

# COST OF WILDFIRE PREPAREDNESS AND SUPPRESSION ACTIVITIES ON ODF-PROTECTED LANDS IN OREGON

**PREPARED FOR** Department of Administrative Services, State of Oregon

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## **ACKNOWLEDGEMENTS**

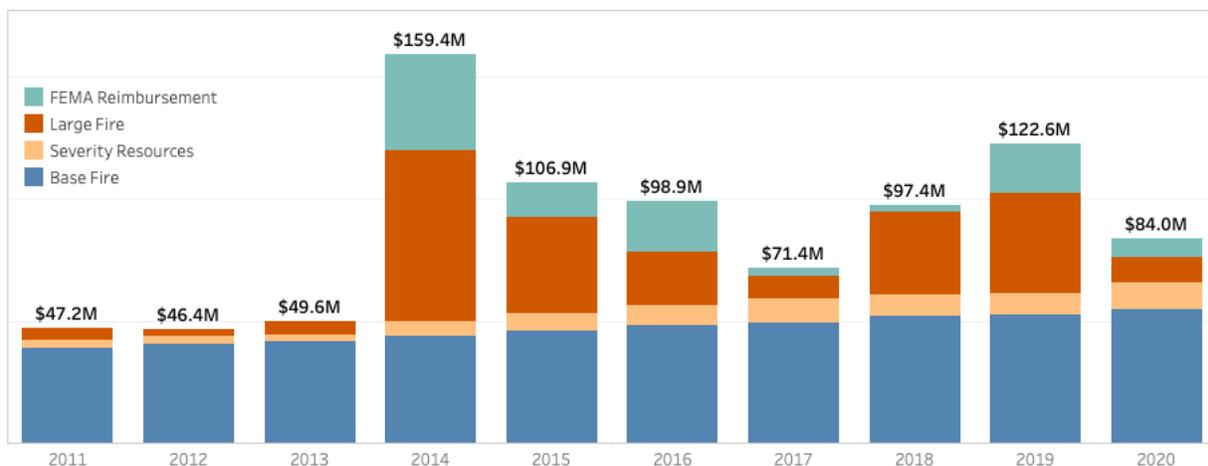
We wish to thank the Technical Advisory Group and all of the other stakeholders who made time to share their expertise and provide data in support of this effort.

## Executive Summary

Over the past decade, the State of Oregon has experienced a rapid growth in wildfire activity with over 6.7 million acres burned, including 915,000 acres protected by the Oregon Department of Forestry's (ODF) Fire Protection Division. The increasing frequency of severe fire years is a challenge both for ODF firefighting operations and the programs that fund them. Since the beginning of fiscal year 2014, when the Wildfire Protection Act ushered in the current cost-sharing funding structure, the total program expense has averaged over \$90 million per year. With long-term climate forecasts projecting a threefold increase in number of acres burned and population growth trends suggesting that more people and structures will be at risk from wildfire, the challenges being felt today are likely to further intensify. Total gross wildfire-related costs are shown in Figure 1 for the past ten years.

Figure 1.

Total Gross Wildfire Cost (Fiscal Years 2011- 2020)



Source: ODF Administration and ODF Fire Protection Division. Notes: Large Fire represents expenditures from OFLPF, General Fund, and insurance benefits. Severity Resources includes both OFLPF and General Fund. Base Fire totals are taken from annual, approved Fire Protection Division Budgets because earlier year actuals were not available at time of analysis, value shown is expected to be within 5% of actual. FEMA values represent "Revised Estimates" provided by ODF Fire Protection Division.

Oregon has a long, proud tradition of locally engaged landowners joining forces to protect their own lands and communities from wildfire. Over the decades, more responsibility has moved to ODF which has resulted in an evolving, multi-layered funding structure. Today, ODF protects 16.4

million acres of forestland, including more than 12 million acres of privately owned forest. Landowners share with ODF both the physical and financial responsibility for wildfire prevention and suppression as codified by Chapter 477 of the Oregon Revised Statutes. As a result of changing land ownership, funding mechanisms, and fire protection responsibilities, Oregon features what is arguably the most complex wildfire funding structure in the country.

The purpose of this report is to clearly document the costs, data, procedures, and legislative underpinning of Oregon’s fire funding structure and provide recommendations. HB4166 from the 2020 Regular Session outlined five goals for this study:

- 1) Gather data that describes the cost of wildfire suppression on lands protected by the Oregon Department of Forestry;
- 2) Identify private and public funds used to pay for fire suppression;
- 3) Compare Oregon’s wildfire costs and funding mechanisms with those states with comparable ecology and land management;
- 4) Describe regional difference in costs, funding sources, and measures of equity within Oregon;
- 5) Provide recommendations that can bring transparency to the program’s function and performance, and to improve tracking and substantiation of cost data.

To achieve these goals, the project team reviewed data curated by ODF, conducted stakeholder interviews, and engaged with a Technical Advisory Group representing a diverse array of perspectives and expertise to ensure a comprehensive and accurate representation of the system as it exists today.

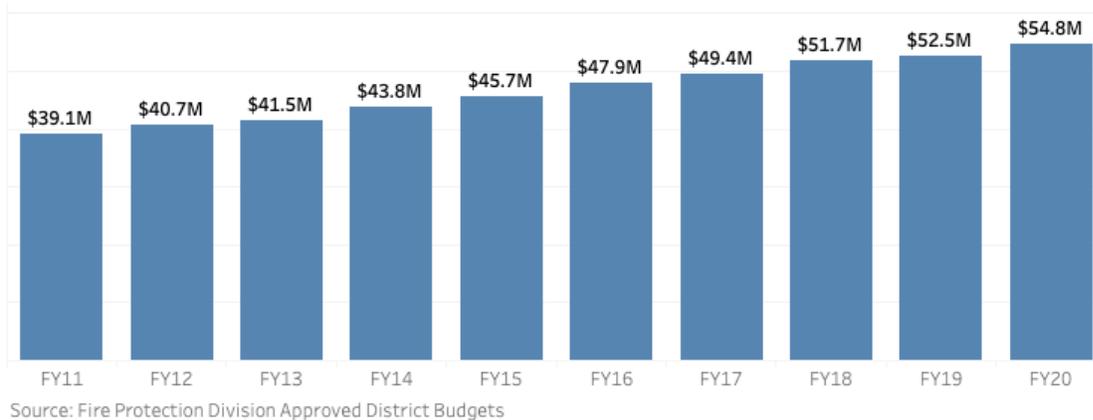
Goal #1: [Gather data that describes the cost of wildfire suppression on lands protected by the Oregon Department of Forestry](#)

This report focuses on the two ODF activities most directly related to what a lay person would consider to be the role of a fire department: fire preparedness and fire suppression. Preparedness encompasses all of the necessary activities—staffing, training, equipment, etc.—

to ensure readiness to respond to fires when they occur. Suppression describes the resources, people, and equipment actively engaged to attack and extinguish wildfires. These activities are also organized along another axis—Base Fire and Large Fire. ODF districts build their programs and budgets to provide an ‘adequate level of protection’ in order to be prepared for and manage wildfire within district boundaries—this is called Base Fire protection and involves both preparedness and suppression of smaller fires. Figure 2 summarizes the annual approved district budgets for Base Fire protection over the past ten fiscal years and shows the program growth over this period.

Figure 2.

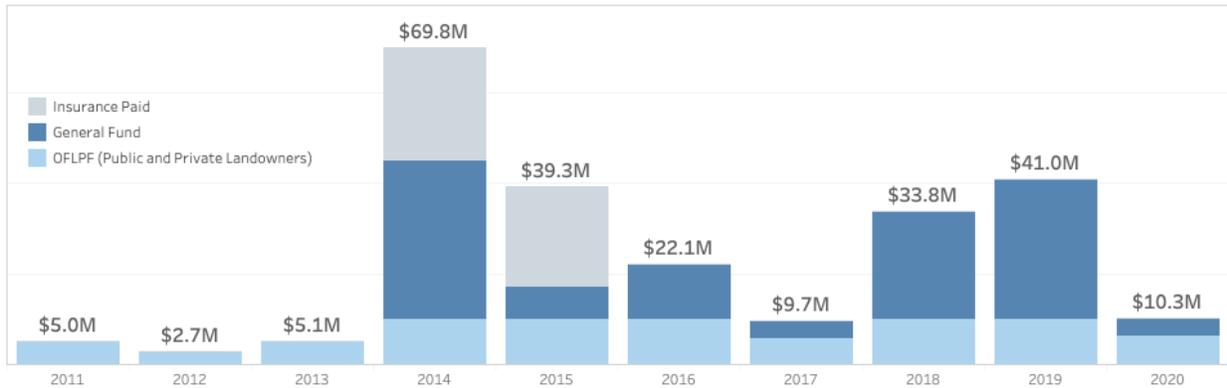
### Base Fire Approved Budgets (Fiscal Years 2011-2020)



In the event that a fire grows rapidly, and/or poses an imminent threat to people and structures, it may be deemed a Large Fire. A district may then access statewide suppression assets such as aircraft, incident management expertise, and additional financial resources from the Oregon Forest Land Protection Fund (OFLPF). Figure 3 shows the total Large Fire expense over the past ten fiscal years and includes OFLPF and General Fund contributions as well as insurance benefits.

Figure 3.

Total Large Fire Expenses (Fiscal Years 2011-2020)



Source: ODF Administration. Notes: In FY14 expense allocation for large fire transitioned from OFLPF paying first \$10M to OFLPF/General Fund sharing the first \$20M dollar-for-dollar - the order of bars on the chart do not indicate the order of funding. Calendar year 2020 fires are not included as they occurred in fiscal year 2021.

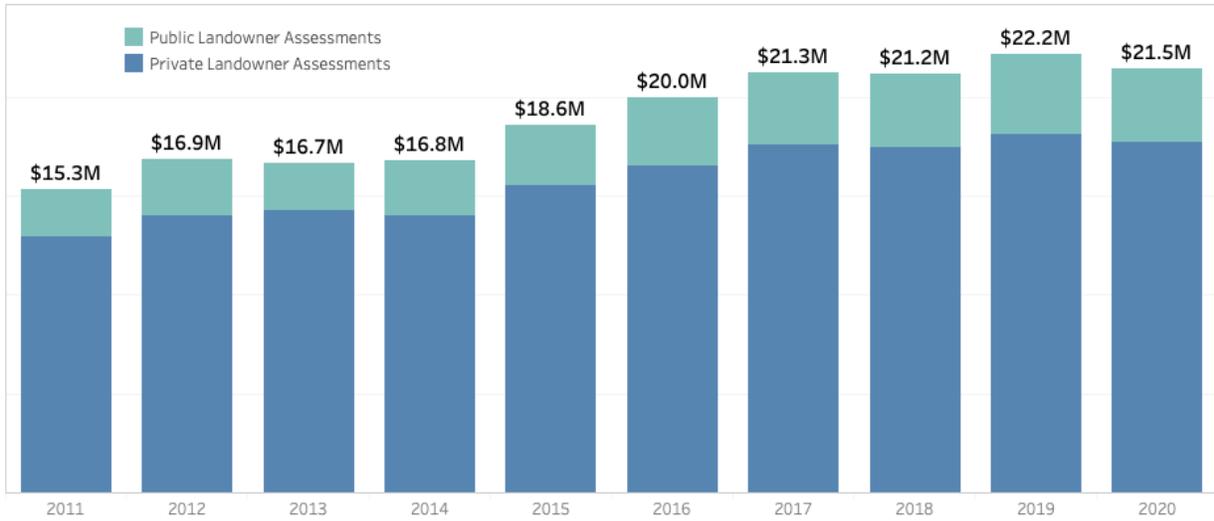
### Goal #2: Identify private and public funds used to pay for fire suppression

While it is essential to reference the body of this report for the details, at a high level there are three funding mechanisms that support fire preparedness and suppression in the State: the Forest Patrol Assessment, the Oregon Forest Land Protection Fund (OFLPF), and the General Fund.

The Forest Patrol Assessment is levied by districts on each acre of protected land and funds district Base Fire budgets, as well as regional and Fire Protection Division Headquarters administration. The district rates charged vary by land type (grazing or timber) and owner type (public or private) and also vary substantially by district based on unique fire risk and operational needs, which are driven by climate, forest type, and topography. This variability is seen in the rates charged to landowners: in fiscal year 2020, the rates ranged across the districts from a low of \$0.03/acre (grazing land) to a peak of \$4.42/acre (timber land) in a fire-prone district. Figure 4 provides the total value of assessments collected over the past ten fiscal years.

Figure 4.

### Forest Patrol Assessment Revenue (Fiscal Years 2011-2020)

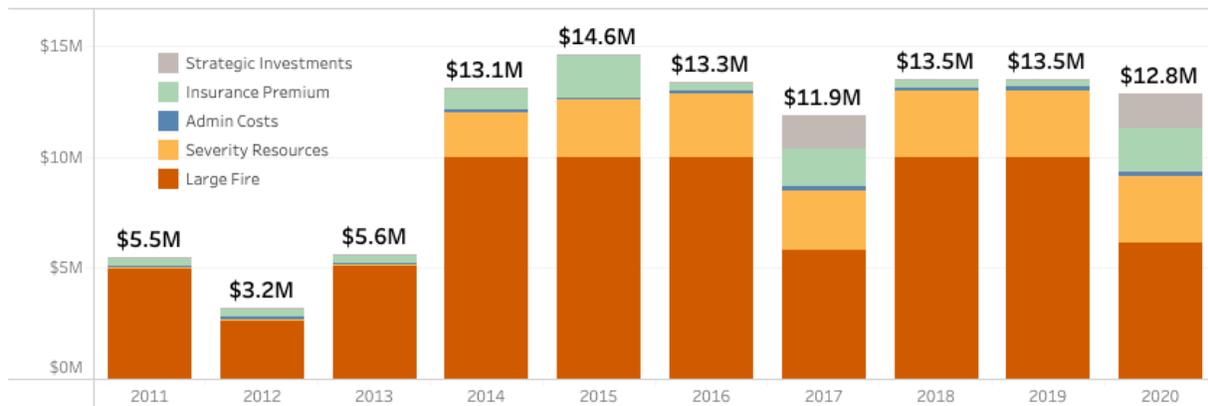


Source: Data provided by ODF Administration. Notes: Includes revenue earmarked for regional offices and Fire Protection Division Headquarters. Does not include BLM.

OFLPF is comprised of five sources of revenue outlined in the Oregon Revised Statutes, plus liable party cost recoveries and, prior to the restructuring of the Bureau of Land Management (BLM) protection agreement in 2019 that removed them from eligibility for Large Fire funding, BLM assessments. Together, these revenues generate approximately \$12 million per year for OFLPF. The funds collected serve to reimburse districts for Large Fire expenses, as well as Large Fire-related costs like paying premiums on the State’s fire insurance policy, occasionally purchasing strategic investments that help bolster statewide preparedness and suppression, paying for OFLPF administration, and funding the deployment of equipment and staff, called severity resources, during high-risk periods. Figure 5 provides the total OFLPF expenditures over the past ten fiscal years.

Figure 5.

### OFLPF Expenditures (Fiscal Years 2011-2020)

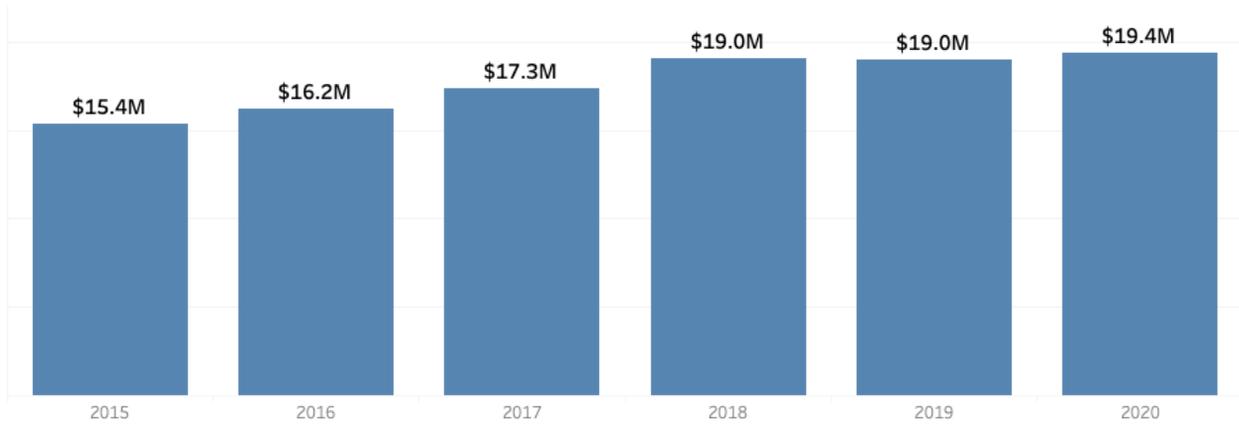


Source: Data provided by ODF Administration

In Oregon, the General Fund plays four significant roles in funding wildfire preparedness and suppression. First, to recognize that providing protection on private lands benefits all Oregonians, the General Fund matches the Forest Patrol Assessment paid on private acres dollar-for-dollar, reducing the financial burden of fire protection on private landowners. An additional rate subsidy is provided to private owners of low-productivity lands in eastern Oregon, Eastside Rate Relief, to recognize the fact that eastern lands are inherently less productive compared to the rest of the state and to reduce their Forest Patrol Assessment rate accordingly. In total, these Base Fire contributions from the General Fund are approximately \$19.4 million in fiscal year 2020, approximately 26% higher than in fiscal year 2015, as shown in Figure 6.

Figure 6.

General Fund Payments to Districts (Fiscal Years 2015-2020)

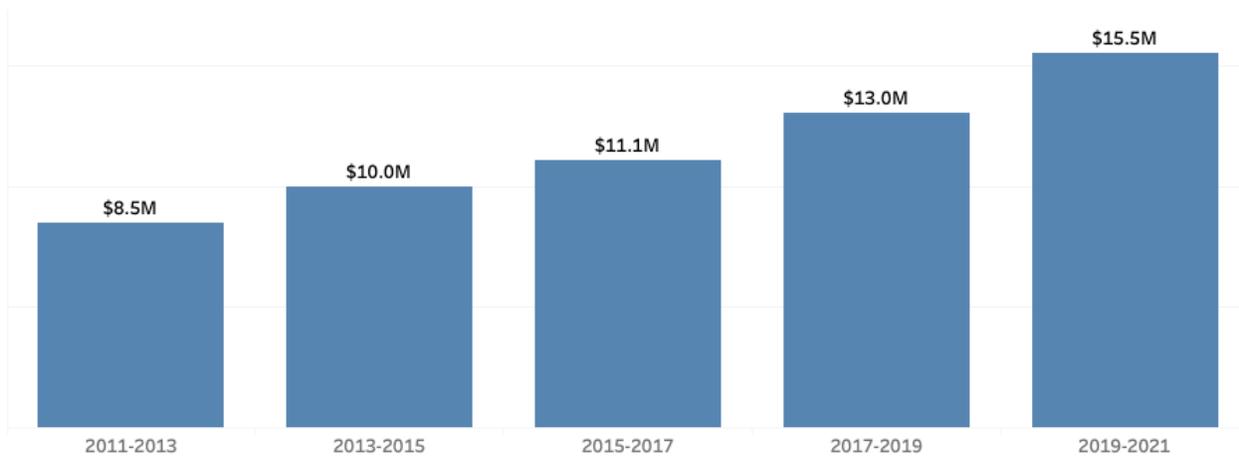


Source: Data provided by ODF Administration

Second, the General Fund allocates funds for ODF administration, the “admin prorate,” on behalf of private landowners, in recognition of their contribution of highly trained staff, infrastructure, and firefighting assets that help the districts meet their fire protection goals. For fiscal years 2019 and 2020, \$7.75 million per year was allocated for this purpose (Figure 7).

Figure 7.

General Fund Contribution for Admin Prorate (Fiscal Years 2011-2020)



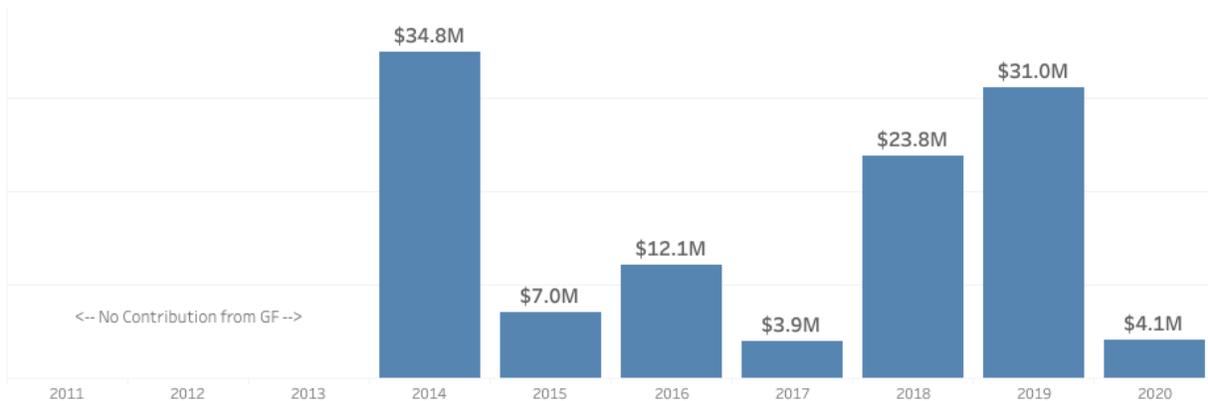
Source: ODF annual budgets, data provided by ODF Administration.

Third, the greatest risk exposure and cost burden (depending on the fire year) for the General Fund comes from covering Large Fire expense. Though the State’s \$25 million insurance policy

and the potential for Federal Emergency Management Agency (FEMA) disaster funding help to protect the General Fund during bad fire years, there is no actual limit on General Fund liability for Large Fire. The current protection agreement with BLM has removed them from Large Fire eligibility; this arrangement also helps protect the General Fund, as BLM will be billed for Large Fire expenses. General Fund expenditures for Large Fire are shown in Figure 8.

Figure 8.

General Fund Allocation for Large Fire Allocation (Fiscal Years 2011-2020)



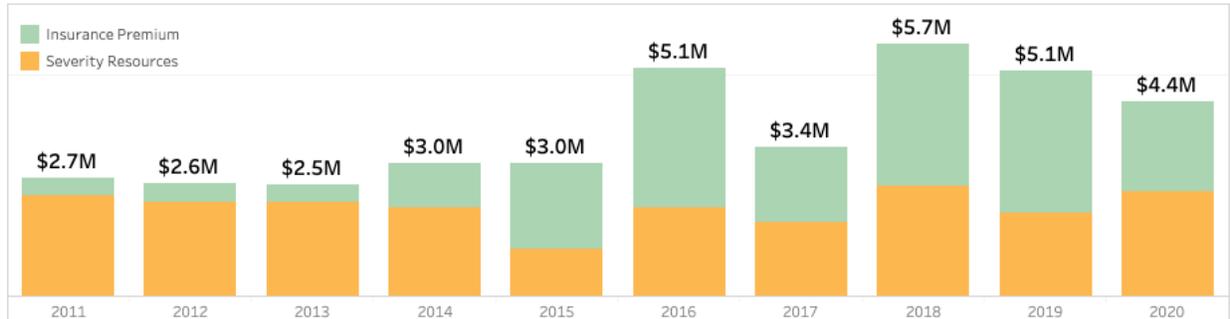
Source: Data provided by ODF Administration. Note: Calendar year 2020 fires are not included because they occurred in fiscal year 2021.

The variability in General Fund expenditure is notable, from zero to \$34.8 million, depending on the nature of a fire year and the ability to access insurance and FEMA support. It is important to note that fiscal year 2014 represents the beginning of the current Large Fire funding structure as established by the 2013 Wildfire Protection Act, which restructured Large Fire funding so that the first \$20 million in Large Fire expense is shared dollar for dollar with OFLPF; prior to fiscal year 2013, the first \$10 million were the sole responsibility of OFLPF (see Figure 5 for OFLPF expenditures on Large Fire during fiscal years 2011–2013).

Finally, as with OFLPF, the General Fund contributes more than just Large Fire costs, annually helping to fund the deployment of severity resources (e.g., equipment and staff) during high-risk periods as well as paying a portion of premiums for the State’s fire insurance policy, shown in Figure 9.

Figure 9.

General Fund Expenditures - Severity Resources and Insurance Premiums  
(Fiscal Years 2011-2020)



Source: Data provided by ODF Administration.

Goal #3: Compare Oregon’s wildfire costs and funding mechanisms with those states with comparable ecology and land management

Review of wildfire strategy and funding in Washington, Idaho, and Montana showed that each of these states is also wrestling with adapting their funding mechanisms and firefighting strategies to the new increased risk and cost of fires. All three states have similar, though simpler, funding mechanisms supporting their preparedness and suppression activities. Each state is also attempting to smooth the impact of high-cost years on their General Funds by creating some type of fund to accumulate dollars during low-fire years to be expended during high-fire years. Though each state is taking similar action, it is not feasible to suggest best practices or produce apples-to-apples comparisons of, for instance, General Fund versus landowner dollars without a significant level of research and collaboration between Oregon and the other states to understand the detailed assumptions and procedures that make each funding vehicle unique. Nevertheless, the experiences of other states reveal different approaches to the shared problem of increasing fire risk.

Goal #4: Describe regional difference in costs, funding sources, and measures of equity within Oregon.

The wildfire funding mechanisms described above generate significant variability in the rates paid by landowners. Though the rates are different, the assets and staff required to meet the 98% containment targets also vary substantially due to climate, forest type, and topography across the districts. While it is difficult to assess the equity of these difference, the following differences are noted.

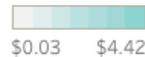
The most significant variability comes via the Forest Patrol Assessment. As described above, the rate is set within each district to meet Base Fire protection requirements. The rates for private lands over the past ten fiscal years are shown in Figure 10. These rates vary by land type (timber or grazing), ownership type (public or private), and region. Rates change each year, and may go up or down depending on district requirements and availability of unspent carry-over funds from the previous year. The public rates are double the private rates due to the fact that the General Fund matches private rates 1:1 with an allocation to each district.

Figure 10.

### Approved District Rates for Fiscal Year 2020

			Public Rate	Private Rate
Timber	Eastern	Central Oregon	\$4.24	\$1.93
		Klamath/Lake	\$3.41	\$1.52
		Northeast Oregon	\$3.32	\$1.48
		Walker Range	\$3.57	\$1.60
	Northwest	North Cascade	\$3.21	\$1.61
		Northwest	\$2.21	\$1.10
		West Oregon	\$2.30	\$1.15
	Southern	Coos FPA	\$3.12	\$1.56
		Douglas FPA	\$3.69	\$1.84
		South Cascade	\$2.91	\$1.46
		Southwest	\$4.42	\$2.21
Western Lane		\$2.35	\$1.17	
Grazing	Eastern	Central Oregon	\$1.66	\$0.64
		Klamath/Lake	\$1.43	\$0.53
		Northeast Oregon	\$1.07	\$0.35
		Walker Range	\$0.43	\$0.03
	Southern	Coos FPA	\$2.37	\$1.18
		Douglas FPA	\$1.55	\$0.77
		Southwest	\$2.04	\$1.02
Grazing Z1	Eastern	Central Oregon	\$0.30	\$0.15

Source: ODF Fire Protection Division. Notes: Private rate includes Eastside Rate Relief.



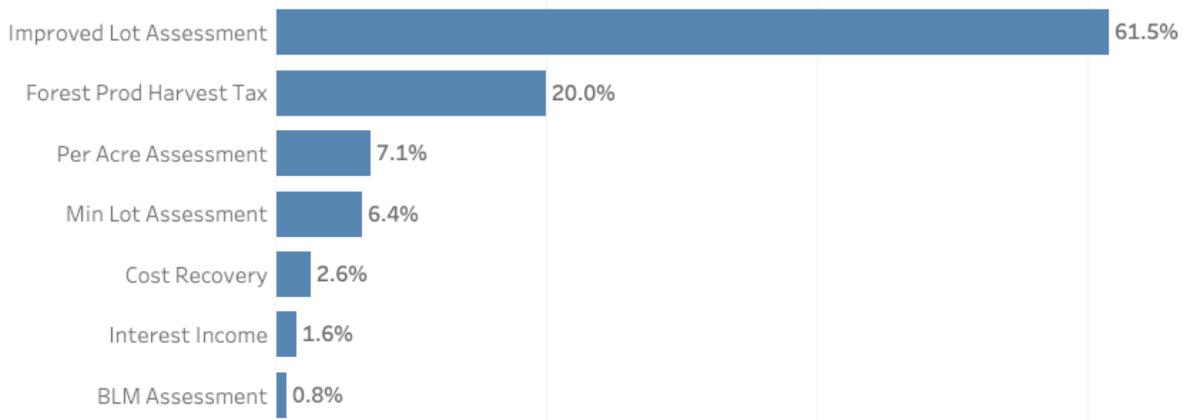
Landowners in eastern Oregon receive an additional subsidy, Eastside Rate Relief. In recognition that lands on the eastside are less productive than lands west of the Cascades, the Legislature provides a this \$2+ million appropriation each biennium. Rate relief funds are distributed proportionally to the four eastside districts according to their size and consequently lower the per-acre Forest Patrol Assessment by an equal amount for each landowner acre.

OFLPF also introduces regional difference in rates by varying its per-acre assessment by geography and land type. Westside timber owners pay a lower assessment (\$0.05 / acre) than eastside timber (\$0.075 / acre). All grazing lands regardless of location paying the same rate as eastside timber (\$0.075).

Finally, the funding mechanisms that feed OLFPF introduce variability regarding the percentage contributed by different types of landowners as shown in Figure 11. For example, the improved lot assessment, paid by landowners with structures on their lands has contributed 61.5% of total revenue for OLFPF over the past ten years; the Forest Products Harvest Tax, paid by timber harvesters, has raised 20% of total revenue; the per-acre assessment and minimum lot assessment, both paid by all landowners, have together raised 13.5%. These percentages will likely shift over time as land use changes.

Figure 11.

OFLPF Revenue Proportions by Type (Fiscal Years 2011-2020)



Source: Data provided by ODF Administration

Goal #5: Provide recommendations that can bring transparency to the program’s function and performance, and to improve tracking and substantiation of cost data

Based on the research, data analysis, interviews and counsel of the Technical Advisory Group, the work accomplished in this report suggests a number of actions to improve understanding and transparency of Oregon’s wildfire funding strategy and inform future policy discussions. These recommendations fall into three categories, and are described in general terms here; specifics can be found in the body of the report.

- 1) **Improve Data Consistency and Reporting:** A significant amount of the data made available from ODF for this study is custom, produced manually through access to multiple systems,

often spreadsheets. Furthermore, these data are not reported in a standardized format, level of disaggregation, or frequency, and acquiring the desired data was a labor-intensive process for both ODF and the project team, requiring significant iteration and a deep knowledge of Oregon’s fire funding structures. Creating several broadly understood and accepted regular reports—with clear documentation and consistent use of terms—would be beneficial for many stakeholders and purposes. Improving access to quality data could also better inform future policy discussions.

- 2) **Provide Clarity on In-Kind Contributions:** The definition and recognition of in-kind contributions made by private landowners generates significant confusion and misunderstanding across many fire program stakeholders. Assembling a workgroup to agree on key items detailed in this section of the report will provide important clarity and better inform policy discussions as Oregon’s fire funding structure continues to evolve.
- 3) **Advanced Collaboration with Neighboring States:** The risks and challenges that Oregon faces are not unique. Other states are actively working on wildfire strategy, often with an emphasis on funding mechanisms to manage and fairly share financial risk. Oregon would have valuable perspective to offer and just as much to gain by connecting with its peers on these topics.

It is clear that Oregon has an extremely complex system that could benefit from some selective pruning. This complexity is borne from the strong collaboration between landowners and the State that is unique in Oregon, but also from decades of policy changes and program adjustments. Today, this system and its complex web of procedures, assessments, fees, taxes, and stakeholders delivers on ODF’s containment goal of extinguishing 98% of fire starts before they reach ten acres, but also generates confusion and difficulty in tracking who pays for what in the preparedness and suppression ecosystem. In the future, whenever making adjustments to the legislation, processes, detailed procedures, and underlying systems that define and support ODF’s Fire Protection Division mandate, it will be beneficial to seek ways to reduce complexity while still achieving key policy goals.

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## Table of Acronyms and Initialisms

<b>Abbreviation</b>	<b>Full Name</b>
BLM	Bureau of Land Management
BOF	Board of Forestry
DAS	Department of Administrative Services
DNRC	Department of Natural Resources and Conservation
DSL	Department of State Lands
EFCC	Emergency Fire Cost Committee
FEMA	Federal Emergency Management Agency
FFPA	Forest Fire Protection Assessment
FMAG	Fire Management Assistance Grants
FPA	Forest Protective Associations
FPD	Fire Protection Districts
FPHT	Forest Products Harvest Tax
GASB	Government Accounting Standards Board
IDL	Idaho Department of Lands
LOC	Landowner Contingency Assessment
ODF	Oregon Department of Forestry
OFIC	Oregon Forest and Industries Council
OFLPF	Oregon Forest Land Protection Fund
TAG	Technical Advisory Group
USFS	United States Forest Service
WPA	Wildfire Protection Act
WUI	Wildland-Urban Interface

## 1. Report Structure

The State of Oregon's wildfire preparedness and suppression programs are complex in terms of their structure and funding processes. This complexity means that a substantial portion of this report is allocated to establishing clear definitions and detailed flow charts to ensure that readers have a shared set of frameworks, facts, and definitions when interpreting the underlying data. To this end, the report has been structured so that each section builds incrementally on the preceding sections and their associated definitions and process descriptions. To help readers navigate this report, a brief summary of each section is provided here:

**Section 2 – Study Background:** Summarizes this report's intent along with providing relevant context regarding the wildfire threat in Oregon and the State's historical approach to preparedness and suppression.

**Section 3 – Wildfire Preparedness and Suppression in Oregon:** Reviews the roles of the main entities responsible for wildfire response and funding including ODF, forest protective operating associations, the Emergency Fire Cost Committee, and the Legislature.

**Section 4 – Budget Vehicles and Funding Sources:** Delves into the operational detail underlying Oregon's wildfire funding processes.

**Section 5 – Funding Mechanisms – Detail:** Provides specifics about each fee, assessment, and taxation mechanism.

**Section 6 – District Budgets and Actual Revenues for Base Fire Protection:** Summarizes Base Fire budgets at the district level and provides metrics with which to assess variability across districts such as General Fund as percentage of the district budget, relative revenue from assessments versus BLM dollars, and others.

**Section 7 – Highlights of Wildfire Funding Structures in Washington, Idaho, and Montana:** Provides a summary of preparedness and suppression structures and funding in Washington, Idaho, and Montana for comparison to Oregon's programs.

**Section 8 – Conclusion:** Brings together individual details to present high-level comparisons of funding share between landowner and General Fund for different fire suppression tiers.

**Section 9 – Recommendations:** Provides specific recommendations to improve data consistency and reporting on wildfire funding, and regarding steps to account for the value of in-kind preparedness and suppression services provided by private landowners.

**Section 10 – Appendices:** Includes appendices of definitions; detailed research on wildfire funding in Washington, Idaho, and Montana; stakeholder interviews and contacts; data files reviewed; Technical Advisory Group meeting agenda; and references.

## 2. Study Background

A damaging wildfire requires a convergence of contributing factors including ignition sources (lightning- and human-caused), weather conditions, fuel loads, and availability or scarcity of fire suppression assets. Continued development along the wildland-urban interface across much of the West has amplified the risk of fire casualties and property damage, as have drier and hotter summers. Using data to understand how these and other variables combine to shape long-term, multi-year wildfire trends is useful for strategic planning and understanding how Oregon's fire risk is changing. The Quantitative Fire Risk Assessment for Oregon and Washington is one such example, and it models how the probability and intensity of fire events intersects with the exposure and susceptibility of highly valued resources and assets to drive risk.<sup>i</sup> However, predicting precisely where and when damaging wildfire will occur on the landscape is extremely difficult, and organizing wildfire response largely remains an exercise in understanding short-term weather conditions and how they drive risk.

The cost of wildfire has come to the fore throughout the western United States and Canada over the past two decades. The 2018 Camp Fire in Paradise, California, a grim example, killed 86 people, burned 14,000 homes, and scorched more than 150,000 acres.<sup>ii</sup> After damages were totaled, the Camp Fire was the world's costliest natural disaster in 2018.<sup>iii</sup> The summer of 2020 brought devastating fires to Oregon, burning over 1 million acres with nine residents killed and over 4,000 homes destroyed.<sup>iv</sup>

Throughout the West, these increasingly damaging fires and the expectation of more to come have driven state and federal agencies and local communities to reexamine how best to prepare for and fund response to these large, increasingly frequent events.

### 2.1. Study Intent and Approach

#### Originating Legislative Intent

The goal of this report is to provide wildfire stakeholders, Oregon lawmakers, and the public with a document that connects and clearly describes legislative, procedural, and financial mechanisms

that fund wildfire response for lands protected by the Oregon Department of Forestry (ODF). House Bill 4166 defined the specific goals of the project: <sup>v</sup>

- Gather data that describes the cost of wildfire suppression on lands protected by the Oregon Department of Forestry;
- Identify private and public funds used to pay for fire suppression;
- Compare Oregon’s wildfire costs and funding mechanisms with those states with comparable ecology and land management;
- Describe regional difference in costs and funding sources and measures of equity within Oregon;
- Provide recommendations that can bring transparency to the program’s function and performance, and to improve tracking and substantiation of cost data.

Ultimately, this work is intended to create a common vocabulary and baseline data to inform future policy discussions about how the State can effectively balance wildfire protection demands with the economic wellbeing of rural communities and businesses.

### Study Scope

Importantly, a number of related policies, funding mechanisms, and discussions will **not** be addressed by this study:

- As the Fire Protection Division is the branch of ODF charged with wildfire response, the contributions of the ODF State and Private Forest Divisions during wildfire response are out of scope for this report.<sup>1</sup>
- This report does not address the distribution or equity of the total taxes, fees, and assessments paid by landowners (some of which include funds for fire response), but instead focuses on only the portion of taxes and assessments specifically set aside to fund fire preparedness and suppression in Oregon.

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<sup>1</sup> The role of the Administrative Division, which supports all three ODF Divisions (including Fire Protection), is peripherally discussed through the admin prorate (see page 52, “Admin Prorate” for detail).

- Fuels management and resilience investments, post-fire rehabilitation, and land management activities under the Oregon Forest Practices Act and related programs—while important to wildfire management in general—are out of scope for this report.
- Federal forest management policy and wildfire spending within federal jurisdictions (e.g., national forestland) and not directly related to ODF activities and responsibilities are not considered here.
- Discussion of appropriateness and fairness of resource distribution, assessments, and expenditures is also beyond this report’s scope.

### Study Approach

The project team conducted interviews (see Appendix 10.5 for detail) with wildfire stakeholders to document wildfire funding history, gather relevant data and resources, and solicit ideas for improvements to make wildfire funding more transparent and resilient in this time of increasing fire activity and cost. In addition to interviews, the project team requested and analyzed wildfire budget, expenditure, and revenue data from ODF at the Fire Protection Division and district level. The team reviewed related legislation, administrative rules, policies, and procedures that inform collection and allocation of wildfire-related funds. Finally, the team collected and reviewed popular and peer-reviewed reports and research studies relevant to this analysis.

The project team worked closely with a Core Team from the Department of Administrative Services and the Office of Economic Analysis which provided regular guidance and oversight.

The supporting bill for this work also authorized the *Wildfire Cost Technical Advisory Group* (TAG) to guide the analysis and ensure it is comprehensive, objective, and incorporates broad stakeholder viewpoints. The following individuals were appointed to the TAG:

- Cassandra Moseley, Univ. of Oregon Institute for a Sustainable Environment
- Doug Grafe, ODF Fire Protection Division
- Jaime McGovern, Legislative Revenue Office
- Kaola Swanson, Sustainable Northwest
- Ken Cummings, Emergency Fire Cost Committee

- Kyle Williams, Oregon Forest & Industries Council
- Matt Stayner, Legislative Fiscal Office
- Mike Barsotti, Oregon Small Woodlands Association

In addition to the appointed TAG members, Core Team and project team members participated in the TAG meetings. The TAG held three meetings via web conference to review goals, data gathering and analysis methods, and provide input on the draft report. Agendas for each of the meetings are provided (see Appendix 10.7 for detail). Finally, the TAG members reviewed and provided detailed comments on two drafts of this report.

### Fiscal Years and Fire Years

Given that this study's focus is on wildfire funding mechanisms, the primary calendar unit for data provided and shown in this report is the fiscal year, in order to align with ODF budgeting and financial reporting. Oregon's fiscal year spans two calendar years, beginning on July 1<sup>st</sup> and concludes June 30<sup>th</sup> of the following calendar year. This fiscal year basis creates opportunity for confusion when financial data is compared to fire occurrence data, typically provided by calendar year. The next fiscal year begins in the middle of the calendar year.

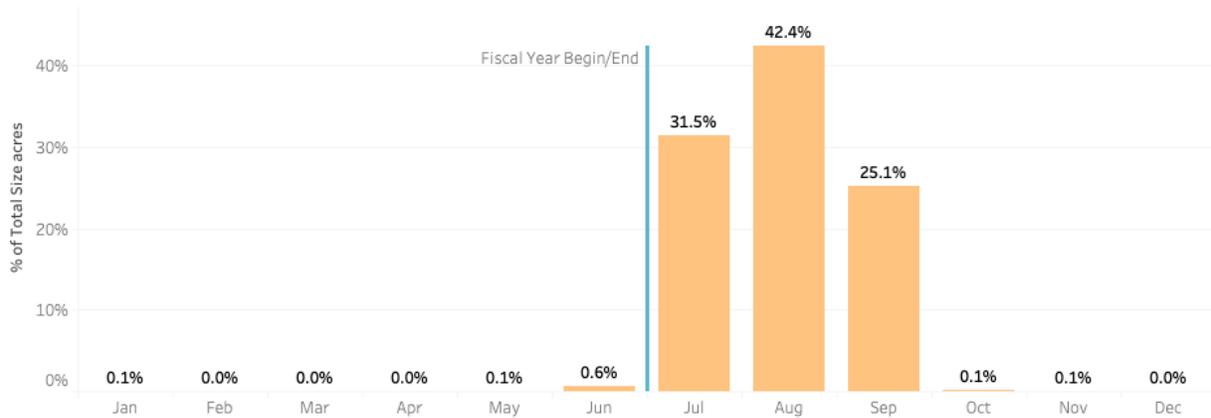
To illustrate this point, Oregon's most recent catastrophic fire season saw most of its damaging fires occur in September of calendar year 2020. As these fires occurred in the second half of the calendar year, the costs of combatting them are assigned to the next fiscal year, 2021. At the time of this writing, fiscal year 2021 is not complete; therefore, this analysis, which draws upon data from the past ten *complete* fiscal years to understand annual variation in costs, will not capture the extreme costs associated with fire year 2020 (which are still being tabulated and reconciled).

Given that most damaging fires tend to occur after July 1<sup>st</sup>, the fiscal year and fire year for a given event will typically be different. While fires can and do occur during every month of a calendar year, the latter half of the calendar year is generally the peak time for acres burned due relatively infrequent precipitation and warm temperatures. As a general rule, to identify the fiscal year to which fire costs are assigned, add 1 to the calendar year (e.g., the costly fire season of 2020 will

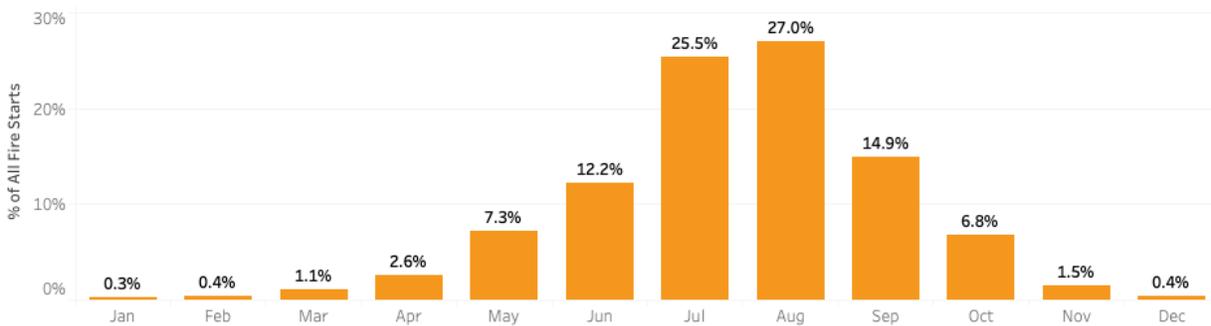
be accounted for in fiscal year 2021). Figure 1 illustrates this point by showing that most acres burned are concentrated in the latter half of a calendar year—the beginning of the next fiscal year.

Figure 1.

Percent Acres Burned by Month (2010-2020)



Fire Starts by Month (2010-2020)



Source: FIRES Database  
 Methods: Calculated using the Month of DiscoveryDate and Total Acres for Statistical Fires

## 2.2. Wildfire Threat

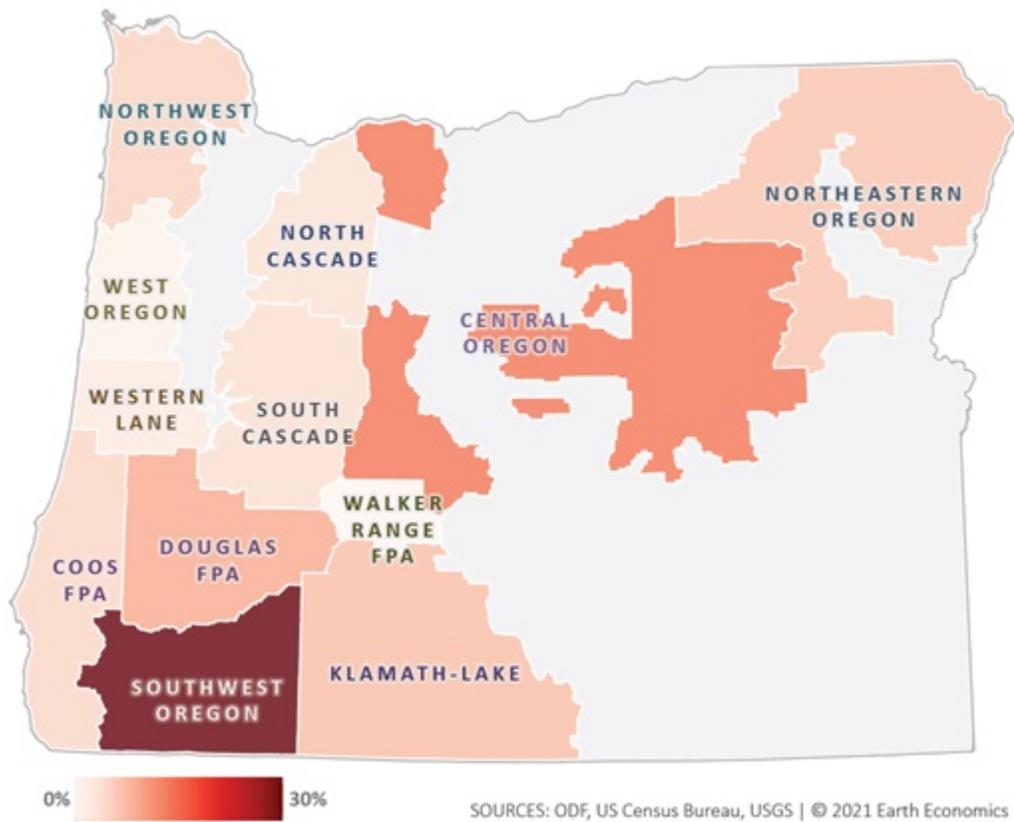
### Fire Starts, Acres Burned, and Damages

Oregon’s experience with wildfire over the past ten years underscores the variability of damages and acres burned from year to year. Figure 2 shows ODF “statistical”<sup>2</sup> fire starts—essentially,

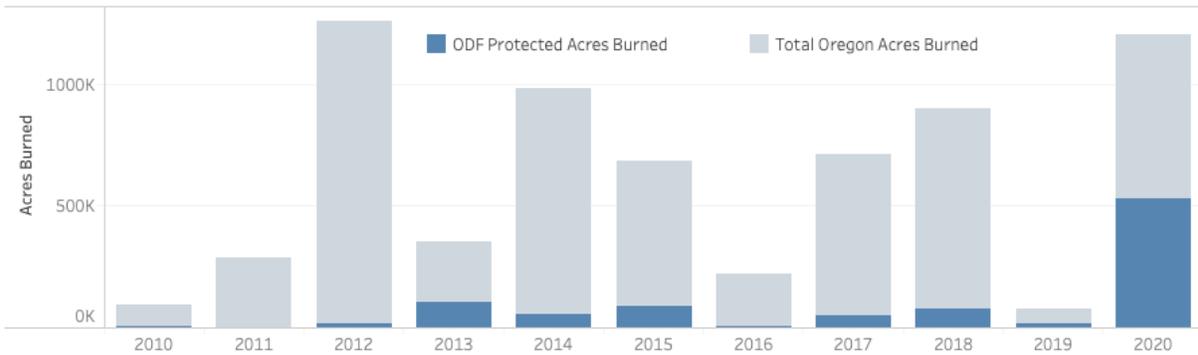
<sup>2</sup> See “Statistical Fires” in Appendix 10.1, “Definitions”.

fires that burn on or threaten ODF-protected land—by district, with the Southwest Oregon District representing nearly 30% of all fire start activity over the ten-year period.<sup>vi</sup> Figure 3 again shows ODF statistical fires, and compares the ODF-protected acres burned per year against total acres burned across Oregon by calendar year.

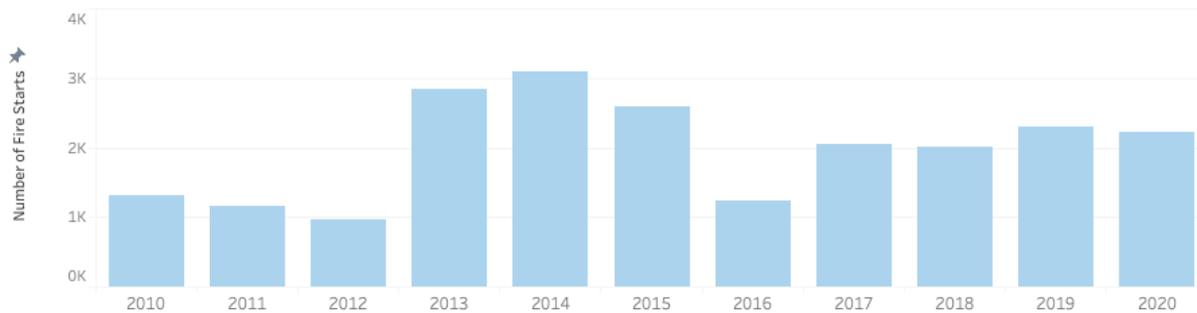
Figure 2. Fire Starts by District, Fiscal Years 2011–2021



All Acres Burned vs. ODF-Protected Land (Fire Years 2010-2020)



Fire Starts Affecting ODF-Protected Land



Source: Data provided by ODF Fire Protection Division. Method: Statistical Fires, Acres-Prot.

Given the unpredictability of wildfire and changing climatic conditions from year to year, it is difficult to calculate a rate of change to precisely predict future wildfire costs and damages. Trends in key factors that contribute to wildfire suggest that the wildfire threat will continue at recent levels, if not accelerate. The *Fifth Oregon Climate Assessment* from January 2021 supports the assertion that fires will become more frequent and intense based on temperature and precipitation forecasts for Oregon. Specifically, the *Assessment* suggests that over the next 50–100 years, “area burned and fire frequency are projected to increase substantially, initially east of the crest of the Cascade Range and then in the western Cascade Range.”<sup>vii</sup>

The *Assessment* summarizes results from many models that use different methods and inputs. In the aggregate, the models suggest that the acreage burned may increase on the order of three times or more over the next two decades as compared with the closing decades of the 20<sup>th</sup> century. The report goes on to suggest that the incidence of fires larger than 12,350 acres may increase by a similar magnitude.

The Office of Economic Analysis forecasts that overall population in Oregon will grow more than 6% by 2029.<sup>viii</sup> While population growth means that more Oregonians will be impacted by future fire activity, these impacts will likely be concentrated amongst new residents moving into the wildland-urban interface (WUI). Researchers have estimated that in Oregon in the 1990s, 46% of net house unit growth occurred in the WUI; a trend that has likely continued.<sup>ix</sup> This in-migration to the WUI will place additional people and structures at risk from fire and increase the likelihood of human-caused ignitions.<sup>x</sup>

#### Discussion

While additional analysis of climate models and their methods is beyond the scope of this report, it seems prudent that the State prepare to manage and fund the response to additional large, damaging fires in the coming decades. Though the specific timing and manifestation of these changes is difficult to anticipate, Oregon's policy and financial frameworks described in the remainder of this report should be considered with these trends in mind.

### 2.3. Forestland Ownership and Historical Fire Response

As with most western states, jurisdiction and responsibility for Oregon forestlands is divided between government agencies, tribes, and private landowners. As shown in Figure 4, approximately 60% of forested acres in Oregon are federal, 34% are private, with the remainder comprised of State, local and tribal ownership. Jurisdiction becomes important in tracking costs and responsibilities, especially as fires can start within one jurisdiction and migrate to others.

Figure 4.

### Ownership of Oregon’s Forestlands

Type	Ownership	Acres	% of Forestland
Federal	U.S. Forest Service	14,093,000	48%
	Bureau of Land Management	3,573,000	12%
	National Parks Service	160,000	1%
	Other Federal	32,000	0%
Private	Large Landowners 5,000 Ac+	6,487,000	22%
	Small Landowners	3,702,000	12%
State-Local	State	942,000	3%
	County and Municipal	187,000	1%
Tribal	Native American Tribal	480,000	2%
<b>Grand Total</b>		<b>29,656,000</b>	<b>100%</b>

Source: Oregon Forest Resources Institute (<https://oregonforestfacts.org/#forestland-ownership>)

Prior to 1913, individual forestland owners in Oregon were responsible for fighting fires that occurred on their own land, or threatened their land. The passing of the *Fire Patrol Law of 1913* began to shift responsibility from individual landowners into a more coordinated approach, where landowners began to assemble into local fire patrol associations, and the State began to take its first steps towards greater responsibility for wildfire suppression. Initially, the State was only a minor contributor, with the local associations and private patrols taking on the majority of the responsibility. Over time, the financial burden placed on private associations by large fires meant that associations began to stop operating independently, instead transitioning protection responsibility to ODF. The number of private operating associations peaked at 17 from 1920–1923, slowly dwindling through the 1960s until the number of associations (8) matched the number of state districts (8); today, there are nine ODF districts and three operating associations.

In 1965, the Legislature authorized the General Fund to pay firefighting costs in excess of the maximum per-acre cost of fire suppression for private landowners, which began as \$0.05 per acre for grazing land and \$0.10 per acre for timber land. In 1975, this arrangement shifted to the private landowner and the General Fund sharing the budgeted cost of fire protection 50-50. In 1989, this arrangement was applied to western Oregon lands, meaning that the budgeted cost of fire protection on all ODF-protected private forestlands in Oregon was shared 50-50 with the

General Fund. This history illustrates the transition from entirely private responsibility for fire protection to today's shared responsibility for wildfire preparedness and suppression.<sup>xi</sup>

### 3. Wildfire Preparedness and Suppression in Oregon

This section narrows the focus on ODF fire preparedness and suppression activities by describing key terms and how they are applied within the ODF Fire Protection Division, outlining the Fire Protection Division structure that allows for central coordination and local delivery of a complete and coordinated system of fire protection (ORS 477.005), listing the types of landowners protected by the agency, highlighting how Base Fire protection is budgeted for and funded, and spotlighting other key actors that support fire preparedness and suppression.

#### 3.1. Key Terms

This study is focused solely on the cost of wildfire preparedness and suppression activities at ODF. This scope was suggested by the language of HB4304 (Section 69), which focused on “wildfire protection and suppression;” however the bill did not provide definitions of these terms.<sup>xii</sup> For the purposes of this report, these terms are slightly adapted and defined as follows:

- **Preparedness:** maintaining at the ready the necessary resources (personnel, equipment, infrastructure, training) to prevent, detect, and respond to wildfires.
- **Suppression:** attacking and extinguishing wildfires using the necessary resources, primarily those made available through *preparedness* activities.

The size, location, predicted weather conditions, available resources, and nature of a wildfire event determines how ODF responds, with each type of response involving different stakeholders, funding mechanisms, and budget allocations as described later in this section. The firefighting activities of preparedness and suppression are structured into two tiers—**Base Fire** and **Large Fire**—which are complemented on an as-needed basis by **Severity Resources**. These terms are defined as follows:

- **Base Fire.** The Base Fire budget funds the ‘adequate level of protection’ (see Section 10.1, “Definitions”) provided by each district, regular operations. Base Fire encompasses both *preparedness* and basic fire *suppression* activities that are the responsibility of the districts, often with support of local landowners and local fire departments. This budget funds also administration at the district, regional, and Fire Division headquarters, which are necessary

for providing the adequate level of protection to landowners. Base Fire is funded by landowner dollars and the General Fund.

- **Large Fire.** Fires that require more *suppression* resources than the responding district can provide within its annual budget and available assets are the responsibility of the Large Fire funding structure.<sup>3</sup> Large Fire costs are covered—in different amounts—by landowner dollars, the General Fund, recovery from responsible parties, and insurance. Additionally, these fires can qualify for Federal Emergency Management Agency (FEMA) disaster relief, which helps reduce General Fund liability during expensive fire years (see Section 4.4, “Federal Emergency Management Agency” for more detail on FEMA disaster funding).
- **Severity resources.** Boosting *preparedness* at critical times, severity resources are strategically pre-positioned *suppression* assets—often air support—used in times of elevated fire risk to prevent small fires from growing larger. They can be deployed to either **Base Fire** or **Large Fire** to support local districts or larger regions. Severity resources are supported by landowner dollars, the General Fund, and FEMA (see Section 4.4, “Federal Emergency Management Agency” for more detail on FEMA Fire Management Assistance Grants).

The intersection of these five wildfire management concepts (preparedness, suppression, Base Fire, Large Fire, severity resources) provides the lens through which to understand Oregon’s budget, expense structure, and overall wildfire strategy described in detail throughout the remainder of this report.

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<sup>3</sup> Large Fire is a budgetary classification only, and there is no relationship to actual size of the fire.

## Discussion

Severity resources are often presented as a second, ordinal tier in ODF's firefighting capability, sandwiched between Base Fire and Large Fire. Severity resources behave as supplementary suppression resources with their own dedicated funding stream that can be dispatched in support of Base Fire, Large Fire, or not at all. In practice, severity resources may be deployed during times of increased fire risk to a region to support districts' Base Fire capability. If these resources contribute to Large Fire, they are funded using Large Fire procedures; otherwise, they augment districts' Base Fire capability, effectively increasing the district budget and asset base.

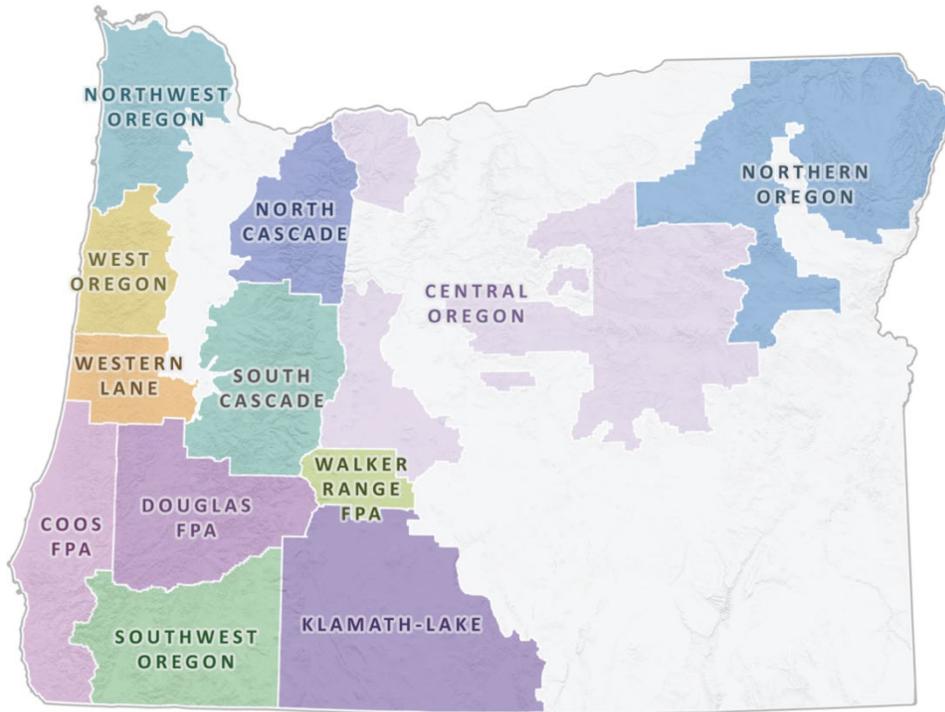
As described in this section, providing clarity on how preparedness and suppression activities connect to Base Fire, Large Fire, severity resources, and their respective funding streams is a best practice that helps to simplify a complex system.

### 3.2. Oregon Department of Forestry – Fire Protection Division

Within ODF, the Fire Protection Division is responsible for managing the agency's preparedness and suppression activities for the forestlands it protects. Forestland "means any woodland, brushland, timberland, grazing land or clearing that, during any time of the year, contains enough forest growth, slashing or vegetation to constitute, in the judgment of the forester, a fire hazard, regardless of how the land is zoned or taxed" (ORS 477.001). Forestland classification committees further divide forestland into either timber lands or grazing lands, and per-acre rates paid to ODF to cover Base Fire and severity resources vary according to this designation (ORS 526.324).

In total, ODF provides protection for approximately 16 million forestland acres via its nine Fire Protection Districts (FPD) and under agreement with three private Forest Protective Associations (FPA), visible in Figure 5.<sup>4</sup>

Figure 5. ODF Districts and Operating Associations<sup>5</sup>



SOURCES: ODF, US Census Bureau, USGS | © 2021 Earth Economics

The districts and operating associations are supported by three regional offices, also listed in Figure 6.<sup>xiii</sup> These regional offices provide coordination and support for each FPD and FPA within

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<sup>4</sup> Rangeland Fire Protection Associations (RFPA) are cooperative landowner groups that protect rangeland in eastern Oregon and receive training and limited support from both federal agencies and ODF. They are out of scope for this study.

<sup>5</sup> Gray indicates land outside of ODF Fire Protection Division jurisdiction

the region. **Unless it is necessary to highlight a critical distinction between FPD and FPA, the term “district” will be used for both entities for simplicity throughout this document.**

*Figure 6. ODF Fire Protection Division Structure*

Districts	Operating Associations	Regional Offices
Central Oregon	Coos FPA	Eastern
Klamath/Lake	Douglas FPA	Northwest
North Cascade	Walker Range FPA	Southern
Northeast		
Northwest Oregon		
South Cascade		
Southwest Oregon		
West Oregon		
Western Lane		

FPD provide Base Fire protection to forested lands within their boundaries, and these landowners pay assessments to cover the costs of Base Fire protection and—for public lands—ODF administrative division and Department of Administrative Services (DAS) charges. Additionally, protected landowners pay assessments to the Oregon Forest Land Protection Fund (OFLPF) which grants access to the ODF Large Fire funding structure; should a fire exceed the resources and budget of the FPD, the FPD is eligible for Large Fire assistance.

FPA are non-profit, private associations that provide Base Fire protection within their geographic boundaries. Membership is not mandatory for forestland owners within the geographic boundaries of an association; FPA contain both member and non-member forestlands. Each FPA provides Base Fire protection to all forestland owners within its boundaries, regardless of

membership status. FPA membership fees for landowners are minimal and are used for board-related activities; membership grants the landowner a seat on the FPA governance board.<sup>6</sup>

Aside from the optional membership assessment, member and non-member forestland owners within an FPA pay the same assessments as do protected lands within FPD—these assessments cover the costs of Base Fire protection and—for public lands—ODF administrative division and DAS charges. As with FPD, the landowners protected by the FPA pay into the Large Fire funding structure by paying assessments to the Oregon Forest Land Protection Fund (OFLPF); should a fire exceed the resources and budget of the FPA, the FPA is eligible for Large Fire assistance.

For clarity, it is useful to note that there are nine additional non-operating associations that exist within FPD. These non-operating associations play a variety of advisory or supporting roles, from collecting assessments on behalf of ODF to owning equipment that is used by the FPD; the cost of maintaining and replacing the equipment is included in the assessment to cover FPD operations. Non-operating associations are typically remnants of historical entities that used to be solely responsible for fighting fire on their own lands, but have since opted to pay ODF to protect their lands.

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<sup>6</sup> At Douglas FPA, total revenues totaled approximately \$6,000 in FY21, for example.

## Discussion

In the '19–'21 ODF Legislatively Adopted Budget Fire Protection Division Narrative, ODF's structure is described as "... 12 forest protection districts, of which three are private, non-profit Forest Protective Associations (FPA)." This appears to create a minor tension with the categorization presented throughout this report, which is 9 Fire Protection Districts and 3 Forest Protective Operating Associations. This choice was made because it is most useful for analysis: each of the 9 FPD and 3 FPA—together, the 12 ODF lowercase *d* districts—have dedicated budgets to provide Base Fire protection to the forestlands within their boundaries. Fundamentally, ODF retains responsibility for protecting forestlands within these district boundaries, either through agreement with FPA or through its own FPD.

### 3.3. ODF-Protected Forestlands by Land Ownership Type

Each district has its own distinct fire regime, as well as a unique blend of landownership and fire protection relationships. For the purpose of this analysis, the protected acreage within each district is identified as either privately-owned, publicly-owned, or federal acreage that is protected by agreement with ODF or which, in the case of USFS, provides its own protection. Figure 7 provides forestland acres by ownership type and district, and Figure 8. presents the same data on a percentage basis.

Figure 7.

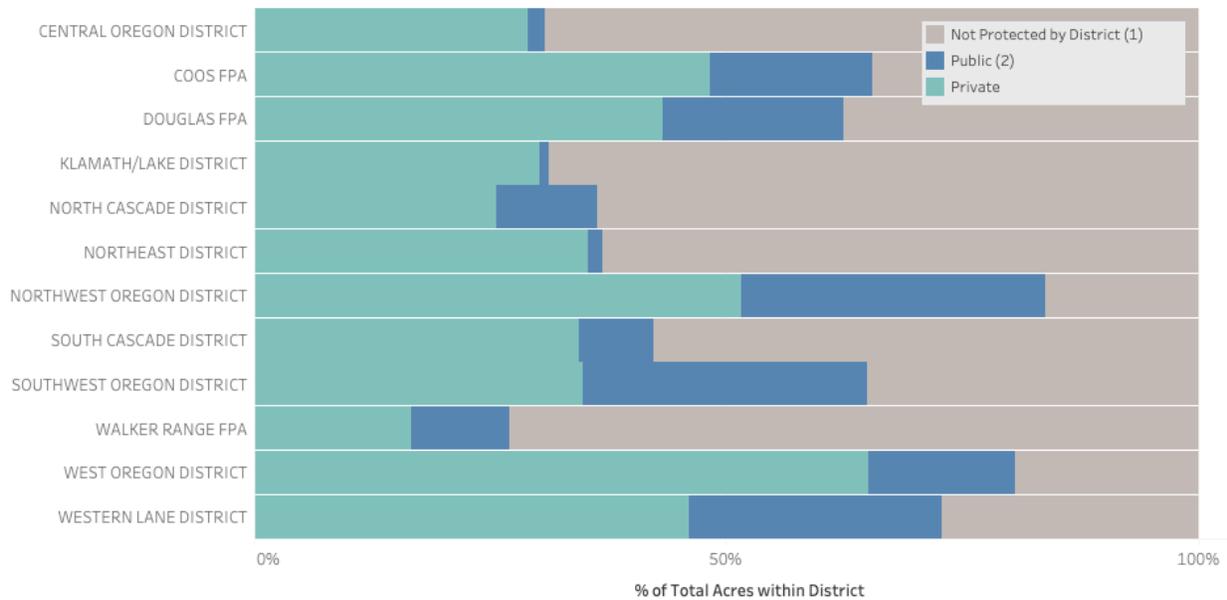
### District Acres With and Without ODF Protection

	Private With Assessment	Public With Assessment (1)	No Assessment (not forested)	With Protection Agreement (2)	W/O Protection Agreement (3)	Total District Acres
CENTRAL OREGON DISTRICT	2,165,012	130,493	370,250	3,216	4,805,634	7,474,604
COOS FPA	1,152,457	146,155	89,223	261,953	734,523	2,384,312
DOUGLAS FPA	1,163,853	17,896	66,142	495,176	944,695	2,687,761
KLAMATH/LAKE DISTRICT	1,458,154	44,621	671,191	1,282	2,650,563	4,825,810
NORTH CASCADE DISTRICT	460,617	68,923	167,199	123,202	976,710	1,796,651
NORTHEAST DISTRICT	1,854,091	53,096	285,867	27,019	3,021,984	5,242,057
NORTHWEST OREGON DISTRICT	1,086,001	578,346	222,076	98,169	118,281	2,102,873
SOUTH CASCADE DISTRICT	923,379	5,077	55,771	205,596	1,493,865	2,683,688
SOUTHWEST OREGON DISTRICT	1,007,317	55,252	157,201	816,483	859,996	2,896,249
WALKER RANGE FPA	114,337	71,734	700	0	501,707	688,477
WEST OREGON DISTRICT	877,185	65,126	68,560	143,912	192,916	1,347,699
WESTERN LANE DISTRICT	496,542	31,903	18,900	256,573	273,507	1,077,425
<b>Total Acres by Type</b>	<b>12,758,944</b>	<b>1,268,623</b>	<b>2,173,080</b>	<b>2,432,580</b>	<b>16,574,380</b>	<b>35,207,606</b>

Source: Custom data request provided by ODF Fire Division, February 2021. Notes: (1) DSL/BOF, County Lands. (2) BLM, BIA, USACE (3) USFS and non-protected federal lands within ODF boundaries.

Figure 8.

### District Composition of Protected Lands



Source: ODF Fire Protection in year 2021. Notes: (1) Largely USFS but also developed urban areas. (2) Includes BLM.

### Private Acreage

Private forestland owners are generally described as small family owners and large industrial owners. There is however a third group—small lots in the urban interface that are not working forests but whose forested lands nevertheless contribute to wildfire risk. Each of these owners pay assessments to ODF and receive fire protection in return. In this report, all three groups are combined under a single term, private owners.

### Public Acreage

Non-federal entities that own public forestlands in Oregon include the Board of Forestry (BOF), the Department of State Lands (DSL), Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, and county lands.

### Federal Acreage Protected Under Agreement

ODF provides fire protection to different federal agencies via contractual agreements. The largest of these agencies—in terms of acreage protected by ODF—is the Bureau of Land Management (BLM), with whom ODF has a longstanding relationship in western Oregon. Prior to 2018, BLM lands west of the Cascade crest paid Forest Patrol Assessments to ODF and received the full protective benefit of Oregon’s Base Fire and Large Fire funding structure. Several costly fires on ODF-protected BLM land over the past decade demonstrated that this arrangement transferred significant Large Fire risk from the federal government to OFLPF and the General Fund, which was deemed an unsustainable arrangement by the Emergency Fire Cost Committee (see Section 3.5). An amended contract between ODF and BLM signed in 2019—the five-year Western Oregon Operating Plan—transitioned some minor fire preparedness and prevention responsibility back to the BLM, and removed them from accessing Oregon’s Large Fire funding structure. BLM continues to pay public landowner per-acre assessments for Base Fire as set by the districts (except for the district deductible, as described in Section 4.1, “Oregon Forest Land Protection Fund”) and benefits from ODF Base Fire protection, but is now responsible for paying its own Large Fire costs.

In addition to BLM, ODF also maintains agreements to protect land administered by the Bureau of Indian Affairs and the Army Corps of Engineers.

Within a district, there may be forestland that is unprotected by ODF (non-forestland acreage within a district is protected by urban/rural fire departments). Examples of unprotected acreage include national forests (where the USFS is responsible for wildfire management) or a large county park receiving fire protection from a local fire agency. Should a fire grow large and require ODF involvement, the landowner is responsible for repaying all fire suppression–related costs to ODF.

### 3.4. Budgeting and Revenue Collection at ODF

All non-federal forestland owners in Oregon are required by the State to maintain an adequate level of fire protection on their lands. This is accomplished by paying the Forest Patrol Assessment or by creating a Board of Forestry–approved forest protection plan (ORS 477.210).

The FPD and FPA budgets are structured to support preparedness and provide Base Fire protection with the goal of regularly containing 98% of fires before they reach 10 acres.<sup>xiv</sup> Maintaining operational readiness to quickly attack fires is critical to minimizing the number and cost of large wildfires.

Delivering Base Fire protection follows the same process across all districts; each will:

- Work with ODF and local landowners to estimate the total cost for providing Base Fire preparedness and suppression for the upcoming fire season, based on each district’s unique fire risk and resources demands.
- Set the annual per-acre Forest Patrol Assessment to cover the anticipated Base Fire costs for the upcoming season, which includes operational and certain administrative costs.
- Seek budget agreement from local landowners and final budget approval from the Board of Forestry.

The Fire Protection Division coordinates state-wide fire response across districts by allocating severity resources to mitigate elevated regional fire risk, and by organizing the assets and

incident management teams to respond to large fires. The Division prepares a biennial budget for these activities.

Figure 9 and Figure 10 provide an overview of how these budgets are funded for both FPA and FPD (for details on the different funding mechanisms listed, please refer to Section 5, “Funding Mechanisms – Detail”).

Figure 9. Budget and Collection of Funds: FPD

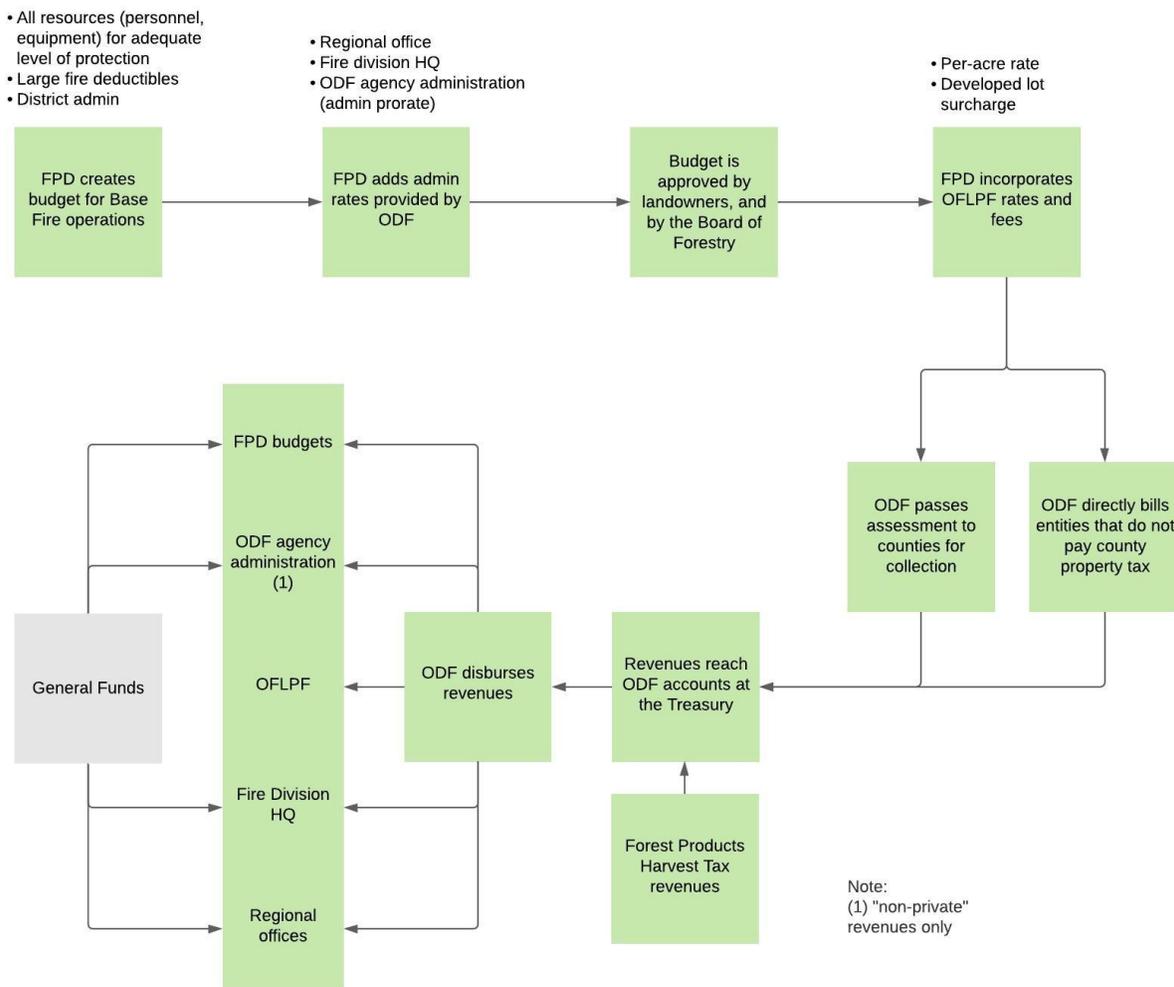
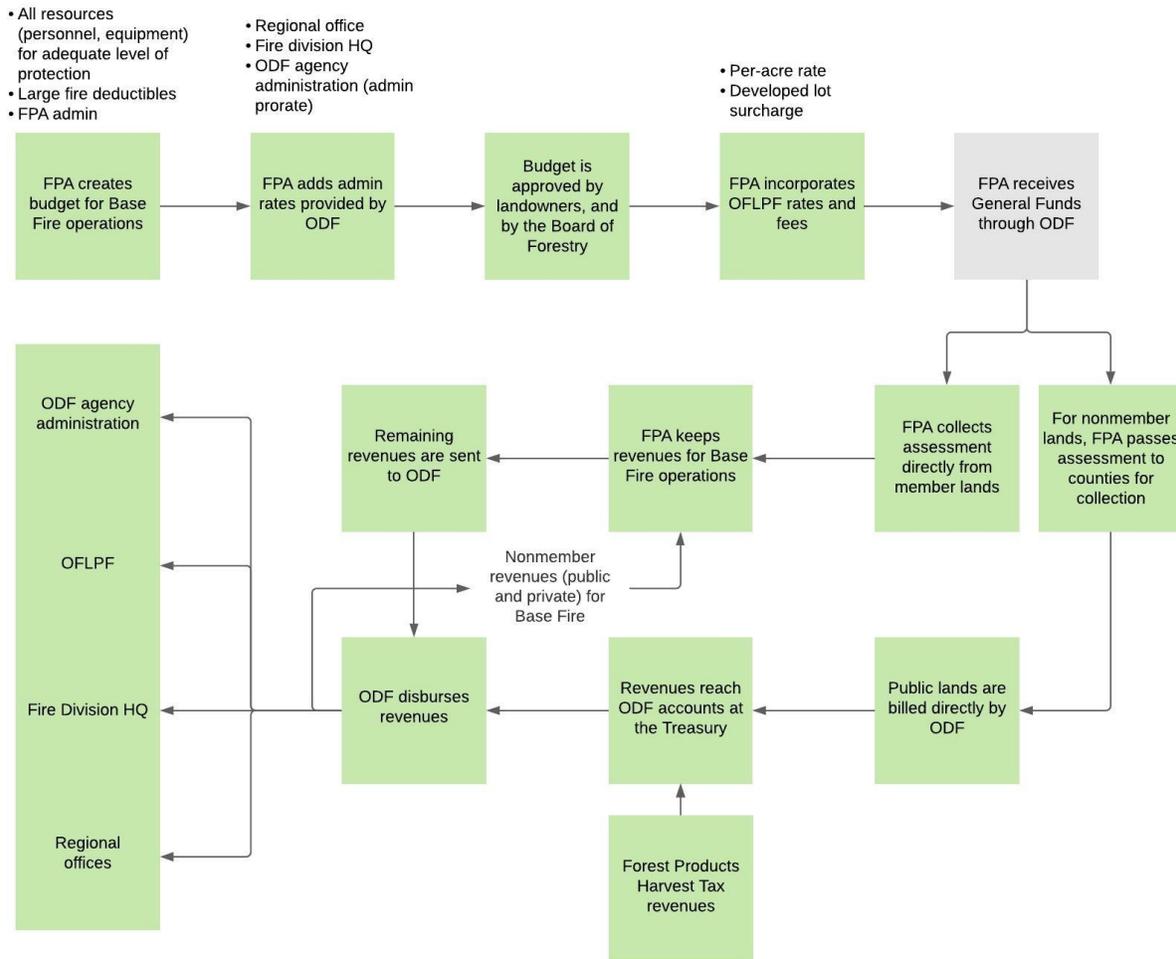


Figure 10. Budget and Collection of Funds: FPA



Revenue is collected via two pathways—through the county tax collection system, or direct bill—but these tools are used differently at FPA and FPD. In FPD, most revenues are collected via the county tax collection system which first routes the funds to ODF’s accounts at the Treasury, after which they are disbursed by ODF. The remaining revenue is collected directly from landowners, typically public landowners that do not pay county taxes, through a direct bill program. In FPA, member lands are billed directly by the FPA, whereas non-member lands are billed through county tax collection.

#### Discussion

The difference in how these revenues are collected at FPA and FPD is notable, because the revenues raised from FPA member lands never reach ODF's accounting system; to arrive at a complete measure of district revenues (as in Section 6, "District Budgets and Actual Revenues for Base Fire Protection"), it is necessary to combine ODF data with accounting data from each FPA.

Another key difference between FPA and FPD from the perspective of budgeting and revenue collection is that FPA operate on a cash flow basis whereas FPD operate on an accrual basis. This difference is important because it affects when matching General Funds arrive: in FPA, General Fund dollars are appropriated in several lump sums based on the budgeted assessment rate but in FPD, General Fund dollars are appropriated throughout the year when funds that receive a General Fund match are spent.

A final difference is that FPA, as private associations, are not governed by ODF/DAS rules concerning personnel expenses and contracting. This difference conveys more flexibility for the FPA in managing costs over time as compared with FPD.

#### Discussion

One budget-related challenge cited in multiple interviews is the tension between the annual district operating budgets and the ODF legislatively approved biennial budget, particularly with respect to General Fund dollars. The biennial budget sets the General Fund contribution over a period of two years; a large portion of these funds is intended to match landowner assessments. However, because the rates assessed to landowners vary each year in response to actual expenditures diverging from budgets, additional General Funds may be required beyond what is approved in the biennial budget to match rate increases.

### 3.5. Emergency Fire Cost Committee

The Emergency Fire Cost Committee (EFCC) consists of four members, appointed by the Board of Forestry, who “... shall be forest landowners or representatives of forest landowners whose forestland is being assessed for forest fire protection within a forest protection district. At least one member shall be selected from each forest region of the state” (ORS 477.440). The EFCC oversees the allocation of funds in OFLPF (see Section 4.1, “Oregon Forest Land Protection Fund”) which acts as an insurance policy to spread the expense of large fire costs across all districts. In addition, the EFCC determines eligibility for and payment of Large Fire costs, and acts as the conduit by which private landowners can provide feedback on the operation and funding of the Fire Protection Division.

### 3.6. Oregon State Legislature

Each biennium, ODF creates its agency request budget and passes it to the executive branch. This, along with other agency budgets, eventually becomes the Governor’s budget. This provides the framework on which the Legislature builds the legislatively adopted budget for the biennium—this includes the final list of budgeted expenses for the Fire Protection Division. At each step, the agency request budget is scrutinized and adjusted.

General Fund appropriations support Base Fire, Large Fire, and severity resources at ODF, and the Legislature will also authorize special purpose appropriations to help pay for wildfire in Oregon. These contributions are allocated using a complex variety of cost-sharing calculations that are described in detail in the following section.

## 4. Budget Vehicles and Funding Sources

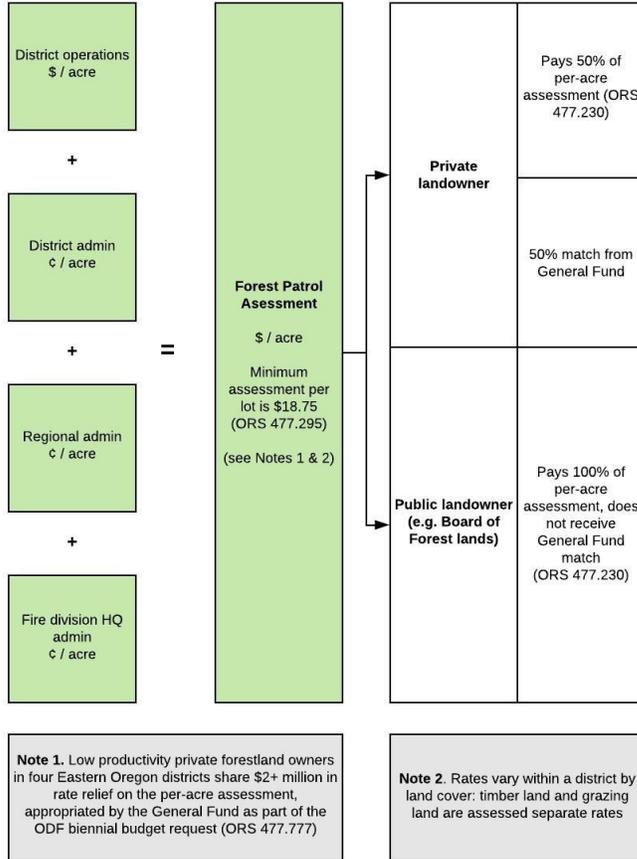
The State employs a variety of funds and techniques to pay for wildfire preparedness and suppression. For fiscal years with low to moderate wildfire activity and damages, the majority of expenses fall within the district budgets for Base Fire with limited Large Fire costs are shared between OFLPF and the General Fund. In years with high fire complexity and cost, the General Fund covers a greater share of total liability and may be supplemented with funds from FEMA disaster grants, and Oregon’s wildfire insurance policy. Though these funds reduce the General Fund allocation, in reality, the general liability can be substantial for large events. The following sections describe the function, high-level procedures, and financial detail for each of these mechanisms. Section 5, “Funding Mechanisms – Detail,” provides specific details about individual funding mechanisms.

Figure 11, Figure 12, and Figure 13 illustrate how Base Fire, Severity Resources, and Large Fire are funded, highlighting the contributions of landowners, the General Fund, and other funding mechanisms that finance wildfire preparedness and suppression on ODF-protected lands.

Figure 11.

### Base Fire Protection

Each year, fire districts and operating associations create budgets to fund an adequate level of protection, which ensures that the necessary equipment and personnel are available to fight fire. These budgets also include certain administrative costs that allow ODF to coordinate fire preparedness and suppression across the district, region, and state levels. These costs are computed on a per-acre basis, and combine to form a per-acre rate unique to each district. This is called the **Forest Patrol Assessment**, and it raises revenue to support these budgets.



### Districts share responsibility for large fires

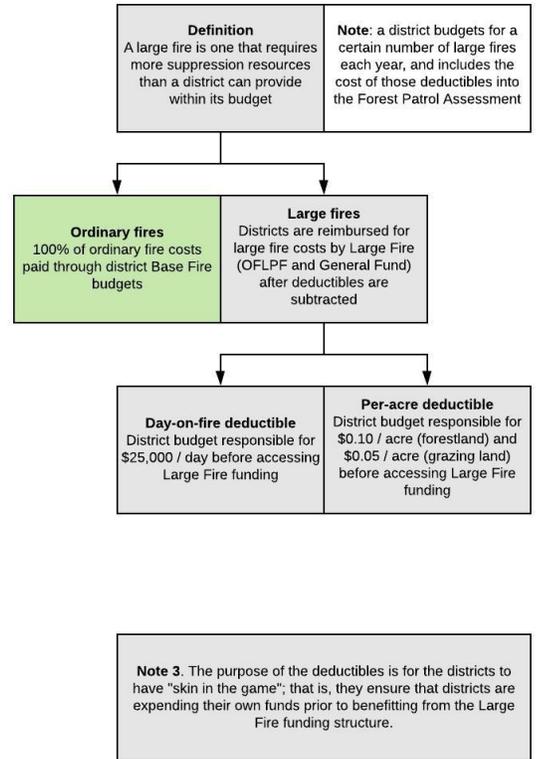
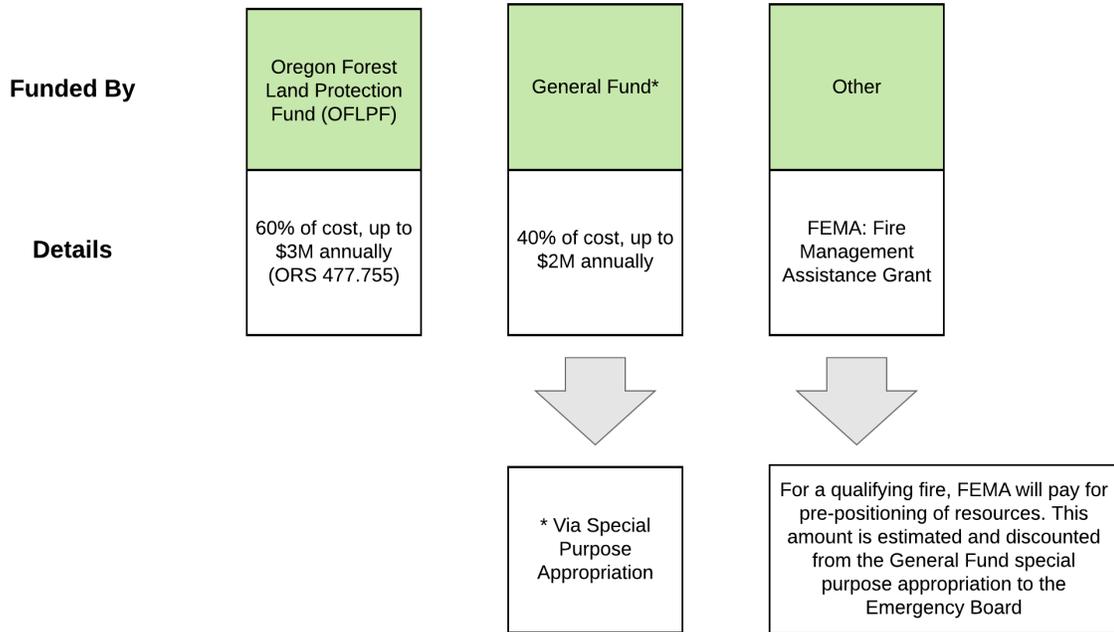


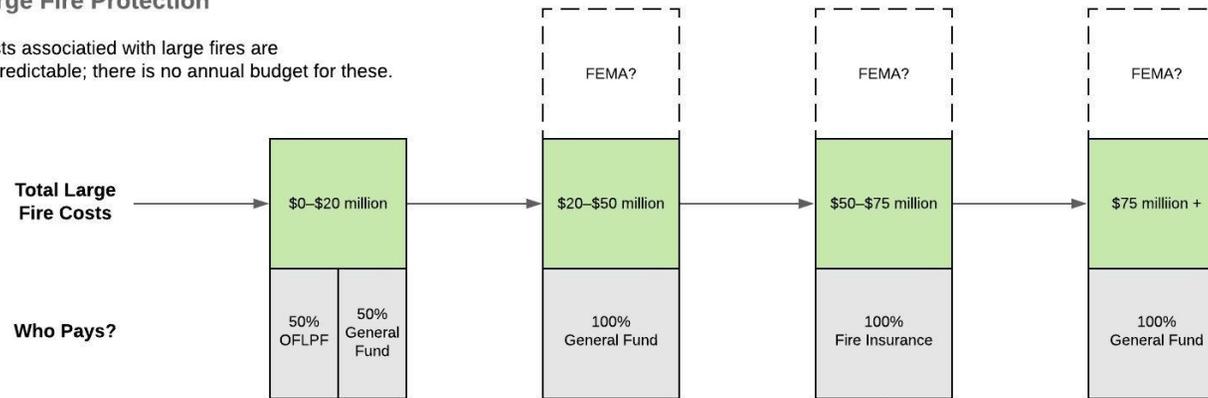
Figure 12.

### Severity Resources



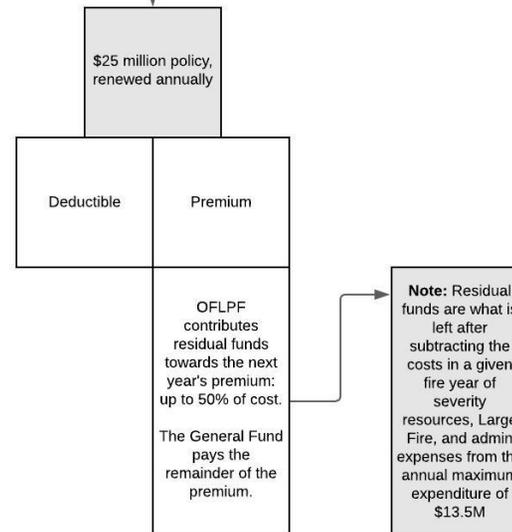
### Large Fire Protection

Costs associated with large fires are unpredictable; there is no annual budget for these.



### Other contributions to Large Fire protection:

<p><b>FEMA.</b> Often, large fires qualify for federal disaster aid through FEMA. These disaster awards are projected each year and reduce the total Large Fire cost accordingly.</p>
<p><b>Landowners</b> contribute fire-trained staff, equipment, and labor to fighting large fires. These contributions are eligible for reimbursement and charged to Large Fire.</p>
<p><b>ODF State and Private Forest Divisions.</b> Trained staff (admin, field staff) and equipment are borrowed from their usual roles and deployed for incident response. These expenses are charged to Large Fire, rather than agency budgets.</p>
<p><b>Federal and out-of-state resources.</b> When resources from outside Oregon help with large fires, the State receives invoices for services rendered and are the responsibility of Large Fire.</p>



#### 4.1. Oregon Forest Land Protection Fund

The Oregon Forest Land Protection Fund was established by the Legislature (ORS 477.750) with the purpose of equalizing Large Fire suppression costs among ODF districts. The funding system is designed to insulate individual districts from costly fire years: all districts contribute to the Fund so that money will be available to any individual district to pay Large Fire costs. To access these funds, each district must first meet two Large Fire deductibles: \$25,000 per day on fire and an acreage deductible of \$0.10 per acre for timber and \$0.05 per acre for grazing.

The amount budgeted for deductibles varies by district, but within a given district, the acreage deductible is a fixed cost based on the composition of protected lands, and the per day on fire deductible is a variable cost based on the anticipated number of Large Fire days. Both deductibles are included annually in district Base Fire budgets.<sup>7</sup> The individual funding mechanisms that feed OFLPF are discussed in detail later in this report (Section 5.2, “Landowner Assessments”); their unit costs and maximum annual expenditures by type are summarized in Figure 14.

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<sup>7</sup> The number of projected Large Fire days that a district can include in its budget is limited by its size and land type composition: total cost for the day on fire deductible cannot exceed a maximum district exposure of \$0.15 per acre for timber and \$0.06 per acre for grazing.

Figure 14.

### Oregon Forest Land Protection Fund (OFLPF)

Revenue Source	Per-acre assessment (ORS 477.880)	Minimum lot assessment (ORS 477.295)	Developed lot surcharge (ORS.477.277)	Forest Products Harvest Tax (ORS 321.015)	Interest (ORS 477.750)
Rate	Westside Forestland \$0.05 / acre	\$3.75 / lot	\$47.50 / lot	\$0.625 / MBF	n/a
	Eastside Forestland \$0.075 / acre			↓	↓
	All Grazing Land (Class 3) \$0.075 / acre			The first 25 MBF harvested per owner each year are untaxed	State Treasurer invests the fund; earned interest is credited to the fund

<p><b>General note:</b> All revenue sources can be decreased for a year if OFLPF is above its reserve base (ORS 477.760).</p> <ul style="list-style-type: none"> <li>-Below \$22.5M: collected as usual;</li> <li>-\$22.5M&lt;OFLPF&lt;\$30M: reduced 50%;</li> <li>-Above \$30M: not collected</li> </ul>	<p><b>Annual expenditures for OFLPF (ORS.477.755)</b></p> <ol style="list-style-type: none"> <li>1. Total expenditures are capped at \$13.5M</li> <li>2. Up to \$3M for severity resources</li> <li>3. Up to \$10M for Large Fire</li> <li>4. Up to \$500,000 for admin expenses, determined by EFCC and approved each biennium by the Legislature</li> <li>5. After fire season costs are totalled, residual money is put towards the insurance premium, not to exceed 50% of the premium cost or the \$13.5M annual limit. Premium not covered by OFLPF is the responsibility of the General Fund.</li> </ol>
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Notes and additions on the revenue streams as outlined in ORS (Figure 14) versus those that appear in ODF’s accounting system as seen in the OFLPF financial summary (Figure 15 and Figure 16):

- **Developed lot surcharge** is “improved lot assessment.”
- **Cost recovery.** These are funds recovered from responsible parties when liability is demonstrated.
- **BLM assessment.** This amount is reduced to zero in FY2020, reflecting the current five-year Western Oregon Operating Plan in which BLM continues to pay assessments for Base Fire

protection from ODF (minus the rate to cover the district deductibles), but no longer contributes to OFLPP and does not receive any Large Fire dollars from the State. Instead, BLM reimburses ODF for Large Fire suppression on its lands in western Oregon.

Figure 15.

Revenues Contributing to OFLPP (Fiscal Years 2011-2020)

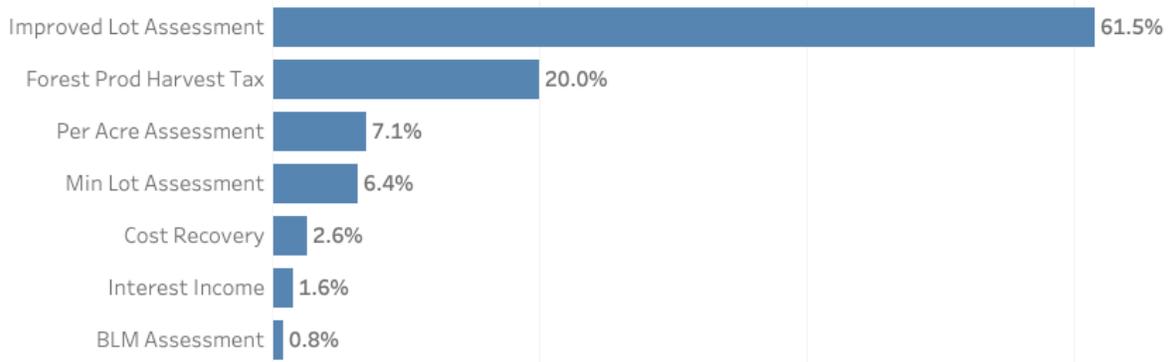
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Improved Lot Assessment	6,745,915	6,873,431	7,108,674	7,088,909	7,262,645	7,273,366	7,337,437	7,402,599	7,154,674	7,639,879
Forest Prod Harvest Tax	1,977,041	2,242,277	2,401,364	2,557,736	2,435,516	2,290,430	2,292,029	2,413,537	2,417,444	2,280,614
Per Acre Assessment	747,513	795,352	771,660	822,132	844,747	820,664	990,532	810,937	828,932	846,400
Min Lot Assessment	737,088	738,178	757,005	760,620	757,091	742,555	739,922	745,352	713,210	753,777
Cost Recovery	457,500	2,700	854,293	2,100	320,536	1,118,353	321,487	300	125	0
Interest Income	36,617	71,698	115,034	116,717	103,798	124,721	283,599	349,104	328,938	307,933
BLM Assessment	121,469	122,447	121,361	121,330	121,213	119,865	119,865	1,252	120,403	0
<b>Grand Total</b>	<b>10,823,143</b>	<b>10,846,083</b>	<b>12,129,392</b>	<b>11,469,545</b>	<b>11,845,547</b>	<b>12,489,955</b>	<b>12,084,873</b>	<b>11,723,080</b>	<b>11,563,726</b>	<b>11,828,604</b>

Source: Data provided by ODF Administration. Notes: Query is based on revenue in fund 9510 (9500 for older years); Excludes transfer activity related to claims and Large Fire.

Figure 16 illustrates the relative contribution of different sources to OFLPP over the ten-year period.

Figure 16.

OFLPF Revenue Proportions by Type (Fiscal Years 2011-2020)



Source: Data provided by ODF Administration

Funds in the OFLPF are maintained in the State Treasury and are expended upon approval of the EFCC administrator, who acts on behalf of the committee to ensure that disbursement is consistent with laws and processes. OFLPF expenditures are often made in conjunction with matching General Fund contributions. Passed by the Legislature in 2013, the *Wildfire Protection Act* (WPA) restructured the funding of Large Fire in Oregon to take a cost-sharing approach between OFLPF and the General Fund, moving from OFLPF spending the first \$10 million followed by the General Fund, to sharing the first \$20 million in expenditures dollar for dollar. The WPA also authorized for the first time a strategic investment component to EFCC/OFLPF authority, as well as outlined OFLPF cost share responsibility with the General Fund for severity resources and the OFLPF contribution to the annual insurance premium. These changes were phased in over several years with implementation complete for the 2017–2019 biennium.

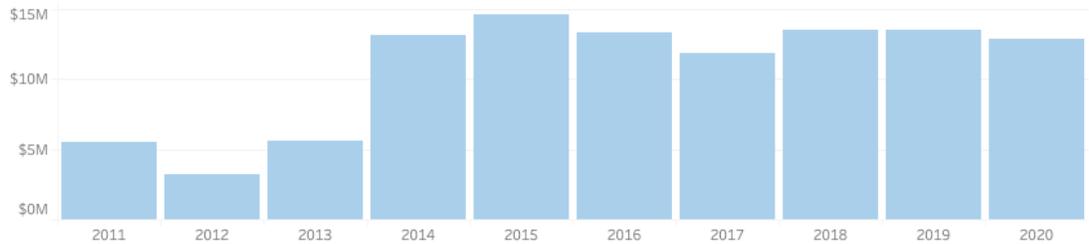
See page 36 for additional details on these authorized expenditures.

Figure 17 illustrates the breakdown of expenditures by year along with the proportion OFLPF versus General Fund for each year.<sup>8</sup> The final proportion varies depending on the overall magnitude of fire costs for the year. Additionally, ODF and EFCC are presently working to reconcile all fire season related cost centers back through fiscal year 2014, so these numbers may vary depending on the data request date.

Figure 17.

OFLPF Expenditures (Fiscal Years 2011-2020)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Admin Costs	\$0.06M	\$0.07M	\$0.07M	\$0.10M	\$0.11M	\$0.11M	\$0.21M	\$0.12M	\$0.17M	\$0.15M
Insurance Premium	\$0.41M	\$0.43M	\$0.41M	\$1.01M	\$1.92M	\$0.39M	\$1.69M	\$0.38M	\$0.33M	\$2.01M
Large Fire	\$5.04M	\$2.71M	\$5.14M	\$10.00M	\$10.00M	\$10.00M	\$5.80M	\$10.00M	\$10.00M	\$6.16M
Severity Resources				\$2.03M	\$2.57M	\$2.83M	\$2.66M	\$3.00M	\$3.00M	\$3.00M
Strategic Investments							\$1.50M			\$1.50M
<b>Grand Total</b>	<b>\$5.50M</b>	<b>\$3.20M</b>	<b>\$5.62M</b>	<b>\$13.13M</b>	<b>\$14.60M</b>	<b>\$13.34M</b>	<b>\$11.86M</b>	<b>\$13.50M</b>	<b>\$13.50M</b>	<b>\$12.82M</b>



Source: Data provided by ODF Administration. Notes: Does not include 2020 Fires that occurred in Fiscal Year 2021.

<sup>8</sup> As noted on page 6, “Fiscal Years and Fire Years,” these data do not include the costly fires of fire year 2020, which largely started burning in September 2020, which places these costs in fiscal year 2021. Data in Figure 17 would show OFLPF maxing out both severity resources and Large Fire expenditures, and significant Large Fire General Fund expenditures; the insurance policy is not expected to pay out, as FEMA disaster declarations are projected to reduce total Large Fire costs below the \$50 million threshold.

The expenditures from OFLPF are not intended to exceed \$13.5 million per year and are outlined in statute according to the following proportions (ORS 477.755):

#### Large Fire Costs

OFLPF is authorized to spend up to \$10 million on Large Fire expenses; this is the primary mechanism by which landowner dollars help to mitigate the cost of Large Fire across all districts. If an insurance policy is in place, these expenditures count towards the insurance deductible.

#### Severity Resources

OFLPF is authorized to spend up to \$3 million on severity resources. This amount will be equal to 60% of the total expenditure on severity resources.

#### Administrative Costs

OFLPF administrative expenses cannot exceed the limit authorized by the Legislature each biennium.

#### Insurance Premiums

At the end of a fire season, expenditures on Large Fire, severity resources, and administrative expenses are totaled. The difference between this amount and the \$13.5 million expenditure cap is then spent on the coming fire year's insurance premium—up to 50% of cost, with the General Fund paying the other 50% of the premium. In years where OFLPF does not have available funds below its expenditure cap to reach 50% of the premium cost, the General Fund pays the difference.

See Section 4.3, "Wildfire Insurance Policy" for additional detail.

#### Strategic Investments

In low fire years where OFLPF does not approach its expenditure cap, the EFCC may choose to spend these residual funds on strategic investments—often equipment—that add to the readiness resources available for fire preparedness and suppression. These funds are transferred from OFLPF to a Strategic Investment Fund, where EFCC tracks fully funded projects, challenge (i.e., partially funded) projects, approved expenditures, and expenditures to date.

## 4.2. General Fund

The State of Oregon’s General Fund contributes to both Base Fire and Large Fire preparedness and suppression, as well as severity resources, and ODF agency administrative cost.

### Base Fire: Private Landowner Match and Low-Productivity Land Subsidy

At the district level the General Fund is used to match private landowner assessments dollar-for-dollar and provide for annual rate relief for low productivity lands in eastside districts. Figure 18 provides the total annual General Fund allocations to districts.

Figure 18.

General Fund Payments to Districts (Fiscal Years 2015-2020)



Source: Data provided by ODF Administration

### Severity Resources

Each year, the General Fund contributes up to \$2 million to the severity resources that are made available to support the districts in times of elevated risk (as outlined in Figure 12 on page 29). This amount will be equal to 40% of the total expenditure on severity resources.

### Admin Prorate

The admin prorate is a per-acre assessment that pays for the financial and planning services provided by ODF agency administration that support Fire Division operations including HR, IT,

finance, motor pool, public affairs, procurement, and budget, as well as state DAS charges.<sup>9</sup> Currently, public landowners pay the admin prorate, and private landowners do not. The General Fund contributes the private landowner share of the admin prorate; these funds appear in ODF’s biennial budget request.

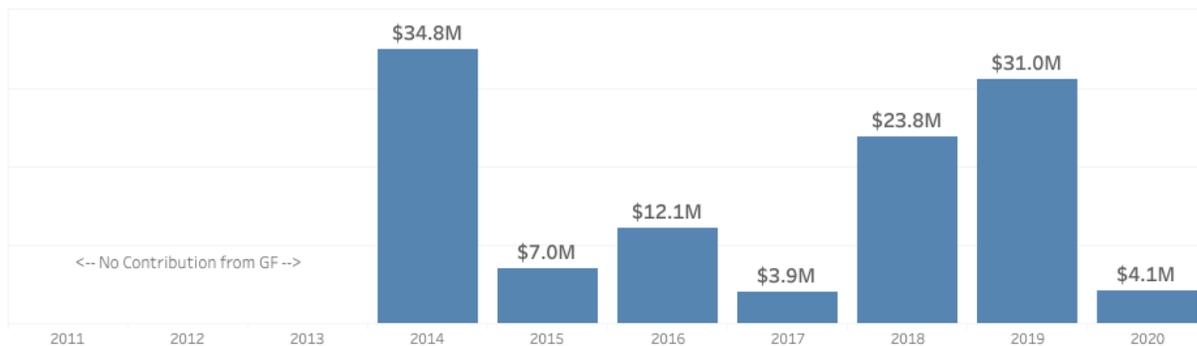
For more detail see page 52, “Admin Prorate.”

### Large Fire

Large Fire costs not covered by other funding sources (OLFPP, FEMA, insurance, or cost recoveries from partners or responsible landowners) are a cost for the State. Annual General Fund expenditures for Large Fire are shown in Figure 19.

Figure 19.

General Fund Allocation for Large Fire (Fiscal Years 2011-2020)



Source: Data provided by ODF Administration. Note: Calendar year 2020 fires are not included because they occurred in fiscal year 2021.

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<sup>9</sup> The State Forests and Private Forests Divisions of ODF also benefit from these services; they also contribute to the total cost of ODF agency administration and DAS charges.

## Discussion

Recurring high-cost fire seasons in Oregon have resulted in a growing funding gap due to time required for ODF and partners to gather and submit reimbursement requests for complex events in combination with the extended federal reimbursement timeline and cost-audit process which may require years to complete. As a result, reconciling the actual expenditures seen in Figure 19 with the lingering receivables is an active and ongoing process.

ODF must cover outstanding balances for reimbursable expenses until the funds are received. There is no mechanism within the ODF biennial budgets to account for the multi-year impact of these lingering reimbursables, which poses a cash flow challenge. As a workaround, ODF uses a combination of operational financing sources including the use of Treasury loans, operational cash, supplemental General Fund appropriations, and even the occasional loan from OFLPF. Interest on borrowing is covered by the General Fund. The gap may not be sustainable if high-cost fire seasons become more frequent.

### 4.3. Wildfire Insurance Policy

As part of its Large Fire funding structure, the State of Oregon holds a wildfire insurance policy with Lloyd's of London to protect the General Fund; today, the policy provides reimbursement of up to \$25 million in net fire costs exceeding the \$50 million deductible.<sup>10</sup> Notably, since this benefit is presently capped at \$25 million, the General Fund may still have significant liability for fire years exceeding \$75 million, depending on the extent of FEMA reimbursement. Fiscal year

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<sup>10</sup> For insurance, net fire costs mean costs to the State after subtracting expected reimbursements; the large amount of federal aid anticipated explains why the damaging 2020 fire season did not trigger the insurance benefit.

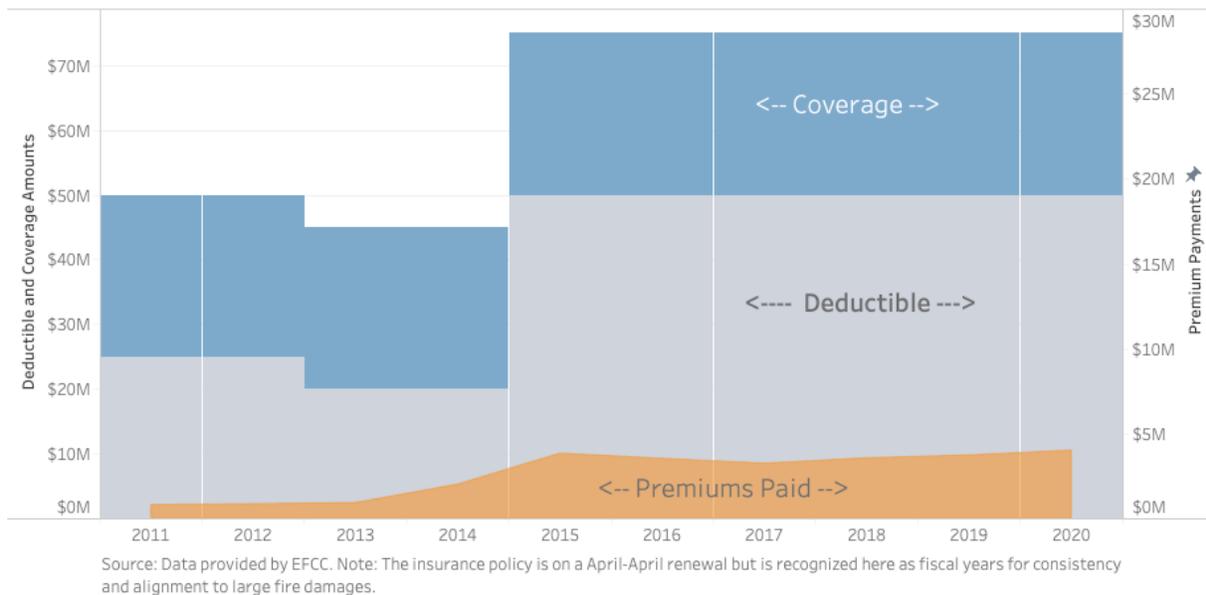
2020 provides an example of a high-cost fire season that did not result in reimbursable insurance claims due to the likelihood of FEMA reimbursement.

This policy is unique to Oregon. Lloyd’s of London, in its role as broker, facilitates the policy by bringing together a syndicate of multiple specialist underwriters who decide on price and terms for the policy.<sup>xv</sup> The protection offered by Lloyd’s of London each year depends on two things: whether the underwriters choose to offer the policy, and whether the State decides to purchase the policy.

The annual premium, deductible, amount of coverage, and insurance payout are subject to change each year (though the amount of coverage has not changed since 2003). Figure 20 shows these fluctuations.

Figure 20.

Wildfire Insurance Premium, Deductible, and Coverage (Fiscal Years 2011-2020)



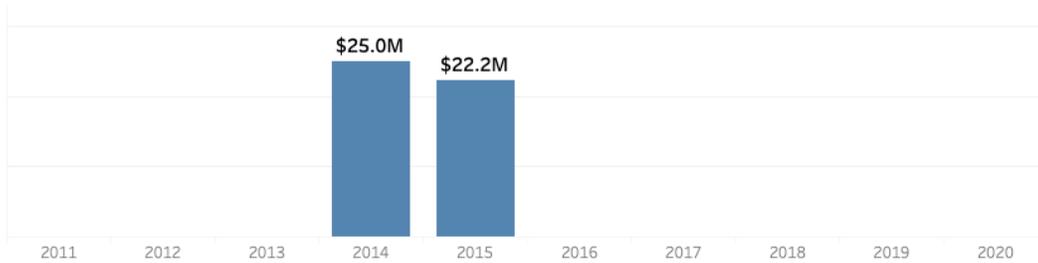
Over the past ten fiscal years, the policy has provided a net benefit (benefit received less premiums paid) to the State of approximately \$20.7 million. Figure 21 shows insurance premiums paid by source of funds and benefits received over the ten-year period.

Figure 21.

Large Fire Insurance Premiums (Fiscal Year 2011-2020)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
<b>General Fund</b>	405,795	427,463	409,877	1,006,020	1,916,408	3,133,360	1,686,440	3,184,265	3,201,253	2,005,201	17,376,081
<b>OFLPF</b>	405,795	427,463	409,877	1,006,020	1,916,408	392,831	1,686,440	375,779	326,991	2,005,201	8,952,804
<b>Other Funds</b>									198,020		198,020
<b>Premium Cost</b>	<b>811,589</b>	<b>854,926</b>	<b>819,753</b>	<b>2,012,040</b>	<b>3,832,816</b>	<b>3,526,191</b>	<b>3,372,880</b>	<b>3,560,044</b>	<b>3,726,264</b>	<b>4,010,402</b>	<b>26,526,906</b>

Large Fire Insurance Claims Paid



Source: Data provided by ODF Administration. Note: This chart does not reflect calendar year 2020 fires. Insurance policy is on an April-April renewal but is shown here in fiscal years to for consistency and alignment to large fire damages.

Discussion

One theme that emerged from multiple conversations over the course of the study is the role of the insurance policy in safeguarding the sustainability of fire funding in Oregon. The terms of the policy are adjusted and renewed on an annual basis, and retaining the policy each year requires agreement between insurer and the insured party. Should the policy not be offered by Lloyd’s of London or not purchased by the State, the General Fund would shoulder a substantial amount of additional financial risk.

4.4. Federal Emergency Management Agency

FEMA delegates authority to FEMA Regional Administrators to provide states with federal assistance for fire suppression activities. Once authorized, the Fire Management Assistance Grants (FMAG) can support “equipment, personnel, and grants to state, local and tribal

governments for control, management, and mitigation of any fire ... that might become a major disaster.”<sup>xvi</sup> FMAG generally cannot be applied to federal lands.

Criteria used to evaluate FMAG requests include:

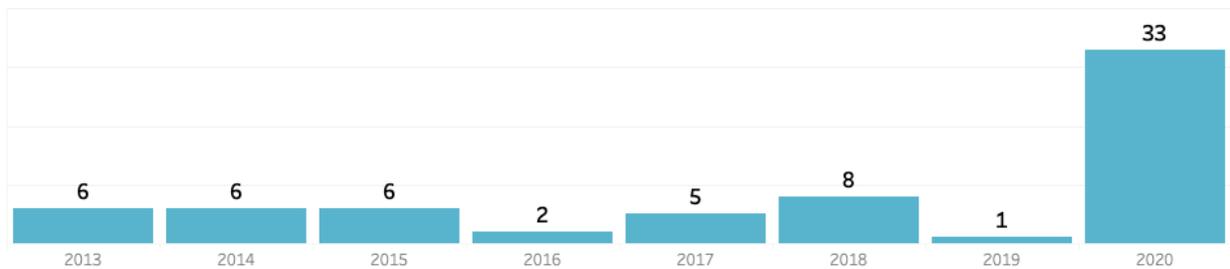
- Threat to lives and property including critical infrastructure
- Availability of state and local fire resources
- High fire danger
- Potential economic impact

FEMA has established dollar-value thresholds for qualification of single and cumulative events. For Oregon in 2021, the thresholds are \$296k and \$890k, respectively.<sup>xvii</sup>

In addition to FMAG funds, the state may request an Emergency or Major Disaster Declaration under the Stafford Act.<sup>xviii</sup> Once approved by the President, an Emergency Declaration can facilitate assistance up to \$5 million for a single event. A Major Disaster Declaration provides a broader and longer-term assistance package. Figure 22 shows state and county disaster declarations in Oregon since 2010.

Figure 22.

FEMA Fire Disaster Declarations (Calendar Years 2010 - 2020)  
Includes county and state-wide declarations



Source: <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties> Note: No approved declarations in 2010 - 2012. Chart does include calendar 2020 large fire events.

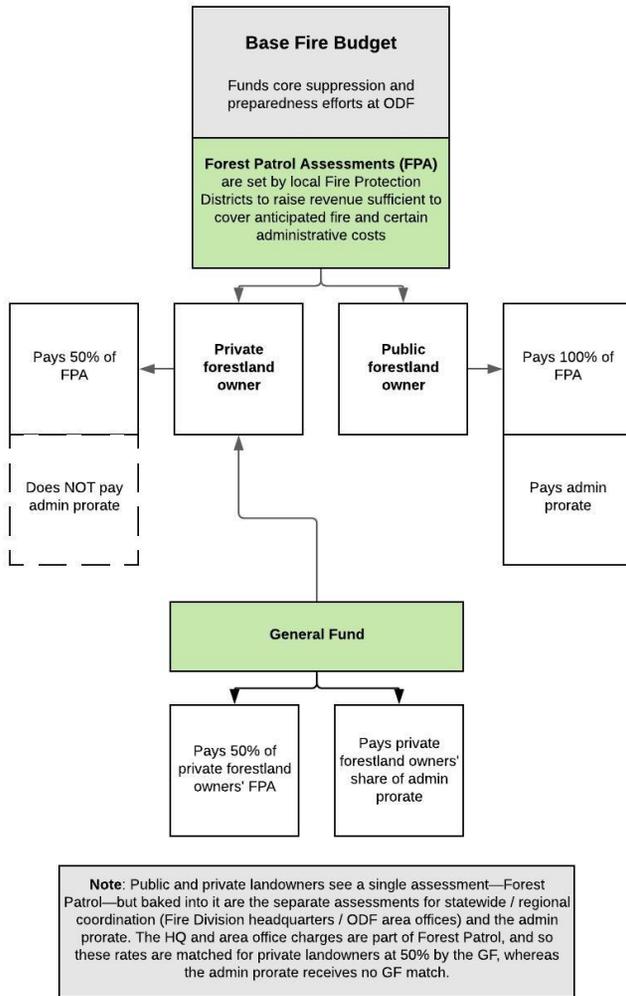
When FEMA funds flow to Oregon, they go to the ODF account at the Treasury, and are disbursed to the districts, OFLPF, and the Fire Protection Division, as appropriate. As discussed on page 38 (“Large Fire”), the challenge with FEMA disaster awards is that reimbursement for expenses may

be delayed for several years due to time required to submit and process applications, prepare application appeals, and receive funds. Despite these time lags, funds from these declarations reduce net fire costs, which explains why a catastrophic fire year like 2020 with 33 disaster declarations does not trigger the wildfire insurance benefit.

## 5. Funding Mechanisms – Detail

Based on a review of wildfire funding mechanisms in multiple states conducted by University of Idaho researchers, Oregon appears to have the most complex array of funding mechanisms for supporting wildfire preparedness and suppression.<sup>xix</sup> This section provides a detailed description of the processes and procedures associated with each mechanism as well as financial data providing budget and/or actuals for each. Priority has been given to mechanisms representing the greatest revenue. This complex system is outlined in Figure 23.

Figure 23. ODF Fire Protection



Severity Resources	Oregon Forest Land Protection Fund (OFLPF)	General Fund
Strategically located firefighting assets, mostly air support, used in extreme fire conditions to prevent small fires from growing large		
<b>Note:</b> when used on large fires, charged to Large Fire rather than Severity Resources budget	Up to 60% of total cost, capped at \$3 million per year (ORS 477.755)	Remainder of budget is appropriated by the Legislature

Large Fire Protection		These fires are unpredictable; no annual budget for these	
<b>OFLPF</b> capped at \$10 million annually (ORS 477.755)		Interest generated is reinvested in the fund	ORS 477.750
<b>General Fund</b>	Shares first \$20 million 50/50 with OFLPF; additional (minus insurance) falls to General Fund	Per-acre assessment 5 / 7.5 cents for W/E forestlands / class 3 grazing lands	ORS 477.880
<b>Fire insurance</b>	\$25 million policy, available when large fire costs reach \$50 million	FPHT; harvest tax of 62.5 cents / 1000 board feet; first 25,000 board feet exempt	ORS 321.015
		Improved lot surcharges; \$47.50 per lot	ORS 477.277
		\$3.75 per lot out of the minimum assessment for Forest Patrol Assessment	ORS 477.295

## 5.1. Forest Products Harvest Tax

The Oregon Forest Products Harvest Tax (FPHT) applies to timber and timber-derived products collected on all private and public lands in Oregon, except for most tribal lands. The tax generally applies to all products measured in board feet, as well as logs, chips, poles, and piling which are converted to MBF (thousand board feet) using formulas from the Department of Revenue.<sup>xx</sup>

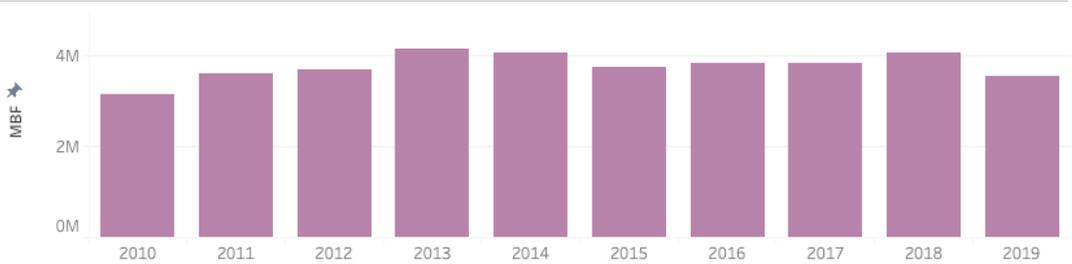
In 2020, the FPHT rate was \$4.13 per MBF, with the first 25 MBF per filer exempt from taxation.<sup>xxi</sup> Revenue generated by this tax is earmarked for five different uses, four of which do not directly support wildfire preparedness and suppression. Relevant to this study, \$0.625 per MBF from FPHT is allocated to OFLPF for fire suppression—equaling about 15% of total revenue generated by the tax (ORS 321.015). While the shares allocated for other uses have fluctuated over the years, the amount dedicated to OFLPF has held steady at \$0.625 per MBF since at least 2010.

Since FPHT revenue to OFLPF is passed as a lump sum by the Department of Revenue to ODF, no breakdown by taxpayer type is available for this study. However, by utilizing harvest data, it is possible to approximate to relative contribution by taxpayer type. Figure 24 provides comprehensive timber harvest data for calendar years 2010–2019.

Figure 24.<sup>11</sup>

Forest Products Harvest as MBF Reported (Calendar Year 2010-2019)  
(MBF = 1,000 Board Feet)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Federal	387,103	539,404	517,386	557,333	595,488	561,005	534,199	495,012	494,880	497,717
Industry	2,204,656	2,454,521	2,555,496	2,762,168	2,625,009	2,391,304	2,459,375	2,535,451	2,532,932	2,295,390
Nonindustrial - Private	227,763	278,344	317,830	511,462	557,739	454,419	507,468	465,864	615,438	375,801
State and Local	328,521	324,376	294,696	302,086	290,344	329,589	327,813	346,094	402,703	363,340
<b>Grand Total</b>	<b>3,148,043</b>	<b>3,596,645</b>	<b>3,685,408</b>	<b>4,133,049</b>	<b>4,068,580</b>	<b>3,736,317</b>	<b>3,828,855</b>	<b>3,842,421</b>	<b>4,045,953</b>	<b>3,532,248</b>



Source: Open Data Portal, Timber Harvest 1962-2019, Oregon Natural Resources. Note: Tribal Harvest Data has been excluded because it is largely exempt from taxation.

It is important to note that the FPHT is a tax placed not on the land, but on the timber itself. This is the result of action in 1993 taken by the Legislature (as part of Ballot Measure 5 in 1990) that separated the value of standing timber from timber lands.<sup>xxii</sup> Because FPHT is a harvest tax and not a property tax, it is paid by the harvester rather than the owner of the land. In many cases, the landowner is also the harvester; in other cases, landowners contract with others to do the harvest, and the harvester pays the FPHT. As an example, the federal government does not generally harvest its own timber, instead issuing contracts for harvest on its lands.

For this analysis, it is assumed that 100% of the cost of the FPHT owed is reflected in the purchase price paid by the harvesters. Using this assumption, it is possible to approximate the share of FPHT revenue generated by type of landowner. Figure 25 estimates the dollar contribution per

<sup>11</sup> These data do not refer to the harvester, but rather the land on which the timber was harvested.

year by landowner type using the relative share of total harvest by land ownership type each year and combining it with the \$0.625 per MBF share of FPHT destined for OFLPF.

Figure 25.

Estimated Forest Products Harvest Tax Collected by Owner Type (Fiscal Year 2011 - 2020)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Federal	\$243,109	\$336,284	\$337,122	\$344,905	\$356,469	\$343,906	\$319,782	\$310,931	\$295,689	\$321,354
Industry	\$1,384,573	\$1,530,236	\$1,665,128	\$1,709,367	\$1,571,372	\$1,465,913	\$1,472,231	\$1,592,591	\$1,513,419	\$1,482,030
Nonindustrial - Private	\$143,040	\$173,530	\$207,094	\$316,518	\$333,871	\$278,567	\$303,781	\$292,623	\$367,722	\$242,638
State and Local	\$206,319	\$202,228	\$192,020	\$186,946	\$173,805	\$202,044	\$196,235	\$217,392	\$240,614	\$234,592
<b>Grand Total</b>	<b>\$1,977,041</b>	<b>\$2,242,277</b>	<b>\$2,401,364</b>	<b>\$2,557,736</b>	<b>\$2,435,516</b>	<b>\$2,290,430</b>	<b>\$2,292,029</b>	<b>\$2,413,537</b>	<b>\$2,417,444</b>	<b>\$2,280,614</b>

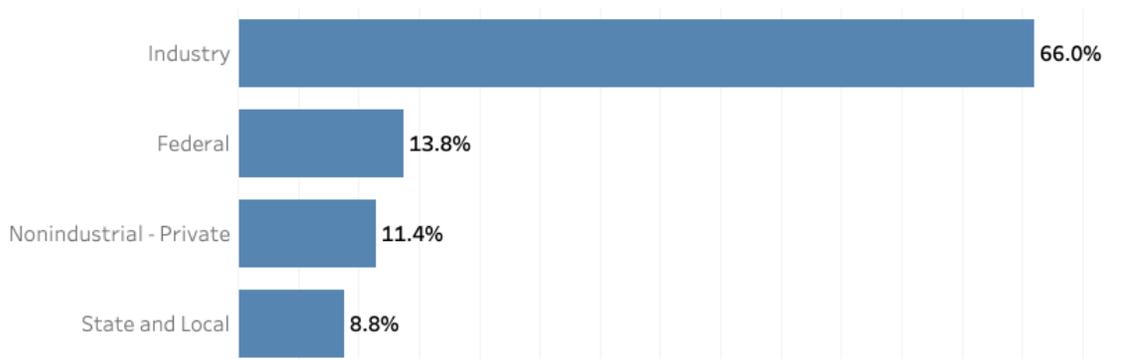
Source: Oregon Open Data Portal, Timber Harvest Data 1962-2019 and OFLPF revenue data from ODF Administration. Note: The relative proportion of timber harvested by owner type was calculated from Oregon Harvest records. These proportions were applied to actual, total revenue as reported by ODF. The calculation does not account for differential number of 25MBF minimum exceptions in each owner type, which are not currently available. This data would be expected to decrease the Nonindustrial-Private value slightly. Also note that harvest data is reported by calendar year and revenue by fiscal year. Due to the low variability from year to year, this is not expected to have a material effect on results.

The \$0.625 per MBF share is not applied to harvest from tribal lands, as most tribal lands are exempt from FPHT and the harvest volume is relatively small in comparison to the other sectors. This calculation also does not factor in the 25 MBF exemption per forestland owner, but this amount is unlikely to appreciably change the share of the FPHT contributed to OFLPF by each sector. To illustrate the point, if there were 1,000 harvesters claiming the exemption in a given year, that would represent a \$15,630 reduction in tax revenue. When compared to FY2010—the leanest year for FPHT—the amount is equal to less than 1% of total revenue. The assumptions in this calculation may slightly overstate the share of FPHT revenue attributed to nonindustrial, private landowners—the sector with the largest number of landowners.

Figure 26 provides the estimated percentage and total contribution to the FPHT for the ten-year period.

Figure 26.

Estimated Percentage of FPHT Revenue by Owner Type (Fiscal Years 2011-2020)



Source: Oregon Open Data Portal, Timber Harvest Data 1962-2019 and OFLPF revenue data from ODF Administration. Note: Calculated by applying MBF harvest data to actual revenue from FHT to OFLPF.

## 5.2. Landowner Assessments

Each year, public and private forestland owners are assessed a charge for forest fire protection. For those who pay property taxes, this charge is levied through the county property tax collection system; for those who do not, they are billed directly by ODF. Landowners see this annual charge, in general, as a single lump sum. In reality, this charge contains several smaller per-acre rates and fixed-fee assessments. ODF tracks these individual assessments that make up the total charge, which allows them to distribute the revenues to the correct places once those funds arrive in ODF's accounts at the Treasury.

These individual assessments are divided into three groups: the Forest Patrol Assessment, admin prorated, and OFLPF assessments.

### Forest Patrol Assessment

The district budget for Base Fire protection is funded by the Forest Patrol Assessment (ORS 477.230 and ORS 477.270). The minimum charge per lot for the Forest Patrol Assessment is \$18.75 (ORS 477.295). This minimum amount only applies for small lots and takes effect when the per-acre rate fails to raise \$18.75 in total revenue. The minimum lot assessment is not additive with the per-acre rate; it is simply a mechanism to round small-acre assessments up to a minimum threshold. Each land type—timber land or grazing land—is assigned its own rate. As

previously noted, private landowners pay 50% of the Forest Patrol Assessment, and the district receives a 50% match on their behalf from the General Fund; public landowners pay 100% of the Forest Patrol Assessment, and do not receive General Fund match (ORS 477.230).

A district's budget for Base Fire includes the administrative and operational costs necessary to provide an adequate level of protection on their protected acreage. The adequate level of protection is based on key metrics for acres burned, human-caused fires, firefighter safety, and Large Fire costs relative to district budget. These metrics inform required activities and operational considerations within the categories of readiness, detection, and resource mobilization that help a district to meet its performance goals. Beyond the scope of this study are the required activities and considerations related to fire prevention, fuel/hazard management, post-suppression, and business management.

Additionally, low productivity private forestland owners across the four eastern Oregon districts receive a biennial subsidy from the General Fund of more than \$2 million<sup>12</sup> to offset the cost of the Forest Patrol Assessment (ORS 477.777 [1][e]). This benefit is shared amongst the eastside districts based on acreage protected, and results in a lower per-acre assessment rate charged to forestland owners. Together, this General Fund subsidy and the 50% match make the Forest Patrol Assessment "whole," allowing districts (and regional and state offices) access to their full budgets.

The Forest Patrol Assessment is assessed on each public and private parcel based on its land type, timber or grazing. The Assessment funds the following:

**District operations and administration.** This rate funds the personnel, equipment, and district administration necessary to provide an adequate level of protection—Base Fire—

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<sup>12</sup> The amount of the subsidy was initially set at \$2 million dollars per biennium, and may be adjusted once for inflation.

for the lands protected by a district. This is the largest of the per-acre assessments that make up the Forest Patrol Assessment, and this revenue stays with the districts.

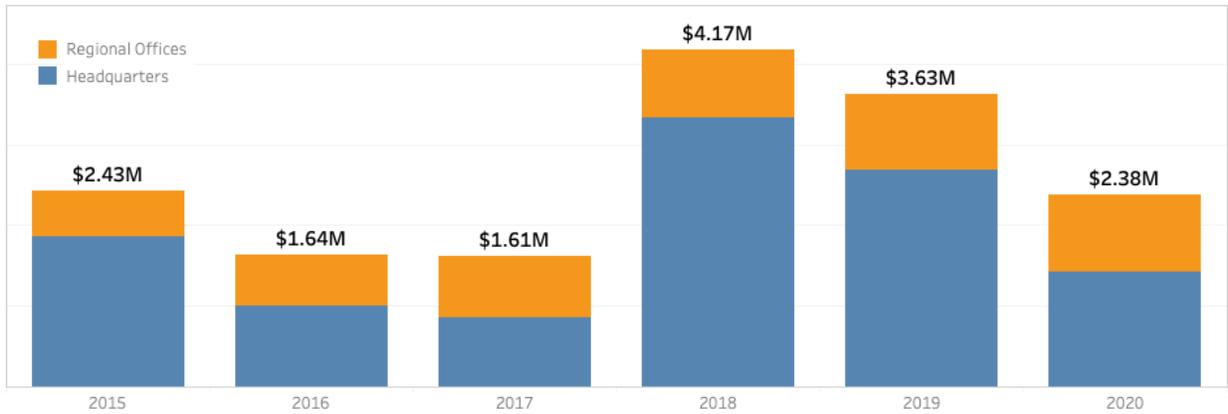
**Regional administration.** Three ODF regional offices—Eastern, Northwest, Southern provide support and coordination for districts within the region. The districts build the cost of regional administration into their Base Fire budgets and include them in setting the Forest Patrol Assessment. This per-acre rate will be the same for all districts that share a regional office. This revenue is pooled at the state level.

**Fire Protection Division headquarters.** The Fire Protection Division headquarters is the hub for coordination of ODF’s resources across the state. The districts build the cost of headquarters positions and activities into their Base Fire budgets and include them in setting the Forest Patrol Assessment. The per-acre rate will be the same for all districts. This revenue is pooled at the state level.

Revenue collected for ODF regional office and Fire Protection Division headquarters administration is illustrated in Figure 27. For district operations revenue, see Section 6, “District Budgets and Actual Revenues for Base Fire Protection.”

Figure 27.

Revenue Collected for Fire Protection Division (Fiscal Years 2015-2020)



Source: Data provided by ODF Administration. Note: Data not available for FY2011-2014.

### Admin Prorate

ODF Agency Administration supports all three ODF Divisions by providing essential services like HR, IT, finance, motor pool, public affairs, procurement, and budget. Each Division contributes its share to pay the total cost of ODF Agency Administration. The Fire Protection Division uses the "admin prorate" to contribute its share. State agencies, including ODF, contribute a portion of their budgets to the Oregon Department of Administrative Services (DAS), and the admin prorate raises funds for this as well.

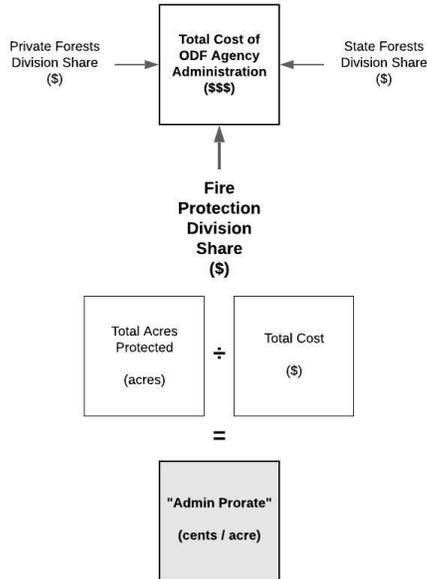
The admin prorate is a per-acre rate calculated by dividing the Fire Protection Division share of the total cost of ODF agency administration and contribution to DAS, divided by the total acreage protected by ODF. Presently, public landowners are assessed this rate and private landowners are not; to cover the full cost of ODF agency administration, the General Fund provides the revenue that would have been raised from landowners.

This nuance of the admin prorate—the largest fire-related administrative cost—is illustrated by Figure 28.

### Admin Prorate

ODF agency administration supports all three ODF Divisions by providing essential services like HR, IT, finance, motor pool, public affairs, procurement, and budget. Each Division contributes its share to pay the total cost of ODF agency administration. The Fire Protection Division uses an assessment called the "admin prorate" to contribute its share.

#### 1. Calculation



#### 2. Collection

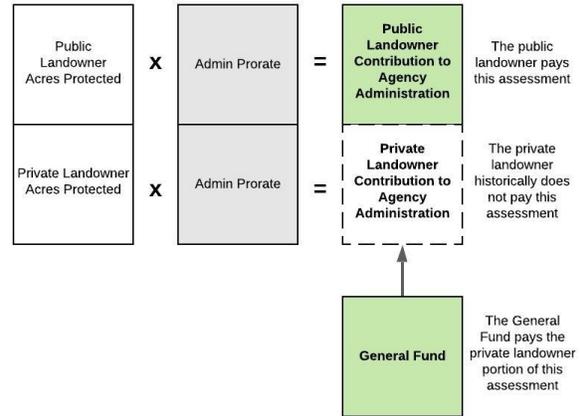
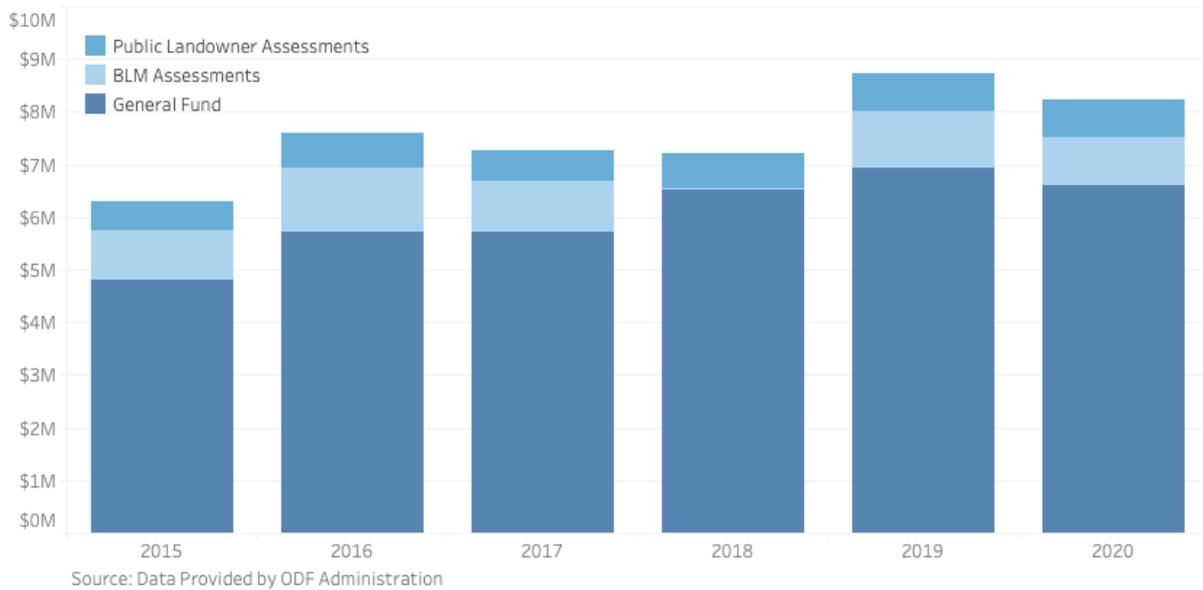


Figure 29 shows the sources of funds that contribute to the admin prorate over the past five years. To read more about why the admin prorate is assessed to public and not private landowners, see Section 5.3, "In-Kind Contributions."

Figure 29.

### Sources of Funds Covering Admin Prorate (Fiscal Years 2015-2020)



#### OFLPF Assessments

The landowner charge for forest protection also contains three funding mechanisms whose revenues are earmarked for OFLPF. Collecting these assessments provides a district with access to ODF’s Large Fire funding structure, which offers support from landowner dollars, insurance, and the General Fund in case of large, costly fires.

These assessments include \$3.75 from each lot from the Forest Patrol Assessment (ORS 477.295), a per-acre rate (ORS 477.880) that differs by geography (eastside vs. westside) and land type (grazing vs. timber), and a developed lot surcharge (ORS 477.277). None of these revenues stay with the district, instead feeding OFLFP and unlocking Large Fire support.

#### Multiple Assessments, One Fire Protection Charge

Figure 30 and Figure 31 bring together the Forest Patrol Assessment, the admin prorate, and the OFLPF assessments to show how this amount varies for public and private landowners, respectively. Figure 31—the private landowner chart—also shows where the General Fund contributes to ensure that budgeted costs are fully funded.

Figure 30.

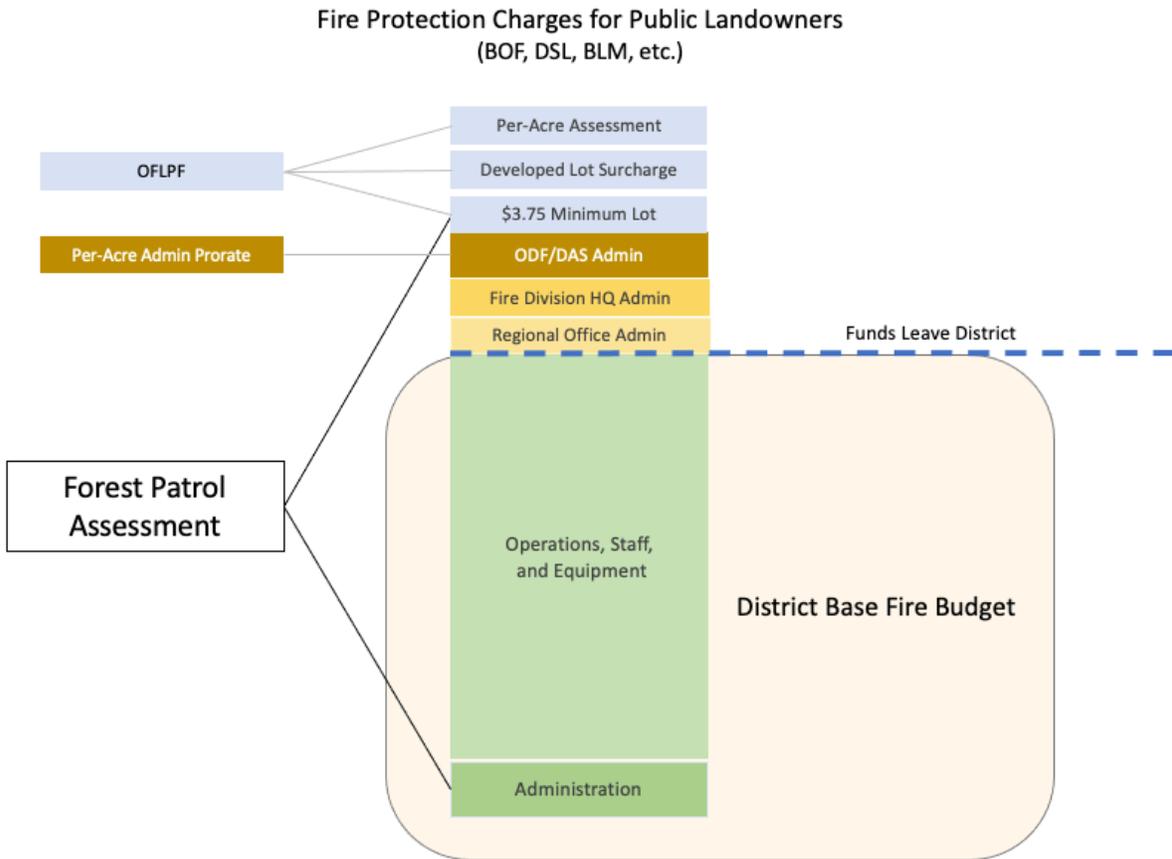
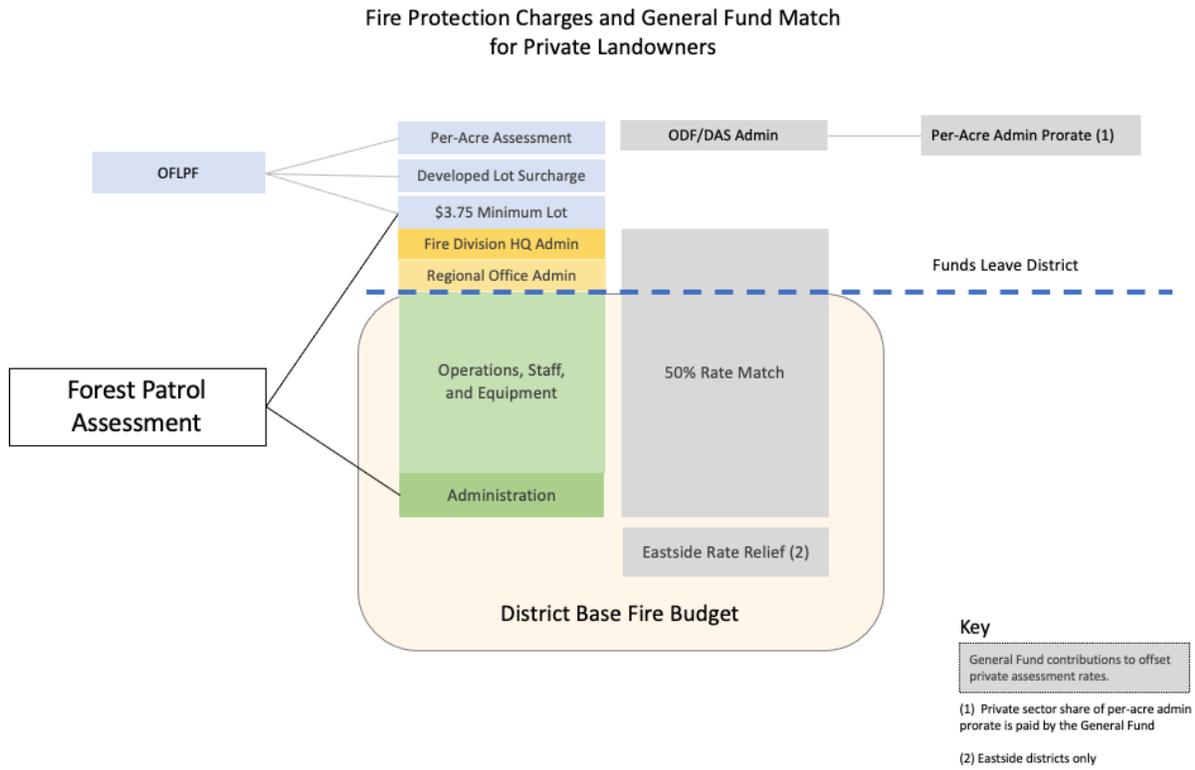


Figure 31.



## Discussion

The Forest Patrol Assessment is composed of different individual assessments earmarked for different purposes. Notably, the admin prorata paid by public landowners is folded into the Forest Patrol Assessment, whereas the same is not true for private landowners. This distinction is important because the 50% General Fund match for private landowners is calculated based on the Forest Patrol Assessment per-acre rate, which is an amalgamation of smaller rates (district operations and admin, regional and Fire Protection Division headquarters admin). In the event that the General Fund contribution for the admin prorata is reduced, it would result in an increase of the Forest Patrol Assessment for private landowners and would likely receive matching General Funds, as with the individual assessments that make up Forest Patrol.

Additionally, the terms and assessments discussed in this section are often used interchangeably or imprecisely; simply citing the Forest Patrol Assessment—without describing what is and is not included in it, and how it is different for public and private landowners—leads to confusion. Adopting a consistent use of specific terms is important to bring clarity and transparency to the conversation about who pays for fire protection in Oregon.

### 5.3. In-Kind Contributions

As described in Section 2.3, “Forestland Ownership and Historical Fire Response,” Oregon has a long history of collaboration between forest landowners, community members, ODF, and the associations to do what is needed to detect, attack, and contain wildfire and minimize damage. Even as more resources and responsibilities have transitioned from private entities to ODF, there remains a mutual recognition that private citizens and resources provide important value to Oregon’s overall wildfire management strategy, helping ODF to meet its goal of containing 98% of fires under 10 acres. In fact, the duty of landowners to prevent and abate fires is established in statute (ORS 477.062 and ORS 477.066). Some of these landowner contributions—especially from larger landowners, which provide heavy equipment and highly trained personnel—are

reimbursable, and some are not. What is not reimbursable is a varied collection of resources and activities that have been broadly described as in-kind contributions.

The Government Accounting Standards Board (GASB) provides a limited framework for defining and valuing in-kind contributions—GASB calls these “nonexchange transactions”—that contribute to Oregon’s fire protection system. From GASB Statement No. 33:

*In a nonexchange transaction, a government gives (or receives) value without directly receiving (or giving) equal value in return. This is different from an exchange transaction, in which each party receives and gives up essentially equal values.* <sup>xxiii</sup>

The exchange transaction between ODF and protected landowners is clear: landowners pay Forest Patrol Assessments; in exchange, they receive wildfire protection. In this way, private landowners and the General Fund each contribute to, and receive equal value from, Base Fire protection in Oregon.

The Forest Patrol Assessment rate for private landowners represents one-half of the public landowner rate; the remaining 50% of necessary funds to provide Base Fire protection is paid by the General Fund. This rate match by the General Fund represents an acknowledgement that the public plays a role in starting fires (along with landowners and lightning), and that it is in the interests of all Oregonians to maintain sufficient fire protection on the landscape (ORS 321.012). The rate match also recognizes the important economic role Oregon’s forest industries, as well as the economic burden that paying the full private landowner rate would place on rural economies. Such subsidies are common across government where the public interest is involved (e.g., Portland’s TriMet light rail system was paid for by a blend of funds including a combination of state, local, and federal bonds; if light rail riders were forced to pay the entire cost of installing, expanding, and maintaining the system, tickets would be prohibitively expensive and the public goods of increased mobility and reduced congestion would be lost).

## Discussion

This exchange transaction—Forest Patrol Assessment for Base Fire protection—between landowners and ODF poses an important question: to what extent is the availability of private resources (e.g., dozers, other capital equipment, personnel) that are distributed across the landscape considered by districts when developing Base Fire budgets? If they are considered as part of the district’s Base Fire capacity, they represent nonexchange transactions (i.e., in-kind contributions), and their value (and valuation method) should be agreed on by the beneficiary (ODF) and the providers (private landowners).

The GASB guidance on nonexchange transactions applies to financial or capital resources, but does not apply to contributed services.<sup>13</sup> Landowners do not provide nonexchange financial transactions (e.g., grants) to ODF, but do make financial investments in fire training, road maintenance, and more that have both private and public value. They also provide nonexchange capital resources, but not in a way that the GASB framework contemplates. Landowners, rather than donating a capital resource (e.g., a wildland fire truck) to ODF, may make such suppression resources available in case they are needed. There are many of these capital assets distributed around the state, but there is no formal agreement in place with ODF to ensure that they are available for use in the event they are needed. While these assets are known to exist and could be tapped for fire suppression, the current arrangement is informal and does not guarantee that they will be fully maintained and available (if a landowner is away, for instance). Because the location of fire starts is unpredictable at a parcel level, some of these available capital resources may never be deployed.

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<sup>13</sup> This is because contributed services are reimbursable. For example, deploying trained staff to a fire is reimbursable by checking in with the Incident Management Team, and so would not qualify as an in-kind contribution.

## Present Treatment of Private In-Kind Contributions

The current approach for valuing in-kind contributions is informal, and is guided by a precedent acknowledged in a 2009 memo from the Joint Committee on Ways and Means responding to the Legislature's *2007 Biennial Budget Note – In-Kind Contributions by Land Owners* and introducing the 2009 Grant Thornton in-kind valuation audit. It states:

Historically, in-kind contributions have been viewed as roughly equivalent to the Fire Protection Program's share of ODF agency-wide administration costs. Therefore, it was considered appropriate for the state general fund to cover the program's share of these costs. Over the past 30 years, three different in-kind surveys have been completed as part of the ongoing review of landowner's contribution to Oregon's fire protection system. <sup>xxiv</sup>

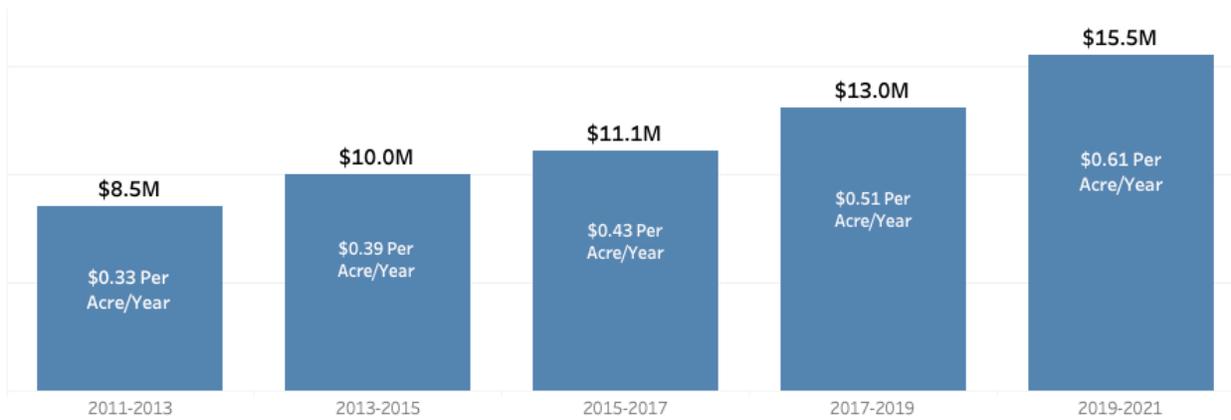
At some point prior to the 2007–2009 biennium, it was determined that ODF agency administration costs would not be paid by private landowners as a way of recognizing the value of their in-kind contributions to the complete and coordinated fire protection system in the state. In practice, this works by multiplying the admin prorata (a per-acre assessment) by the number of private acres protected, and transferring that amount from the General Fund for each year in the biennial request budget (see Figure 32).<sup>14</sup> The Legislature has approved this request in each biennial budget since at least 2007.

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<sup>14</sup> Note that the actual biennial General Fund contribution for the admin prorata (Figure 32) exceeds the actual annual General Funds expended each year on the admin prorata (Figure 29). This is the result of reductions in the DAS charges over the last few biennia, but which were not removed from the General Fund request in the ODF agency request budget, resulting in an excess appropriation of General Fund dollars.

Figure 32.

### General Fund Contribution for Admin Prorate (Fiscal Years 2011-2020)



Source: ODF annual budgets, data provided by ODF Administration. Note: Per-acre rate calculated by dividing prorated value by 2 for annual contribution and dividing this annualized amount by the number of assessment acres measured in year 2021. Actual values may be slightly different, higher or lower, due to annual variation in number of acres assessed.

In fiscal year 2019, the General Fund allocated \$7.75 million (\$15.5 million for the biennium) to cover the cost of ODF agency administration on behalf of private landowners—or \$0.61 per acre. On average, private landowner rates would be approximately 44% higher without these General Fund contributions.<sup>15</sup>

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<sup>15</sup> Calculated as  $([\text{private landowner assessments} + \text{admin prorated}]) / \text{private landowner assessments}$  for Fiscal Year 2020; private landowner assessments sourced from Figure 34.

## Discussion

While the precedent of the General Fund paying the private landowner portion of the admin prorate to recognize the value of their in-kind contributions continues today, the underlying logic of this exchange merits review. Namely, the increasing contribution of General Fund dollars for ODF agency administration (see Figure 32.) implies that the value of the in-kind contributions of private landowners is simultaneously increasing at the same rate. This suggests that either using the admin prorate in this way always fell short of the “true” in-kind value of private resources and is just now catching up, or that the initial admin prorate for in-kind exchange represented a full accounting of in-kind services and the increasing value of the admin prorate means landowners are receiving surplus benefit.

In either case, making the logic behind this tradeoff explicit, rather than tacitly recognizing it through the budget process, would be an important step towards resolving uncertainty surrounding in-kind value and highlighting the best way of accounting for this value in the future.

## Prior Research on the Value of In-Kind Contributions

The two most recent studies of the value of private landowner in-kind contributions are from 2009 and 2019, conducted by ODF and the Oregon Forest and Industries Council (OFIC), respectively. Without access to source data for either the 2009 ODF study or the 2019 OFIC study, this report is unable to comment on the validity of the findings. While the methods seem to provide a reasonable way to value certain equipment and resources, without broader clarity on valuation goals and intended methods, the completeness or appropriateness of these studies is difficult to assess.

### 2009 ODF Study

In the 2007 budget note acknowledging the reasoning behind using the admin prorate to recognize in-kind contributions, the Legislature also nods towards prior attempts at more precisely valuing in-kind contributions from private landowners, and points to HB 5024A from

the same year (2007) that directs ODF to study the issue in detail. Presumably, the intent of such a valuation study was to help the Legislature gauge if the General Fund payment of the private landowner portion of the admin prorata represents an appropriate match for private landowner–provided in-kind services.

This report, *Landowner In-Kind Fire Suppression Resources*, arrived in 2009. This report attempted to calculate the value of availability—a contrast to guidance on actual capital or financial donations provided by GASB—by surveying all available resources (“non-mobilized assets”) and identifying the number of these that were called into action during the fire season (“mobilized assets”). In each case assets included fire/patrol crews, equipment (dozers, tankers, and other heavy equipment commonly used by larger forest and ranch operators), and infrastructure (e.g., water sources and detection cameras).

Data on mobilized resources during fiscal years 2007 and 2008 was collected. Using a ticket system, the study attempted to identify specific private assets that contributed to fire suppression. The estimated value of unreimbursed “Operational Actual Costs” totaled less than \$75,000, though an independent review conducted by Grant Thornton concluded that there were numerous data quality challenges and gaps that resulted in incomplete data. These challenges included lack of comprehensive outreach and training for landowners to ensure common understanding of qualifying activities, gaps and inconsistencies in data entry, and the omission of significant contribution categories (e.g., privately paid contractors). The report recommended that ODF and the Legislative Fiscal Office conduct a review of what activities are considered to be in-kind contributions.

The study also estimated the value of “non-mobilized” assets available to each district. ODF developed and distributed voluntary survey forms to ODF-protected forest landowners. The survey defined in-kind as follows:

- Landowner equipment, operation of that equipment, and supplies and services associated with wildfire protection. Examples include engines, pumps, hoses, radios, personal protective equipment, aircraft, etc.

- Expenses for personnel, including support costs and training, associated with wildfire suppression.
- Expenses for activities associated with fire protection, prevention and suppression, including, hazard abatement, road maintenance solely for fire protection, and protection facilities (gates, signs, water resources, etc.).

The survey results were reviewed by the Fire Division Business Manager and a District Forester from each region to identify resources “most likely to be used during peak fire danger periods.” ODF produced a methodology for valuing assets based on standard equipment rental rates, industrial wage rates, and an estimate of the number of days per year the assets may be called into service, peak fire season. These assets were further distinguished as “Critical Resources” that ODF would need to procure if they were not available from private landowners and “Key Resources” that would not need to be procured but which nonetheless may help the districts meet their containment objectives.

ODF calculated the value of these assets, including high-value fixed wing aircraft and helicopters, to be on the order of \$6.5 million for “Critical Resources” and a total of \$13.6 million per year (2009 dollars), critical and key combined—approximately \$16.4 million in 2020 dollars, including the non-mobilized, non-reimbursed resources. There was no independent audit of the data collection and valuation methodology for non-mobilized resources.

The 2009 report appears to be a point-in-time analysis, and there has not been any attempt on the part of ODF or others to regularly delineate the activities considered as in-kind wildfire contributions or comprehensively refresh surveys of in-kind assets.

#### *2019 Oregon Forest and Industries Council Study*

In 2019, the Oregon Forest and Industries Council (OFIC) conducted a survey of its members in an attempt to produce an updated value for non-mobilized assets maintained by member landholders, which are large forestland owners.<sup>xxv</sup> Following a similar methodology to the ODF study, the OFIC report estimated similar values for resources available in 2019 with “Key Resources” estimated at a total of \$14.5 million and the subset of “Critical Resources” at \$8.8

million. Though the survey response reflected only OFIC member assets (so excluding those assets from small forestland owners and large non-members), the overall value increased because the study reflected an increased duration of fire season, which impacts the calculation of the number of days when non-mobilized assets may be called upon, and thus valued. This privately conducted study and methodology were also not independently audited.

#### Discussion

The 2009 ODF report and associated audit make clear that objectively determining in-kind value is complex; accounting for the thousands of contributors and their wide variety of assets and resulting benefits—some more quantifiable than others—is an administratively-cumbersome exercise. Nevertheless, interviews for this study revealed substantial anecdotal evidence and broad support for the fact that private landowners and their assets (as well as the public at-large) play an important role in preventing, detecting, and suppressing fires, which contributes significant value to the overall wildfire management capability by reducing wildfire risk and loss in Oregon.

This suggests five options to increase clarity and transparency of in-kind contributions:

**Status quo.** Continue to use the admin prorate to recognize in-kind contributions.

Pros: process already in place.

Cons: admin prorate is growing and may over- or under-represent the “true” value of these contributions; continuing ambiguity.

**Improve the status quo.** Continue to use the admin prorate to recognize in-kind contributions, but come to explicit agreement on whether the current use of the admin prorate represents either a partial or complete acknowledgement of the value of in-kind private landowner contributions.

Pros: easy implementation

Cons: difficulty of reaching agreement without deeper study of the issue

**Set value.** Agree to a value and funding mechanism for recognizing the value of in-kind contributions that does not require extensive data collection.

Pros: minimal administrative burden

Cons: difficulty of settling on a number

**Rigorous valuation.** Develop a rigorous method for valuing in-kind contributions, and a mechanism to recognize this value.

Pros: potential to create a highly accurate estimate of in-kind value that is transparent, reproducible, and widely accepted.

Cons: difficulty of agreeing to method; cost and logistics of study implementation and validation that may divert resources from core fire-related duties; necessity of updating the value in subsequent years; no guarantee of added certainty in accuracy of estimates, which will always be based on assumptions.

**No valuation.** Do not value in-kind contributions. Remove the value of in-kind contributions from the larger discussion about the overall fire funding system. Though in-kind contributions have widely agreed-upon value, in-kind valuation is not necessarily required for setting private landowner rates. This option does not imply an increase in private landowner rates, only a conceptual change in how they are calculated.

Pros: separates the difficult to quantify in-kind contributions from the larger discussion of appropriate rates.

Cons: fairness concerns; difficulty of implementation; appearance that in-kind contributions are not recognized or valued.

## 6. District Budgets and Actual Revenues for Base Fire Protection

Each district has its own budgetary needs, depending on size, mix of land ownership, and resource needs, which are driven by climate, forest type, and topography. Understanding these budgets—what a district expects to pay for operations, district administration, and Large Fire deductibles in a given year—is important for placing the ODF biennial budget and the actual revenues for each district in context. Approved Base Fire budgets for each district are presented in Figure 33.

Figure 33.

### Annual District Budgets (Fiscal Years 2015-2020)

Dist Name	FY15	FY16	FY17	FY18	FY19	FY20
Central Oregon	6,185,964	6,386,771	7,026,169	7,391,232	7,484,319	7,340,102
Coos FPA	4,312,244	4,448,369	4,624,652	4,830,237	5,074,906	5,376,571
Douglas FPA	5,203,209	5,495,569	5,229,002	5,699,111	6,069,876	6,296,930
Klamath/Lake	4,420,551	4,573,054	5,040,937	5,333,689	5,358,233	5,442,152
North Cascade	1,916,580	1,837,749	1,935,650	1,976,472	1,931,319	2,146,713
Northeast	4,328,492	4,413,395	4,531,773	4,881,259	5,072,790	5,331,630
Northwest	4,110,129	4,425,415	4,627,318	4,764,002	4,780,553	4,987,700
South Cascade	3,228,113	3,409,987	3,565,835	3,546,093	3,579,509	3,928,792
Southwest	6,871,552	7,370,702	7,426,917	7,544,802	7,437,148	7,909,860
Walker Range FPA	809,613	961,448	855,683	882,264	897,812	879,627
West Lane	2,003,030	2,083,991	2,051,490	2,238,609	2,209,291	2,365,760
West Oregon	2,293,911	2,470,556	2,530,407	2,636,604	2,592,368	2,767,736
<b>Grand Total</b>	<b>45,683,388</b>	<b>47,877,006</b>	<b>49,445,833</b>	<b>51,724,374</b>	<b>52,488,124</b>	<b>54,773,573</b>
	<b>% Change From Prior Year</b>	<b>4.80%</b>	<b>3.28%</b>	<b>4.61%</b>	<b>1.48%</b>	<b>4.35%</b>

Source: Annual Board Summaries provided by ODF Fire Protection

These budgets include: district operations, district admin, regional admin, Fire Division HQ, and Large Fire deductibles.

## 6.1. Actual Revenues for Base Fire Protection

This section focuses on the actual revenues that are raised to support the budgeted costs of Base Fire suppression at the district level. These data present actual district revenues, which are the funds raised by the district that support district administration and operations for Base Fire. The admin prorate for ODF agency administration and the revenues raised by OFLPF, neither of which relate to Base Fire protection, are not included in these revenues. Data come from two sources: ODF's accounting division and from FPA documentation, which provided the Forest Patrol Assessment revenue raised from member lands that fund their operations and administration—funds which do not pass through ODF's accounting system.

District revenues are reported using the following line items:

### Private Landowner Assessments

This revenue stream represents 50% of the per-acre Forest Patrol Assessment to cover Base Fire protection. It is important to note that this line item does not include the General Fund match for private landowner Forest Patrol Assessments, or the \$2 million biennial subsidy for low-productivity eastside lands, neither of which are considered revenue. Any leftover funds from landowner assessments rollover and offset rates for the following year.

### Public Landowner Assessments

This line item is the total revenue generated for a district by the Forest Patrol Assessment paid by public landowners, both federal and state (i.e., BOF, DSL, Oregon Parks and Recreation, Oregon Department of Fish and Wildlife, county lands, Bureau of Indian Affairs, Army Corps of Engineers). Any leftover funds rollover and offset rates for the following year.

### BLM Assessment

This line item is the total revenue generated for a district by the assessment paid by BLM. The BLM pays the per-acre Forest Patrol Assessment levied on public landowners to support Base Fire protection. The BLM rate is distinct from other public landowner rates in one respect: it is lower than rates charged to other public landowners because it does not include Large Fire deductibles,

because BLM no longer has access to Large Fire funding. As with landowner assessments, leftover funds rollover and offset rates for the following year.

#### General Fund

This line item represents the General Fund dollars spent in delivering Base Fire protection in the FPD, as well as the General Fund dollars received by the FPA. This difference is due to the cash basis vs. accrual accounting methods used by the FPA and FPD, respectively: the FPD do not recognize General Funds as revenue, so to estimate the actual General Fund match it is necessary to view FPD expenditures. In contrast, the FPA receive several lump sum payments of the budgeted General Fund contribution to the district, and recognize this revenue when the cash arrives. For both FPA and FPD, these General Fund dollars cover the 50% match for all private landowner Forest Patrol Assessments and for eastside districts, the additional \$2 million biennial subsidy shared by low-productivity eastside lands.

#### Other Revenue

This line item consists of the cost recoveries from responsible parties who must pay back the district for firefighting costs. After an investigation is concluded, if a landowner is deemed responsible for starting the fire, they have to pay up to \$300,000 of the suppression cost (ORS 477.120). If deemed responsible *and* willful, malicious, or negligent, such a landowner is responsible for the full suppression cost (ORS 477.068). ODF strives to recover 100% of costs from responsible parties; smaller, lower cost fires are typically the easiest to recover, but larger fires with more significant costs are not usually recovered at 100% because the necessary assets to cover the cost (e.g., an insurance policy) are not available.

Figure 34 presents the actual district revenue for these line items.

Figure 34.<sup>16</sup>

Base Fire Revenue by Source of Funds (Fiscal Years 2011-2020)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
General Fund	11,372,067	12,796,806	12,551,349	16,023,806	15,402,641	16,245,971	17,345,102	19,037,264	18,992,336	19,414,747
Private Landowner Assessments	12,971,318	14,034,106	14,286,642	13,986,023	15,538,064	16,539,415	17,606,062	17,441,711	18,159,479	17,765,256
BLM Assessment	5,281,944	4,364,550	5,782,540	4,484,969	3,403,921	5,756,960	5,077,157	4,502,704	12,958,461	8,239,750
Public Landowner Assessments	2,371,671	2,824,718	2,404,378	2,852,793	3,039,462	3,478,261	3,671,548	3,753,033	4,050,130	3,709,425
Other Revenue	1,100,716	1,127,338	615,981	2,208,491	5,051,216	1,301,224	670,754	815,391	945,812	679,634
<b>Grand Total</b>	<b>33,097,715</b>	<b>35,147,517</b>	<b>35,640,889</b>	<b>39,556,083</b>	<b>42,435,304</b>	<b>43,321,831</b>	<b>44,370,624</b>	<b>45,550,103</b>	<b>55,106,219</b>	<b>49,808,811</b>

Source: Data provided by ODF Administration. Notes: Private Landowner Assessments includes direct bill revenue collected and kept by FPA. General Fund includes FPD expenditures and FPA General Fund payments. All line items include region and HQ administration. BLM variability is due to payment schedules and delays.

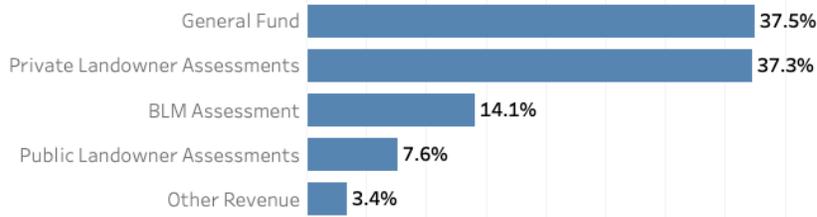
In an effort to balance year-to-year revenue variance caused by prior year carryover or special expenditures—both of which can affect subsequent rate setting and actual revenues—the following chart (Figure 35) shows percentage of total for each revenue stream for the study period across all districts.

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<sup>16</sup> BLM agreement revenues vary significantly year to year due to reimbursements for prior year fire costs and the recent changes to the protection agreement.

Figure 35.

Proportion of Revenue Collected by Source of Funds  
(Fiscal Years 2011-2020)

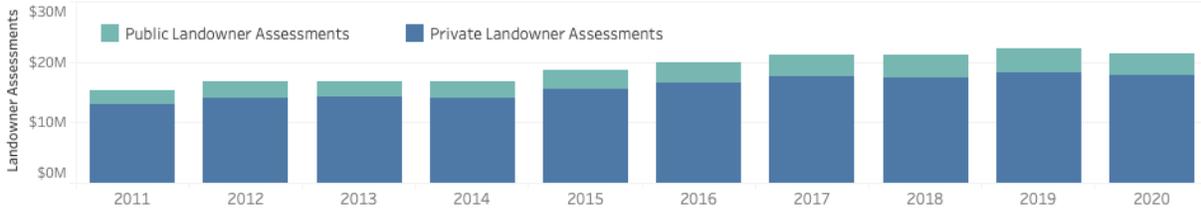
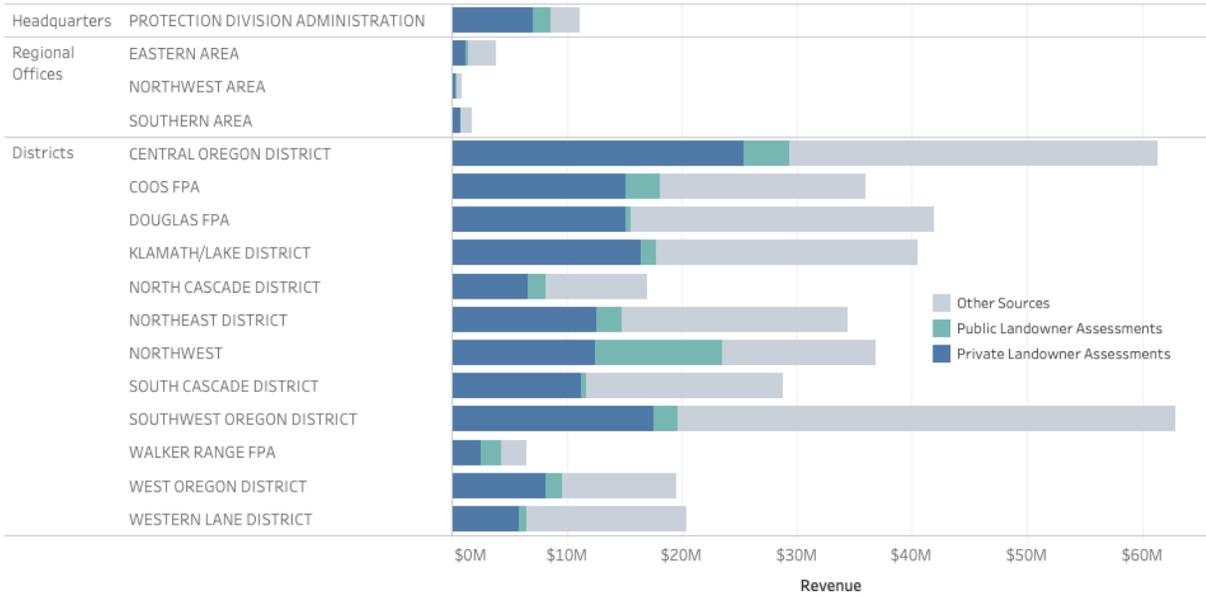


Source: Data Provided by ODF Administration

Several metrics of interest are highlighted below. Figure 36 illustrates the percentage of landowner assessments (public and private) across all revenue collected for the districts. The districts have been grouped according to type (FPD, FPA, and regional offices). Figure 37 illustrates the contribution of the BLM agreement to total revenue by district.

Figure 36.

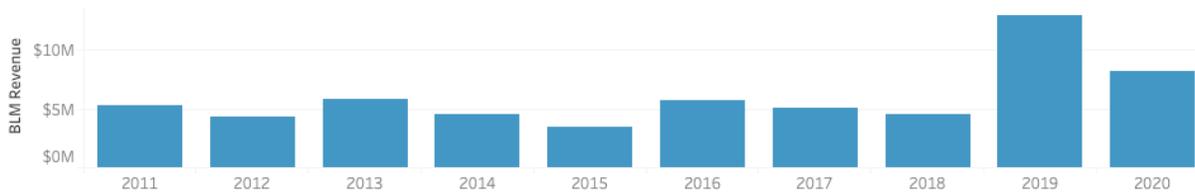
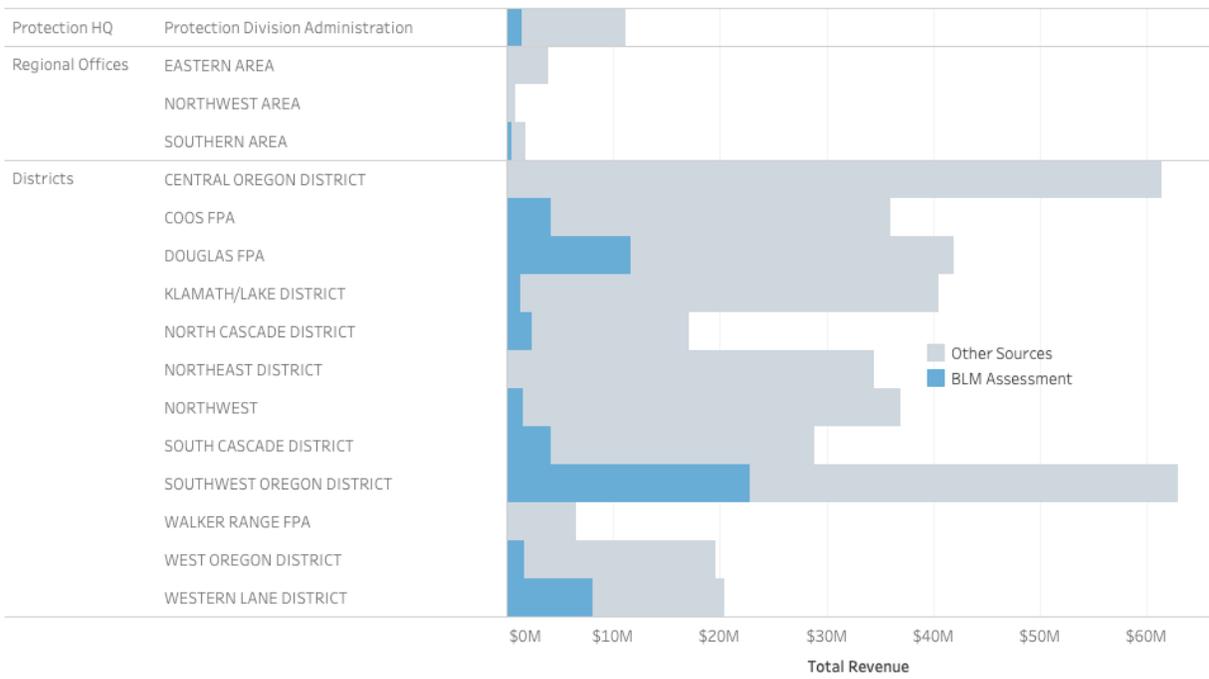
Revenue from Landowner Assessments vs. Other Sources (Fiscal Years 2011-2020)



Source: Data provided by ODF Administration. Method: Other includes Other Revenue, BLM, and General Fund. Revenue collected directly from FPAs is included in Private Landowner Assessments.

Figure 37.

### BLM Assessments vs Other Sources (Fiscal Year 2011-2020)



Note: Data provided by ODF Administration. Note: BLM annual values may vary due to payment delay and catch-up payments.

## 6.2. Per-Acre Budgeted Rates for Base Fire Protection

Figure 38 and Figure 39 provide the annually approved rate by district for private and public lands, respectively. The variability in rates reflect the level of fire activity, operational requirements and budget carryover from prior years. The private rates include the Eastside Rate Relief for the four eastside districts receiving that subsidy. Note that these data are from the approved budget and rates, which drive General Fund appropriations to ODF. The actual revenue collected from landowners may be slightly lower due to partial or nonpayment.

Figure 38.

Approved Forest Patrol Rates, Private Landowners (Fiscal Years 2011 - 2020)

		FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
<b>Timber</b>	Central Oregon	\$1.62	\$1.74	\$1.73	\$1.66	\$1.62	\$2.05	\$2.06	\$1.87	\$1.88	\$1.93
	Coos FPA	\$1.00	\$1.09	\$1.08	\$1.12	\$1.13	\$1.23	\$1.36	\$1.43	\$1.48	\$1.56
	Douglas FPA	\$1.12	\$1.16	\$1.27	\$1.34	\$1.31	\$1.42	\$1.79	\$1.64	\$1.82	\$1.84
	Klamath/Lake	\$1.41	\$1.57	\$1.40	\$1.35	\$1.25	\$1.43	\$1.44	\$1.39	\$1.41	\$1.52
	North Cascade	\$0.84	\$1.07	\$1.03	\$0.99	\$1.23	\$1.29	\$1.28	\$1.29	\$1.19	\$1.61
	Northeast Oregon	\$1.20	\$1.40	\$1.38	\$1.44	\$1.23	\$1.38	\$1.44	\$1.43	\$1.44	\$1.48
	Northwest	\$0.79	\$0.90	\$0.89	\$0.98	\$1.01	\$1.21	\$1.21	\$1.22	\$1.22	\$1.10
	South Cascade	\$0.98	\$1.14	\$1.28	\$1.32	\$1.22	\$1.18	\$1.31	\$1.39	\$1.48	\$1.46
	Southwest	\$1.41	\$1.33	\$1.49	\$1.56	\$1.75	\$1.92	\$2.02	\$2.16	\$2.05	\$2.21
	Walker Range	\$1.56	\$1.53	\$1.54	\$1.54	\$1.51	\$1.46	\$1.45	\$1.57	\$1.56	\$1.60
	West Oregon	\$0.63	\$0.74	\$0.70	\$0.80	\$0.93	\$0.92	\$1.02	\$1.08	\$1.07	\$1.15
	Western Lane	\$0.69	\$0.84	\$0.90	\$1.02	\$1.09	\$1.06	\$1.12	\$1.29	\$1.05	\$1.17
<b>Grazing</b>	Central Oregon	\$0.63	\$0.60	\$0.61	\$0.62	\$0.69	\$0.71	\$0.71	\$0.62	\$0.54	\$0.64
	Coos FPA	\$0.76	\$0.91	\$0.90	\$0.93	\$0.95	\$0.85	\$1.05	\$1.14	\$1.14	\$1.18
	Douglas FPA	\$0.54	\$0.56	\$0.57	\$0.66	\$0.80	\$0.68	\$0.52	\$0.60	\$0.80	\$0.77
	Klamath/Lake	\$0.59	\$0.71	\$0.61	\$0.46	\$0.38	\$0.41	\$0.41	\$0.37	\$0.37	\$0.53
	Northeast Oregon	\$0.42	\$0.48	\$0.44	\$0.47	\$0.27	\$0.31	\$0.33	\$0.33	\$0.32	\$0.35
	Southwest	\$0.97	\$1.04	\$1.31	\$1.25	\$1.37	\$0.76	\$0.88	\$1.01	\$0.93	\$1.02
	Walker Range	\$0.31	\$0.48	\$0.56	\$0.39	\$0.67	\$0.41	\$0.59	\$0.36	\$0.67	\$0.03
<b>Grazing Z1</b>	Central Oregon	\$0.30	\$0.30			\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15

Source: Rate data pulled from Protection Budget Summary by District and Area reports provided by ODF Fire Protection. Notes: Central Oregon has Zone 1 that is calculated differently and reported separately. This chart includes Eastside Rate Relief that lowers rates for eastside districts. OFLPF assessments are not included in these rates.



Figure 39.

Approved Forest Patrol Rates, Public Landowners (Fiscal Years 2011-2020)

		FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
<b>Timber</b>	Central Oregon	\$3.59	\$3.48	\$3.46	\$3.31	\$3.62	\$4.48	\$4.51	\$4.12	\$4.13	\$4.24
	Coos FPA	\$2.20	\$2.17	\$2.17	\$2.24	\$2.25	\$2.46	\$2.71	\$2.86	\$2.96	\$3.12
	Douglas FPA	\$2.49	\$2.32	\$2.55	\$2.67	\$2.62	\$2.83	\$3.58	\$3.27	\$3.64	\$3.69
	Klamath/Lake	\$3.09	\$3.14	\$2.80	\$2.70	\$2.88	\$3.25	\$3.26	\$3.16	\$3.19	\$3.41
	North Cascade	\$1.92	\$2.14	\$2.06	\$1.98	\$2.46	\$2.58	\$2.57	\$2.57	\$2.39	\$3.21
	Northeast Oregon	\$2.69	\$2.80	\$2.75	\$2.88	\$2.84	\$3.15	\$3.26	\$3.25	\$3.25	\$3.32
	Northwest	\$1.77	\$1.79	\$1.79	\$1.95	\$2.02	\$2.42	\$2.43	\$2.44	\$2.44	\$2.21
	South Cascade	\$2.19	\$2.29	\$2.56	\$2.65	\$2.44	\$2.35	\$2.62	\$2.78	\$2.95	\$2.91
	Southwest	\$3.11	\$2.66	\$2.98	\$3.13	\$3.51	\$3.84	\$4.04	\$4.32	\$4.09	\$4.42
	Walker Range	\$3.50	\$3.06	\$3.08	\$3.08	\$3.40	\$3.30	\$3.28	\$3.52	\$3.49	\$3.57
	West Oregon	\$1.43	\$1.47	\$1.39	\$1.60	\$1.86	\$1.84	\$2.03	\$2.16	\$2.14	\$2.30
	Western Lane	\$1.60	\$1.68	\$1.80	\$2.05	\$2.17	\$2.12	\$2.24	\$2.58	\$2.10	\$2.35
<b>Grazing</b>	Central Oregon	\$1.39	\$1.20	\$1.21	\$1.25	\$1.76	\$1.80	\$1.81	\$1.62	\$1.45	\$1.66
	Coos FPA	\$1.68	\$1.81	\$1.79	\$1.87	\$1.90	\$1.69	\$2.09	\$2.28	\$2.28	\$2.37
	Douglas FPA	\$1.24	\$1.11	\$1.14	\$1.31	\$1.60	\$1.36	\$1.04	\$1.20	\$1.61	\$1.55
	Klamath/Lake	\$1.32	\$1.42	\$1.21	\$0.92	\$1.14	\$1.20	\$1.21	\$1.13	\$1.10	\$1.43
	Northeast Oregon	\$0.95	\$0.96	\$0.89	\$0.94	\$0.92	\$1.01	\$1.05	\$1.04	\$1.01	\$1.07
	Southwest	\$2.18	\$2.09	\$2.61	\$2.50	\$2.75	\$1.52	\$1.75	\$2.01	\$1.85	\$2.04
	Walker Range	\$0.75	\$0.95	\$1.11	\$0.78	\$1.73	\$1.20	\$1.56	\$1.10	\$1.70	\$0.43
<b>Grazing Z1</b>	Central Oregon	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30

Source: Rate data pulled from Protection Budget Summary by District and Area reports provided by ODF Fire Protection. Notes: Central Oregon has Zone 1 that is calculated differently and reported separately. OFLP assessments are not part of this chart.



Figure 40. shows the same public and private rates, but averaged at the State level to provide a zoomed-out perspective on the rates paid across geographies by different landowners for Base Fire protection—district operations and administration, plus the regional and Fire Protection Division headquarters administration.

Figure 40.

Statewide Approved Rate Average by Land Type (Fiscal Years 2015 - 2020)

		FY15	FY16	FY17	FY18	FY19	FY20
<b>Timber</b>	Private Rate	\$1.34	\$1.44	\$1.52	\$1.54	\$1.53	\$1.61
	Public Rate	\$2.67	\$2.88	\$3.04	\$3.09	\$3.06	\$3.23
<b>Grazing</b>	Private Rate	\$0.84	\$0.70	\$0.75	\$0.74	\$0.79	\$0.75
	Public Rate	\$1.69	\$1.40	\$1.50	\$1.48	\$1.57	\$1.51
<b>Grazing Z 1</b>	Private Rate	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15
	Public Rate	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30

Source: Rate data pulled from Protection Budget Summary by District and Area reports provided by ODF Fire Protection. Notes: Central Oregon has Zone 1 that is calculated differently and reported separately.

Discussion

Since Oregon’s model applies rates on a district-by-district basis, landowners in different parts of the state may pay more than four times what their peers in less fire-prone regions pay for fire protection. Though this increases the financial burden on some landowners, it also helps to better align the costs paid (assessments) with the benefit received (a higher level of preparedness and suppression services) for those in high-risk areas, and this appears to reduce the likelihood of one area benefiting disproportionately from ODF fire preparedness and suppression over another.

## 7. Highlights of Wildfire Funding Structures in Washington, Idaho, and Montana

Western states face a similar threat from the increasing frequency and intensity of wildfire on the landscape, as well as the challenge of developing and deploying robust funding mechanisms that meet the need of wildfire protection without creating undue, and unintended, impacts for forest landowners, rural communities, and taxpayers at large. States also must adapt and evolve their funding mechanisms to account for the effects of population growth, rural development, and changes to the economics of the forest-dependent business sectors. In 2017, the University of Idaho, College of Natural Resources Policy Analysis Group prepared an in-depth study of wildfire funding methods across ten western states from 2005–2015.<sup>xxvi</sup>

The report, *State Funding for Wildfire Suppression in the Western U.S.*, finds that states take an individualized approach to funding wildfire suppression using a blend of methods and sources listed in Figure 41.

Figure 41. Wildfire Funding Mechanisms in Practice

Reimbursements	Costs incurred by the state but for which it receives reimbursement from another entity
<b>Federal</b>	Reimbursements from cost share agreements with other agencies, Fire Management Assistance Grants from FEMA, or other federal programs.
<b>Other</b>	Reimbursements from other state agencies, states or countries, and private resources.
State Obligation	Remaining costs not paid via reimbursements
<b>General Fund Appropriations Prior to Incurring Costs</b>	Base appropriation prior to fire season.
<b>General Fund Appropriations after Incurring Costs</b>	Supplemental, emergency, or deficit appropriation from General Fund after expenses are incurred.
<b>Landowner Assessments</b>	A fee for fire protection based on number of acres owned and/or characteristics of the land.
<b>Assessment on Timber Harvests</b>	Owners of timber are assessed a fee for fire protection based on volume of timber harvested.
<b>Insurance</b>	Private insurance purchased by state to pay for extreme costs.
<b>Revenues from Unrelated Activities</b>	Revenues from an activity unrelated to wildfire are used to pay costs (e.g. federal mineral lease, insurance premium taxes).
<b>Disaster Response Account</b>	Extreme costs are paid from an account with multiple sources of revenue.
<b>Cost Recovery via Legal Action</b>	Costs for human-caused fires are recovered based on legal liability or negligence.
<b>Other</b>	County payments, timber salvage, etc.

While many of the states reviewed depend primarily upon General Funds for pre- and post-fire appropriations, several states use landowner assessments with similar structure to Oregon’s programs to fund a portion of their wildfire requirements.

For this report, Washington, Idaho, and Montana are reviewed in closer detail, as they are most comparable to Oregon in terms of assessment structure, ecology, and wildfire strategy. This

review uses the University of Idaho study as a starting point, and incorporates research into state legislation, published governmental and independent reports, and strategic initiatives unique to each state.

While the three states and Oregon share many attributes, Oregon appears to have by far the most complex program in terms of number of funding mechanisms and procedures. Each state imposes one or more assessments on both public and private landowners as summarized below.

State	Mechanism	Rate
Washington	Forest Fire Protection Assessment  Landowner Contingency Assessment	\$17.50 + \$0.27/ac over 50 ac  (East) \$0.20/ac up to 50 ac + \$0.02/ac above 50 ac  (West) \$0.40/ac up to 50 ac + \$0.04/ac above 50 ac
Idaho	Forest Land Assessment	\$0.60 per acre with \$15 minimum  \$40.00 per livable structure
Montana	Fire Protection Assessment	\$45.10 + \$0.30/ac above 20 ac

While details about each state program—rates, general funds contributions, and protected area—are provided below in Appendices 10.2, 10.3, and 10.4. The subtle variations in definitions and procedures across the states make an apples-to-apples comparison of funds raised and relative impact on each state’s General Fund impractical within the current scope. Further, such a comparison would be incomplete due to lack of insight into non-wildfire fees and taxes paid by landowners within each state. As such, the intent of this study’s research is to provide benchmarks and references with which to compare Oregon’s funding programs and identify relative strengths, weaknesses, and potential ideas for updates to the current system.

## 8. Conclusion

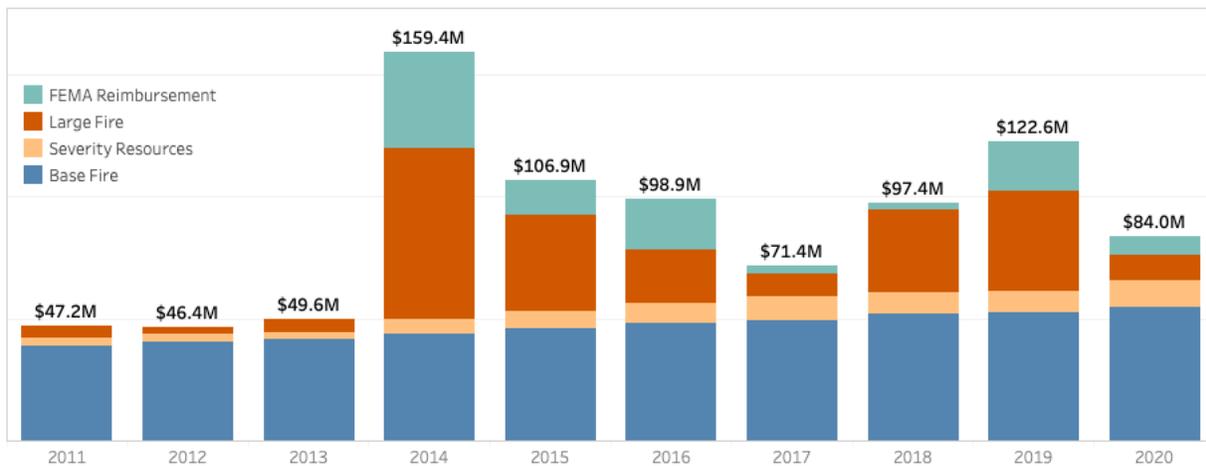
Oregon’s strategy for funding wildfire response has evolved over the years as a result of changes in land ownership, costly fire seasons, and other factors. As the system has changed, funding mechanisms and spending rules have been added, adjusted, and subtracted, layering complexity on top of complexity. Up to this point, the focus of this report has been on teasing apart the individual layers that make up the current iteration of the complete and coordinated system for wildfire response. By spotlighting the activities that constitute wildfire preparedness and suppression and how they are woven into the funding structures of Base Fire, Large Fire, and severity resources, this report has made clear how—and how much—different stakeholders contribute at every stage of wildfire response. This section brings together these individual elements to deliver a comprehensive view of the entire system.

### [Expenditures for Preparedness and Suppression are Growing](#)

In total, wildfire-related expenditures averaged over \$77.5 million annually over the past ten years, and over \$90 million annually over the past six. Figure 42. illustrates the value of these funds attributed to Base Fire, Large Fire, and severity resources. Though it is difficult to project future wildfire activity, current modeling suggests that wildfire will remain a significant and growing part of the State’s budget for years to come.

Figure 42.

### Total Gross Wildfire Cost (Fiscal Years 2011- 2020)



Source: ODF Administration and ODF Fire Protection Division. Notes: Large Fire represents expenditures from OFLPF, General Fund, and insurance benefits. Severity Resources includes both OFLPF and General Fund. Base Fire totals are taken from annual, approved Fire Protection Division Budgets because earlier year actuals were not available at time of analysis, value shown is expected to be within 5% of actual. FEMA values represent "Revised Estimates" provided by ODF Fire Protection Division.

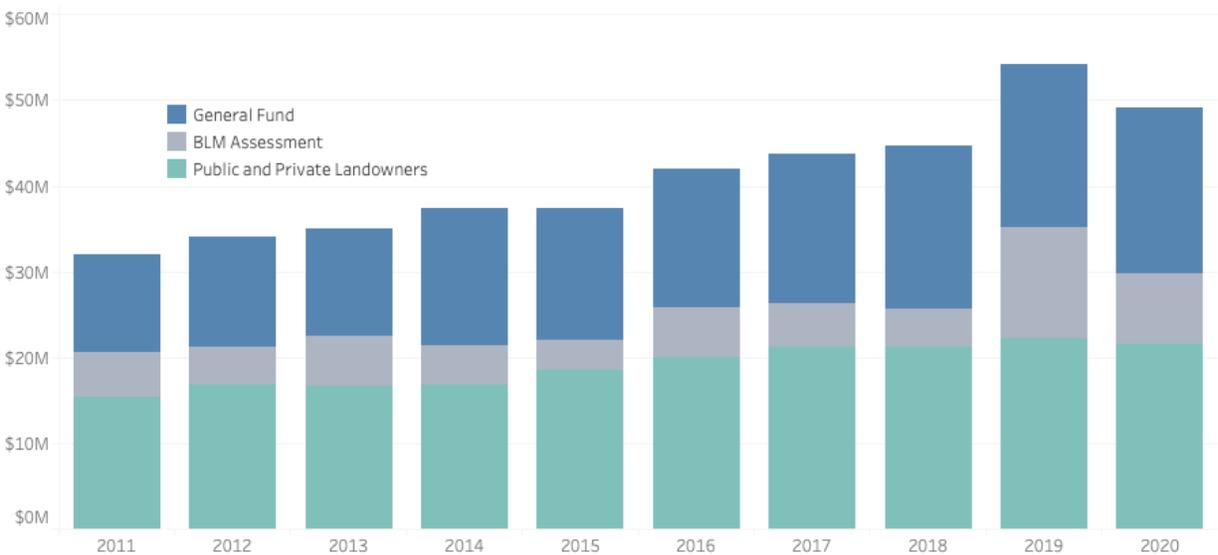
At its most basic level, wildfire protection at ODF is a partnership between landowners and the State, which makes its contribution via the General Fund. While landowners benefit directly from the fire protection services of the districts, all Oregonians benefit from managing wildfire to protect lives, property, and the economic health of communities, especially those rural communities with direct ties to the forest products sector and outdoor recreation.

#### Base Fire Expenditures

The Base Fire budget funds the 'adequate level of protection' provided by each district, regular operations. Base Fire encompasses both preparedness and basic fire suppression activities that are the responsibility of the districts, often with support of local landowners and local fire departments. Figure 43 presents the Base Fire contributions from public and private landowners (46.5% over the period) and General Fund (39%), with BLM making up the remaining contribution (14.5%).

Figure 43.

Base Fire Revenue by Source of Funds (Fiscal Years 2011-2020)



Source: ODF Administration Revenue and Expenditure Data. Notes: This chart excludes 'Other Revenue' which largely represents recoveries from landowners.

Separating the private from the public dollars presented in Figure 43 and comparing the private landowner contribution against the General Fund contribution confirms that the 50–50 match between General Fund and private landowners outlined in statute is working in practice as well as in theory, with the ten-year average at 50.1% and 49.9% respectively.

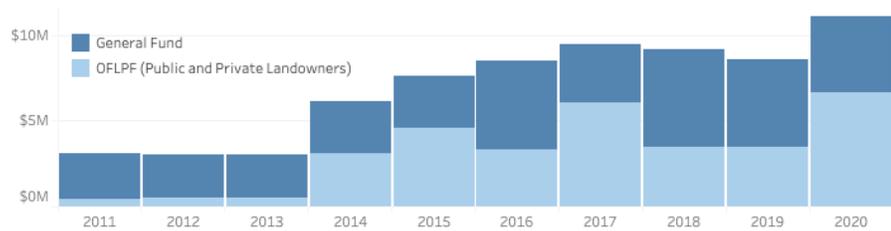
#### Oregon Forest Land Protection Fund (OFLPF) and General Fund Expenditures

OFLPF and the General Fund share expenditures related to the Large Fire insurance premiums and severity resources used to mitigate risk during times of increased likelihood of severe fires. The relative share of contributions by landowners and the General Fund for these non-Large Fire expenses are shown in Figure 44. This illustrates the transition in 2014 prompted by the 2013 Wildfire Protection Act that created the severity resources and strategic investments programs, and changes the way that OFLPF contributes to the wildfire insurance premium. It also shows the interplay between OFLPF spending—subject to certain limits that depend on the overall magnitude of expenses during the fire year—and General Fund spending.

Figure 44.

OFLPF and General Fund Expenditures, Excluding Large Fire (Fiscal Years 2011 - 2020)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
General Fund	Insurance Premium	\$0.41M	\$0.43M	\$0.41M	\$1.01M	\$1.92M	\$3.13M	\$1.69M	\$3.18M	\$3.20M	\$2.01M
	Severity Resources	\$2.26M	\$2.12M	\$2.12M	\$2.00M	\$1.07M	\$2.00M	\$1.67M	\$2.49M	\$1.89M	\$2.37M
	Total	\$2.67M	\$2.55M	\$2.53M	\$3.01M	\$2.98M	\$5.13M	\$3.35M	\$5.68M	\$5.09M	\$4.38M
OFLPF (Public and Private Landowners)	Admin Costs	\$0.06M	\$0.07M	\$0.07M	\$0.10M	\$0.11M	\$0.11M	\$0.21M	\$0.12M	\$0.17M	\$0.15M
	Insurance Premium	\$0.41M	\$0.43M	\$0.41M	\$1.01M	\$1.92M	\$0.39M	\$1.69M	\$0.38M	\$0.33M	\$2.01M
	Severity Resources				\$2.03M	\$2.57M	\$2.83M	\$2.66M	\$3.00M	\$3.00M	\$3.00M
	Strategic Investments							\$1.50M			\$1.50M
	Total	\$0.47M	\$0.49M	\$0.48M	\$3.13M	\$4.60M	\$3.34M	\$6.06M	\$3.50M	\$3.50M	\$6.66M
	Grand Total	\$3.13M	\$3.05M	\$3.01M	\$6.14M	\$7.58M	\$8.47M	\$9.42M	\$9.18M	\$8.59M	\$11.04M



Source: Data provided by ODF Administration. Notes: Totals presented in bar chart do not reflect the order in which funds are spent, which is dollar for dollar between GF and OFLPF for the first \$20M; Insurance paid out \$25MM (2014) and \$22.2M (2015); Does not include 2020 Fires that occurred in Fiscal Year 2021.

Due to the aggregated nature of assessments collected for OFLPF at the county level, it is not possible to separate the landowner dollars into public and private shares. Access to this data in the future would lend itself to a more complete and granular analysis that focuses on how General Funds and private landowners' funds compare.

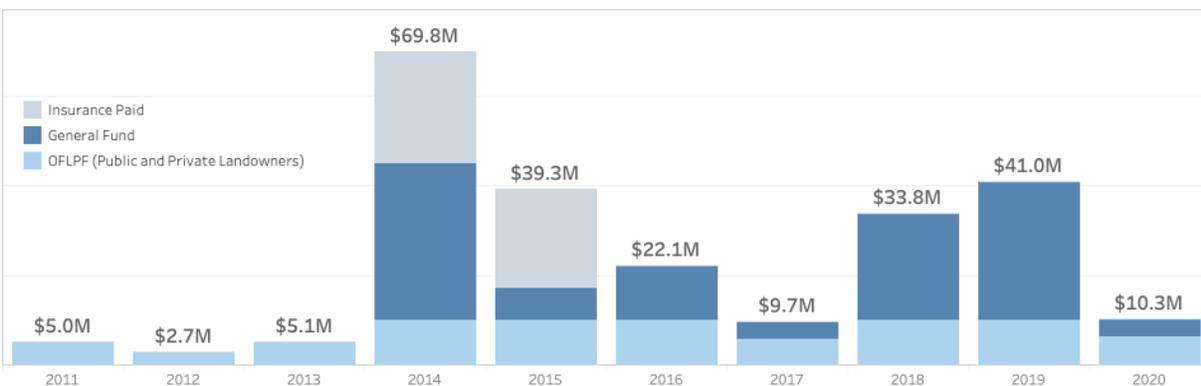
Large Fire Expenditures

Large Fires are events that require more suppression resources than the responding district can provide within its annual budget and available assets. These events are the responsibility of Oregon's Large Fire funding program, a combination of landowner dollars, General Fund, and insurance reimbursements as shown in Figure 45. This figure illustrates two elements discussed earlier in the report. It highlights changes brought on by the *2013 Wildfire Protection Act*; in this

case; the transition in 2014 from an OFLPF-first payment strategy to the dollar-for-dollar expenditure share between OFLPF and General Fund in place today. It also shows that the Large Fire risk to the General Fund is essentially unlimited, though insurance and FEMA disaster awards tend contribute a growing percentage of expense as total damages increase. It is important to note that Large Fire expenses are net costs that do not include projected or received FEMA disaster awards, which reduce General Fund expenditures in a given year.

Figure 45.

Total Large Fire Expenses (Fiscal Years 2011-2020)



Source: ODF Administration. Notes: In FY14 expense allocation for large fire transitioned from OFLPF paying first \$10M to OFLPF/General Fund sharing the first \$20M dollar-for-dollar. Listing OFLPF below General Fund in these bars does not indicate order of payment; moneys from these two funds are expended simultaneously. Calendar year 2020 fires are not included as they occurred in fiscal year 2021.

Again, given current record keeping it is not possible to separate the landowner dollars into public and private shares. Access to this data in the future would lend itself to a more complete and granular analysis that focuses on how General Funds and private landowners’ funds compare.

#### Equity: Costs Vary by Land Type, Owner Type, and Geography

The wildfire funding mechanisms described above generate significant variability in the rates paid by landowners. Though the rates are different, the assets and staff required to meet the 98% containment targets also vary substantially due to climate, forest type, and topography across the districts. While it is difficult to assess the equity of these difference, the following differences are noted.

The most significant variability comes via the Forest Patrol Assessment. As described above, the rate is set within each district to meet Base Fire protection requirements. The rates for private

lands over the past ten fiscal years are shown in Figure 46. These rates vary by land type (timber or grazing), ownership type (public or private), and region. Rates change each year, and may go up or down depending on district requirements and availability of unspent carry-over funds from the previous year. The public rates are double the private rates due to the fact that the General Fund matches private rates 1:1 with an allocation to each district.

Figure 46.

### Approved District Rates for Fiscal Year 2020

			Public Rate	Private Rate
Timber	Eastern	Central Oregon	\$4.24	\$1.93
		Klamath/Lake	\$3.41	\$1.52
		Northeast Oregon	\$3.32	\$1.48
		Walker Range	\$3.57	\$1.60
	Northwest	North Cascade	\$3.21	\$1.61
		Northwest	\$2.21	\$1.10
		West Oregon	\$2.30	\$1.15
	Southern	Coos FPA	\$3.12	\$1.56
		Douglas FPA	\$3.69	\$1.84
		South Cascade	\$2.91	\$1.46
		Southwest	\$4.42	\$2.21
		Western Lane	\$2.35	\$1.17
	Grazing	Eastern	Central Oregon	\$1.66
Klamath/Lake			\$1.43	\$0.53
Northeast Oregon			\$1.07	\$0.35
Walker Range			\$0.43	\$0.03
Southern		Coos FPA	\$2.37	\$1.18
		Douglas FPA	\$1.55	\$0.77
		Southwest	\$2.04	\$1.02
Grazing Z1	Eastern	Central Oregon	\$0.30	\$0.15

Source: ODF Fire Protection Division. Notes: Private rate includes Eastside Rate Relief.

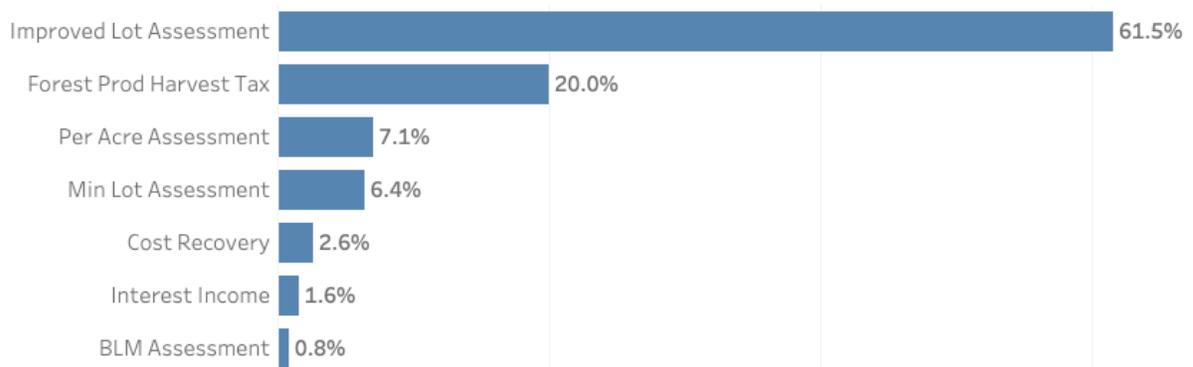
Landowners in eastern Oregon receive an additional subsidy, Eastside Rate Relief. In recognition that lands on the eastside are less productive than lands west of the Cascades, the Legislature provides a \$2+ million appropriation each biennium. Rate relief funds are distributed proportionally to the four eastside districts according to their size and consequently lower the per-acre Forest Patrol Assessment by an equal amount for each landowner acre.

OFLPF also introduces regional difference in rates by varying its per-acre assessment by geography and land type. Westside timber owners pay a lower assessment (\$0.05 / acre) than eastside timber (\$0.075 / acre). All grazing lands regardless of location paying the same rate as eastside timber (\$0.075 / acre).

Finally, the funding mechanisms that feed OFLPP introduce variability regarding the percentage contributed by different types of landowners as shown in Figure 47. For example, the improved lot assessment, paid by landowners with structures on their lands has contributed 61.5% of total revenue for OFLPP over the past ten years; the Forest Products Harvest Tax, paid by timber harvesters, has raised 20% of total revenue; the per-acre assessment and minimum lot assessment, both paid by all landowners, have together raised 13.5%. These percentages will likely shift over time as land use changes.

Figure 47.

#### OFLPP Revenue Proportions by Type (Fiscal Years 2011-2020)



Source: Data provided by ODF Administration

## 9. Recommendations

The following recommendations address opportunities to improve the tracking, substantiation, and visibility of costs and funding mechanisms related to Oregon’s wildfire preparedness and suppression programs. They are based on interviews and experience collecting and analyzing financial data and process flows for this report. Specifically, the recommendations are intended to produce outputs that are accepted and trusted as accurate and comprehensive by wildfire program stakeholders.

### Reporting and Data Consistency

Financial and operational data collected appeared to result from manual data collection and preparation. Comparing different datasets with each other and across years proved difficult and unreliable. In addition, naming conventions and usage varied by data source, which required additional effort to standardize or made comparison impractical. The following recommendations are intended to improve data consistency and reporting:

- 1) **Agree to and apply consistent naming conventions and definitions to critical systems and reports.** For example:
  - Basic information such as district names and types (operating association, etc.) appear differently and at various levels of aggregation in various financial reports, the FIRES application, and elsewhere
  - Funding mechanism names (e.g., improved lot surcharge vs. developed lot surcharge; forest patrol assessment, et al.) vary in different financial reports and other materials
  - Revenue sources such as BOF/DSL assessments are disaggregated from ‘Public Assessments’ in ODF reporting but typically should be combined for clarity (i.e., they are all public landowners)
  
- 2) **Develop and make available standardized, fully documented reports on revenue from wildfire funding mechanisms and fire-related expenses that are made available on a regular basis, likely annually.** For example:

- ***District Base Fire Revenue Projections and Actuals by Year.*** Two tables, approved budget projection and actual revenue receipts, that show the following data for each district, including operating associations.<sup>17</sup>
  - i. District acreage by type (timber/grazing, public/private)
  - ii. Anticipated revenue for district operation and administration collected via Forest Patrol Assessment
  - iii. Revenue for regional office and Fire Protection Division administration collected via Forest Patrol Assessment
  - iv. General fund dollars received for Eastside Rate Relief
  - v. General fund dollars received as 50-50 match on private landowner acreage
  - vi. General fund dollars received for admin prorated
  - vii. District budget carryover from previous year
  - viii. Approved rates by landowner type
  - ix. Special payments or notes
- ***OFLPF Revenue Actuals*** by year and source (e.g., minimum lot assessment, per-acre assessment, developed lot surcharge, et al.).
- ***OFLPF and General Fund Actual Expenditures*** on severity resources, insurance premium, strategic investments, and administration.
- ***Large Fire Expenses*** by year and type, including outstanding receivables from previous years

3) **Create a simple (1-page) summary of administrative rates and calculations.** These values are currently difficult to obtain and to determine the underlying rates and allocations. The summary should include total and per-acre charges for admin prorated, Fire Protection Division administration, and regional office administration.

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<sup>17</sup> It is especially important that revenue collected by operating associations from member lands is included in this full cost accounting, because these data exist outside the primary ODF accounting system; these data are required for a comprehensive understanding of wildfire budgets and expenses, and few people outside of ODF will know that it is necessary to ask for these specifically.

- 4) **Produce a brief, but complete, annual report of wildfire related activity, revenue, and cost.** Given the complexity of and interest in this topic, a regular report providing consistent data would provide stakeholders with trusted information to inform policy decisions. This activity will necessarily involve including data that does not reach ODF's primary accounting system (e.g., the ACC reports from operating associations; anticipated reimbursements from FEMA/BLM/other partners). This report could be 4-6 pages, largely summarizing the regular reports described above.
  
- 5) **Create a centralized database that provides access to the referenced reports and underlying data to make reporting more efficient and reliable.** Custom data pulls from multiple spreadsheets is a heavy lift for ODF accounting; investing in a system with data that state agencies outside ODF can interact with to create their own custom reports could increase efficiency, accuracy, and transparency.
  
- 6) **Cultivate advanced interstate engagement on the subject of funding adequate fire protection amid increasing fire risk.** All three states reviewed in this report are confronting similar issues of managing wildfire risks and costs. If not already engaged, ODF staff and other Oregon stakeholders may want to connect with peers and track various working groups, especially the wildfire funding working groups in Washington and Montana.

#### In-Kind Contributions

While the value of private landowners' (and the general public's) contribution to preparedness and suppression as part of Oregon's wildfire program is significant and widely agreed efforts to quantify and integrate in-kind value into policymaking have not been entirely successful. The following recommendations are intended to resolve this challenge.

- 7) **Convene an in-kind workgroup** to formally address outstanding questions about the nature and benefit of in-kind services provided by private landowners in support of Oregon's wildfire management strategy. The group should include both beneficiaries and providers of in-kind services, and an expert on in-kind services. Specifically, the group should accomplish the following:
  - Produce an agreed-upon definition of in-kind services related to both Base Fire and Large Fire activities. Prior studies have focused on suppression assets, both

unreimbursed mobilized as well as non-mobilized assets. Neither considered the value of certain investments such as incident management training or road maintenance that have both private and public value, nor did they consider privately paid contractor contributions—contributions such as these will need to be either jointly ruled in or out for valuation by the recipient (ODF/the State) and the provider (private landowners), and a valuation approach will need to be agreed to.

- Consider the five options and discussion outlined in Section 5.3, and others as needed, to select an approach that is efficient and effective in resolving these uncertainties. While there is no off-the-shelf answer to this question from either a policy or accounting perspective, formally addressing and agreeing upon a path forward will increase transparency and reduce confusion on this topic.

It is clear that Oregon has an extremely complex system that could benefit from some selective pruning. This complexity is borne from the strong collaboration between landowners and the State that is unique in Oregon, but also from decades of policy changes and program adjustments. Today, this system and its complex web of procedures, assessments, fees, taxes, and stakeholders delivers on ODF's containment goal of extinguishing 98% of fire starts before they reach ten acres, but also generates confusion and difficulty in tracking who pays for what in the preparedness and suppression ecosystem. In the future, whenever making adjustments to the legislation, processes, detailed procedures, and underlying systems that define and support ODF's Fire Protection Division mandate, it will be beneficial to seek ways to reduce complexity while still achieving key policy goals.

## 10. Appendices

### 10.1. Definitions

#### Adequate Level of Protection

A district's budget for Base Fire includes the operational and administrative costs necessary to provide an adequate level of protection on its protected acreage. The adequate level of protection is based on key metrics for acres burned, human-caused fires, firefighter safety, and Large Fire costs relative to district budget. These metrics inform required activities and considerations within the categories of readiness, detection, and resource mobilization that help a district to meet its performance goals. Beyond the scope of this study are the required activities and considerations related to fire prevention, fuel/hazard management, post-suppression, and business management.

#### Admin

#### Prorate

A per-acre rate levied on protected landowners to pay Department of Administrative Services (DAS) charges and cover the cost of administrative services necessary to support Fire Protection Division operations including HR, IT, Finance, Motor Pool, Public Affairs, Procurement, and Budget.

#### Base Fire protection

The Base Fire protection budget funds the adequate level of protection provided by each district. Base Fire encompasses both **preparedness** and small fire **suppression** activities that are the responsibility of the districts and associations, often with support of local landowners and local fire departments. This budget also funds administration at the district, regional, and Fire Protection Division headquarters, which are necessary for providing the adequate level of protection to landowners.

## In-Kind Services

In-Kind refers to “equipment and activities that landowners provide, without reimbursement, to assist with wildfire prevention, detection, and suppression” per the *2009 ODF Report on 2007 Biennial Budget Note – In-Kind Contributions by Landowners*.

## Land Classification

Forestland: “... [A]ny woodland, brushland, timberland, grazing land or clearing that, during any time of the year, contains enough forest growth, slashing or vegetation to constitute, in the judgment of the forester, a fire hazard, regardless of how the land is zoned or taxed.” (ORS 477.001(9))

Grazing Land: “... [F]orestland, within a forest protection district, that has been classified as Class 3, agricultural class, as provided by ORS 526.305 to 526.370.” (ORS 477.205(1))

Timber Land: “... [F]orestland, within a forest protection district, that has not been classified as Class 3, agricultural class, under ORS 526.305 to 526.370. [1965 c.253 §56]” (ORS 477.205(2))

## Large Fire Protection

Fires that require more **suppression** resources than the responding district or association can provide within its annual budget and available assets are the responsibility of the Large Fire funding structure. There is no budget for these events, and the costs are covered—in different amounts—by landowner dollars, the General Fund, and insurance. Additionally, these fires often qualify for FEMA disaster relief, which helps mitigate these costs.

## Preparedness

Maintaining at the ready the necessary resources (personnel, equipment, infrastructure, training) to prevent, detect, and respond to fires.

## Severity Resources

These are strategically pre-positioned firefighting assets—often air support—used in times of elevated fire risk to prevent small fires from growing large. Can be deployed to either Base Fire or Large Fire in support of specific districts, associations, or larger regions.

## Statistical Fire

“A statistical fire is a fire requiring suppression action by the department or its cooperators if it meets one of the following conditions:

- Originates on land for which the district has the protection responsibility and is contained within the district. (Include fires on dual assessment, except where only the structure was involved.)
- Originates on land protected by another agency and/or district, and spreads into the reporting district. Costs, acreage and damage incurred to each district will be reported by the responsible district.
- If a fire originates on land outside of district protected forestland and does not spread to protected forest land, count the fire as a statistical if the fire is within 1/8 of a mile of forest land (220 yards) or deemed a threat by ODF fire managers to forest land, and:
  - The fire is not within the boundaries of another protection agency, or
  - The fire is within another protection agency boundary; however, suppression is clearly needed to prevent the spread of fire to protected forest land. Do not count suppression action provided by agreement or pre-planned dispatch.
- In Offset Agreement Areas (Eastern Oregon Area), if ODF provides the resources to fight the fire on a partner agency’s lands, ODF is considered the protection agency in the case, and reports a STAT fire. If only partner agency acres are burned, ODF-Protected Acres are zero. If ODF-Protected Acres (lands normally ODF-Protected such as Private lands) are burned, ODF-Protected Acres should be recorded.”

*Source: 2018 ODF FIRES Database Manual*

## Suppression

Attacking and extinguishing wildfires using the necessary resources, primarily those made available by preparedness.

## 10.2. Wildfire Funding in Washington State

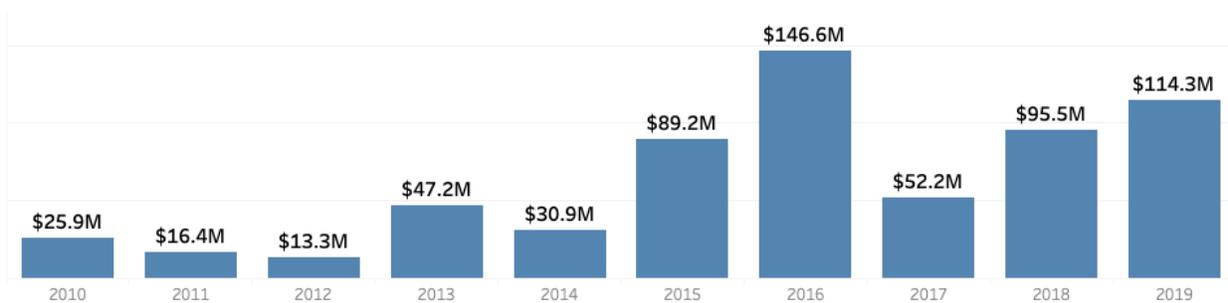
Washington State’s Department of Natural Resources is the lead agency for the State’s wildfire program. The Department protects a total of 13.1 million acres (31% of the State’s acreage) and is organized into six regions. In total, the Wildfire Program has over 1,300 permanent and seasonal workers who are distributed throughout the regions along with 120 wildland engines, and 20 aircraft. Department staff is supplemented with crews from correctional facilities. The Washington State Patrol and Fire Marshal provide supplemental crews and resources for large fire response.<sup>xxvii</sup>

Washington pursues a target of containing fires to 10 acres or less 95% of the time.<sup>xxviii</sup> In pursuit of this goal, Washington takes a somewhat different approach to budgeting. Rather than Oregon’s Base Fire conception of local fires within a district’s capacity, Washington budgets include separate line items for readiness activities AND suppression. The suppression activities are derived from previous years’ experience and include Large Fire costs. Over fiscal years 2010–2019 the annual expenditures for ‘Wildfire Non-Suppression’ (readiness) activities ranged between \$15 million–\$20 million.<sup>xxix</sup>

Wildfire severity and costs have mirrored the experience of other western states over the past decade, as illustrated by increasing costs over recent years as shown in Figure 48.

Figure 48.

Washington State Fire Program Expenditures (Fiscal Years 2010-2019)



Source: Fire Season Summary 2019. WA DNR ([https://www.dnr.wa.gov/publications/rp\\_fire\\_annual\\_report\\_2019.pdf](https://www.dnr.wa.gov/publications/rp_fire_annual_report_2019.pdf))

Figure 49 provides detailed fire suppression expenditures by funding source, for fiscal years 2010–2019. The State General Fund category includes the Budget Stabilization Fund – or “Rainy Day Fund” – to which an amount equal to 1 percent of the general State revenues for that fiscal year is transferred annually, a Disaster Relief Fund, and the General Fund.<sup>xxx</sup> Also, the Clarke-McNary Fund that holds funds received from the federal government in connection with Cooperative work with the USDA.<sup>xxxi</sup>

Figure 49.

Washington State Wildfire Suppression Expenditures (Fiscal Years 2010-2019)

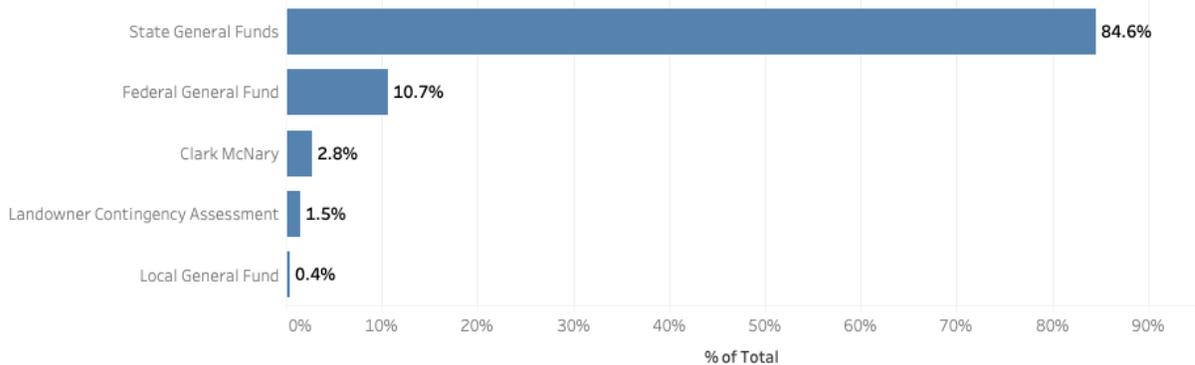
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
State General Funds	\$24.23M	\$14.89M	\$11.84M	\$43.03M	\$26.34M	\$77.54M	\$138.15M	\$46.24M	\$74.82M	\$76.88M
Federal General Fund	\$1.46M	\$1.38M	\$1.34M	\$4.05M	\$4.08M	\$11.42M	\$7.36M	\$3.20M	\$19.15M	\$14.24M
Local General Fund	\$0.01M	\$0.00M	\$0.00M	\$0.00M	\$0.16M	\$0.09M	\$0.07M	\$0.07M	\$1.17M	\$0.99M
Clark McNary	\$0.00M	\$2.04M	\$0.00M	\$15.54M						
Landowner Contingency Assessment	\$0.17M	\$0.10M	\$0.09M	\$0.14M	\$0.31M	\$0.18M	\$0.98M	\$0.63M	\$0.41M	\$6.66M
<b>Grand Total</b>	<b>\$25.87M</b>	<b>\$16.36M</b>	<b>\$13.28M</b>	<b>\$47.22M</b>	<b>\$30.89M</b>	<b>\$89.23M</b>	<b>\$146.56M</b>	<b>\$52.18M</b>	<b>\$95.55M</b>	<b>\$114.30M</b>

Source: Fire Season Summary 2019. WA DNR ([https://www.dnr.wa.gov/publications/rp\\_fire\\_annual\\_report\\_2019.pdf](https://www.dnr.wa.gov/publications/rp_fire_annual_report_2019.pdf))

Figure 50 shows the relative contribution of each funding source over the same ten-year period.

Figure 50.

Washington State Fire Program Expenditures by Proportion (Fiscal Years 2010-2019)



Source: Fire Season Summary 2019. WA DNR ([https://www.dnr.wa.gov/publications/rp\\_fire\\_annual\\_report\\_2019.pdf](https://www.dnr.wa.gov/publications/rp_fire_annual_report_2019.pdf))

### Fire Funding Mechanisms

Washington State funds wildfire with a mixture of General Funds and fees paid by forest landowners. Each landowner has an obligation to provide wildfire protection for their forested land that meets with the approval of the Department.<sup>xxxii xxxiii</sup> In lieu of providing protection, the landowner may pay the Forest Fire Protection Assessment (FFPA). The FFPA helps pay for readiness resources including purchasing equipment and training crews to support preparedness.<sup>xxxiv</sup>

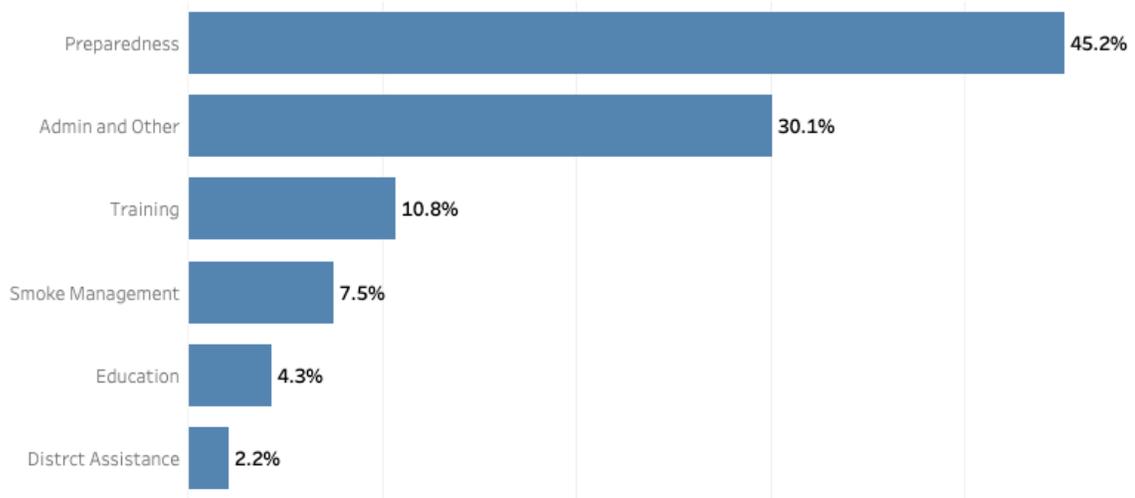
The FFPA rate is set by the Department and administered by each county, which may choose to add \$0.50 to cover administrative costs. The fee assessed is the same for private and exempt landowners and does not vary by geographic location. For the past decade the fee has remained the same, \$17.00 for properties up to 50 acres + \$0.27 for each additional acre. Allowances are made for holders of multiple small lots to pay the minimum fee only once.

The fee is collected annually on approximately 500,000 parcels and results in revenue of approximately \$11.6 million annually for the 2017–2019 State budget.<sup>xxxv</sup> Washington has no mechanism for recognizing the in-kind contributions from private landowners related to readiness or fire suppression activities.<sup>xxxvi</sup>

A report from by JLARC completed in 2017 evaluates the collection, use, and equity of the FFPA.<sup>xxxvii</sup> The following figures are drawn from this report. Over the ten-year period ending with fiscal year 2016, DNR collected over \$100 million from the FFPA and allocated those funds as shown in Figure 51.

Figure 51.

### Forest Fire Protection Assessment Allocation (Fiscal Years 2007-2016)



Source: Washington JLARC 17-06 Final Report Forest Fire Protection Assessment.  
<https://leg.wa.gov/jlarc/reports/2017/forestFireProtectionAssessment/f/default.html>

Funds collected via the FFPA are distributed to regions based on the number of full-time staff members within the region which may be proportional to but not directly linked to either dollar value of fees collected within the district nor the district's fire costs. The report found that there can be a differential between the revenue collected and funds allocated within each region as shown in Figure 52.

Figure 52.

### FFPA Collected vs Spent by Region (Fiscal Years 2007-2016)

	Collected	Spent
Eastside	28.0%	47.0%
Westside	64.0%	38.0%
Statewide	8.0%	16.0%

Source: Washington JLARC 17-06 Final Report Forest Fire Protection Assessment.  
<https://leg.wa.gov/jlarc/reports/2017/forestFireProtectionAssessment/f/default.html>

Report recommendations included taking actions to improve consistency of land classifications and administration of the fees at the county level to resolve issues with incorrectly classified parcels and to add missing parcel into the program.

The State of Washington also administers a second, smaller fee called the Landowner Contingency Assessment (LOC). LOC pays for emergency fire suppression when a paying landowner starts a fire during landowner operations. The Department may also apply LOC funds to mitigate extreme fire hazard.<sup>xxxviii</sup>

The assessment may be applied as a base rate of \$7.50 for parcels less than 50 acres with a per acre fee added for larger parcels. However, as of 2020, DNR only applies a per-acre assessment as follows:<sup>xxxix</sup>

- Eastern Washington: First 50 acres @ \$.20/ac + \$0.02/ac for each additional acre
- Western Washington: First 50 acres @ \$.40/ac + \$0.04/ac for each additional acre

This fund has collected approximately \$750k per year over the past several biennial cycles (fiscal years 2015–2019). Monies in this fund are supplemented with funds recovered by the Department due to landowner liability or negligence. If money is spent from the fund that turn out not to be for landowner-responsible fires, the General Fund will reimburse the account.

## Strategic Initiatives

Washington State Department of Natural Resources prepared the 2019 *Washington State Wildland Fire Protection 10-Year Strategic Plan*<sup>xl</sup> to address the significant cost and risk of wildfire. The Plan includes steps to create a more sustainable funding base for wildfire and forest health initiatives including the following actions (Pages 81-82):

- Establish the true costs of wildfire in Washington State to better inform resource allocation decisions
- Identify and evaluate alternative sustainable funding mechanisms for resilience and wildland fire suppression
- Convene a task force to develop and advance funding strategies
- Increase investment in fuel and vegetation management

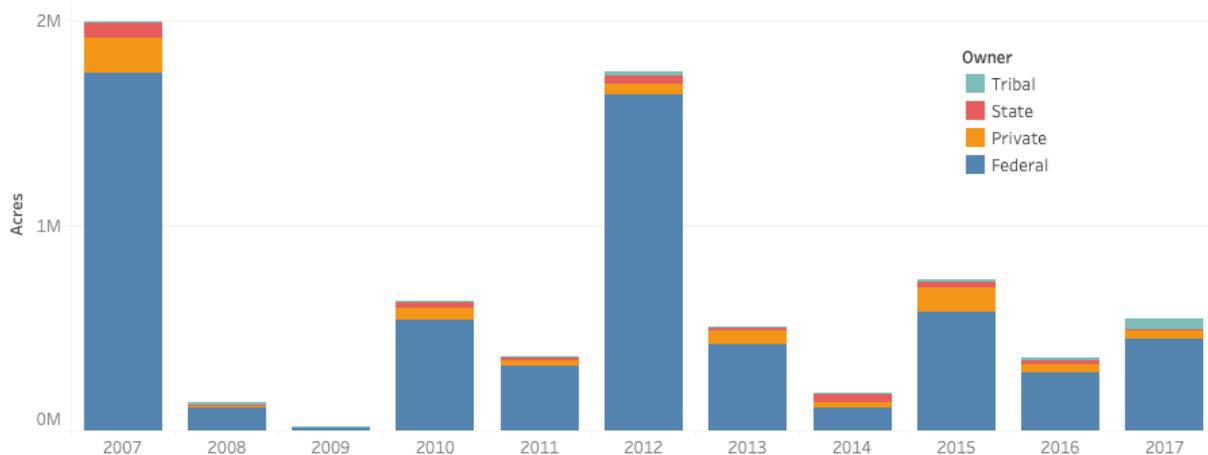
### 10.3. Wildfire Funding in Idaho

The State of Idaho’s Department of Lands (IDL) is responsible for wildfire preparedness and suppression. The State protects approximately 6 million acres (11.3% of the State’s area) of both forest and rangeland. Idaho’s wildfire protection is organized into ten Forest Protective Districts and two Timber Protective Associations which provide their own fire protection, with IDL approval, in lieu of paying state wildfire assessments. The State also has four additional districts that are managed by federal or tribal entities, as well as rangeland protection associations. Due to the patchy distribution of federal and state land within Idaho, IDL has established the concept of “offset acres” where federal and state agencies swap wildfire responsibilities to achieve a more efficient and effective firefighting capability. As for 2017, the number of “offset acres” was approximately 870,000.<sup>xli</sup>

Idaho has experienced a similar profile of wildfire frequency and extent as compared with other western states over the past decade. During this time federal lands have burned at a higher rate as compared with other lands; likely due to remote locations and forest management history. Federal lands make up 61.9% of lands in the State.<sup>xlii</sup>

Figure 53.

Idaho Acres Burned by Land Ownership (2007-2017)



Source: State of Idaho 10 Year Fire Data, 2007-2017, Department of Lands  
<https://www.idl.idaho.gov/wp-content/uploads/sites/2/fire/10-yr-fire-data-2007-2017.pdf>

## Funding Mechanisms

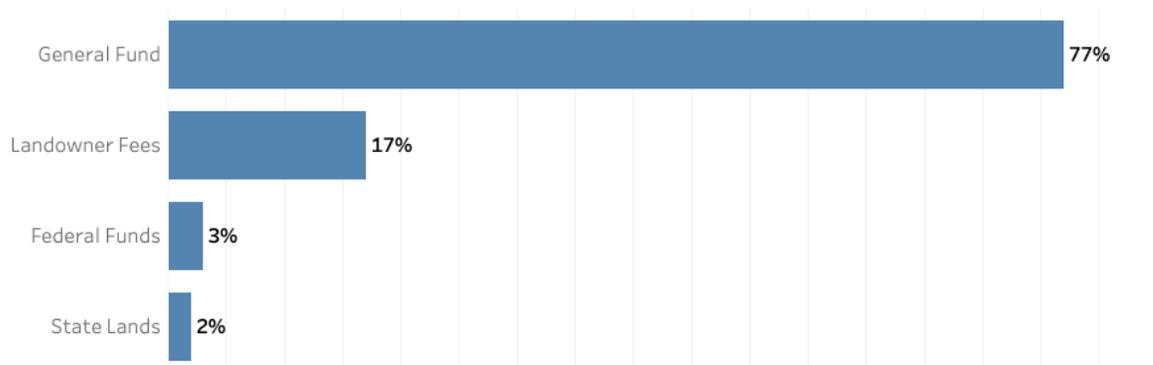
Idaho's wildfire activities are funded by a combination of General Fund, federal funds, and assessments on forested land. The assessment was established in The Idaho Forestry Act (38–111)<sup>xliii</sup> with the rate set annually by the State Lands Commission. Currently, the rates are as follows:

- Parcels less than 25 acres: \$0.60 per acre with a minimum of \$15 per parcel.
- Parcels more than 25 acres: \$0.60 per acre.
- Parcels with structures have an additional \$40.00 surcharge per livable structure

The funds collected via this assessment are gathered in the State's 'Dedicated Fund' for wildfire protection. IDL contributes to the assessment for nearly 1 million acres of state endowment lands also under protection. Over the 10-year period ending in fiscal year 2016, the assessment structure yielded approximately \$4.1 million per year and contributed approximately 53% to the State's preparedness expenditures. As a percentage of the total preparedness and suppression budget the total is approximately 17% over the same period.<sup>xliv</sup>

Figure 54.

### Idaho Make-up of Preparedness and Suppression Funding (Fiscal Years 2007-2016)



Source: IDL Fire "Red Book" <https://www.idl.idaho.gov/fire-management/>

The State funds Large Fire via a "Deficiency Fund" that allows spending by the Department and is then reimbursed at the end of the fire season. In some cases, the fund may be pre-loaded in anticipation of expenses. All dollars contributed to this fund come from the State's General Fund.

No attempt to value in-kind assets was identified. In fact, the Idaho Red Book seems to discourage private firefighting activities for safety reasons.<sup>xlv</sup>

### Strategic Initiatives

The IDL produced an in-depth program review in 2017, *Idaho Department of Lands Fire Program Review*,<sup>xlvi</sup> that provides a detailed overview of all fire program components and dozens of specific recommendations. The key finding:

*IDL needs to plan and implement changes in fire organization structure, training, staffing, and equipment to respond effectively to predicted increases in wildfire size, intensity, duration and complexity. Trends in the evolution of fuels, fire behavior, and climate change indicate that the current fire organization will struggle to achieve its initial attack suppression target. The area burned in the next decade is likely to increase, and these fires are likely to burn more rapidly, with greater intensity, and resistance to control. Population increase and the expansion of the wildland urban interface, together with increased potential for larger and faster spreading fires, will impact communities and rural homeowners, causing greater loss of private property and greater threats to public and firefighter safety.*

The July 2020 *Forest Action Plan*<sup>xlvii</sup> provides detailed assessment of the intersection of forest health and wildfire. The *Plan* confirms the increase of fire prevalence and intensity as well as detailing specific threats to ecosystems and wildlife.

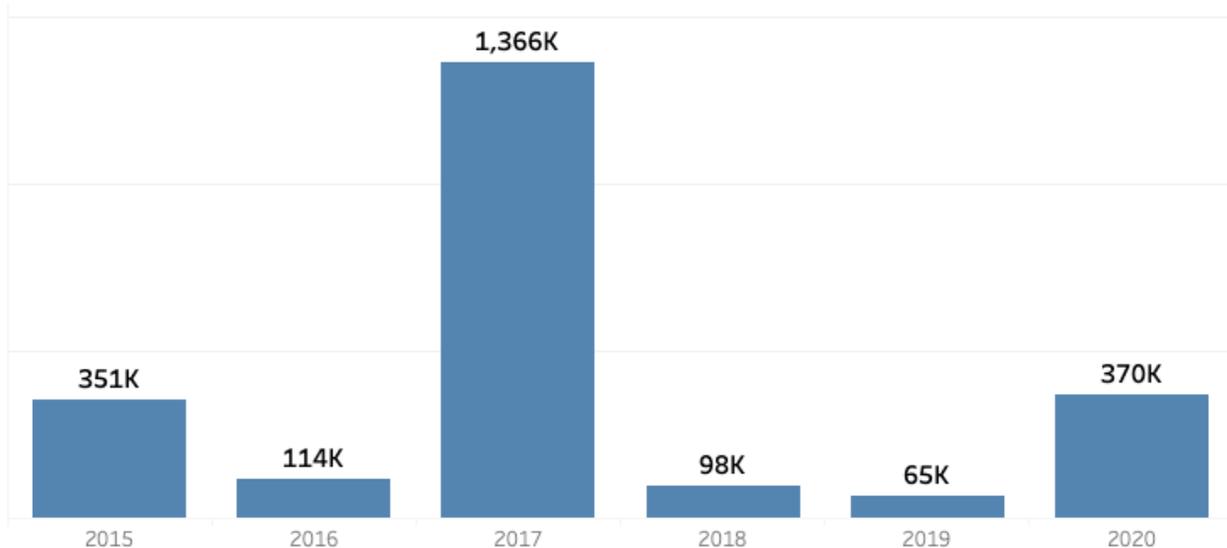
## 10.4. Wildfire Funding in Montana

The State of Montana Department of Natural Resources and Conservation (DNRC) provides protection for approximately 5.2 million acres, or 5.5% of Montana’s 94 million acres. This protected acreage includes about 3.5 million acres of state and private land as well 1.7 million acres of federal land. The majority of remaining 50 million acres are protected via the County Cooperative Fire Protection Program via a network of 400 fire departments statewide.<sup>xlviii</sup> Similar to Oregon, Montana also receives support from regional assets such as the Montana Air National Guard, Canadian air resources, and the Northwest Wildfire Compact.

Figure 55 below provides the total acres burned in Montana the period 2016–2020. It is worth noting that these totals include federal lands that may, or may not, be under the jurisdiction of the DNRC.

Figure 55.

### Montana Total Acres Burned (Fire Years 2015-2020)



Source: Northern Rockies Coordination Center.

[https://gacc.nifc.gov/nrcc/predictive/intelligence/ytd\\_historical/eoy/10yr2008-2017-state.htm](https://gacc.nifc.gov/nrcc/predictive/intelligence/ytd_historical/eoy/10yr2008-2017-state.htm)

## Funding Mechanisms

Montana has implemented a fire assessment fee<sup>xlix</sup> for landowners that are not able to provide their own fire protection within Montana's fire districts and to others, called Affidavit Units, representing landowners that specifically request support from the department. The Fire Protection Assessment may also be applied to non-forested and farm areas within ½ mile of forested land as this land may present a fire risk to the forest. As of 2020, the fee is as follows:

- \$45.10 per landowner per district + \$0.30 per acre in excess of 20 acres.
- A special rate of \$22.55 applies to condominium owners within the district.

Each September, the DNRC program identifies landowners subject to the fee and distributes this list to the Department of Revenue for collections. This assessment structure raised approximately \$3.8 million for fiscal year 2018. The legislation (MCA-76-13-207)<sup>l</sup> requires that the funds collected represent no more than 33% of the fire protection fund each year. In 2007, the legislature established a new policy that landowners with less than 20 acres pay approximately 60% of the total fees collected.<sup>li</sup> <sup>lii</sup> The fees are applied equally geographically though the majority come from westside forest owners. There has been an equity issue raised regarding using fees to support cooperative program expenses that benefit many of the eastern fire districts.<sup>liii</sup> In addition to these fees there may be additional wildfire-related fees charged at the local or regional level that do not pass through the DNRC program. The program does not appear to explicitly recognize in-kind contributions of private landowners.

Montana has created the Wildfire Suppression Account<sup>liv</sup> as a mechanism to better address the increasing cost of fire. The legislature may transfer funds to the account along with restitution from private parties and transfers of unused components of the governor's emergency appropriation. The fund may be used for the following activities:

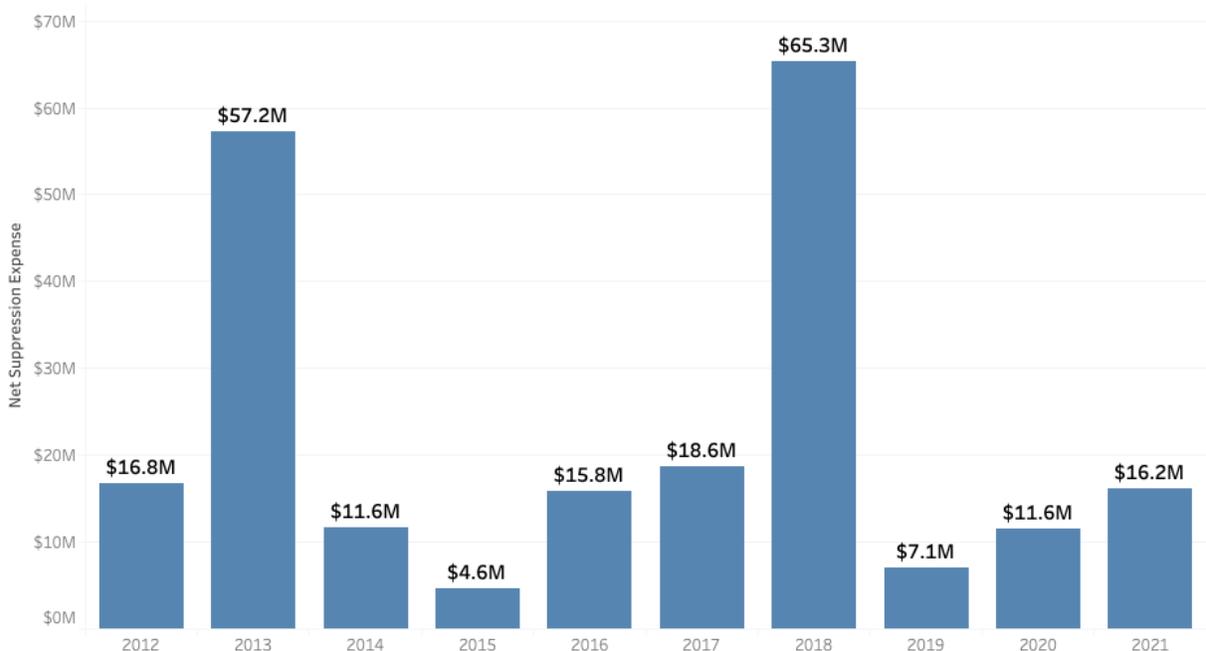
- Fire suppression
- Fuel reduction/mitigation
- Forest restoration
- Equipment grants to county cooperatives

- Forest management activities on federal lands

Excess moneys in the General Fund each year will be transferred to this account until the total reaches a cap of approximately \$101.5 million. In years when the balance exceeds \$40 million, up to \$5 million per biennium may be used for non-suppression activities listed above. Following the 2020 fire season, the account had approximately \$85 million.<sup>lv</sup> At this level, the fund could cover approximately four “average” fire seasons.

Figure 56.

Montana Large Fire Expense (Fiscal Years 2012-2021)



Source: Montana: DNRC accounting via custom data request. Note: Total expense after recoveries from FEMA and other agencies.

### Strategic Initiatives

The Montana Department of Natural Resources has released its *Fire Protection Strategic Plan (2019-2025)* <sup>lvi</sup> which defines measures that the State is taking to advance its wildfire programs.

*Strategic Goal 2* addresses the need for updating approaches to funding and cost recovery:

*Goal 2: Maintain stable, adequate purchasing power in the Fire Protection Program preparedness budget and a stable fire suppression account that enables our ability to sustain our program delivery.*

*Objective 2.1: By 2022, develop an approach to fund our fire protection preparedness budget sustainably and comprehensively with, as needed, a reformed Wildland Fire Protection Fee (assessment) that acknowledges the true nature of the DNRC Fire Protection Program.*

*Objective 2.2: Prepare, if necessary, to replace with state appropriated funds approximately 12% of our fire protection preparedness budget currently provided by federal NFC and RFC grant funds.*

*Objective 2.3: By 2024, redeem our cost recovery responsibilities related to billable, human-caused fires and take advantages of opportunities to recover costs from responsible parties in a matter that could flow funds into the fire suppression fund annually.*

## 10.5. Stakeholder Interviews and Contacts

ODF	<p>Bill Herber          Tim Holschbach          Mark Hubbard          Doug Grafe          Ron Graham          Sarah Longwell          Stacy Miller          Sherry Rose          James Short          Mike Shaw          Tracy Wrolson</p>
Douglas Fire Protective Association	<p>Jill Miller          Pat Skrip</p>
OFIC	<p>Tyler Ernst          Kyle Williams</p>
EFCC	<p>Ken Cummings          Nancy Hirsch</p>
Legislative Staff	<p>Jaime McGovern, LRO          Matt Stayner, LFO</p>
Other Stakeholders	<p>Mike Barsotti, OSWA          Renee Kline, DAS          Justin Marlowe, University of Chicago          Cassandra Moseley, University of Oregon          Kaola Swanson, Sustainable Northwest</p>

10.6. Data Files Reviewed

<p>ODF Administration</p>	<p>Administrative Revenues Received for Forest Patrol Assessment Biennial            Fiscal Budgets – Fire Protection Division            District/Association-level Base Fire Budgets            District/Association-level Revenue by Category            Large Fire Expense 2010-2020            OFLPP Revenue by Type and Year 2011-2020</p>
<p>Fire Division</p>	<p>Acres by Land Jurisdiction by District/Association            Approved District Budgets 2011-2021            District/Association Deductible History            FEMA Reimbursements            FIRES Application (Wildfire Event Detailed Data: 2010-2020)            Operating Association Carryover Balance            Operating Association Certification of Expenditures from ACC</p>

## 10.7. Technical Advisory Group Meeting Agendas

### Wildfire Study Technical Advisory Group Meeting 1



**Meeting Purpose:** This meeting will serve as a formal kickoff for the Oregon Wildfire Suppression Cost Study. Earth Economics will review the study objectives, scope of work, and project output format. This is the first of three Technical Advisory Group meetings.

**Date & Time:** 5:00PM-7:00PM, February 17, 2021

**Location:** Microsoft Teams

**Join on your computer or mobile app** [Click here to join the meeting](#)

**Or call in (audio only)** [+1 407-440-0806,819348072#](#) Phone Conference ID: 819 348 072#

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**Agenda:**

- Introductions (DAS)
- Study Objectives (EE)
- Project Schedule (EE)
- Scope of Work (EE)
- Contacts and Data (EE)
- Final Project Outputs (EE)
- Discussion Topics – What’s missing, definitions, other topics (EE)
- Next Steps

**Project Overview:**

The goal of this project is to produce a comprehensive understanding of fire suppression activities and costs borne by different stakeholders throughout Oregon—industrial forestland owners, non-industrial smallholders with less than 5,000 acres, publicly owned forestlands, and others.

**Earth Economics Overview:**

Since 1998, Earth Economics has provided science-based economic analyses of the contribution of ecosystem goods and services to human wellbeing. Working with leading ecologists and economists, we have supported public policy makers, businesses, and community groups around the world in their efforts to transition toward solutions that are both economically and environmentally sustainable.

**Questions:**

Contact Johnny Mojica | [jmojica@eartheconomics.org](mailto:jmojica@eartheconomics.org)

## Wildfire Study Technical Advisory Group Meeting 2



**Meeting Purpose:** This meeting is to review the draft report *Cost of Wildfire Preparedness and Suppression Activities on ODF-Protected Lands in Oregon*.

**Date & Time:** 5:00PM-7:00PM, March 4<sup>th</sup>, 2021

### Microsoft Teams meeting

**Join on your computer or mobile app**

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[+1 407-440-0806,648796284#](tel:+14074400806648796284) United States, Orlando

Phone Conference ID: 648 796 284#

[Find a local number](#) |

#### **Agenda:**

- Summarize report approach and outstanding items/gaps
- Review key charts and data
- Collect initial observations on the draft:
  - What needs more detail and/or summary charts?
  - What's missing or extraneous?
- Solicit TAG feedback on approach to the Executive Summary and Recommendations
- Next steps

#### **Project Overview:**

The goal of this project is to produce a comprehensive understanding of fire suppression activities and costs borne by different stakeholders throughout Oregon—industrial forestland owners, non-industrial smallholders with less than 5,000 acres, publicly owned forestlands, and others.

#### **Earth Economics Overview:**

Since 1998, Earth Economics has provided science-based economic analyses of the contribution of ecosystem goods and services to human wellbeing. Working with leading ecologists and economists, we have supported public policy makers, businesses, and community groups around the world in their efforts to transition toward solutions that are both economically and environmentally sustainable.

#### **Questions:**

Contact Johnny Mojica | [jmojica@eartheconomics.org](mailto:jmojica@eartheconomics.org)

## Wildfire Study Technical Advisory Group Meeting 3



**Meeting Purpose:** This meeting is to review the comment resolutions for the report *Cost of Wildfire Preparedness and Suppression Activities on ODF-Protected Lands in Oregon*.

**Date & Time:** 5:00PM-7:00PM, March 23<sup>th</sup>, 2021

### Microsoft Teams meeting

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**Or call in (audio only)**

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Phone Conference ID: 128 010 205#

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#### **Agenda:**

- Overview of comments collected and update process
- Discuss changes in financial data
- Review draft recommendations
- Group discussion
- Next steps

#### **Project Overview:**

The goal of this project is to produce a comprehensive understanding of fire suppression activities and costs borne by different stakeholders throughout Oregon—industrial forestland owners, non-industrial smallholders with less than 5,000 acres, publicly owned forestlands, and others.

#### **Earth Economics Overview:**

Since 1998, Earth Economics has provided science-based economic analyses of the contribution of ecosystem goods and services to human wellbeing. Working with leading ecologists and economists, we have supported public policy makers, businesses, and community groups around the world in their efforts to transition toward solutions that are both economically and environmentally sustainable.

#### **Questions:**

Contact Johnny Mojica | [jmojica@eartheconomics.org](mailto:jmojica@eartheconomics.org)

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