateral configurations of most electric distribution systems. Satellite data is processed through machine learning algorithms to detect system changes over time. It effectively learns Avista's system and the associated vegetation. The advantage of this system-wide approach is that vegetation planners are receiving 100% of the data at the same time, so field activities can be prioritized using a risk-based strategy rather than simply relying on cycle-based methods. In short, resources can be focused in the areas of highest risk.

Satellite Imagery (left shows raw data, right shows applied analytics)

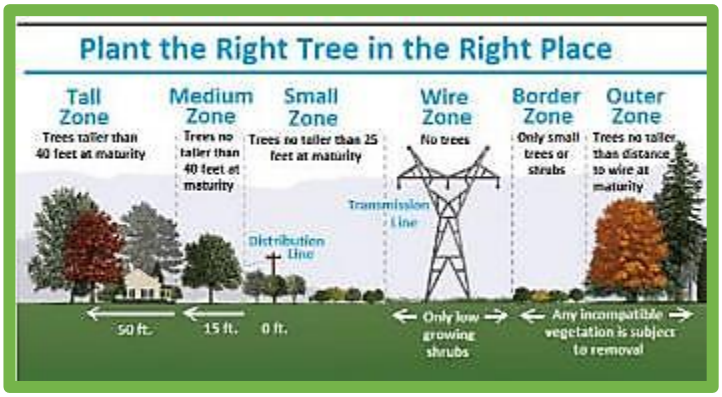
Both the LiDAR and satellite images are taken on a regular basis and will indicate where vegetation risk exceeds both reliability and fire mitigation thresholds. These tools provide valuable information regarding the location of vegetation encroachment and fall-in risks. This high-tech approach takes vegetation management to the next level. Rather than relying solely upon human inspections, this data collection is automated, highly accurate, and aided by computer-based artificial intelligence analytics. This helps vegetation planners make better informed decisions on the scope and extent of field treatments.

Fuel Reduction Partnerships. We are actively engaged with several land management agencies to financially assist them with fuel reduction near our facilities. This includes mitigating dead trees on or adjacent to Avista-owned facilities and corridors, thinning small diameter trees, and removing underbrush. Avista is actively working with the

Fuel Reduction Before & After Photos

Washington Dept. of Natural Resources, Idaho Dept. of Lands, the U.S. Forest Service, the Nez Perce Tribe, and local and regional agencies such as the Bonner County Department of Emergency Management. Each year we provide funding to these external agencies to reduce the amount of vegetation on land they manage, areas considered at high risk for fire activity, and that are located within our service territory and near our facilities. Avista grants $100,000 annually to this program.

Safe Tree Program. Vegetation contacts with powerlines are a significant source of spark-ignition potential. In response, Avista built on an existing customer-focused tree removal program called "Right Tree Right Place" to develop an additional program called the "Safe Tree Program," specifically targeted at customers in high fire threat areas. This program is designed to work proactively with customers in these elevated fire risk areas who have tall-growing trees under or adjacent to our powerlines. The Safe Tree Program removes non-compatible vegetation (i.e., likely to grow into powerlines), cleans up the debris, and replaces the previous tree with a low-growing species of the customer's choice if the customer wishes to do so, all at no direct cost to the customer. Replacement trees will be low growing species that mature to a height that will not interfere with overhead powerlines and should not require ongoing trimming or maintenance to keep them from becoming hazards to powerlines. While we see value in low-growing trees being replaced on the landscape, and it ultimately reduces the maintenance expenses associated with trimming these trees as they grow, the goal is primarily to remove trees that could cause spark ignitions or customer reliability issues.



In 2022 we tested this concept in Kellogg, Idaho. The results of the program were overwhelmingly favorable. In response, in 2023 we expanded the program across our service territory, again contacting specifically identified customers in WUI 2 and WUI 3 risk areas. We also added a platform to the Company's website allowing these customers to request this service directly. The "Safe Tree Customer Service Portal" is available on the MyAvista website, allowing specific-location customers to communicate directly with our arborists and schedule this work themselves.[13] The site has proven to be extremely popular. A promotional email went out to targeted customers when the site went live, encouraging them to check out the website. Within an hour, more than 100 applications were submitted. Within a few weeks, over 500 requests were in the queue.[14] We see a real win-win with this program as we protect our customers from a potential hazard situation, reduce reliability risk, and provide offsets to future vegetation management work on their trees.

[13] Note that only eligible customers are allowed to request this service. The portal can be found at: https://www.myavista.com/safety/wildfire-resiliency

[14] These requests are managed by our contractor, Associated Arborists, and are prioritized by the order in which they are received.

Enhanced Vegetation Goals. Our goals here are to reduce the number of tree-related outages that could potentially lead to a fire. To indicate the long term benefits of our vegetation programs, we track the number of these outages over time.
We do not set goals for the number of risk trees we remove or trim, as this varies greatly based on factors beyond the Company's control such as forest health and insect infestations (as shown in the photos).

These pictures are of the same group of trees, four months apart, after a beetle infestation.

Due to these challenges to forest health, we have found that scaling to 100% risk inspection annually was a much bigger and more expensive proposition than originally anticipated. Vegetation planners had preliminary forecasts of the volume of dead, dying, and diseased trees that could potentially strike powerlines prior to 2022. However, in 2022 and 2023 we found that the actual number of risk trees was nearly double earlier estimates. Forest health has been made more dire by the historic drought of 2021, but also reflects increased levels of insect damage combined with human activity, all leading to higher levels of tree mortality than expected. In fact, the USDA anticipates "substantial tree mortality from insects and diseases through 2027."[15]

Avista removed nearly 19,000 dead, dying, or diseased trees within strike distance of our facilities in 2022 and over 22,000 trees in 2023, a new record for our vegetation crews. Vegetation contractor cost and availability has been a challenge in accomplishing this work, as these professionals are in high demand across the region. Avista's primary inspection contractor has been repeatedly unable to recruit and retain enough inspectors to complete the work, as utilities across the western U.S. are all competing for the same labor resources. As an example of the issues around acquiring an adequate level of crews, the Gray Fire led to Avista contract crews

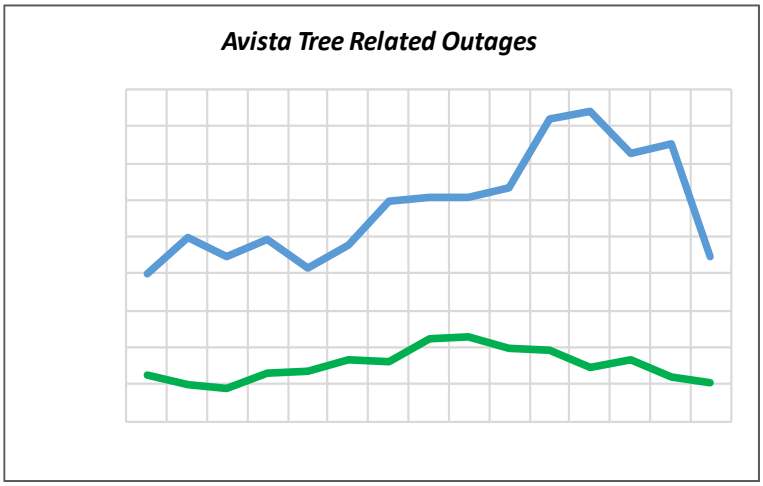


Figure 10. Tree Related Outages

[15] "Forest Health Summary for the Pacific Northwest Region 2022: USDA Forest Service: Forest Health Protection, Oregon Department of Forestry, and Washington Department of Natural Resources, July 11, 2022," https://storymaps.arcgis.com/stories/026a39f860b041eb84d8582bce094fad

removing over 5,000 risk trees damaged by the blaze that were at risk of falling during future weather events. This work was accomplished over the short span of four weeks. This single event led to approximately 37 crew weeks lost to this extensive risk tree response, creating complications in getting planned vegetation work back on schedule. Even so, the Company is committed to this intense inspection process and, in addition, to mitigating risk trees within six months of identifying them. (Note that the 22,000 trees removed in 2024 do not include the Medical Lake area removals.)

Enhanced Vegetation Metrics. Metrics indicate that trees are far more likely to fall into distribution lines than grow into them, as indicated by historical outage data shown in Figure 10 above. Our vegetation efforts in removing risk trees should have a significant impact on tree-related events over time, continuing to reduce the number of outages caused by trees falling into or growing into our lines.

In addition to metrics reflecting the outcomes of our vegetation programs related to outages, we also track information around the vegetation work, such as number of trees removed or trimmed, the number of acres treated via our Fuel Reduction Partnerships, and the number of customer requests related to our Safe Tree Program. Note that Fuel Reduction Partnerships and the Safe Tree Program are new programs so results were not available prior to 2022.

We track the miles of inspection achieved by our digital data collection programs: satellite imaging for the distribution system and LiDAR for transmission. When the Wildfire Plan got started in 2020, we tested the satellite technology on 85 miles of the distribution grid. In 2021 and each year since, satellite inspections have covered 100% of the 7,675 miles of our distribution grid. In 2020 Avista collected LiDAR data on approximately 540 miles. In 2021 we ramped up to 1,143 miles. The plan going forward is to capture all 2,270 miles of the transmission system with LiDAR each year. In 2023 this goal was not achieved. Only 1,679 miles of LiDAR were captured due to budget constraints. Our initial vendor's delivery and billing was so late that some of the work they performed for us in 2022 was not billed until 2023, throwing off our 2023 inspection budget and schedule. In response, we switched to a new vendor and hope this change will provide us with more reliability. Our plan is to capture all 2,270 miles in 2024.

Enhanced Vegetation Management Program	2020	2021	2022	2023
Total Number of Trees Trimmed	3,129	4,313	13,036	9,989
Total Number of Hazard Trees Removed	10,091	12,796	18,959	22,573

Figure 11. Enhanced Vegetation Management Program Overall Metrics

Distribution Enhanced Vegetation Management Program	2020	2021	2022	2023
Miles of Distribution Risk Tree Inspections	2,811	5,245	6,466	6,546
Percent of Distribution Risk Tree Inspections Performed on Time	100%	100%	100%	100%
Percent of Distribution Risk Tree Inspections Remediated	n/a	n/a	90%	58% *
Number of Distribution Risk Trees Removed	10,091	12,796	15,678	19,511
Number of Distribution Risk Trees Trimmed	3,129	4,313	10,780	9,142
Miles of Distribution Satellite - AiDash Completed	85	7,675	7,675	7,675

Figure 12. Distribution Enhanced Vegetation Management Program Metrics

**Note: The percent of risk trees remediated is misleading. The program goal is to mitigate risk trees within 6 months of identification. In 2022 90% of the risk trees remaining at year end were less than 6 months old. In 2023 only 58% of the risk trees remaining at year end were less than 6 months old. This is due in part to the timing of the respective inspections, with the 2023 inspection being completed earlier in the year than in 2022. However, 100% of risk trees identified in 2023 will be mitigated prior to fire season 2024. Did not track the % of remediations until 2022. We did not track % of trees remediated until 2022.*

Transmission Enhanced Vegetation Management Program	2020	2021	2022	2023
Total Miles of Transmission Risk Tree Inspections	1,355	2,270	2,270	2,270
Percent of Transmission Risk Tree Inspections Performed on Time	100%	100%	100%	100%
Percent of Transmission Risk Tree Inspections Remediated	n/a	n/a	100%	96%
Number of Transmission Risk Trees Removed	1,288	1,362	3,281	3,062
Number of Transmission Risk Trees Trimmed	n/a	n/a	2,256	847
Acres of Transmission Corridor Clearing Completed	1,270	1,848	736	782
Miles of Transmission LiDAR Completed	540	1,143	2,270	1,679

Figure 13. Transmission Enhanced Vegetation Management Program Metrics

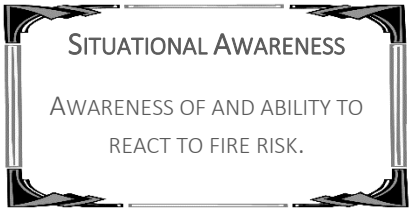
Other Vegetation Management Programs	2020	2021	2022	2023
Number of Trees Replaced Through the Customer Safe Tree Program	n/a	n/a	870	477
Number of Trees Removed Through Customer Requests	n/a	n/a	63	1,365
Fuel Reduction Partnership Acres of Trees and Brush Removed/Trimmed	n/a	n/a	211	179

Figure 14. Other Vegetation Management Program Metrics
Note: These programs were not in place until 2022.

Enhanced Vegetation Management											
Budget (in thousands)	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024	2025	2026	2027	2028	2029	Total
ID Risk Tree	$1,239	$3,152	$6,023	$5,404	$5,445	$4,901	$4,410	$3,969	$3,572	$3,215	$41,330
WA Risk Tree	$0	$2,111	$7,948	$10,600	$6,899	$6,209	$5,588	$5,029	$4,526	$4,073	$52,982
Safe Tree Program	$0	$0	$260	$741	$1,200	$1,200	$1,200	$500	$300	$200	$5,601
Fuel Reduction Partnership	$0	$0	$159	$225	$300	$300	$300	$300	$300	$300	$2,183
Distribution Satellite	$59	$327	$494	$511	$107	$107	$107	$107	$107	$107	$2,033
Transmission LiDAR	$491	$450	$680	$783	$900	$900	$900	$900	$900	$900	$7,805
Total Vegetation (O&M)	*$1,790*	*$6,040*	*$15,563*	*$18,263*	*$14,851*	*$13,616*	*$12,505*	*$10,805*	*$9,706*	*$8,796*	$111,934
Total Wildfire O&M Budget	*$2,430*	*$7,602*	*$17,273*	*$19,727*	*$16,122*	*$14,905*	*$13,812*	*$12,130*	*$11,050*	*$10,160*	$125,210
Veg. % of O&M Budget	*74%*	*79%*	*90%*	*93%*	*92%*	*91%*	*91%*	*89%*	*88%*	*87%*	*89%*

Figure 15. Enhanced Vegetation Management Program Actuals & Budget

Situational Awareness

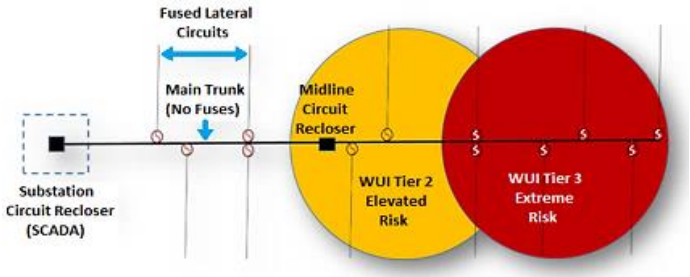


Equipment failures, vegetation contacts, wind, snow, and lightning are significant contributors to line faults, and each line fault represents interruptions to electric service as well as the potential for a spark to occur. Avista makes a great effort to reduce the number of faulted circuits with programs such as Wood Pole Management, Vegetation Management, and by adding sectionalizing devices such as reclosers, because when line faults happen, distribution system protection is called upon to isolate the fault location.

Avista's Situational Awareness strategies are designed to enable remote monitoring and control of protection equipment and to provide operating horizon risk analytics. Automation equipment provides "eyes" on some of our most critical infrastructure in high fire risk areas. Many of Avista's circuit breakers do not support monitoring or control, which means they cannot be remotely operated, requiring manual intervention to make changes to settings or to identify an issue. This may take several hours depending on location and crew availability. In fire conditions or situations, delay is never a good thing.

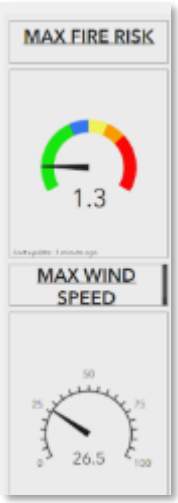
The Wildfire Resiliency Plan has the goal of installing modern circuit reclosers capable of remote monitoring and operation in WUI 2 and WUI 3 high fire threat areas. This equipment supports Avista's Fire Safety Mode (FSM) Operations. FSM is informed by Avista's Fire Weather Dashboard, a computer-based risk analysis system that combines elements of the 7-day National Weather Service forecast with metrics associated with infrastructure performance and underlying fire risk. Our Situational Awareness Plan encompasses this critical protection equipment, development of a WUI map specific to Avista's service territory, and the Fire Weather Dashboard, our principle means of identifying risk. These programs are described in more detail below:

- *Fire Weather Dashboard*
- *Wildland Urban Interface Map*
- *Substation SCADA Installations*
- *Distribution Automation Devices*



Fire Weather Dashboard. The Fire Weather Dashboard is really the heart of our awareness efforts. It is our primary tool for identifying transient fire danger potential on our system. The Dashboard is a sophisticated risk-based model developed within Avista and directly customized to our system. It uses historical data based on our service territory that combines elements of the 7-day National Weather Service forecast with infrastructure performance and underlying fire risk metrics. This tool provides insights into each individual feeder in Avista's distribution system, delivering a risk level based on a comprehensive spectrum of information including wind speed and direction, sustained wind levels, humidity and dryness levels, type of vegetation on each feeder, temperature, condition of equipment,

mode of operation, historic outage data, and more. It provides a dynamic look at Avista's daily fire risk and weather conditions across our system, identifying areas and times where problems may arise and when the risk is increasing beyond a desirable point. It provides notice to take actions to mitigate potential risk on individual facilities throughout our system. It also has the ability to track current fire paths and estimate potential risk to Avista's infrastructure. When combined with the dynamic operating capability provided by automated protection equipment, it guides the decision to enable various levels of operations and protection systems (Fire Safety Mode operations) to mitigate risk.



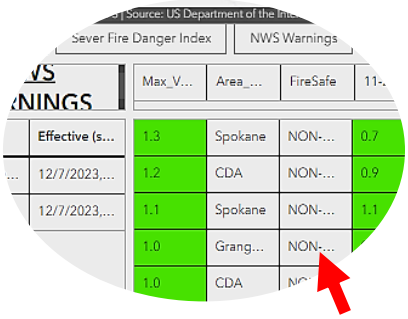
Dashboard Maximum Fire Risk & Wind Speed predictions for the week

The Dashboard indicates the risk level for the upcoming week for each area office and highlights the maximum fire risk as well as the maximum wind speed expected for the week across our system. It indicates the status of Fire Safety Mode (FSM) equipment and also indicates whether the circuit is enabled for FSM operations. The dynamic approach offered by the Dashboard allows system operators to better understand timing and extent of the risk, providing the opportunity for the Company prepare and to act in order to mitigate potential spark-ignition events. It also provides a historical record of fires and their impacts. (Note that these Dashboard samples were taken in November of 2023, a time of low fire risk.)

Area Filter	
Area_Office	FR
CDA	Low
Colville	Low
Davenport	Low
Deer Park	Low
Grangeville	Low
Kellogg/St. M	Low
L/C	Low
Othello	Low
Pull/Mos	Low
Sandpoint	Low
Spokane	Low

Dashboard Fire Risk by Area Office

The Fire Weather Dashboard has had minor modifications since 2021, including small calibrations of the model in an attempt to best fit data to observed outcomes in real time, as well as through back-casting against actual situations and conditions in order to test concepts and accuracy. These tweaks were done to simplify action points, ensure proper weighting of factors, and provide better data clarity to our operations team. This system has been benchmarked against actual fires in our service territory to further refine and prove its accuracy. In 2023 we incorporated an updated WUI map. This should not have major impacts to the Fire Weather Dashboard, as we utilize the same logic to assess the fire risk, but it incorporates more granular data to have an increased view of potential impact to communities.



Dashboard indicates FSM Status

Date of Decision	Feeder	Company Equip ID	Fire Risk Score	Recommended ...	Date/Time to Go...	Hours in Mode
7/24/2023, 12:00 PM	KAM1293	KAM1293	6.9	Elevated Mode	7/24/2023, 12:00 PM	12
7/24/2023, 12:00 PM	KAM1292	KAM1292	6.9	Elevated Mode	7/24/2023, 12:00 PM	12
7/24/2023, 12:00 PM	ORO1280	ZL1540R	6.9	Elevated Mode	7/24/2023, 12:00 PM	12
7/24/2023, 12:00 PM	GRV1271	1285	6.6	None	7/24/2023, 9:25 AM	0
7/24/2023, 12:00 PM	ORO1280	ORO1280	6.6	None	7/24/2023, 9:26 AM	0
7/24/2023, 12:00 PM	GIF34F2	GIF34F2	6.4	Elevated Mode	7/24/2023, 12:00 PM	12
7/24/2023, 12:00 PM	SE12F2	Z898R	6.4	Elevated Mode	7/24/2023, 12:00 PM	12

The Dashboard Tracks Decisions Related to Elevating Protection Settings

Figure 16. Avista's Fire Weather Dashboard showing the risk factors by day for each feeder (October 2023)

Wildland Urban Interface Map. The interface area between forest lands and human development is referred to as Wildland Urban Interface (WUI). Today, more than one-third of the U.S. population lives in the wildland urban interface.[16] The attraction of living in wooded areas and closeness to nature is accelerating growth in the WUI. However, when wildfires strike, the WUI's mix of buildings with forests and grasslands can set the stage for disaster. Homes and businesses located in WUI zones are most at-risk from the impact of wildfires and are often located in rural areas lacking adequate fire suppression resources. In contrast, incorporated urban areas exceeding 10,000 in population are typically identified as "developed areas" for wildfire hazard potential and are considered non-WUI, as they have well established fire response facilities and non-burnable hardscape areas such as roads and parking lots to help serve as fire containment zones. Thus, fire spread potential is constrained in these areas. Avista believes that employing a WUI map helps identify and prioritize areas of greatest risk and serves to inform the recommendations and operational decisions related to wildfire resiliency and applying the Wildfire programs within our service territory. In utilizing a WUI map specific to our service territory, we can target our programs where they have the potential to reduce the most risk and have the greatest positive impact in the safety and protection of our customers and our infrastructure.

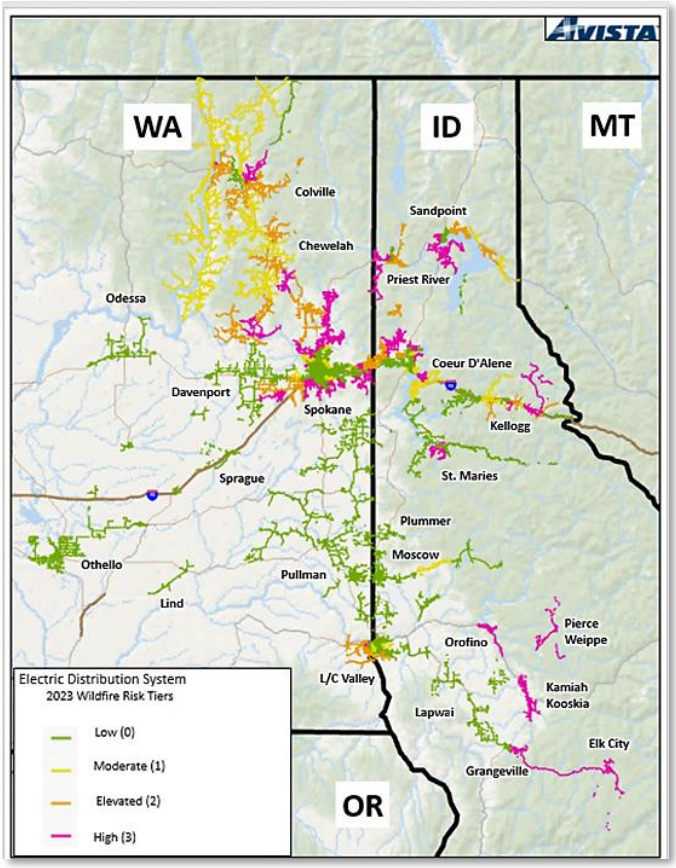


Figure 17. Avista's WUI Map

University of Colorado Boulder
Earth Lab
U.S. Wildfire Study[15]

- Humans cause 97% of all wildfires in the WUI interface, 85% of all wildfires in "low housing density areas," and 59% of all wildfires in wildlands.
- Human-started wildfires are expensive, eating up about 1/3 of all fire fighting costs.
- Overall, about ½ of fire suppression costs are related to protecting homes.
- Most human-caused fires are relatively small (<10 acres) but are responsible for the most homes threatened (92%).

Avista's WUI risk mapping is oriented towards potential utility-caused fires combined with significant impact to communities. Because our Wildfire Plan was developed using a risk-based approach, the Company identified the higher risk areas that can benefit the most

[16] "Planning the Wildland Urban Interface," National Cohesive Wildland Fire Management Strategy, April 30, 2019, http://wildfireinthewest.org/planning-the-wildland-urban-interface/

[17] The University of Colorado Boulder study consisted of 1.6 million U.S. Government spatial records of wildfire ignitions as well as 120,000 wildfire incident reports, and 200 million real estate records. https://www.homelandsecuritynewswire.com/dr20200911-humans-cause-97-percent-of-homethreatening-wildfires

from prudently applied mitigative actions rather than utilizing blanket solutions applied to our entire service territory. Avista delegated four primary risk tiers: Low (0-green), Moderate (1-yellow), Elevated (2-orange), and Extreme (3-pink/red) as shown in the Avista WUI map above (Figure 17). We consider the combination of WUI Risk Tiers 2 & 3 as "elevated fire threat areas." These areas comprise approximately 36% of Avista's electric distribution (22% in Washington, 13% in Idaho). Portions of the WUI map that are not highlighted are classified as non-WUI areas and represent areas with low fuel concentrations, are not located within our service territory, or have low burnability (such as lakes), very low housing densities, or are large urban areas (> 10,000 population).

Distribution Line Miles												
State	Low (0)		Moderate (1) Miles		Elevated (2)		Extreme (3)		WUI 2 & 3		Total Miles	
	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
WA	2,670	35%	780	10%	1,056	14%	652	8%	1,708	22%	5,158	67%
ID	1,181	15%	349	5%	418	5%	619	8%	1,037	13%	2,567	33%
Total	3,851	50%	1,129	15%	1,474	19%	1,271	16%	2,745	36%	7,725	100%

Figure 18. Avista's WUI Miles

We continue to improve the WUI map as new information becomes available. Avista's original Wildland Urban Interface tiers worked with USDA's Wildland Hazard Potential[18] data to assign potential for wildfire severity in conjunction with population density data. The original data did not reflect the potential impact to communities, so in 2022 a new dataset from the USDA and U.S. Forest Service called the "Wildfire Risk to Communities Housing Unit Impact Data"[19] was added. This data reflects the potential for housing to be impacted by a wildfire, summarizing the potential for loss of structures. This better meets Avista's wildfire goals, as we intend to work towards a static risk map that sufficiently considers the impact to communities in and around our service territory.

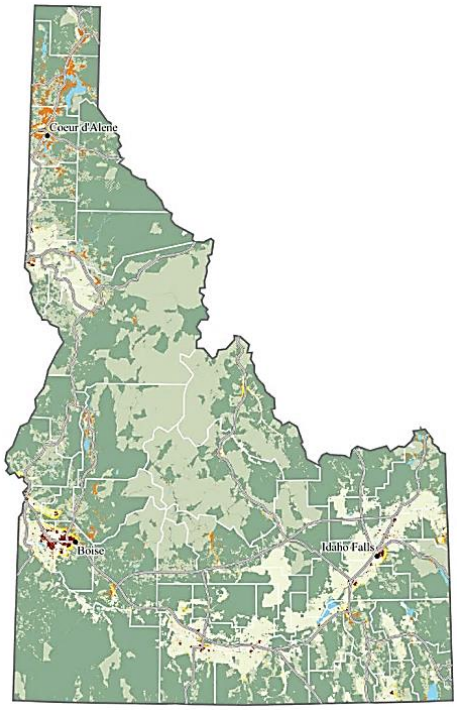
Washington State WUI Zone Map[20]

We have also incorporated wind direction data to better understand the everyday risks near our facilities in each direction. In addition, we integrated historic feeder outages as well as vegetation and feeder

[18] Dillion, Greg. "Wildfire Hazard Potential," Wildfire Hazard Potential: Missoula Fire Sciences Laboratory, https://www.firelab.org/project/wildfire-hazard-potential

[19] Scott, Joe H., Brough, April M.; Gilbertson-Day, Julie W.; Dillon, Gregory K.; Moran, Christopher. 2020. "Wildfire Risk to Communities: Spatial datasets of wildfire risk for populated areas in the United States," Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2020-0060

[20] Washington State WUI Map courtesy of Ashely Blazina and Kirk Davis, Washington Dept. of Natural Resources, February 25, 2022, https://storymaps.arcgis.com/stories/7016c437623a445997c072a05e26afbb



Idaho State WUI Zone Map[21]

health data to calculate the probability of a fault that may lead to a spark event. Finally, we considered the location of the feeder related to burnable/non-burnable areas to assess the ignition potential. As we improve our WUI map, we gain better insights into risk locations at a more granular level, allowing us to better understand the transformation of wildfire risk across our electric system over time.

Substation SCADA Installations. We are updating substations located in high fire threat areas that currently lack automation equipment by extending Supervisory Control and Data Acquisition (SCADA) systems into these areas to allow the subs to be monitored and controlled remotely. Though substations are designed to operate autonomously, the inability to adjust associated protection systems based on weather conditions or to de-energize electrical circuits in an emergency elevates the safety risk for emergency first responders and can increase the potential for a fire situation. Thus, using SCADA to monitor and control substations and powerlines is a fundamental tenant of utility wildfire plans across the western U.S. and Canada. SCADA systems allow quick response to high risk situations. Fifteen Avista substations that lack communications equipment are located in high threat fire areas. Another thirty substations require hardware upgrades to support a fully automated Fire Safety Mode system. Work under the Wildfire Plan also includes 129 substation breakers that serve downstream WUI 2 or 3 zones that require some level of hardware upgrades such as recloser replacement and/or upgrades to electronics.

Substation work being completed at the St. Maries Substation

Automation Equipment on a distribution pole in front compared to the pole behind

Distribution Automation. Avista's Situational Awareness strategies are designed to make sure key protection devices out on the powerlines can be monitored and operated remotely to quickly respond to fire weather and conditions. Midline circuit reclosers are often deployed on

[21] Idaho WUI zone map courtesy of the USDA Map of the Wildland-Urban Interface of the Conterminous United States, page 24, https://www.fs.usda.gov/nrs/pubs/rmap/rmap_nrs8.pdf

long distribution lines where substation-based equipment cannot adequately protect the entire length of the circuit. Urban distribution lines are typically 5 to 10 miles in length, while rural counterparts can extend hundreds of miles. Many of Avista's circuit breakers do not support monitoring or control, which means they cannot be remotely operated, requiring manual intervention to make changes to settings or to identify an issue. This may take several hours depending on the location of the equipment and crew availability. Part of the Wildfire Resiliency Plan is installing modern circuit reclosers (such as the Viper shown in the photo) on circuits deemed potentially at risk. These new reclosers are capable of remote monitoring and operation so do not require manual intervention.

Viper Recloser

Situational Awareness Goals. Avista plans to modernize all of 45 of the substations in elevated WUI zones by the end of 2029 as well as upgrade the 129 remaining breakers. This plan, depending upon budget, manpower, and other constraints, should include completion of about 4-5 substation upgrades per year. This work is a significant project and is expected to run over the next 8-10 years.

Avista also has over 240 circuit reclosers (both midline and substation) that require upgraded hardware and/or software in order to be Fire Safety Mode capable and able to aid in implementing wildfire protection measures. The majority of these 240 devices were selected based on the downstream WUI tier zones served (Tiers 2 and 3 were mandated by the Program, while some Tier 1 were also included based on historical events). 101 of the 240 circuit reclosers are modern units and will support automated Fire Safety Mode but require software upgrades. We planned to upgrade or install 11 midline and 15 Fire Mode Ready reclosers in 2023.

Situational Awareness Metrics. Note that there are no metrics associated with the WUI map or the Fire Weather Dashboard, but in the automation category we track the number of devices that have been installed over the course of the year on both the distribution grid and in substations. In 2023 we completed 9 upgrades to substation breakers. To date, almost 200 distribution automation reclosers have been upgraded, with 8 upgraded or installed in 2023. These protection updates have struggled to meet their goals for this year due to resource constraints, but during the fourth quarter of 2023 advanced scheduling work was accomplished related to these projects, so we anticipate getting back on track for 2024.[22]

Situational Awareness	2020	2021	2022	2023
"Fire Mode Ready" Reclosers Commissioned / Settings Only	n/a	65	100	1
Fire Safety Mode Distribution Midline Reclosers Installed	n/a	7	17	7
Substation Breakers Installed	n/a	2	0	9

Figure 19. Situational Awareness Program Status
Note: This program did not begin until 2021.

[22] Note that this program did not get underway until 2021.

Situational Awareness											
Budget (in thousands)	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024	2025	2026	2027	2028	2029	Total
Fire Weather Dashboard	$198	$189	$64	$447	$1,272	$40	$40	$40	$40	$40	$2,370
Fire Ignition Tracking	$3	-$3	$0	$0	$0	$0	$0	$0	$0	$0	$0
Distribution Automation	31	1,355	1,599	1,273	438	650	650	650	650	650	$7,946
Substation Automation	0	515	741	1,555	2,788	4,500	4,500	4,500	4,500	4,500	$28,099
Total SA (Cap)	*$231*	*$2,056*	*$2,404*	*$3,275*	*$4,498*	*$5,190*	*$5,190*	*$5,190*	*$5,190*	*$5,190*	$38,415
Total Wildfire Capital Budget	*$3,421*	*$19,375*	*$26,066*	*$28,319*	*$33,750*	*$35,250*	*$60,250*	*$35,250*	*$35,250*	*$35,250*	$312,181
SA % of Capital Budget	*7%*	*11%*	*9%*	*12%*	*13%*	*15%*	*9%*	*15%*	*15%*	*15%*	*12%*
Fire Weather Dashboard	$0	$0	$41	$70	$75	$75	$75	$75	$75	$75	$561
Total SA (O&M)	*$0*	*$0*	*$41*	*$70*	*$75*	*$75*	*$75*	*$75*	*$75*	*$75*	$561
Total Wildfire O&M Budget	***$2,430***	***$7,602***	***$17,273***	***$19,727***	***$16,122***	***$14,905***	***$13,812***	***$12,130***	***$11,050***	***$10,160***	$122,780
SA % of O&M Budget	***0%***	***0%***	***0%***	***0%***	***0%***	***1%***	***1%***	***1%***	***1%***	***1%***	***0%***

Figure 20. Situational Awareness Budget & Actuals

Operations & Emergency Response

This part of the Plan encompasses both internal and external resources with a goal of reacting to wildfire threat in a thoughtful and proactive manner. It features operational tactics such as Fire Safety Mode operations as well as joint preparation with both internal and external partners. Operations and Emergency Response has a number of elements:

- *Fire Safety Mode Operations*
- *Weekly Fire Threat Assessment Meetings*
- *Formalized Wildfire Emergency Operating Plan & Procedures (EOP)*
- *Emergency First Responder Training*
- *Expedited Fire Response*
- *Wildfire Performance Metrics*

OPERATIONS & RESPONSE

MODIFYING OPERATIONS IN RESPONSE TO FIRE THREAT, AND REACTING TO WILDFIRE THREAT IN A THOUGHTFUL, PROACTIVE, AND COORDINATED MANNER.

Training with Spokane Firefighters

Fire Safety Mode Operations. Previously called Dry Land Mode, Fire Safety Mode operation can significantly reduce spark ignition potential by adjusting the sensitivity of the protection system when there are forecasted significant weather events during wildfire season. Since the early 2000s, Avista has turned off automatic reclosing on distribution circuits located in high fire risk areas. Historically, this has been a manual process of turning on the system at the beginning of fire season (typically early July) and then returning to normal operation at the end of fire season (usually early October). An important element of the Wildfire Resiliency Plan involves modernizing this system so that reclosers can support higher modes of protection. Figure 21 illustrates this concept.

Fire Safety Mode (FSM) involves both identifying electric circuits that operate in elevated fire threat areas and the reconfiguration of protection systems to allow protection devices to be remotely and automatically adjusted for wildfire threat based on the operating location and the estimated risk at that location. Avista's Fire Safety Mode has the following levels of reclosing operations:

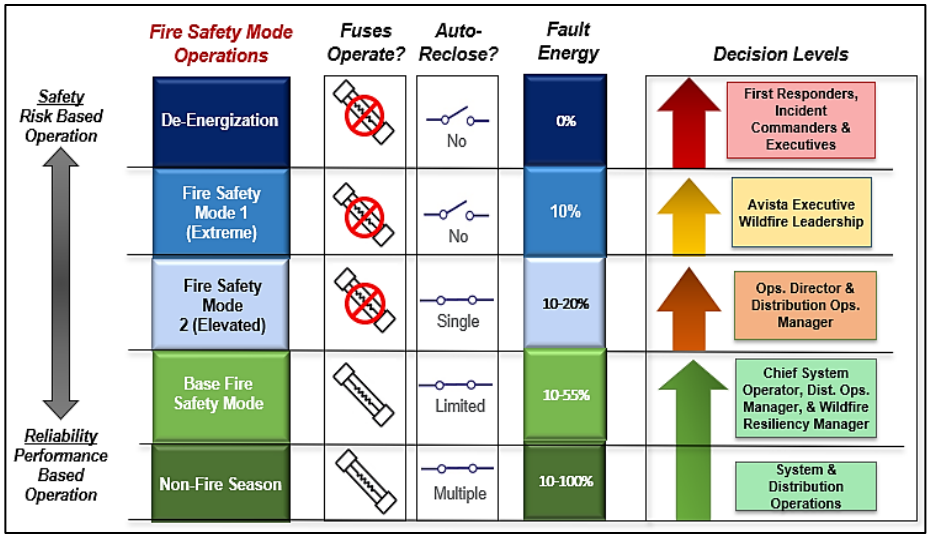


Figure 21. Avista's Fire Safety Mode Operations

1) Non-Fire Season Mode – Normal operations where circuit breakers automatically reclose multiple times before locking out, with a focus on reliability.

2) Base Level Fire Safety Mode – If a circuit is set to this protection level, when it trips it waits a predetermined length of time then recloses to test the circuit. If the circuit tests bad the second time it will stay off until manually inspected before being placed back in service. This level is used on specifically identified circuits during the bulk of fire season to limit automatic reclosing of faulted circuits and to reduce spark ignition energy levels and associated potential for fire ignition.

3) Elevated Fire Safety Mode – Identified circuits placed at this protection level will stay off if the circuit trips and tests bad. There is no time delay. This allows the circuit to close back in for temporary faults, but de-energize for permanent faults by tripping off at the breaker. This is a level that was added via the Wildfire Plan. It is used during critical fire weather events such as moderate to high wind levels combined with low relative humidity levels. This mode prohibits line fuse operation in order to limit the scope of outage impact, significantly reducing fault energy and associated fire ignition potential.

4) Extreme Fire Safety Mode – Circuits considered in extreme danger are configured for instantaneous tripping and non-reclosing so if the circuit trips, it does not test or try to reclose. It stays off until it is inspected and released back into service. This level of protection operates at significantly reduced energy levels, and once the feeder trips due to a fault condition, mitigates the impact of future system faults due to the feeder being in an off status until the feeder is patrolled and re-energized. This is another level added via the Wildfire Plan. This can impact customer reliability, as it may take several hours to patrol the line and mitigate any issues found. Thus, this extreme protection level will only be used for severe weather conditions due to its potential to have a significant impact on customer outage times. At this level, spark ignition risk takes priority over service reliability.

5) De-Energizing – For extreme weather events exceeding Extreme Fire Safety Mode conditions, the Company will selectively implement de-energization on feeders or sections of feeders as a measure of last resort in coordination with our partners and first responders. We have implemented de-energization at the request of first responders as a course of business throughout our history. At this time, this is only done in a situation where there are no customer impacts or if no other mitigation actions are available, and when it is clear that the safety benefits exceed the costs and risks of shutting off power to customers. As the Company develops a Public Safety Power Shutoff (PSPS) plan and strategy, this strategy may be modified.

Protection Settings	Goal	Fault Energies	Instant. Tripping	Automatic Reclosing	Time Delay Tripping	Fuse Operable	Notes
Non-Fire Season	Maximize service reliability	10-100%	Yes	Yes	Yes	Yes	Both instantaneous and time delay overcurrent relays are active. Automatic reclosing is enabled. Fuses will operate.
Base Manual FSM	Balance fire prevention and service reliability	45%	No	No	Yes	Yes	Only the time delay overcurrent relay is active. Automatic reclosing is enabled. Fuses will operate.
Base Automated FSM	Same as above	10-55%	Yes	Single	Yes	Yes	Both instantaneous and time delay overcurrent relays are active. Automatic reclosing is limited to a single attempt. Fuses will operate.
Elevated FSM	Elevate fire prevention	10-20%	Yes	(12 second) Single	No	No	Only the instantaneous relay is active. Automatic reclosing is limited to a single attempt. Fuses will NOT operate.
Extreme FSM	Maximize fire prevention	10%	Yes	(12 second) No	No	No	Only the instantaneous relay is active. Automatic reclosing disabled. Fuses will NOT operate.

Figure 22. Fire Safety Mode Protection Settings

In 2023 Avista did not have a formal public safety power shutoff plan (PSPS) in place for de-energization but plans to implement a formal plan for the fire season of 2024. Along with the PSPS plan, we will continue to operate our Elevated and Extreme Fire Safe Modes at lower thresholds than would be used for a PSPS to mitigate more moderate fire weather conditions. *Note: The major difference between Fire Safety Mode (FSM) Operations and PSPS is that FSM circuits are only removed from service when an actual fault is experienced on the line, while PSPS circuits are proactively disconnected based on an assessment of risk.*

Although many elements of Wildfire Resiliency are aimed at reducing outage events and possible fire starts, we realize that it is impractical to expect perfect reliability, especially during fire season wind events. By altering protection schemes on select circuits, Avista can achieve a better balance between reliability and fire safety objectives. This means that at times of extreme risk, customer reliability may be sacrificed in order to focus on customer safety. We believe that if this balance is carefully considered and decisions are made with the sophisticated analysis and guidance provided by the Fire Weather Dashboard, we can help make our system safer in times of fire threat while minimizing customer impact.

Weekly Fire Threat Assessment Meetings. Since 2020, during fire seasons the Wildfire Team holds weekly fire risk meetings to provide updates and information sharing as well as gather feedback from operations managers and other interested parties. Approximately 75 people are invited to these calls including district managers and line crew leaders as well as employees working in Communications, System and Distribution Operations, Legal, and more. These meetings often include personnel from the Washington Department of Natural Resources and the Idaho Department of Lands. These meetings are highly interactive and include a forum for Avista district managers and state fire officials to report on fires in our operating areas, including impacts or potential impacts to our infrastructure. These meetings also provide a platform for discussion around elevating system protection settings (Fire Safety Mode) in response to fire threat situations.

2023 EOP Tabletop Exercise

Formalized Wildfire Emergency Operations Planning and Procedures. The Emergency Operating Plan or EOP is an incident command structure that defines workflow processes and unified command structures deployed during emergency events. It includes defining key roles and responsibilities, identifying communications channels, and emergency operating procedures to be used during emergency events such as storms or wildfire. In accordance with the Wildfire Resiliency Plan, a specific EOP and associated procedures were developed for wildfire situations. These events differ from "traditional" weather events such as high winds and ice storms in that those situations are caused by situations outside of the Company's control. A wildfire event may, on the other hand, be a result of Company operations, so has an additional level of focus and action.

Avista Crews Restoring Power in Medical Lake

This year we finalized Emergency Operating Procedures specific to wildfire response and set up a tabletop exercise to test the design against a simulated fire situation. We invited emergency and land management agencies across our service territory including the Red Cross, the Idaho Department of Lands, and the Washington Department of Natural Resources to be observers in a tabletop exercise wildfire scenario. Avista's incident management teams went through this scenario as if it was occurring. They developed strategies including customer outreach, crew placement, damage assessment, mutual assistance requests, and planned restoration efforts from the beginning of the scenario event until final restoration and return to normal operations. The involvement of state and local agencies allowed the teams to practice coordination efforts.

Shortly after the exercise took place, we had the opportunity to test these relationships and the lessons learned. Avista's adoption of the Incident Command Structure (ICS) principles and incident management framework enabled us to integrate seamlessly into the fire ICS during the Gray Fire in Medical Lake. First responders coordinated efforts with Avista in developing their response strategies and taking necessary actions to protect the community. As part of this, Avista was able to work with the fire and emergency management agencies as they prepared to lift evacuation orders. With the support of the ICS, Avista was able to restore power prior to the county lifting the evacuation orders, enabling residents to return to their homes with their power restored, and crews to be safely out of the way as residents returned.

First Responder Training. Another element of the Wildfire Plan is to partner directly with fire protection agencies and cross-train personnel so that Avista first-responders understand fire incident command structures and their role during an active event, and, in turn, fire professionals learn safety requirements associated with working around electric operations. Avista is partnering with a variety of agencies who share a vested interest in wildfire mitigation, including working with professional firefighting agencies at a variety of levels (primarily state and local) in training and response as well as incorporating their input and feedback into our Plan, strategies, and actions. Avista conducts annual fire safety and electrical hazard training with fire agency partners across the service territory each year, including joint training sessions with fire protection personnel. Fire professionals provide fire safety training to Avista first responders and, in turn, Avista conducts electrical hazard training for fire personnel. It is important that Avista personnel understand the safety precautions taken during an active fire situation. Likewise, it is essential that fire personnel understand the hazards associated with utility infrastructure. This program is designed to promote the safety of everyone involved in a wildfire situation.

Expedited Fire Response. Avista has always had good relationships with firefighting agencies having jurisdiction on the lands that our facilities occupy. These partnerships have been created in part due to Avista's willingness to quickly respond to fires at the request of fire officials. This may entail de-energizing transmission or distribution lines while firefighters respond to an incident in order to protect their safety, as well as participating with Fire Incident Command in wildfire situations and in briefings and information sharing sessions with them during fire season.

In alignment with these existing partnerships, we developed the Expedited Fire Response concept to get a quick response to the site of a fault on the transmission system during fire season. If the fault causes a spark event and a fire results, trained fire fighters and firefighting apparatus respond and are able to engage the fire immediately. A quick response is key to keeping fires smaller.

Expedited Response is initiated when Avista System Operations makes a request and provides an exact location of the incident to the appropriate entity, enabling fire responders to be dispatched directly to the scene. All available information about the situation is also shared. This concept started in 2020, when a Memorandum of Understanding was executed with the Spokane County Fire Department that included the dispatch of fire patrol personnel to transmission-level outage locations in Spokane County. An enthusiastic response from Spokane County led to additional signed agreements with the Washington Department of Natural Resources (DNR), the Idaho Department of Lands (IDL), and the Idaho Panhandle National Forest in 2022 and 2023. Together these agreements provide coverage for approximately 99% of our service territory. In fact, the DNR has agreed to manage all fire response for Avista even outside of their jurisdiction. These agreements have no expiration date, and there is no cost associated with the responses.

Firemen extricate a driver in a car-hit-pole situation

Wildfire Metrics. Avista's Outage Management System (OMS) is used to track electric outages including causation information such as tree fall-ins, car-hit-poles, wind, animal-caused, underground cable, overhead equipment, pole fires, etc. Fire is listed as an outage category, but generally relates to structure fires and is not typically related to Avista equipment.[23] The OMS was designed to record actual events based upon cause, not impact, with the goal of repairing or replacing equipment that has or could lead to an outage. Currently we can use the OMS dataset to capture spark-ignition and fire events by searching the text strings of Dispatcher comments. Going forward we are developing a more formalized way of capturing spark events. This will require software or equipment upgrades. The current outage management system is essentially frozen (no major changes) until it is replaced with a commercial off the shelf system which is expected to occur within the next five years. This system and/or associated technology should help provide tracking for these events.

Operations & Response Goals. In this area of the Plan, our general goals are to continue to expand and build on our spectrum of partnerships. Regarding our Fire Safety Mode operations, though the results of our experiences with Fire Safety Mode in 2023 are still being analyzed, we learned some key lessons from the response of our system using Fire Safety Mode. This experience will help us define and refine the appropriate trigger points for action based on the Fire Weather Dashboard assessment of risk. These potential changes are being thoroughly evaluated and analyzed over the next few months.

Operations & Response Metrics. The programs associated with Operations & Response do not have budgets, as they are based on relationships or existing Company programs and practices. The programs for which we collect metrics, Fire Safety Mode (FSM) and Expedited Response, were not in full operation until 2022. In 2022, as mentioned above, we were testing the concept of Expedited Response

[23] Structure fires often require Avista to respond and turn off the power at the meter to protect firefighters, thus "fire" may be noted in the log.

with Spokane County and did not collect metrics. In 2023 we used our expedited response agreements 4 times in Washington State and 2 times in Idaho. Note that to date, there have been no fires found while using these expedited response agreements

In 2022 we tested FSM on two circuits; neither of these elevations resulted in customer outages. In 2023 we utilized we utilized Fire Safety Mode elevated protection settings on four days, impacting 20 circuits. Two circuits tripped off, one substation breaker in Washington impacting 592 customers, and one circuit in Idaho impacting 369 customers. None of the elevated circuits was involved in a fire start.

Extreme/Elevated Fire Safety Mode Activities	2023
Fire Safety Mode # of Elevated Operation Days	4
Fire Safety Mode # of Circuits Elevated	20
Fire Safety Mode # of Circuits Elevated That Tripped Off	2
Number of Faults Without Ignition Events	2
Number of Customers Impacted From Elevated Tripped Circuits	961
Expedited Response Requests	6

Figure 23. Operations & Response Metrics

2023 Fire Season Recap

The 2023 Fire Season. According to the Washington State Department of Natural Resources, 1,884 fires were counted in Washington in 2023 with 165,365 acres burned. Of those fires, 41 were considered "large" (over 100 acres of forest land or 300 acres of grassland). The state further estimates that over 400 homes were destroyed in these fires.[24] Though the number of fires was about 200% of normal, the number of acres burned was kept to about 88%. The Washington DNR stationed resources in key locations across the state (in part by using Avista's Dashboard to identify areas of risk), keeping 95% of the fire starts to 10 acres or less.[25]

Avista Crews Restoring Power in Medical Lake

In Idaho, the Dept. of Lands (IDL) reported 206 human-caused fires in 2023, compared to 78 that were caused by lightning. Human-caused fires are up nearly 30% over last year in Idaho, most of them due to unmanned or improperly

[24] Lauren Gallup, "Washington State Endures 'Catastrophic' 2023 Wildfire Season With High Ignitions, Property Loss," Oct. 3, 2023, OPB, https://www.opb.org/article/2023/10/04/pacific-northwest-wildfires-impacts-2023/

[25] Hunter Phipps, "Despite High Fire Count, Washington State Keeps 95% of Fires Under 10 Acres," Oct. 2, 2023, KIMA, https://kimatv.com/news/local/despite-high-fire-count-washington-state-keeps-95-of-fires-under-10-acres-a-closer-look-at-the-2023-fire-season

extinguished campfires. The DOL reports that 64,789 acres of U.S. Forest Service lands burned this year in Idaho, accounting for the majority of the 86,942 total acres burned across the state. The rest of the fires occurred on a mix of U.S. Bureau of Land Management, private, state, tribal and other federal lands. Like Washington, the DOL kept most fires to only 10% of the 20 year average for acres burned with quick and efficient response.[26]

In impacts to Avista, the largest wildfire event in our service territory in 2023 was the Gray Fire (Medical Lake and Silver Lake, Washington) where we lost 255 poles. The Gray Fire started in the early afternoon of Aug. 18 in a field of wheat (not near our facilities) and spread rapidly due to hot, dry conditions and sustained southwesterly winds. The blaze burned over 10,000 acres, destroyed numerous homes and structures, prompted the mass evacuation of residents, and was linked to the death of a local man. Investigators have determined that this fire was human caused but have not released any further information. Avista had 13 crews helping with restoration work from Spokane, Coeur d'Alene, Colville, Pullman, and Davenport. Electric service was restored within 3 days for the people returning to their homes, with gas service restored in 4-5 days. This fire was not considered 100% contained until September 1.

A wildfire on July 17 in the town of Ritzville, Washington, destroyed 9 distribution poles. This fire, believed to have been started in a wheat field by a combine, grew to about 250 acres due to strong winds and very dry conditions. No one was hurt, but the fire got as close to Ritzville as the town airport. Two abandoned structures were burned.

Avista Crews Restoring Power in Ritzville

The Oregon Road Fire, in Elk, Washington (north of Spokane) started on August 18 and tripled in size in one day, growing to over 10,000 acres. 126 houses and 258 outbuildings were lost due to the fire burning through the town of Elk. It took almost three weeks to completely contain this fire. Fire officials have stated that the fire was caused by human activity but have not been more specific. Avista did not suffer any damage from this fire.

In Orofino, Idaho, a small wildfire near the hospital (thus called the Hospital Fire) on August 29 grew to 53 acres in size due to windy and dry conditions, destroying 6 homes and multiple outbuildings as well as an Avista H-frame transmission structure. Rainfall allowed fire crews to quickly get this fire under

[26] Clark Corbin, "Almost Three-Fourths of Fires Idaho State Officials Tracked in 2023 Were Human Caused," Oct. 17, 2023, Idaho Capital Sun, https://idahocapitalsun.com/2023/10/17/almost-three-fourths-of-fires-idaho-state-officials-tracked-in-2023-were-human-caused/

control within about 24 hours. Avista crews had power restored the next day. The cause of this fire is listed as "unknown."

Smaller fires during the 2023 fire season that impacted Avista include the loss of a transmission structure to fire on the Noxon-Pine Creek 230 kV line on July 8 and on the Benewah-Pine Creek 115 kV line on July 29. On August 3 a transmission structure was damaged by a fire that burned through the right-of-way under the Shawnee-Sunset 115 kV line.

Correlation Between Wildfires and Avista's Predictions of Risk. Fires ignitions from all sources including natural, human-caused, and utility-caused fires seem to randomly occur within Avista's service territory. This appears to be confirmed by the Washington Dept. of Natural Resources list of fire causes in Washington State in 2023, as shown in Figure 24.[27] However, fires of severe consequence and size have regularly occurred in areas that Avista has modeled via the Fire Weather Dashboard as being at high risk, including accurate predictions of fire potential in Elk and Medical Lake, Washington. These trends indicate that focusing mitigations in areas we have identified as high fire risk areas should be effective in decreasing utility-related fires of severe consequence. By directing our actions in high risk areas, we are more efficiently dealing with causal factors that could result in severe impacts to our customers and communities and reducing the risk of Avista facilities being involved in a fire start.

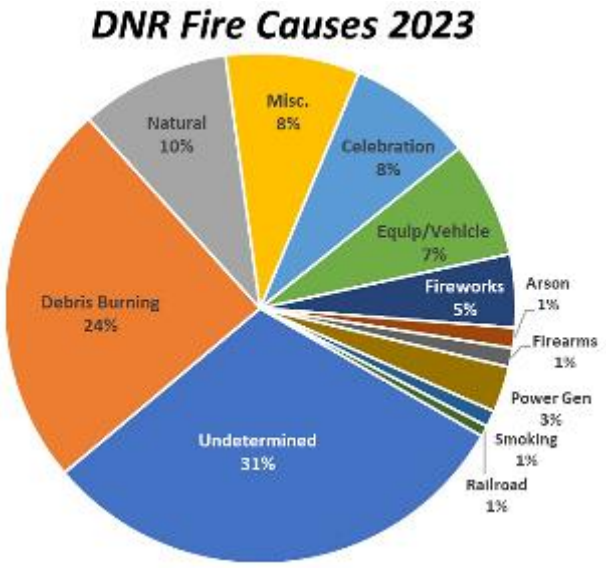


Figure 24. DNR Wildfire Causes 2023

2023 Avista Wildfire Accomplishments

Avista's Wildfire Resiliency Plan is built upon the concept of Plan-Do-Check-Adjust. We are continually evaluating the efficacy of our programs and adjusting them as we see opportunities for improvement. We have made some significant improvements since the Plan began. In 2023 we made several notable improvements to the Plan and our work in Wildfire as described below.

[27] Washington Dept. of Natural Resources Wildfire Intel Dashboard as of December, 2023, Wildfire Intel Dashboard (arcgis.com)

Continued to Improve Customer Outreach and Communications. This year we increased and enhanced our wildfire-related customer communications, specifically with customer engagement activities such as the town hall meetings and through additional communication materials and strategies (including moving beyond English-alone materials). The Company greatly expanded our community outreach for the 2023 wildfire season. In 2022, we engaged with 225 public safety partners and key community leaders in eight of the highest fire threat counties (WUI 2 and 3) in our service territory. And, via our telephone town hall platform, we reached out to nearly 36,000 residential customers in those eight counties with information about our Wildfire Resiliency Plan. In 2023 our customer engagement extended to all 16 counties that have WUI Tier 2 and Tier 3 fire risk, including over 90,000 residential customers and 640 public safety partners and key community leaders. This engagement was in coordination with associated emergency response agencies who participated in the discussions. All Telephone Town Hall Meetings were offered in both English and Spanish. We also translated the 'Outage Preparation for Home Medical Equipment' one pager into the six languages spoken in our service territory.

Customer Outage Preparation Guide in Spanish

Developed Specialized Outreach for Vulnerable Customers. The communications focus for 2022 and 2023 included identifying and reaching our most at risk customers. In 2022 we began an effort to better support our medically vulnerable customers. We developed an outreach framework for proactively notifying life support customers on elevated FSM feeders. The process is very similar to what we do for planned outage notifications, utilizing Avista's CARES outreach teams.[28] This team supports our most vulnerable customers with their Avista account and acts as a liaison between the customer and our community partner network. They are specially trained to help people who need assistance with their energy bills or other resources such as food, housing, and medical care. Customers with medical equipment in the home are handled with special care by this team. We did not get to use the vulnerable customer outreach process in 2022 because the season was over by time it was developed and approved. However, this year we implemented this process with great success. Adding a life support customer flag to all the feeder lists made it possible for Avista to quickly identify these customers and proactively call them to make sure they were aware of potential outages due to the weather and potential wildfire threat and could be more prepared.

In addition, this year Avista launched an employee team of volunteer Community Response Ambassadors who trained with the Red Cross to provide help and support to our most vulnerable

[28] CARES (Customer Assistance Referral and Evaluation Services) is a specialized team within Avista's customer contact center.

customers. We implemented proactive outreach to medically vulnerable customers, developed a process to quickly pull customer notification lists for impacted Fire Safety Mode feeders (including life support customers), offered translated collateral materials and Spanish translation during the four telephone town hall meetings, and completed identification of critical commercial/industrial customers for notification during elevated Fire Safety Mode protection settings.

Our community outreach efforts with the tribes included a number of discussion topics including concern for tribal elders and medically vulnerable tribal members. The tribes are partnering with Avista to further identify these vulnerable populations (some tribes already have partial lists) and see what can be done to help support them in the case of an extended power outage.

Avista is also working closely with its Equity Advisory Group to fully develop and identify Highly Impacted Communities and Vulnerable Populations (Named Communities) unique to the Company's service territory. The identification of customer barriers, development of workable solutions, and implementation of an effective multilingual communication strategy is an ongoing process, but one that Avista believes to be integral to the success of the Wildfire Plan as well as PSPS planning and implementation. Avista has engaged a firm to help us identify barriers to participation and accessibility for these customers and communities and is steadfast in ensuring that all customers have access to programs and utility-related information. These efforts will be reflected in our wildfire outreach efforts going forward, especially in the areas of public safety and notification, but also in relation to providing information about our Wildfire Plan and its associated programs.

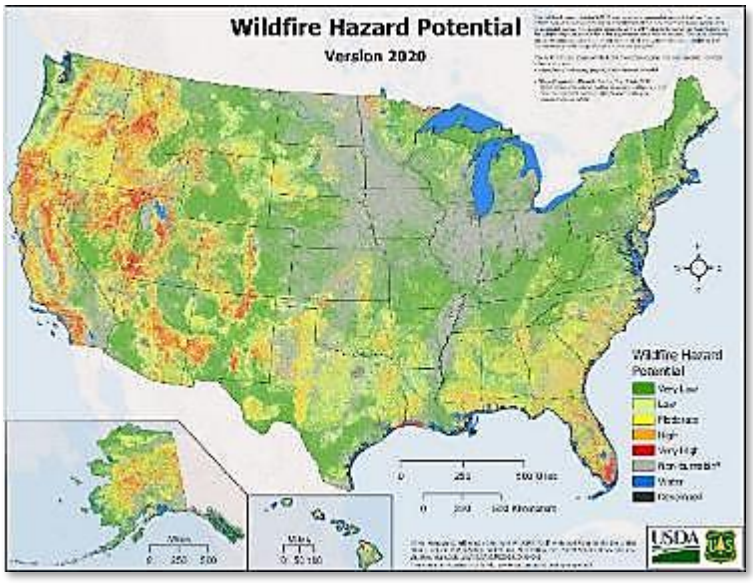
Verifying and Expanding Use of the Fire Weather Dashboard. We added additional modeling inputs, capability, and refinement to the Fire Weather Dashboard, as mentioned above, to further advance our ability to forecast and identify risk. We continue to refine and verify the accuracy of our Fire Weather Dashboard as we experience fire seasons. We are seeing a good correlation between the dynamic forecasted risk of fire and actual events that took place. The two large fires in Avista's service territory in 2023 were started miles from any Avista facility but were helpful data points in ensuring that where we acted (initiated Fire Safety Mode operation) and actual fire size show good correlation with actual outcomes. These fires, in Medical Lake and Elk, Washington, occurred in areas that Avista's Fire Weather Dashboard modeled as high risk at the time of the fires, and the Dashboard also predicted fires of 10,000 acres, which is what occurred. These trends indicate that focusing mitigations in areas we have identified as high fire risk areas should be effective in reducing the risk of Avista facilities starting a fire of severe consequence. Experience is proving that the Dashboard is a highly useful and accurate tool in predicting this risk.

Washington DNR responds to the Medical Lake wildfire

Also in 2023, the Washington Dept. of Natural Resources (DNR) called upon Avista's Dashboard to help them identify areas of highest fire risk so they could station response and resources appropriately. In 2023 the DNR reported that they were able to keep 95% of the fire starts in the state to 10 acres or less, which they attribute to appropriately locating these resources.[29]

Further Refined and Enhanced Fire Safety Mode Operations. Not only do we continue to strive to provide the automation equipment on the distribution system needed to remotely monitor and control equipment in the field, but we are working to refine managing protection settings and related operations based on actual experience, specifically as we fully implemented FSM during the 2023 fire season. The insights gained from this experience are allowing us to further refine our thresholds for action. We have learned through utilizing elevated Fire Safety Mode settings during the past two fire seasons that these additional safety measures do not cause a large number of outages to our customers without good cause (meaning an actual event leading to a fault). As mentioned previously, during the fire weather events in 2023 we elevated multiple circuits. Only two experienced a fault, meaning all other circuits maintained customer service, and none of the elevated circuits was involved in a fire start. We believe that this experience helps prove that the FSM strategy is successful and that it operated as predicted. The insights gained are allowing us to reduce our thresholds for taking action to adjust protection settings going forward, knowing that any outages that may occur would be the result of actual impact to the system rather than strictly an estimate of risk. Thus, Avista is able to be more conservative in risk mitigation through using these elevated protection settings, protecting customer safety while keeping a focus on reliability.

Improved the WUI Map. We improved the inputs to our WUI map in order to define risk areas more clearly and to specifically include structural and human impact with new datasets from the U.S. Department of Agriculture's "Housing Unit Impact" and "Wildfire Hazard Potential" maps. These data sets directly assess the static risk of wildfire to communities related to our electric system. This new data, very detailed, represents where people live in the U.S. based on housing units and population counts, along with vegetation and fuel sources, with the goal of trying to



USDA-US Forest Service Wildfire Hazard Potential Map

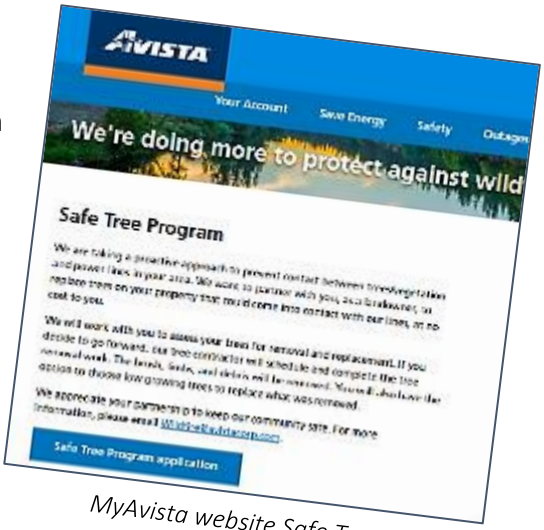
[29] Hunter Phipps, "Despite High Fire Count, Washington State Keeps 95% of Fires Under 10 Acres," Oct. 2, 2023, KIMA, https://kimatv.com/news/local/despite-high-fire-count-washington-state-keeps-95-of-fires-under-10-acres-a-closer-look-at-the-2023-fire-season

determine the most likely places wildfire impacts/damage will occur. We also layered in our satellite imagery of the distribution system from AiDash to quantify the amount and type of vegetation near our distribution powerlines, adding further detailed information to the analysis used to create a WUI map specific to Avista's service territory and customer base and further refine identified areas of risk.

Developed a Formal EOP Process. As mentioned previously, in 2023 we developed a vigorous Emergency Operating Procedure related to Wildfire response and tested it in a realistic tabletop exercise that included external partners such as the Red Cross, Washington Dept. of Natural Resources (DNR), and Idaho Dept. of Lands (IDL). Valuable lessons were learned from this exercise. Most notable was the collaboration between and amongst the internal participants and with our emergency management partners and participating fire agencies. The involvement of the state and local agencies allowed the teams to practice coordination efforts. Participants noted that it enhanced the knowledge of emergency response plans, procedures, and strategies and allowed participants to improve their performance in emergency situations. The relationships forged and having both sides learn each other's "language" helps Avista easily integrate into the Fire Incident Command in fire situations as demonstrated in the Gray Fire this past summer.

Expanded Fuel Reduction Partnerships Territory-Wide. In 2022 we partnered primarily with the Washington DNR in Spokane and Stevens Counties on fuel reduction activities. In 2023 we expanded our Fuel Reduction Partnership program across the service territory. We actively engaged with the DNR as well as the IDL, the U.S. Forest Service, the Nez Perce Tribe, and local and regional fire agencies including the Bonner County Department of Emergency Management to reduce fuel loading on land they manage near our facilities. These partnerships have the added benefit of continuing to help us build great relationships with external parties who are as interested in wildfire protection and prevention as we are.

Extended Expedited Response Across the Service Territory. By engaging with first responders such as the Washington DNR and the IDL, we created Expedited Response Agreements that, as of 2023, cover nearly 99% of our service territory as mentioned above. These agreements do not have end dates and have no cost. Professional fire response to transmission-level faults helps ensure that any fires that may result are contained, adding an additional layer of safety for our customers and the infrastructure they have paid for.



MyAvista website Safe Tree Program Application

The Safe Tree Program Is Up to Full Speed. In 2022, in Kellogg, Idaho, we tested the concept of this program, which works directly with customers in high fire

threat areas to remove risk trees on their property that are likely to come into contact with powerlines. The results were overwhelmingly favorable, so this year we extended it into all WUI 2 and WUI 3 areas across the service territory. This year we also added a platform to the Company's website allowing customers in these identified areas to request this service directly. The "Safe Tree Customer Service Portal" is available on the MyAvista website, allowing customers to communicate directly with our arborists and schedule this work themselves if they qualify (based upon their physical location). The site has proven to be extremely popular. A promotional email went out to targeted customers when the site went live, encouraging them to check out the website. Within an hour, more than 100 applications were submitted. Currently over 500 requests are in the queue, which is managed by our partner in this endeavor, Associated Arborists.

Began Development of a Public Safety Power Shutoff Strategy. In 2023 we hired a Wildfire Community Safety Manager to help us develop an approach to implementation of a PSPS strategy and the related customer outreach. This work includes developing a coordinated response with external customer service providers. The knowledge and experience gained from this collaboration will be part of what is used to continue to refine our approach to assisting and supporting vulnerable customers across the service territory. We should have a PSPS strategy in place for the 2024 fire season.

Continued to Develop, Expand, and Enhance External Partnerships. We continue to gain great benefits from our external partnerships as we actively seek out and build valuable relationships and connections to support our wildfire efforts with both external partners and customers. Our external partners have helped design, create, and shape our Wildfire Resiliency Plan since the beginning. They have worked with us in actual fire situations, advised and guided policy and strategies, shared ideas and best practices to help us make the best possible choices, and participated with us in Emergency Operations Response simulations and actual situations. We continue to work with and learn from our utility peers and join with them to strategize and develop best practices. We participate with local and state fire fighting agencies such as the Inland Empire Fire Chiefs and Spokane County Fire Districts. We have reached out to support agencies such as Aging and Long-Term Care of Eastern Washington and the Disability Action Center NW to help build a network to reach vulnerable customers more effectively. Each year we work together further strengthen these relationships.

Transmission Pole Replacement on the Addy-Gifford line

Refining the Prioritizing Transmission Resiliency Work. Over the past two years we have moved beyond utilizing WUI zone alone to determine where to focus our steel transmission replacement efforts. We created and are implementing a strategy to prioritize steel transmission pole replacements based on a spectrum of inputs including actual historic fire information as well as topography/vegetation data

provided by digital imaging. This helps identify which areas of our service territory are forested versus low growing areas such as farmland, desert, or developed areas. This segregation is significant from a cost perspective, as it allows us to separate our mitigation efforts into poles in high canopy/forested areas which are candidates for steel replacement, and those in low vegetation areas, which may be adequately protected with fire resistant mesh. The cost for replacement of a wood pole with steel is several thousand dollars per pole versus a few hundred dollars for installing mesh wrap on a pole. Thus, knowing where the poles are physically located, and the geography of the area, has a significant budget impact in addition to replacing the poles in areas where we are most likely to experience a fire based on historical fire trends.

Gaining Experience in Applying Digital Data. In acquiring digital data for both the transmission and distributions systems to aid in identifying risk trees (via our LiDAR and satellite imagery), we are becoming familiar with the large amount of data these tools provide and how to use this information to focus our vegetation efforts in areas that should provide the most positive impact. For example, our System Forester is using the analytics provided by LiDAR analysis to focus tree work on the transmission system where it will provide the most value and protection, that is, where the most risk trees are present. Transmission Design engineers are using the images to help identify maintenance issues or to zero in on problems. We are also using this data to help refine our WUI maps by identifying vegetation near our facilities and using it to help us differentiate between high canopy and low vegetation areas for transmission resiliency planning (steel replacement versus fire mesh wrap as mentioned above). We use the percentage of treed areas from AiDash to help us define our WUI tiers and identify risk related to the Fire Weather Dashboard. We anticipate increasing the usage of this data around the Company as we gain familiarity with it.

Studying the Cost and Value of Targeted Undergrounding. Avista is in the process of evaluating the costs and value to customers and communities of including additional undergrounding as part of our Distribution Grid Hardening Program. We call this concept Enhanced Grid Hardening. There are many cases where sections of distribution conductors do not pose highly probable threats to nearby communities, including urban areas that are largely unburnable or with available firefighting resources, or long sections of line with many miles between one customer and the next. But in some areas of our service territory, large fire growth risk potential is in proximity to communities which are excessively vulnerable to total loss in the event of a wildfire. It is our plan that these areas would be risk-ranked and prioritized for sectional undergrounding of existing overhead conductor. We believe that by focusing on areas where the wildfire growth modeling suggests large scale loss to communities and high impacts to homes, people, and communities, focusing on very specific areas and conductor segments most at risk, we are able to provide a direct risk reduction without using a far more expensive blanket undergrounding policy. We

are currently evaluating this strategy and plan to test it in 2026 after the concept has been further evaluated and analyzed.

Comparing Favorably with Our Peers. Avista has built a Wildfire Program that is directly in line with industry standards, and at a lower cost than most, especially when percentage of WUI zone is considered, as shown in Figure 25 below.[30]

Utility	Wood to Steel	Fiberglass Crossarms	Fire Wrap	Covered Conductor	Fuses / Sectionalizing Devices	Small/Bare Wire Replace.	Enhanced Veg.	Installing Weather Stations and/or Cameras	Targeted Under-grounding	Number of Customers	Average Cost Per Customer	% in Elevated WUI Zones
San Diego Gas & Electric	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1,490,000	$421.83	64%
Pacific Gas & Electric	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4,500,000	$910.03	52%
Southern California Edison	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	15,000,000	$431.59	25%
PacifiCorp (California only)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	45,000	$530.59	36%
Portland General	Yes	Yes	Yes	Yes	Yes	Unknown	Yes	Yes	Yes	922,444	$54.85	39%
NV Energy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2,400,000	$211.64	n/a
Rocky Mountain Power	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	1,200,000	$40.98	7%
Idaho Power	Yes	Yes	Yes	Testing	Yes	Unknown	Yes	Yes	Yes	616,857	$40.59	4%
Puget	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1,000,000	$32.00	1%
Avista	Yes	Yes	Yes	Developing	Yes	Yes	Yes	Developing	Developing	403,000	$50.98	35%

Figure 25. Wildfire Total Program Comparison

[30] San Diego Gas & Electric "2023-2025 Wildfire Mitigation Plan" 2023-2025 WILDFIRE MITIGATION PLAN (sdge.com) Customer Data: About Us | San Diego Gas & Electric (sdge.com) WUI Data in Plan
Pacific Gas & Electric "2023-2025 Wildfire Mitigation Plan R3" 2023-2025 Wildfire Mitigation Plan R3 PUBLIC (pge.com) Customer Data: Company Profile (pge.com) WUI Data in Plan
Southern California Edison "2023-2025 Wildfire Mitigation Plan" SCE 2023-2025 Wildfire Mitigation Plan and Customer Data: Who We Are | About Us | Home - SCE WUI Data in Plan
PacifiCorp "2023 Revised Wildfire Mitigation Plan" PacifiCorp_2023_Revised_Wildfire_Mitigation_Plan_20231121.pdf Customer Data: PacifiCorp 2020 PSPS Performance (ca.gov) WUI Data in Plan
Portland General Electric "2023 Wildfire Mitigation Plan" Microsoft Word - Portland General Electric 2023 Wildfire Mitigation Plan FINAL.docx (ctfassets.net) Customer Data Quick Facts (portlandgeneral.com) WUI Data Welcome to the 2023 PPT template (oregonlegislature.gov)
NV Energy www.nvenergy.com/safety/ndpp - download PUC Plan via this webpage. (Note that this was scanned in so is not searchable), pages 35-92, 109, 113, 124. Summary chart on pg. 129-131. Customer Data Natural Disaster Protection Plan - NV Energy (no WUI data found)
Rocky Mountain Power "Utah Wildfire Mitigation Plan 2023-2025" 329969UTWldfrMtgtnPln202320259-25-2023.pdf (utah.gov) Customer Count 2023 Just The Facts_Rocky Mountain Power WUI Data 07_Mansfield_Testimony_and_Exhibits.pdf (rockymountainpower.net) page 16
Idaho Power "Wildfire Mitigation Plan 2023" 2023 Wildfire Mitigation Plan (idahopower.com) Customer Data About Us - Idaho Power WUI Data Colburn DI Testimony - 2023 GRC.docx (idaho.gov) page 33
Puget Sound Energy "Wildfire Mitigation and Response Plan" PSE | Wildfire preparedness (download Plan via this webpage) Customer Data PSE | Corporate Information and Facts WUI Data in Plan

2023 Challenges and Lessons Learned

Scaling the Vegetation Program to 100% Risk Inspection. This was a much bigger and more expensive proposition than originally anticipated. Avista expanded its risk/hazard tree program from a program concurrent with cycle trimming (20% annually) to include a 100% risk tree inspection and remediation program. Vegetation planners had preliminary forecasts of the volume of dead, dying, and diseased trees that could potentially strike powerlines prior to 2022. However, in 2022 and 2023 we found that the actual number of risk trees was nearly double earlier estimates. Forest health was significantly impacted by the historic drought of 2021 but also reflects increased levels of insect damage combined with human activity, all leading to higher levels of tree mortality than expected. Avista removed nearly 19,000 dead, dying, or diseased trees within strike distance of our facilities in 2022 and 22,573 trees in 2023. These are a record levels of tree removals for Avista. Note that the 2023 numbers do not include the additional 5,000 trees removed as a result of the Gray Fire.

Vegetation Contractor Cost and Availability. In addition to finding more risk trees than anticipated, tree-related labor resources have been an issue. Utilities across the western U.S. are all competing for the same labor resources, and Avista's primary inspection contractor has been repeatedly unable to recruit and retain enough inspectors to complete the work. Given the level of competition for resources, contractors – if we are able to secure them - are able to command 60-hour work weeks, lodging, and per diem allowances, unexpectedly increasing costs for this critical program. As mentioned previously, impacts from forest health (drought, insects, disease, weather, and fire) continue to create spikes in risk trees on the system and this necessitates the addition of labor accordingly, which will likely continue to elevate costs.

Customer Access for Vegetation Work. Another issue that is cropping up is permitting and acquiring customer permission to access trees for removal. The Vegetation Team is developing strategies to deal with these barriers, focusing on the fact that it is in everyone's best interests to remove danger trees for public safety, protection of customer reliability, and prevention of wildfires, but these types of issues create delays and can also increase costs.

Digital Data Provider Issues. In 2023 we completed 7,675 total miles of inspections on the distribution system via satellite. However, the transmission inspections did not meet the target of 2,270 miles. We were only able to capture 1,679 miles of LiDAR within budget. Our initial vendor's delivery and billing was so late that some of the work they performed for us in 2022 was not billed until 2023, throwing off our inspection 2023 budget. In response, we switched to a new vendor and hope this change will provide us with more reliability.

Learning and Incorporating Digital Inspection Data. Avista is also beginning to incorporate remotely sensed LiDAR and satellite imagery data into the vegetation management

programs. These are new technologies to the Company and will need more experience and refinement before they truly begin replacing boots-on-the-ground labor resources. However, after our initial experience in 100% inspection and subsequent mitigation, this should become more of a known quantity and easier to right size the labor required to complete this work on an annual basis.

In Summary

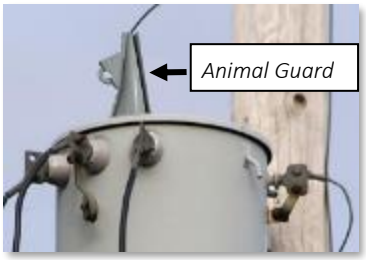
2023 presented some unexpected challenges to the Wildfire Team. Our manager, David James, who developed and led Avista's Wildfire Resiliency Plan, was lost to us in a long battle with cancer. With some management changes, we are reporting to a new director under a new business unit. Even so, our accomplishments in 2023 have been significant thanks to great support from around the Company and from our external partners. We look forward to continuing to enhance and improve our communications, especially with our most vulnerable customers, and to executing the Wildfire programs at full levels of implementation as we have now reached "cruising altitude." Avista is deeply committed to this program and to what it provides for the safety of our customers and communities as well as protection for the infrastructure they have provided to serve them.

Dave (in red) and the Wildfire Team

Glossary of Terms

ADMS: Advanced Distribution Management System. This will be the replacement system for Avista's current inhouse-created Outage Management System (OMS). It is an enterprise level system that will manage and track all planned and unplanned outages that affect the grid. Wildfire is among many other Company users of this system.

Access and Functional Needs (AFN): Customers who are especially vulnerable such as those who are disabled, dependent on electrically operated medical equipment, who are transportation disadvantaged, etc.



Animal Guards: Parts installed to act as a barrier to stop animals such as squirrels and birds from coming into contact with energized power equipment.

Asset: Electric lines, structures, equipment, or supporting hardware in the service of providing electric power to customers.

At-Risk Species: Species of vegetation that have an elevated risk of (1) coming into contact with powerlines, (2) causing an outage or ignition, and/or (3) being easily ignitable and are within close enough proximity to potential arcing, sparks and/or other utility equipment thermal failures. "At-risk species" must be a function of species-specific characteristics including growth rate, failure rate of limbs, trunk, and/or roots (as compared to other species), height at maturity, flammability, vulnerability to disease or insects, etc.

Backburn/Backfire: A fire set along the inner edge of a fire line to consume the fuel in the path of a wildfire and/or change the direction of force of the fire to help get it under control.

Bail Connector: A protection device installed on hot taps to hold the conductor if the hot tap fails, preventing live conductor from falling to the ground and potentially starting a fire.

Base Level Fire Safety Mode: FSM is a non-reclosing distribution protection scheme used during summer fire season (typically July through September) on circuits determined to be at risk for fire activity based on a variety of factors including vegetation, past events, and age of equipment. These circuits are configured so that when they trip, they will wait for a predetermined length of time then reclose to test the circuit. This allows the line to go back into service for incidental and transitory faults such as a tree branch

Base Level Fire Safety Mode

touching the line. If the line tests bad after the first reclose, it will wait for a predetermined length of time then test the circuit again. If the line tests bad the second time, it will stay off until it is manually inspected to ensure it is safe before it is placed back in service. This has the goal of balancing reliability and fire risk potential.

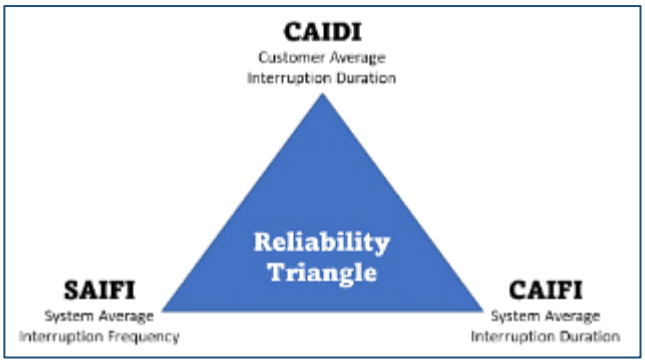
Brush Area

Baseline: A measure, typically of the current state or condition, which establishes a starting point for comparison with measures from other states or conditions.

Brush: Refers to vegetation dominated by shrubby, woody plants, or low growing trees.

Burning Index (BI): An estimate of the potential difficulty of fire containment, judged by the flame length at the most rapidly spreading portion of a fire's perimeter. It is the contribution of fire behavior to the efforts to contain a fire, a combination of how fast the fire is spreading and how much energy/heat it is producing, related to flame length at the "head" of the fire.

CAIDI: CAIDI refers to "Customer Average Interruption Duration Index." It is calculated as total minutes of customer interruption divided by the total number of customers interrupted. CAIDI describes the average time required to restore service. It only includes customers who actually experienced an interruption.

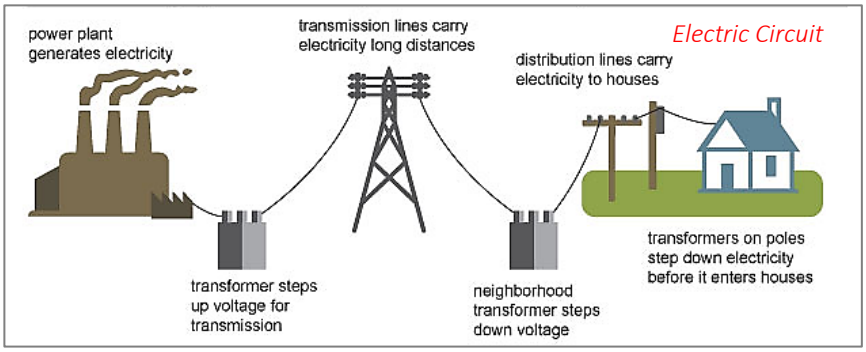


CAIFI: CAIFI refers to "Customer Average Interruption Frequency Index." It is calculated by dividing the number of interruptions by the number of customers experiencing interruptions. It describes how many interruptions each impacted customer experiences.

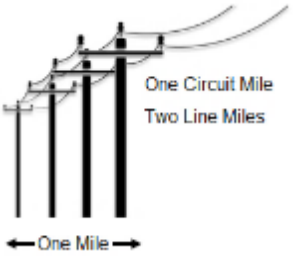
CEIP / Clean Energy Implementation Plan: An overview of Avista's plan for progressing toward the clean energy requirements of Washington State's RCW 19.405, the Clean Energy Transformation Act (CETA).[31] This Act requires all retail sales of electricity to Washington retail customers be greenhouse gas neutral by January 1, 2030. Avista's CEIP work impacts Wildfire in its efforts to communicate better with customers, including on wildfire preparation and Fire Safety Mode impacts.

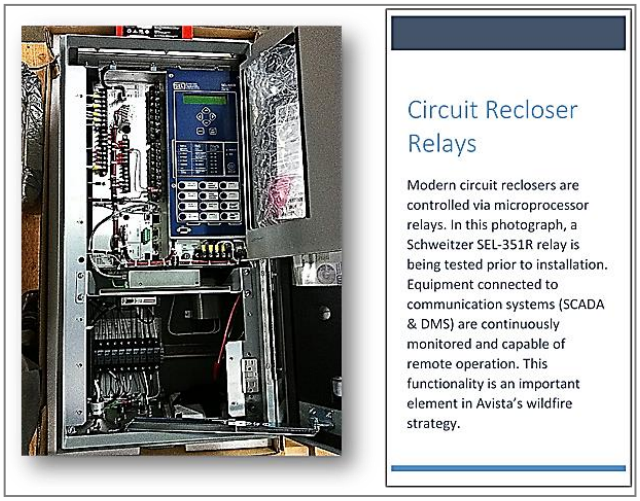
[31] RCW 19.405.040: Greenhouse gas neutrality—Responsibilities for electric utilities—Energy transformation project criteria—Penalties. https://app.leg.wa.gov/RCW/default.aspx?cite=19.405&full=true#:~:text=(1)%20It%20is%20the%20policy,customers%20by%20January%201%2C%202045.

Circuit: The path for transmitting electric current from the device that creates the current (generator) across all associated equipment (such as the wire or conductor, switches, breakers, etc.) to the end user, as shown in the graphic on the right.



Circuit Mile: Also known as Pole Mile, this is the total length in miles of separate circuits regardless of the number of conductors carried per circuit, in geographic miles. On a double circuit, the circuit miles are counted as twice the number of circuit miles.





Circuit Recloser: Circuit reclosers are similar to household breakers. They shut off the power when trouble has been detected then automatically test the line to see if the trouble has been removed. If the problem is only temporary the recloser automatically resets itself and restores electrical power. Adding communications to power system circuit reclosers provides monitoring and control functionality, including the ability to operate the device remotely. By placing circuit reclosers at strategic locations, Avista Distribution Operations can re-task those devices during periods of elevated fire danger to operate in fire protection mode rather than in their typical reliability mode. In other words, if there is a high-risk situation, the reclosers can be set to not automatically reclose.

Complex Fire: As related to fire, this is when two or more individual fire incidents located in the same general area are assigned to a single incident commander or unified fire command and typically given one name that includes the word "Complex" to indicate that the fire has individual components.

Condition-Based: Maintenance based on the way equipment is performing, its age, number of times it was actuated, and/or other factors that indicate the actual condition of an asset.

Consumer Average Interruption Duration Index: CAIDI is the average duration of an interruption, calculated based on the total number of sustained (over five minutes in length) interruptions in a year.

Control Line: A completed fuel break around the fire. This break may include natural barriers, manually created barriers , and/or mechanically constructed fire lines to try to keep a fire within controllable boundaries.

Cooperating Agency/Partner: For Avista's Wildfire Program, this includes external fire professionals, agencies that provide customer assistance, law enforcement, the Red Cross, emergency management agencies, state/city/local government entities, etc. that the Company works with in planning and implementing our Wildfire Plan.

Critical Facilities/Infrastructure: Referring to outage events, these are elements critical to public safety such as emergency services, schools, jails/prisons, healthcare and medical services, water, waste and wastewater systems, communications, some manufacturing, and transportation. Referring to the utility, these are elements of the electrical grid that are required in order to provide customer service as well as safety. Critical infrastructure is a priority for restoration of service.

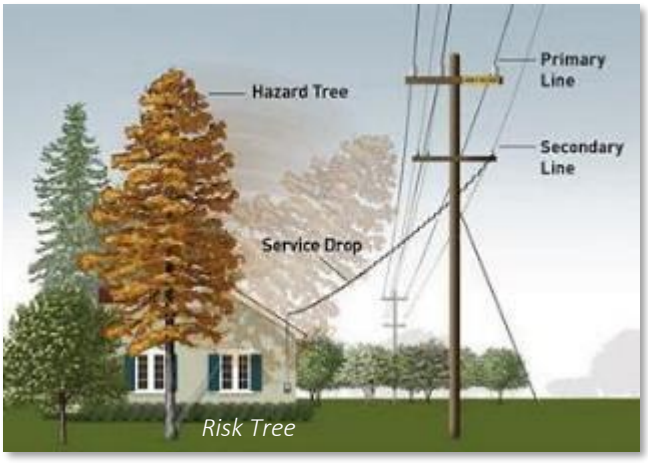
Crown Fire: A crown fire is defined as a fire that has ascended from the ground into the forest canopy/treetops and is spreading through it, usually in conjunction with the surface fuels. When a forest fire spreads from treetop to treetop it often begins advancing at great speed, well in advance of the fire on the ground.

Customer Choice Safe Tree Program: At Avista, this program as it is specific to the Wildfire Plan, has been renamed the "Safe Tree Program." It is a partnership with private landowners to remove risk trees, trees which are likely to come into contact with power lines, but which are located on private property in high fire threat (WUI 2 and 3) areas. This program reduces the chances of their trees contacting powerlines and creating fire potential, improving customer safety and reliability.

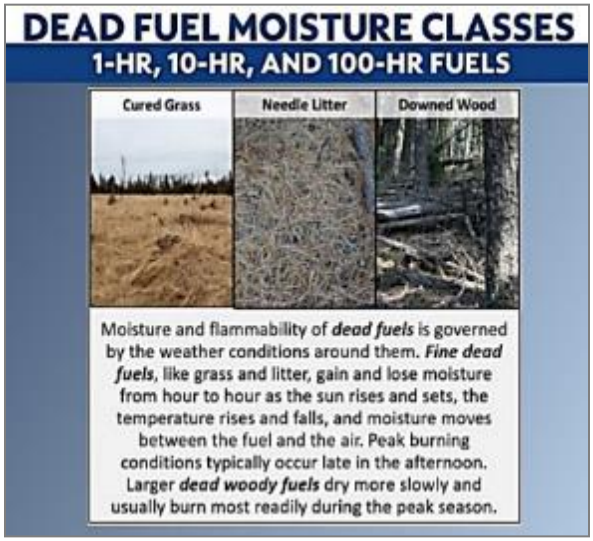
Customer Hours: When referring to an outage, this is the total number of customers multiplied by the average number of hours of a power outage.

Cycle Trimming: At Avista, routine vegetation management divides the system into five segments which are patrolled on a rotating five-year basis, meaning about 20% of the system is inspected and subject to trimming each year. The Wildfire program added a 100% risk tree inspection to non-urban areas in addition to the routine cycle trimming vegetation program to more rapidly address vegetation issues that may lead to fire.

Danger or Hazard Tree: At Avista, a danger or risk tree is a dead, dying, or diseased tree, or a tree that has a structural defect or lean that makes it likely to fail in whole or in part and contact electrical equipment or facilities within or adjacent to the utility right- of-way.



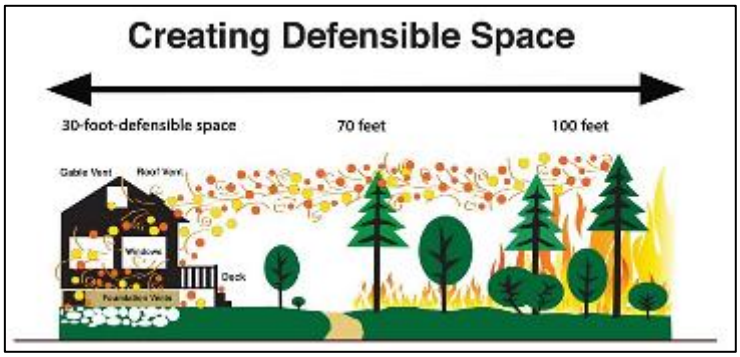
Dead Fuels: Fuels with no living tissue, so moisture content is governed almost entirely by atmospheric moisture (relative humidity and precipitation).



Dead Fuel Moisture: Moisture content of dead vegetation, which responds to current environmental conditions and is critical in determining fire potential.

Defensible Space: An area, either naturally or human-made, where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and the loss of life, property, or resources. In practice, "defensible space" is often defined as a buffer, an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation. In forested areas, this buffer area typically increases to 100 feet of space.

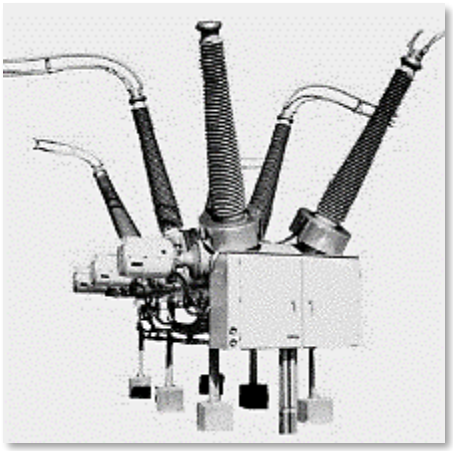
Digital Data Collection: At Avista, this means collecting LiDAR and satellite images of our transmission and distribution systems in order to help pinpoint vegetation and other encroachments, which allows planning field work and mitigating problematic vegetation more accurately.



Dispatcher: A person who receives reports of discovery and status of outages, confirms their locations, and takes action to provide people and equipment likely to be needed, sending them to the proper place.

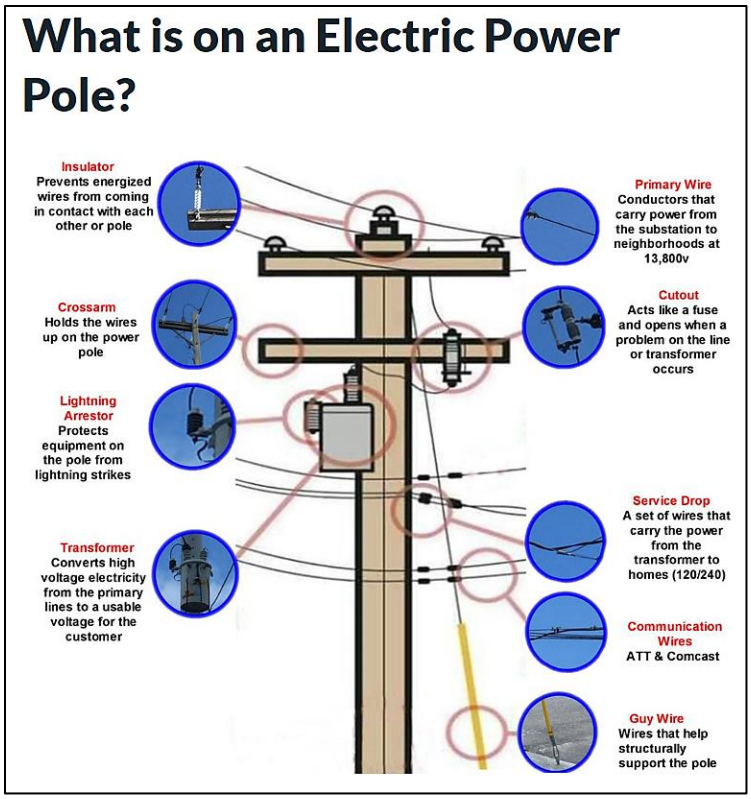
Distribution (DX): Electric facilities that have a voltage that is 60 kV or lower.

Distribution Automation: Avista's Wildfire program designed to aid in implementing wildfire protection measures. This program will fund upgrading or replacing 240 devices (including about 50 midline and substation breakers) to enable dynamic protection settings, allowing these devices to be operated remotely and automatically during fire season to support Avista's Fire Safety Mode operations, reducing fire risk.



Substation Circuit Breaker

Distribution Grid Hardening: Avista's Distribution Grid Hardening Program targets portions of circuits located in high-risk fire areas with the goal of reducing spark ignition outages. This work includes replacing wood crossarms with fiberglass units, replacing end-of-life wood poles, changing out obsolete small copper wire with modern steel reinforced aluminum wire, installing wildlife guards to reduce animal related events, eliminating open wire secondary districts, installing wedge connected stirrups to provide protection and additional strength at hot tap connection points, and undergrounding conductor when cost-justified.



Distribution Infrastructure Upgrades: In Avista's Wildfire Plan, this means making improvements to our distribution system including adding wildlife guards, replacing wood crossarms with fiberglass, replacing wood poles with steel in specific locations, and replacing replaced obsolete equipment that has known spark potential. These changes are designed to reduce the potential for sparks.

Drip Torch: A hand-held device for igniting fires by dripping flaming liquid fuel on the materials to be burned. It consists of a fuel fount, burner arm and igniter. Fuel used is generally a mixture of diesel and gasoline. This tool is used to create back burns to help control a fire's spread.

Drip Torch

Drought Index: A number representing net effect of evaporation, transpiration, and precipitation in producing cumulative moisture depletion in the soil.

Dry Land Mode: DLM (now called Fire Safety Mode) is a non-reclosing distribution protection scheme used during summer fire season (typically July through September) on circuits determined to be at risk for fire activity based on a variety of factors including vegetation, past events, and age of equipment. These circuits are configured so that when they trip, they will wait for a predetermined length of time then reclose to test the circuit. This allows the line to go back into service for incidental and transitory faults such as a tree branch touching the line. If the line tests bad after the first reclose, it will wait for a predetermined length of time then test the circuit again. If the line tests bad the second time, it will stay off until it is manually inspected to ensure it is safe before it is placed back in service.

Avista's Dry Land /Fire Safety Mode Steps

Emergency Operations Procedures (EOP): Defines key roles and responsibilities for personnel, identifies communications channels, and outlines strategies for engaging with fire protection professional and emergency operating agency staff during expected or actual wildfire events, creating a consistent approach.

Elevated Fire Safety Mode: Circuits whose fire risk exceeds nominal levels are modified to increase the protection level. This is similar to Base FSM but instead of a time delay tripping step, the circuit will instantly trip if it tests bad. This allows service restoration for temporary faults but will de-energize the entire circuit for permanent faults by tripping off the breaker.

Elevated Fire Safety Mode

Elevated Fire Threat Areas: Known as WUI Tiers 2 and 3, these are areas in which there is a higher risk for the ignition and rapid spread of wildfires as well as increased human safety and infrastructure risks due to the tendency for strong winds, abundant dry vegetation, significant levels of human activity and habitation zones, and other environmental conditions.

Elevated Wildfire Risk: This means that based on existing weather and vegetation conditions, wildfires are possible should ignitions occur.

Emergency First Responder Training: Protects both firefighters and utility workers in the event of a fire event by providing proper training in response to both, mitigating the safety risks. Utility workers are trained in fire response and safety, and fire professionals are trained in utility operations, equipment, and power equipment safety.

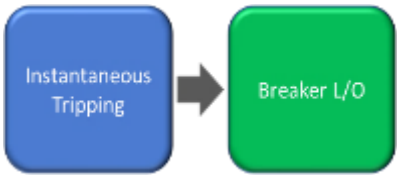
Emergency Operating Program (EOP): An EOP is a command structure that shifts normal operations to emergency response, with service restoration typically the primary objective. For a Wildfire EOP, the primary focus is safety, and the engagement includes outside fire and emergency-related entities to prepare for potential or actual wildfire events.

Enhanced Distribution Grid Hardening: Avista is planning on sectionalized undergrounding more overhead facilities in high fire threat areas where the potential for large fire growth is coupled with proximity to communities that are excessively vulnerable to total loss in the event of a wildfire.

Episodic Wildfires: Wildfires that do not occur frequently or regularly.

Expedited Fire Response: In Avista's Wildfire Plan, this is an agreement with local firefighting agencies that sends fire crews directly to the site of a transmission trip event to ensure if there is a fire, it is managed immediately.

Extreme Fire Safety Mode: Circuits whose fire risk is judged to be extreme are configured in a way similar to the crew safety mode called "Hot Line Hold." In this configuration, auto reclosing is disabled, and instantaneous tripping is enabled. A circuit that experiences a fault will trip off and stay off at the first instance. It does not test or try to reclose. The circuit must be manually inspected to ensure it is safe before it is placed back in service.



Extreme Fire Safety Mode

Extreme Fire Behavior: "Extreme" implies a level of fire behavior that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, and/or a strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, often dangerously.

Extreme Wildfire Risk: Based on existing weather and vegetation conditions, a large, rapidly growing wildfire is possible should ignition occur.

Fault Reduction: Decrease the number of faults by prioritizing reliability programs that strengthen the utility's infrastructure, especially in higher wildfire risk areas.

Fiberglass Crossarms: Pole fires are a well understood phenomena within the electric utility community. Electric current tracking on wood poles and crossarms, especially during summer months, leads to increased rates of pole

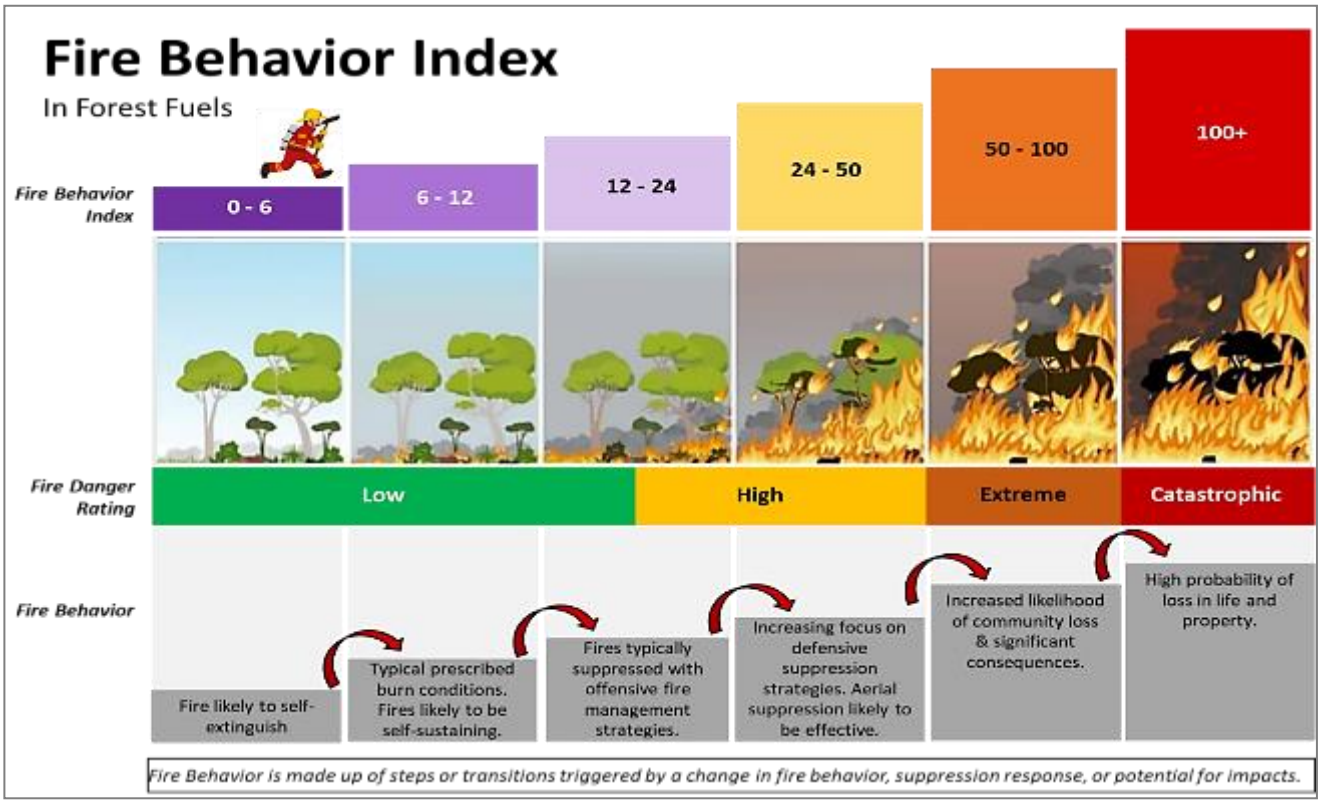
Installing a fiberglass crossarm

fires. Fiberglass crossarms reduce or eliminate electric current tracking and hence, pole fires. Fiberglass crossarms are smooth and resistant to contamination, do not rot or degrade over time, and are much lighter while being up to six times stronger than wood. In addition, fiberglass crossarms are inherently self-extinguishing, so perform well in fire situations.

Fire Behavior: The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire Behavior Forecast: A prediction of probable fire behavior, usually prepared by a fire professional, in support of fire suppression or prescribed burning operations.

Fire Behavior Index: A scale that captures fire severity as a function of flame length (intensity of burn) and rate of spread.



Fire Break: A natural or constructed barrier used to stop or check fires that may occur or to provide a control line from which to work to extinguish a fire.


Crews bulldozed a fire break at the fire's edge

Fire Front: The part of a fire within which continuous flaming combustion is taking place. The fire front is usually assumed to be the leading edge of the fire perimeter. In ground fires, the fire front may be mainly smoldering combustion.

Fire Ignition Events: In Avista's Wildfire Plan, this is when a spark is created by the interaction of utility equipment and its surroundings (such as when a tree falls into a powerline) and this results in a spark that, under the right circumstances, could become a fire.

Fire Mode Ready Devices: Midline and substation devices located in high risk fire areas that Avista's Wildfire Program will upgrade or replace to allow protection settings to be operated remotely and automatically in reaction to wildfire or wildfire risk situations.

Above: Testing Fire Mesh Wrap

Fire Mesh Wraps: Avista uses Genics Fire Mesh, a wire mesh treated with intumescent graphic that, when exposed to extreme heat, rapidly expands to form a barrier between the fire and the wood pole. These wraps help prevent low-burning fires from accessing wood poles, protecting them from damage or destruction.

Fire Perimeter: The entire outer edge or boundary of a fire.

Fire Prone Area: Areas where fires are most likely to occur or which have a higher tendency for fires to occur, often as a result of drought, forest health issues or insect infestations, human interaction, large amounts of dry undergrowth, low levels of humidity, etc.

Fire Retardant: Avista uses two primary forms of fire retardant on the transmission system. Fire resistant paint has historically been painted on wood transmission structures near ground line, which is an effective means of preventing damage caused by ground fires. This product must be re-applied every 3-5 years. Fire resistant mesh is a new product the Company is switching to. It is chemically reactive to extreme heat, expanding to protect wood poles from fire. This product does not require ongoing maintenance and is quick and easy to apply.

Fire Risk Potential: This incorporates weather and fuels information to rate the overall fire threat at a particular location as well as a fire's likely behavior should one start.

Fire Safety Mode: FSM is a non-reclosing distribution protection scheme used during summer fire season (typically July and August) on circuits determined to be at risk for fire activity based on a variety of factors including vegetation, past events, and age of equipment. These circuits are

configured so that when they trip, they will wait for a predetermined length of time then reclose to test the circuit. This allows the line to go back into service for incidental and transitory faults such as a tree branch touching the line. If the line tests bad after the first reclose, it will wait for a predetermined length of time then test the circuit again. If the line tests bad the second time, it will stay off until it is manually inspected to ensure it is safe before it is placed back in service.

Fire Safety Mode Automation: Avista's plan to upgrade 240 midline and substation devices in areas at risk for wildfire to enable the devices to be operated remotely and automatically in response to fire situations.

Fire Season: The time of year that wildfires are most likely to take place for a given geographic region due to seasonality, historical weather conditions, vegetative characteristics, etc.

Fire Threat Conditions/Fire Danger Rating: This considers current and antecedent weather, fuel types, and both live and dead fuel moisture to estimate the likelihood of a fire occurring as well as potential fire behavior should a fire occur.

Fire Threat Areas: Areas which have the highest likelihood of impacting people and property and where additional action may be needed to reduce wildfire risk. Threat level is based on elements such as population, topography, vegetation type, and historical fires in the area.

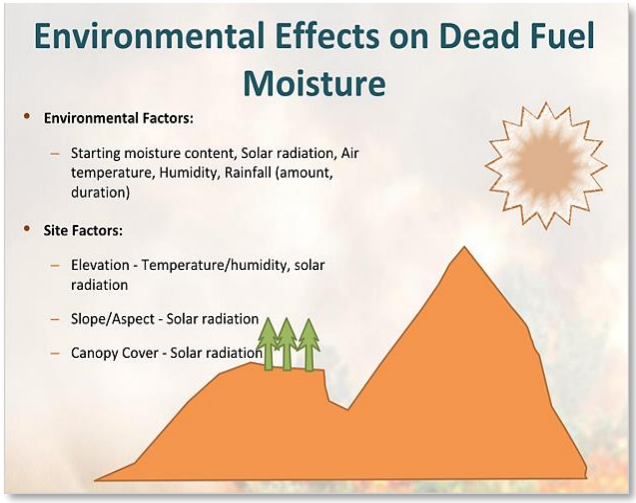
Fire Weather: Weather conditions that influence fire ignition, behavior, and suppression.

Fire Weather Dashboard: This is Avista's primary means of determining fire risk across our system. It is a risk-based computer program that combines the National Weather Service 7-day weather forecast with Avista equipment performance as well as time of year, drought conditions, type of vegetation and moisture levels, sustained wind and wind gusts, and more. It indicates the risk level for the upcoming week and highlights the maximum expected daily risk, helping the Company plan accordingly.

Fuel: Combustible material. This includes vegetation such as grass, leaves, ground litter, plants, shrubs and trees that can feed a fire.

Fuel Concentration/Density: Mass of fuel (vegetation) per area which could combust and result in a wildfire.

Fuel Management: Removing, thinning, or otherwise altering vegetation to reduce the potential rate of propagation or intensity of wildfires.



Fuel Moisture Content:
Amount of moisture in a given mass of fuel (vegetation), measured as a percentage of its dry weight.

Fuel Management/Reduction Work

Fuel Reduction:
Manipulation, including removal of fuels (vegetation management) to reduce the likelihood of ignition and/or to lessen potential damage and resistance to fire control.

Fuel Reduction Partnerships: In Avista's Wildfire Plan, this is partnering with external land management agencies and leveraging funding to remove fuels near Avista facilities. Sharing the cost allows both parties to do more work than each could accomplish with individual budgets.

Grid: An electric grid is a network of synchronized power providers and consumers that are connected by transmission and distribution lines and operated by one or more control centers. The purpose of the grid is to serve electric power to customers. The general design of an electric system, whether looped (able to deliver electricity from an additional source if a line goes out of service) or radial (has only one power source for a group of customers so a power failure, short-circuit, or a downed power line would interrupt power in the entire line) has consequences for reliability.

Grid Hardening: Actions such as equipment upgrades, maintenance, and planning for more resilient infrastructure, taken in response to the risk of undesirable events (such as outages or wildfires) or undesirable conditions (such as unreliable equipment) of the electrical system in order to reduce or moderate those events and conditions, maintaining reliability and safety. This is informed by an assessment of the relevant risk drivers or factors. In the Wildfire Plan, this specifically means adapting transmission and distribution materials and construction to minimize the potential for utility-involved fires in addition to protecting utility infrastructure in the event of a fire.

Hazard (or Risk) Tree: A dead, dying, or diseased tree or one which has a structural defect that makes it likely to fail into energized facilities whole or in part. Also called a "risk tree," this is a tree with the potential of imminent fall-in hazard to energized facilities located inside our just outside of our rights-of-way.

Herbicides: Typically used on the right-of-way to control incompatible tall growing species and noxious weeds. For the past several years, herbicide applications have primarily consisted of treating the stumps of fast-growing deciduous trees after they are removed to prevent resprouting. These applications are recorded within the same work records as the tree removals, generally categorized as risk tree work.

Steel Distribution Pole at a Hard Angle

High Risk Fire Areas: These are areas that have been identified as most at risk for wildfire and associated damage, such locations in wildland urban interfaces (WUI zones) for which there is little or no fire protection (typically rural or remote areas), have human population and/or structures, and//or which have experienced historical wildfires.

High Value Locations: In Avista's Wildfire Plan, this refers to situations where wood poles are replaced with steel to add strength and durability at high value or high consequence locations such as high-volume traffic areas, railroad, highway, and river crossings, at hard angles, or if access for maintenance is particularly difficult. These are locations where mechanical or fire-related pole failures could lead to increased safety risks and reliability impacts.

High Wind Warning (HWW): Level of wind risk from weather conditions as declared by the National Weather Service (NWS).

Hot Tap Connectors

Hot Tap: A connection to the utility's powerline. A hot tap is a connection that can easily be removed versus a wedge connector, which is more permanent. The traditional hot line tap is attached via a bolt. Over time this type of connection can come loose and arc and spark and can melt through the conductor, dropping it to the ground. Thus, adding parts such as hot tap connectors that keep the conductor from falling may help prevent fires.

Ignition probability: The relative possibility that an ignition will occur, quantified as a number between 0% and 100% (where 0% indicates impossibility and 100% indicates certainty). The higher the probability of an event, the more certainty there is that the event will occur. (Often informally referred to as likelihood or chance).

Impact/Consequence of Ignitions: The effect or outcome of a wildfire ignition upon objectives, which may be expressed by terms including, although not limited to, maintaining health, and safety, ensuring reliability, and minimizing economic and/or environmental damage.

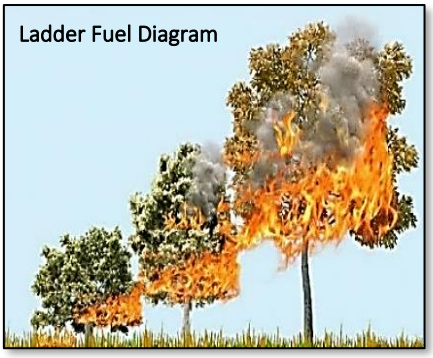
Incident: In Wildfire Plans, this refers to human-caused or natural occurrence, such as wildland fire, that requires emergency service action to prevent or reduce the loss of life or damage to property or natural resources.

Incident Command Structure: The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility to manage assigned resources to effectively manage an incident.

InciWeb: This is the Interagency All-Risk Incident Information Management System that provides a single source for fire incident related information and a standardized reporting tool for public use.

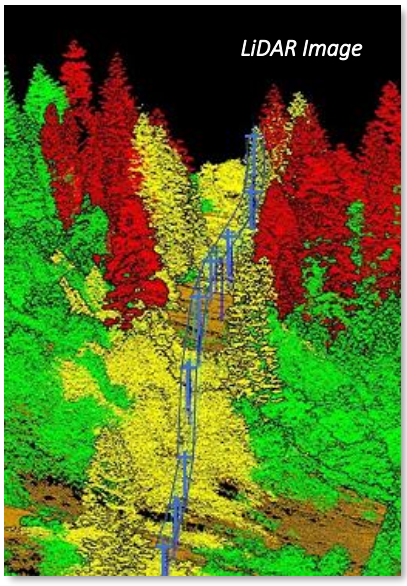
Infrastructure: This refers to the equipment Avista utilizes in order to serve customers, including poles, transformers, conductor, switches, substations, etc.

Inherent Risk: At Avista, this is the current state wildfire risk level which reflects Company wildfire defense strategies already in place.



Ladder Fuels: Fuels which provide a vertical path between the ground strata and higher vegetation, allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning when the fire spreads very rapidly from treetop to treetop.

LiDAR: Light Detection and Ranging, sometimes called 3-D laser scanning, that can be used to make high resolution representations of the earth's surface. At Avista it is used on the transmission system to identify vegetation encroachment and risk trees. It works well for transmission due to the open linear transmission rights-of-way. LiDAR is primarily collected via helicopter and fixed wing aircraft.



Line Miles: The number of miles of transmission and/or distribution line. Differs from circuit miles because individual circuits, such as the two circuits of a double-circuit line, are not counted separately in circuit miles but are counted as separate in line miles.

Live Fuel Moisture Content: Moisture content within living vegetation which can retain water longer than dead fuel.

Medical Baseline Customers: Residential customers with qualifying medical conditions and/or depend on power for qualifying medical devices for certain medical

needs. For example, customers that have specific heating and cooling or mobility needs, those on respirators or dependent upon other electrically operated medical equipment.

Member of the Public: Any individual not employed by the utility.

Managed Risk: At Avista, this is the future state wildfire risk level as it is impacted by the addition of Wildfire Resiliency elements like grid hardening.

Metrics: In Avista's Wildfire Program, these are measurements that track how much utility wildfire mitigation activity has changed the conditions of utility wildfire risk exposure or the ability to manage and reduce wildfire risk.

Viper Circuit Recloser

Midline Circuit Reclosers: Often used on long distribution lines where substation-based equipment cannot adequately protect the entire length of the circuit. Avista's Wildfire Plan adds communications to these midline circuit reclosers in order to provide monitoring and control functionality, including the ability to operate the device remotely. By placing automated midline circuit reclosers at strategic locations, Avista Distribution Operations can re-task those devices during periods of elevated fire danger to operate in fire protection mode rather than in their typical reliability mode. In other words, if there is a high-risk situation, the reclosers can be set to not automatically reclose.

Miles Completed: In Avista's Vegetation Management Program, this is a calculated value that equates to the known overhead line mileage within a polygon multiplied by the percentage of planned work completed within that polygon. Completion of planned work means executing the plan (trimming, removing, replacing) to the Company's specifications.

Miles Patrolled: Miles patrolled and miles planned effectively mean the same thing within the vegetation work plans.

Miles Planned: Miles patrolled and miles planned effectively mean the same thing within the vegetation work plans.

Mitigation: A measure or activity proposed or in process that is designed to reduce the impact/consequences and/or the likelihood/probability of a risk event such as wildfire.

Momentary Outage: The IEEE defines "momentary" outages as a brief loss of power caused by the opening and closing operation of an interrupting device that are less than five minutes in length.

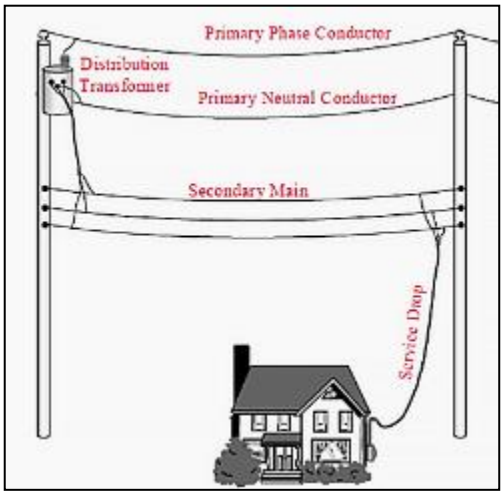
Multi-Agency Coordination/ Partnerships: A generalized term which describes the functions and activities of representatives of a variety of involved agencies and/or jurisdictions who come together to make decisions regarding the prioritizing of incidents, and the sharing and use of critical resources. Also refers to agencies who work together, sometimes via financial assistance, in reducing fire risk.

Normal Fire Season: A season or time of year when weather, fire danger, and number and distribution of fires are about average.

"Old" Fire Safety or Dry Land Mode: This is a program implemented by Avista in the early 2000s, when, during the summers, Avista changes the distribution system to turn off automatic re-closing when a fault occurs in certain parts of the system.

OMS/OMT: Outage Management System or Outage Management Tool. This is an Avista inhouse developed tool for tracking electric outage cause information (such as car hit pole, tree fall-in, wind, pole fire, etc.) as well as time stamp, reason, type, number of customers impacted, and length of outage. The OMS was designed to record actual events based upon cause, not impact, with the goal of repairing or replacing equipment that has or could lead to an outage. The current OMS does not include provisions for tracking outcomes beyond direct customer impacts, so is not set up to capture if an outage results in a fire unless that is noted in Dispatcher comments.

Open Wire Secondary Districts: Three conductors with 120/240 volts that run pole to pole below the primary conductors (primary conductors are on top of the pole in an overhead distribution system). It is called "open wire" because the three wires are clearly visible as opposed to a design in which the three conductors are bundled together.



Outstanding Plan: A still-to-be-completed plan. As inspections are performed, plans are created that consist of one or more units of work that need to be performed. In Avista's Vegetation Management, this can mean that completion of a plan is delayed due to customer permission, access, inclement weather, etc.

NIFC/National Interagency Fire Center: Located in Boise, Idaho, this is the home to the National Interagency Coordination Center (NICC) and National Multi-Agency Coordination (NMAC) group which provide unified guidance to fire agencies across the U.S., coordinate fire response and manage firefighting resources, and track and document fires, sources, size, and impact.

Patrol: Visual inspection of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards.

Patrol Inspection: A visual inspection of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards.

Peak Fire Season: That period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.

Plan-Do-Check-Adjust: A continuous improvement technique also known as the Deming Circle or Shewhart Cycle. Avista's Wildfire program uses this technique to help continue to grow and improve the program.

Planned Outage: Electric outage announced ahead of time by the utility.

Pole Fires: Pole fires are a significant contributor to wildfire risk. The mechanism that causes pole top fires is well-known. This issue is related to periods of hot, dry weather when insulators become covered with dust and other contaminants, creating a path for leakage current, which happens as insulating properties of overhead equipment break down. Leakage current is usually invisible and does not cause a heat signature, making it almost impossible to detect. A light rain after the dry spell increases this leakage current and creates the right conditions for pole fires when the leakage current is concentrated between wood-to-wood contacts such as the contact point between wood crossarms and wood poles. Wood shrinkage and cracking around metal bolts holding wood crossarms to poles form a combustive-friendly cavity for arcing and burning, and the burning process accelerates when the moisture of wood increases. Fiberglass crossarms virtually eliminate pole fires. Avista has been installing fiberglass crossarms since the early 2000s. As part of Wildfire Resiliency, the Company has an additional focus on replacing wood crossarms on structures located in elevated fire areas.

Pole Fire

Pole Wraps: Avista uses Genics Fire Mesh, a wire mesh treated with an intumescent coating that, when exposed to extreme heat, rapidly expands to form a barrier between the fire and the wood pole. These wraps help prevent low-burning fires from accessing wood poles, protecting them from damage or destruction. Mesh is more durable than the fire-resistant paint and is considerably less expensive than replacing a wood pole with steel. At Avista, pole wraps are used in areas subject to routine grassland or sage-shrub fires, areas of low vegetation.

Installing Pole Wraps

Polygons: Between 2017 and 2018 Avista's Vegetation Management planning was changed from circuit level to polygon level. Polygons contain many circuits. Prior to switching to the polygon method, the overhead line mileage of a circuit was multiplied by the percentage of the circuit planned/inspected to arrive at "Miles Planned" and the percentage of the work on the circuit completed was multiplied by overhead line mileage to arrive at "Miles Completed."

Polygon Planned Work Completed: A polygon that has 100 percent "Miles Planned" and 100 percent "Miles Completed" requires no further remediation – all tree work has been completed. It is technically possible that an inspection could lead to no work needed at all, but it is not something that has been encountered in practice at Avista.

Polygon Planned Work Not Done: The entire Vegetation Management polygon has been planned/inspected but tree work is incomplete. This category helps keep track of inspections and work spanning between two plan years, so that those polygons will be carried into the following year for completion.

Preparedness: Condition or degree of being ready to cope with a potential fire situation.

Preventive Maintenance (PM): The practice of maintaining equipment on a regular schedule based on risk, elapsed time, run-time meter readings, or number of operations. The intent of PM is to "prevent" maintenance problems or failures before they take place by following routine and comprehensive maintenance procedures. The goal is to achieve fewer, shorter, and more predictable outages.

Priority Essential Services: Critical first responders, public safety partners, critical facilities and infrastructure, operators of telecommunications infrastructure, and water utilities/agencies that are often prioritized in power restoration in order to protect public safety and welfare.

Public Safety Power Shutoff (PSPS): When electric companies preemptively turn off the power to specific areas of the system to reduce the risk of wildfires and to help keep customers and infrastructure

safe. These events differ from typical outages because they are based on a prediction of risk rather than the occurrence of an actual event.

PSPS Event: Defined as the time from when the first public safety partner is notified of a planned public safety de-energization to the final customer being re-energized.

PSPS Risk: The potential for the occurrence of a PSPS event expressed in terms of a combination of various outcomes of the event and their associated probabilities.

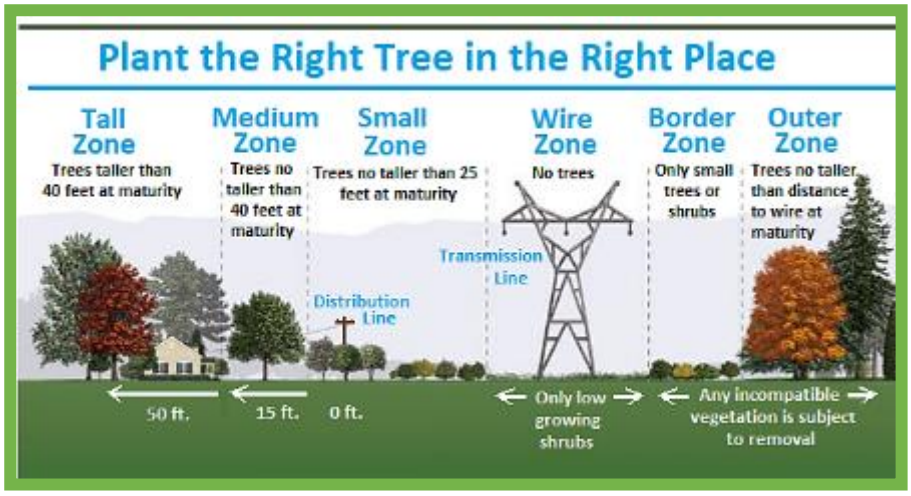
Rate of Spread: The relative activity of a fire in extending its horizontal dimensions. It is expressed as the rate the total perimeter of the fire is growing, as rate of forward spread of the fire front, or as rate of increase in area, depending on the intended use of the information. Usually, it is expressed in acres per hour for a specific period in the fire's history.

Reburn: The burning of an area that has been previously burned but that contains flammable fuel that ignites when burning conditions are more favorable.

Red Flag Warning (RFW): A term used by fire weather forecasters to alert the public to an ongoing or imminent critical fire weather pattern.

Relative Humidity: The ratio of the amount of moisture in the air to the maximum amount of moisture that air would contain if it were saturated.

Reliability: Maintaining customer service continuity.



Right Tree Right Place: At Avista this has been renamed the "Safe Tree Program." It is a partnership with private landowners residing in high fire threat (WUI 2 and 3) areas to remove risk trees on their private property that are at risk of coming into contact with powerlines and creating fire potential or loss of reliability and replacing these trees, if the customer desires, with a lower growing variety.

Risk Based: Making decisions based upon how much risk is involved. Typically, a utility identifies specific risks to safety elements, financial well-being, customer reliability impacts, probability of occurrence, and consequence of occurrence in order to develop programs and plans which seek to reduce those risks.

Risk-Based Vegetation Inspections: A new goal based on the Company's Wildfire Plan that requires 100% of non-urban areas to be inspected for vegetation issues each year.

Risk or Danger Tree

Risk Event: An event with probability of ignition, including wires down, contacts with objects, line slap, events with evidence of heat generation, and other events that cause sparking or have the potential to cause sparks or fire.

Risk Tree: At Avista, a "risk tree" is a dead, dying, or diseased tree or one with obvious structural defects that has the potential of imminent fall-in hazard to energized facilities.

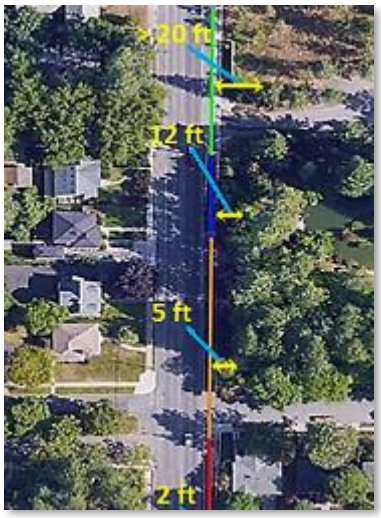
Routine Vegetation Inspections: As opposed to risk-based vegetation inspections which are planned for 100% of the system annually, routine inspections consist of cycle-based tree trimming, focused on about 1,500 miles (20% of the system) annually.

Right-of-Way (ROW) Work: ROW work means re-clearing/reclaiming the right-of-way with planning and completion of work at the span (from one pole to the next) level as opposed to spot work planned and completed at the individual tree level.

Run-to-Failure: A maintenance approach that replaces equipment only when it fails.

SAIDI: SAIDI refers to "System Average Interruption Duration Index." It is calculated by multiplying the average duration of customer interruptions by their total number and then dividing by the total number of customers in the system. SAIDI describes the total duration of the average customer interruption.

Safe Tree Program: This is a partnership with private landowners in high fire risk (WUI 2 or 3) areas to remove risk trees on their property to reduce the chances of their trees contacting powerlines and creating fire potential or loss of reliability. Avista will replace these trees, if the customer desires, with a low growing variety at no cost to the customer.



AiDash satellite Image of an Avista distribution line

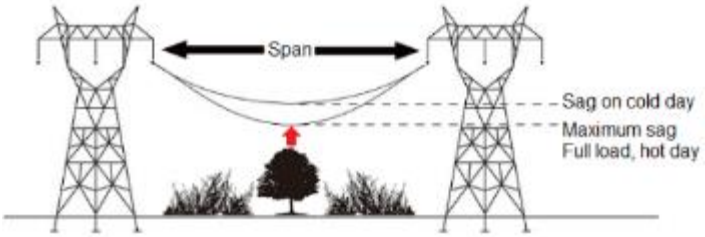
Safety Hazard: A condition that poses a significant threat to human life or property.

Satellite Imaging: In Avista's Wildfire Plan, this means using satellites to capture images of the distribution system to detect vegetation issues and changes in vegetation over time. Satellite-powered artificial intelligence systems such as that used by Avista's LiDAR and satellite contractors can predict vegetation growth years in advance. Satellite imaging works well for the distribution system, which is

more widespread and convoluted than the transmission system and is located in a wide variety of environments not always accessible or visible from the aircraft used to collect LiDAR images.

Situational Awareness: Many of Avista's circuit breakers cannot be remotely operated and require manual intervention to make changes to settings or to identify an issue. This may take several hours depending on location and crew availability. Avista's Wildfire Situational Awareness Program funds communications and control equipment that will help us have "eyes" on critical equipment out in the field as well as be able to control it remotely in case of fire or high fire threat conditions.

Span: The space between adjacent supporting poles or structures on a circuit consisting of electric lines and equipment.



Spark Ignition Event: A situation when something such as equipment failure creates a spark that can potentially lead to a fire.

Spark Ignition Potential: The risk of heat (usually via spark or arc) creating the ability for a fire to start, spread, and do damage.

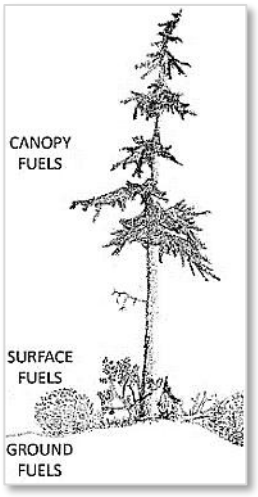
Spark Ignition Source: Something that creates a spark that may lead to a fire under the right circumstances, such as a failed piece of equipment, blown fuse, or conductor that touches dried vegetation on the ground.

Steel Conversion: One of Avista's wildfire resiliency strategies is to replace wood transmission poles in areas at an elevated risk of fire with steel, as steel is less likely to be damaged and fail when exposed to fire.

Substation SCADA / Substation Fire Safety Mode Automation: Provides automation that allows remote control and operation of substation equipment to allow it to respond more quickly if fire conditions indicate elevated risk. In Avista's Wildfire Plan, fifteen remote substations located in high fire risk areas will be upgraded with communications equipment and hardware/software that allows them to support fully automated Fire Safety Mode operations.

Supervisory Control & Data Acquisition: SCADA systems are used to monitor and control a variety of critical infrastructure in manufacturing, power generation, and other complex circuit infrastructure. It provides the ability, for example, to monitor and control reclosers to isolate and/or reroute power

during outages or fire events. SCADA provides insights for operators into the operation of the system in addition to helping them remotely control it.



Surface Fuels: Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branches, downed logs, and stumps interspersed with or partially replacing the litter. These elements can feed a fire.

Sustained Outage: The IEEE defines a sustained outage as a disruption in power supply lasting more than five minutes.

System Average Interruption Duration Index (SAIDI): SAIDI is a system-wide tally of the total number of minutes per year of sustained outage per customer served. It is calculated by multiplying the average duration of customer interruptions by the total number of interruptions then dividing by the total number of customers in the system.

System Average Interruption Frequency Index (SAIFI): SAIFI is the average number of sustained interruptions per customer during the year. It is calculated by dividing the total number of customers experiencing an interruption with the total number of customers in the system.

SAIFI	System Average Interruption Frequency	How often the average customer experiences an outage
CAIDI	Customer Average Interruption Duration	Average time it takes to restore power after an outage
SAIDI	System Average Interruption Duration	Total number of minutes of interruption experienced by the average customer
MAIFI	Momentary Average Interruption Frequency	How often an average customer experiences a momentary outage or trip
CEMI	Customers Experience Multiple Interruptions	Percent of customers having 3-5 interruptions in a set period

Third-party Contact: Contact between a piece of electrical equipment and another object, whether natural (such as a tree branch) or human (such as a vehicle).

Tiers: In Avista's Wildland Urban Interface, the power system is divided into sections based upon the risk of a fire occurring and having impact. These are called Tiers and include: Tier 0 (Low or no risk), Tier 1 (Moderate), Tier 2 (Elevated), and Tier 3 (Extreme).

Transmission: Electric facilities that have a voltage that is 60 kV or above.

Transmission Corridor: The right-of-way associated with a transmission line in which the utility has the right to remove vegetation that may interfere with the line.

Transmission Line Inspection: Avista uses ground patrols, aerial inspections, and LiDAR data to inspect their transmission lines and structures each year.

Transmission Steel Conversion: Avista's effort to replace wood poles specifically in areas with elevated fire risk with steel poles to protect both infrastructure and customer reliability. The Company has experienced wildfire burning through steel pole lines with no impact from the fire.

Tree Fall-In

Tree Fall-In: Trees (or limbs) that are dead, dying, or damaged by illness, trees impacted by storms, lumberjacks, etc. that fall and come into contact with powerlines, often causing an outage.

Tree Grow-In: Trees planted under powerlines that over time grow into and contact those lines.

Tree Grow-In

TX: Short for Transmission.

Undergrounding: In Avista's Grid Hardening efforts, select portions of overhead line will be converted to underground facilities where feasible and cost justified. Converting facilities to underground fully mitigates potential spark-ignition risk.

Unplanned Outage: Electric outage that occurs with no advance notice from the utility.

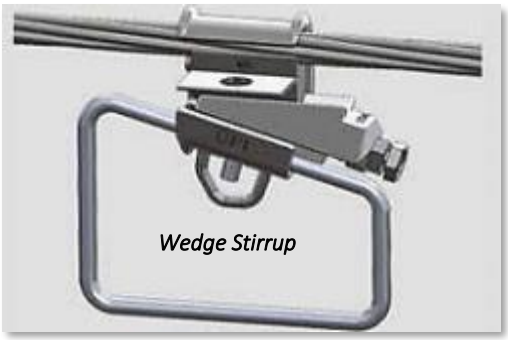
Utility-Related Ignitions: Ignitions involving utility infrastructure or utility employees as determined by official investigation to have originated from utility infrastructure.

Vegetation Issues: This typically means trees and other vegetation that has the potential to or has contacted powerlines.

Vegetation Management, Routine: Trimming, removal, and other remediations of vegetation used to maintain utility rights-of-way and reduce the risk of outages, ignitions, or other disruption and danger. At Avista, routine vegetation management is done on a five-year cycle with 20% of the system completed each year.

Vegetation Management, Risk-Based: Under Avista's Wildfire Plan, risk tree inspections are increased to 100% of non-urban polygons in an effort to mitigate the potential for vegetation to contact powerlines and create an outage or spark event.

Vegetation Risk Index: Risk index indicating the probability of vegetation- caused outages and/or ignitions along a particular circuit, based on the vegetation species, density, height, growth rate, etc.



Wedge Connected Stirrups: The traditional hot line tap is attached via a bolt. Over time this type of connection can come loose, arc and spark, and melt through the conductor, dropping it to the ground. The wedge connected stirrup device prevents the hot tap from being directly connected to the conductor. The stirrup attaches in such a way that if the connection loosens and if the stirrup melts, the conductor is still intact and does not fall to the ground. A wedge connected stirrup is a more permanent connection to the powerline than a hot tap.

Wildfire Impact/Consequence: The effect or outcome of a wildfire affecting, although not limited to, health, safety, reliability, economic and/or environmental damage.

Wildfire Mitigation Plan: A thoughtful approach to addressing the utility's responsibility in helping prevent their equipment from starting a wildfire, while at the same time protecting assets paid for by customer and designed to provide them with reliable service from the impacts of wildfire.

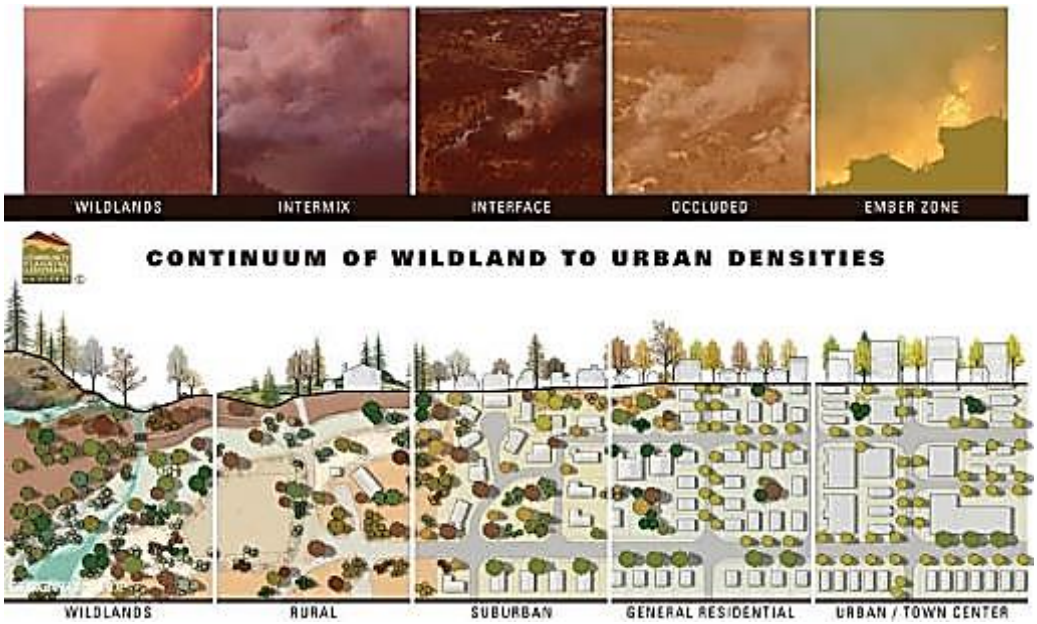
Wildfire Programs: Activities, practices, and strategies that are only necessitated by wildfire risk, unrelated to or beyond that required by minimum reliability and/or safety requirements. Such programs are not indicated or in common use in areas where wildfire risk is minimal (e.g., territory with no vegetation or fuel) or under conditions where wildfires are unlikely to ignite or spread (e.g., when rain is falling).

Wildfire Risk: The potential for the occurrence of a wildfire event expressed in terms of ignition probability and wildfire impact/consequence, and the likelihood that an ignition will grow to become a large or rapidly growing wildfire due to dry vegetation and weather conditions.

Wildfire Risk Reduction: The average percentage difference between the current state of risk and future state risk levels as wildfire measures are implemented.

Wildland Urban Interface: Or WUI, is the zone of transition between wilderness (unoccupied land) and land developed by human activity; basically, where the natural environment (typically forested areas) meets the built environment. Homes and businesses located in WUI zones are most at-risk

from the impact of wildfires, as they are often located in rural areas lacking adequate fire suppression resources. The WUI map helps to identify and prioritize these areas of greatest risk and serves to inform the recommendations and operational decisions related to wildfire resiliency. Using this map, programs can be targeted where they have the potential to reduce the most risk and have the greatest positive impact in the safety and protection of customers and infrastructure.



Communities building in a WUI zone

Wire Down: Instance where an electric transmission or distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object. If the conductor contacts dry materials on the ground and is live, the sparks created can lead to a fire.

Fire Mesh Wood Pole Wrap

Wood Pole Wraps: Avista uses Genics Fire Mesh, a wire mesh treated with an intumescent material that, when exposed to extreme heat, rapidly expands to form a barrier between the fire and the wood pole. These wraps help prevent low-burning fires from accessing wood poles, protecting them from damage or destruction.