ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF AIR QUALITY, AIR PERMITS PROGRAM
Anchorage Compliance Supervisor
555 Cordova Street
Anchorage, AK 99501

OPEN-BURNING APPROVAL APPLICATION
CONTROLLED BURNING FOR RESOURCE MANAGEMENT

Prescribed burning, intentionally setting fires to burn off ground and forest cover, is usually, but not always, done by land management agencies. Prescribed burning requires written ADEC approval before starting the burn if the intent is to burn, or clear and burn 40 acres or more during a year.

When conducting prescribed burning, Land Management Agencies shall follow the Enhanced Smoke Management Plan (ESMP). The ESMP is an agreement and program plan developed and agreed upon by the Alaska Wildland Fire Coordinating Group. The purposes of the ESMP are to mitigate the nuisance, health and safety hazards to transportation, such as, roadway and airport visibility impairment, smoke sensitive features (such as hospitals, schools, and clinics) posed by smoke intrusions into populated areas; to prevent deterioration of air quality and Alaskan Ambient Air Quality Standard violations; and to reduce visibility impacts in mandatory Class I Federal Areas in accordance with Regional Haze Rules.

Regardless of any ADEC approval, open burning is prohibited in an area if ADEC declares an air quality advisory under 18 AAC 50.245 or 18 AAC 50.246, stating that burning is not permitted in that area for that day. Open burning is prohibited between November 1 and March 31 in a wood smoke control area identified in 18 AAC 50.025(b) (the Mendenhall Valley area of Juneau) and in each PM-2.5 nonattainment area identified in 18 AAC 50.015(b)(3) (the Fairbanks and North Pole urban area). In a PM-2.5 nonattainment area, a local air quality open burn permit program may replace the seasonal open burning prohibition in this section if the program is part of a local air quality plan included in the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030, and does not cause or contribute to violations of the PM-2.5 ambient air quality standards set out in 18 AAC 50.010.

Note: Please type or cut/paste your responses into the appropriate cells; the cells will expand as required.

Person(s) Responsible:

Project Contact:		Phone Number:	

Landowner:		Fire Manager:		Applicant:	
Mailing Address:		Mailing Address:		Mailing Address:	
Phone Number:		Phone Number:		Phone Number:	

Emergency contact number(s) in case of smoke intrusion:

Name:		Name:		Name:	
Title / Agency:		Title / Agency:		Title / Agency:	
Primary contact Phone #:		Primary contact Phone #:		Primary contact Phone #:	
Cell or other contact #:		Cell or other contact #:		Cell or other contact #:	

1. LOCATION AND DATES OF PROPOSED BURN

Indicate the location, duration, and inclusive dates considered for the burn:

Legal Description of Burn Site(s):	
Physical Location of Burn Site(s):	

Anticipated Burn Date(s):	Anticipated Duration of Each Event:

2. BURN SUMMARY

Location of Burn (please check):

	KP = Kenai Peninsula		DJ = Delta Junction
	SE = Southeast		AL = Aleutian (inc. Kodiak, Iliamna)
	MS = Mat-Su Borough		FBX = areas north of Talkeetna

	One time event? (yes or no)		Multiple Events? (yes or no)

Total acreage to be burned and/or cleared and burned:	
Acreage to be burned per event (if applicable):	

Permit Approval Requested Length:		1 Year		Multi-Year

If a multi-year permit approval is requested, indicate which portions of the projects will be burned during each of the following years: Attach a map as necessary to further indicate where/when burning will occur.

Indicate the type of vegetation to be burned (please check):

	1 = Broadcast, forested, not piled, heavy		4 = Machine piled slash
	2 = Range/tundra		5 = Hand piled slash
	3 = Wildlife habitat improvement		6 = Understory burns

Pre-burn and post-burn fuel loading estimates:

Size class (inches diameter):	Tons/acre (estimated):
0.00 to 0.25	
0.25 to 1.00	
1.00 to 3.00	
3.00 to 9.00	
Live Crown Mass	
Above Ground Mass	
Duff Layer (DMC, DC)	
Total:	

Ignition techniques to be used (please describe):

Provide the approximate PM, CO, VOC, and NOx emissions expected for each burn and method used to estimate.
Emissions can be estimated by multiplying the approximate level of activity, which is the amount of fuel consumed, usually expressed in tons, by an emission factor which is expressed in pounds per ton of material burned. Applicants may use wild-fire emission factors, AP-42 factors, or other factors or methods if they are more specific to Alaskan fuels and conditions. AP-42

emission factors can be found on EPA's website: http://www.epa.gov/ttn/chief/ap42/ch13/.		
Burn Area:	Expected Emissions:	Method Used to Estimate Emissions:
	Ton per year PM	
	Ton per year CO	
	Ton per year VOC	
	Ton per year NOx	

3. SMOKE MANAGEMENT

Have you developed a Smoke Management Plan for this burn (please check)?

	Yes (Please attach and show ratings below)		No [Complete Attachment 1 (Smoke Complexity) and provide ratings below]

The Smoke Management Complexity ratings for this open burn are (check appropriate category):

Risk:		Low (1 point)		Moderate (2 points)		High (3 points)
Potential Consequences:		Low (1 point)		Moderate (2 points)		High (3 points)
Technical Difficulty:		Low (1 point)		Moderate (2 points)		High (3 points)

Complete Attachment 2 (Public Health Impact Complexity) included with this application. Summarize the Smoke Management Public Health Impact Complexity below (check appropriate category):

Risk:		Low (1 point)		Moderate (2 points)		High (3 points)
Potential Consequences:		Low (1 point)		Moderate (2 points)		High (3 points)
Technical Difficulty:		Low (1 point)		Moderate (2 points)		High (3 points)

Indicate the overall Smoke Management / Public Health Impact Complexity Rating Score for this burn (i.e., the total score of the above six ratings points): *Overall rating may be reduced through smoke mitigation efforts outlined in the complexity rating descriptions.*						
Revised overall smoke /health complexity rating with mitigation applied:		Low (6-8 points)		Moderate (8-12 points)		High (>12 points)

Indicate whether the fire is considered "anthropogenic" or "natural."	
anthropogenic*: a categorization that designates which fire emissions contribute to visibility impairment in a Federal Class I area. "Anthropogenic" emissions must be controlled to achieve progress toward the 2064 natural conditions goal for each Federal Class I area in Alaska. This classification includes natural and human-caused ignitions. Most fire emission sources are classified as "anthropogenic." Prescribed fire is an "anthropogenic" source, except where it is utilized to maintain an ecosystem that is currently in an ecologically functional and fire resilient condition (in which case it is classified as a "natural" source.)*	
natural*: a categorization that designates which fire emissions can result in a natural reduction of visibility for each Federal Class I area in Alaska. This classification includes natural and human-caused ignitions. Wildfire that is suppressed by management action is a "natural" source. Wildfire, when suppression is limited for safety, economic, or resource limitations, remains a "natural" source. Wildfires managed for resource objectives are classified the same as prescribed fires. Native American cultural burning for traditional, religious, and ceremonial purposes is a "natural" source.*	
Further clarification regarding the differences between "anthropogenic" and "natural" are explained in the WRAP document "Policy for Categorizing Fire Emissions". This document is available at http://www.wrapair.org/forums/fejf/docs.html	

4. SENSITIVE FEATURES

Sensitive Features *include population centers such as communities, cities, towns, hospitals, health clinics, nursing homes, schools (in session), campgrounds, numbered Alaska highways and roads, airports, Prevention of Significant Deterioration Class I Areas, where smoke and air pollutants can adversely affect public health, safety, and welfare.*

Include a map of the proposed burn area.

a. Indicate multiple burn sites (if any) within the proposed burn area;
b. List sensitive features as described below that may be adversely affected by low level smoke and distance of those areas from proposed burn area(s); and
c. List sensitive features that may be adversely affected long range transport of smoke and distance of those areas from proposed burn area(s).

How many maps are attached?	

5. MITIGATION:

If any safety hazard is present, or if requested by the authority of a Sensitive Feature, you must mitigate impacts through steps that are technologically feasible and economically and environmentally reasonable. Contingency or emergency monitoring may be needed to measure and detect smoke intrusions on Sensitive Features. Failure to have an effective mitigation measure may, in some cases, result in the application not being approved.

Indicate how authorities in control of Sensitive Features will be contacted if air quality degrades (visibility may be used as an indicator of air quality). Provide a contingency plan for smoke intrusion into Sensitive Feature areas. Indicate how you will notify Authorities having control over Sensitive Features identified above if visibility is expected to be decreased to less than three miles for an hour.

Is the burn expected to generate low level smoke, transported locally?		Yes		No
If yes, could people coming into the proposed burn locality be adversely affected by smoke?		Yes		No

If yes, what mitigation practices / contingency plans are proposed to help keep the smoke from affecting Sensitive Features near to the burn site?

Is the burn expected to be large enough (>1000 acres) or hot enough to create a smoke plume that is transported to upper-level air currents?		Yes		No

If yes, what mitigation practices / contingency plans are proposed to help keep the smoke from affecting Sensitive Features far from the burn site?

6. PUBLIC NOTICE

The Responsible Authority's / Fire Manager's local contact phone number should be publicized. The public must be notified at least three days prior to the anticipated open burn through the local news media or the local Post Office.

Indicate how the public will be informed prior to, during, and after the burning. How will you notify persons in control of the sensitive features identified on your map of your anticipated burn?

Indicate how you will coordinate with other concerned agencies, including the Responsible Authorities of sensitive features identified above *(such as the FAA, State Troopers, military, fire department, adjacent land managers, etc.)* Include a list of telephone numbers or email addresses of agencies you will contact prior to ignition.

Indicate how you will coordinate with ADEC Air Quality. *At a minimum, the ADEC Meteorologist must be notified two (2) weeks prior to anticipated project ignition (907-269-7676). If your application is approved, a conference should be scheduled for 24 - 96 hours prior to the actual burn for a burn-weather call*

Attach a copy of your approval for the DNR - Forestry Division Open Burn Permit for your planned activity or explain below why a DNR Burn Permit is not required.

7. METEOROLOGICAL / WEATHER FORECASTING

The Division's meteorologist is responsible for ensuring, from the ADEC's standpoint, that smoke from a prescribed burn does not adversely impact the public. To allow their participation in the burn decision making process, please ensure that this application is completed and submitted at least 2 weeks prior to a scheduled burn so they can participate in pre-burn planning events 1-2 days prior to ignition.

Indicate how weather forecasts will be obtained and used to prevent smoke impacts. Identify how the local and spot weather forecast will be obtained prior to ignition of the open burn. *Parameters that should be obtained are the predicted visibility, dispersion conditions, transport and local area wind direction, and wind speed.*

Indicate how weather changes will be monitored.

Explain what will be done to reduce or mitigate smoke impacts if unfavorable weather should occur after ignition. *If any safety hazard is present, or if requested by the Authority of a Sensitive Feature, you must take technologically feasible and economically and environmentally reasonable steps to mitigate smoke impacts.*

Identify what you will do if a wind shift or other weather change begins to create an adverse smoke impact on Sensitive Features previously.

Indicate what will be done to validate predicted smoke dispersion. Note: If a test fire, small piles, or areas fire, etc. fails to indicate that acceptable smoke dispersion will occur, no fires are to be ignited.

Indicate proposed techniques to be used to enhance the active fire phase and reduce the smoldering phase. Consider employing emission reduction techniques before, during and after the fire. Indicate what is feasible to address the management objective.

Will air monitoring be conducted during the burn (check applicable boxes)?

	No, monitoring will not be conducted during the burn. Explain why air quality monitoring for particulates should not be necessary for this burn.
	Yes, monitoring will be conducted. Describe the numbers and placement of monitors to be used, how often the data will be collected / stored, how the results will affect the burn operations, and where the monitoring data can be accessed by ADEC staff.

Identify how the effect of the fire on air quality at Sensitive Features, and visibility in Class I areas will be monitored.

The applicant will supply monitoring equipment and personnel *(Check Yes or No)*	YES	
	NO	
The applicant requests the ADEC supply monitoring equipment and personnel, and acknowledges that time and materials will be charged for ADEC services *(Check Yes or No)*	YES	
	NO	

8. OTHER DISPOSAL OPTIONS

Identify alternative disposal options for material being open burned. *An evaluation of alternatives to open burning must demonstrate that open burning is the only technologically feasible and economically and environmentally reasonable alternative.*

Identify other alternative disposal options for material burned or explain why burning is the selected alternative and why the alternatives were not used.

List any alternatives to burning that have been done to the burn units prior to ignition.

Certification: (If signing as an Authorized Agent, please submit a copy of your authority to do so.)

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Landowner Signature Date	Fire Manager Signature Date	Applicant Signature Date
Printed Name of Landowner	Printed Name of Fire Manager	Printed Name of Applicant

As of September 7, 2022, the fee for review of and routine compliance services for a request for Open Burning Approval is $387. With each burn application please submit a $387 administrative fee payable to the State of Alaska, DEC. If the ADEC determines that a smoke incursion is likely as per 18 AAC 50.400(g), any additional costs will be billed on an hourly basis in accordance with 18 AAC 50.400(h). The applicant will be notified that the ADEC will charge an hourly administrative fee and direct costs for approval processing and administration. The ADEC will prepare and send a monthly invoice itemizing fees and direct costs to the applicant.

Send each open burn application and check to:

ADEC Air Permits Program
Anchorage Air Compliance Supervisor
Open Burn Request
555 Cordova Street
Anchorage, AK 99501

Your approval may be issued within 30 days. If approved, notification and burn summary requirements will be outlined in your letter of approval.

Additional information and copies of the open burning guidelines may be obtained through our website: https://dec.alaska.gov/air/air-permit/open-burn-info/.

Attachment 1
Prescribed Fire Complexity Rating System Guide

Smoke Management – Risk		
	Low	Smoke concerns are generally few or easily mitigated. The project will produce smoke for only a short period of time or is barely visible to the public. Smoke exposure or amounts are not expected to cause health or safety concerns to project personnel or the public. Members of the public have expressed few or no concerns about smoke.
	Moderate	Smoke concerns are moderate, and some concerns require special mitigation. The project will produce smoke visible to the public over several days. Smoke exposures or amounts may cause some health or safety concerns over a short period of time. Members of the public have expressed some concerns about smoke.
	High	Smoke concerns are high and require special and sometimes difficult mitigation. Smoke will be readily visible to the public and last several days to weeks. Smoke exposures or amounts are likely to cause some health and safety concerns that will require special mitigation. Large segments of the public are concerned about smoke.

Smoke Management - Potential Consequences		
	Low	No impacts OR minor impacts to isolated residences, remote roads or other facilities are expected. Firefighter exposure to smoke is expected to be minimal and not cause health and safety concerns.
	Moderate	Vistas, roads, and some residences may experience short-term decreases in visibility. A few health-related complaints may occur. Minor smoke intrusions may occur into smoke sensitive areas, but below levels that trigger regulatory concern. Project personnel may be exposed to dense smoke for short periods of time.
	High	Vistas, roads, and residences may experience longer-term decreases in visibility OR significant decreases in visibility over the short-term. Major smoke intrusions may occur into smoke sensitive areas, such as Class I airsheds, non-attainment areas, hospitals, and / or major airports, at levels that trigger regulatory concern. Project personnel may be exposed to dense smoke for prolonged periods of time.

Smoke Management - Technical Difficulty		
	Low	No special operational procedures are required. Limitations on wind direction, season, etc. may be present in the plan. No mitigation efforts are deemed necessary
	Moderate	Some considerations are needed in the prescription OR ignition portions of the plan. Burn window / opportunities are reduced by the required weather / dispersion conditions. Normal coordination with air quality officials is required. Some mitigation measures or additional smoke modeling may be needed to address potential concerns with smoke impacts. Specific smoke monitoring may be required to determine smoke plume heights and directions. Rotating project personnel out of dense smoke is necessary but easy to accomplish. Some mitigation efforts can be used and will be placed into effect as necessary.
	High	Special considerations are needed in the prescribed fire plan. Special smoke management techniques will be used. Burn window / opportunities are limited by the required weather / dispersion conditions. Special coordination with air quality officials is required. Accelerated mop up may be planned to reduce smoke impacts. Some mitigation measures or additional smoke modeling are required to address potential concerns with smoke impacts. Specific smoke monitoring is required to determine smoke plume heights and directions. Rotating project personnel out of dense smoke is necessary but may be difficult to accomplish. Mitigation efforts can be used but are difficult or will not be applied.

Attachment 2
ADEC Smoke Management Public Health Impact Complexity Rating System Guide

Smoke Management Public Health Impact – Risk		
	Low	Smoke will not extend into local communities or travel aloft to distant communities. Health risk minimal.
	Moderate	Smoke will be in and around the public with some potential impact to sensitive individuals.
	High	Smoke would impact communities in the vicinity of the fire or in the distance which will probably require healthy and sensitive individuals to take precautionary actions.

Smoke Management Public Health Impact - Potential Consequences		
	Low	Little impact on public health. No one expected to require hospitalization.
	Moderate	Some impact anticipated. Sensitive individuals may need to take action to protect themselves.
	High	The public will be impacted by smoke from this fire. Sensitive people and some healthy individuals will most probably be impacted and require medical attention or be required to take direct precautionary action such as staying indoor, using an air filtration system or taking medicine.

Smoke Management Public Health Impact - Technical Difficulty		
	Low	No special operational precautions or advisories require to protect public health.
	Moderate	Further consideration of operational actions will need to be undertaken to ensure protection of potentially impacted public. Monitoring will need to be planned and samplers deployed for potential use in protecting the public.
	High	Action will be required to protect public health. Monitoring will be necessary. Samplers will be set up and operated and advisories issued if smoke levels exceed EPA air quality thresholds.