Wildfire Season 2020

Wildfire Division Season Summary

Prepared by
Washington State Department of Natural Resources
Wildfire Division
December 1, 2020

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Please note that these statistics are derived from regional input of data into the Emergency Incident Response Statistics (EIRS), an internal DNR system. Statistics may vary throughout the season until finalized at the end of the calendar year. Additionally, data cleaning may modify these statistics as we work towards more comprehensive and accurate data management. Statistics presented here are the most up-to-date and accurate information provided through Sept. 30, 2020. The large fires described in this report are those fires that started on DNR protection, or are otherwise considered DNR fires. This report does not include details or statistics for other agency fires, except in those instances where DNR was directly involved in developing said information.

Executive Summary

Fighting Washington's wildfires is always a taxing year-round endeavor, even during the best of circumstances. This year, that annual undertaking came with the added expectation that the ongoing COVID-19 global health crisis would make things even more complex. In response, DNR enacted a number of mitigation strategies that proved to be successful. When a Labor Day windstorm ignited a slew of blazes across the state, the agency's emphasis on air resources – initially designed to limit ground crew exposure to the virus – helped turn the tide and begin to bring those wildfires under control.

This report examines DNR's response to the 2020 fire season – detailing both challenges and successes, explaining the agency's strategic COVID-19 response, and giving an overview of the damage wildfires caused across DNR jurisdictions and the economic costs of fighting them. Efforts to combat several major fires, such as Cold Springs and Pearl Hill, received DNR assistance but originated in other jurisdictions and as such are not fully explored here.

This year's Wildfire Division Season Summary report highlights four key summary findings:

- **The success of DNR's COVID-19 mitigation planning.** The strategies and protocols implemented by the agency, from training adjustments before the season to how fire responders worked in the field, resulted in minimal positive cases among DNR firefighters throughout the fire season.

- **The positive impact of having additional aircraft.** DNR made the decision to bring in two K-Max Type 1 helicopters on 90-day exclusive use contracts before the fire season, and additional air resources were added through partnerships with the National Guard and other contracted helicopters.

- **An excellent safety record.** The safety of DNR personnel is always the agency's highest priority. Despite the added risks of COVID-19, the agency was able to maintain an excellent safety record in 2020.

- **Significant assistance provided by DNR to Washington's neighbors.** In addition to suppressing wildfires across Washington, DNR crews, equipment and other resources helped battle blazes in eight other states this fire season.

Fire Season Overview

The 2020 fire season presented significant challenges for first responders from beginning to end. The outbreak of the COVID-19 pandemic disrupted the normal fire training regime and routine fire season preparations, forcing DNR to adapt. The agency rushed to devise new ways to deliver firefighter training and created virus-safe fire camp protocols, while supporting pandemic response at the local and statewide levels. DNR had to adjust procedures and requirements for preparedness activities, waiving some of those activities entirely. Also, a Wildfire Safety Plan was prepared to address COVID-19 mitigation strategies associated with wildfire and prescribed fire activities.

Photo 1: The Palmer Fire, which started Aug. 18, 2020, burned a total of 17,988 acres in Okanogan County. Photo credit: DNR Wildfire Division.

Firefighters put these protocols to the test during an early year fire outbreak in April and May. These fires required several days of intense ground suppression and the use of DNR aviation assets to keep in check.

Following a brief respite, the typical fire season arrived in earnest in early July. While lightning activity was below normal, one dry lightning storm on Aug. 16 sparked a number of large fires throughout the eastern side of the state. As the fires from the lightning storm were winding down, a significant wind event approached Washington. The conditions that led up to the Aug.

16 lightning event prompted a Governor's Emergency Proclamation, allowing DNR to access National Guard troops and aviation assets to assist with the response.[1]

In September, the Labor Day windstorm fanned numerous fires across Washington. More than 500,000 acres burned in less than a 36-hour period, which included one civilian fatality and the loss of most structures in the communities of Malden and Pine City.[2] DNR aggressively attacked fires in its jurisdictional protection areas, which include both state and private lands, while assisting with many catastrophic fires on cooperating jurisdictions.[3]

Table 1: DNR ground resources available for Initial Attack, 2020 Fire Season.

Region	Engines	Type 2 Crews (20-person)	Camps Crews (10-person)	Dozers
Northeast	41	2	6	1
Southeast	29	1		
Olympic	8		9	
South Puget	13		9	
Pacific Cascade	19		12	
Northwest	10			
Totals	**120**	**3**	**36**	**1**

Table 2: DNR and Washington Fire Service (WFS) resources dispatched out of state.

STATE	DNR Engines	DNR Crews	WFS Overhead	DNR Overhead	Grand Total Overhead
Alaska				5	5
Arizona		2	1	5	6
California	20		47	96	143
Colorado			19	30	49
Idaho				2	2
Nevada				4	4
New Mexico				1	1
Oregon	19	3	201	336	537
TOTAL	**39**	**5**	**268**	**479**	**747**

[1] https://www.governor.wa.gov/office-governor/official-actions/proclamations, Proclamation by Governor Jay Inslee, #20-68, Aug. 19, 2020 to Sept. 30, 2020.

[2] See table for structures lost or damaged in the Appendix.

[3] DNR protects state, private and other non-federal forestlands within Forest Protection Zones defined in RCW. Any response outside of these zones is considered an "other agency assist."

As the high winds moved along the West Coast, historic fires impacted Oregon and California, spreading resources thin. As soon as fires in Washington were nearing containment, DNR and WA Fire Service resources moved south to help in impacted states.

Notable successes in 2020 include COVID-19 planning and mitigation, which resulted in minimal positive cases among DNR firefighters. As part of a COVID-19 mitigation strategy designed to keep fires small, DNR contracted for additional aircraft to maintain adequate resources during the expected periods of high fire activity and the resulting heavy competition for the use of those resources both regionally and nationally. This proved very valuable throughout the season, especially when resources were in high demand. [4]

Given all of the challenges presented by the 2020 fire season, DNR personnel attained an excellent safety record. With DNR's highest priority always being public and firefighter safety, this is the most important achievement of the fire season.

Photo 2: The Bertschi Road Fire, which began July 16, 2020, burned in heavy logging slash, timber and short grass. Photo Credit: DNR Aviation Program.

[4] See Aviation (p. 16) for more detail on aviation cost.

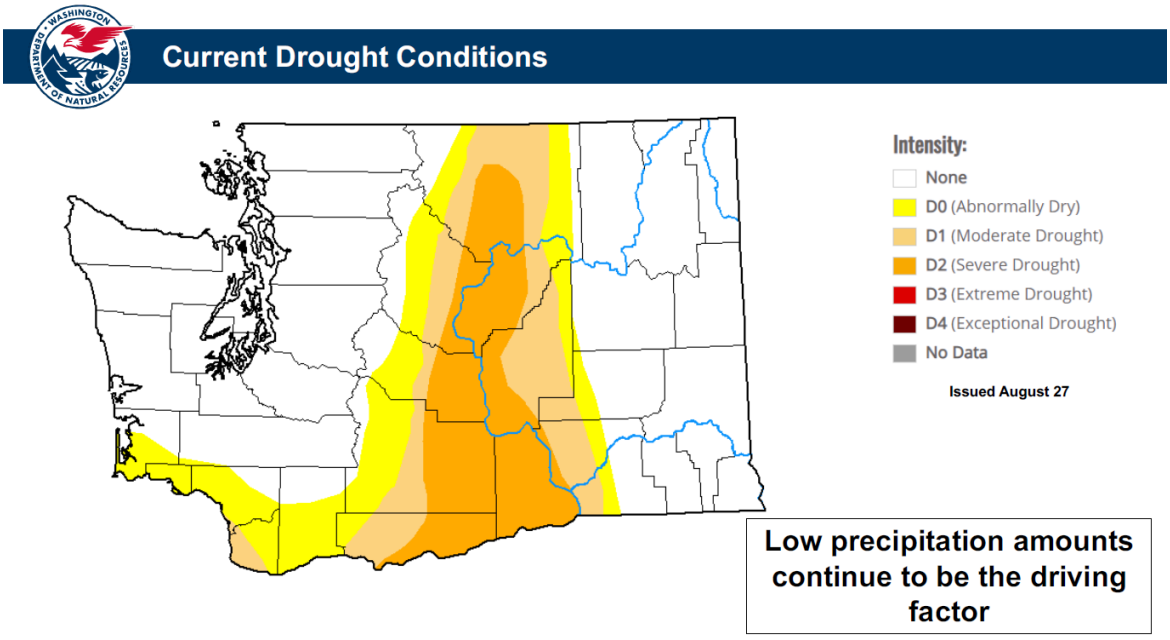
Fuels, Weather and Fire Danger Summary

2020 preseason fuels were primed by a pronounced warm, dry period that made fuels receptive to early season fire activity. This resulted in a very active April with numerous fire starts. After seasonal growth began, however, a cool and wet June kept fire danger well below average.

July saw some very hot and dry weather patterns with no measurable precipitation. By the end of July, fuel conditions over much of Eastern Washington were at or above critically dry thresholds.

August continued the precipitation deficit, with a single wetting rain across most of the state on Aug. 6 and a system that impacted only the west side on Aug. 19-22.

Figure 1: August 2020 Drought Conditions from the Monthly Climate Report, prepared by DNR Meteorologist Josh Clark.



September began with a very strong thermal trough that brought hot and dry conditions for a prolonged amount of time. On Labor Day weekend, there was an alignment of critical fuels, critical weather and abundant new ignitions.[5]

[5] A copy of the Executive Weather Summary, "Major Wind Event Contributing to Statewide Fire, Wind, and Dust Impacts, September 6-9, 2020" is available upon request. The report was prepared by cooperating meteorologists at the National Weather Service, Josh Clark (DNR Meteorologist) and Nicholas Nauslar (NIFC Fire Meteorologist). This document was prepared for FEMA Region 10 Preliminary Damage Assessment in Washington.

Normal September weather returned shortly after the Labor Day outbreak. Fuel conditions plummeted after Sept. 15, as shorter days, cooler nights, onshore flow and some precipitation slowed the various large fires and drove indices well below average by the end of the month.

Figure 2: Timeline of effective Warnings & Advisories for Sept. 6-9 from the National Weather Service forecast offices serving Washington State.

	Sept. 6		Sept. 7		Sept. 8		Sept. 9	
	AM	PM	AM	PM	AM	PM	AM	PM
Red Flag Warning								
Dust Storm Warning								
Blowing Dust Advisory								
High Wind Advisory								
Wind Advisory								

Large Fire Summary

As of Sept. 30, 2020, there have been 18 DNR fires that are considered large and/or significant (see Table 3 below).[6] Large or significant fires are typically those fires that are greater than 100 acres in timber or 300 acres in grass. For a location of these large fires, please see the Map of 2020 Fire Locations found in the Appendix.

Table 2: DNR Large or Significant Fires, Jan. 1 to Sept. 30, 2020.

#	Fire Name	Incident ID	Total Acres	Start Date	Region	County	Cause
1	POTHOLE	WA-COA-200084	351	7/6/2020	NE	Okanogan	Misc. (Vehicle Fire)
2	BERTSCHI ROAD	WA-SES-000334	250	7/16/2020	SE	Klickitat	Under Investigation
3	GREENHOUSE	WA-COA-200093	5,146	7/23/2020	NE	Okanogan	Under Investigation
4	COLOCKUM	WA-SES-000370	2,967	7/24/2020	SE	Chelan	Under Investigation
5	ANGLIN	WA-NES-001725	1,992	7/27/2020	NE	Okanogan	Misc. (Burning Material)
6	GREEN	WA-NES-001723	1,480	7/27/2020	NE	Okanogan	Misc. (Vehicle Fire)
7	BLUE LAKE ONE	WA-NES-001748	73	7/30/2020	NE	Okanogan	Undetermined
8	BADGER LAKE	WA-NES-001921	244	8/16/2020	NE	Spokane	Under Investigation
9	PALMER	WA-SPD-001947	17,988	8/18/2020	NE	Okanogan	Under Investigation
10	EVANS CANYON	WA-SES-000565	74,800	8/31/2020	SE	Yakima	Undetermined
11	INCHELIUM COMPLEX	WA-COA-200136	19,399	9/7/2020	NE	Ferry	Under Investigation
12	WHITNEY	WA-NES-002144	127,430	9/7/2020	NE	Lincoln	Under Investigation
13	BABB	WA-NES-002151	15,269	9/7/2020	NE	Spokane	Under Investigation
14	APPLE ACRES	WA-SES-000596	5,752	9/7/2020	SE	Chelan	Under Investigation
15	CUSTOMS ROAD	WA-NES-002167	2,208	9/7/2020	NE	Ferry	Under Investigation
16	EUCLID TRACKS	WA-NES-002173	260	9/7/2020	NE	Spokane	Misc. (Power Line)
17	MIMA ROAD (BORDEAUX)	WA-SPS-000204	268	9/8/2020	SPS	Thurston	Misc. (Power Line)
18	FISH	WA-SPS-000199	132	9/8/2020	SPS	King	Misc. (Power Line)

Inchelium Complex is comprised of three separate fires: Inchelium Highway, Kewa Fields and Fry. Collectively, these three fires burned 19,399 acres and all three are still under investigation at this time. Inchelium Complex (Colville Agency) and Palmer, on Spokane District of the Bureau of Land Management, are part of agreements with DNR for protection. The other large fires noted above were either Northeast Region (NE), Southeast Region (SE), or South Puget Sound Region (SPS) of DNR. Data are from EIRS and ICS-209 forms.

[6] For all fires and all jurisdictions in Washington, refer to Northwest Coordination Center (NWCC) statistics located at https://gacc.nifc.gov/nwcc/content/products/intelligence/sitreport.pdf. DNR only has control over fire statistics associated with their jurisdictional responsibility (generally private and state land); however, all fire agencies report their wildland fire statistics to NWCC.

Table 3: Ownership Acres Burned, Jan. 1 to Sept. 20, 2020.

FIRE NAME	OWNERSHIP ACRES				TOTAL
	FED	PRIVATE	STATE	TRIBAL	
ANGLIN		1,223.8	526.0		**1,749.8**
APPLE ACRES	2,203.3	2,890.7	631.0		**5,725.0**
BABB-MALDEN		13,905.5	520.2		**14,425.7**
BERTSCHI ROAD		244.9			**244.9**
COLOCKUM	200.7	2,494.0	249.8		**2,944.5**
CUSTOMS ROAD	456.4	640.3			**1,096.7**
EUCLID TRACK		189.8			**189.8**
EVANS CANYON	1,521.0	11,556.6	62,441.2		**75,518.8**
FISH		129.4			**129.4**
FRY				474.9	**474.9**
GREEN		1,471.9	301.1		**1,772.9**
GREENHOUSE				5,148.1	**5,148.1**
INCHELIUM HIGHWAY				7,075.0	**7,075.0**
KEWA FIELDS				11,734.0	**11,734.0**
PALMER	8,205.5	8,713.0	1,056.6		**17,975.0**
POTHOLE				347.2	**347.2**
WHITNEY	29,229.3	72,140.7	25,883.7		**127,253.6**
Total	***41,816.1***	***115,600.6***	***91,609.5***	***24,779.2***	***273,805.4***

This analysis of total fire acreage by ownership type was completed using GIS data from NIFC and the DNR QDL. Polygons were not available for Badger Lake, Blue Lake One or Mima Road (Bordeaux) fires, so they are excluded from this list and acreage calculation.

The 17 large fires listed above (Table 4) burned over 273,000 acres across federal, private, state and tribal ownership. Any expenditures that DNR has incurred are described in the Financial Highlights section of this report. If expenditures were incurred while assisting a federal or tribal entity that weren't part of mutual assistance during initial attack, those expenditures will be reimbursed. DNR incurs cost associated with DNR protection. DNR protects state, private and other non-federal forestlands within Forest Protection Zones defined in RCW. Any response outside of these zones is considered an "other agency assist."

The same 17 large fires burned both forested and non-forested land cover types (see Table 5). Of the total acreage burned in these large fires, about 12 percent of the lands were forested while the remaining 88 percent were not. Non-forested land cover types include shrub lands and crop lands, among others.

Table 4: Forested vs. Non-forested Acres Burned, Jan. 1 to Sept. 30, 2020.

FIRE NAME	FORESTED	NON-FORESTED	TOTAL
ANGLIN	27.2	1,722.6	**1,749.8**
APPLE ACRES	625.5	5,099.5	**5,725.0**
BABB-MALDEN	279.8	14,145.9	**14,425.7**
BERTSCHI ROAD	104.1	140.8	**244.9**
COLOCKUM	12.9	2,931.6	**2,944.5**
CUSTOMS ROAD	73.2	1,023.5	**1,096.7**
EUCLID TRACK	53.0	136.9	**189.8**
EVANS CANYON	7,388.1	68,130.7	**75,518.8**
FISH	96.3	33.0	**129.4**
FRY	133.6	341.3	**474.9**
GREEN		1,772.9	**1,772.9**
GREENHOUSE	272.5	4,875.6	**5,148.1**
INCHELIUM HIGHWAY	3,286.4	3,788.6	**7,075.0**
KEWA FIELDS	7,503.6	4,230.4	**11,734.0**
PALMER	7,000.9	10,974.1	**17,975.0**
POTHOLE		347.2	**347.2**
WHITNEY	5,526.6	121,727.1	**127,253.6**
Total	***32,383.7***	***241,421.6***	***273,805.4***

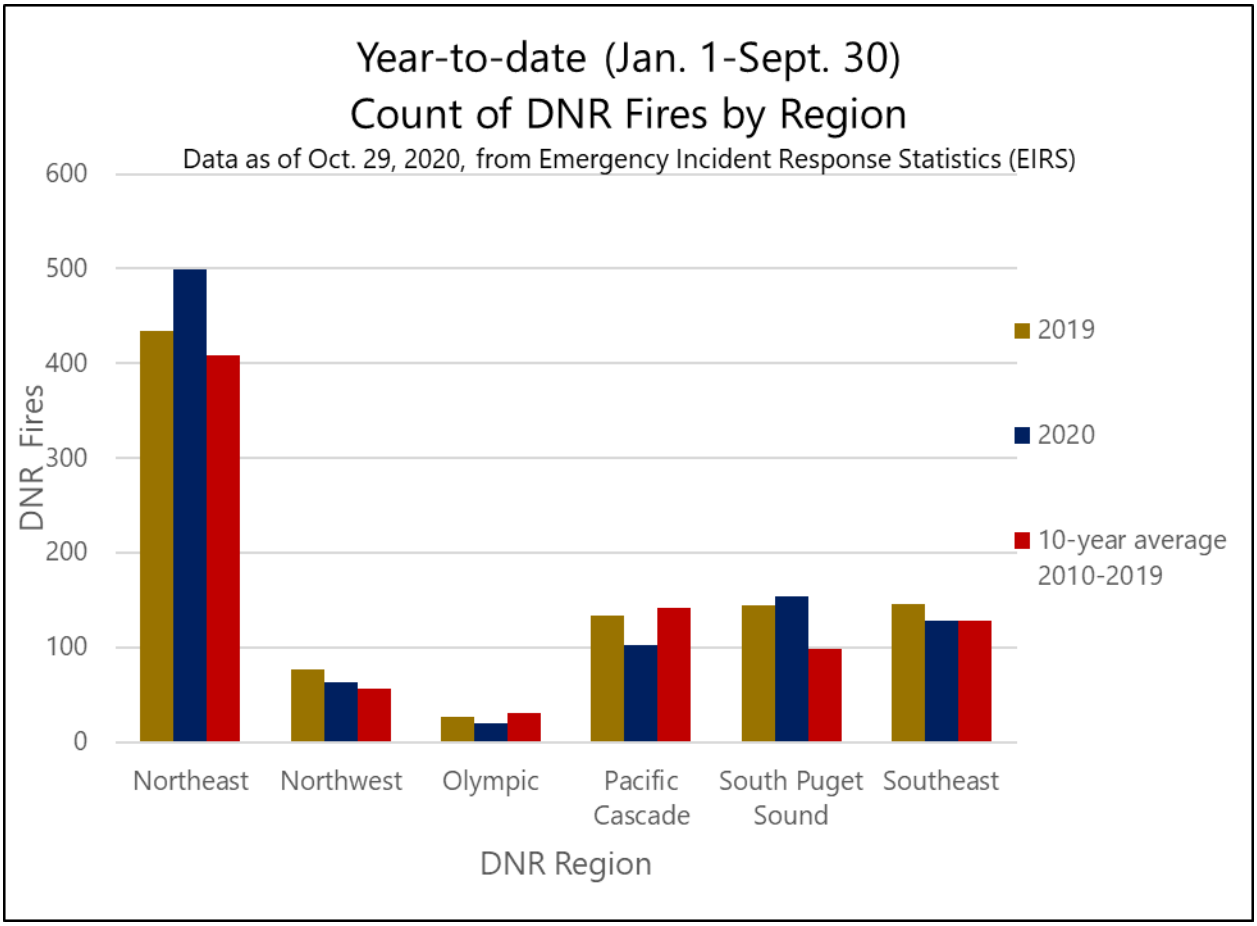
Analysis of total fire acreage by forested and non-forested land cover type. This breakdown was completed using GIS data from NIFC and the DNR QDL. Polygons were not available for Badger Lake, Blue Lake One or Mima Road (Bordeaux) fires, so they are excluded from this list and acreage calculation.

In addition to timber and other valuable lands, many structures and homes were also lost during the 2020 fire season (see Table 11 in the Appendix). DNR protects the land, and coordinates with structural fire agencies and emergency responders who are responsible for protecting structures and homes. This provides landowners with a coordinated protection system for their land and structures.

Fire Season Statistics for DNR Fires

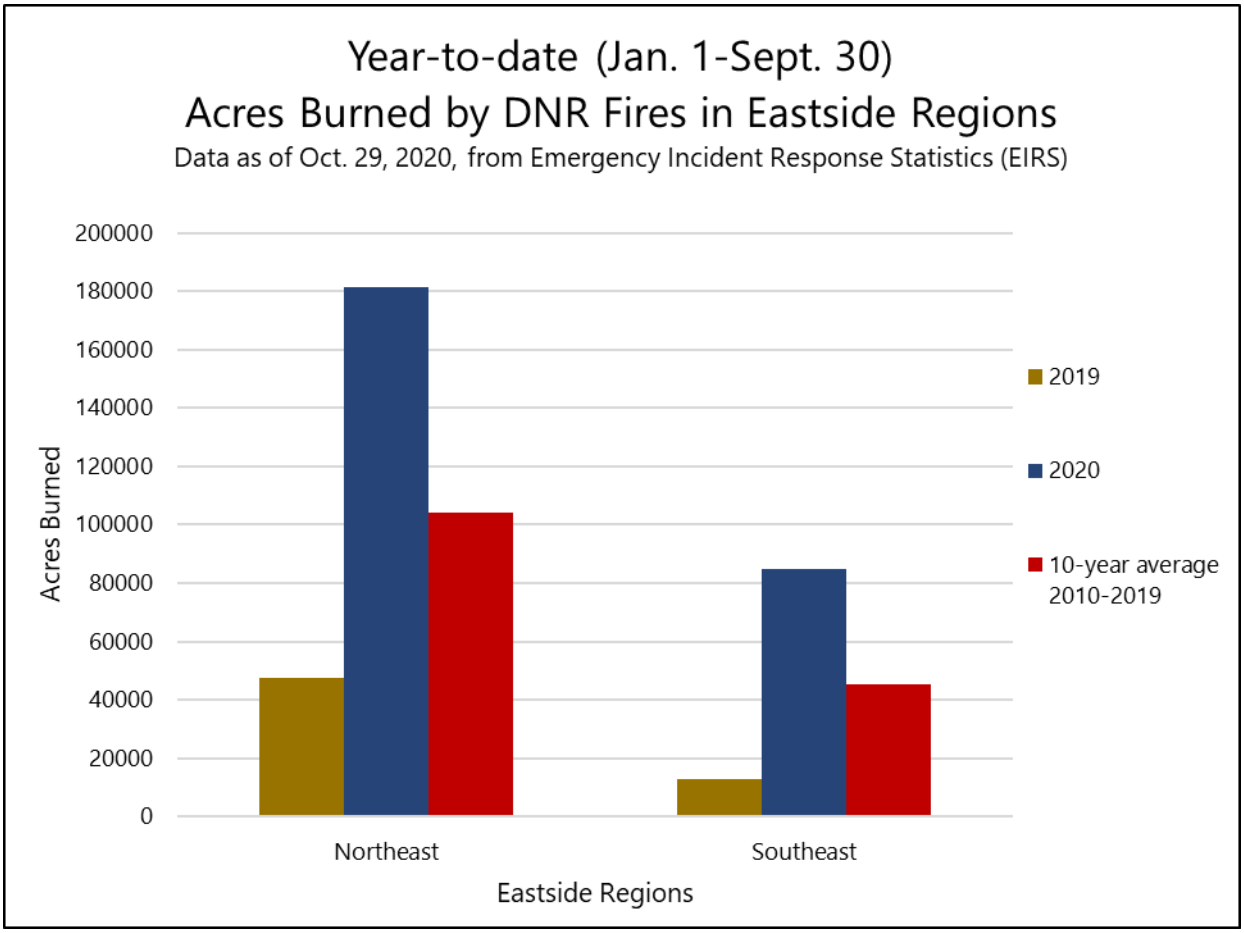
Between Jan. 1 and Sept. 30, 2020, the number of DNR fires was 340 on the westside and 627 on the eastside, bringing the statewide total to 967 DNR fires. This is higher than the 10-year average in the DNR Northeast, Northwest and South Puget Sound Regions (see Figure 3 below and Table 9 in the Appendix). Additionally, the number of fire responses was also higher than the 10-year average (see Table 8 in the Appendix).

Figure 3: Year-to-date count of DNR fires by region in 2019, 2020 and the 10-year average.



Most of the fires were contained before they had the chance to become large, complex fires. The year-to-date number of DNR fires contained at 10 acres or less is 911 of 967, or approximately 94 percent.

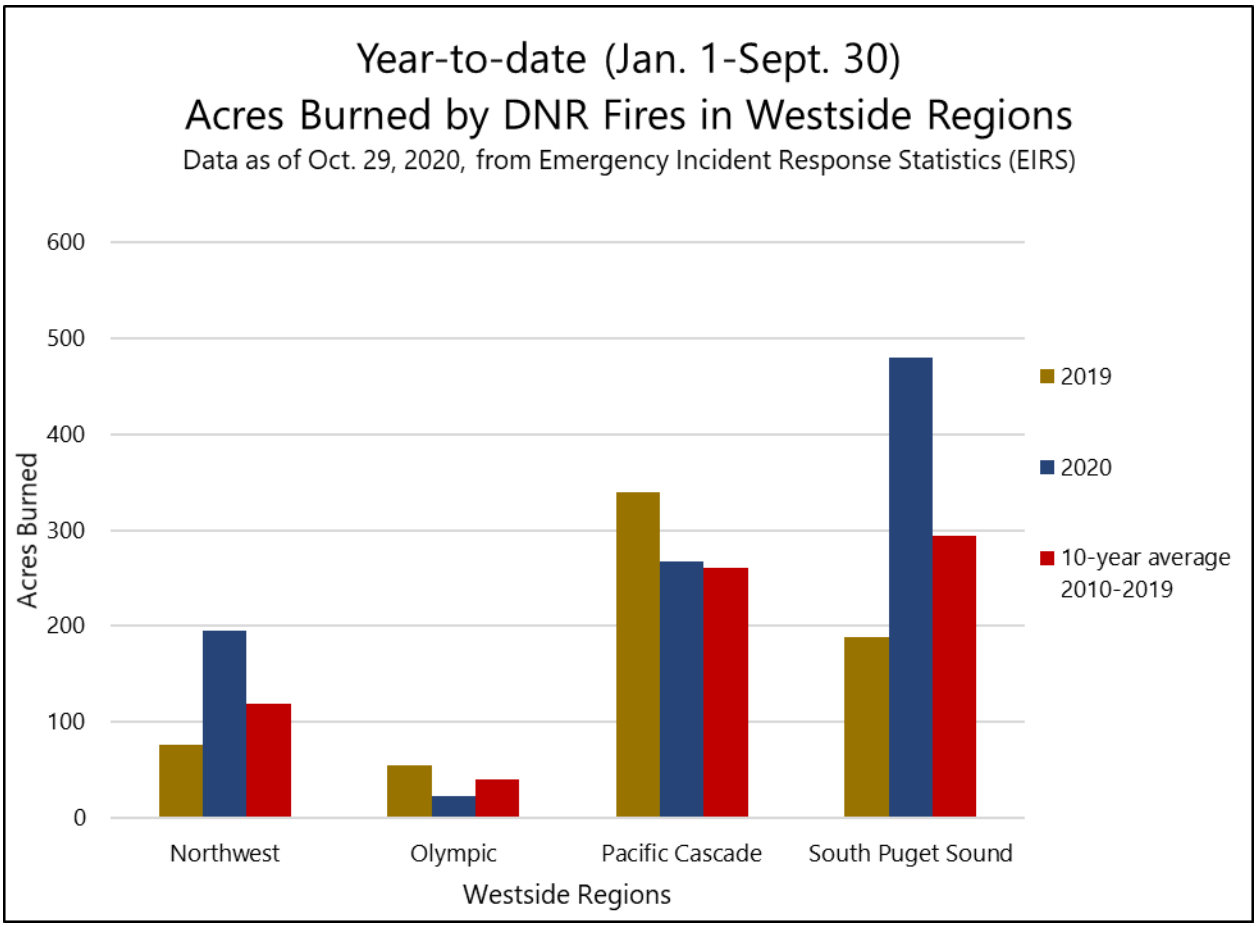
Figure 4: Acres burned by DNR fires in in DNR eastern regions. DNR eastern and western regions are shown separately due to scale.



In September alone, there were 159,717 acres reported burned by DNR fires, bringing the year-to-date total to 267,231 acres. The number of DNR acres burned in all fires across the state will be calculated at the end of the season, when reports and perimeters are finalized. The number of acres burned is higher than the 10-year average in all DNR regions except Olympic (see Figures 4 and 5).

As of Sept. 30, there have been 37 fires started by lightning, which is below the 10-year average (see Figure 6). Five of these lightning-caused fires have been on the western side of the state, while the remaining 32 have been on the eastern side. For more details on fire causes, see Table 10 in the Appendix.

Figure 5: Acres burned by DNR fires in western regions. DNR eastern and western regions are shown separately due to scale.



Currently 107 DNR fires (11 percent of fires) remain under investigation, lightning accounts for 4 percent of DNR fires, and human causes account for 823 DNR fires (85 percent) statewide (see Figure 7). Miscellaneous fires contain those other human-caused fires that do not fall into one of the nine general causes.

Please note: These statistics are not finalized or certified as end-of-year statistics. At the time of this report, the fire year has not closed. An annual summary and year-end statistics will be included in the Wildfire Division Annual Report, which will be published in March 2021.

Figure 7: Fires by General Cause Category

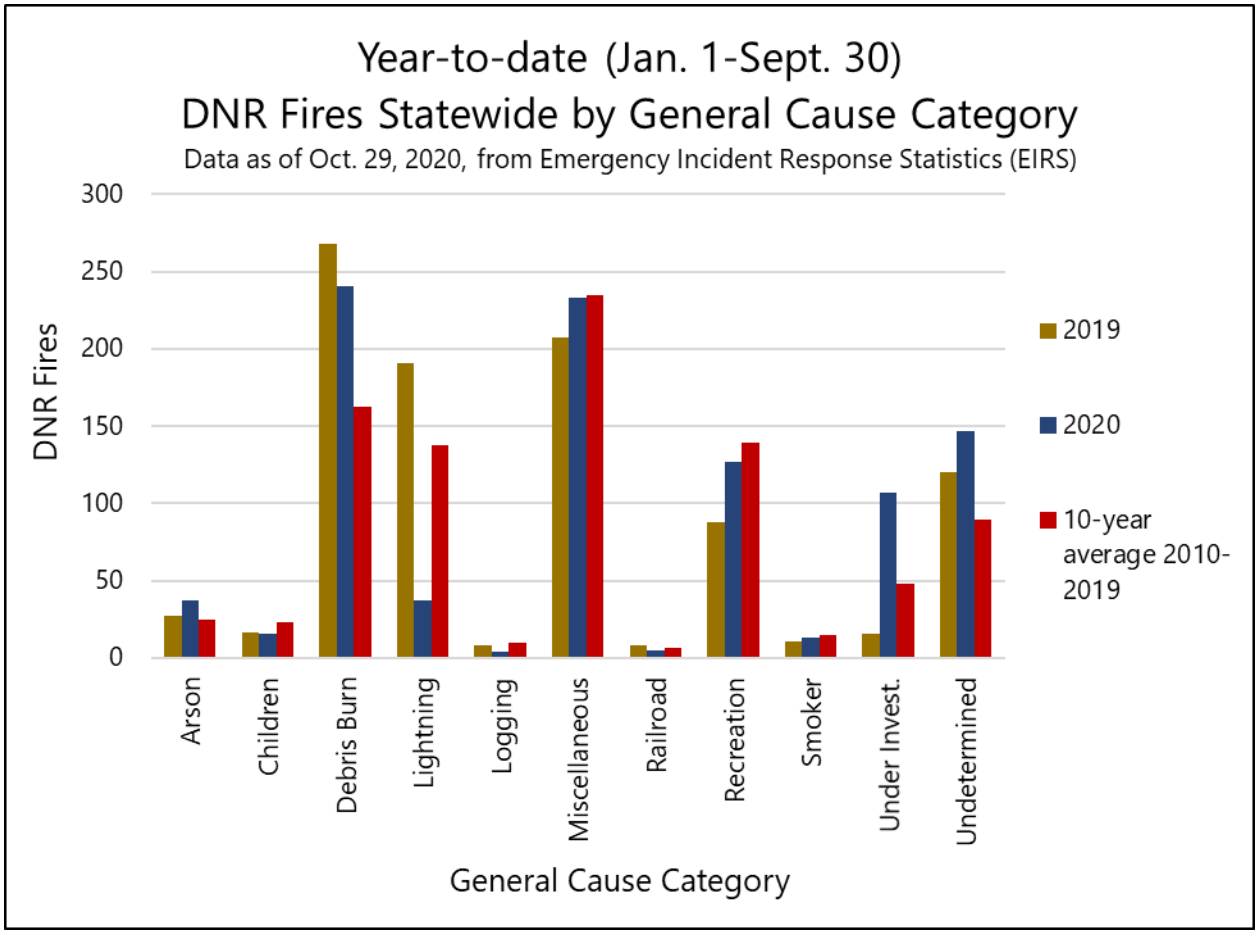
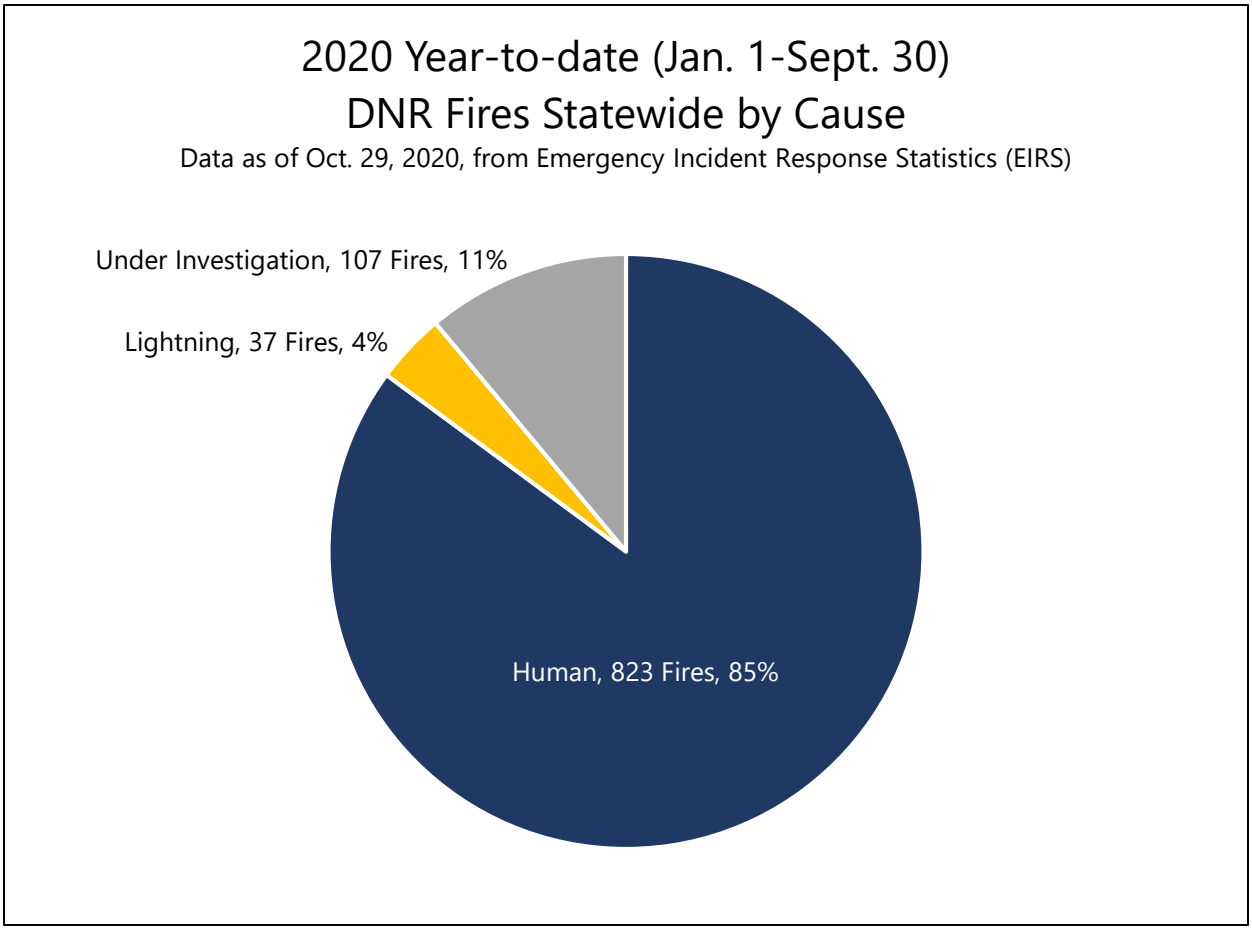


Figure 7: DNR Fires Statewide, Human vs. Lightning.



Aviation

As noted above, aviation operations were an area of emphasis in 2020. DNR committed to heavy aircraft utilization to minimize exposure of firefighters to COVID-19 by keeping fires small. One key action was the procurement of two K-Max heavy helicopters on 90-day exclusive use contracts, in addition to the aviation assets DNR manages. Ultimately, those two heavy helicopters delivered 2,034 buckets of water totaling over 1.3 million gallons. The K-Maxs were the most cost-effective resource in terms of cost per gallon, delivered at $0.69/gallon (see Table 6 for more details).

Photo 3: K-Max dropping water on Palmer Fire, Aug. 21, 2020. Photo credit to Todd Olson.

DNR ended the 2019 season with eight UH-1H helicopters, plus one leased from Chelan County Fire District 1. Over the winter, an additional Huey was built using Legislative Decision Package (DP) funding. This was a significant effort by the DNR Maintenance staff. The aircraft (which is equipped with a belly tank for water drops) was operational and fire-ready by June. The DP also provided for the purchase of a Bell Long Ranger light helicopter, bringing the DNR-operated fleet to 11 helicopters.

With the planned approach being additional aircraft usage, a third Air Attack aircraft was contracted, in addition to the normal two. This provided for safe operation by having aerial supervision readily available.

DNR contracted with private vendors for five amphibious, single-engine air tankers. These aircraft delivered 2,793 loads totaling 1.3 million gallons. Their cost per gallon was $1.69. One additional SEAT was contracted on a call-when-needed (CWN) basis for a short period. Several other CWN aircraft from private contractors were brought on for specific incidents or weather events, including one Black Hawk, one UH-1 and two heavy amphibious scoopers. For a breakdown of aviation resources used this year, see Table 6.

Table 5: Aviation statistics for the 2020 fire season.

DNR Helicopters										
Helo Type	Total Incidents	Buckets	Tank Loads	Total Gallons	Cost Per Gallon	Incident Flight Time	Non-Revenue Flight Time	Structures Protected	DNR Incidents	Federal & Other Incidents
Type II	130	4,835	2,632	2,090,760	0.81	741.10	200.20	733	87	43
Type III	9	120	NA	13,000	0.76	40.20	119.50	30	3	6
Contract Helicopters										
Helo Type	Total Incidents	Buckets	Tank Loads	Total Gallons	Cost Per Gallon w/ Availability included	Incident Flight Time	Non-Revenue Flight Time	Structures Protected	DNR Incidents	Federal & Other Incidents
Type I KMAX	32	2,034	NA	1,342,800	0.69	232.00	24.6	NR	29	3
Type I NW UH-60	5	98	NA	60,020	2.71	19.40	NA	NR	5	1
Type II NW Helos	2	36	NA	8,750	4.03	9.30	NA	NR	2	0
Type III Hillcrest	2	48	NA	5,760	2.22	11.90	NA	30	2	0
Washington National Guard (WANG) Helicopters										
Helo Type	Total Incidents	Buckets	Tank Loads	Total Gallons	Cost Per Gallon w/ Availability included	Incident Flight Time	Non-Revenue Flight Time	Structures Protected	DNR Incidents	Federal & Other Incidents
UH-60s	7	519	NA	324,774	1.09	121.80	0	NR	6	1
UH-72	7	NA	NA	NA	NA	31.30	0	NA	6	1
Contract Fixed Wing										
Fixed Wing Type	Total Incidents*	Buckets	Tank Loads	Total Gallons	Cost Per Gallon w/ Availability included	Incident Flight Time	Non-Revenue Flight Time	Structures Protected	DNR Incidents	Federal & Other Incidents
EU Fireboss	233	NA	2793	1,726,920	1.69	650.10	NR	NR	96	137
CWN Fireboss	5	NA	116	66050	1.66	19.42	NR	NR	2	3
Air Attacks	79	NA	NA	NA	NA	326.36	NR	NR	34	43
CL-215 Scoopers	19	NA	154	154	4.47	62.70	NR	NR	3	16

Notes: Cost per gallon includes all flight time which includes pre-po, mob, demob, en-route time. It does not include Non-Revenue timein Calculation. Cost per gallon: Flight Rate hourly cost only. Cost per gallon with availability: Flight Rate plus hourly pro-rated availability rate (real cost to fire). Does not include not flight time availability when assigned to the fire for prolonged periods. *Total incident includes same incident for multiple days.

Following the Governor's Emergency Proclamation, two UH-60 Blackhawks and one Lakota were made available to DNR by the Washington National Guard. Those three aircraft were used for two different missions. They provided extremely valuable surge capacity for direct suppression and intelligence gathering (infrared) when other aircraft were in high demand.

Photo 4: Mima Road (Bordeaux) Fire, started Sept. 8, 2020, was the largest DNR fire on the western side of the state this fire season at 268 acres. Photo credit to DNR Wildfire Division.

Financial Highlights

In 2020, the Washington State Department of Natural Resources (DNR) had seven significant and costly incidents that incurred a cost of $1 million or greater. As of Sept. 30, the DNR estimates costs of $4,909,929 for Bertschi Road, $3,318,873 for Evans Canyon, $2,626,364 for Whitney, $1,757,401 for Cold Springs, $1,745,200 for Anglin, $1,703,151 for Inchelium Complex and $1,280,484 for Colockum.

There were three incidents that exceeded costs of $500,000. DNR estimates costs of $502,300 for Big Hollow, $510,276 for Green and $717,542 for Badger Lake. DNR estimates costs associated with Type 4 and Type 5 incidents, as of Sept. 30, at $2,400,000 for Type 4 incidents and $1,600,000 for Type 5 incidents.

DNR had 16 incidents that involved cost share with other agencies. Below is a chart that shows all incidents that involved cost shares and the jurisdictional agencies involved.
All direct cost associated with sending resources out of state is reimbursable through our agreements. If DNR has an agreement with the state we are providing assistance to, they may order us directly and DNR will invoice them directly. If the DNR does not have an agreement with that state, the United States Department of Agriculture Forest Service (USDA-FS) will order our resources, DNR will invoice USDA-FS, and the USDA-FS will recover the funds from the state. Washington Fire Service Resources that are dispatched out of state are dispatched off of their agreement with DNR and are considered our resources for billing purposes.

Table 7: All incidents involving cost share agreements with other agencies.

Fire Name	Juridctional Agencies
APPLE ACRES	DNR SE REG./ USFS
BABB	DNR NE REG./ WSP
BADGER LAKE	DNR NE REG./ WSP
BARTHOLOMEW	DNR NE REG./ WSP
BIG HOLLOW	DNR PC REG./ USFS
BLUE LAKE ONE	DNR NE REG./ BLM
COLD SPRINGS	DNR NE REG./ BIA/ WSP
COLOCKUM	DNR SE REG./ BLM
CUSTOMS ROAD	DNR NE REG./ BLM/ USFS
EVANS CANYON	DNR SE REG./ WSP
GREENHOUSE	DNR NE REG./ BIA
INCHELLIUM COMPLEX	DNR NE REG./ BIA
MIMA ROAD (BORDEAUX)	DNR SPS REG./ WSP
PALMER	DNR NE REG./ BLM/ WSP
POTHOLE	DNR NE REG./ BIA
WHITNEY	DNR NE REG./ BLM/ WSP

In 2020, DNR had seven incidents that were declared eligible for Fire Management Assistance Grants (FMAG). These incidents were Anglin, Palmer, Evans Canyon, Babb, Apple Acres, Mima Road (Bordeaux) and Cold Springs. When FMAG is declared, Washington State will recover 75% of eligible cost from FEMA. The total estimated amount of DNR cost that will be recovered for 2020 is $5,700,000.

FMAG is a federally funded program that is administered through FEMA that provides assistance to state, local, and federally recognized tribal governments for the mitigation, management and control of fires on publicly or privately owned forests or grasslands. A FMAG declaration may be requested and issued for an uncontrolled fire when the threat of a major disaster exists. The declaration process is initiated when the state submits a request for assistance to the FEMA Regional Director at the time a threat to a major disaster exist. FEMA will review the claim and will make a determination on whether the claim will be approved.

The distribution of cost for the large fires can be found in Table 9 and Table 10 in the Appendix.

The cost distribution tables include cost for all incidents that were significant and costly or were considered large due to their size. The cost are estimates as of Sept. 30 and are estimated based on our actuals in our finance systems, and any estimated encumbrances for costs not currently reflected in our actuals.

Photo 5: East Beach Road fire began July 29, 2020, in Clallam County. DNR resources assisted Olympic National Park with suppression. Photo credit to DNR Aviation Program.

Appendices

Definitions

DNR Fires: classified fires on DNR protected lands.

Classified fire: an uncontrolled fire requiring suppression action by the Department or its partnering federal and/or local fire suppression agencies to prevent the fire from spreading to or burning on any lands for which DNR has protection responsibility. This excludes "false alarms," but includes "Unclassified" fires, a now-discontinued classification type used prior to 2019, for the 10-year average calculations.

DNR protection: any response in EIRS that is not considered "DNR Assist Other Agency." This includes "DNR protection-FFPA," "DNR protection non-FFPA under agreement," "Threat to DNR protection FFPA," and "Threat to DNR protection, non-FFPA under agreement" and instances where the field is null.

DNR Responses: any incident or false alarm to which DNR resources were dispatched, regardless of jurisdiction.

Burn acreage on DNR protected lands: the total sum of acres burned for fires listed as: "DNR protection-FFPA," "DNR protection non-FFPA under agreement," "Threat to DNR protection FFPA," and "Threat to DNR protection, non-FFPA under agreement" and instances where this field is null. This excludes fires labeled "DNR Assist Other Agency."

Regions: There are six DNR-specific regions across the state: Northeast, Northwest, Olympic, Pacific Cascades, South Puget Sound, and Southeast. See Figure 8 below.

Eastside/Westside:
Refers to east or west of the Cascades based on region boundaries. Northeast and Southeast region comprise "eastside" while the remaining four regions comprise "westside."

Figure 8: DNR Region locations.

Tables

Table 8: Year-to-date DNR Responses, 2010 to 2020. DNR responses include any incident or false alarm, regardless of jurisdiction, to which DNR resources were dispatched. In 2020 there were 1,777 responses in this time period, higher than the running 10-year average of 1,438.70.

2020 Year-to-date (Jan. 1- Sept. 30) DNR Responses by Region and Year Data as of Oct. 29, 2020, from Emergency Incident Response Statistics (EIRS)							
Year	**Northeast**	**Northwest**	**Olympic**	**Pacific Cascade**	**South Puget Sound**	**Southeast**	***Total***
2010	591	48	35	128	54	187	***1043***
2011	538	54	48	190	72	180	***1082***
2012	670	79	60	216	93	288	***1406***
2013	741	74	44	180	83	266	***1388***
2014	850	45	49	228	129	306	***1607***
2015	940	93	58	216	227	206	***1740***
2016	686	82	29	173	157	211	***1338***
2017	660	91	35	163	187	198	***1334***
2018	871	84	54	225	231	257	***1722***
2019	900	99	29	177	198	324	***1727***
2020	891	101	34	209	211	331	***1777***
Total	***8338***	***850***	***475***	***2105***	***1642***	***2754***	***16164***
10-year average 2010-2019	***744.70***	***74.90***	***44.10***	***189.60***	***143.10***	***242.30***	***1438.70***

Table 9: Year-to-date DNR Fires, 2010 to 2020. DNR fires are classified fires on or threatening DNR protected lands. In 2020 there were 967 DNR fires, which is higher than the running average of 863 DNR fires. This apparent trend of increase in fires over time may be partially due to the way fire reporting has changed over time.

2020 Year-to-date (Jan. 1- Sept. 30) DNR Fires by Region and Year Data as of Oct. 29, 2020, from Emergency Incident Response Statistics (EIRS)							
Year	**Northeast**	**Northwest**	**Olympic**	**Pacific Cascade**	**South Puget Sound**	**Southeast**	***Total***
2010	338	37	26	91	36	103	***631***
2011	271	36	36	133	46	96	***618***
2012	401	60	50	148	56	139	***854***
2013	423	52	28	156	37	142	***838***
2014	483	32	32	174	83	152	***956***
2015	518	72	29	179	137	134	***1069***
2016	383	55	18	127	126	128	***837***
2017	345	79	24	127	127	111	***813***
2018	486	64	37	148	186	132	***1053***
2019	434	76	26	134	145	146	***961***
2020	499	63	20	103	154	128	***967***
Total	***4581***	***626***	***326***	***1520***	***1133***	***1411***	***9597***
10-year average 2010-2019	***408.20***	***56.30***	***30.60***	***141.70***	***97.90***	***128.30***	***863.00***

Table 10: Year-to-date DNR Fires by General Cause Category. Of the 967 DNR fires this year, 241 of them (or 25 percent) were caused by escaped debris burns. Additionally, 107 incidents remain under investigation at the time of this writing.

2020 Year-to-date (Jan. 1- Sept. 30)
DNR Fires by Region and General Cause Category
Data as of Oct. 29, 2020, from Emergency Incident Response Statistics (EIRS)

General Cause Category	Northeast	Northwest	Olympic	Pacific Cascade	South Puget Sound	Southeast	*Total*
Arson	**27**		1	6	3		***37***
Children	**9**	4	1	1		1	***16***
Debris Burn	**144**	19	1	18	23	36	***241***
Lightning	**20**		1	2	2	12	***37***
Logging	**3**			1			***4***
Miscellaneous	**141**	10	7	25	30	20	***233***
Railroad	**4**					1	***5***
Recreation	**47**	18	7	11	20	24	***127***
Smoker	**5**	3		2		3	***13***
Under Invest.	**47**	1	2	18	30	9	***107***
Undetermined	**52**	8		19	46	22	***147***
Total	***499***	***63***	***20***	***103***	***154***	***128***	***967***

Table 11: Structures and residences damaged or destroyed in the 18 large or significant DNR fires. Data are from ICS-209 forms, and in collaboration with Washington State Patrol.

#	Fire Name	Start Jurisdiction	Residences Damaged	Residences Destroyed	Total Structures Damaged or Destroyed
1	Pothole	WA-COA	0	0	0
2	Bertschi Road	WA-SES	0	0	0
3	Greenhouse	WA-COA	0	0	6
4	Colockum	WA-SES	0	0	1
5	Anglin	WA-NES	0	1	3
6	Green	WA-NES	0	0	0
7	Blue Lake One	WA-NES	0	0	0
8	Badger Lake	WA-NES	0	0	4
9	Palmer	WA-SPD	0	2	37
10	Evans Canyon	WA-SES	0	6	12
11	Inchelium Complex	WA-COA	1	0	14
12	Babb	WA-NES	4	121	228
13	Customs Road	WA-NES	0	2	11
14	Whitney	WA-NES	10	55	145
15	Apple Acres	WA-SES	0	0	0
16	Fish	WA-SPS	0	0	0
17	Mima Road (Bordeaux)	WA-WFS	0	1	1
18	Euclid Tracks	WA-NES	0	0	2

Table 12: Estimated Cost by Incident, Large and/or Significant Incidents. All of these incidents are Type 2 or Type 3. Cold Springs and Big Hollow are included here because they were federal incidents that DNR was in cost share with the Federal agency.

Fire Name	Cost Share?	FMAG	Total Estimated Cost	Est. Amount Billable or Reimbursable Through Cost Shares	DNR Salaries & Benefits	DNR Equipment	Air Resources	Misc. Expenses	National Guard	DOC	Contractors	Cooperators	Federal Resources
ANGLIN	NO	YES	1,745,200		354,728	37,125	267,757	75,969		25,641	422,209	170,904	390,867
APPLE ACRES	YES	YES	427,777	-677,310	204,083	7,545	10,597	60,712			822,150		
BABB	YES	YES	75,000		65,530	7,344		2,125					
BADGER LAKE	YES	NO	717,542	225,440	184,543	25,030	10,438	56,707		7,420	144,651	21,662	41,650
BERTSCHI ROAD	NO	NO	4,009,929		1,006,182	88,506	321,081	964,190		42,675	590,911	178,824	817,560
BLUE LAKE ONE	YES	NO	143,000		74,103	6,624	26,914	1,367			24,743	9,249	
COLOCKUM	YES	NO	1,280,484	345,838	207,556	7,919	327,063	97,388			156,670	138,049	
COLD SPRINGS	YES	YES	1,757,401	915,920	251,189	7,287	13,256	2,193			30,270	9,680	527,606
CUSTOMS ROAD	YES	NO	451,395	-105,575	275,485	19,052	128,887	729			116,618	16,200	13,239
EUCLID TRACKS	NO	NO	69,171		65,588	3,517		66					
EVANS CANYON	YES	YES	3,138,873	-5,281,929	1,265,191	60,936	379,111	532,671	113,574	17,575	1,943,498	292,667	3,815,579
FISH	NO	NO	1,400,000		407,524	30,068	271,709	440,260		25,439	135,000	45,000	45,000
GREEN	NO	NO	510,276		60,331	4,019	96,271	954			42,971	34,351	271,379
GREENHOUSE	YES	NO	140,449	-401,058	182,089	9,764	332,858	2,933				13,864	
INCHELIUM COMPLEX	YES	NO	1,703,151	1,245,628	374,641	7,378	49,624	229				25,651	
MIMA ROAD (BORDEAUX)	YES	YES	288,477	-69,238	85,416	10,537	141,154			3,911	116,698		
PALMER	YES	YES	464,125	-1,373,050	1,104,915	89,032	583,745	21,878		2,784	20,740	14,081	
POTHOLE	YES	NO	32,378	-51,908	22,388	1,528	59,359	1,011					
WHITNEY	YES	NO	2,626,364	569,589	667,901	28,331	270,580	281,278	111,195		492,723	204,768	

Table 13: DNR Type 3 Incidents Not Classified as Large and/or Significant Incidents. All of these incidents are Type 3.

Fire Name	Cost Share?	FMAG	Estimated Cost	Est. Amount Billable or Reimbursable Through Cost Shares	DNR Salaries & Benefits	DNR Equipment	Air Resources	Misc. Expenses	National Guard	DOC	Contractors	Cooperators	Federal Resources
BARTHOLOMEW	YES	NO	420,000		114,641	34,538	244,796	1,098		3,451	13,450	8,026	
BIRD HOUSE	NO	NO	24,087		15,602	2,254		636				5,594	
BURMA ROAD	NO	NO	266,293		114,814	14,282	46,487	6,918			21,680	62,111	
CHAMPMAN LAKE	NO	NO	65,528		19,218	6,854	28,711	343		869	5,750	3,784	
HEATON ROAD	NO	NO	240,000		94,599	5,131	128,809	411			11,050		
LONG LAKE	NO	NO	369,720		81,230	11,998	120,583	7,586		1,295	2,700	3,863	140,465
MORRIS CANYON	NO	NO	366,558		206,322	9,987		13,353			28,235	8,269	100,392
SHORE ACRES	NO	NO	205,630		68,590	7,952	66,647	7,611		2,758	5,341	5,538	41,193
SOUTH PINE	NO	NO	418,041		119,221	14,517	114,508	23,073			14,615	17,959	114,149
SUNSET	NO	NO	265,755		27,372	700	61,067	1,051			5,492	20,072	150,000
WILLIAMS LAKE	NO	NO	147,992		2,383	134	99,675	1,850				4,250	39,701

Map of 2020 Fire Locations