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Appendix F Comments and Responses

Ecology's comment period for the DNR SMP SIP submittal was May 25, 2022 through June 30, 2022. We held a hearing on June 28, 2022. We received seven comments from five commenters: two individuals, two agencies, one municipality, and one organization on a number of topics.

- Individual Commenters were Nancy Farr and Steve Fraidenburg
- Agency comments were from Yakima Regional Clean Air Agency (YRCAA) and Puget Sound Clean Air Agency (PSCAA)
- Municipality: City of Roslyn
- One organization commented: the Washington Prescribed Fire Council

Comments covered the following topics:

- Burn Approval Criteria
- Supports day-before ignition approval (1)
- Opposes day-before ignition approval (2)
- Enforcement
- Alternatives to burning
- Support for removing restriction on summer weekend burning
- UGA burning
- Complaint response coordination with local clean air agencies
- Calls for clarification/modifications
- Responsibility for a nonattainment area (NAA)

Two commenters supported and two commenters opposed Ecology's adoption and submission of the SMP to EPA. The following table shows the Comment Number (the letters signify I for an Individual, A for an Agency, and O for an Organization), Commenter and Topic for each comment.

Table 1. Comment Index; includes: Commenter, Topic, and grouped by Individuals, Agencies, and/or Organizations

Comment number	Commenter	Topic
	Nancy Farr	
I-1-1	"	Concerned that Criteria #6 for forest health exemption for Large Burns and Burns within UGAs omits Central Washington.
I-1-2	"	Support submittal to EPA with one exception
	Steve Fraidenburg	
I-2-1	"	Issues remain from comments submitted in February 2021
I-2-2	"	Does not support sending report to EPA, recommends changes
I-2-3	"	#1 Opposes day before ignition decision making
I-2-4	"	#2 Change language in Criteria #1 to match RCW- from intrusion to exceedance-adequacy of the monitoring network
I-2-5	"	#3 UGA burning: no public opportunity to see this part of the plan
	"	Repeat comments from 2/21/2021 webinar
I-2-6a	"	Alternatives to Burning
I-2-6b	"	Increased Burning/Increased Impacts
I-2-6c	"	Comprehensive Plan
I-2-6d	"	RX burning should be last option
I-2-6e	"	Emissions Data/DNR Compliance
I-2-6f	"	Last Audit/Last Report to legislature
I-2-6g	"	Burn Permit Fees/Cost of Administering Program
I-2-6h	"	Forest Health Burning Definition and Process
I-2-6i	"	Monitoring Study
I-2-6j	"	Day before decision making tools
	Yakima Regional Clean Air Agency	Hasan Tahat
A-1-1	"	#1 and #4 Opposes day before decision making
A-1-2	"	# 2 Enforcement responsibilities
A-1-3	"	# 3 Concerned about area/topography; diurnal inversions

Comment number	Commenter	Topic
A-1-4	"	#5 Smoke intrusion report
A-1-5	"	#6 Nonattainment Area responsibilities
A-2-1	"	Day Before Burning Approval for multiple day burns
	Puget Sound Clean Air Agency	Betsey Wheelock
A-3-1	"	LCAA authority to enforce in their jurisdiction
A-3-2	"	Coordination on complaints
	WA Prescribed Fire Council	Chris Martin
O-1-2	"	Supports day before decision making
O-1-3	"	Multiple day burning- clarifications/modifications
O-1-4	"	Support process for approving burns in UGAs
O-1-5	"	Review or Updating of plan
O-1-6	"	After Action Review or council like Oregon
O-1-7	"	Distinguish inquiries from complaints
O-1-8	"	Reduce burden for requesting exemptions
O-1-9	"	Wants clear instructions and helpline
O-1-10	"	Supports proposal to submit
	City of Roslyn	Chris Martin
O-2-1		Supports Urban Growth Area burning

Ecology evaluated the comments received and developed the responses with DNR. No changes were recommended for the 2022 SMP as a result of the comments received. Throughout this Response to Comments, we refer to the 2022 Smoke Management Plan Demonstration as the Demonstration. We refer to the 2022 Smoke Management Plan as the SMP.

EPA reviewed the SMP and related documentation and found sufficient evidence in a preliminary review that the changes will not interfere with attainment of the National Ambient Air Quality Standards or other Clean Air Act requirement, if the SMP is followed.

See [Ecology's website](https://ecology.wa.gov/Regulations-Permits/Plans-policies/State-implementation-plans)¹ for more information about our state air quality implementation plan State Implementation Plan or SIP.

¹ <https://ecology.wa.gov/Regulations-Permits/Plans-policies/State-implementation-plans>

I-1: Nancy Farr

Comment I-1-1 Concerned that Criteria #6 for forest health exemption for Large Burns and Burns within UGAs omits Central Washington

Re: Inclusion of WA DNR's 2022 Smoke Management Plan for forests in the WA statewide air quality plan, I strongly urge adoption of this proposal. I live in one of Washington's highest risk areas for catastrophic wildfire, and my area has seen repeated enormous and highly damaging wildfires since 2014 beginning with the Carlton Complex wildfire that year. Our forests are heavily overstocked and many are riddled with diseased trees, and with climate change our risks continue to mount. I have read the plan and SUPPORT IT IN FULL WITH ONE CRITICAL EXCEPTION. The important exception covered in Criteria #6 for Large Burns and Burns within UGAs omits Central Washington. Please ensure that Central Washington is specified in Criterion #6 because our region is called out separately by both WA Dept of Ecology in its own organizational management structure and by WA Dept of Natural Resources in its critically important 10-year Wildland Fire Protection Strategic Plan and the 20-Year Forest Health Strategic Plan. Central Washington has the highest wildfire risk in Washington State, it has experienced the most and largest devastating wildfires in recent history, and its forests are in desperate shape needing vastly increased amounts of thinning and prescribed fire. Please ensure that Central Washington's needs are specifically covered in the statewide air quality plan, as well as in DNR's 2022 Smoke Management Plan. Thank you.

Response to I-1-1 – Concerned that Criteria #6 for forest health exemption for Large Burns and Burns within UGAs omits Central Washington

Thank you for your comment. The criteria used by DNR for approving ignition (Criteria #6 in the SMP) relates to exempting excess emissions from eastern Washington forest health treatments.

The law you are referencing [is RCW 70A.15.5020: Outdoor burning—Areas where prohibited—Exceptions—Use for management of storm or flood-related debris—Silvicultural burning.](https://www.wa.gov/legislature/codes/rcw/rcw70A/70A.15.5020) ([wa.gov](https://www.wa.gov)).

Criteria 6 on page 9 of the SMP states:

“Approval to ignite will be denied if:

Burning will cause mandatory emission reduction levels to be exceeded ([RCW 70A.15.5020: Outdoor burning—Areas where prohibited—Exceptions—Use for management of storm or flood-related debris—Silvicultural burning.](https://www.wa.gov/legislature/codes/rcw/rcw70A/70A.15.5020) ([wa.gov](https://www.wa.gov))).

Exception: Emissions from silvicultural burning in eastern Washington that is conducted for the purpose of restoring forest health or preventing the additional deterioration of forest health are exempt from the reduction when certain conditions are met.”

The Smoke Management Plan, APPENDIX 9: Procedure for Exempting Eastside Forest Health Burns From the Requirement for Emission Reduction (page 77), includes the criteria and procedure for exempting burns from the emission reduction totals by qualifying as a forest health burn.

In this context, eastern Washington refers to areas east of the Cascade crest. Central Washington is indeed included as an area where burns may qualify as forest health burning.

Comment I-1-2 Support in full with one exception

I have read the plan and SUPPORT IT IN FULL WITH ONE CRITICAL EXCEPTION.

Response to I-2-2 Support in full with one exception

Thank you for your comment. Please see the response to I-1-1.

I-1: Steve Fraidenburg

Thank you for the opportunity to comment on the proposed adoption of DNR's SMP into the SIP. I previously commented on the DNR's SEPA submittal for the SMP. The issues I documented still appear to remain, and are incorporated on the page below as reference to DNR's inability to provide "practical enforceability" to the current SMP, which is of concern toward SIP adoption of this proposed SMP.

Further, and most applicable to the issue of Ecology's desire to submit this new SMP to EPA for SIP adoption, I would strongly recommend that Ecology NOT make this recommendation, for the following reasons:

1: Day of vs Day-before burn decisionmaking. The 110-L "anti-backslide" demonstration is woefully inadequate. Please see my comments to DNR's SEPA submittal below, in section 7. As far as I can tell, the submitted 110-L documentation/study ONLY assessed one single modelling tool (UW ventilation index). DNR staff making burn decisions have asserted/admitted that this is not the only tool used in burn decisionmaking. Time and again, in public forums, DNR references (as just one example) a significant reliance on NWS "spot wx forecasts" in decisionmaking. No other tools beside UW ventilation index being included in the "anti-backslide" analysis of a decision-making process that claims to be (and SHOULD be) much more robust, is a failure of due process to the EPA's SIP adoption standards.

2: Proposed change from avoiding "intrusions" to "NAAQs exceedance." Please see my comments to DNR's SEPA submittal below, under section 6. I can find no 110-L demonstration that assesses the adequacy of any monitoring network that would support this change as being either "practically enforceable" nor at least as protective as the current SMP. This omission of 110-L analysis is a failure of due process to the EPA's SIP adoption standards.

3: UGA burning. This proposed change to the DNR's SMP was not included in the version of the SMP that DNR proffered for SEPA approval. Therefore, no one was provided opportunity for public comment/input to this part of the plan. This should be considered a breach of due process that, along with my comments below regarding several RCW/WAC requirements that are not currently being met, should send strong signal to Ecology and EPA regarding DNR's ability and intent to perform and enforce under their newly proposed SMP. It is for these reasons (and more as I outlined below) that I do not believe that Ecology should recommend this current SMP proposal for EPA SIP adoption.

<Ecology author: Beginning with the paragraph below, these are the comments Steve Fraidenburg sent to DNR after the 2/21/2021 webinar - March 5, 2021, Comment #1, see responses 6a through 6j >

Thank you for the opportunity to comment on the proposed update to DNR's Silvicultural Smoke Management Plan (SMP). Some questions should be asked and assumptions challenged, and it seems prudent that DNR, in proposing this new Smoke management plan that has the potential to increase adverse human health impacts from smoke, should provide some scientific demonstrations for these assumptions:

- A greater effort and resources need to be directed to the increased use of alternatives to burning. What happened to the state commitment to consider alternatives? Is prioritizing the use of prescribed fire as the solution really the right approach to the wildfire problem? Many alternative silvicultural practices exist to reduce the need for burning and there are also alternatives to burning that do not come at the cost of increased smoke exposure for the public. The Washington Clean Air Act, state law RCW 70A.15.5140, requires this hierarchy.

The department of natural resources shall encourage more intense utilization in logging and alternative silviculture practices to reduce the need for burning. The department of natural resources shall, whenever practical, encourage landowners to develop and use alternative acceptable disposal methods subject to the following priorities: (1) Slash production minimization, (2) slash utilization, (3) nonburning disposal, (4)

silvicultural burning. Such alternative methods shall be evaluated as to the relative impact on air, water, and land pollution, public health, and their financial feasibility. State law RCW 70A.15.1005, establishes “air pollution is the most serious environmental threat in Washington State. Air pollution causes significant harm to human health.” RCW 70A.15.5130, and RCW 70A.15.5140 direct DNR in its duty to regulate silvicultural burning to “reduce statewide emissions from silvicultural burning” and to encourage “alternative silviculture practices to reduce the need for burning.

What is the relationship between more prescribed fire and less “catastrophic wildfire”?

If severity of wildfire impact is to be measured with a “cost plus loss” approach, is prioritizing more prescribed fire before alternative protections to affected communities that do not come at the cost of increased smoke exposure really the right approach to the wildfire problem? Concerns with this approach revolve around the following understandings:

- All sources of PM2.5 harm human health.
- Wildfire is a given and will continue to happen.
- The return interval for effectiveness of prescribed fire as a protection against wildfire may simply be lengthening the calendar of exposure to smoke for communities/populations at risk.

How much more prescribed fire is proposed and how do proponents propose to accomplish this without significant risk to communities at risk of exposure and exceedance of standards?

- Within this new SMP proposal, how has DNR demonstrated that they can conduct increased burning without increased impacts to public health? Have the desired prescribed fire efforts and locations been quantified, and the potential impacts to populations at risk of exposure (and potential air quality standards violation) been modelled and found to be at least as protective of the standards as the current SMP?
- Has DNR developed a comprehensive plan, that identifies values and communities at risk, quantifies the desired outcomes (i.e. WUI protection vs ecosystem restoration) and assessed the best treatment tools. This plan should also address potential air quality impacts to nearby communities from prescribed fire activity.

In areas where prescribed fire is deemed necessary for wildfire defense and/or ecosystem management that are identified as having direct potential for impacts to air quality on sensitive populations, then prescribed fire should be the last option, not the first, and should be prefaced with adequate monitoring, communication to the affected public, and clean air technologies provided as mitigation. All this should be put in place BEFORE fire is put to the ground. Trained Wildland firefighters know that it is not good practice to conduct burn operations without prepping homes first.

I have the following direct questions for DNR in regards to this SMP proposal, as relates to protection of human health and compliance with current Washington State Law:

1: Where precisely does DNR’s emissions data show current levels of activity fall under the emissions limits set by RCW 70A.15.5130?

2: When was the last data audit conducted and when was the last report to legislature performed, as required by this law? Are these data and reports publicly available?

3: How does DNR define the “forest health burning” that is to be catalogued as potentially exempt from emissions ceilings required by RCW 70A.15.5130? If this is not adequately defined, then any activity conducted east of the cascades could be considered “exempt” from the ceiling. Is this really in compliance with the intent of the law?

4: Where in the burn permit and data collection process is the assessment of alternatives to burning being conducted/captured and utilized as required by RCW 70A.15.5140? How often in the past 5 years has DNR determined that a proposed burn was not the preferred alternative?

5: Are current burn permit fees covering the cost of administering this program, as required by RCW 70A.15.5120(3)? When was the last program audit performed? Does this funding requirement also include adequate funding to support a robust monitoring network, as would be needed in order to ensure compliance with the proposed burn decisionmaking criteria?

6: With regard to the proposed large-burn approval criteria, has DNR conducted a monitoring study to ensure adequate coverage in order to comply/enforce the decision making? Has this study been peerreviewed and is it publicly available? The plan appears very vague as to exactly what devices will be relied upon where.

7: DNR is proposing to make large-burn decisions the day before rather than the morning of the planned ignition, as is the current practice. What tools will DNR's decision-makers use to make these decisions, and how does DNR propose that this change will provide the same level of accuracy in forecast Has the National Weather Service been consulted on this new practice and provided assurance that the accuracy of their forecast tools does not degrade over the change in time period, and that this tool, if used day before, will be just as protective as current practice?

Comment I-2-1 Issues remain from comments submitted in February 2021

Thank you for the opportunity to comment on the proposed adoption of DNR’s SMP into the SIP. I previously commented on the DNR’s SEPA submittal for the SMP. The issues I documented still appear to remain, and are incorporated on the page below as reference to DNR’s inability to provide “practical enforceability” to the current SMP, which is of concern toward SIP adoption of this proposed SMP.

Response to I-2-1 Issues remain from comments submitted in February 2021

See Responses I-2-6a through I-2-6j below.

Comment I-2-2 – Does not support sending plan to EPA

Further, and most applicable to the issue of Ecology’s desire to submit this new SMP to EPA for SIP adoption, I would strongly recommend that Ecology NOT make this recommendation.

Response to I-2-2- Does not support sending plan to EPA

Thank you for your comment.

Comment I-2-3 Does not support day-before decision making

1: Day of vs Day-before burn decisionmaking. The 110-L “anti-backslide” demonstration is woefully inadequate. Please see my comments to DNR’s SEPA submittal below, in section 7. As far as I can tell, the submitted 110-L documentation/study ONLY assessed one single modelling tool (UW ventilation index). DNR staff making burn decisions have asserted/admitted that this is not the only tool used in burn decisionmaking. Time and again, in public forums, DNR references (as just one example) a significant reliance on NWS “spot wx forecasts” in decisionmaking. No other tools beside UW ventilation index being included in the “anti-backslide” analysis of a decision-making process that claims to be (and SHOULD be) much more robust, is a failure of due process to the EPA’s SIP adoption standards.

Response to I-2-3 Does not support day-before decision making

DNR’s meteorologist and smoke management staff consult several forecast applications, along with surface and satellite observations, smoke dispersion simulations, and data regarding the physical environment. The 2022 Smoke Management Plan Demonstration is sometimes called the 110(l) demonstration². The Demonstration looked at high-resolution Weather Research and Forecasting (WRF) models at the University of Washington’s (UW) Department of Atmospheric Sciences sponsored by the Northwest Regional Modeling Consortium. These models run twice per day and provide both meteorological forecasts for the Pacific Northwest and input data for a variety of applications, including the smoke dispersion and air quality models used by meteorologists.

The Ventilation Index is a composite tool that includes such variables as wind speed, wind direction, temperature, relative humidity, and precipitation. The UW Ventilation Index is the tool most frequently used by DNR for smoke management decision making. Ecology’s meteorologist worked with a UW professor of atmospheric sciences who specializes in weather prediction and modeling. They determined that analyzing the degradation of the Ventilation Index was the best

² 110(l) refers to the Clean Air Act, Title 1, Part A., Air Quality and Emission Limitations, Clean Air Act Section 110(l) Plan revisions.

representative analysis of whether or not there was appreciable change between day-before and day-of conditions. See Appendix 1 of the Demonstration.

The analysis found only slight degradation between the day-before and day-of decision points. Where DNR has uncertainty about the resilience of the forecast, a spot weather forecast may be requested from National Oceanic and Atmospheric Association, which supplements the ventilation index with much more specificity and point-specific accuracy.

For a more complete picture of the approval process, see the SMP Approval Criteria for Large Burns and All Burns within UGAs starting on page 9, and the Demonstration, Burn Decision Approval – Criteria and Process, starting on page 44.

Comment I-2-4- Change language in Criteria #1 to match RCW- from intrusion to exceedance-monitoring

2: Proposed change from avoiding “intrusions” to “NAAQs exceedance.” Please see my comments to DNR’s SEPA submittal below, under section 6. I can find no 110-L demonstration that assesses the adequacy of any monitoring network that would support this change as being either “practically enforceable” nor at least as protective as the current SMP. This omission of 110-L analysis is a failure of due process to the EPA’s SIP adoption standards.

Response to I-2-4 Change language in Criteria #1 to match RCW- from intrusion to exceedance-adequacy of the monitoring network

DNR made this change to align Criteria #1 (SMP, page 9) with the state clean air act (RCW 70A.15.5140), which specifies that approval to ignite will be denied if there is a likelihood of an exceedance of air quality standards. This statute provides the authority for DNR to deny burn requests.

An intrusion is defined by a NowCast result showing particulate matter concentrations at Unhealthy for Sensitive Groups (USG)³ levels, which is 20.5 micrograms/cubic meter, a level well below 24-hour PM_{2.5} NAAQS. DNR will make contact and work with burners to reduce smoke impacts, if air quality degrades near levels of an intrusion. In light of the fact that DNR will manage well below the NAAQS, the likelihood of an exceedance is significantly diminished.

DNR explains that Criteria #1, and all other Large Burn and UGA Burn Criteria, are prospective decision-making criteria, and not enforcement criteria. As such, determining whether to approve or deny burns does not require inputs from Federal Equivalency Monitors or Federal Reference Monitors, and the current, aggregate system of public and private monitoring networks provides for informed determinations.

DNR and Ecology reviewed the statewide monitoring network and found that for decision-making purposes, it is robust. The map in Figure 1 shows PurpleAir™ sensors, Ecology’s statewide monitoring network, Interagency Monitoring of Protected Visual Environments (IMPROVE) monitors and Remote Automatic Weather Stations (RAWS). Green shading is forested land.

³ See the Washington Compliance with NAAQS, Washington Air Quality Advisory section of the Demonstration (page 12) for explanation of USG.

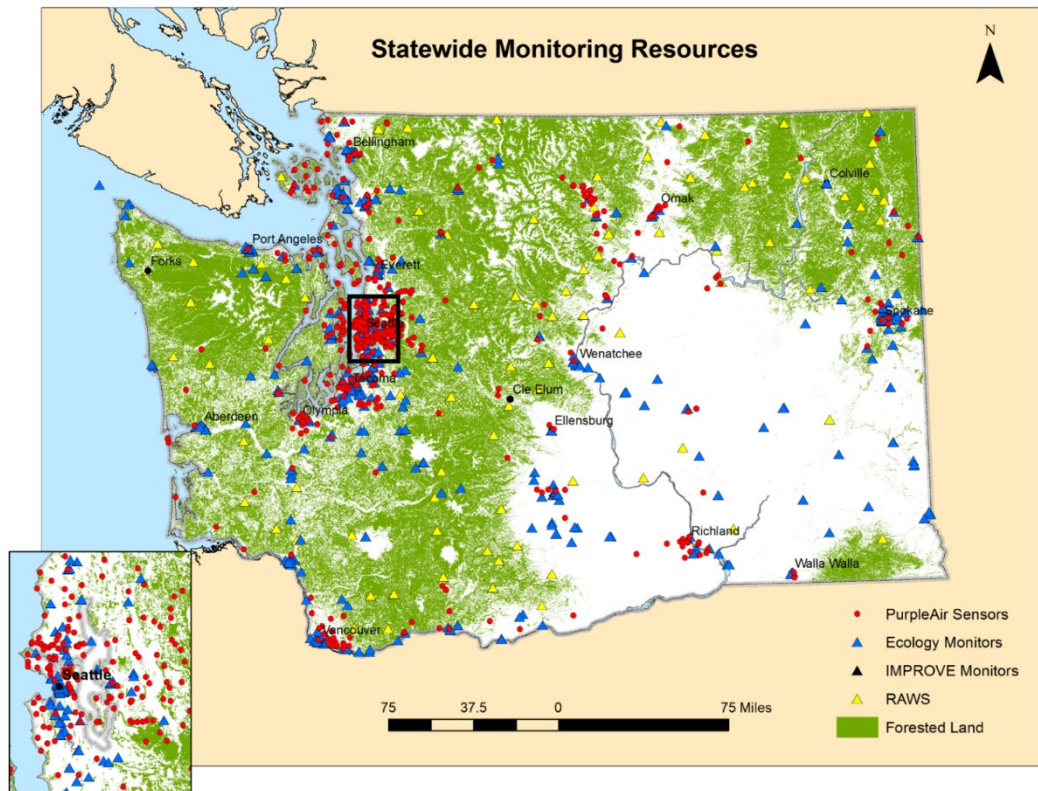


Figure 1. Statewide Monitoring Resources

In addition, the SMP⁴ procedures include instructions to recheck weather conditions in the morning.

“...If the burn was approved, the [DNR] Smoke Management Section will verify weather conditions have not changed so much as to result in a violation of the Approval Criteria, by 7:30 a.m. If weather conditions have unexpectedly changed, burners and regions will be notified and advised that they may have to extinguish, and therefore are advised to not burn that location.”

Comment I-2-5 UGA burning: no public opportunity to see UGA as part of the plan

3: UGA burning. This proposed change to the DNR’s SMP was not included in the version of the SMP that DNR proffered for SEPA approval. Therefore, no one was provided opportunity for public comment/input to this part of the plan. This should be considered a breach of due process that, along with my comments below regarding several RCW/WAC requirements that are not currently being met, should send strong signal to Ecology and EPA regarding DNR’s ability and intent to perform and enforce under their newly proposed SMP.

Response to I-2-5 UGA burning: no public comment opportunity to see UGA part of the plan

DNR held a webinar in February 2021. (See Demonstration, Appendix 5. Pages 5-19 through 5-28). At the webinar, DNR reviewed the SMP changes and discussed the 2019 law change to RCW

⁴ SMP, Appendix 1: Burn Submittal and Approval Procedures for Burns 100 Tons or Greater, and any Burn in an Urban Growth Area, Lands Protected by DNR, C. Day-of-the burn, page 30.

70.94.6514 (now 70A.15.5020) allowing UGA burning. The SEPA action (see below) and special protective provisions for UGAs were covered in the webinar.

DNR completed an State Environmental Policy Act review to adopt revisions to WAC 332-205, General rules—Minimum requirements for all burning, to align with RCW 70.94.6514(1) to allow burning in UGAs. (19-110701⁵). This action included a public comment period from November 7, 2019 through November 21, 2019. (See Demonstration, Appendix 5, pages 5-149 through 5-174.) DNR issued a Notice of Final Determination and response to comments on November 22, 2019.

In the SEPA Nonproject Review Form, (dated November 4, 2019), Item C., page 8, DNR described the operating procedures that would be employed inside UGAs.

“c) Describe reasonable mitigation of adverse impacts identified.

Understanding that urban growth areas are different in kind from other areas of the slate, DNR is establishing a stringent set of operating procedures, to apply to burns in Urban Growth Areas. These include:

- Extending the requirement for smoke management approval to all burns, regardless of size.
- Coordinating with either the local Clean Air Agency or the Department of Ecology, depending on who has jurisdiction. Coordination will occur both at the time of permit issuance and on the day of ignition.
- Requiring burners to conduct a test burn in order to gain a day-of-ignition understanding of smoke transport and dispersal conditions.
- DNR is working toward revising WAC to allow for the use of alternative ignition devices that reduce emissions, promote more complete ignition, and decrease the likelihood of fire escape. We are considering requiring use of these in all or a portion of burns ignited in UGAs.”

DNR also outlined the special provisions for burning inside UGAs in their Response to Comments, Notice of Final Determination, Adopting Urban Growth Area Outdoor Burning Policies SEPA File No. 19-110701, dates 11/22/2019, under Plans to mitigate impacts.

At the February 2021 webinar, DNR invited and received comments on the 2019 draft of the SMP. The webinar discussed, and the 2019 draft referenced, the 2019 law that allowed burning in UGA. Shortly after the law passed, DNR initiated the SEPA process, and received comments. In 2020, DNR worked out operational safeguards for burning in UGAs, and described these at the February webinar. After reviewing comments, and in consultation with EPA, DNR added these safeguards to the final 2022 SMP. DNR has indicated they plan to undertake rulemaking to codify the restrictions on UGA burning included in the SMP and RCW 70.94.6514. This action will include an additional opportunity for public comment.

⁵ <https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=201906409>

Comment I-2-6 Repeat comments from 2/21/2021 webinar

<This information is a repeat of the comments sent by Mr. Fraidenburg to DNR, May 5, 2021, after the February 18, 2021 webinar, not a SEPA comment. >

I previously commented on the DNR's SEPA submittal for the SMP. The issues I documented still appear to remain, and are incorporated on the page below as reference to DNR's inability to provide "practical enforceability" to the current SMP, which is of concern toward SIP adoption of this proposed SMP.

Thank you for the opportunity to comment on the proposed update to DNR's Silvicultural Smoke Management Plan (SMP). Some questions should be asked and assumptions challenged, and it seems prudent that DNR, in proposing this new Smoke management plan that has the potential to increase adverse human health impacts from smoke, should provide some scientific demonstrations for these assumptions:

- A greater effort and resources need to be directed to the increased use of alternatives to burning. What happened to the state commitment to consider alternatives? Is prioritizing the use of prescribed fire as the solution really the right approach to the wildfire problem? Many alternative silvicultural practices exist to reduce the need for burning and there are also alternatives to burning that do not come at the cost of increased smoke exposure for the public. The Washington Clean Air Act, state law RCW 70A.15.5140, requires this hierarchy.

The department of natural resources shall encourage more intense utilization in logging and alternative silviculture practices to reduce the need for burning. The department of natural resources shall, whenever practical, encourage landowners to develop and use alternative acceptable disposal methods subject to the following priorities: (1) Slash production minimization, (2) slash utilization, (3) nonburning disposal, (4) silvicultural burning. Such alternative methods shall be evaluated as to the relative impact on air, water, and land pollution, public health, and their financial feasibility. State law RCW 70A.15.1005, establishes "air pollution is the most serious environmental threat in Washington State. Air pollution causes significant harm to human health." RCW 70A.15.5130, and RCW 70A.15.5140 direct DNR in its duty to regulate silvicultural burning to "reduce statewide emissions from silvicultural burning" and to encourage "alternative silviculture practices to reduce the need for burning."

What is the relationship between more prescribed fire and less "catastrophic wildfire"?

If severity of wildfire impact is to be measured with a "cost plus loss" approach, is prioritizing more prescribed fire before alternative protections to affected communities that do not come at the cost of increased smoke exposure really the right approach to the wildfire problem? Concerns with this approach revolve around the following understandings:

- All sources of PM2.5 harm human health.
- Wildfire is a given and will continue to happen.
- The return interval for effectiveness of prescribed fire as a protection against wildfire may simply be lengthening the calendar of exposure to smoke for communities/populations at risk.
- How much more prescribed fire is proposed and how do proponents propose to accomplish this without significant risk to communities at risk of exposure and exceedance of standards?
- Within this new SMP proposal, how has DNR demonstrated that they can conduct increased burning without increased impacts to public health? Have the desired prescribed fire efforts and locations been quantified, and the potential impacts to populations at risk of exposure (and potential air quality standards violation) been modelled and found to be at least as protective of the standards as the current SMP?

- Has DNR developed a comprehensive plan, that identifies values and communities at risk, quantifies the desired outcomes (i.e. WUI protection vs ecosystem restoration) and assessed the best treatment tools. This plan should also address potential air quality impacts to nearby communities from prescribed fire activity.

In areas where prescribed fire is deemed necessary for wildfire defense and/or ecosystem management that are identified as having direct potential for impacts to air quality on sensitive populations, then prescribed fire should be the last option, not the first, and should be prefaced with adequate monitoring, communication to the affected public, and clean air technologies provided as mitigation. All this should be put in place BEFORE fire is put to the ground. Trained Wildland firefighters know that it is not good practice to conduct burn operations without prepping homes first.

I have the following direct questions for DNR in regards to this SMP proposal, as relates to protection of human health and compliance with current Washington State Law:

1: Where precisely does DNR's emissions data show current levels of activity fall under the emissions limits set by RCW 70A.15.5130?

2: When was the last data audit conducted and when was the last report to legislature performed, as required by this law? Are these data and reports publicly available?

3: How does DNR define the "forest health burning" that is to be catalogued as potentially exempt from emissions ceilings required by RCW 70A.15.5130? If this is not adequately defined, then any activity conducted east of the cascades could be considered "exempt" from the ceiling. Is this really in compliance with the intent of the law?

4: Where in the burn permit and data collection process is the assessment of alternatives to burning being conducted/captured and utilized as required by RCW 70A.15.5140? How often in the past 5 years has DNR determined that a proposed burn was not the preferred alternative?

5: Are current burn permit fees covering the cost of administering this program, as required by RCW 70A.15.5120(3)? When was the last program audit performed? Does this funding requirement also include adequate funding to support a robust monitoring network, as would be needed in order to ensure compliance with the proposed burn decisionmaking criteria?

6: With regard to the proposed large-burn approval criteria, has DNR conducted a monitoring study to ensure adequate coverage in order to comply/enforce the decision making? Has this study been peerreviewed and is it publicly available? The plan appears very vague as to exactly what devices will be relied upon where.

7: DNR is proposing to make large-burn decisions the day before rather than the morning of the planned ignition, as is the current practice. What tools will DNR's decision-makers use to make these decisions, and how does DNR propose that this change will provide the same level of accuracy in forecast Has the National Weather Service been consulted on this new practice and provided assurance that the accuracy of their forecast tools does not degrade over the change in time period, and that this tool, if used day before, will be just as protective as current practice?

Response to I-2-6 Repeat comments from 2/21/2021 webinar

Mr. Fraidenburg submitted comments following the public webinar held in February 2021. The purpose of the webinar was to update the public on the progress of the SMP update and the SIP demonstration, and to inform on next steps and opportunities for further involvement. DNR answered most of these questions in a response provided to Mr. Fraidenburg. The comments and DNR responses can be found in Appendix 5, DNR Response to Webinar Comment #1, April 1, 2021, starting on page 5-21.

The DNR response letter is Figure 2 below.



DEPARTMENT OF
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April 1, 2021

Mr. Fraidenburg;

Thank you for your continued interest in the Department of Natural Resources (DNR) silvicultural smoke management program and the protection of air quality in Washington State. As noted in my quick e-mail last week, I am encouraged that the State Implementation Plan (SIP) Demonstration DNR, the Department of Ecology (Ecology) and the Environmental Protection Agency are currently drafting will answer many of your questions. The SIP Demonstration is estimated to be out for public comment June 2021.

Since your comments were submitted to the e-mail address created for comments from the webinar held February 18, 2021, I am hoping you were able to attend the webinar. The webinar included the updates DNR has proposed to the Silvicultural Smoke Management Plan (SMP). If you were unable to attend you can listen to the recording [here](#). The title of your comments "DNR SMP SEPA" concerns me that you may be under the impression comments were requested through the State Environmental Policy Act public process, unfortunately that process ended November 22, 2019. The webinar was an additional effort to share the 2019 SMP, and to seek additional constructive input on the changes in the SMP.

In your letter there are many questions on page one; however, you specify on page two the questions you would like DNR to answer. We are responding to the direct questions on page two in the following three categories; out of the scope of comments requested at the webinar, addressed in the SIP Demonstration which has a comment period upcoming, and within scope of the webinar.

Out of the scope for the webinar

- Where precisely does DNR's emissions data show current levels of activity fall under the emissions limits set by RCW 70A.15.5130?
- When was the last data audit conducted and when was the last report to legislature performed, as required by this law? Are these data and reports publicly available?
- How often in the past 5 years has DNR determined that a proposed burn was not the preferred alternative?
- Are current burn permit fees covering the cost of administering this program, as required by RCW 70A.15.5120(3)?
- When was the last program audit performed?

Addressed in the SIP Demonstration

- Does this funding requirement also include adequate funding to support a robust monitoring network, as would be needed in order to ensure compliance with the proposed burn decision making criteria?
- With regard to the proposed large-burn approval criteria, has DNR conducted a monitoring study to ensure adequate coverage in order to comply/enforce the decision making? Has this study been peer-reviewed and is it publicly available? The plan appears very vague as to exactly what devices will be relied upon where.
- DNR is proposing to make large-burn decisions the day before rather than the morning of the planned ignition, as is the current practice. What tools will DNR's decision-makers use to make these decisions, and how does DNR propose that this change will provide the same level of accuracy in forecast Has the National Weather Service been consulted on this new practice and provided assurance that the accuracy of their forecast tools does not degrade over the change in time period, and that this tool, if used day before, will be just as protective as current practice?

Within scope of the webinar

- How does DNR define the "forest health burning" that is to be catalogued as potentially exempt from emissions ceilings required by RCW 70A.15.5130? If this is not adequately defined, then any activity conducted east of the cascades could be considered "exempt" from the ceiling. Is this really in compliance with the intent of the law?
 - Appendix 16 of the 1998 SMP and Appendix 9 of the 2019 SMP's set the procedures for exempting eastside forest health burns. Previously, there was a check mark in DNR's system indicating the burn met the requirements however the program did not ask for any of the elements required to meet the requirements of RCW 70A.15.5130. With the updated [burn portal](#), the program now requires the four steps listed in the procedure, including an analysis of alternatives and why the landowner does not believe alternatives area appropriate in that situation.
- Where in the burn permit and data collection process is the assessment of alternatives to burning being conducted/captured and utilized as required by RCW 70A.15.5140?
 - Appendix 14 of the 1998 SMP and Appendix 8 of the 2019 SMP's set the procedures for alternatives to debris disposal techniques. As noted above, DNR has improved our data collection process by requiring the four steps listed in the eastside procedure. In addition, DNR hired a field coordinator to work with burners on alternatives to burning and work with their counterpart in OR on different techniques. DNR recently discussed air curtain incinerators (still burning, however may be cleaner) with Ecology and plan to work with Ecology to identify cost effective ways to utilize this cleaner burning.

Regards,

Karen Zirkle

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Figure 2 DNR Letter to Mr. Fraidenburg, April 1, 2021

Figure 3. DNR Response to Fraidenburg, April 1, 2021

DNR's response addressed a number of Mr. Fraidenburg's comments in their letter above. DNR identified other comments as outside the scope of the webinar, and that others would be (and are) addressed in the SIP Demonstration.

DNR identified certain comments as out of scope for the webinar:

"Out of the scope for the webinar

- Where precisely does DNR's emissions data show current levels of activity fall under the emissions limits set by RCW 70A.15.5130?
- When was the last data audit conducted and when was the last report to legislature performed, as required by this law? Are these data and reports publicly available?
- How often in the past 5 years has DNR determined that a proposed burn was not the preferred alternative?
- Are current burn permit fees covering the cost of administering this program, as required by RCW 70A.15.5120(3)?
- When was the last program audit performed?"

Although out of scope for the webinar, information responsive to these comments is provided in Response to Comments, answers I-2-6e-6g.

In this same letter, DNR indicated certain comments would be addressed in the SIP Demonstration.

"Addressed in the SIP Demonstration

- Does this funding requirement also include adequate funding to support a robust monitoring network, as would be needed in order to ensure compliance with the proposed burn decision-making criteria?
- With regard to the proposed large-burn approval criteria, has DNR conducted a monitoring study to ensure adequate coverage in order to comply/enforce the decision making? Has this study been peer-reviewed and is it publicly available? The plan appears very vague as to exactly what devices will be relied upon where.
- DNR is proposing to make large-burn decisions the day before rather than the morning of the planned ignition, as is the current practice. What tools will DNR's decision-makers use to make these decisions, and how does DNR propose that this change will provide the same level of accuracy in forecast Has the National Weather Service been consulted on this new practice and provided assurance that the accuracy of their forecast tools does not degrade over the change in time period, and that this tool, if used day before, will be just as protective as current practice?"

See Responses to Comments I-2-3, I-2-4, I-2-6i.

Also, DNR identified certain comments as within the scope of the webinar and provided answers to Mr. Fraidenburg as shown below.

“Within scope of the webinar

- How does DNR define the “forest health burning” that is to be catalogued as potentially exempt from emissions ceilings required by [RCW 70A.15.5130](#)? If this is not adequately defined, then any activity conducted east of the cascades could be considered “exempt” from the ceiling. Is this really in compliance with the intent of the law?
 - Appendix 16 of the 1998 SMP and Appendix 9 of the 2019 SMP’s set the procedures for exempting eastside forest health burns. Previously, there was a check mark in DNR’s system indicating the burn met the requirements however the program did not ask for any of the elements required to meet the requirements of RCW 70A.15.5130. With the updated [burn portal](#), the program now requires the four steps listed in the procedure, including an analysis of alternatives and why the landowner does not believe alternatives area appropriate in that situation.
- Where in the burn permit and data collection process is the assessment of alternatives to burning being conducted/captured and utilized as required by RCW 70A.15.5140?
 - Appendix 14 of the 1998 SMP and Appendix 8 of the 2019 SMP’s set the procedures for alternatives to debris disposal techniques. As noted above, DNR has improved our data collection process by requiring the four steps listed in the eastside procedure. In addition, DNR hired a field coordinator to work with burners on alternatives to burning and work with their counterpart in OR on different techniques. DNR recently discussed air curtain incinerators (still burning, however may be cleaner) with Ecology and plan to work with Ecology to identify cost effective ways to utilize this cleaner burning. Regards, . . .”

See the 2022 SMP APPENDIX 9: Procedure for Exempting Eastside Forest Health Burns From the Requirement for Emission Reduction for more information on forest health burning. See also comment I-2-6h.

Comment I-2-6a Alternatives to Burning

A greater effort and resources need to be directed to the increased use of alternatives to burning. What happened to the state commitment to consider alternatives? Is prioritizing the use of prescribed fire as the solution really the right approach to the wildfire problem? Many alternative silvicultural practices exist to reduce the need for burning and there are also alternatives to burning that do not come at the cost of increased smoke exposure for the public. The Washington Clean Air Act, state law RCW 70A.15.5140, requires this hierarchy.

The department of natural resources shall encourage more intense utilization in logging and alternative silviculture practices to reduce the need for burning. The department of natural resources shall, whenever practical, encourage landowners to develop and use alternative acceptable disposal methods subject to the following priorities: (1) Slash production minimization, (2) slash utilization, (3) nonburning disposal, (4) silvicultural burning. Such alternative methods shall be evaluated as to the relative impact on air, water, and land pollution, public health, and their financial feasibility

State law RCW 70A.15.1005, establishes “air pollution is the most serious environmental threat in Washington State. Air pollution causes significant harm to human health.” RCW 70A.15.5130, and RCW 70A.15.5140 direct DNR in its duty to regulate silvicultural burning to “reduce statewide emissions from silvicultural burning” and to encourage “alternative silviculture practices to reduce the need for burning.

Response to I-2-6a-Alternatives to Burning

DNR provided the following to Mr. Fraidenburg in response to his comments submitted following the February 2021 webinar.

“Appendix 14 of the 1998 SMP and Appendix 8 of the 2019 SMP’s set the procedures for alternatives to debris disposal techniques. As noted above, DNR has improved our data collection process by requiring the four steps listed in the eastside procedure. In addition, DNR hired a field coordinator to work with burners on alternatives to burning and work with their counterpart in OR on different techniques. DNR recently discussed air curtain incinerators (still burning, however may be cleaner) with Ecology and plan to work with Ecology to identify cost effective ways to utilize this cleaner burning.”

DNR routinely makes Smoke Management decisions to deny burning permission if communities will be significantly impacted by smoke. It is important to note that the 2022 SMP updates large burn and UGA burn criteria, but responds to the needs of communities that are potentially affected by smoke with a robust intrusion procedure that quantifies what constitutes an intrusion, and charges DNR and burners with the responsibility to minimize intrusions and to respond to them in a timely manner.

Ecology and DNR recognize that prescribed fire is one of several tools to address wildfire and improve forest health. Alternatives to burning are another important tool, which is covered in detail in the Smoke Management Plan. See Alternatives to Burning, page 20; and in the Demonstration, see the section on Alternatives to Forest Health Burning, page 78.

The Demonstration includes a section on alternatives to burning and emission reduction techniques. Alternatives described include mechanical and manual treatments, chipping, and applying herbicides. The section begins by noting that DNR has a Small Forest Landowner Office that helps landowners improve forest health through a variety of strategies.

Alternatives to burning provide opportunities for improving forest health by reducing fuel loading and creating opportunities to reintroduce fire into the ecosystem. DNR’s Wildland Fire Protection 10-Year Strategic Plan (August 2019) discusses multiple treatments to reduce fuel and vegetation, including mechanical thinning as well as prescribed fire.

Finally, nowhere in the SMP is prescribed burning identified as the only and best solution for preventing catastrophic wildfire and declining forest health. The SMP is intended to create a framework for managing the smoke that results from silvicultural burning, which is one tool among many for addressing wildfire and forest health.

Comment I-2-6b Increased Burning/Increased Impacts

“Within this new SMP proposal, how has DNR demonstrated that they can conduct increased burning without increased impacts to public health? Have the desired prescribed fire efforts and locations been

quantified, and the potential impacts to populations at risk of exposure (and potential air quality standards violation) been modelled and found to be at least as protective of the standards as the current SMP?”

Response I-2-6b Increased Burning/Increased Impacts

DNR proposes to treat forestlands in eastern Washington to address ongoing and accelerating forest health impacts, frequency of fire return, and severity of wildfire. DNR does not propose that a particular percentage of those treatments be prescribed burning. The application of fire to the landscape is one tool among many, and is often used in conjunction with manual thinning followed by pile burning in order to increase combustion efficiency and reduce emissions. The Demonstration describes how DNR will manage silvicultural burning across the state to prevent intrusions, keep Washington in compliance with NAAQS and meet the state’s regional haze goals.

The 20-Year Forest Health Strategic Plan: Central and Eastern Washington, is available on the DNR website. From the DNR website:

“As of Oct. 31, 2021, DNR and our partners have completed forest health treatments on 363,143 acres across central and eastern Washington. We launched the Forest Health Treatment Tracker in 2021 to map the planned, completed and in-progress forest health treatments across Washington. The tool is interactive and illustrates the scale at which treatments are taking place across landscapes, land ownerships and ecosystems.”⁶

Moreover, DNR’s burn approval criteria remain intact and have served to largely prevent both intrusions and NAAQS exceedances. DNR’s new intrusion procedure, which aims to manage smoke well below NAAQS, will provide additional protections to communities who might suffer smoke impacts.

Comment I-2-6c Comprehensive Plan

Has DNR developed a comprehensive plan, that identifies values and risk quantifies the desired outcomes (i.e. WUI protection vs ecosystem restoration) and assessed the best treatment tools. This plan should also address potential air quality impacts to nearby communities from prescribed fire activity.

Response I-2-6c Comprehensive Plan

[DNR’s 20-Year Forest Health Strategic Plan](#) addresses forest health treatments statewide, prioritizing landscapes and treatments. Their [landowner assistance program](#)⁷ supports individual small forest landowners and their communities as they address forest health protection and wildland fire prevention. The commenter is encouraged to explore the considerable amount of information available on the DNR website, including the reports and tools mentioned in this document.

Comment I-2-6d Prescribed burning should be last option

In areas where prescribed fire is deemed necessary for wildfire defense and/or ecosystem management that are identified as having direct potential for impacts to air quality on sensitive populations, then prescribed fire should be the last option, not the first, and should be prefaced with adequate monitoring, communication to the affected public, and clean air technologies provided as mitigation. All this should be

⁶ <https://www.dnr.wa.gov/ForestHealthPlan>

⁷ <https://www.dnr.wa.gov/cost-share>

put in place BEFORE fire is put to the ground. Trained Wildland firefighters know that it is not good practice to conduct burn operations without prepping homes first.

Response I-2-6d Prescribed burning should be last option

The Smoke Management Plan addresses alternative options to burning, but its primary function is to manage the smoke that results from silvicultural burning such that it does not unduly impact communities. To the extent that DNR recommends treatment tools to landowners, their approach is to use the best tool for the project given the constraints in place. In areas where prescribed fire is deemed the best tool, the SMP ensures that adequate protections are in place to reduce potential impacts to air quality, avoid NAAQS exceedances, monitor air quality, and communicate and coordinate with partners (local air agencies, fire districts, others).

Comment I-2-6e Emissions Data/DNR compliance

1: Where precisely does DNR’s emissions data show current levels of activity fall under the emissions limits set by RCW 70A.15.5130?

Response I-2-6e Emissions Data/DNR compliance

The most recent (2017) Department of Ecology Comprehensive Emissions Inventory shows that PM 2.5 emissions ascribed to silvicultural burning totaled 2,425 tons, whereas the emissions baseline set in 2000 and reflected in the SMP is 15,853 tons of PM 2.5.

Comment I-2-6f Last Audit, Last Report to Legislature

When was the last data audit conducted and when was the last report to legislature performed, as required by this law? Are these data and reports publicly available?

Response I-2-6f Last Audit, Last Report to Legislature

Ecology prepares a comprehensive emission inventory every three years, with data provided in part from DNR, and reports these numbers to EPA for the National Emissions Inventory (NEI). Prescribed burning permitted by DNR is significantly below the emissions cap specified in law, and has been for many years. The law says prescribed burning levels must be 50% less than the 1985-1989 average. DNR reported the baseline average as 17,250 tons of PM10, making the current cap 8,625 tons of PM10. The prescribed burning emissions estimate for 2017 was 2,784 tons PM10—approximately one third the cap. Other recent years are also well below the cap. Note that forest health burning does not count against the cap (RCW 70A.15.5130, Silvicultural forest burning—Reduce statewide emissions—Exemption—Monitoring program, (4))⁸, but is included in the emissions totals.

Comment I-2-6g Burn Permit Fees/Cost of Administering Program

Are current burn permit fees covering the cost of administering this program, as required by RCW 70A.15.5120(3)? When was the last program audit performed? Does this funding requirement also include adequate funding to support a robust monitoring network, as would be needed in order to ensure compliance with the proposed burn decisionmaking criteria?

⁸ <https://app.leg.wa.gov/rcw/default.aspx?cite=70A.15.5130>,

Response I-2-6g Burn Permit Fees/Cost of Administering Program

DNR calculated how much fees would need to be increased in order for the smoke management program to be self-funded in 2011. The legislature declined to increase program fees commensurate with this assessment.

DNR is in the process of conducting a comprehensive review of the state’s silvicultural Smoke Management Program to incorporate ongoing policy and operational changes to prescribed fire usage in Washington State. DNR will provide holistic recommendations to the Legislature on the program and any changes to the burn permit fee schedule prior to the 2023 legislative session.

The statewide monitoring network is a responsibility of the Washington State Department of Ecology, in coordination with local air agencies, tribes, and EPA. Per the map included in Response to Comment I-2-4 and I-2-6i, the available monitoring network supports the current and forecasted air quality component of decision-making. DNR plans to use all available monitoring and sensor networks to inform smoke management decisions; this includes the statewide air monitoring network, and other informal networks, like air quality sensors (e.g., Purple Air).

On page 12 of the SMP, DNR says, “As the day of ignition progresses, DNR will monitor available field resources, including monitoring networks, community cameras, and field observations by DNR staff to track the increase or decrease of smoke in impacted communities.”

Comment I-2-6h Forest Health Burning Definition and Process

How does DNR define the “forest health burning” that is to be catalogued as potentially exempt from emissions ceilings required by RCW 70A.15.5130? If this is not adequately defined, then any activity conducted east of the cascades could be considered “exempt” from the ceiling. Is this really in compliance with the intent of the law?

Response I-2-6h Forest Health Burning Definition and Process

DNR replied to this question in their letter to you dated April 1, 2021, after the webinar held in February 2021:

“Appendix 16 of the 1998 SMP and Appendix 9 of the 2019 SMP’s set the procedures for exempting eastside forest health burns. Previously, there was a check mark in DNR’s system indicating the burn met the requirements however the program did not ask for any of the elements required to meet the requirements of RCW 70A.15.5130. With the updated [burn portal](#), the program now requires the four steps listed in the procedure⁹,

⁹ RCW 70A.15.5130--Silvicultural forest burning—Reduce statewide emissions—

Exemption—Monitoring program, item (4) Emissions from silvicultural burning in eastern Washington that is conducted for the purpose of restoring forest health or preventing the additional deterioration of forest health are exempt from the reduction targets and calculations in this section if the following conditions are met:

(a) The landowner submits a written request to the department identifying the location of the proposed burning and the nature of the forest health problem to be corrected. The request shall include a brief description of alternatives to silvicultural burning and reasons why the landowner believes the alternatives not to be appropriate.

(b) The department determines that the proposed silvicultural burning operation is being conducted to restore forest health or prevent additional deterioration to forest health; meets the requirements of the state smoke management plan

including an analysis of alternatives and why the landowner does not believe alternatives are appropriate in that situation.”

Appendix 9 Procedure for Exempting Eastside Forest Health Burns From the Requirement for Emission Reduction of the SMP, page 77, provides detail on forest health conditions that may qualify for exemption.

“The following procedures describe:

- How to identify burning which may qualify for exemption from the emission reduction targets for forest health reasons.
- How to request an exemption from the emission reduction targets for a burn.
- The process DNR Regions will use to review requests for exemption from the emissions reduction targets.

II. Forest Health Conditions That May Qualify for Exemption

- A. Species Composition: Control species composition to favor the creation and maintenance of stands of fire-resistant seral tree species over climax species.
- B. Stand Density: Control of stand density to favor more open fire-resistant and healthy stands over dense, overstocked stands subject to drought stress, insect and disease infestation and high intensity fire.
- C. Natural Fuels Build-Up: Control of fuels build-up due to natural processes and not a direct result of management activities.
- D. Insect and Disease: Control or prevention of insect or disease outbreaks.
- E. Restore Natural Processes: Correct the interruption of natural ecological process caused by the exclusion of fire in fire-dependent ecosystems.
- F. Types of Burning Qualifying for Exemption
 - Underburning.
 - Prescribed stand replacement fire not directly associated with a timber harvest. 78
 - Burning conducted as part of a project designed for forest health and not primarily as a commercial activity.
 - Burning of piled ponderosa pine slash created between January and June to prevent bark beetle outbreaks when no alternatives are available.”

The July 6, 2022 image below shows approved burn requests that are forest health exempt east of the Cascade crest (green indicator), including the area commonly understood to be central Washington. Total projects that qualified as forest health exempt from 2011 to 2021 include 329 approved burn requests totaling 156,325 tons of consumable material.

to protect public health, visibility, and the environment; and will not be conducted during an air pollution episode or during periods of impaired air quality in the vicinity of the proposed burn.

(c) Upon approval of the request by the department and before burning, the landowner is encouraged to notify the public in the vicinity of the burn of the general location and approximate time of ignition.

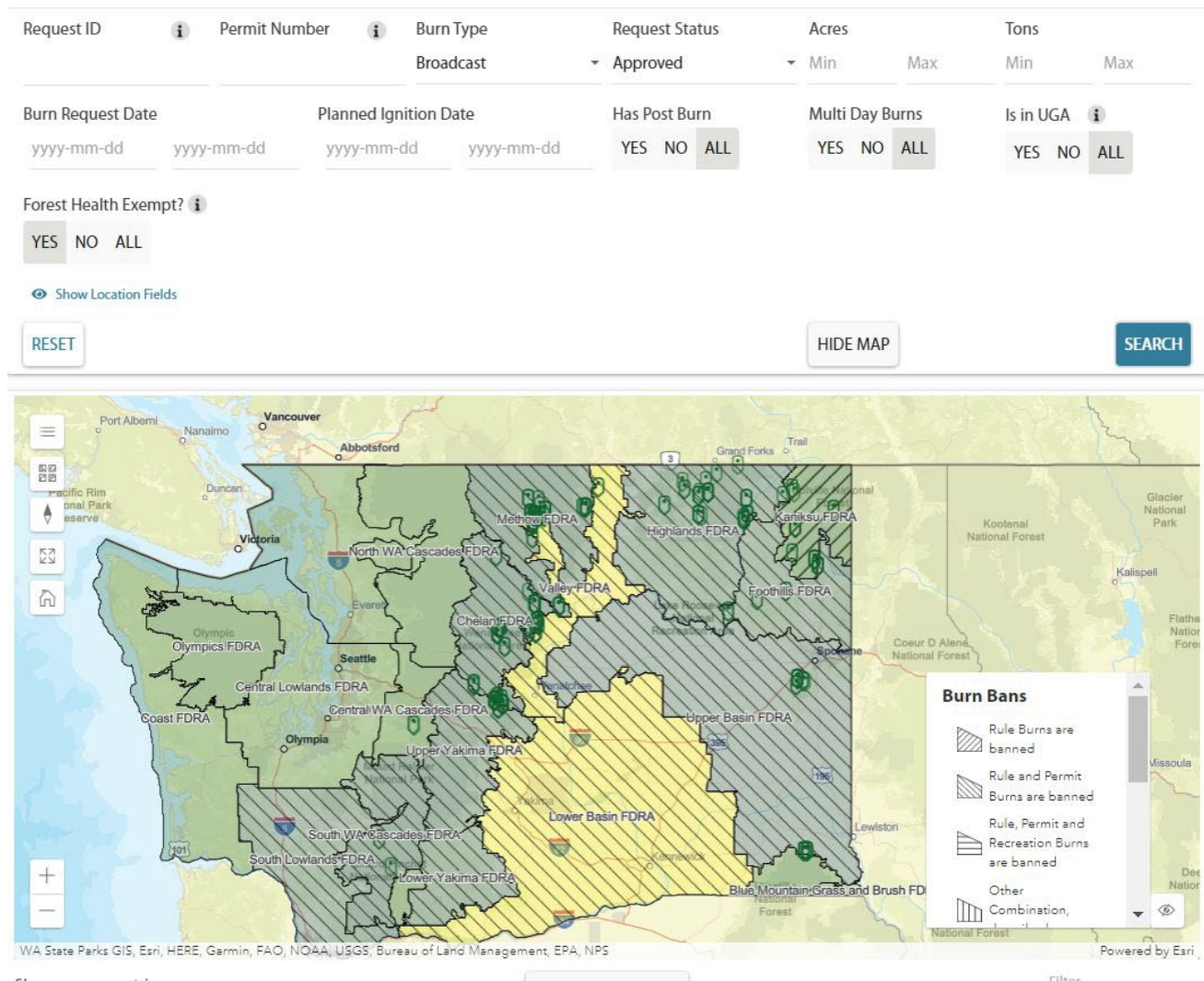


Figure 4. DNR Map of Forest Health Exempt Burns as of July 6, 2022

Comment I-2-6i Monitoring Study

With regard to the proposed large-burn approval criteria, has DNR conducted a monitoring study to ensure adequate coverage in order to comply/enforce the decision making? Has this study been peer-reviewed and is it publicly available? The plan appears very vague as to exactly what devices will be relied upon where.

Response I-2-6i Monitoring Study

DNR has not conducted a separate monitoring study. Ecology and DNR staff reviewed the state air monitoring network and determined that air monitoring is sufficient and adequate to make burn decisions. Please see the map attached to question I-2-4 for the scope of the monitoring network DNR will rely on. More information on the monitoring network is in the Demonstration in Monitors and Sensors (beginning on page 42) and various places in the SMP. For example, on page 12, the SMP says:

“3. As the day of ignition progresses, DNR will monitor available field resources, including permanent and portable air quality monitors, distributed private monitoring networks,

community cameras, and field observations by DNR staff to track the increase or decrease of smoke in impacted communities”

Comment I-2-6j Day before decision-making tools

DNR is proposing to make large-burn decisions the day before rather than the morning of the planned ignition, as is the current practice. What tools will DNR’s decision-makers use to make these decisions, and how does DNR propose that this change will provide the same level of accuracy in forecast Has the National Weather Service been consulted on this new practice and provided assurance that the accuracy of their forecast tools does not degrade over the change in time period, and that this tool, if used day before, will be just as protective as current practice?

Response I-2-6j Day before decision-making tools.

<See I-2-3 Response>

A-1: Yakima Regional Clean Air Agency – Hasan Tahat

Comments for the proposed SMP:

Yakima Regional Clean Air Agency (YRCAA) has at least the following comments:

1. YRCAA understand that DNR analyzed the effects on air quality on large burn 100 tons or more, however, approving the burn a day before the burn happen is completely erroneous approach. DNR and all weather forecaster will agree that weather conditions changes and could deteriorate very fast. YRCAA has long experience in the forecast and the actual knowledge of our area. Conditions changes overnight very rapidly. Yakima County had a very bad smoke intrusion. What will happen if the burn approval will be the on the day before the burning? The possibility and probability of intrusion and NAAQS exceedances will increase dramatically. YRCAA strongly believe the burn approval must be done on the same day of the burn NOT the DATE BEFORE. Please make this change to the SMP.

2. Enforcement Responsibility:

In case of smoke intrusions into cities and counties, will the DNR only be responsible for the enforcement? The State and the Local Clean Air Agencies must be involved in the enforcement when violations occur. Enforcement by education only, may not have the desired outcome. How often the DNR did issued civil penalties as part of enforcement in the past 10 or more years? If my understanding is correct, none. If that is true, why this plan will be followed or should be and even be effective, and what benefits it will add to the SIP.

3. Area and topographies should be part the burn procedure/protocol as it effects smoke transportation. Multiple day burns will definitely affect those low or valley areas overnight, especially during inversions. Yakima county is known for almost daily inversion due to difference in day and night temperature. It is a semi-arid region. Hence, burning calls for the the [sic] west side and the east side of the mountain should be differentiated in the SMP.

4. Smoke intrusion caused by silvicultural burning:

If the approval of burning will be done a day or two before the burning, it will be less of a possibility to know where the smoke intrusion will be not as what stated in the SMP, it will be known. Again, approving the burn one day before the burn must delated [sic] from the SMP, and replaced by approval on the same day of the burn.

5. "If DNR determines that a smoke intrusion has occurred... from SMP" a report will be generated after 10 business days. If no deterrent/enforcement, a report only will not prevent smoke intrusion now or in the future and will not be helpful for areas with maintenance plan or nonattainment.

6. If the NAAQS exceeded because of the burn, and EPA denies the exceptional event demonstration by DNR, who will be responsible for the nonattainment issues in that area, if the area become a nonattainment? Is it DNR, the Local Clean Air Agencies (LCAA) or the State?

Comment A-1-1 - Opposes day before ignition decision making

Yakima Regional Clean Air Agency (YRCAA) has at least the following comments:

1. YRCAA understand that DNR analyzed the effects on air quality on large burn 100 tons or more, however, approving the burn a day before the burn happen is completely erroneous approach. DNR and all weather forecaster will agree that weather conditions changes and could deteriorate very fast. YRCAA

has long experience in the forecast and the actual knowledge of our area. Conditions changes overnight very rapidly. Yakima County had a very bad smoke intrusion. What will happen if the burn approval will be the on the day before the burning? The possibility and probability of intrusion and NAAQS exceedances will increase dramatically. YRCAA strongly believe the burn approval must be done on the same day of the burn NOT the DATE BEFORE. Please make this change to the SMP.

4. Smoke intrusion caused by silvicultural burning:

If the approval of burning will be done a day or two before the burning, it will be less of a possibility to know where the smoke intrusion will be not as what stated in the SMP, it will be known. Again, approving the burn one day before the burn must delated from the SMP, and replaced by approval on the same day of the burn.

Response to Comment A-1-1 Opposes day before ignition decision making

Thank you for this comment. We appreciate that YRCAA wants to ensure reliable information for burn decisions.

See Response to Comment I-2-3.

DNR smoke management experts monitor weather conditions closely prior to and throughout burning, and will be in regular and frequent contact with burners, if conditions appear to be changing for the worse before or during ignition. When conditions are good, day-before decisions have a number of significant advantages that can work to better control the burn, for example when locating crews and equipment in rugged terrain. DNR staff will double check conditions the morning-of ignition and communicate with burners if parameters change¹⁰.

Moreover, raw weather data is only part of DNR's Smoke Management decision-making process. Topography, history of smoke intrusions or exceedances, current air quality conditions, and patterns of human settlement around the burn area are important elements considered when approving or denying permission to burn.

DNR has also strengthened the Smoke Management Plan by adding the requirement to begin mitigating and addressing smoke impacts when NowCast, which uses hourly PM measurements, predicts that PM_{2.5} will reach 20.5 µg/m³. This level corresponds with Ecology's air quality level of Unhealthy for Sensitive Groups (USGs), and is well below NAAQS. When monitor readings approach unhealthy air levels, DNR regional staff coordinate with other burners in the area and contact burners with instructions to mitigate smoke. DNR will use all types of monitors to assess possible sites of smoke impact. DNR requires burners to attest that they will comply with applicable RCW and WAC, as well as conditions of their permit. The following attestations are required of burners seeking a permit from DNR:

¹⁰ See answer I-2-4 for reference on morning-of ignition recheck.

I certify that:

- If granted a permit, I agree to comply with Chapter 76.04 RCW (Forest Protection), Chapter 70.94 RCW (Washington Clean Air Act), Chapter 332-24 WAC (Forest Protection), the Smoke Management Plan in effect at the time of burning, and the conditions contained in the permit;
- The information provided is true and accurate to the best of my knowledge;
- I believe the proposed burning is reasonably necessary, and that no practical alternative exists;
- I grant the Department of Natural Resources, or its representative, access to all acreage listed on any burning permit application I submit or on any burning permit I am issued, including private roads or access ways under my control needed to access the listed acreage for the purpose of investigating conditions specific to the burning permit or application;
- If applying as the landowner's agent, I have landowner written approval to conduct the burning requested in this application.

To the extent reasonable and consistent with carrying out the duties of the Department of Natural Resources (DNR) burning permitting program, you will be notified and given the option to accompany DNR, or its duly authorized representatives, when accessing your property.

Pages 11-12 of the 2022 Silvicultural Smoke Management Plan state the procedures DNR will follow to detect and respond to smoke intrusions, which includes contacting the air agency with jurisdiction. If DNR determines an intrusion has occurred, the burner must deliver a preliminary intrusion report within 24 hours and a full report within 5 days of the occurrence. DNR's response reviews future actions, as well identifying any procedural, operational, or policy changes arising from the intrusion. The report and accompanying data are shared with applicable partner agencies, including local air agencies, within 10 days of receiving the full intrusion report.

During the height of burn season, DNR smoke management experts must review 50 or more burn requests each day. In a morning-of-ignition scenario, they must approve or deny those requests by 9:15 am, which means staff have less time to evaluate the proposed burns and conditions. Approving burns the afternoon before ignition allows smoke management experts to combine still-robust forecast tools with very complex ensemble tools that model smoke transport, and are time and resource consuming to use. See the Demonstration for details about the approval process in section, **Burn Approval Process**, starting on page 44, and in the SMP in the **General Burning Requirements** section, which begins on page 7.

In response to item 4, please note that the change to the SMP provides for DNR to make burn approval decisions the day before burning, not two days before burning.

Comment A-1-2 Enforcement Responsibility

2. Enforcement Responsibility:

In case of smoke intrusions into cities and counties, will the DNR only be responsible for the enforcement? The State and the Local Clean Air Agencies must be involved in the enforcement when violations occur. Enforcement by education only, may not have the desired outcome. How often the DNR did issued civil penalties as part of enforcement in the past 10 or more years? If my understanding is correct, none. If that is true, why this plan will be followed or should be and even be effective, and what benefits it will add to the SIP.

Response to Comment A-1-2 Enforcement Responsibility

DNR issues all silvicultural burn permits and manages smoke related to silvicultural burning under regulations at 332-24 WAC. A violation of the regulations is a violation of the Washington Clean Air Act. The SMP describes DNR's enforcement strategy, starting on page 5.

“The primary enforcement mechanisms employed by DNR are education regarding requirements and mitigating impacts as they occur, followed by revoking current burn permits and withholding permits, if there is a refusal to comply. Permit holders who are repeatedly in violation the SMP may have their current burn permits and ability to apply for new permits suspended until they demonstrate the ability to comply with the SMP

DNR has specific authority to issue orders revoking or suspending burn privileges or permits when necessary to prevent air pollution or for the safety of adjacent property. RCW 76.04.205(4); WAC 332-24-205(1). DNR may also suspend burning under RCW 76.04.315 in order to address unusual fire danger. Any burning that occurs without a required permit, or in violation of any permit requirements, violates WAC 332-24-201(4) or other provisions of WAC 332-24. Any burning in violation of DNR rules voids any prior permission granted to burn WAC 332-24- 217. If necessary, DNR has specific authority to issue civil penalties for violations of RCW 76.04.205 per RCW 70A.15.3160. As directed in RCW 76.04.205, DNR is in the administrative procedure process, including public input, of conducting rulemaking. The rule will establish: (a) A framework for resolving conflicts that may arise related to this section, including the issuance of civil penalties pursuant to RCW 70A.15.3160 for violations of this section; and (b) the method by which penalties issued pursuant to RCW 70A.15.3160 for violations of this section will be calculated. As a last resort DNR Law Enforcement Officers are stationed throughout Washington to protect the public, employees, and state lands, resources and other assets, and DNR can take action under chapter 76.04 RCW issuing criminal citations for willful violations of permit provisions.”

In addition, failure to comply with the rules in chapter 332-24 WAC voids permission to burn.

WAC 332-24-217 - Burning permit requirements—penalty. Failure to comply with the rules in chapter 332-24 WAC voids permission to burn. Any person burning without complying with chapter 332-24 WAC is in violation of RCW 76.04.205 and chapter 70A.15 RCW. Convictions or bail forfeitures in connection with illegal burning under chapter 332-24 WAC may result in refusal to issue further permits for a two-year period from the date of the illegal burning.

DNR's silvicultural burning statute (RCW 76.04.205) was amended in 2021 to clarify that DNR has authority to issue civil penalties under the Washington Clean Air Act, in an amount not to exceed \$10,000 per day for each violation of its silvicultural burn permit program. DNR is engaged in the public process of rulemaking to determine the method for calculating fines and to set a framework for resolving conflicts. Persons interested in participating in the rulemaking should contact Jonathan Guzzo at jonathan.guzzo@dnr.wa.gov.

DNR intends to work closely with Ecology and Local Clean Air Agencies on compliance and enforcement activities; DNR has expertise on silvicultural burning, and Ecology and LCAAs are experienced with both air quality monitoring and enforcement.

Comment A-1-3 - Topographies

3. Area and topographies should be part the burn procedure/protocol as it effects smoke transportation. Multiple day burns will definitely affect those low or valley areas overnight, especially during inversions. Yakima county is known for almost daily inversion due to difference in day and night temperature. It is a semi-arid region. Hence, burning calls for the the west side and the east side of the mountain should be differentiated in the SMP.

Response to Comment A-1-3 Topographies

Area and topography are indeed important considerations. DNR smoke experts and Regional DNR¹¹ staff have detailed knowledge of the terrain and topography, and their expertise is a key part of the prescribed fire program. The SMP includes information about the resources and tools used by DNR to consider¹²:

- Current and forecasted air quality.
- Weather Conditions
- Dispersal conditions
- Burn conditions
- Availability of suppression forces

While the SMP applies to all silvicultural burning statewide, each burn request is considered individually and in the context of other burns in the vicinity. When making burn decisions, each request takes into account local conditions, including topography, prevailing winds, diurnal patterns of air stagnation, and local silvicultural and agricultural activities.

Comment A-1-4 – Smoke Intrusion Report

“5. If DNR determines that a smoke intrusion has occurred... from SMP" a report will be generated after 10 business days. If no deterrent/enforcement, a report only will not prevent smoke intrusion now or in the future and will not be helpful for areas with maintenance plan or nonattainment.

Response to Comment A-1-4 – Smoke Intrusion Report

Thank you for your comment. The SMP describes DNR’s process of investigating intrusions to determine what happened and why. The section on Smoke intrusions caused by any silvicultural burning describes the intrusion procedure, beginning on page 11 of the SMP. This procedure would go into effect upon indication that an intrusion is imminent or has occurred. (Enforcement of permit conditions and burn practices can occur immediately). If the intrusion was caused by a burn approved by DNR, the burner reports to DNR within 5 days of the intrusion. The report is a retrospective document that consolidates a record of the conditions

¹¹ DNR Region Staff issue final approval of large burns and burns in UGAs that are conducted on state and private lands, after DNR Smoke Management Program staff initially approve ignition. Federal land managers only receive the approval from the DNR Smoke Management Program.

¹² Summarized from SMP page 10.

and decisions that led up to the intrusion, both for the purposes of creating and maintaining a record of intrusions, and to capture any lessons that will help prevent intrusions in the future. If permit violations are responsible for the intrusion then deterrence and enforcement will prevent future intrusions.

The intrusion report elements are described beginning at item 4. For more on preventing intrusions, see the Demonstration beginning on page 78. For more on the intrusion report and follow up, see pages 11, 12 in the SMP; in the Demonstration, see Intrusions, beginning on page 78.

Comment A-1-5 – Non-Attainment Area Responsibilities

6. If the NAAQS exceeded because of the burn, and EPA denies the exceptional event demonstration by DNR, who will be responsible for the nonattainment issues in that area, if the area become a nonattainment? Is it DNR, the Local Clean Air Agencies (LCAA) or the State?

Response to Comment A-1-5 – Non-Attainment Area Responsibilities

Thank you for your question. This question asking about responsibilities in a nonattainment area assumes: 1) a NAAQS was exceeded ¹³because of a permitted silvicultural burn; 2) EPA disapproved the Exceptional Event Demonstration (or the event would not qualify); and 3) the area impacted would be designated ‘Nonattainment’ by EPA.

1): In the Demonstration, **Washington Compliance with NAAQS Section** begins on page 12:

“When an area does not meet national air quality standards, the area is classified by EPA as “nonattainment”. When an area returns to meeting national air quality standards, we ask EPA to re-classify the area as in attainment and in maintenance. . . EPA can potentially exclude exceedances of the NAAQS caused by natural events from the official record, if the events meet the Exceptional Event Rule (EER) criteria. Washington Department of Ecology (Ecology) — with DNR assistance — would need to prepare an exceptional event demonstration and submit it to EPA. Not all events qualify for consideration under the EER and an EER demonstration requires substantial documentation. . .”

Information about the Exceptional Event Rule (EER) is on EPA’s webpage, [Treatment of Air Quality Data Influenced by Exceptional Events \(Homepage for Exceptional Events\) | US EPA](#)¹⁴.

¹³ An exceedance of a standard means that an official federal reference or equivalent monitor recorded a level that exceeds a NAAQS standard. For example, the level of the particulate matter 2.5 24-hour standard is 35 µg/m³; a monitored value over this level is an exceedance of the standard. A violation of the standard is when, in the case of the 24-hour PM_{2.5} standard, when a monitor records exceedances over a three-year period such that the three-year average of the 98th percentile is over 35 µg/m³. Designation is an official EPA decision made formally in the Federal Register. For more information on the designation and nonattainment process, see EPA website:

<<https://www.epa.gov/criteria-air-pollutants/naaqs-designations-process>>

¹⁴ <<https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events-homepage-exceptional>>

2): A successful exceptional event demonstration allows data to be excluded from certain regulatory actions. The SMP includes a section that describes strict requirements for an Exceptional Events Demonstration. It outlines what must be collected by DNR and burners to potentially qualify an event under the Exceptional Event Rule. If the event does not qualify or not enough evidence can be collected to determine if the event qualifies, or, if an EER Demonstration is not concurred upon by EPA, the monitoring values stand. Ecology works closely with EPA to evaluate events and determine if an Exceptional Event Demonstration should be submitted. Any EE demonstration submitted to EPA would be carefully prepared and sufficient vetted such that approval is likely.

3): Regarding the question of an area being designated as nonattainment because of a monitoring violation that was caused by impacts from silvicultural burning: The designation of an area as nonattainment by EPA is a multiyear, multistep process. Were this to happen, Ecology would work with the area's clean air agency, if applicable, as well as DNR, and the community to develop a plan to return the area to compliance with the NAAQS. Local clean air agencies are in a good position to understand the sources of the target pollutant and devise control strategies to implement so the area can reduce emissions and the area can return to compliance status.

It is unlikely that a single silvicultural burn would be the cause of an exceedance or a violation of a NAAQS, and that an Exceptional Event demonstration would be rejected or that an area would be designated a nonattainment area by EPA. Should all these events come together, a nonattainment designation and development of an attainment plan would require collaboration with Ecology, the local air agency, if applicable, DNR, and the local community.

A-2: Yakima Regional Clean Air Agency – Hasan Tahat

Comment A-2-1 Day Before Burning Approval for multiple day burns

After the submission of our comments yesterday- I was wondering, the proposed SMP to approve large burn or multiple burns a day earlier than the burn day itself, I think it will make the new SMP less stringent than the old SMP, that is a serious issue "backslide" which could challenge the SIP approval and makes it problematic.

Response to Comment A-2-1 Day Before Burning Approval for multiple day burns

Thank you for this comment. See the response to comment A-1-1 for details on day-before burn decision analysis. There are no changes made from the 1998 SMP to the 2022 SMP for permitting multiple day burns. While the multiple day burning process is separate, the decision to ignite is still made the day before planned ignition under the revised SMP.

DNR's procedure for approving multiple day burns requires burners to procure a spot weather forecast each day of ignition. This spot forecast will provide a much higher degree of certainty and is a critical check of the ability to burn on a given day. The Multiple Day Burn Approval Procedure is on pages 12-14 of the SMP.

Taken together, the Demonstration, new procedures, and revised and strengthened strategies, prevent the 2022 SMP from backsliding. The NAAQS and the state's Regional Haze goals will continue to be protected, when the SMP is followed.

A-3: Puget Sound Clean Air Agency – Betsy Wheelock

Thank you for the opportunity to comment on the Washington State Department of Natural Resources Smoke Management Plan as it is proposed to be incorporated into the State Implementation Plan (SIP).

The Puget Sound Clean Air Agency's jurisdiction covers King, Kitsap, Pierce, and Snohomish counties. These four counties are home to more than 4.1 million people, over half the state's population.

The smoke from burning wood and wood-based debris contains fine particles (soot) and a toxic mix of other carcinogens. This pollution is harmful to human health, particularly for sensitive groups — infants, children, and people over 65, and those that are pregnant, have heart or lung diseases (such as asthma or COPD), respiratory infections, diabetes, stroke survivors, and those suffering from COVID-19.

To better protect human health, the Agency has sought to limit outdoor burning within its jurisdiction, and especially within the Urban Growth Area, to the greatest extent possible. We believe reasonable alternatives exist for vegetation management.

The Agency understands that the Department of Natural Resources regulates silvicultural burning within King, Kitsap, Pierce and Snohomish Counties, and has recently promulgated a rule change to allow such burning within the Urban Growth Area. We appreciate all coordinated efforts by DNR and the Department of Ecology to regulate this type of burning in a way that minimizes fine particle pollution and protects human health.

As the primary recipient of air quality related feedback from the public, the Agency reserves its authority to respond to smoke and nuisance complaints within King, Kitsap, Pierce and Snohomish counties, as appropriate, and if necessary, as supported by the evidence, enforce Agency regulations, including Regulation 1, Article 9.11 (a):

(a) It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

The above regulation is incorporated into the Puget Sound Clean Air Agency's State Implementation Plan, and as such, we reserve the right to enforce Agency regulations as necessary to protect the public we serve. Coordination between DNR and this Agency with respect to complaints may be important to the success of this program in our four counties.

We believe that this plan (and regulations adopted that led to it) do not alter or revise any requirement or provision of this Agency's prohibitions of land clearing burning included in our Regulation I, Section 8 (Outdoor Burning). Land clearing burning is banned in all four of the counties in our jurisdiction.

Thank you,

Puget Sound Clean Air Agency

Submitted by:

Betsy Wheelock

Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, WA 98101

Comment A-3-1 Agency authority to enforce in their jurisdiction

As the primary recipient of air quality related feedback from the public, the Agency reserves its authority to respond to smoke and nuisance complaints within King, Kitsap, Pierce and Snohomish counties, as appropriate, and if necessary, as supported by the evidence, enforce Agency regulations, including Regulation 1, Article 9.11 (a):

(a) It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

The above regulation is incorporated into the Puget Sound Clean Air Agency's State Implementation Plan, and as such, we reserve the right to enforce Agency regulations as necessary to protect the public we serve. Coordination between DNR and this Agency with respect to complaints may be important to the success of this program in our four counties.

We believe that this plan (and regulations adopted that led to it) do not alter or revise any requirement or provision of this Agency's prohibitions of land clearing burning included in our Regulation I, Section 8 (Outdoor Burning). Land clearing burning is banned in all four of the counties in our jurisdiction.

Response to Comment A-3-1 Agency restates authority to enforce in their jurisdiction

Thank you for your comment. We agree that neither the revised SMP, nor completed or planned rulemaking associated with the SMP, makes or will make any change to the authority of local clean air agencies. The SMP outlines DNR's plan for minimizing smoke intrusions to local communities from prescribed burning and includes processes to coordinate with local air agencies and fire districts. While the plan aims to prevent intrusions, Ecology agrees that coordination between DNR and local air agencies with respect to complaints that may arise related to smoke intrusions from prescribed fires will be important.

Different types of burning fall under/are regulated by different regulatory agencies in Washington State. Clean air agencies have enforcement authority in activities and areas granted under their jurisdiction by the Washington Clean Air Act in RCW 70A.15.

Ecology or local clean air agencies regulate land clearing, residential, recreational burning and at times, agricultural burning, in their jurisdictions. ([Outdoor Burn Regulations, 173-425](#))¹⁵

- [Outdoor & residential burning - Washington State Department of Ecology](#)
- [Smoke & fire - Washington State Department of Ecology](#)
- [Clean air agencies - Washington State Department of Ecology](#)

The Department of Natural Resources is granted responsibility for silvicultural burning under [RCWs 70A.15.5120, 76.04.005](#), and WAC 332-24. See Appendix 9 of the Demonstration for federal and state laws and state rules that apply to silvicultural burning and support the SMP.

¹⁵ <<https://apps.leg.wa.gov/WAC/default.aspx?cite=173-425>>

Comment A-3-2 Complaint Coordination

The above regulation is incorporated into the Puget Sound Clean Air Agency's State Implementation Plan, and as such, we reserve the right to enforce Agency regulations as necessary to protect the public we serve. Coordination between DNR and this Agency with respect to complaints may be important to the success of this program in our four counties.

Response to Comment A-3-2 Complaint Coordination

Thank you for your comment. Additional coordination between DNR and the air quality agencies (Ecology and local clean air agencies) with respect to complaints would be welcomed by Ecology as well. We heartily agree that interagency coordination is and will be important to the success of any future silvicultural burning.

DNR intends to collaborate closely with Ecology and local clean air agencies when burning inside UGAs is requested. Coordination on complaints received and enforcement will assure positive outcomes.

O-1: Washington Prescribed Fire Council – Chris Martin



Washington Prescribed Fire Council

www.waprescribedfire.org | wa.rxfirecouncil@gmail.com

June 29, 2022

Laurie Hulse-Moyer
Air Quality Program
Washington State Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Re: Washington Department of Natural Resources' Smoke Management Plan

The Washington State Prescribed Fire Council appreciates this opportunity to comment on the proposed Smoke Management Plan update ("2022 SMP").

Introduction

The Washington State Prescribed Fire Council represents members from over 50 organizations including state and federal agencies, tribes, non-governmental organizations, the private sector, universities, and more. Our membership is diverse. However, our members are united by our mission to protect, conserve, and expand the safe and responsible use of prescribed fire on the Washington landscape to meet both public and private management objectives. Prescribed fire refers to the planned, professional application of fire to reduce stockpiled fuels. Reducing these fuels with prescribed fire is critical to prevent the catastrophic wildfires that threaten lives, property, natural resources, and air quality.¹

I. The 2022 Smoke Management Plan is a Major Step Forward

The Prescribed Fire Council applauds the Department of Natural Resources (DNR), and the Department of Ecology (Ecology) for developing this update to the SMP. By facilitating the careful use of prescribed fire, the 2022 SMP will reduce the risk of catastrophic wildfire while

¹ See e.g., Scott Stephens et. al., *The Effects of Forest Fuel-Reduction Treatments in the United States*, BioScience Vol. 62 No. 6 (Jun. 2012) [https://www.fs.fed.us/psw/publications/fettig/psw_2012_fettig001\(stephens\).pdf](https://www.fs.fed.us/psw/publications/fettig/psw_2012_fettig001(stephens).pdf) (finding that prescribed fires are "successful in meeting short-term fuel-reduction objectives such that treated stands are more resilient to high-intensity wildfire").

protecting Washington's air quality.² We particularly want to highlight four areas where the 2022 SMP makes significant progress over the current SMP.

First, we support that the 2022 SMP removes the prohibition on summer weekend burning. With thoughtful planning and attention to weather conditions, prescribed fires can be completed without significant impacts on views, air quality, or weekend recreation activities. Moreover, prescribed burning is already limited to a small number of days per year when weather conditions, seasons, and available resources align. The weekend prohibition arbitrarily reduces the number of days even further. We appreciate that under the 2022 SMP, burn permit decisions will be based on safety and air quality, not the day of the week.

Second, the 2022 SMP includes a commitment by DNR to notify large burn permit applicants if their burn has been approved by 4:30 PM the day before. We commend DNR for proposing this change. This is critical for the Prescribed Fire Council's members to have time to organize the staff and safety equipment necessary to execute a prescribed fire.

Third, we also appreciate the additional clarity regarding the approval process for multi-day burns. However, we are interested in working with the state agencies during implementation to ensure that if three months of notice is required for a multi-day burn application, applicants may amend the application as new information becomes available.

Fourth, we support the process for approving burns within Urban Growth Areas (UGAs). We expect that prescribed fires within UGAs will be limited. However, prescribed fire in these areas may be critical to protecting communities from a catastrophic wildfire.

II. Include Stakeholders in Implementing the Smoke Management Plan

While the 2022 SMP clarifies many elements of the burn approval process, the Prescribed Fire Council expects that our members will identify potential improvements and new issues during implementation. Furthermore, because the SMP is incorporated into Washington's Clean Air Act State Implementation Plan (SIP), formal revisions to the SMP require federal approval. Our experience is that this is a multi-year process. Therefore, the 2022 SMP must incorporate stakeholder feedback during implementation to ensure it is maximally effective because it may be several years before another revision is possible.

While we appreciate the 2022 SMP contemplates an After Action Review (AAR), the description of this element would benefit from additional clarity. The 2022 SMP does not require DNR to

² See Environmental Protection Agency, *Comparative Assessment of the Impacts of Prescribed Fire Versus Wildfire (CAIF): A Case Study in the Western United States* (Sept. 30, 2021) (finding that "prescribed fire can reduce the overall size of a future wildfire" and that "prescribed fire is not without risk as it can result in smoke related air quality and public health impacts, but at a much smaller scale compared to a wildfire").

conduct the review, but only provides that DNR “may” do so. *See* Wash. Dept. of Natural Resources, *Smoke Management Plan* (May 10, 2022) at 6. Moreover, the 2022 SMP is similarly vague regarding who is included and what the AAR will produce.

Instead of occurring at DNR’s discretion, we suggest the AAR be adopted as an annual requirement. Additionally, the AAR should explicitly include prescribed fire practitioners so that DNR may collect the input of those directly impacted by the burn approval process. Finally, the AAR should begin to identify issues to address in the next SMP revision. We propose the 2022 SMP, page 6, be revised with our suggested changes in *italics*:

“Once each year DNR *must* convene state, federal, private burners, *prescribed fire practitioners*, partner agencies including Ecology and LCAAs, and relevant DNR staff for a full-day after-action review (AAR). *During the AAR, DNR and the participants shall identify and record issues that may require an update to the SMP.*”

Alternatively, we would support the creation of a separate advisory committee. In Appendix 9, the 2022 SMP suggests that “members of the Smoke Management Advisory Committee” may meet to evaluate DNR’s guidelines for the Eastern Washington forest burning emissions exemption. *See* Wash. Dept. of Natural Resources, *Smoke Management Plan* (May 10, 2022) at 80. However, the committee is not referenced elsewhere in the 2022 SMP. We are aware that Oregon’s Smoke Management Plan includes an advisory committee that meets annually. *See* OAR 629-048-0450(4). A similar committee, that includes prescribed fire practitioners, could also support the implementation process in Washington. We welcome the addition of an advisory committee if that is preferable to a robust AAR.

III. Distinguish Complaints from Inquiries

We also support the provisions in the 2022 SMP pertaining to complaint tracking. However, we want to ensure that mere inquiries are not miscategorized as complaints. For example, if a caller sees smoke and is concerned that a wildfire may be nearby, and only wishes to clarify whether the smoke is from a prescribed fire or a wildfire, this call should not be categorized as a complaint. This may be achieved by requiring each caller to first indicate whether they are seeking information or registering a complaint. Furthermore, we encourage DNR to collect caller information so that complaints can be followed-up on and a dialogue established with concerned parties.

IV. Support Eastern Washington Landowners Applying Under RCW 70A.15.5130(4)

The 2022 SMP would also benefit from reducing the burden on landowners who wish to request the exemption from emission limits for Eastern Washington forest health prescribed burning as

authorized by RCW 70A.15.5130(4). DNR should ensure that burn permit applications, and the burn portal webpage, provide clear instructions and a helpline for those requesting the exemption.

Conclusion

We applaud DNR and Ecology for developing the 2022 SMP. We look forward to collaborating with both agencies during the implementation process. We support Ecology's proposal to amend the SIP to include the 2022 SMP and hope the process moves forward swiftly.

Figure 5. Letter from Prescribed Fire Council, dated June 29, 2022

Comment O-1-1 Support lifting of summer weekend burning restriction

First, we support that the 2022 SMP removes the prohibition on summer weekend burning. With thoughtful planning and attention to weather conditions, prescribed fires can be completed without significant impacts on views, air quality, or weekend recreation activities. Moreover, prescribed burning is already limited to a small number of days per year when weather conditions, seasons, and available resources align. The weekend prohibition arbitrarily reduces the number of days even further. We appreciate that under the 2022 SMP, burn permit decisions will be based on safety and air quality, not the day of the week.

Response to Comment O-1-1 Support lifting of summer weekend burning restriction

Thank you for your comment.

Comment O-1-2 Supports day before decision making

Second, the 2022 SMP includes a commitment by DNR to notify large burn permit applicants if their burn has been approved by 4:30 PM the day before. We commend DNR for proposing this change. This is critical for the Prescribed Fire Council's members to have time to organize the staff and safety equipment necessary to execute a prescribed fire.

Response to Comment O-1-2 Supports day before decision making

Thank you for your comment.

Comment O-1-3 Regarding multi-day burns

“Third, we also appreciate the additional clarity regarding the approval process for multi-day burns. However, we are interested in working with the state agencies during implementation to ensure that if three months of notice is required for a multi-day burn application, applicants may amend the application as new information becomes available.”

Response to Comment O-1-3 Regarding multi-day burns

Thank you for your comment. Federal agencies are the only land managers to date to request multi-day burning. Authorization to conduct a multi-day burn can be a complex evaluation of fire risk and smoke management. To manage a multi-day burn well, both the burner and DNR need to be in close collaboration far in advance of the burn itself to ensure resources, objectives and public safety and health are all aligned. The collaboration can be and is an iterative process. DNR is confident their process working with burners will ensure the most up to date and accurate information is reflected in the application and the authorization to burn. The ignition decision is made the day before the first day of planned ignition. For each day of planned ignition, a spot forecast is required.

Comment O-1-4 Urban Growth Areas

Fourth, we support the process for approving burns within Urban Growth Areas (UGAs). We expect that prescribed fires within UGAs will be limited. However, prescribed fire in these areas may be critical to protecting communities from a catastrophic wildfire.

Response to Comment O-1-4 Urban Growth Area

Thank you for your comment. Note that the extra precautions and procedures for burning in UGAs are found in the SMP beginning on page 7 and on page 63 of the Demonstration. These extra precautions and procedures will help protect communities from smoke when silvicultural

burning is used as a tool for protecting communities against catastrophic wildfire. For example, on page 8 of the SMP:

“Urban Growth Area (UGA) Burns: Regardless of consumable tonnage, burns within a UGA require a site-specific DNR Smoke Management decision, a documented test fire and a spot weather forecast.”

Comment O-1-5 Review or updating of plan

II. Include Stakeholders in Implementing the Smoke Management Plan

While the 2022 SMP clarifies many elements of the burn approval process, the Prescribed Fire Council expects that our members will identify potential improvements and new issues during implementation. Furthermore, because the SMP is incorporated into Washington’s Clean Air Act State Implementation Plan (SIP), formal revisions to the SMP require federal approval. Our experience is that this is a multi-year process. Therefore, the 2022 SMP must incorporate stakeholder feedback during implementation to ensure it is maximally effective because it may be several years before another revision is possible.

Response to Comment O-1-5 Review or updating of plan

Thank you for your comment. DNR states in the SMP (SMP Plan Review, Approval, and Updating section, page 24,) that elements of the plan will be reviewed on an as-needed basis and that they intend to update the SMP every five years. DNR will involve stakeholders in the SMP review process, especially the Prescribed Fire Council in to benefit from your experiences implementing the 2022 SMP. Any interested stakeholders—land owners/managers, air quality managers, the public— can be involved with the review of the Plan.¹⁶

Comment O-1-6 After Action Review (AAR)/Advisory Committee

Instead of occurring at DNR’s discretion, we suggest the AAR be adopted as an annual requirement. Additionally, the AAR should explicitly include prescribed fire practitioners so that DNR may collect the input of those directly impacted by the burn approval process. Finally, the AAR should begin to identify issues to address in the next SMP revision. We propose the 2022 SMP, page 6, be revised with our suggested changes in *italics*.

Once each year DNR must convene state, federal, private burners, *prescribed fire practitioners*, partner agencies including Ecology and LCAAs, and relevant DNR staff for a full-day after-action review (AAR). *During the AAR, DNR and the participants shall identify and record issues that may require an update to the SMP.”*

Alternatively, we would support the creation of a separate advisory committee. In Appendix 9, the 2022 SMP suggests that “members of the Smoke Management Advisory Committee” may meet to evaluate DNR’s guidelines for the Eastern Washington forest burning emissions exemption. See Wash. Dept. of Natural Resources, Smoke Management Plan (May 10, 2022) at 80. However, the committee is not referenced elsewhere in the 2022 SMP. We are aware that Oregon’s Smoke Management Plan includes an advisory committee that meets annually. See OAR 629-048-0450(4). A similar committee, that includes prescribed fire practitioners, could also support the implementation process in Washington. We welcome the addition of an advisory committee if that is preferable to a robust AAR.

¹⁶ 2022 SMP, page 24

Response to Comment O-1-6 After Action Review/Advisory Committee

Thank you for your comment and suggestion. The 2022 SMP describes the AAR starting on page 6. DNR is committed to public input from all plan stakeholders during implementation. DNR maintains an open line of communication throughout the year to ensure concerns heard and burners and agencies are held accountable to the standards set. Revisions to the SMP will entail demonstrating through the SIP process that air quality remains protected. DNR will open up the dialog about ideas for changes in the next SMP revision (anticipated Fall 2025) and will add these to AAR agendas. Any resulting suggestions can be provided to a future workgroup or advisory committee.

AAR(s) have, and will continue to, have a robust invitee list and DNR welcomes anyone to participate. DNR appreciates the Washington Prescribed Fire Council representatives providing valuable contributions at each AAR held to date. If additional prescribed fire practitioners or others are interested in being included in the AAR, they can send a message to dnrburnportal@dnr.wa.gov.

Comment O-1-7 Distinguish inquiries from complaints

III. Distinguish Complaints from Inquiries.

We also support the provisions in the 2022 SMP pertaining to complaint tracking. However, we want to ensure that mere inquiries are not miscategorized as complaints. For example, if a caller sees smoke and is concerned that a wildfire may be nearby, and only wishes to clarify whether the smoke is from a prescribed fire or a wildfire, this call should not be categorized as a complaint. This may be achieved by requiring each caller to first indicate whether they are seeking information or registering a complaint. Furthermore, we encourage DNR to collect caller information so that complaints can be followed-up on and a dialogue established with concerned parties.

Response to Comment O-1-7 Distinguish inquiries from complaints

DNR reports that the process for responding to an inquiry is much less formal than for responding to a complaint, so it is unlikely that much overlap exists between the two communications. DNR will take this under advisement; they understand that when there is smoke, people may have questions or be concerned, and appreciate the distinction between inquiries and complaints. The main number for DNR's Forest Resiliency Division, 360 902-1300, receives complaints during business hours. This number is transferred to the state emergency operation center after hours, weekends and holidays. The operations center contacts DNR dispatch.

Comment O-1-8 Reduce burden for requesting exemptions

The 2022 SMP would also benefit from reducing the burden on landowners who wish to request the exemption from emission limits for Eastern Washington forest health prescribed burning as authorized by RCW 70A.15.5130(4).

Response to Comment O-1-8 Reduce burden for requesting exemptions

DNR strives to be transparent on the process of applying for a permit and qualifying a project for a forest health exemption. The process to qualify for a forest health exemption is explained in RCW 70A.15.5020: Outdoor burning. DNR's smoke management experts are available to

answer questions or help guide applicants through the permit process (and exemption qualifications). They can be reached by phone at (360) 902-1300 or email at dnrburnportal@dnr.wa.gov during regular business hours. See the information in answer I-2-6h, for what may be considered forest health burning and how to qualify.

Comment O-1-9 Clear instructions and helpline

“DNR should ensure that burn permit applications, and the burn portal webpage, provide clear instructions and a helpline for those requesting the exemption.”

Response to Comment O-1-9 Clear instructions and helpline

DNR appreciates the comment and will continue to improve information and instructions about the permit process on the burn portal. Note that phone numbers and email addresses of DNR Regions are available online and on the burn portal. Smoke management expert staff can assist permit applicants.

Starting several years ago, DNR created an improved burn portal, with features for both permit applicants and the general public. Anyone can access complete information about locations and timing of proposed, approved, and completed burns. The burn portal provides ready links to information about burn restrictions, air quality, state laws, applying for a permit, and reporting smoke intrusions. Recently completed burns, recent UGA burns, planned burns, are shown by size on an interactive map that also identifies areas with burn bans. This tool is part of a communication strategy that includes providing data. The burn portal is accessible at burnportal.dnr.wa.gov.¹⁷

¹⁷ <https://burnportal.dnr.wa.gov/>

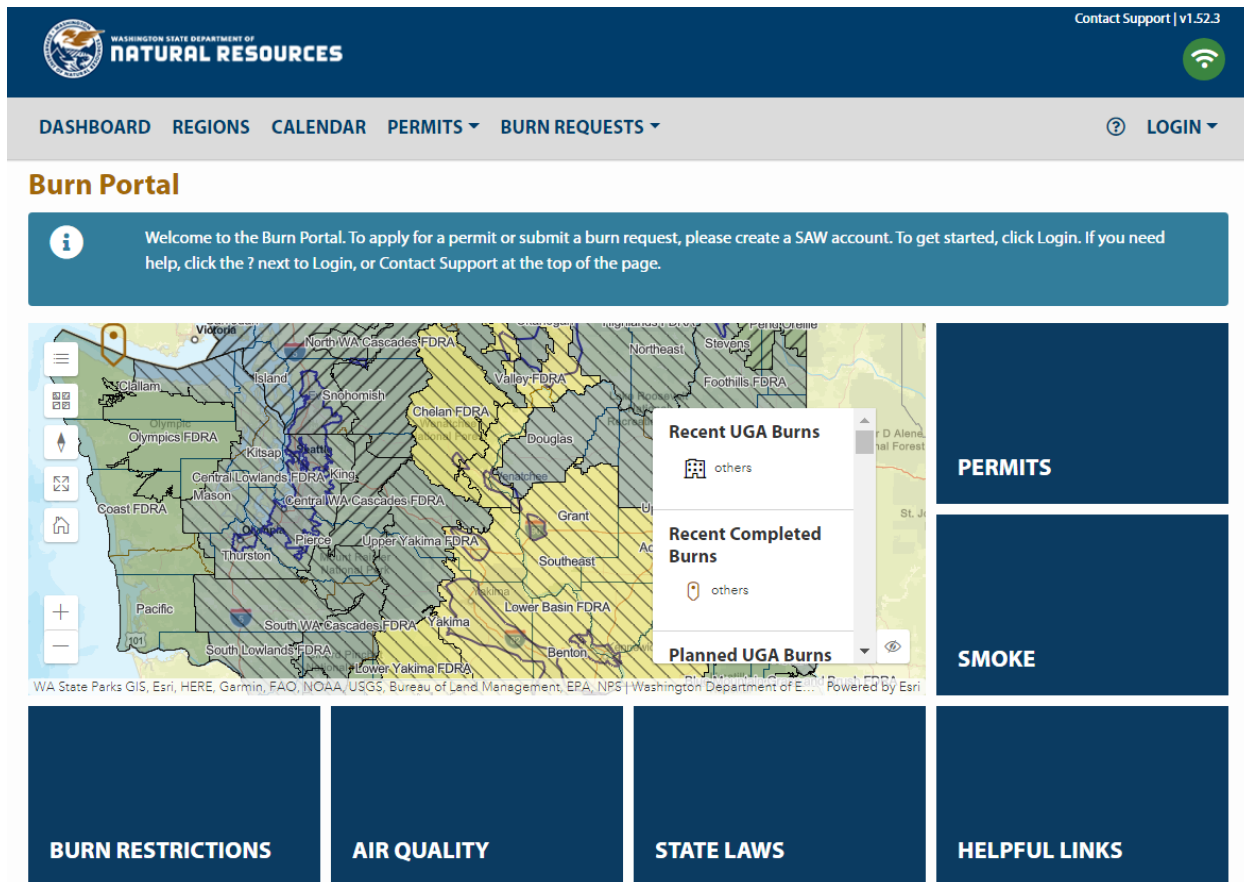


Figure 6. Burn Portal as of July 6, 2022; Showing Recent UGA Burns & Recently Completed Burns

Comment O-1-10 Supports proposal to submit

We applaud DNR and Ecology for developing the 2022 SMP. We look forward to collaborating with both agencies during the implementation process. We support Ecology’s proposal to amend the SIP to include the 2022 SMP and hope the process moves forward swiftly.

Response to Comment O-1-10 Supports proposal to submit

Thank you for your comment.

O-2: City of Roslyn – Chris Martin, included in testimony from the June 28 hearing

Comment O-2-1 Support of UGA Burning

On behalf of the City of Roslyn, we'd particularly like to thank Ecology, EPA, and DNR for working on the urban growth area issue. The City of Roslyn, because it's a city, is a defacto UGA, even though we are surrounded by forest land that rates us in the top three most at-risk communities from wildfire in the State of Washington, and Prescribed Fire in that forest, which is in the UGA is a critical component of our community protection plan. We'd like to thank everybody for including that and that concludes my testimony. Thank you.

Response to O-2-1 Support of UGA Burning

Thank you for your comment.