



Burning Permit Application – Long Form

FOR OFFICIAL USE ONLY			
Application #	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
	Region	Year	Number
Tonnage this application only.....:	_____		Date Received: _____
Total tonnage of packaged applications:	_____		Fee Amount: _____
For packaged applications: Application _____ of _____			Check # _____

Burn Permit Application Instructions

1. Use this application if you are requesting a permit to burn:
 - piled forest material generated from an area that is greater than ten acres in size, or
 - you plan to conduct a “Broadcast” or “Understory” burn
2. **SAVE** the form to your computer before you begin to fill out the application.
3. Fill out the application completely (if completing by hand, must be printed legibly using blue or black ink)
4. Sign and date the application.
5. Mail the following to your DNR Region Office:
 - Application
 - Map (See Appendix A)
 - Applicable permit tonnage calculation sheet (See Appendix B and C)
 - Fee – permit fees are refundable only if DNR determines that the proposed burning will not be permitted
6. Make check payable to: Department of Natural Resources
7. Application must be filled out completely and correctly and submitted with **all** attachments as outlined in #5 above before DNR will evaluate the application or issue a permit.

Section 1 – Landowner and Agent Information

1.1 Landowner:

Mailing Address:

Street

City

State

Zip code

Primary Phone:

Alternate Phone:

Email:

1.2 Landowner Agent:

(if applicable)

Mailing Address:

Street

City

State

Zip code

Primary Phone:

Alternate Phone:

Email:

1.3 Mail burn permit to: Landowner or Landowner Agent (select only one)

3.3 Burn Acres: (round up to nearest whole acre)

- For Pile Burns = the area piled forest material is accumulated from
- For Underburns = the area to be burned black

3.4 Forest Practice Permit No: (if material to be burned was generated from a permitted forest practice)

3.5 Elevation (ft):

3.6 Check all that apply to the proposed burn:

Burn is within 500 feet of one or more residences which are not owned by the landowner of the property where the proposed burn will occur

Burn is within 500 feet of other buildings or structures which are not owned by the landowner of the property where the proposed burn will occur

Burn is within 100 feet of a state or federal highway, county road or railroad, or other public road

Burn is within 500 feet of a public campground, school grounds, or other areas of frequent concentrated public use

Piles are composed of predominately ponderosa pine planned for burning between January and June to prevent bark beetle outbreaks AND other debris disposal alternatives are not available

3.7 On what day(s) of the week do you plan to burn?

Monday through Thursday

Friday through Sunday

3.8 Do you plan to burn during the closed season (April 15 through October 15)?

Yes

No

3.9 Do you have access to equipment capable of fire line construction or for assistance in extinguishing burning/smoldering piles?

Yes

No

If Yes, check type:

Dozer

Backhoe

Excavator

Other

If other, describe:

Section 4 – Tonnage Calculation and Fee Determination for Pile Burns

Fill out this section ONLY if you selected “Pile” as the burn type in Section 3.2 above.

4.1 Total number of burn piles (all sizes):

4.2 Use the Piled Fuels Biomass and Emissions Calculator to calculate the tonnage of the forest material to be burned (see Appendix B for directions on use of calculator).

Total of Consumed Fuel (tons) of all pile groups:

(round up to nearest whole ton)

4.3 Permit Fee: (leave blank if fee is based on multiple applications as noted in Appendix D)

Determine the permit fee from Appendix D based on the Total of Consumed Fuel (tons) of all pile groups from Section 4.2 (see note in Appendix D for fee options if submitting multiple applications).

Section 5 – Tonnage Calculation and Fee Determination for Broadcast or Natural Burns

Fill out this section ONLY if you selected “Broadcast” or “Underburn” in Section 3.3 above.

5.1 General species to be burned:

5.2 Slope: (average percent slope of unit)

5.3 Harvest Date: (month and year unit was harvested, e.g. 03/2009)

- If unit was harvested over an extended period of time, enter date when the unit was 70 percent cut. Leave blank if natural fuels (i.e. not harvested)

5.4 Snow off date: (month and year snow melted off unit, e.g. 03/2009)

- Leave blank if unit was not covered with snow last winter

5.5 Ignition method: Aerial Hand Other (list method)

5.6 Refer to Appendix C “Broadcast/Underburn – Permit Tonnage Calculation” to determine Gross Fuel Loadings in tons per acre and Consumed Tons for the proposed burn unit. If your burn includes landing piles, use the "Piled Fuels Biomass and Emissions Calculator" to calculate the tonnage of the landing piles separately (see Appendix B for directions on use of calculator). Provide the following tonnage information:

1. Broadcast/Natural estimated gross fuel loading:

Diameter of Fuel (inches)	Tons/Acre (0.1 or greater)
Sound and Rotten 0.00 – 0.25	> 3 inch rotten fuel (tons/acre)
0.25 – 1.00	Litter depth (inches)
1.00 – 3.00	Duff depth (inches)
Sound 3.01 – 9.00	Duff type (select one)
9.01 – 20.00	
20.00 plus	
	Shrubs (tons/acre)
	Grass/Herb (tons/acre)

Total tons per Acre (sum of tonnages including > 3 inch rotten fuel, shrub, grass/herb): (auto calculated field)

2. Calculate “consumed tonnage” for the broadcast or natural burn using the Consume version 2.1 software (see Appendix C).

Consumed Tons:

3. Will landing piles be burned? Yes No

If yes, calculate the tonnage of the landing piles using the "Piled Fuels Biomass and Emissions Calculator" (see Appendix B for directions on use of calculator)

Total number of landing piles:

Total of Consumed Fuel (tons) of all landing pile groups:

4. Total permit tonnage: (auto calculated field)

- Consumed Tons from Section 5.6.2 plus Total of Consumed Fuel (tons) of all landing pile groups from Section 5.6.3

5.7 Permit Fee: (leave blank if fee is based on multiple applications as noted in Appendix D)

Determine the permit fee from Appendix D based on the total permit tonnage from Section 5.6.4 above (see note in Appendix D for fee options if submitting multiple applications).

Section 6 - Certification and Signature

Permit applicants are required to follow and obey all applicable provisions of Chapter 76.04 RCW (Forest Protection), Chapter 70.94 RCW (Washington Clean Air Act), Chapter 332-24 WAC (Forest Protection), and the Smoke Management Plan in effect at the time of burning.

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.

Signature of Landowner/Landowner Agent

Date

Mail the application with permit fee to your local DNR Region Office (see Appendix E).

What Happens Next?

DNR will evaluate your application and may contact you to clarify application responses, obtain additional information and/or to schedule a site visit. Upon approval of the application, DNR will mail a permit to you for signature or you can schedule an office visit to obtain your permit.

Refund Policy

Permit fees are refundable only if DNR does not issue a permit.

Have Questions or Need Help?

Contact your local DNR Region Office (see Appendix E).

Appendix A

Directions for Using Google Maps to Determine Latitude and Longitude

1. Access Google Maps from your web browser (www.maps.google.com)
2. Locate your property by utilizing the “pan” and “zoom” control. You may find the “Satellite” view easier to use in locating your property especially if the property is rural. The “Satellite” view is accessed by clicking the “Satellite” icon in the top right corner of the map.
3. When you have located the property where your burn is proposed:
 - Place your mouse cursor over the approximate center of the burn area
 - Right click your mouse
 - Select “What’s here?” from the popup menu
 - A green arrow will appear. Move your mouse cursor over the green arrow to display the Latitude and Longitude
 - The positive number on the left is the latitude in decimal degrees
 - The negative number on the right is the longitude in decimal degrees
 - Record the Latitude and Longitude on the burn application

Map

Submit a map of the proposed burn unit/area with the application. If you are burning material from a permitted DNR forest practice, the Forest Practice Activity map may be used. The map must, at a minimum, clearly show the following:

- Burn unit boundaries
- Roads
- Numbered pile locations and pile dimension
- If a broadcast or understory burn, identify the proposed burn acres
- Legal description

Appendix B

Pile Burns – Permit Tonnage Calculation

To calculate permit tonnage for pile burns use the “Piled Fuels Biomass and Emissions Calculator” (www.depts.washington.edu/nwfire/piles/) developed by the Fire and Environmental Research Applications Team, Pacific Wildland Fire Sciences Laboratory, USDA Forest Service Pacific Northwest Research Station.

Pile Calculator Directions for Hand Piles

1. Open the “Piled Fuels Biomass and Emissions Calculator from your web browser” (see web address above).
2. **Add Pile Group of Pile Type:** Select “Hand”
3. **Pile group name:** Enter a name for the pile or pile group to be calculated. Pile groups represent one or more piles of the same shape and size. If the proposed burn has a variety of pile shapes and sizes, then a pile group will be created and consumed tonnage calculated for each pile group.
4. **Number of piles:** Enter the number of piles in the pile group.
5. **Pile shape:** Select the representative pile shape for the pile group. A diagram of the pile shape can be viewed by selecting the pile shape. NOTE: pile shapes are most commonly either paraboloid or half ellipsoid.
6. **Pile dimensions (ft):** Enter the pile dimensions in feet for the selected pile shape. Dimensions that are grayed-out are not required for the selected pile shape. Dimension correspond to the pile shape diagram and are defined as:

W1 = Width one in feet	W2 = Width two in feet
H1 = Height one in feet	H2 = Height two in feet
L1 = Length one in feet	L2 = Length two in feet
7. **Pile Composition:** From the drop down menu select either conifer or shrub/hardwood, whichever comprises the majority of the pile volume.
8. **Consumption:** Enter 85. This represents the percentage of the pile that will be consumed when burned.
9. Click on the **Add pile group** button located at the bottom left of the calculator. A **Pile Group Data** table will appear at the bottom of the calculator showing the information entered for the pile group.
10. Repeat steps 2-9 for additional pile groups.
11. When all pile groups for the planned burn have been added, click on the **Done/run calculator** button located at the bottom left of the **Pile Group Data** table. A new screen will appear containing the **Pile Group Data** and a **Pile Group Results** table.
12. Enter the total of **Consumed Fuels (tons)** from the **Pile Group Results** table in Section 4.2 of the application.
13. Print the **Pile Group Data** and **Pile Group Results** tables and submit with your application. Click on the [Print-friendly report] link in the **Pile Group Results** table and print from your web browser.

Pile Calculator Directions for Machine Piles

1. Open the “Piled Fuels Biomass and Emissions Calculator” from your web browser (see web address at the top of page 7).
2. **Add Pile Group of Pile Type:** Select “Machine”
3. **Pile group name:** Enter a name for the pile or pile group to be calculated. Pile groups represent one or more piles of the same shape and size. If the proposed burn has a variety of pile shapes and sizes, then a pile group will be created and consumed tonnage calculated for each pile group.
4. **Number of piles:** Enter the number of piles in the pile group.
5. **Pile shape:** Select the representative pile shape for the pile group. A diagram of the pile shape can be viewed by selecting the pile shape. NOTE: pile shapes are most commonly either paraboloid or half ellipsoid.
6. **Pile dimensions (ft):** Enter the pile dimensions in feet for the selected pile shape. Dimensions that are grayed-out are not required for the selected pile shape. Dimensions correspond to the pile shape diagram and are defined as:

W1 = Width one in feet	W2 = Width two in feet
H1 = Height one in feet	H2 = Height two in feet
L1 = Length one in feet	L2 = Length two in feet
7. **Estimated pile volume that is soil:** Enter 0.
8. **Packing ratio:** Select the packing ratio that best represents the piled forest material
9. **Pile Composition:**
 - 1) Select from the Primary Species drop down menu the tree species that best represents the majority of the pile volume.
 - 2) Enter the percent of the pile volume represented by the Primary Species (should be greater than 50)
 - 3) For piles containing more than one species, select from the Secondary Species drop down menu the tree species that best represents the second most abundant species in the pile
 - 4) Enter the percent of the pile volume represented by the Secondary Species (should be less than 50)
10. **Pile Quality:** Select the pile quality that best represents the piled material. Burning wet or dirt filled piles increases pollution emissions (smoke) and should be avoided.
11. **Consumption:** Enter 85. This represents the percentage of the pile that will be consumed when burned.
12. Click on the **Add pile group** button located at the bottom left of the calculator. A **Pile Group Data** table will appear at the bottom of the calculator showing the information entered for the pile group.
13. Repeat steps 2-12 for additional pile groups.
14. When all pile groups for the planned burn have been added, click on the **Done/run calculator** button located at the bottom left of the **Pile Group Data** table. A new screen will appear containing the **Pile Group Data** and a **Pile Group Results** table.
15. Enter the total of **Consumed Fuels (tons)** from the **Pile Group Results** table in Section 4.2 of the application.
16. Print the **Pile Group Data** and **Pile Group Results** tables and submit with your application. Click on the [Print-friendly report] link in the **Pile Group Results** table and print from your web browser.

Appendix C

Broadcast/Natural Prescribed Burns – Permit Tonnage Calculation

The following approved methods may be used to calculate gross fuel loading of debris to be burned and tons of fuel consumed for broadcast and natural prescribed burns.

Gross Fuel Loading – Photo Series Method

There are several Pacific Northwest Research Station (PNW) Photo Series available for quantifying forest residues. The photo series provide a reasonable means for estimating the tons of fuel in a unit that may be consumed by a prescribed burn. These publications contain series of photographs displaying different forest residue loading levels by size class, for areas of like timber types and cutting practices.

The photo series that are the standard used by the Washington State Smoke Management Plan are:

1. USDA Forest Service General Technical Report PNW 51, 1976.
(www.dnr.wa.gov/Publications/rp_burn_quantifying_douglasfir.pdf). Photo Series for quantifying Forest Residues in Coastal Douglas Fir-Hemlock Type and the Coastal Douglas Fir-Hardwood Type
2. USDA Forest Service General Technical Report PNW 52, 1976.
(www.dnr.wa.gov/Publications/rp_burn_quantifying_ponderosa_pine.pdf). Photo Series for Quantifying Forest Residues in the Ponderosa Pine Type, Ponderosa Pine and Associated Species Type, and Lodgepole Pine Type.
3. USDA Forest Service General Technical Report PNW-GTR-258, 1990.
(www.fs.fed.us/pnw/publications/pnw_gtr258/). Photo Series for quantifying Forest Residues in Coastal Douglas Fir-Hemlock Type of the Willamette National Forest.
4. USDA Forest Service General Technical Report PNW-GTR-231, 1989.
(www.dnr.wa.gov/Publications/rp_burn_quantifying_coastal_or_forests.pdf). Photo Series for Quantifying Forest Residues in Coastal Oregon Forests: Second-Growth Douglas Fir-Western Hemlock Type, Western Hemlock-Sitka Spruce Type, and Red Alder Type.

Other photo series may be accepted for use if approved by the Department of Natural Resources. Information with each photo includes measured weights, volumes and other residue data, information about the timber stand and harvest and thinning actions and fuel ratings. These photo series provide a fast and easy-to-use method for quantifying existing residues. This method, while not perfect, will provide reasonable estimates if used consistently. Experience in its use will increase the accuracy of estimates.¹

Procedures for use of the photo series to determine gross woody fuel loading are:

- A. Observe each specific fuel size class of residue on the ground (for example, 3.1 to 9- inch loading).
- B. Select a photo or photos that nearly match or bracket the observed fuel class.
- C. Obtain the quantitative value for the characteristic being estimated from the data sheet accompanying the selected photo (or interpolate between photos).
- D. These steps are repeated for each fuel size class or fuel characteristic needed.

The total gross woody fuel loading per acre can then be calculated by summing the estimates.

¹USDA Forest Service Pacific Northwest Research Station, General Technical Report, PNW-STR-258, Stereo Photo Series for Quantifying Forest Residues in the Douglas Fir-Hemlock Type of the Willamette National Forest, page 6.

An example of the above procedure using the PNW-GTR-258 Stereo Photo Series would be:

Fuel Class Size (inches)	Photo	Tons/Acre
0.00 - 0.25	1-DFWH-PRE-16	2.5
0.26 - 1.0	1-DFWH-PRE-16	4.2
1.1 - 3.0	1-DFWH-PRE-13	5.9
3.1 - 9.0	1-DFWH-PRE-13	25.3
9.1 - 20.0	1-DFWH-PRE-13	2.0
20+	1-DFWH-PRE-12	0
Total gross woody fuel load per/acre		39.9

If the general area being inventoried has areas with obvious differences in residue loading, the user should make separate determinations for each area and then weigh and sum the loading for the whole area.

Gross Fuel Loading – Transect Method

A second approved method, the basis upon which the photo series was developed, is actual field sampling of proposed units.

The procedures for inventorying downed woody material are provided in two U.S. Forest Service technical reports published by the Inter-Mountain Forest and Range Experiment Station in Ogden, Utah. The Handbook for Inventorying Downed Woody Material by James K. Brown (USDA General Technical Report INT-16, 1974) and the "Graphic Aids for Field Calculation of Dead, Downed Forest Fuels" by Hal E. Anderson (USDA General Technical Report INT-45, August 1978) are the reference documents to be followed when doing a planar intersect sample.

Calculate Consumed Tonnage for Broadcast and Underburns

The Consume version 2.1 software developed by the Fire and Environmental Research Applications Team, USDA Forest Service, Pacific Northwest Research Station is the approved method for calculating permit tonnage for broadcast and underburns.

1. The Consume version 2.1 software and User's Guide is available for free download at: http://www.fs.fed.us/pnw/fera/research/smoke/consume/consume_download.shtml
2. The "Total Consumed Tons" provided in the "Consumed by Date" report generated in Consume version 2.1 is what you will enter as Consumed Tons in Section 5.6.2 of the application. Print the "Consumed by Date" report and submit with your application.

Appendix D

Permit Fees

Use the following table to determine permit fee. Tonnage is determined in Section 4.2 or Section 5.6.3 of this application. (See note below for fee options if submitting multiple applications for one landowner)

<u>Tonnage</u>	<u>Permit Fee</u>
Under 100	\$105.50
100 to 500	\$357.00
501 to 1,000	\$846.00
1,001 to 1,500	\$1,356.00
1,501 to 2,000	\$1,869.00
2,001 to 2,500	\$2,380.00
2,501 to 3,000	\$2,893.00
3,001 to 3,500	\$3,402.00
3,501 to 4,000	\$3,914.00
4,001 to 4,500	\$4,427.00
4,501 to 5,000	\$4,938.00
5,001 to 5,500	\$5,451.00
5,501 to 6,000	\$5,962.00
6,001 to 6,500	\$6,476.00
6,501 to 7,000	\$6,987.00
7,001 to 7,500	\$7,499.00
7,501 to 8,000	\$8,011.00
8,001 to 8,500	\$8,523.00
8,501 to 9,000	\$9,035.00
9,001 to 9,500	\$9,548.00
9,501 to 10,000	\$10,057.00
10,001 or more	\$10,395.00 plus \$0.50/ton for each ton over 10,000 tons

Note: A landowner submitting multiple applications within one DNR region may elect to pay one fee based on the combined tonnage of all applications when:

- the combined tonnage of all applications equals or exceeds 100 tons, and
- the Long Form application is used for each permit request, and
- applications are submitted and paid for as one packet

**Additional applications submitted at a later date will require a new permit fee.

Permit Term

Under 100 tons 1 year
100 tons or more 2 years

Appendix E

DNR REGION OFFICES

Northeast Region Counties Included:	225 S. Silke Road, Colville 99114-9369 Ferry, Lincoln (northeast portion), Okanogan, Pend Oreille, Spokane, Stevens	509-684-7474
Northwest Region Counties Included:	919 N. Township Street, Sedro Woolley 98284-9384 King (northeast portion), Island, San Juan, Skagit, Snohomish, Whatcom	360-856-3500
Olympic Region Counties Included:	411 Tillicum Lane, Forks 98331-9271 Clallam, Grays Harbor (north portion), Jefferson	360-374-2800
Pacific Cascade Region Counties Included:	601 Bond Road, PO Box 280, Castle Rock 98611-0280 Clark, Cowlitz, Grays Harbor (south portion), Lewis, Pacific, Skamania, Wahkiakum	360-577-2025
South Puget Sound Region Counties Included:	950 Farman Avenue North, Enumclaw 98022-9282 King, Kitsap, Mason, Pierce, Thurston	360-825-1631
Southeast Region Counties Included:	713 Bowers Road, Ellensburg 98926-9301 Adams, Asotin, Benton, Chelan, Columbia, Douglas, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln (south portion), Walla Walla, Whitman, Yakima	509-925-8510