

Archie Creek and Thielsen Fire Rapid Assessment Team Report
Umpqua National Forest
North Umpqua and Diamond Lake Ranger District
October 19-20, 2020



**Rapid Assessment Team (RAT) summary and recommendations for the
2020 Fires on the Umpqua National Forest
October 20th, 2020**

This document makes a recommendation to the Forest on post-fire actions and helps assess various options based upon a very rapid, preliminary, non-binding assessment of initial information. The Forest has the option to mix, match and create new options and will make the determination of how to move forward, in conjunction with the Forest Leadership Team, Regional Leadership Team and the Directors of Natural Resources (NR) and Resource Planning and Monitoring (RPM). The mission of the RAT during its October 2020 review was to help the Umpqua National Forest assess salvage options and help prioritize post-fire restoration projects.

CONTEXT

Oregon experienced one of its worst fire seasons in western Oregon in close to a century with >850,000 acres burning along the Cascades this season. Several of these fires, notably the Riverside, Beachie, Holiday Farm and Archie burned significant acres of private industrial timber land.

The Umpqua National Forest burned over 36,000 acres from two wildfires in 2020 that both started on September 8th, 2020: the Thielsen Fire on the Diamond Lake Ranger District and the Archie Creek Fire on the North Umpqua Ranger District. The Archie Creek Fire burned a total of 131,580 acres with 26,161 acres on the Umpqua NF, while the Thielsen Fire burned 9,851 acres entirely on the Umpqua NF (Table 1, Figure 1). While the Umpqua itself burned over 36,000 acres, the fire severity on the Forest exceeded what has been seen over the past two decades, with 66% of the Archie Creek Fire resulting in >75% basal area loss and 44% of the Thielsen Fire resulting in >75% basal area loss. This amount of high severity fire coupled with the high use recreation areas the fires burned through on the Forest will necessitate a much larger and expensive post fire restoration/recovery effort than the Forest has seen over past 20 years.

Over the past 20 years 28% of the Umpqua National Forest has burned in wildfires, with the total acreage being higher due to several areas being burned two to three times over in the past 20 years. The fires burned across all land allocations and with generally higher severity than normally seen (Tables 2 and 3, Figures 2 and 3).

Table 1. Acres burned by land ownership in the Archie Creek and Thielsen Fires on the Umpqua National Forest.

Archie Creek Fire	
OWNERSHIP	ACRES
UMPQUA NF	26,645
ROSEBURG BLM	40,429
STATE	39
PRIVATE	63,847
UNDETERMINED	620
TOTAL ACRES BURNED	131,580
Thielsen Fire	
Umpqua NF	9,851
TOTAL ACRES BURNED	9,851

FOREST SUPERVISOR – LEADERS INTENT

Forest Supervisor Alice Carlson expressed that the Rapid Assessment Team’s work is an important step to informing an integrated response to the fires the Forest and community have experienced. She would like the RAT to consider the fires on the Umpqua in the larger context of western Oregon this fire season. Several large fires have burned across multiple ownerships driven by an east wind event, resulting in severe fire effects in terms of soil severity and basal area mortality, as well as social effects due to the fires occurring in high value recreation areas within major river corridors. These fires have affected the nexus of where people live, work and recreate at a scale not seen in western Oregon in modern times. As the team moves forward and develops recommendations, it needs to work within the context of the response of the Pacific Northwest, and west coast as a whole.

It is critical to look at the impacts from these fires in a holistic fashion, as well as by the following resource areas:

- Consider the option of reforestation and planting both in areas where we may salvage, as well as areas that are not salvaged.
- Look at prescription treatments for improving watersheds and how to do watershed improvement; reach out to Ron McMullin as he has projects already in mind.
- Consider our obligations to work with the Oregon Department of Transportation (ODOT) in terms of danger tree abatement, but also with respect to impacts to the North Umpqua River, the wild and scenic corridor and national scenic byway.
- Help the Forest think through changed condition analyses for the adjacent, unburned Calf-Copeland project, including any additional environmental analysis or consultation that might be needed prior to project implementation.
- Recreation: look at the resources and infrastructure that burned on the Forest, and at the larger scale of recreation impacts across the western Cascades of Oregon and the unique place the Umpqua has within that context. Help the Forest consider what we might want to rebuild, relocate and plan for the future needs with an eye to the broader regional context and how the Umpqua fits within the broader landscape.
- Look at opportunities for salvage not just from an economic perspective, but also for benefits to the county government, with a close look at any Oregon and California (O&C) lands managed by the Forest within the Archie Creek Fire.

Rapid Assessment Team Summary and Recommendations for the 2020 Fires on the Umpqua National Forest

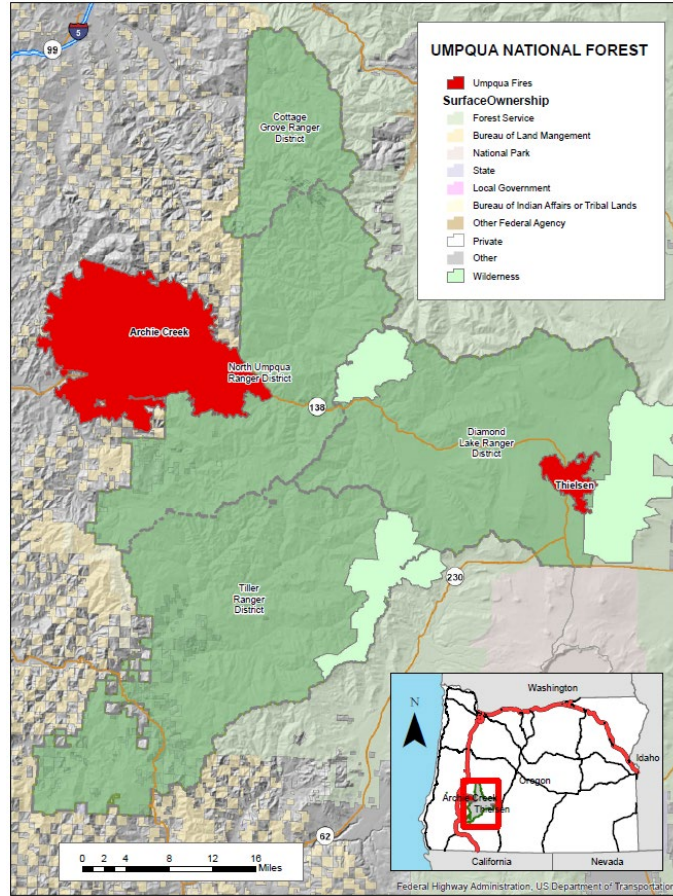


Figure 1. Locator map for the Archie Creek and Thielsen wildfires on the Umpqua National Forest.

Table 2. Acres of each fire by Northwest Forest Plan Land Use Allocations. Note that the Wild and Scenic River corridor and riparian reserves double count acres as they overlay Northwest Forest Plan allocations.

Fire Name	Total acres on Forest Service land	Wilderness (CR)	Wild and Scenic (CR) *	Adaptive Management Area	Administratively Withdrawn	Late Successional Reserve	NSO Core (LSR4)	Matrix	Riparian Reserves*
Thielsen	9,961	321	-	-	5,832	-	259	3,549	1,132
Archie	26,160	-	3,539	11	-	12,805	551	12,793	7,325
Grand Total	36,121	321	3,539	11	5,832	12,805	810	16,342	8,457

* Acres double counted as they are a separate feature class from the NWFP.

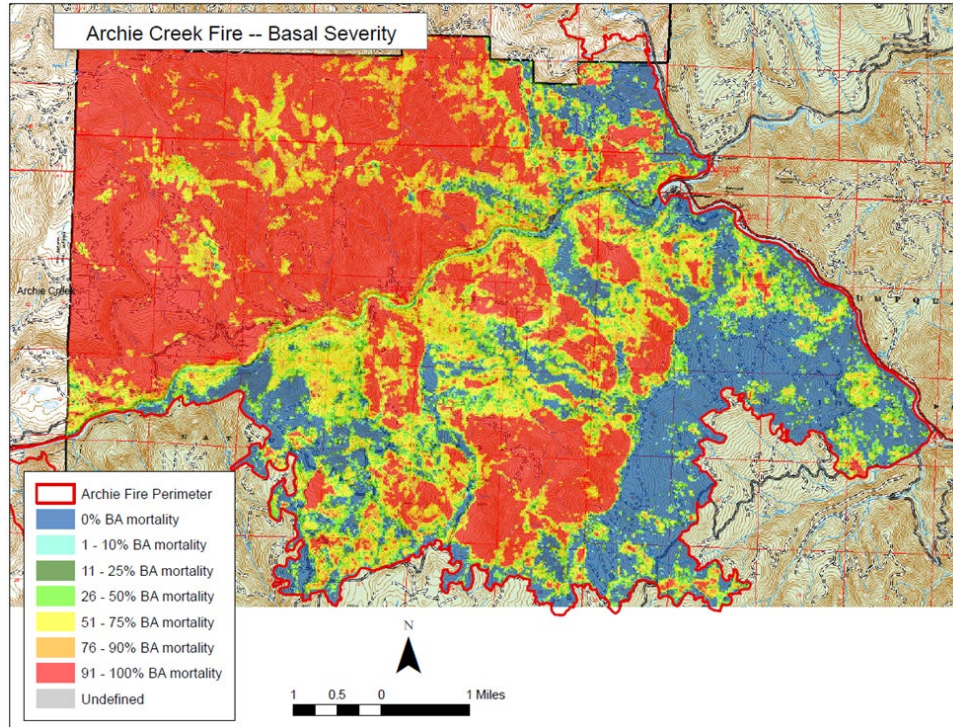


Figure 2. Umpqua National Forest portion of the Archie Creek Fire basal area mortality map developed by Andy Stratton from DRM.

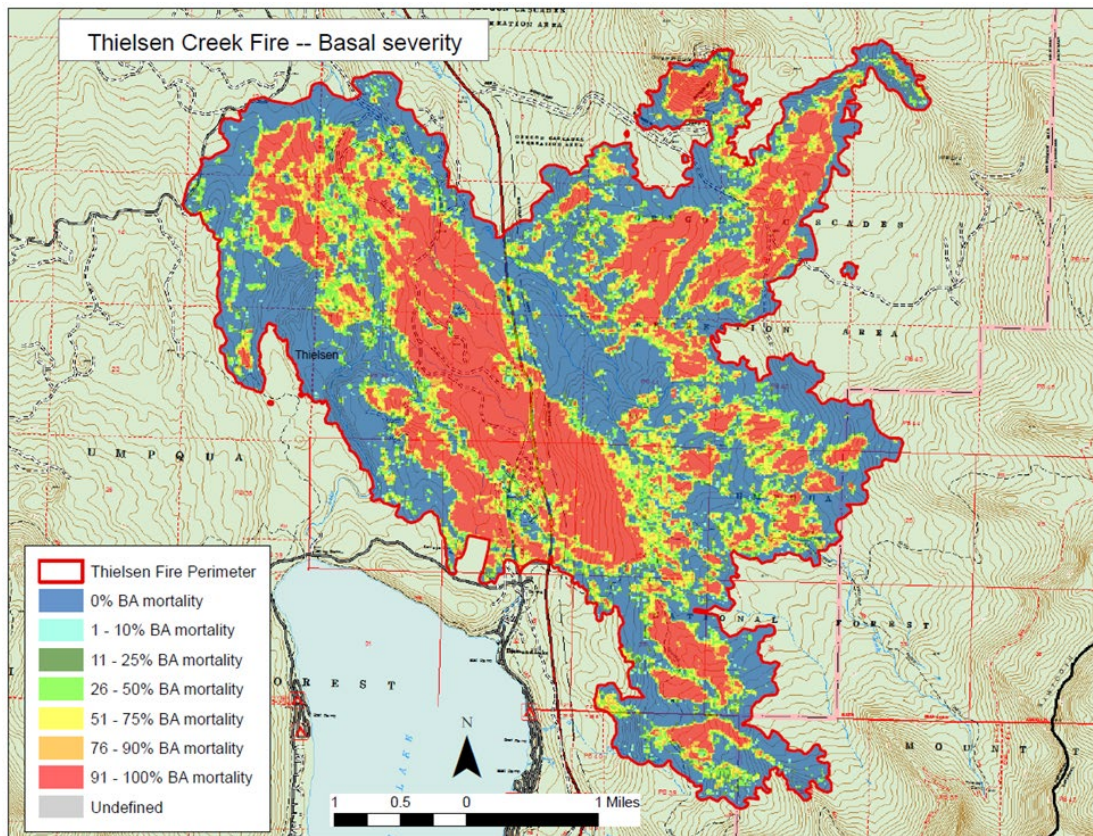


Figure 3. Thielsen Fire basal area mortality map developed by Andy Stratton from DRM.

Table 3. Preliminary basal area loss analysis for the Archie Creek and Thielsen Fires on the Umpqua National Forest in 2020. This data was created by Andy Stratton from DRM using satellite imagery from 9/29/2020.

Fires	Low Mortality (<25% mortality)		Low mortality (25-50% mortality)		Moderate mortality (50-75%)		High mortality (> 75%)		Grand Total
	Acres	% of fire	Acres	% of fire	Acres	% of fire	Acres	% of fire	
Archie	6,829	25%	2,333	9%	3,942	14%	14,161	52%	27,265
Thielsen	4,667	47%	898	9%	960	10%	3,416	34%	9,951

WILDLIFE

Northern spotted owl

Both fires burned within northern spotted owl critical habitat. The Archie Creek Fire burned 5% of the Western Cascades South Subunit 5 (WCS 5) northern spotted owl critical habitat, and the Thielsen Fire burned 0.5% of WCS 5, for a total of 5.5% of this subunit being burned in 2020. With 13,682 acres within WCS-5 in the Archie Creek Fire experiencing >50% basal area mortality and 541 acres of the Thielsen Fire in WCS-5 experiencing >50% basal area mortality, both fires removed approximately 4% of the suitable habitat in WCS-5 (Table 4).

Table 4. Acres of Northern Spotted Owl Critical Habitat burned in the Archie Creek and Thielsen Fires.

Fire	Critical Habitat Unit	Basal Area Mortality Class	Acres	Percent
Archie	Western Cascades 5	0% BA mortality	2,431	13%
		1 - 10% BA mortality	325	2%
		11 - 25% BA mortality	638	3%
		26 - 50% BA mortality	1,608	9%
		51 - 75% BA mortality	3,170	17%
		76 - 90% BA mortality	2,183	12%
		91 - 100% BA mortality	8,329	45%
Archie Total			18,684	
Fire	Critical Habitat Unit	Basal Area Mortality Class	Acres	Percent
Thielsen	Western Cascades 5	0% BA mortality	890	52%
		1 - 10% BA mortality	43	3%
		11 - 25% BA mortality	78	5%
		26 - 50% BA mortality	167	10%
		51 - 75% BA mortality	161	9%
		76 - 90% BA mortality	100	6%
		91 - 100% BA mortality	280	16%
Thielsen Total			1,719	

As a result of this changed condition, the Forest will need to have discussions with the US Fish and Wildlife Service regarding whether or not these changed conditions within the WCS-5 CH subunit will

warrant additional analysis for the adjacent Calf-Copeland restoration project biological assessment. While the Calf-Copeland project area was not burned during these fires, the project area is located in the same critical habitat subunit.

For the Archie Creek Fire, the Umpqua has 14 historic spotted owl cores (500-acre core use areas) within the fire perimeter. Prior to the Archie Creek Fire, 5 out of the 14 cores were below the 50% threshold for nesting, roosting, foraging habitat (NRF), due in part to previous timber harvest and wildfires. However, post-fire, 11 of the 14 cores are below 50%, with 5 of those cores having little to no acres of NRF post fire. With the severity of the fire effects in the area north of the North Umpqua River, it is not anticipated that four of the cores in that area, along with one of the cores along the southern edge of the fire (0528) will function as even dispersal habitat for several decades as they experienced almost complete stand replacement fire effects.

For the Thielsen Fire, the Umpqua had two historic spotted owl cores within the fire perimeter. Prior to the fire one core use area (0829) had 36% NRF and the other (0830) had 65% NRF. Post-fire, core use area 0829 has 32% NRF, losing 19 acres of NRF from the wildfire, while core use area 0830 has 51% NRF, having lost 72 acres of habitat. In general, the Thielsen Fire tended to burn in a mosaic pattern that left pockets of more severely burned areas within the interior of the fire that resulted in relatively minor losses of NRF habitat.

These highly burned owl cores, especially those occurring in WCS-5, present an opportunity to accelerate forest recovery and should be considered for some level of reforestation. Ray Davis will be providing updated post fire spotted owl habitat layers for the Forest to use in current and future planning efforts, feel free and reach out to him to acquire the updated habitat layer and habitat trend analysis.

Red Tree Voles

The Umpqua recently signed a decision for the Calf-Copeland restoration project, which is located just to the east of the Archie Creek Fire. While the project area itself was not affected, as part of project development the Forest developed a high-priority site management plan to provide a reasonable assurance of red tree vole (RTV) persistence within the Middle North Umpqua fifth-field watershed. The goal of the plan was to identify National Forest System lands that would be managed to provide suitable habitat for a well-distributed population of red tree voles and allow linkages to adjacent watersheds. As a result of the change in habitat connectivity for RTVs as a result of the Archie Creek fire the high-priority site management plan will need to be reviewed and updated to identify additional habitat linkages for the Calf-Copeland project.

The Archie Creek Fire burned through three of the subwatersheds identified as key for connecting RTV habitat in the Calf-Copeland planning area to adjacent subwatersheds with suitable habitat. The Rock Creek, Canton Creek and Little River subwatersheds all experienced stand replacing fire reducing the likelihood that they currently serve as habitat, especially the Rock and Canton Creek watersheds, which burned particularly hot. There are opportunities to identify additional connected habitat into the Lower and Middle Steamboat Creek Watersheds to the north, as well as to the south through the headwaters of Little River down to the Boulder Creek sub watersheds. The RTV high priority site management recommendations provide guidance that a wildfire is a situation that may require modification of the resulting RTV plan. The Forest should evaluate and determine if the post-fire conditions change their conclusion that the high-priority site management plan provides a reasonable assurance of species persistence, and if the assumptions in the high-priority site management plan are still valid. It is

recommended that wildlife biologists working on the updated high-priority site management plan reach out to discuss the process with Carol Hughes, the Regional Special Status/Sensitive Species Program Manager.

Wildlife Habitat Restoration Opportunities

With the severity of the Archie Creek Fire, it is very likely that north of the North Umpqua River, the Williams Creek and Thunder Creek subwatersheds will remain in an early seral habitat condition for decades. This amount of early seral habitat, along with the presence of the Pacific Power powerline, make this an area with high potential for invasive weed expansion into the Forest. To complement the prescribed early detection rapid response treatments proposed by the BAER team, there is an opportunity to consider more extensive seeding of native grasses palatable for big game, as well as including flowers and forbs that could provide improved nectar and pollen sources for Regional Forester's sensitive pollinator species like the Western bumble bee, monarch butterfly, Mardon skipper and Coronis fritillary. It is recommended that the Forest work with Jenny Lippert on the Willamette and Stu Osbrack on the Rogue River Siskiyou to see if they have pollinator-friendly seed collections that would be genetically appropriate that the Umpqua could use to add some diversity to their reseeding mix. This seeding would not only aid in improving habitat conditions for wildlife species, it would also be beneficial to retain remaining soil in the severely burned areas. The Oregon Department of Fish and Wildlife (ODFW) is very interested in supporting National Forests in Oregon in post-fire recovery, so consider engaging the local Umpqua District biologists for habitat restoration assistance. In addition to coordinating with ODFW on seeding, we recommend that you protect the investment by improving and replacing existing seasonal winter range gates along appropriate roads within the Archie Creek fire, which impacted 11,288 acres of big game winter range. As forage improves, big game will be drawn to these areas, and there is potential for increased harassment, resulting in additional stress to big game. Improving these gates will provide protection and limit harassment within the winter ranges.

Snags and Downed Wood

Over the past 20 years, 28% of the Umpqua has burned in wildfires, with the total acreage being higher due to several areas being burned two to three times over the past 20 years. Less than 1% of these past fires in total have been salvaged, with the majority of snag loss occurring along roadsides as danger tree mitigation to keep open public access. Therefore, snag abundance at the landscape level will likely be above the 80% tolerance level on the North Umpqua and Diamond Lake Ranger Districts for quite some time. Due to the severity of the Archie Creek Fire in particular, it would be beneficial to leave some larger diameter (>20") logs within potential roadside danger tree and potential salvage units to meet downed wood retention levels, because much of the pre-fire downed wood was consumed. The Region will provide an updated snag and downed wood layer for use in future project DecAID analyses to help inform current and future vegetation management project planning; please reach out to Josh Chapman for that information.

SOILS, HYDROLOGY AND FISHERIES

The Thielsen Fire and the Archie Creek Fire both occurred within the North Umpqua subbasin. While the Thielsen Fire burned in a mosaic pattern with a low to moderate intensity, the Archie Creek Fire burned at a much higher intensity. The respective BAER 2500-8 reports provide details of acres of burn severity by subwatershed. Fires, suppression activities, and other post-fire actions including hazard tree reduction and salvage have potential to affect soil, water and fisheries resources including water quality, aquatics and ESA-listed fish.

Soils

The Thielsen Fire burned in the High Cascades geology and largely resulted in moderate and low soil burn severities. Areas of higher burned soil severity were concentrated west of Highway 138, affecting Lake Creek. There were a lot of moderate to low/unburned fuels. Soil erosion is expected in portions of the high soil burn areas. Priorities would be to re-establish riparian vegetation.

Archie creek resulted in much higher soil burn severity. Much of the fire area, particularly north of the river and Bogus Creek experienced high burned soil severity and soil erosion is expected to occur. The occurrence of slumps and slides, natural to the area will likely be accelerated. Areas near Burnt Mountain, including Boundary Road and Panther Creek are susceptible to future landslides. It is expected some soil loss will occur, but the extent and degree are unknown. The loss of soil could result in long term effects to soil productivity. There is good potential for long-term and short-term recovery due to soil resiliency and decomposition rates, however soil productivity and hill slope stability should be reassessed after allowing some time for natural recovery.

As with the Thielsen Fire, re-establishing riparian vegetation would be a priority. In areas that have now burned multiple times (e.g. Williams Creek Fire), much of the down wood that was left behind after the first fire has been consumed.

Debris Flows

Watersheds recently burned by wildfires are recognized as having an increased susceptibility to debris flow occurrence. The great majority occur within the first two years following wildfires. The likelihood of debris flows decreases over time as vegetative cover and soil infiltration functioning return to pre-fire conditions. There is some evidence, however, that there is an increase in debris flow susceptibility in burned forested areas largely attributable to the fire-induced tree mortality and subsequent decay of tree root networks; this decreases soil strength on steep hillslopes, which produces an increased likelihood of debris flow occurrence for 3-10 more years after the wildfire. Entrainment of wood by debris flows reduces momentum and may reduce runout lengths of flows.

Mitigation recommendations to reduce debris flows effects include:

- Identify high priority debris flow prone areas (USGS, EPA maps?) and prioritize these areas for replanting.
- Avoid removal of large woody material in debris flow prone areas dependent on the values-at-risk.
- Retain standing trees with potential to fall into stream channels or fall standing dead trees into adjacent streams where wood has been removed or burned.
- Inventory infrastructure values-at-risk and stormproof where possible (upsized culverts, rolling dips, etc.).

Water Quality

The Forest anticipates changes to water quality due to solar loading and nutrient increases due to loss of riparian cover and erosion. These effects include increased stream temperatures with larger daily fluctuations. Temperatures increased several degrees in the Panther Creek drainage during the Apple Fire in 2002 and are still elevated above pre-fire levels. The Umpqua Basin total maximum daily load (TMDL) was approved by EPA in 2007, but is part of the Temperature TMDL Replacement effort ongoing in Oregon. Per the District Court's final order and judgement, the Oregon Department of Environmental Quality (ODEQ) must amend and submit a replaced temperature TMDL to EPA for approval or disapproval. The Umpqua Basin TMDLs is scheduled to be replaced by February 28th, 2025. There will be

a need to coordinate with the state effort and provide requested updates to reflect changed conditions as well as update the existing North Umpqua Water Quality Management Plan.

The North Umpqua River sub basin is the drinking water source area for numerous communities and municipalities (Table 5). Fires have the potential to affect drinking water supplies where larger areas burned in higher severity and in closer proximity to intakes. More detailed analysis may be needed to determine potential for fires to impact drinking water systems. Continue working with USGS, state, local entities and regional office to monitor effects to water quality. Provide appropriate best management practices (BMPs), design features and mitigation measures to protect water quality during any proposed management activities.

Table 5. Downstream public water system intakes.

Primary Source	Fire	PWS-ID	PWS-Name	Source
Surface	Thielsen	OR4101012	PP&L-TOKETEE VILLAGE	Toketee Lake (N. Umpqua River)
Ground	Archie Creek	OR4193438	TIMBER RIVER RV PARK	North Umpqua River
Surface	Archie Creek	OR4101091	USFS STEAMBOAT WORK CENTER	North Umpqua River
Surface	Archie Creek	OR4100720	ROSEBURG, CITY OF	North Umpqua River
Surface	Archie Creek	OR4100326	GLIDE WATER ASSOCIATION	North Umpqua River
Surface	Archie Creek	OR4101095	USFS WOLF CREEK JOB CORPS	Little River
Surface	Archie Creek	OR4100847	SUTHERLIN, CITY OF	Calapooya Creek Non-Pariel
			Oakland	Calapooya Creek (downstream of Sutherlin)

Wet Season Haul

Priorities for soil resources, water quality, and fish recovery are to maintain focus on fire suppression rehabilitation, BAER implementation including interagency coordination and planning for winter storm patrols, in addition to the existing program of work including vegetation and watershed restoration projects. Other opportunities and needs for post-fire restoration and needs are identified in BAER reports.

For all activities including hazard tree reductions, follow applicable Forest Plan standards and guidelines, design criteria, and BMPs. Within fire affected areas, normal operations and maintenance and project design criteria should take into account BAER predictions for changes in soil stability, and increased potential for flooding and sediment transport.

For logging operations including hazard tree reductions that involve wet season haul, there would likely be a “may affect” requiring consultation. If haul is limited to summer, a potential “no effect” call could be reached on hazard tree reduction. Mitigation to upgrade roads may make it possible to haul in the wet season and minimize or avoid sediment delivery to streams. Normal operations require extra rock for wet season haul (typically 4-6 inch lift). Hazard tree reduction generally does not support the level of

road work that would be needed. Other PDCs include disconnecting ditches from streams (i.e. installing cross drains).

REFORESTATION

Reforestation is more than tree planting. Reforestation efforts generally are a continuum that might range from 100% natural regeneration to 100% planting, depending on the land management objectives and seed source availability.

The most basic role of a silviculturist, per the National Forest Management Act (NFMA), is to identify the species composition, stocking level, growth rate and other stand conditions needed to meet the land management direction. When our emphasis was more on single-species management in the past and our reforestation was primarily harvest-based, these items were commonly reduced down to stocking level without much attention (if any) to species composition or other stand conditions.

General Regional Priorities for Reforestation

The Regional Forester is responsible for setting general priorities for reforestation. This letter was signed in 2018 and was re-sent to Forest Silviculturists recently. Our highest priority in the region is reestablish disease-resistant five-needle pines (western white, sugar, whitebark) and Port-Orford-cedar that have been impacted by mortality from invasive diseases. Their restoration is important for ecosystem resilience to disturbance and climate change and for ecosystem function. In some cases, these may be the only species that we plant because natural regeneration will be appropriate for the other tree species. The letter includes other general priorities and details of national policy on reforestation after disturbance and salvage.

Post-Disturbance Reforestation Assessment

Forest Service Policy requires a post-disturbance reforestation assessment. This is a living document that is modified as additional site-specific information becomes available. The initial assessment for a large fire is usually based on remote sensing information to quickly identify whether there is a reforestation need or not, and if that need will be met through planting, natural regeneration, or natural recovery (or some combination of those three). The NFMA requires us to report acres of reforestation need annually to Congress, so this initial assessment is very important to have some estimate of reforestation need at the end of the fiscal year. Areas stay in the FACTS database as a reforestation need until they are certified as satisfactorily stocked.

Policy on Preparation of Silvicultural Diagnoses and Prescriptions

The post-disturbance reforestation assessment serves as a silvicultural diagnosis and, per agency policy, must be prepared or approved by a Forest Service Certified Silviculturist. Policy also requires that site-specific reforestation prescriptions be prepared or approved by a Forest Service Certified Silviculturist. Regardless of the purpose of the planting, a silviculturist can help resource specialists identify the appropriate seed source, stock type, and other specifications for planting to meet the project objectives. Reforestation in particular is a multi-step process that involves living materials that can easily have their survival potential reduced due to improper handling or planting.

Riparian Planting

Special attention may be needed for adequate genetic diversity in riparian planting. Some riparian hardwoods reproduce clonally by plant parts that travel downstream. In some cases, the genetic diversity of hardwood trees may be very narrow, so if these trees are used for seed collection or cutting

collection, the new plantings will not have sufficient genetic diversity. The Area Geneticist or local silviculturist can help ensure that hardwood plantings have adequate genetic diversity.

Partnerships

Partnerships are a key part of post-disturbance reforestation in Region 6. Forests that use regionally-managed post-disturbance reforestation funds are required to submit reforestation partnership proposals to help leverage additional funds to cover the cost of tree seedlings. Region 6 has been very successful in getting projects funded, and we are recognized by the WO for our riparian restoration proposals and other specialized reforestation projects. The region received \$1.1 million in partnership funds in FY20 and 100% of our proposals were funded. We expect to receive at least that much in FY21, depending on the value of the proposals that we submit.

Trillion Tree Initiative

On January 20, 2020, the President announced that the United States would be joining the World Economic Forum Trillion Tree Initiative to grow and conserve one trillion trees worldwide by 2030. On October 13, 2020, the President signed an Executive Order that established an Interagency Council to help advance the initiative. The focus of this initiative is the ability of reforestation to sequester carbon as a natural climate solution that provides additional benefits like wildlife habitat, watershed protection, and wood products. There is no additional funding for this at this time, but several bills have been introduced in Congress that would provide some additional funding. In some bills that additional funding is aimed at reducing the Forest Service “reforestation backlog”, while other bills focus on carbon sequestration and forest management practices to conserve trees.

Prioritization of Seed/Seedlings to Address Reforestation Needs from the 2020 Wildfires

Based on remote sensing, approximately 500,000 acres of Forest Service managed land was burned by wildfires in 2020 in Region 6. Of that, approximately 200,000 acres have at least 75% of the basal area killed by fire. Due to the conditions under which the fires burned, this is a greater proportion of 75% basal area mortality than we usually see. That 200,000 acres will more than double our existing reforestation needs in the region.

Approximately 8% of that 200,000 acres is on the Umpqua National Forest. With the fires that have occurred on the Umpqua National Forest in the last 10 or so years, seed inventories on the Forest have been heavily used without many opportunities to replace that seed. If the Forest needs additional seed or seedlings to meet high priority tree planting needs, the Area Geneticists are developing a tool to identify transfer limits for all Region 6 Forest Service Seed Lots. The Regional Geneticist has also developed agreements with other forest land management agencies to use or purchase their seed. The Forest should work with their Area Geneticist, Scott Kolpak, to identify other potential seed sources and work with the National Forests or other entities that have that seed to use it on the Umpqua. If prioritization of seedlings is needed, the Regional Silviculturist can help facilitate that process.

Planting of Unsalvaged Areas with Standing Dead Trees

The most common situation in Region 6 where we plant unsalvaged areas is where managed stands have burned and the trees are not large enough to salvage profitably. Many forests have also planted trees under larger standing dead trees. Safety of employees and contractors is of high importance, and this can be dealt with through a Job Hazard Analysis/Risk Assessment and/or selective felling of dead trees to create safer places to plant and to conduct follow-up surveys. Earlier efforts to plant under larger standing dead trees in the region often run into overriding safety issues due to deterioration of the dead trees if planting is delayed more than 3-4 years or when it is time to do post-planting stocking

surveys. In the case of stocking surveys, this can potentially be addressed through the use of UAS (drones). Any non-salvaged areas to be planted should be a high priority for planting.

Protection of the Planting Investment

Tree planting is very expensive when you consider the cost of cone surveys, cone collection, seedlings, pre-planting surveys, contract preparation, contract administration, planting costs, and survey costs. With the increasing frequency of reburns in the region, it is important to consider live and dead fuel management at the landscape and at the stand scale to help assure that at least some of the planted trees can survive the next fire. Wider/irregular spacing of planted tree seedlings, rearrangement of fuels, and early use of prescribed burning can help at the stand scale.

RECREATION, SCENIC RESOURCES, ROGUE-UMPQUA NATIONAL SCENIC BYWAY, AND THE NORTH UMPQUA WILD AND SCENIC RIVER CORRIDOR

Recreation Opportunities, Settings and Access

Wildfires affected both the western and eastern portions of Highway 138 along the Rogue-Umpqua National Scenic Byway (the Archie Creek Fire affected primarily the western end of Hwy 138-North Umpqua segment of Byway; The Thielsen Fire affected the eastern portion of Hwy 138 near Diamond Lake-High Cascades Segment of the Byway). The Archie Creek Fire was one of several large-scale fires affecting highly valued gateway recreation corridors accessing recreation opportunities along the west side of the Cascades. Forest staff have identified that both fires burned both developed and dispersed recreation settings and infrastructure over a variety of burned areas severity. Affected infrastructure includes recreation sites and areas such as campgrounds (and related constructed features), viewpoints, trailheads, trail bridges, trails, boat launches, snow park areas, as shown in Tables 6 and 7.

Table 6. Archie Creek Fire Impacts to Trails, Recreation Sites and Facilities.

Facility/Trail Name	Approximate Miles of Trail Impacted	Level of Soil Burn Severity	Description
Fall Creek Falls – 1502	1.0	High	Hiking Trail
Job’s Garden – 1502A	0.25	High	Hiking Trail
Williams Creek – 1513	4.9	Moderate/High	Hiking Trail
Williams Creek Tie – 1513A	0.1	Moderate/High	Connector Trail
Riverview – 1530	6.1	Low/Mod/High	Hiking/Biking Trail
Riverview Tie – 1530A	0.3	Moderate/High	Connects to Bogus CG
Mace Mountain – 1518	4.4	High	Hiking/Hunting Trail
Cougar Creek – 1507	3.6	Low/Moderate	Hiking Trail
McDonald – 1515	3.3	Moderate/High	Hiking Trail
Panther Section (North Umpqua Trail (NUT)) – 1414	5.0	Low/Moderate	Hiking/Biking Trail
Mott Section (NUT) – 1414	5.5	Moderate	Hiking/Biking Trail – Fishing Access
Tioga Section (NUT) – 1414	2.0	Unburned/Low/Mod	Hiking/Biking Trail – Connected to BLM
Fall Creek Falls Trail Head (TH)	N/A	High	Hiking Trail

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Facility/Trail Name	Approximate Miles of Trail Impacted	Level of Soil Burn Severity	Description
Panther Creek TH	N/A	Unburned/Low	North Umpqua Trail Access
Mott TH	N/A	Unburned	North Umpqua Trail Access
Wright Creek TH	N/A	Moderate/High	North Umpqua Trail Access
Tioga TH	N/A	High	North Umpqua Trail Access
Williams Creek TH	N/A	Unburned/Low	Bridge burned
Riverview TH	N/A	Unburned	Trail Access
Bogus Creek Campground	N/A	High	High Use Campground
Williams Creek Campground	N/A	Low	Decommissioned CG
Wright Creek Camping Area	N/A	Moderate	Developed/Dispersed Camping Area
Steamboat Group Site	N/A	Unburned	Group Camping Area
Bogus Creek Raft Launch	N/A	High	Raft Take Out/Put In
Steamboat Work Center	N/A	Unburned	Work Area – ODOT & FS
Steamboat Water Tower	N/A	Low	Water for Steamboat Area
Steamboat Residences	N/A	Low	Rentals for Steamboat Inn
Steamboat Inn	N/A	Unburned	Permit Holder on Forest
North Umpqua River	10	Low and Moderate	Wild and Scenic River
State Hwy 138 – Scenic Byway	10	ALL	Rogue-Umpqua National Scenic Byway

Table 7. Thielsen Fire Impacts to Recreation Sites and Trails.

Facility/Trail Name	Trail/Road Number	Approx. Burned Length in Miles	Trail Class	Description
Howlock Mountain Trail	1448	3.5 miles	TC-3	Horse Trail
Spruce Ridge Trail	1458	2.5 miles	TC-3	Connector
West Lake Trail	1452A	.1 miles	TC-3	Hiking Trail
Wits End Trail	SNO-1590A	.5 miles	TC-3	XC Ski Trail
Cinnamon Butte Trail	SNO-1590	1 mile	TC-3	XC Ski Trail
Lemolo Lake Trail	SNO-1589E	5 miles	TC-3	Snow-mo Trail
Bear Creek Trail	SNO-1589P	.25 miles	TC-2	Snow-mo Trail
Northern Exposure Ski Area	SNO-1589R	10 miles	N/A	Ski Area
Howlock Mountain TH	N/A	N/A	N/A	Trail Head

The Archie Creek Fires burned over 27,000 acres of recreation settings ranging across all classes of recreation opportunity spectrum classes (24,042 acres in roaded modified, 3,229 acres in roaded natural). The fire burned some sites so severely that may not be prudent to consider replacing or rebuilding infrastructure in the same location as setting context contributing to original attraction for site has been lost, until overstory vegetation is reestablished. This may be the case for areas such as Bogus Creek Campground, which appears to have received high fire severity. Other areas may not have been as affected. Salvage and reforestation in these areas could aid in meeting required Visual Quality Objectives consistent with the Umpqua Forest Plan, North Umpqua Wild and Scenic River (WSR) Plan, and Rogue-Umpqua National Scenic Byway Corridor Plan, and sustainable recreation goals.

Shifts in patterns and intensity of recreation use are likely to occur. Recreation infrastructure and sites lost due to fires (and/or site or area closures) will result in a reduced supply of recreation opportunities and settings. Fires will create increased need for trail maintenance along areas affected by fire, increased downed trees requiring log out, etc. However, changes to settings conditions may not result in these areas providing desired recreation settings.

Consider investing in other trail maintenance and improvement in near term to satisfy demand for trail experiences until landscape and trail network in areas affected by the fire have stabilized and revegetation has started to occur, etc. Consider how salvage treatments for larger areas can benefit trails and trail settings as well as developed recreation sites and settings. Consider opportunities to work with other recreation providers and partners to address increases in trail maintenance for those affected trails with the greatest use and sustained demand in settings with less intensity of fire severity or extent. This could be the case along portions of the North Umpqua River Trail and the winter recreation trail network near Diamond Lake.

In collaboration with and support from the Regional office seek opportunities to replace lost recreation infrastructure, trail bridges, and develop recreation site amenities (toilets, signage, tables, fire rings) in locations where decisions are made to replace in kind. New infrastructure should be located and designed to meet the Forest Service Outdoor Recreation Accessibility Guidelines. Similarly, in collaboration with and support from the Regional office, seek resources to do more trail repair, restoration, slope stabilization, trail bed armoring. Where conditions warrant considerations of relocated portions of trail or creating new segments of trail to access existing trail networks not affected by fire, keep in mind opportunities for creating more miles of sustainable trail that meet Forest Service Trails Accessibility Guidelines.

Sense of Place

Consider opportunities for an all lands-shared stewardship approaches to recreation planning for the corridor to assist with decisions regarding replacement and repair of recreation assets. Opportunities for coordinated place-based project submittals through the recently created National Asset Management Program¹ (NAMP) process, combined Great American Outdoors Act (GAOA), Federal Lands Transportation Program (FLTP), and Capital Improvement Plan (CIP) project proposals) may be feasible.

¹ The Agency is undertaking a comprehensive, holistic approach to management of available funding sources to maintain, restore and improve its physical infrastructure and assets. Submittal of all infrastructure projects in FY 21 for the Comprehensive Capital Improvement Plan (CCIP), the Great American Outdoors Act (GAOA) - National Parks and Public Land Legacy Restoration Fund program and the Federal Land Transportation Program (FLTP) is now consolidated through one portal as part of the newly named National Asset Management Program (NAMP).

Other place-based opportunities for other travel- transportation related improvements the future that may involve other jurisdictions, such as county and state (such as through Federal Lands Access Program, potential Byways grants available through currently proposed language within the reauthorization of transportation bill, etc.). Collaboration efforts around post fire restoration and future fire mitigation activities are shown to be more important in areas where there is a strong place attachment, such as is true along the Rogue-Umpqua Scenic Byway. Consider utilizing the energy and concern around restoration as a catalyst to continue and reinvigorate the grass-roots scenic byway management across jurisdictions, particularly with the Bureau of Land Management, Douglas County and State of Oregon.

Visual Quality/Scenic Character

The wildfires burned over 27,000 acres of management area allocations with visual quality objectives (VQOs) across the following distance zones in the Archie Creek Fire (3,664 acres foreground, 3,048 acres middle ground, 19,446 acres background). Within the Thielsen Fire, over 9,000 acres were burned across the following distance zones (3,739 acres foreground, 2,456 middle ground, and 3,724 acres background).

Fire suppression efforts may have created noticeable visual impacts to valued natural appearing settings (such as high stumps from hazard-danger tree removals and such). Where it is not already accounted for through BAER or other means, efforts are needed to identify funding and resources to address suppression repair and roadside danger tree removal mitigation along the Rogue-Umpqua National Scenic Byway, following guidelines outlined by Forest Landscape Architect-Recreation Program Manager

In collaboration with and support from the regional office, continue to consult with Oregon Department of Transportation on opportunities to influence visual mitigations of emergency related road work to meet visual quality/scenic byway objectives, such as:

- future danger/hazard tree removal to be done through statewide contract;
- planting and seeding for slope stabilization and erosion control;
- rock fall mitigation and fill slope stabilization;
- guard rail and other barrier replacements;
- replacement of signage.

When considering salvage opportunities, consider location and extent of where salvage may be occurring on lands bordering Forest Service managed lands to minimize potential for unnatural lines or patterns on the landscape. This would include danger tree removals associated with utility line corridors, which is likely to increase the visibility of unnatural patterns on the landscape.

Fire suppression activity and danger tree removals have likely created an existing condition that does not meet visual quality objectives. This may result in more difficulty with meeting Forest Plans standards for visual quality for any proposed salvage activities. An assumption is that even more of view shed is visible now as well and will be more visible because of high severity fire that has removed the canopy layer that might have previously screened areas beyond foreground from view. We recommend working with regional office to identify resources for developing a view shed corridor plan for Highway 138. Consistent with direction within the Umpqua National Forest Land and Resource Management Plan, the view shed Corridor Plan would help to address short and long-term goals for maintaining, enhancing and restoring scenic character along the Byway, including plans for danger tree removal, salvage logging, and revegetation. Components of this would include:

- visibility (seen area) analysis;
- consistency with Wild and Scenic River Corridor plan and outstandingly remarkable values (ORVs);
- opportunities to enhance hardwoods where appropriate for visual variety;
- opportunities for restoration, forest resiliency, created openings for views;
- dividing byway into design cells organized around distinctive conditions;
- include landscape character elements, existing and desired scenic experience, and management opportunities;
- Consider use of Forest Landscape Analysis and Design handbook (FLAD) as tool for long term restoration, recovery and corridor management strategy.

Due to their proximity to both Wild and Scenic River and National Scenic Byway corridors, salvage and reforestation efforts along high use areas such as Fall Creek Falls, North Umpqua Trail, North Umpqua WSR, and other high use locations could aid in recovery and enhancement of VQOs and ORVs. Similarly, reforestation along portions of the Byway near the Diamond Lake Recreation Area could aid in reestablishing desired vegetation, helping to meet desired conditions and goals of VQOs and Scenic Byway Corridor Management Plan.

Wild and Scenic Rivers

The Archie Creek Fire burned portions of the North Umpqua Wild and Scenic River Corridor, valued for its outstanding, scenic, recreation and geologic resources. Funding and resources are needed for addressing the Wild and Scenic River Corridor, including plans for salvage (where appropriate) and revegetation; downed wood recruitment where needed, removal of log jams for safe recreational boating, river launches, etc.

Wild and Scenic Rivers are managed in accordance with the Wild and Scenic Rivers Act of 1968, subsequent designating legislation, Forest Service Manual 2354, Land and Resource Management Plans, and Comprehensive River Management Plans. Wild and Scenic Rivers are designated to preserve free flow, water quality, and outstandingly remarkable values, which should be protected when danger tree removal is considered. Each segment of river is uniquely classified as Wild, Scenic, or Recreational, all of which require specific administration. Emergency danger tree removal requires quick response by the river administering agency, while at the same time, all efforts should be made to protect river values where possible. Where danger tree situations may be anticipated in the future, advanced planning is recommended to determine whether actions can be accomplished without having direct and adverse effects on river values.

Continue collaborations associated with co-management of WSR corridor with the Bureau of Land Management. In addition, as a designated state scenic waterway, continue to work with Oregon Parks and Recreation Department regarding activities that are within ¼ mile of banks AND that are visible from river, per state scenic waterway rule.

Priority Considerations for Recreation - Summary

- Seek means to *address visual mitigation of danger /hazard tree work not accomplished through BAER or other means*; including opportunities to still influence the ODOT statewide contract, future roadside CE work, and similar.

- *When considering opportunities for salvage and revegetation along roadsides, within developed recreation site, and portions of scenic byway and WSR view sheds to maintain, enhance or restore desired scenic conditions:*
 - Salvage and reforestation efforts along high use areas (Fall Creek Falls, North Umpqua Trail, North Umpqua WSR, and other high use locations could aid in recovery and/or enhancement of VQOs/ ORVs;
 - Similarly, reforestation along portions of the Rogue-Umpqua National Scenic Byway near the Diamond Lake Recreation Area could aid in reestablishing desired vegetation, helping to meet desired conditions and goals of VQOs and Scenic Byway Corridor Management Plan.
 - Well-designed salvage and reforestation in areas of high intensity fire (such as Bogus Creek CG) areas could aid in meeting required Visual Quality Objectives consistent with the Umpqua Forest Plan, North Umpqua WSR Plan, and Rogue-Umpqua National Scenic Byway Corridor Plan, and sustainable recreation goals.
- *Repair and/or replacement of lost recreation infrastructure where not already accomplished through BAER or other means, as prioritized locally.*
- Shifts in patterns and intensity of recreation use are likely to occur. Recreation infrastructure and sites lost due to fires (and/or site or area closures) will result in a reduced supply of recreation opportunities and settings. Work with regional office and other recreation providers for *mid-level recreation planning post-fire to seek sustainable solutions for recreation infrastructure, access, etc.*
- Funding and resources are needed for addressing the Wild and Scenic River Corridor, including plans for salvage (where appropriate) and revegetation; downed wood recruitment where needed, removal of log jams for safe recreational boating, river launches, etc.
- *Identify resources for developing a view shed corridor plan for Highway 138.* Consistent with direction within the Umpqua National Forest Land and Resource Management Plan, the View shed Corridor Plan would help to address short and long-term goals for maintaining, enhancing and restoring scenic character along the Byway, including plans for danger tree removal, salvage logging, and revegetation, as well as recreation infrastructure.

INVENTORIED ROADLESS AREAS

The 2001 Roadless Area Conservation Rule (RACR) established protection for inventoried roadless areas (IRAs); the rule generally prohibits road construction and timber harvest, with some exceptions that require review by the Regional Forester. Three IRAs were impacted by the Archie Creek and Thielsen Fires, including the Cougar Bluff IRA (5,573 acres), Williams Creek IRA (5,843 acres) and the Mt. Bailey IRA (2,154 acres). Over half of the Cougar Bluff IRA burned with greater than 50% basal area mortality, while over 90% of the Williams Creek IRA burned with greater than 75% basal area mortality (98% burned with over 50% mortality). In the Mt. Bailey IRA, over 36% burned with greater than 50% basal area mortality. The Thirsty Creek Appendage IRA (2,257) was also minorly impacted, as a shaded fuel break was constructed as a contingency line for the Thielsen Fire; however, impacts were limited to about 50 acres on the edge of the IRA along Forest Service Road 60 (Windigo Pass Road).

Appendix C of the Final Environmental Impact Statement for the Umpqua National Forest Land and Resource Management Plan describes the special features of each of these roadless areas; recreation uses include hiking, hunting, camping and opportunities for solitude.

Timber may not be cut, sold or removed in IRAs, except as described in the regulation at 36 CFR 294.13(b). In general, timber cutting must be infrequent, generally small diameter, and must be needed to maintain or improve one or more of the nine roadless area characteristics as defined by the roadless rule. In addition, timber can only be cut if needed to improve TES habitat; to maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes.

Matrix land overlaps with parts of the western portion of both the Williams Creek IRA and Cougar Bluffs IRA, while Matrix also overlaps with the northeastern portions of the Mt. Bailey IRA. In general, area salvage does not typically occur within IRAs; however, an analysis should be conducted to determine if some timber needs to be removed in order to reduce the risk of uncharacteristic fire, as the reburns of both the Williams Creek Fire and the Apple Creek Fire have shown that irreversible soil damage (both burn severity and erosion) has occurred as a result of these reburns. Any proposal to cut timber in an IRA needs to be reviewed by the Regional Forester prior to undertaking the activity.

CULTURAL/HERITAGE RESOURCES

Adverse impacts to cultural/heritage resources occurred as a result of the fire. For the Thielsen Fire, one grove of culturally modified trees was irreparably damaged by the fire. According to the BAER Report, "Nine cultural resource sites were identified as critical values within the Archie Fire (five precontact sites, one historic site, and three multicomponent sites). These sites include lithic scatter sites (precontact) and refuse scatter sites (historic)." In addition, the report details that "Over half of the nine total sites experienced a high severity burn, causing irreversible loss of archaeological data due to the effects of the fire. However, components of these sites still remain intact."

The severity of the fire increased visibility of the sites, which results in an increased risk of erosion as well as the potential for looting/vandalism. Due to a shortage of personnel, many impacts to previously undocumented sites are unknown. Other impacts occurred to artifacts and the one known historic site, although safety and access issues prevented on-site assessment of the site. Overall, the impact to known sites is high, which includes a loss of scientific data that was present. The BAER Report recommended treatment to five of the nine sites in order to limit the risks at each site. The BAER Report indicated that treatments include seeding, administrative closure of a road, directional felling of trees for erosion and limiting visibility, camera surveillance, and monitoring.

The archaeological staff on the Forest is fully occupied with surveys that are needed in order to protect critical values during implementation of BAER treatments, with coordination critically needed to ensure cultural resources are not lost or damaged during implementation; in order to comply with Section 106 of the National Historic Preservation Act, qualified archeologists will need to perform assessment of the work sites and the proposed activities.

Any additional work identified post-BAER will need to result in an adjustment of priorities by forest personnel and/or additional qualified personnel will be needed to address any area salvage, restoration and additional danger/hazard tree felling and salvage. There are other long-term needs for personnel to address impacts of the developed recreation sites relative to the heritage resources.

LANDS

According to the regional survey group, approximately 18 miles of boundary lines were affected by the Archie Creek Fire; the degree of damage is unknown at this time and the Region 6 Lands Zone has begun assessing the damage. Copies of previous surveys are available and could be used if boundary line markers were damaged. Any salvage units that are located off of the 020 road need to be assessed for boundary line work prior to layout to ensure that the NFS boundary has been appropriately delineated.

About 10,625 acres of the 40,457-acre Toketee to Roseburg Utility Corridor² was affected by the fire. Approximately 7,582 acres burned with greater than 50% basal area mortality. Pacific Power is currently working on falling and decking danger trees under emergency authority; work is expected to continue over the winter.

ROADS

The Archie Creek Fire contains approximately 110 miles of NFS roads are within the fire area, while the Thielsen Fire has about 22 miles of road. After the BAER treatments and danger tree treatments are completed, additional road work, including danger tree falling, will be needed for post-fire repair/restoration. Throughout the road systems the Forest expects to see an increase in rock fall, debris flows, and down trees. Other anticipated treatments include installation of hazard signs, emergency road closure, storm inspection and response, continued road maintenance from rock fall/debris and upsizing some culverts.

Road Prioritization Post-fire

During suppression and with the recently approved BPA, approximately 42 miles of road will be treated for danger trees on the Archie Creek Fire, excluding the 11-miles of Highway 138 affected by both fires, which is being treated for danger trees by the Oregon Department of Transportation (ODOT). The Thielsen Fire is expected to treat 18 miles of road for danger trees during BAER (Figure 4).

For the roads not addressed during suppression, BAER or with the BPA (see Table 8), the Forest expects to enact an emergency closure order until plans are formalized to address these roads. It is recommended that the Forest develop a process that includes how the Forest will work within current budget and workforce realities to prioritize roads for danger tree abatement; this process should also include criteria for determining whether or not those danger trees will be removed or retained. Prioritization of road systems for treatment of danger trees is covered under the FSM R6 supplement 7730-2007-2 and should also consider decisions made through Travel Management Planning and the current Motor Vehicle Use Map (MVUM). Although addressing danger trees along roads can be covered as part of routine maintenance, the Forest will need to address consultation and seasonal restrictions, such as those that apply for the northern spotted owl.

Recommended prioritization criteria:

1. Arterials and collectors should be the highest priority using the following hierarchy:
 - a. Long-duration exposure areas like vistas, pullouts, or other places where people are encouraged to stop or any other place where people are exposed for more than 15 minutes. Additionally, places where work activity occurs post-fire for a long duration of time, like culvert replacement or repair, or other road maintenance

² The Toketee to Roseburg Utility Corridor is 31 miles long and 2 miles wide, totally 40,356 acres on NFS land.

activities. Some of these high priority areas may have been taken care of with BAER, however, this will require good tracking efforts so high priority areas are not missed or overlooked.

- b. Short-duration exposure areas, like intersections or places where the exposure is up to 15 minutes, such as stop signs. Some of these high priority areas may have been taken care of with BAER, however, this will require good tracking efforts so high priority areas are not missed or overlooked.
 - c. Intermittent but high frequency exposure, like high traffic roads for public commuters, timber haul routes, or limited site distance areas (sharp corners).
 - d. Stratification of roads based on identified roadside fuel breaks is also recommended. Roads that can provide logical fuel breaks should be considered for higher priority designation than those with lesser fuel break potential.
 - e. Areas with low traffic volumes.
2. All open roads from the current MVUM in the fire area, regardless of maintenance level, should be prioritized and included in the plan for treatment. Roads that have been permanently closed should not be considered for treatment.
 3. Road maintenance level should not be used as the sole means of prioritization due to past adjustments of road maintenance levels based upon budget restrictions. Instead, prioritize based on above hierarchy.
 4. Close high priority roads where danger trees cannot be mitigated. Use the closure order process recently finalized by RO.

Table 8. Miles of roads by basal area mortality basal area mortality data, excluding road treated during suppression, BAER and through the BPA contract. This is to provide a rough estimate of miles of road where roadside danger tree treatments would be more extensive.

Archie Fire Roads Not Treated in Danger Tree Contract	Low Basal Area Mortality < 50%	Moderate Basal Area Mortality 51-75%	High Basal Area Mortality >75%	Grand Total
1 - BASIC CUSTODIAL CARE (CLOSED)	10.9	1.7	5.3	17.9
2 - HIGH CLEARANCE VEHICLES	27.9	5.5	17.9	51.3
3 - SUITABLE FOR PASSENGER CARS		0.2	0.1	0.3
4 - MODERATE DEGREE OF USER COMFORT	0.0			0.0
5 - HIGH DEGREE OF USER COMFORT				
Grand Total	38.8	7.4	23.3	69.4
Thielsen Fire Roads Not Treated in Danger Tree Contract	Low Basal Area Mortality < 50%	Moderate Basal Area Mortality 51-75%	High Basal Area Mortality >75%	Grand Total
1 - BASIC CUSTODIAL CARE (CLOSED)	2.03	0.61	3.44	6.08
2 - HIGH CLEARANCE VEHICLES	1.03	0.35	3.73	5.11
Grand Total - Miles	3.06	0.96	7.17	11.19

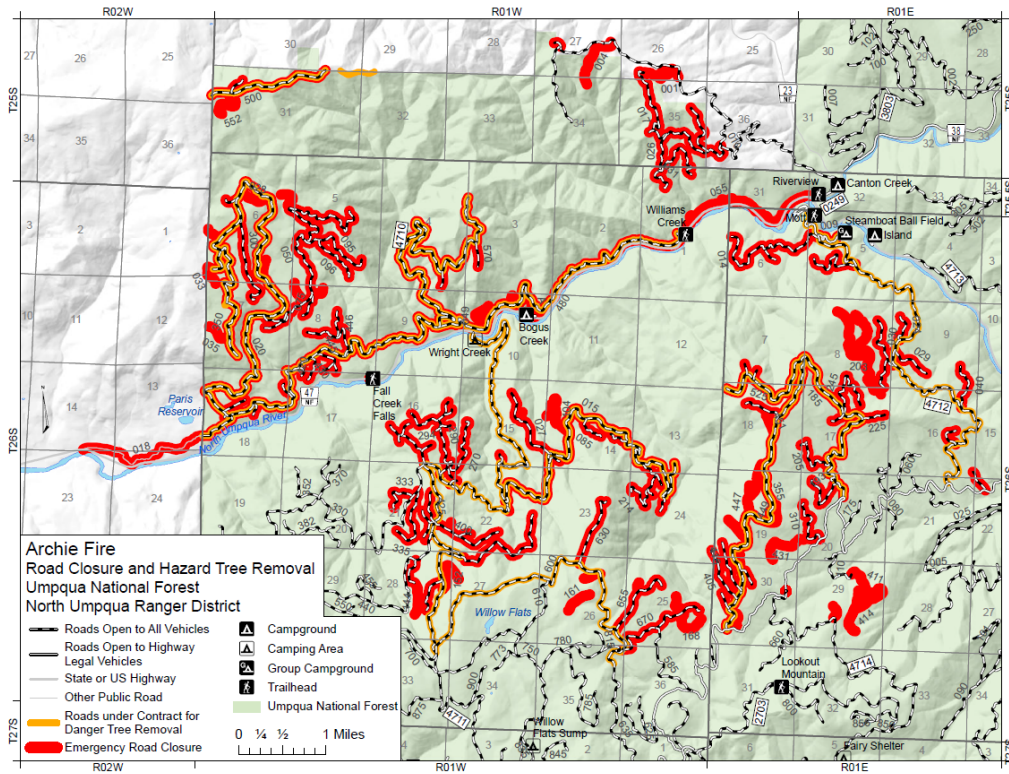


Figure 4. Roads identified for danger tree treatment for firefighter safety, as well as roads identified for closure by the BAER team.

Recommendations for danger and hazard tree abatement in LSR

For danger and hazard tree removal along roadways and in developed recreations sites within LSR, the NWFP standards and guidelines do allow for tree felling. If felled trees are left on-site, a DecAID analysis is not needed. If the trees will be sold, an updated DecAID analysis is required. The sale and removal of these materials is limited by the following:

- For snags and logs located in campgrounds and on roads, the material can be removed and sold, where appropriate.
- Along roads and trails, the following applies: where there is a deficit of coarse woody material (CWM), danger/hazard snags can be felled, but must be left on site. In areas where there is not a deficit of CWM, there is slightly more latitude, though retaining the material on site should be considered, unless retaining the material would be considered a safety issue or would contribute to excess fuel loads that would present a fire hazard.

Categorical Exclusions for Hazard Trees at Trail Heads

Routine hazard tree mitigation at trail heads may be authorized under the repair and maintenance of recreation sites and facilities categorical exclusion (CE). Although routine hazard tree mitigation is covered under this CE, the Forest still needs to address consultation and seasonal restrictions, such as for northern spotted owl for felling and/or removal of hazard trees.

Hazard Trees in Developed Recreation Sites

Hazard trees in recreation sites and developed sites should be assessed following the guidelines provided in the *Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon*

and Washington Forests. This includes the roads and trails within the perimeter of the developed sites. Trees along roads leading up to recreation sites and developed sites should be evaluated using *Field Guide for Danger-Tree Identification and Response along Forest Roads and Work Sites in Oregon and Washington* (Filip et al. 2016).

Probability of tree mortality

Because tree mortality in burned areas is often delayed post-fire (Filip et al. 2007) some type of prediction of which trees may die post-fire is often desired to avoid multiple salvage entries. Post-fire marking guidelines have recently been developed specifically for Oregon and Washington and represent a compellation of the most recent scientific information on potential tree mortality following fires. The Post-fire Assessment of Tree Status and Marking Guidelines for Conifers of Oregon and Washington (Hood et al. 2020) is available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd814664.pdf). The Umpqua began the process of evaluating fire damaged trees prior to the release of Hood et al. (2020) and chose to follow guidelines from Smith and Cluck (2011), which has been considered the best guidance available for predicting the probability of tree mortality post-fire. In future assessments, we recommend referring to the newer publication (Hood et al 2020) for the most up-to-date guidance.

Memorandum of Understanding with ODOT

The identification and treatment of danger trees are addressed in the MOU in place with ODOT that address the planning, construction, operation, and maintenance of state highways on National Forest Land. ODOT has agreed to use the Filip et al. 2016 field guide for identifying danger trees and have sent employees to the danger tree trainings annually since the MOU was signed.

TIMBER

The low and unburned portions of the fires should benefit the residual vegetation as a result of reduced competition. Additional mortality is expected as a result of root and cambium heating in portions with low basal area mortality over the next few years. Additionally, insect mortality is expected but the probability of infestation varies with factors such as tree species, tree age, site quality, time of year of the fire, fire intensity, and weather conditions in the years after the fire, and resident pre-fire insect population sizes, which in turn can differ among fires.

High and moderately burned portions are generally dispersed throughout the fire perimeters. The Forest and RAT identified areas north of the North Umpqua River of the Archie Fire with high tree mortality for potential for salvage. These portions are in the Matrix allocation with one large patch of high and moderate tree mortality (≥ 50 percentage basal area loss) is located North of the North Umpqua River of the Archie Creek Fire. There is a second area south of the North Umpqua River with mixed severity fire that according to field sources may be another acre salvage location within the Archie Creek Fire; please note that it will be important to map out all land allocations to ensure they are compatible with timber harvest.

These areas have a large amount of O&C lands located in the matrix. Unmapped riparian reserves will decrease total acres salvaged. Salvage in the matrix land allocation with O&C will provide direct economic benefits to the Douglas County O&C account. Salvage potential for area salvage harvest to recover economic value is in line with both matrix allocations from the LRMP and O&C land designations (Table 9) and will help promote reforestation, and reduce fuel loads:

Archie Creek Fire

About 17,668 acres or approximately 67% of the fire (26,432 acres of NFS land) was classified as high basal area mortality (>= 50%). The Archie Fire area has 7,733 of acres with the O&C land designation (Table 9):

Table 9. O&C lands in the Archie Fire with BA Mortality percent.

Basal Area Mortality	Acres
0% BA mortality	802.57
1 - 10% BA mortality	136.62
11 - 25% BA mortality	274.76
26 - 50% BA mortality	731.61
51 - 75% BA mortality	1,443.47
76 - 90% BA mortality	817.44
91 - 100% BA mortality	3,527.30
Grand Total	7,733.78

As part of the fire suppression effort, to reduce risk to firefighters, danger trees along roadsides and indirect line were cut and decked. The Forest is preparing deck sales to dispose of the material, totaling and estimated 3-5 MMBF. We recommend the use of 2400-2 timber sales to expedited removal of decks, however if KV, or SS funds are to be collected the use of a 2400-3, 2400-4 or 2400-6 contract would be appropriate.

As part of Pacific Power’s abatement of danger trees along power transmission lines an estimated 1.5 MMBF will be generated and placed in deck locations:

- Recommend the use of 2400-2 timber sales to expedited removal of decks, however if KV, or SS funds are to be collected the use of a 2400-3, 2400-4 or 2400-6 contract would be appropriate.

One large area of approximately ~650 acres within the Matrix land use allocation in the northern area of the fire provides a concentrated location for a salvage opportunity, and there are several other areas that are appropriate for salvage operations in support of economic recovery of salvaged timber. Logging systems would be a mix of ground based and skyline yarding systems. This value would help support reforestation on Matrix lands and put O&C lands back into timber production for future timber revenue.

- Volume/Value Estimations (will require ground validation, conservative estimates):
 - Use a conservative estimate of 17.5 MBF per acre or a more conservative estimate of 15.5 MBF per acre;
 - Use an estimated appraisal value of \$100/MBF.

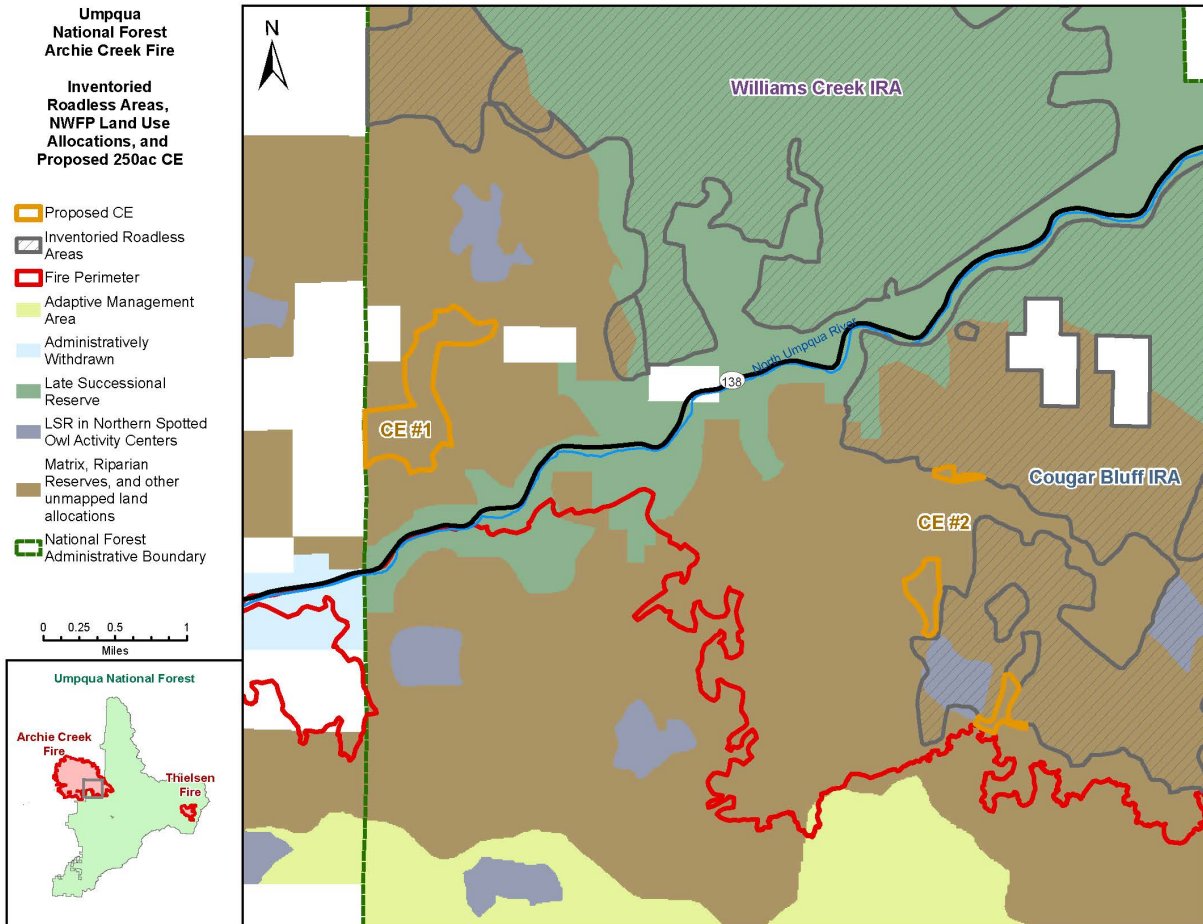


Figure 5. Potential areas for salvage in the Matrix land use allocation in the Archie Creek Fire, if a CE were to be used.

Thielsen Fire

The Thielsen Fire occurred near Diamond Lake and had the following land allocations (Table 10 and Figure 6) impacted by fire with greater than 50% Basal Area mortality (note no O&C land designation):

Table 10. Land allocations and Basal Area mortality Impacts from the Thielsen Fire

Land Allocation	Acres with >50% BA Mortality
AMA	401
AW	1,187
LSR	11,496
LSR4	2,552
Other	2,065

Current danger tree and fire suppression salvage operations include danger tree abatement decks felled during suppression, danger tree abatement contract decks, and ODOT danger tree treatment of Hwy 138 decks. Additionally, danger tree abatement could occur on roads not previously treated in order to fell danger trees along Level 1 and 2 roads used by the public for recreation.

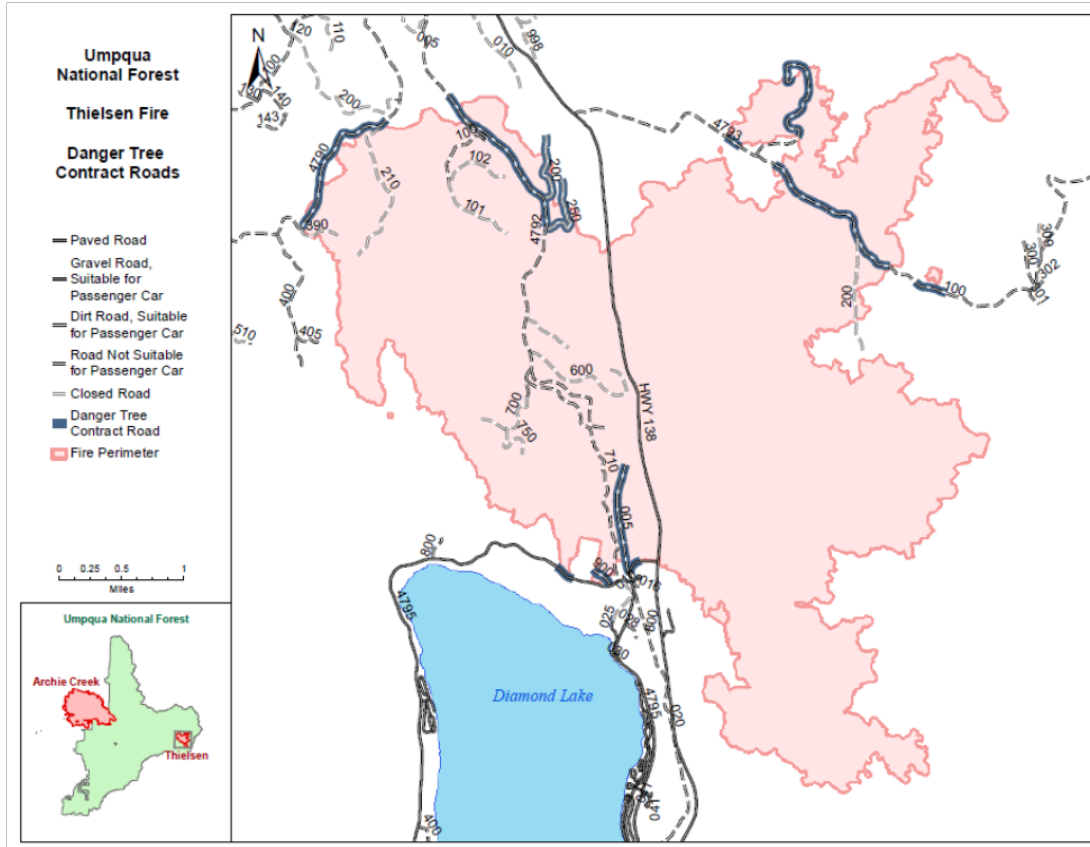


Figure 6. Thielsen Fire with the Danger Tree Contract locations identified in blue.

Trees with imminent mortality and delayed mortality resulting from the fire is expected and additional danger trees along roads and trails, and within recreation sites may cause a concern for public safety, and current and future public access. Please reference the danger tree portion for more information about additional needs beyond those completed during suppression. Disposal of future danger trees should use all option from contracts to personal use firewood, including free use where appropriate. Other considerations include:

- Certification of reforestation within five years is required after salvage harvests to comply with the National Forest Management Act (NFMA).
- Presale recommendations:
 - Use of Designation by Prescription or Designation by Description;
 - Use weight scaled sales to allow for easy add on if hazards near the decks or haul route are identified;
 - Use discernable boundaries where available (i.e. roads, ridgelines);
 - Require additional presale support (temporaries hiring, contracts or Enterprise personnel).

Economic Considerations for Each Fire

Current Market for saw timber is in a decline as shown in the Weekly Random Lengths Report on 10/16/2020 (Figure 7).

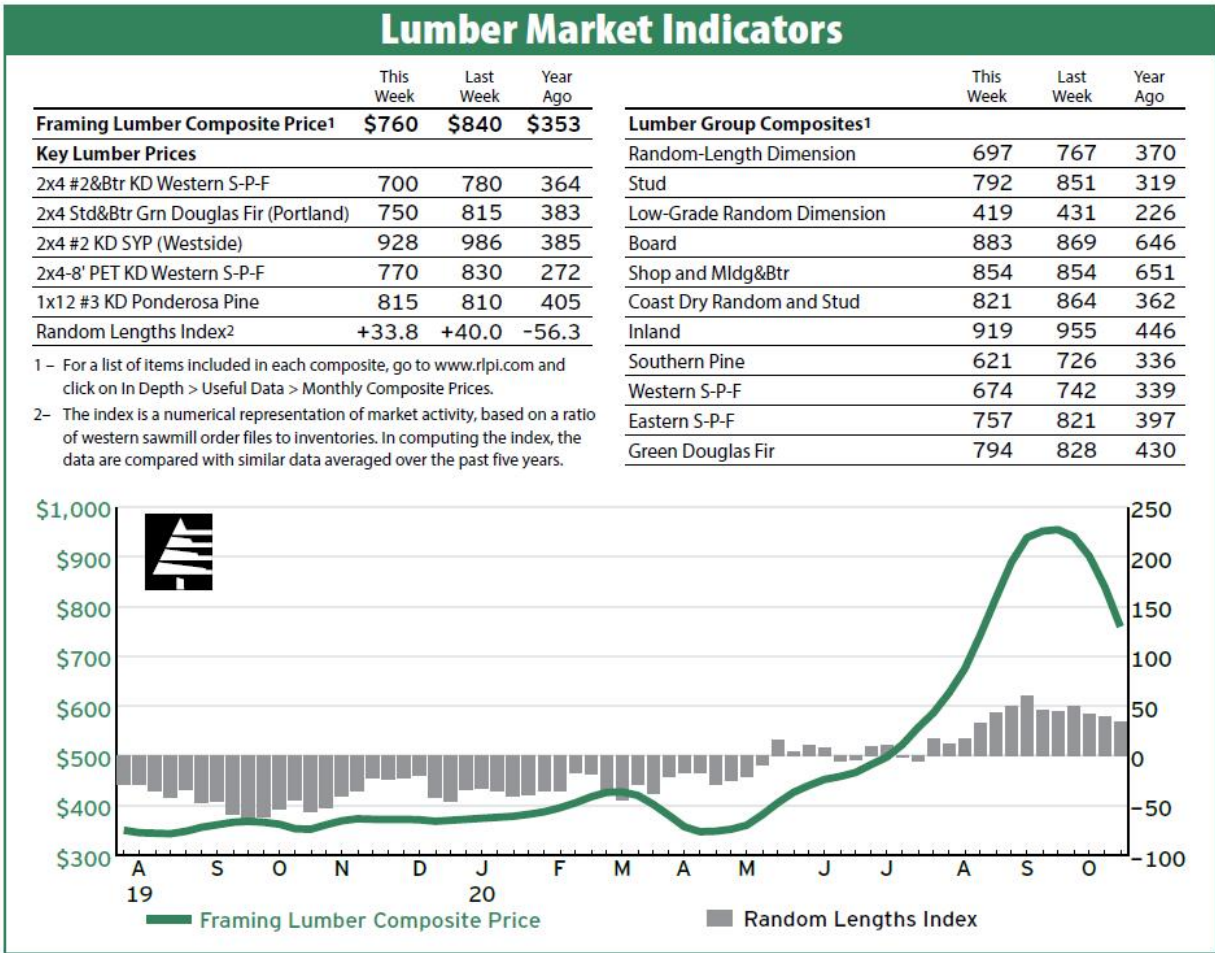


Figure 7. Random Lengths Weekly Publication’s Weekly Lumber Market Indicator graph displaying a declining price for finished product.

Due to the amount of BLM and private ground impacted not only by the Archie Creek Fire, but also the amount of salvaged material being harvested in the 2020 fires located on the Willamette and the Mt. Hood National Forests, pricing for salvaged material will decrease due to supply gluts along the I-5 corridor. A positive point regarding this issue is that mills will not need to stop to clean processing equipment and may not be reflected in bids for salvage material in the short run. Long term wood degradation will impact bids for salvage material.

WORKFORCE CAPACITY

The Umpqua has been moving towards developing a pipeline of planned vegetation restoration projects, and this fire season will set them back due to time lost managing the fires and now the need to reprioritize ongoing projects with the needs around post fire recovery. The employees on the Forest have worked incredibly hard over the last few months on wildfire suppression, repair, BAER, post fire restoration and planning; adding in the impacts from dealing with COVID-19 means that many employees are stretched close to beyond capacity. There are approximately 4 vacancies within the timber sale administration-presale/layout crews, along with new NEPA planners who will soon join the forest. There will also be capacity issues related to archaeology and Section 106 clearance of any identified salvage and post-fire restoration needs beyond BAER; the Forest is working with Regional cultural specialists to help with cultural resource surveys.

The Forest understands that they would have to set aside some of their work in order to accomplish salvage, particularly if an EA were pursued. Focusing on roadside hazard trees/danger trees and using CEs to accomplish the salvage work may allow the Forest to continue with their regular program of work with only minimal or moderate impacts to capacity. Careful considerations on the effects of pursuing a larger salvage effort to their workforce capacities in pursuing their current vegetation restoration program will need to be made. Some factors to consider include:

- Changed condition analysis for Calf-Copeland: ID team members who would be assigned to complete the analysis have been working as READs and/or on the BAER team and much of the necessary data has already been generated. This work would be prioritized for key ID team members.
- Bohemia North project is highest priority for green timber program; ranger predicts no impact to this ID team if salvage is undertaken; similarly, ID team for the Buckeye project (FY22/Q1 decision) would not be impacted.
- Per ranger, there may be flexibility to delay Moore Steamboat and Fish Creek projects to accommodate post-fire workload.
- Workload associated with BAER implementation, danger tree contracts and coordination with partners is and will impact capacity.

OPTIONS FOR THE FOREST TO CONSIDER

Option 1:

- Complete BAER implementation and make any necessary NEPA and consultation updates³ to the Calf-Copeland Project. There will need to be a hard look at changed condition updates for the NEPA (for NSO consultation and red tree vole high priority site analysis, cumulative effects, etc.), specialist reports and existing consultation with both the USFWS and NOAA for this project.
- Complete one to two CE's⁴ for post-fire rehabilitation activities, use category 220.6(e)(11) post-fire rehabilitation activities up to 4,200 acres and category 220.6(e)(5) for reforestation. Consider one for the Thielsen Fire and one for the Archie Creek Fire; a decision memo and supporting record would be required for both CEs. The post-fire rehabilitation CE requires

³ The final Record of Decision for the Calf-Copeland Project recognized that the Archie Creek Fire was burning and that a section 18 review under the Forest Service Handbook 1909.15 would be needed before proceeding with implementation of the project. See Appendix 2 and 3 for details.

⁴ See Appendix 4 for a list of all potential CEs that can be used after a fire.

implementation within three years post-fire. Completing NEPA at this time would provide for implementation when funding opportunities arise, including projects identified by the Forest:

- i. Reforestation for first one to two years⁵;
 - ii. Out year weed treatments;
 - iii. Trail bridge replacements on the North Umpqua Trail;
 - iv. Can include roadside danger tree treatments and road repair.
- The Forest can complete a stand improvement CE in a couple of years to address future reforestation needs as well once additional seedlings have grown and can be procured.

Pros

- No need for notice, comment or objection and an Emergency Situation Determination (ESD⁶) is not needed (only scoping is needed).
- Quickest means of addressing immediate recovery needs.
- Most focused level of analysis for specialists.
- Addresses ongoing restoration planning for Calf-Copeland.
- Best addresses the forest's limited workforce capacity.

Cons

- The interconnected nature of the proximity of the proposed CE's could present analysis challenges for effects⁷.
- Would not cover reconstruction or relocation of the Bogus Creek Campground.
- Some risk of litigation around selling danger trees created by roadside danger tree treatments.
- This does not look holistically at the integrated post-fire restoration needs.
- This does not address the desire to recoup some value from the burned trees to benefit Douglas County (area salvage).

Option 2:

- Complete BAER implementation and make any necessary NEPA and consultation updates to the Calf-Copeland Project as noted in Option 1. There will need to be a hard look at changed condition updates for the NEPA (for NSO consultation and red tree vole high priority site analysis, cumulative effects, etc.), specialist reports and existing consultation with both the USFWS and NOAA for this project.
- Complete one Forest-wide CE for road, trail and landline danger tree abatement for the roads not treated through suppression related danger tree felling. Address trail maintenance to cover the safety of trail repairs needed along the North Umpqua Trail system (e.g. bridge replacements). A supporting record and decision memo are not required, but at least a project record is recommended. Use category 36 CFR 220.6(d)(4) to complete work on the remaining untreated roads that are identified to be maintained as open per the Forests Motor Vehicle Use Map. Follow the R6 Field Guide for Danger Tree Identification and Response along with R6 FSM supplement 7730-2007-2. These documents are available at:

<http://fsweb.r6.fs.fed.us/natural-resources/rapid-assessment-teams/>

⁵ Please note that riparian planting is covered under the Regional Aquatic Restoration Biological Opinion and Programmatic NEPA document.

⁶ See Appendix 4 for details on ESDs.

⁷ The 2020 Council on Environmental Quality Regulations (CEQ) deleted the reference to cumulative effects; however, the description of effects that should be analyzed include those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives.

- Complete one Forest-wide CE for hazard tree abatement at recreation sites and facilities. Use category 36 CFR 220.6(d)(5). Close these areas until hazards are abated. A supporting record and decision memo are not required, but at least a project record is recommended. Consultation may need to be included for this CE as well. Hazard tree evaluation in effected recreation sites and developed sites should be completed following the guidelines provided in: Field Guide for Hazard-Tree Identification and Mitigation on Developed Sites in Oregon and Washington Forests, R6-NR-TP-021-2013. These documents are available at: <http://fsweb.r6.fs.fed.us/natural-resources/rapid-assessment-teams/>
- Complete one to two CE's for post-fire rehabilitation activities, use category 220.6(e)(11) post-fire rehabilitation activities up to 4,200 acres and category 220.6(e)(5) for reforestation. A supporting record and decision memo are required. Consider one for the Thielsen Fire and one for the Archie Creek Fire. Completing NEPA at this time would provide for implementation when funding opportunities arise, including projects identified by the Forest:
 - Reforestation
 - Out year weed treatments
 - Trail bridge replacements on the North Umpqua Trail
- Complete one CE for less than 250-acre area salvage, prioritizing O&C lands.

Pros

- No need for notice, comment or objection and an ESD is not needed (only scoping is required).
- Quickest means of addressing immediate recovery needs.
- Most focused level of analysis for specialists
- Addresses the County's interest in recouping timber value.
- Would focus salvage largely on O&C lands which increases counties receipts.
- Would best address the Forest capacity and workload concerns.

Cons

- The interconnected nature of the proximity of the proposed CE's could present analysis challenges for effects (see previous footnote).
- Would not cover reconstruction or relocation of the Bogus Creek Campground.
- Risk of litigation around the use of the roadside maintenance CE for the removal of danger trees given the recent R5 court decision.
- Segmenting the analysis across multiple CE's potentially does not allow for the same level of public engagement as an EA would allow for.
- Does not address longer term reforestation needs and will require an additional stand improvement CE in future years.
- Would not allow for consideration of larger landscape salvage and restoration could benefit trails, trail settings and recreation sites and settings.
- Will have to consult on the effects of salvage to listed species.

Option 3:

- Complete BAER implementation and make any necessary NEPA and consultation updates to the Calf-Copeland Project as noted in Option 1. There will need to be a hard look at changed condition updates for the NEPA (for NSO consultation and red tree vole high priority site analysis, cumulative effects, etc.), specialist reports and existing consultation with both the USFWS and NOAA for this project.
- Develop a focused post-fire restoration EA for the Archie Creek Fire (could include the Thielsen Fire as well) with a small, focused area salvage component. Restoration activities could include

reforestation, recreation site and roadside maintenance or relocation needs (trails, trailheads, and campgrounds), instream wood placement, etc.⁸. Request an Emergency Situation Determination⁹ (ESD) from the Chief for this project to accelerate the implementation of this effort.

- If not included in the EA, complete one CE for post-fire rehabilitation activities for the Thielsen Fire, use category 220.6(e)(11) post-fire rehabilitation activities up to 4,200 acres and/or category 220.6(e)(5) for reforestation. A supporting record and decision memo are required.

Pros

- An EA could address restoration needs in a more holistic, integrated fashion focusing on needed restoration, as well as recouping some economic value from salvaging trees.
- Provides more opportunity to address restoration and enhancement of visual quality and recreation settings objectives along the National Scenic Byway and Wild and Scenic River Corridor.
- Could address reconstruction or relocation of the Bogus Creek Campground.
- Minimizes the risk of litigation given the recent Region 5 court decision.
- Allows for more robust public engagement.
- Allows the Forest to address all potential restoration needs, as well as salvage opportunities. A single EA could cover both fires.
- By looking at both fires, the Forest could best address the management of the North Umpqua Wild and Scenic River and Rogue Umpqua National Scenic Byway.
- Could allow for a more complete ESA consultation package.

Cons

- An EA would require more specialist engagement and analysis of an already extended workforce; additional staffing through detailers or via contractors would likely be needed.
- The planning would take more time and would require an ESD determination from the Chief to be able to implement next summer.
- The extended timeframe could lead to wood quality deterioration.
- The extended timeframe could also increase the risk of no bid sales due to wood deterioration and or market saturation.
- Will require more public engagement.

RAT Recommendation

While the acreage burned on the Umpqua in 2020 is not as high as it was in recent fire years (2015, 2017, 2018 acreages all exceeded 2020), the complexity of the areas burned including the North Umpqua Wild and Scenic River corridor, the Rogue-Umpqua Scenic Byway, and Diamond Lake far exceed past years fires as they have affected the most frequently visited areas on the Forest. Additionally, these fires have burned at higher severities than previous fire seasons, increasing the extent and urgency around post fire restoration and reforestation efforts. Due to this complexity, and because the Forest Supervisor asked the RAT to look at the post-fire recovery efforts in a holistic fashion, we believe the focused EA option would address the full extent of restoration and rebuilding needs. This option would also give the Forest a more robust opportunity to disclose the impacts of a focused salvage effort to

⁸ The scope of the proposed action will be based on what does not get funded by BAER; unfunded restoration needs are listed in Appendix 1.

⁹ See Appendix 4 for information on ESDs.

meet the sociopolitical needs of the County and communities, as well as the ecological needs of the Forest.

We acknowledge that this planning effort will take more effort from a workload perspective for some staff, while needs for ESA consultation will not really differ as any salvage efforts would need consultation under the use of a CE. In recommending this alternative the Forest would have the opportunity to pursue salvage options exceeding 250-acres, but the RAT strongly recommends a focused approach to salvage to limit the time spent in reconnaissance and planning and to limit the controversy around the EA. This approach would require strong and direct leadership from both the line officer and team leader in order to keep the EA focused and meet the timeline for implementing the project next summer. A focused EA would allow the Forest to frame the EA as a plan for the recovery of the North Umpqua drainage in an interdisciplinary fashion so that recreation infrastructure, view sheds, riparian and terrestrial restoration needs, reforestation needs and focused salvage efforts can be fully disclosed and discussed with the public. This approach will also allow the Forest to consider alternatives to address different community concerns or interests.

RAT Members

Josh Chapman, Regional Wildlife Program Leader, Team lead & Wildlife
Debbie Anderson, Regional Administrative Review Coordinator – NEPA lead
Rob Barnhart, Regional Program lead for Sale Prep, Valuation, Stewardship & GNA
Robyn Darbyshire, Regional Silviculturist
Joy Archuleta, Regional Water Quality and Water Rights Coordinator
Brad Cownover, Regional Landscape Architect - Recreation
Blakey Lockwood, Regional Forest Pathologist
Sue Dixon, Regional Environmental Coordinator – NEPA assistance
Matt Ehrman, Regional Planner – NEPA assistance
Marci Anderson, Environmental Coordinator – NEPA assistance
Ed Hall, DRM GIS point of contact
Allyson Buccanero, DRM GIS point of contact

Umpqua National Forest Staff

Alice Carlton, Forest Supervisor
Michele Holman, Deputy Forest Supervisor (Detail)
Sherri Chambers, North Zone District Ranger
Jake Winn, Forest Natural Resource Staff Officer
Mark Sommer, North Zone Hydrologist
Ron McMullin, North Zone Fisheries Biologist
Errin Trujillo, North Zone Wildlife Biologist
Steve Radford, Forest Service Representative
Joe Blanchard, Regional Soil Scientist and BAER Coordinator (Detail), Forest Hydrologist
Chris Kelly, Forest Heritage Program Manager
Ryan Siebold, Forest Silviculturist
Adrienee Barcas, Forestry Technician
Vern Shumway, Recreation, Lands, and Minerals Program Manager
Skyler Ogden, North Zone Recreation Technician
Steve Hanussak, Roads Engineer
Sarah Brame, Soil Scientist
Amanda Hartman, North Zone Botanist

APPENDIX 1. POST FIRE RESTORATION NEEDS NOT FUNDED BY BAER¹⁰

Umpqua National Forest Post Fire Repair/Restoration Funding Needs				
Activity	Estimated Damage/ Needs	Units	Unit Cost	Total Cost
Land Line Boundary Marking	18	miles	\$8,000	\$146,000
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
				\$0
Total				\$200,000

¹⁰ At the time of this report, the final BAER funding for each fire had not been finalized. This table will be updated once the BAER funds have been determined.

Appendix 2. Calf-Copeland Restoration Project Final ROD – Section 18 Review

The Calf-Copeland Restoration Project EIS was signed 7 days after the start of the Archie Creek Fire on September 15, 2020. The final ROD recognized that the fire was in the planning area for the project and that the fire and fire suppression activities may change the impact analysis used to select Alternative 3. As such, page 37 of the ROD stated:

“In the event that the Archie Creek Fire enters the Calf-Copeland project area or changes conditions outside of the planning area that impacts the conclusions made in the FEIS, the interdisciplinary team and I would complete an analysis of the changed conditions as per the direction found in the Forest Service Handbook 1909.15, Chapter 10. The changed conditions analysis, sometimes referred to as a Supplemental Information Report (SIR) will determine whether or not a correction, supplement or revision of the FEIS is needed, and if not, it will document the reasons why. The changed conditions analysis will be documented and kept on file at the North Umpqua Ranger District, and will be posted to the project's website. In the event that the Archie Creek Fire enters the Calf-Copeland project area or changes conditions outside of the planning area that impacts the conclusions made in the FEIS, the interdisciplinary team and I would complete an analysis of the changed conditions as per the direction found in the Forest Service Handbook 1909.15, Chapter 10. The changed conditions analysis, sometimes referred to as a Supplemental Information Report (SIR) will determine whether or not a correction, supplement or revision of the FEIS is needed, and if not, it will document the reasons why. The changed conditions analysis will be documented and kept on file at the North Umpqua Ranger District, and will be posted to the project's website.”

Given the proximity of the Archie Creek & Thielsen Fires, a section 18 analysis is warranted. The Objection Resolution and Alt 3 project design highlighted the role of fuels reduction in the project area and forest service roads in suppression response.

Conducting a Section 18 interdisciplinary review of the Calf-Copeland Project and documenting it in a Supplemental Information Report, or SIR (see Appendix 3 for an example of a SIR) would be a validation of a decision conducted under the NEPA process for an action that still needs to be implemented. A SIR is a report to examine new information in light of the original decision. The conclusion must support the original decision. If the decision needs to be modified or changed; then a supplemental EA or supplemental EIS has to be done (FSH 1909.15 18.1). It is important that the original decision is still valid, and that the NEPA supporting that document has not gone stale in light of the changed circumstances caused by the fire season in 2020. This process can be used to examine new or changed information that arises after the signing of a decision. Examples of new information that should be considered in a SIR for this project include but are not limited to; a watershed impacts up and downstream of the project Area, transportation needs for fire restoration, recreation impacts, and TES species such as the Northern Spotted Owl & Red Tree Vole. The interdisciplinary review should be conducted to determine if the decision is still valid even under the new information. If not the NEPA process will have to be initiated to change the decision made in the final Record of Decision.

The SIR Interdisciplinary process should be manageable if the team working on it relies on the BAER & READ resources developed by the fire as well as the documentation prepared by the forest as a part of the Rapid Assessment Team Process.

It is worth mentioning what a SIR is not. A SIR is not a NEPA or substitute for NEPA rather a SIR is a report that only assesses whether the current NEPA for a project/action is still valid. A SIR cannot be used to change the NEPA decision. A SIR cannot make up for stale NEPA. The recent Calf Copeland final ROD went to great lengths to situate the project within the current context including the ongoing 2020 fire season, but a SIR will be required to determine if that decision is stale. Should that be the conclusion reached, the SIR is not an opportunity to conduct a new analysis that was sufficiently done to inform the decision.

If the SIR determines that supplemental analysis or a change to the decision is required, the Umpqua National Forest must follow FSH 1909.15 18.2 for reconsideration of an EIS:

1. Correction. Use errata sheets to make simple corrections.
2. Supplement.
 - (c) Agencies:
 - (1) Shall prepare supplements to either draft or final environmental impact statements if:
 - (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
 - (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
 - (2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.
 - (3) Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.
 - (4) Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council. (40 CFR 1502.9(c))

APPENDIX 3. SUPPLEMENTAL INFORMATION REPORT:

SUPPLEMENTAL INFORMATION REPORT
USDA Forest Service
[NAME OF] NATIONAL FOREST
[District] RANGER DISTRICT

[Project Name]

Date

This Supplemental Information Report (SIR) will become part of the project record and is not a stand-alone analysis or decision. Rather, it documents whether the original decision and analysis is still valid and applicable given the new or changed information as it relates to the effects.

[Project Name] on the [District] Ranger District was originally signed on [Date of Decision] by [Name of Responsible Official and Title]. [Reason for the SIR]

[Describe Selected Action, any Changed conditions]

[If true use statement if not reword to describe changes] There are no changes proposed to the selected actions for the project. Additional measures based on specialist review may be required to accommodate changed conditions, but are still within the scope of the original intent and decision.

Measures that are considered for changed conditions include:

- [list]

Consideration of Effects

Based upon Forest Service Handbook 1909.15 (Chapter 10 Section 18 – “*Review and Documentation of New Information Received After Decision Has Been Made*”), if new information or changed circumstances relating to the environmental impacts of a proposed action come to the attention of the responsible official after a decision has been made and prior to completion of the approved program or project, the responsible official should review the information carefully to determine its importance. Consideration should be given to whether or not the new information or changed circumstances are within the scope and range of effects considered in the original analysis and decision.

This SIR does not constitute a National Environmental Policy Act (NEPA) decision nor does it intend to fulfill the requirements for a revised or supplemental NEPA analysis. This SIR does not intend to correct deficiencies in the original environmental documentation nor change a decision. (*See FSH 1909.15 Chapter 10, Section 18.1*)

Interdisciplinary Team Review, Findings and Summary are provided in the attached form.

Decision

[pick one]

Rapid Assessment Team Summary and Recommendations for the 2020 Fires on the Umpqua National Forest

- Based upon the findings presented to me, I have determined that that the analysis and decision for the project remains sufficient and valid, and that the project may be implemented under the existing decision.
- Based upon the findings presented to me, I have determined that the analysis and decision for the project is not sufficient and therefore additional NEPA needs to be initiated.

Responsible Official signature

Date

**FSH 1909.15 - SECTION 18 PROJECT REVIEW
Supplemental Information Report (SIR)**

PROJECT NAME:

DECISION DATE:

REVIEW DATE:

This form is to document that there are no changed conditions or new information that would require changes to an existing environmental analysis. Each specialist provides input to acknowledge whether a revised or supplemental NEPA analysis is or is not needed.

Sections are based on the issues analyzed in the EA and whether there are any changed conditions and whether those changed conditions would change the conclusions for the analysis, and if so is there a need to change the decision.

1) Soil Condition

Comments:

Specialist:

Title:

2) Streams and Watershed Conditions

Comments:

Specialist:

Title:

3) Transportation System

Comments:

Specialist:

Title:

4) Wildlife

Comments:

Specialist:

Title:

5) Rare Plants

Comments:

Specialist:

Title:

6) Wildlife, Rare Plants, Fish and Aquatic Species

Comments:

Specialist:

Title:

7) Fish and Aquatic Species

Comments:

Specialist:

Title:

8) Recreational Uses

Comments:

Specialist:

Title:

9) Forest Scenery

Comments:

Specialist:

Title:

10) Heritage and Cultural Resources

Comments:

Specialist:

Title: Archaeologist

11) Range

Comments:

Specialist:

Title:

12) Timber

Comments:

Specialist:

Title:

13) Other

Comments:

Specialist:

Title:

14) Other Laws, Regulations, Forest Plan

Comments:

Specialist:

Title:

Specialists in these resource areas have reviewed the new information or changed circumstances and have verified that the original NEPA analysis and disclosure regarding environmental effects is sufficient.

HERITAGE RESOURCES

Are effects on Native American religious or cultural sites, archaeological sites or historic properties generally the same as predicted in the existing NEPA document?

Yes No

Explain:

T&E FISH/WILDLIFE and PLANTS

Are effects on threatened, endangered, proposed, sensitive species or critical habitat generally the same as predicted in the NEPA document?

Yes No

Explain:

PUBLIC HEALTH AND SAFETY

Are effects on public health and safety generally the same as predicted in the NEPA document?

Yes No

Explain:

UNCERTAINTY OF EFFECTS

Is the level of uncertainty or controversy over environmental effects of this action generally the same as predicted in the NEPA document?

Yes No

Explain:

UNIQUE CHARACTERISTICS OF THE GEOGRAPHIC AREA

Are the effects on unique characteristics of the geographic area generally the same as predicted in the NEPA document? Unique characteristics include but are not limited to park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, and ecologically critical areas. (If the NEPA document indicates that there are no unique characteristics in the geographic area, then no effects were predicted.)

Yes No

Explain:

ENVIRONMENTAL LAWS

Is the action still consistent with Federal, State, and local laws or requirements for the protection of the environment? Consider any new laws, regulations, ordinances. Consider whether or not any actual effects have exceeded predicted thresholds to the point of threatening to violate any environmental requirements.

Yes No

Explain:

NEPA COORDINATOR:

Additional analysis is necessary? No Yes

APPENDIX 4. NEPA Considerations for Post-fire Activities and Use of an Emergency Situation Determination

Categorical Exclusions (CE)

The final rule for the revised Forest Service 220 regulations does not have an expected publication date, so there are no new categories available for use at this time. The RO can provide a CE checklist/Decision Memo template if your unit does not already have one.

From FSH 1909.15 Chapter 30 & 36 CFR 220.6:

Categories of Actions for Which a Project or Case File and Decision Memo Are Not Required

While these actions fall within the categories of actions for which a project or case file and decision memo are not required, it is recommended that a project file is retained, particularly given the potential for extensive work along many roads and around administrative and recreation facilities. As with all CEs, scoping is required. Documentation, including a well-supported rationale for danger and hazard tree identification, should be complete in the record. Documentation should include the method used to identify danger and hazard trees, the supporting science and data behind the identification method chosen, and a rationale for removal of those trees which are still green, but have been identified as danger/hazard trees for public health and safety.

Use of a categorical exclusion implies consistency with the unit Forest Plan, and, if applicable, other plan level guidance such as the Northwest Forest Plan.

36 CFR 220.6(d)(3) Repair and maintenance of administrative sites.

36 CFR 220.6(d)(4) Repair and maintenance of roads, trails, and landline boundaries.

36 CFR 220.6(d)(5) Repair and maintenance of recreation sites and facilities.

Categories of Actions for Which a Project or Case File and Decision Memo Are Required

36 CFR 220.6(e)(5) Regeneration of an area to native tree species, including site preparation that does not involve the use of herbicides or result in vegetation type conversion.

36 CFR 220.6(e)(11) Post-fire rehabilitation activities, not to exceed 4,200 acres (such as tree planting, fence replacement, habitat restoration, heritage site restoration, repair of roads and trails, and repair of damage to minor facilities such as campgrounds), to repair or improve lands unlikely to recover to a management approved condition from wildland fire damage, or to repair or replace minor facilities damaged by fire. Such activities:

- i. Shall be conducted consistent with Agency and Departmental procedures and applicable land and resource management plans;
- ii. Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure; and
- iii. Shall be completed within 3 years following a wildland fire.

36 CFR 220.6(e)(13) Salvage of dead and/or dying trees not to exceed 250 acres, requiring no more than ½ mile of temporary road construction. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing.

For areas with high insect and disease spread potential due to fire-related tree damage and mortality:

36 CFR 220.6(e)(14) Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than ½ mile of temporary road construction, including removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease. The proposed action may include incidental removal of live or dead trees for landings, skid trails, and road clearing.

HFRA Insect and Disease Infestation category: Section 8204 of the Agriculture Act of 2014 (Pub. L. 113-79) amended Title VI of the Healthy Forests Restoration Act of 2003 (HFRA) (16 U.S.C. 6591 et seq.) to add sections 602 and 603. Section 8407 of the Agriculture Improvement Act of 2018 (Pub. L. 115-334) later amended sections 602 and 603 to add hazardous fuels reduction projects to the types of projects that may be carried out under sections 602 and 603. Projects completed using the section 603 provisions are considered categorically excluded from the requirements of NEPA and evaluation of extraordinary circumstances is not required.

Projects may treat up to 3,000 acres when this category is used. A project file and decision memo are required. There are several other requirements which must be met to apply the HFRA insect and disease category. Work with the Regional Office if you are interested in using this category and you are not familiar with the limitations on its use.

Compliance with other laws, regulations, and policies:

Compliance with the Endangered Species Act (ESA) is required. Page 9 of the regional danger tree policy FSM-7730-2007-2 provides more detail. Forests will also need to be accountable for National Historic Preservation Act (NHPA) compliance for all hazard tree removal. Forest heritage staff can provide design criteria that can minimize impacts to known sites and areas with high site density. Additionally, forests should consult with the wildlife, botanist, fish, and soil scientist specialists when considering felling of danger trees. There may be a need for additional mitigation to protect these resources protected by other laws and to remain consistent with their forest plans.

Other laws, regulations, and policies may apply depending on the situation. Consult with your local environmental coordinator for additional guidance.

Considering an action which would be covered in an EA or EIS?

If your action does not fit within one of the above categories then consider using the EA/FONSI form developed by the national focused EA team found [here](#).

- The form needs some adjustment to reflect the 2020 revised CEQ regulations; however, for the most part it remains consistent with the revised regulations as not much changed for EAs with the revision.
- The biggest change is that we no longer have the FONSI context and intensity factors found in the 1978 CEQ regulations. Work with the RO to complete your FONSI until national direction is available.
- The form is appropriate for actions where we can support a call that the effects of the action are not significant with little additional data collection or documentation.
- We should already have sound support in our agency files regarding the proposed agency action in the affected ecosystems to show that effects from fire salvage or other post-fire activities

have not triggered significance in previous implementation. If a significant impact is expected then consider an EIS.

- If your action is going to require more in-depth documentation to evaluate the potential for significant impacts then use a standard EA or EA/FONSI template and process. Extremely large area salvage may require preparation of an EIS; please work with the RO prior to developing a proposal.

Emergency Situation Determination (ESD)

For FY21, it is the Region’s expectation that all NEPA will be completed by the end of the third quarter in FY21 (June 30, 2021), so that implementation can begin in the fourth quarter. If an ESD is not requested, the objection period would have to start by mid-March to complete the process by the regional deadline. With an ESD, all consultation, ESD requests and NEPA would need to be done by June 30.

Under the 218 objection process, the preliminary or draft EA must be circulated for a 30-day comment period (which can be combined with scoping) and a draft EIS must be circulated for a 45-day comment period (minimum), which cannot be combined with scoping. Following consideration of comments, the final EA, response to comments (if prepared) and draft decision or final EIS and draft decision must be circulated for a 45-day objection period. After the objection period, the Reviewing Officer (next higher level official than the responsible official) has 45 days to issue a written response to the objections; the Reviewing Officer may take an additional 30 days if needed to respond to objections or resolve objection issues.

An Emergency Situation Determination (ESD¹¹) may be requested from the Chief. These take a minimum of 6 to 8 weeks to complete (an average of 7 weeks is used in the calculations below), after the ESD has been reviewed by the Region. The Forest must make a formal request to the Regional Forester for the ESD, which then is forwarded to the WO by the Regional Forester via the Regional Administrative Review Coordinator. An ESD means that there is no objection period (you must tell the public an ESD has been requested early in the process) and the project is implemented immediately after the Decision Notice or Record of Decision is signed and the public is notified of the decision. ESD requests are not guaranteed to be granted and can be controversial with some members of the public.

Timelines for an EA or EIS (includes fieldwork, no ESD):

Preparing the EA or EIS (includes scoping):	90-210 days
Notice and Comment (if not combined with scoping for EAs):	30-45 days
Objection Period:	45 days
Objection Review/Resolution:	<u>45-75 days</u>
TOTAL	210-375 days

¹¹ Emergency Situation Determination – As per 36 CFR 218.21, the Chief and the Associate Chief of the Forest Service are authorized to make the determination that an emergency situation exists when immediate implementation of a decision is necessary to achieve one or more of the following: *Relief from hazards threatening human health and safety; Mitigation of threats to natural resources on NFS or adjacent lands; Avoiding a loss of commodity value sufficient to jeopardize the agency's ability to accomplish project objectives directly related to resource protection or restoration.* When it has been determined that an emergency situation exists, the proposed decision is not subject to the predecisional objection process. Implementation may proceed (1) Immediately after the decision is documented in a Decision Notice (DN) and notification of the public as described in 36 CFR 220.7(d); (2) Immediately after complying with the timeframes and publication requirements described in 40 CFR 1506.10(b)(2) when the decision is documented in a Record of Decision (ROD).

Rapid Assessment Team Summary and Recommendations for the 2020 Fires on the Umpqua National Forest

<u>Timelines for an EA or EIS (includes fieldwork, with ESD):</u>	
Preparing the EA or EIS (includes scoping):	90-210 days
Notice and Comment (if not combined with scoping for EAs):	30-45 days
ESD Requested (can be concurrent with comment period):	<u>56 days</u>
TOTAL	176-311 days