U.S. Department of the Interior
Bureau of Land Management
Coeur d'Alene District Office
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Coeur d'Alene, ID 83815

Pile Burning Program

Programmatic Environmental Assessment

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CHAPTER 1 – INTRODUCTION

The Bureau of Land Management (BLM), Coeur d'Alene Field Office, proposes to programmatically address reduction and elimination of piled vegetation. The Coeur d'Alene Field Office (CdA FO) manages BLM public lands in the northern part of Idaho and encompasses approximately 98,940 acres in five counties—Boundary, Bonner, Kootenai, Shoshone, and Benewah. The Field Office manages many natural resources, of which forestry, wildland fire (planned and unplanned), minerals, recreation, habitat restoration, and fuels reduction are active programs. When implementing projects under these various resource programs, the Field Office often times constructs piles of slashed vegetation.

This programmatic environmental assessment (EA) will tier to the Coeur d'Alene Field Office Vegetation Treatments Programmatic Environmental Assessment (BLM 2008).

1.1 Purpose and Need

The proposed action is needed because forest health projects, recreation, road building, and other activities have, and will continue to create slashed and piled fuels (activity fuels) that that could contribute to unwanted or unmanageable fires.

The purpose of the proposed action is to reduce or eliminate piled vegetation to reduce the potential hazard resulting from these activity fuels.

1.2 Relationship to Laws, Policies and Land Use Plans

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that any action under consideration be in conformance with the applicable BLM land use plan, and be consistent with other federal, state, local and tribal policies to the maximum extent possible.

1.2.1 BLM Land Use Plan Conformance

The proposed action is in conformance with the Coeur d'Alene Resource Management Plan (RMP), approved June 29, 2007 (BLM 2007). Specifically it is consistent with the following decisions made from the RMP:

Goal Wildland Fire Management (WF)-1 – Protect life and property while returning fire to its natural role in the ecosystem.

> **Objective WF-1.1** – Provide an appropriate management response to all wildland fires emphasizing firefighter and public safety while protecting resources and assets and minimizing suppression costs.
>
> **Action WF-1.1.4** – Consider the following criteria in establishing fire

management priorities:

- Firefighter and public safety is the first priority.
- Other priorities include:
  - Protect cultural and natural resources.
  - Protect areas with highly erodible soils.
  - Protect Riparian Habitat Conservation Areas (RHCAs) consistent with the Riparian Management Objectives (RMOs).
  - Protect areas at risk of invasion by nonnative plant species.
  - Protect commercial forest resources and plantations.
  - Protect active grazing allotments and improvements.
  - Protect and/ or maintain municipal watersheds and special status species and habitats.
  - Protect developed recreation sites and structures on public lands.
  - Minimize the cost of fire protection.

Objective WF-1.5 – Improve or protect valuable resources and improve Fire Regime Condition Class (FRCC) through the use of fuels treatment activities within the 8,200 acres where vegetation treatments will occur.

Action WF-1.5.2 – A treatment plan for identified areas will be developed. Treatments to areas identified for improvement and/or protection will emphasize the resource at greatest risk (e.g., WUI, timber, recreation, mining, watershed, vegetation, and wildlife habitat), when site conditions are suitable.

Action WF-1.5.3 – Fuels treatments (prescribed fire, mechanical, chemical, or biological) will be conducted on identified areas.

Action WF-1.5.4 – Coordinate fuels treatment activities with adjacent land owners and other management agencies.

Objective WF-1.6 – Reduce impact from wildland fire to WUI areas, municipal watersheds, and infrastructure.

Action WF-1.6.1 – Identify areas where fuels treatments will reduce hazards and emphasize the use of small diameter trees.

Action WF-1.6.5 – Coordinate fuels treatment activities with adjacent land owners and other management agencies.

Action WF-1.6.6 – Collaborate with local partners to assess WUI areas and update existing community wildland fire protection plans.

Goal Forest and Woodland Vegetation (VF)-1 – Restore forest vegetation towards historic species composition, structure, and function across the landscape.

Objective VF-1.2 – Restore forest stands to historic species composition, structure, and function by conducting vegetative treatments on approximately 8,200 acres.

Action VF-1.2.6 – Restore forest structure and function by reducing tree density and brush/shrub competition using appropriate silvicultural treatments including, but not limited to, intermediate treatments, release treatments, use of pesticides, and prescribed burning. Aerial spraying to control brush/shrub competition will not occur. Prioritize these treatments within FRCC 2 and FRCC 3 areas.

Goal Soil Resources (SO)-1 – Manage soils on public land to maintain, restore, or improve soil erosion class and watershed health.

Objective SO-1.1- Ensure that management actions for other resource programs incorporate adequate soil protection.

Action SO-1.1.1- Implement BMPs for surface disturbing activities.

Action SO-1.1.4- Implement Riparian Conservation Area Management Guidelines in Appendix A as management guidance.

Goal Special Status Species (SS)-1- Conserve listed species and the ecosystems upon which they depend.

Objective SS-1.1- Comply with recovery activities for all Threatened and Endangered (T&E) species.

Action SS-1.1.1 – In cooperation with the IDFG, USFWS, USFS, and other partners, implement conservation measures for all Threatened and Endangered Species.

3) Ensure that new federal actions either support or do not preclude conservation and recovery of the species.

a) Complete project-level inventories in suitable habitats during project planning if inventory information is unavailable or inadequate. The SO will issue instruction memorandum concerning special status species project-level inventories and assessment.

b) If direct or indirect negative impacts on the species or their habitat are anticipated, then modify the proposed action to avoid or minimize

anticipated negative impacts and to promote conservation and recovery of species.

c) Section 7 consultation will be completed for new activities that may affect the species and their habitat.

1.2.2 Consistency with Non-BLM Authorities

The BLM is planning the project for implementation in coordination with other agencies, including the affected counties and the Idaho Department of Environmental Quality (IDEQ), to minimize impacts of smoke on local communities and individuals.

The programmatic pile burning program conforms to the goals and objectives of all 5 Community Wildfire Protection Plans that encompass the Coeur d'Alene Field Office (Boundary, Bonner, Kootenai, Shoshone, Benewah; Idaho Department of Lands 2012).

1.3 Issues

The BLM Interdisciplinary (ID) Team analyzed resources that the proposed action could potentially impact and developed a list of issues and concerns raised about the proposed project. The BLM also published a scoping information package on the internet and sought comments from the public regarding additional resource issues, but received no comments.

The issues carried forward in this document are grouped by resource and described using an issue statement and a list of indicators that were used to determine/measure the effects of the proposed activities. Chapter 2 includes a summary that compares the effects of the alternatives on these issues and their indicators.

Fire and Fuels Issue: Effects on potential fire intensities and the potential for unwanted or unmanageable wildland fire.

Air Quality Issue: Effects of treatments on air quality and greenhouse gas emissions.

Soil Resource Issue: Effects of treatments on the risk of erosion and soil impacts.

Water Resources/Aquatic Species Issue 1: Effects of treatments on the risk of erosion (i.e., sediment loading).

Water Resources/Aquatic Species Issue 2: Impacts in regards to bull trout, westslope cutthroat, and aquatic habitat.

Forest Vegetation Issue: Effects of proposed action on existing vegetation.

Special Status Species Issue: Effects of the proposed action on nearby rare and common plant populations.

Invasive, Nonnative Species Issue: Effects of treatments on the risk of weed spread and introduction.

Cultural Resources Issue: Effects of treatments on cultural and archeological resources.

Wildlife/Habitat Issue: Effects of treatments on wildlife species and their habitats.

CHAPTER 2 – ALTERNATIVES

This chapter describes the Proposed Action and a No Action alternative. This chapter also describes alternatives that BLM considered but eliminated from further analysis.

2.1 Proposed Action

The Proposed Action alternative would be prescribed burning of piled vegetation of activity fuels on lands managed by the BLM Coeur d'Alene Field Office; total of approximately 98,940 acres (see **Map 1**). All prescribed burning would be implemented with a burn plan and smoke management plan approved by the Idaho/Montana Airshed Group and the BLM Coeur d'Alene Field Manager or District Manager.

Techniques used to implement the proposed action would include:

- Prescribed fire would be implemented in the spring, fall, and winter months when the environmental conditions (i.e., fuel moisture and weather conditions) are determined appropriate to meet resource and containment objectives. A prescribed fire plan for each pile/project area would be developed to address the details of the prescribed fire prescription.
- Hand ignition of piles with approved BLM ignition devices including but not limited to drip torches, fuses, terra torch to initiate combustion (BLM 2010).
- No piles would be burned within Specially Designated Areas (Areas of Critical Environmental Concern, Research Natural Areas, or Wilderness Study Areas).
- No piles would be burned within critical or occupied habitat for woodland caribou.

2.1.1 Environmental Design/Resource Protection

All treatments proposed in this alternative would follow established agency management plans, policies, and procedures, including the Idaho Forest Practices Act (Idaho Administrative Code,

Title 38, Chapter 13). The following design criteria would be implemented to avoid or minimize potential negative impacts to resources of concern:

Air Quality (Smoke Management)

- Cooperate with other land managers, including the State of Idaho, and the IDEQ to minimize air quality impacts from smoke on local communities and individuals.
- Conduct prescribed fires in accordance with the procedures outlined in the *Montana/Idaho State Airshed Group Operating Guide* (http://www.fs.fed.u/r1/fire/nrcc/smoke.html, August 2003).
- Apply management techniques to minimize smoke production and to enhance dispersion, including burning under optimum weather conditions, expanding the burning season, etc. These techniques are described in the Prescribed Fire Smoke Management Guide, published by the National Wildfire Coordinating Group (NFES No. 1279, PMS 420-1; 1985).
- Monitor weather, burning, and smoke dispersion conditions to assure air quality impacts remain within prescribed smoke management levels. A smoke monitoring system has been established that determines the need for restrictions on prescribed burning. If the monitoring unit forecasts ventilation problems, burning is either restricted by elevation or curtailed until good ventilation conditions return. The IDEQ uses the monitoring data to inform the public of high levels during burns, wildland fires, and other activities.

Water Resources/Aquatic Species

- No piles would be burned within Riparian Conservation Areas (RCAs), as described below.
    - **Category 1—Fish bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.
    - **Category 2—Permanently flowing non-fish bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of the riparian vegetation, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.
    - **Category 3—Ponds, lakes, reservoirs and wetlands greater than 1 acre:** RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.
    - **Category 4—Seasonally flowing or intermittent streams and wetlands less than 1 acre with riparian characteristics as defined by properly functioning**

condition inventory, and landslides and landslide-prone areas: This category includes features with high variability in size and site-specific characteristics. At a minimum the RCAs must include:

a. the extent of landslide and landslide-prone areas and the area from the edges of the landslide/landslide-prone area to a distance of 100 feet slope distance.

b. the intermittent stream channel and the area to the top of the inner gorge, or to the outer edges of the riparian vegetation, or to the area from the edges of the stream channel to a distance of 100 feet slope distance, whichever is greatest.

c. the wetland area and the area to the outer edges of the riparian vegetation, or to a distance of 100 feet slope distance, whichever is greatest.

Special Status Plants

- Prescribed burning of slash piles would not occur near occupied special status plant habitat. A buffer would be placed around all known special status plant populations within which no burning would occur.

Cultural Resources

- Prescribed burning of slash piles would not occur near known cultural resources. A buffer would be placed around all cultural resources within which no burning would occur.

Migratory Birds

- If pile burning is to occur during the breeding season, nest surveys would be conducted prior to implementation. The nest surveys will be conducted within the piles and a 20 foot buffer around the piles if burning occurs between April 15 th and August 15th.

Wildlife (conservation measures from the CdA RMP)

- Roads on crucial and important winter range for elk will be closed to public vehicular access from December 1 to March 31 each year.
- BLM will consider Idaho Fish and Game recommendations during implementation or approval of actions affecting elk habitat.
- Where practical, suitable forage areas will be provided.
- Where practical, riparian habitat will be fenced and adjacent cover strips of at least 250 feet and at least 20 acres will be maintained.

2.1.2 Monitoring

The BLM would monitor for smoke and containment. Implementation and effectiveness monitoring will be conducted by the BLM prescribed fire burn boss and other resource specialists to evaluate achievement of desired objectives of reducing hazardous fuels of natural and activity fuels and moving towards the desired condition.

2.2 No Action Alternative

Under the No Action alternative, no pile burning of natural and/or activity fuels would occur.

2.3 Alternatives Eliminated from Further Analysis

2.3.1 Chipping or Masticating All Piled Natural and Activity Fuels

This alternative was considered but eliminated from detailed analysis because it would not achieve the purpose and need. All of the existing and future piles could not be reduced or eliminated by this method because spatial locations of piles are often remote and/or located on narrow forest roads where equipment needed for chipping could not physically access. Leaving piles that could not be accessed by chipping equipment would increase potential fire severity and tree mortality due to future wildfire events, even in moderate conditions.

CHAPTER 3 – AFFECTED ENVIRONMENT/EFFECTS OF ALTERNATIVES

This chapter characterizes the resources and uses that have the potential to be affected by the proposed action (section 3.1), followed by a comparative analysis of the direct, indirect and cumulative impacts of the alternatives (section 3.2). Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts are discussed at the end of the chapter.

3.1 Scope of Analysis

General Setting

The Coeur d'Alene Field Office (CdA FO) is located in the Columbia River Basin with elevation ranging from approximately 2,000 feet up to peaks of 7,000 feet. Approximately 88 percent of the lands managed by the CdA FO are forested. Essentially all forested areas have been affected by fire suppression, forest insect (e.g., western pine beetle, mountain pine beetle, Douglas-fir

beetle) or disease (e.g., root disease) and have poor stand density and species composition conditions compared to historic composition and structure.

Historically fires have played an important role in the CdA FO ecosystems. These fires have provided repeating cycles of disturbance that create openings that enhance soil moisture, increase sunlight and nutrients providing habitat for disturbance adapted plants and animals, thus resetting succession. Due to a century of fire suppression, surface, ladder, and crown fuels have accumulated and a more homogeneous landscape prone to natural disturbances including forest insects, disease, and wildfire is now present.

3.1.1 Potentially Affected Resources and Uses

The resources and uses that may be affected and are analyzed for direct, indirect and cumulative effects in the next section of this chapter (section 3.2) are summarized in the table below, along with the geographic extent of the area studied.

Section #	ELEMENT/RESOURCE/USE	Study Area Name	Acres
3.2.1	Fire and Fuels	Project Area	98,940
3.2.2	Air Quality	Airsheds 11, 12A, and 12B	8,115,172
3.2.3	Soil Resources	Project Area	98,940
3.2.4	Water Resources/Aquatic Species	4th code HUCs Watersheds	96,244
3.2.5	Forest Vegetation	Project Area	98,940
3.2.6	Special Status Plants	Project Area	98,940
3.2.7	Invasive, Nonnative Species	Project Area	98,940
3.2.8	Cultural Resources	Project Area	98,940
3.2.9	Wildlife/Habitat	Project Area	98,940

3.1.2 Related Past, Present and Reasonably Foreseeable Actions

As defined by NEPA regulations (40 CFR 1508.7), "Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

Human caused and natural events have had varying levels of impacts on the resources and values affected by the proposed pile burning. Past, present, and reasonably foreseeable actions include slash piles created on private, state, or other federal lands, past timber harvest and fuels reduction projects, transportation, and wildfires.

3.2 Effects of the Alternatives

3.2.1 Fire and Fuels

Affected Environment

The CdA FO is in a region of the inland northwest that has experienced periodic stand-replacing fires. Fire was a periodic disturbance that helped to maintain a mosaic of cover types and seral stages while periodically reducing fuel loads. Currently, however, most fire regimes have been altered, changing one (or more) of the following ecological components and processes: vegetation characteristics (e.g., species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition and loading; and disturbances other than wildland fire (e.g., insect and disease mortality); therefore altering the role fire plays in these ecosystems.

Past research by the Interior Columbia Basin Ecosystem Management Project found fire to play a major role as an ecosystem process in the CdA FO region. Fire has burned in nearly every ecosystem and nearly every square meter of the coniferous forests and summer-dry mountainous forests of northern Idaho, western Montana, eastern Washington, and adjacent portions of Canada. Fire was responsible for the widespread occurrence and even the existence of fire-tolerant species— ponderosa pine, western larch, and western white pine. Fire maintained ponderosa pine on sites throughout its range at the lower elevations and killed ever-invading Douglas-fir and grand fir (Spurr and Barnes 1980). Many ecosystems are regularly recycled by fire; life for many forest species literally begins and ends with fire. Historically, lethal or stand-replacing fires played a lesser role on these landscapes compared to current conditions where lethal fire regimes now exceed nonlethal fire regimes in forested areas (BLM 2007).

Due to a century of fire suppression, surface, ladder, and crown fuels have accumulated beyond the historic range leading to the potential for increased large wildfires (i.e., increased intensity, burn severity) should a fire start. The arrangement and amount of fuel, particularly in dry habitat types, could carry a fire into the crowns of trees, resulting in fires of an intensity and severity outside of the historic fire regime. Crown fires are the most difficult to suppress and as a result are more likely to become large.

Due to past fire suppression practices, vegetation communities are not within the appropriate fire regime condition class (FRCC). FRCC refers to the degree of departure from the historic fire regime to present conditions and its subsequent effect on vegetation composition and structure on a landscape scale. This departure from the natural state may be a result of changes in one or more ecosystem components such as fuel composition, fire frequency, or other ecological disturbances. Currently, the CdA FO is predominantly classified as FRCC 2 (approximately 62%) with remaining lands classified as FRCC 1 (approximately 24%) and FRCC 3 (approximately 14%; BLM 2010) (see Map 2 in Appendix A). An FRCC 2 is a moderate departure (34–66%) and an FRCC 3 is a high departure (67–100%) from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances. FRCC 1 is within the historical regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Changes in Surface Fuel Loading and Potential Flame Lengths

Prescribed burning of piled vegetation from activity fuels would help to reduce the surface fuels present across the CdA FO. The use of prescribed fire could have a range of effects depending on the fuel, size of the pile, and weather conditions at the time of the fire. A prescribed fire plan and weather prescription for each pile/project area would be used to control and predict the effects of management-ignited fire. Common effects of prescribed burning piles may include surface fuel reduction, soil heating, mineral soil exposure, understory and overstory mortality, tree crown and bole scorch, and duff consumption. The degree of each impact can be controlled by careful ignition under the appropriate weather conditions and modification of ignition methods.

Pile burning allows land managers to burn piled vegetation in a more controlled environment in comparison with broadcast burning. Even with careful forethought and planning, prescribed burning can be uncertain, and small, burned areas outside of the designated piled vegetation could occur. However, these "slop-overs" tend to be relatively small, suppressed with contingency resources, contained quickly, and should not cause substantial effects.

Changes in Fuel Continuity Measured by Fire Type

Burning of the piled vegetation would directly affect potential fuel continuity (horizontal and vertical) or fire type by removing concentrations of hazardous fuels. Burning of piled vegetation would reduce the potential fire flame lengths and change the fire type from passive and active potential crown fire behavior to surface fire in the treated areas. The reduction in potential fire intensity increases the ability to suppress wildfire and decreases the potential of a wildland fire exceeding initial attack. The ability to suppress wildfire increases because it allows for incorporation of direct suppression tactics, where firefighters can create a fireline adjacent to the flanking front, pinching off the spread and limiting the size of a wildfire. This alternative would help achieve the desired condition of a landscape resilient to disturbance (i.e., fire).

Direct and Indirect Effects of the No Action Alternative

Changes in Surface Fuel Loading and Potential Flame Lengths

Slash piles would remain across the CdA FO, resulting in no reduction to the existing hazardous surface fuels present. The remaining slash piles would increase wildfire resistance to suppression for initial attack and decrease the effectiveness of suppressing wildfires while they are small and manageable. In the event of a wildfire, the slash piles would create a concentrated area of biomass on the forest floor, increasing the potential for greater flame lengths and spotting distances and subsequently greater fire intensities.

Changes in Fuel Continuity Measured by Fire Type

Remaining slash piles would affect the fuel continuity or fire type by maintaining areas of concentrated hazardous fuels across the CdA FO. Remaining piled vegetation would increase the potential for large, uncharacteristic widlfires, increasing the potential fire intensity and the potential for passive/ active crown fires. Increasing the potential fire intensity and passive/active crown fire type decreases the ability to control or suppress wildfires compared to surface fires. Fires with high intensity also increase the potential of a wildfire exceeding initial attack, thus requiring more time and money to control.

Under the no action alternative, prescribed burning of slash piles would not occur; which could increase fire suppression efforts or potentially altering fire type, intensity, and severity of fire on the landscape. This alternative would not help to achieve the desired condition of a landscape resilient to disturbance, potentially leading to a shift in forest species composition and structure over time.

Cumulative Impacts

Proposed Action

The past, present, and reasonably foreseeable activities that are pertinent to the fire and fuels analysis within the CdA FO are the burning of slash piles on private, state, and other federal lands. How the CdA FO pile burning ties in with other projects on adjacent lands may enhance fire suppression efforts and decrease the overall wildfire severity. Cumulative effects from using prescribed burning of slash piles promotes decreased fire intensities and potential flame lengths and reduced surface hazardous fuels. These activities cumulatively increase the ability to suppress wildfires, decreasing the potential for wildfires to spread onto adjacent lands and within the CdA FO administered lands. This alternative would promote the desired condition of a resilient landscape to disturbance and moving toward the historic fire regimes.

No Action

This alternative would have no immediate effect on fire and fuel conditions. The remaining slash piles would create a concentrated area of biomass on the forest floor, resulting in greater crown fire potential and greater fire intensities. Fire suppression tactics to control or suppress wildfires would decrease, thus increasing the cost for wildfire suppression. Slash piles could also contribute to the increased risk of property and resource damage, and firefighter and public safety. Not burning slash piles increases the opportunity for wildfires to adversely impact vegetation communities by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics. This could increase the potential for weeds to colonize the pile burn scar. Where left untreated, weeds would continue to threaten native plant communities.

3.2.2 Air Quality (Smoke Management)

Affected Environment

The Coeur d'Alene Field Office is located in three airsheds—11, 12A, 12B (see Map 3)—as defined by the Montana/Idaho Airshed Group. The analysis area for air quality includes the

Coeur d'Alene Field Office and the airsheds immediately surrounding it that may potentially be affected by smoke emissions. Montana and Idaho are currently managing smoke emissions for forest and prescribed burns under the Montana/Idaho Smoke Management Group. The Operating Guide for the Montana/Idaho Smoke Management Group is based upon the Environmental Protection Agency Interim Air Quality Policy on Wildland and Prescribed Fires. The Smoke Monitoring Unit coordinates prescribed burn activities through meteorological scheduling in order to ensure that cumulative air quality impacts are minimized.

Air quality impacts due to prescribed fire smoke result from a combination of emission production and atmospheric dispersion (Sandberg et. al 2002). Dispersion is dependent on meteorological conditions including seasonality, large-scale prevailing wind patterns, atmospheric stability, and local terrain-influenced weather patterns. The Smoke Monitoring Unit utilizes dispersion forecasts as a tool for making daily burn recommendations to members of the MT/ID Smoke Management Group.

The Clean Air Act requires that the Environmental Protection Agency (EPA) identify pollutants that have adverse effects on public health and welfare and to establish air quality standards for each pollutant. Each state is also required to develop an implementation plan to maintain air quality. The EPA has issued National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, lead and particulate matter 10 microns in diameter or smaller (PM 10) and 2.5 microns and smaller (PM 2.5; Table 2). The Idaho Department of Environmental Quality (IDEQ) has included an additional standard for fluorides, bringing the applicable standards in Idaho to seven.

Table 2. National Ambient Air Quality Standards for PM 10 and PM 2.5

Particulate Matter	Unit of Measure	NAAQS
PM_{10}	24-hour average Annual arithmetic Mean	$150\mu g/m^3$ revoked
$PM_{2.5}$	24-hour average Annual arithmetic Mean	$35\mu g/m^3$ $15\mu g/m^3$

Air quality associated with the CdA FO analysis area is generally considered good (air pollution causes little or no risk) most of the year. Local adverse effects result from smoke from prescribed burning and wildfires and dust from mineral processing operations, forestry activities, construction, unimproved roads, and recreation. Due to active fire suppression, current smoke emissions are significantly reduced from historical averages, especially during the wildfire season (Quigley and Arbelbide 1997).

The CdA FO is unclassified, but is considered to be in compliance with the NAAQS. The Environmental Protection Agency (EPA) determines airshed compliance defined by criteria pollutants. Non-attainment areas *within* the CdA FO include Pinehurst (Shoshone County) and Sandpoint (Bonner County) areas. Both areas have exceeded PM_{10} NAAQS levels. However, air quality in both of these areas has improved in recent years, and the areas have been documented to be in compliance with the PM_{10} NAAQS, though they currently remain designated as nonattainment areas.

The CdA FO is classified (EPA) as a Class II air quality area, which allows moderate deterioration associated with moderate, well-controlled industrial and population growth. The closest Class I air quality area—sensitive areas such as hospitals, airports, wilderness areas—near the project area, is Cabinet Mountains Wilderness, approximately 12 miles east of the project area. Class I areas receive the highest levels of protection under the Prevention of Significant Deterioration (PSD) program. The PSD program is designed to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value.

Greenhouse gas is a gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone. Greenhouse gases greatly affect the temperature of the earth; without them, the earth's surface would average about 33°C colder than the present average of 14 °C (57 °F).

Since the beginning of the Industrial Revolution, the burning of fossil fuels has contributed to a 40% increase in the concentration of carbon dioxide in the atmosphere from 280 ppm to 397 ppm, despite the uptake of a large portion of the emissions by various natural "sinks" involved in the carbon cycle. Anthropogenic carbon dioxide (CO2) emissions (i.e., emissions produced by human activities) come from combustion of carbon based fuels, principally wood, coal, oil, and natural gas.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Smoke from pile burning would affect air quality temporarily. Impacts would be minimized by following the design features (see Section 2.1.1) and coordinating with the MT/ID Smoke Management Program. The amount and duration of smoke impacts should be limited by conducting burns only during atmospheric conditions that are conducive to good smoke dispersion, by limiting the number of piles burned at one time, by scheduling ignitions early in the day to allow for more complete combustion during daytime conditions, and by planning the ignition to occur prior to a precipitation event that would extinguish the residual fire.

Smoke from pile burning activities would result in the production of carbon dioxide emissions resulting in the production of greenhouse gases. Pile burning to dispose of carbon based fuels (wood) would result in the consumption of 9.9 metric tons of biomass per acre of pile burning, or 990 metric tons for 100 acres. Therefore the proposed action would result in the direct emission of a total of 990 metric tons of carbon dioxide from the annual pile burning program of work of 100 acres.

Indirect effects would be a potential decrease in smoke emissions and the impairment of visibility from wildfires when they occur due to the increased ability to suppress wildfire using direct suppression tactics, where firefighters can create a fireline adjacent to the flanking front, pinching off the spread and limiting the size of a wildfire. Reducing concentrated hazardous fuel

areas created by the slash piles would be a long-term benefit following implementation of prescribed burning.

Indirect effects of greenhouse gas on the environment and climate change does not have a clear cause and effect relationship with a proposed action or alternative because it is not currently possible to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate change.

Direct and Indirect Effects of the No Action Alternative

There would be no direct effects on the existing condition of air quality from this alternative because no prescribed burning would occur. No particulate matter would be produced and visibility would not be impaired due to prescribed burning.

Slash piles could eventually burn from wildfires with remaining slash piles providing concentrated hazardous fuel loads. Wildfires are not planned around other wildfire events or meteorological conditions that would allow for dispersion and transport away from impact zones. Wildfire occurrence without previous fuel reduction is likely to produce two to four times greater particulate matter emissions than would be generated by prescribed fire (Quigley and Arbelbide 1997). It is reasonable to conclude, using the aforementioned research that smoke from wildfire incidents would result in three to four times the production of carbon dioxide emissions resulting in the production of greenhouse gases. When comparing pile burning to dispose of carbon based fuels (wood) to that of wildfire incidents, emissions result in the consumption of 39.5 metric tons of biomass per acre burned, or 3,960 metric tons for 100 acres.

Cumulative Impacts

Proposed Action

Locally adverse and cumulative impacts to air quality could be expected if extensive prescribed burning of piles occurred, particularly if that burning occurred in conjunction with on-going wildfires or other prescribed burning activities in and adjacent to the airshed. However, design measures and procedures outlined by the Montana/Idaho Smoke Management Group are intended to increase the efficiency and effectiveness of communications about, and coordination of, prescribed burning to avoid adverse cumulative effects. In addition to air quality impacts, the cumulative effects to global climate change are difficult to ascertain. The US Geological Survey (2008) in a memorandum to the US Fish and Wildlife Service summarized the latest science on greenhouse gas emissions and concluded that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the sourse of specific climate impacts at a specific location. Therefore the cumulative effect of greenhouse gas and global climate change does not have a direct cause and effect relationship.

No Action

Under this alternative, there would be no measurable effects to air quality or greenhouse gas production because no prescribed burning of slash piles would occur.

If a wildfire were to occur, slash piles could burn. Depending on the intensity and type of fire the slash piles could make the wildfire hard to suppress due to the potential flame lengths and spotting produced. This could, in turn, create more particulate matter, and smoke emissions and greenhouse gases compared to the proposed action.

3.2.3 Soil Resources

Affected Environment

The BLM parcels within the planning area range from bottomlands and terraces to mountain slopes and ridgetops. Most of the CdA FO is rugged, forested, mountainous, or hilly, with comparatively narrow valleys. The Natural Resource Conservation Service (NRCS) has prepared detailed soil surveys for most lands in the CdA FO (USDA NRCS 2012). Soils across the CdA FO vary with local geology, topographic relief, and climate. North of Coeur d'Alene, the soil parent material is primarily granitic and metasedimentary bedrock, overlain by glacial deposits. To the east, parent material is primarily metasedimentary rocks, including quartzites and argillites. Soils on floodplains and terraces are more than 60 inches deep and are formed in loamy material deposited by water or glacial drift. All other soils vary in depth from less than 20 inches to more than 60 inches. The temperature gradient in the planning area follows elevation, and precipitation patterns are complex, resulting in local variation in microclimates that affect soil conditions.

Limited mass movement has occurred in the past on public land within the CdA FO. In the Silver Valley, mining has destabilized streams and floodplains, extensively displacing riparian soils. Other impacts include direct soils contamination from mine tailings piles and fluvial deposition of mine waste, most notably in the Canyon and Pine Creek drainages. Decades of deposition of mine waste have also affected the banks and floodplains of the lower Coeur d'Alene River (USEPA 2002). Past timber harvest activities have contributed to erosion and sedimentation of streams, principally from the construction of landings and roads and in areas of concentrated equipment use (e.g., improperly located skid trails for crawler tractors and/or rubber-tired skidders).

Potential for Damage by Fire

Ratings indicate the potential for damage to nutrient, physical and biotic soil characteristics by fire. Potential for damage by fire, as defined in the soil survey, "involve an evaluation of the impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer. The ratings are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope."

Within the project area, the majority of soil types have a "low" or "moderate" rating for potential damage by fire" (USDA NRCS 2012). "Low" indicates that fire damage is unlikely. Good performance can be expected, and little or no maintenance is needed. "Moderate" indicates that

fire damage can occur because one or more soil properties are less than desirable. Fair performance can be expected, and some maintenance is needed. Approximately 2.9% of the soils have a "high" rating, which indicates fire damage may occur and would require special design, extra maintenance, or costly alteration to overcome the unfavorable soil properties (USDA NRCS 2012).

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Prescribed burning of slash piles would impact soils, primarily as a result of removing protective surface vegetation, litter, and organic matter in the soil. Pile burning would result in greater soil heating and localized impacts. Greater soil heating to the B horizon could effectively sterilize soils by destroying the microbial populations and seeds stored in the soils and potentially creating hydrophobic characteristics in that layer. The impacts to soils would depend on duration and intensity of burning materials and the soil and fuel moisture content at the time of burning. Prescribed burning would ideally be conducted on moist soils and with low to moderate intensity fires, which should not adversely impact the B horizon or sterilize the soils. In addition, when possible slash piles would be burned in rocky areas to minimize these localized impacts to soil.

The removal of protective surface vegetation, litter, and organic matter in the soil increases the potential for both wind and water erosion. Following a prescribed burn, wind erosion may temporarily increase due to exposure to wind shear velocities. However, prescribed burns may be beneficial to soils by providing an influx of nutrients from the plant biomass burned (Rau et al. 2008), stimulates seed production, and helps to perpetuate the vegetation and wildlife species associated with the area. Overall, prescribed burning of slash piles would not be expected to damage soil characteristics in the CdA FO due to the small footprint associated with slash pile sizes (i.e., 3 feet to 100 feet) and the scattered nature of the slash piles.

Direct and Indirect Effects of the No Action Alternative

Slash piles would remain and there would be no changes to the existing soil conditions. If a wildfire were to occur, the slash piles could burn at a higher intensity than the surrounding land due to the concentrated fuel load causing soil sterilization and creating hydrophobic soil layers. The hydrophobic layers could lead to increased soil erosion from overland flow during heavy rain events following the wildfire. Soil moisture content may also be low leading to more severe and widespread damage to soil organic matter compared to the controlled lower intensity burning with prescribed burning of slash piles.

Cumulative Impacts

<u>Proposed Action</u>

Reasonably foreseeable future actions include pile burning on private, state, and other federal lands. The proposed action should affect < 0.25 acres for landing piles and < 0.1 acres for piles created inside treatment areas (machine piling slash in a tractor logged unit or piled slash from slashing operations to create planting spots, wildlife forage areas, reduce fuel loading, etc.) The

size of piles created on public lands is unlikely to contribute cumulatively to the effects of soils when compared to the overall extent of land managed by the CdA FO.

No Action

Past human activities to soils have mainly been timber harvest and associated activities including road building and reforestation. Impacts from the earliest activities were likely to have had the most impact because soil compaction was often not taken into consideration. Current timber management activities are implemented in a manner that minimizes impacts to soils. Under this alternative, there would be no measurable cumulative effects to soils because no prescribed burning of slash piles would occur. However, not burning slash piles increases the opportunity for wildfires to adversely impact soils by severe and intense fire behavior from areas of concentrated fuel loads; this decreases the ability of fire suppression tactics.

3.2.4 Water Resources (Including Aquatic Species)

Affected Environment

The CdA FO is in the Columbia River Basin. The watersheds in the northeast corner of the CdA FO are the Upper and Lower Kootenai and the Moyie watersheds, all of which drain via the Kootenai River northward to Kootenay Lake in British Columbia. Kootenay Lake drains to the Columbia River, which flows south into Washington.

The central part of the CdA FO, including the Lower Clark Fork, Pend Oreille Lake, Priest, and Pend Oreille watersheds, drains to the Pend Oreille River, which flows north through Washington and makes an abrupt turn into British Columbia before joining the Columbia River near the town of Boundary, Washington.

Most of the southern half of the CdA FO area, including the watersheds of Coeur d‘Alene Lake and the Spokane River, drain to the Spokane River, which flows into the south end of Roosevelt Lake. The southern portion of the area drains to the Snake River, including a small portion of the watershed of the Palouse River, and the northern portions of watersheds of the Upper and Lower North Fork of the Clearwater River.

More than two-thirds of the BLM lands in the area are concentrated in three of these watersheds, including the South Fork Coeur d‘Alene, Coeur d‘Alene Lake, and St. Joe watersheds, where most of the historical mining activity in the CdA FO area has been concentrated. A block representing about 10 percent of the BLM lands in the Field Office area is located in the watershed of the Lower North Fork of the Clearwater River. The remaining BLM lands are scattered mainly over the watersheds of the Pend Oreille River and the Kootenai River.

Seventy-eight reach segments from the 303(d) list of water quality-limited streams and water bodies were identified in the CdA FO by Idaho Department of Environmental Quality’s 2002/2003 Integrated 303(d)/305 (b) Report, which includes an update of 303(d) listed streams

approved by the Environmental Protection Agency (EPA) in December 2005. The reach segments were listed as water quality-impaired for temperature, metals, and/or sediment, largely resulting from roads, forest practices, canopy removal, and mining (IDEQ, 2002/2003 Integrated 303(d)/305(b) Report). A complete list of the reach segments can be found in the Coeur d'Alene RMP (Table 3-2, Chapter 3 Volume I; BLM 2007).

Water quality in the CdA FO varies with the extent of human influence. Generally, water quality is good (water quality is defined in terms of the chemical, physical and biological content of water by the EPA) and impacts stem from non-point sources. Primary non-point sources of pollution include surface mining, mine tailings, timber harvesting, streambank destabilization or modification, and roads.

Aquatic Habitat

Approximately 129 miles of perennial streams and 108 miles of intermittent streams cross BLM lands. In addition, there are 263 acres of lakes, 465 acres of wetlands, and approximately 12,000 acres of Riparian Conservation Areas (RCAs) that provide potential habitat for 37 fish species (19 native and 18 nonnative [introduced] species) in the Kootenai, Pend Oreille, and Spokane Rivers (includes St. Joe, St. Maries, and Coeur d'Alene Rivers). No pile burning would be permitted within riparian conservation areas (RCAs) as described in the Environmental Design/Resource Protection Section (2.1.1). RCAs include riparian habitat around fish bearing streams, wetlands, ponds, lakes, and intermittent and perennial streams.

Aquatic Species

Four special status fish species are known to occur within the CdA FO—Kootenai River white sturgeon (*Acipenser transmontanus*), bull trout (*Salvelinus confluentus*), westslope cutthroat (*Oncorhynchus clarki lewisi*), and burbot (*Lota lota*).

The Kootenai River white sturgeon (white sturgeon) (*Acipenser transmontanus*) is federally listed as endangered. White sturgeon inhabit the Kootenai River from Kootenai Falls in Montana downstream through Kootenay Lake to Corra Linn Dam on the lower West Arm of Kootenay Lake, British Columbia. Within Idaho, 18.1 miles of the Kootenai River (from the mouth of the Moyie River to River Mile 141.1 downstream) is designated critical habitat for the white sturgeon. These fish have not successfully spawned in recent years. Changes in flows from Libby Dam are the biggest threat to this population. Land management activities are considered a secondary impact on populations of this species (Lee et al. 1997). The BLM administers small, scattered parcels of public land adjacent to the Kootenai River, including several islands within the river. This land equates to less than 500 acres of land within a ¼ mile of the river.

Bull trout, a federal listed threatened species, is widely distributed across the interior Columbia River Basin, however, their estimated current range is about 60 percent of their historic range. This species is in decline with extirpations of local populations across their range. Currently, the bull trout inhabit about 11 miles of streams across BLM public lands, as compared to 1,732 miles across all of northern Idaho. Spawning and rearing habitat for these species is found in the Little North Fork Clearwater River, and migration corridors and rearing habitat occur in the Coeur

d'Alene River and Coeur d'Alene Lake. Bull trout has also been found in both the Kootenai and St. Joe Rivers and some of their tributaries. Bull trout designated critical habitat includes lakes and rivers within the Clearwater, Coeur d'Alene, Kootenai and Clark Fork watersheds, as described in the Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States; Final Rule (75 FR 63897).

Westslope cutthroat trout, a BLM sensitive species, is widely distributed, but remaining populations may be seriously compromised by habitat loss and genetic introgression (Lee et al. 1997). Westslope cutthroat trout inhabit approximately 68 miles of streams across BLM public lands, as compared to 4,657 miles across all of northern Idaho. Most of the populations in northern Idaho have been depressed due to migration barriers, such as dams and irrigation diversions, which have isolated or eliminated habitat once available to migratory populations. Fishing pressure and introduction of non-native fish species has also contributed to reducing cutthroat numbers (Fish and Wildlife Service 1999; DuPont and Horner 2003). Small and often isolated populations persist throughout the range, but the long-term outlook for many of these populations is poor. The core of strong populations is associated with the Central Idaho Mountains. The Upper Clark Fork regions are important but are more fragmented and restricted to a relatively smaller portion of the historical distribution (Lee et al. 1997).

Burbot (*Lota lota*), a BLM sensitive species, is a cold-water, bottom dwelling fish species that prefers low-velocity areas in main channels or side channels. Burbot spend a portion of their life cycle in the Kootenai River. Based on data collected from 1995 through the spring of 2000, the estimated population of burbot in the Kootenai River was 540 adults (USFWS 2012d http://ecos.fws.gov/speciesProfile/profile/speciesProfile 2012).

No pile burning would be permitted within RCAs as described in the Environmental Design/Resource Protection Section (2.1.1), which includes fish bearing streams as Category 1.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Overall, burning of slash piles is unlikely to affect hydrologic processes or contribute to sediment transportation because the potential to increase surface erosion is low due to the size of the piles, the low to moderate intensity burns, and the buffer placed around perennial and intermittent streams. Areas with high slash pile density or where slash piles burn at high intensities, there is potential for temporary loss of soil fertility leading to lack of vegetation regrowth, causing localized erosion and loss of soil infiltration capacity. However, in the long-term the area currently covered with slash piles should colonize with native vegetation surrounding the area, which will aid in the interception and infiltration of precipitation events and minimize potential soil erosion.

The environmental design measure (section 2.1.1) of no pile burning within RCAs would be implemented to avoid impacts to aquatic species and their habitat. Prescribed burning of the piles would reduce concentrated hazardous fuel loads from the landscape, resulting in an increased ability to suppress future wildfires, therefore reducing the potential of these future wildfires to

effect cultural resources. Thus, the proposed pile burning is not expected to cause impacts to fish and aquatic species or aquatic habitat. The project is determined to be "no effect" to bull trout, Kootenai River white sturgeon or their designated critical habitat.

Direct and Indirect Effects of the No Action Alternative

No prescribed burning of slash piles would occur, thus no direct impacts to water resources or aquatic species and their habitat. Unburned slash piles would remain, providing concentrated hazardous fuel loads for future wildfires that could burn at higher intensities scorching the soil. No burning of slash piles would decrease the ability to suppress future wildfires and increase the potential for wildfires to exceed initial attack efforts. The decreased ability to suppress wildfires would increase the potential to adversely impact water resources and aquatic species and their habitat.

Cumulative Impacts

Proposed Action

Since the proposed action would not affect water or aquatic resources, there would be no cumulative effects.

No Action

Past human activities within the watersheds have mainly been timber harvest and associated activities including road building and reforestation. Impacts from the earliest activities were likely to have had the most impact because streams and fish habitat were often not taken into consideration. Current timber management activities are implemented in a manner that minimizes impacts to fish and aquatic habitats, though rules vary among land ownerships with some being more protective than others. Under this alternative, there would be no measurable effects to water resources or aquatic species cumulative effects because no prescribed burning of slash piles would occur. However, not burning slash piles increases the opportunity for wildfires to adversely impact water resources and aquatic species by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics.

3.2.5 Vegetation

Affected Environment

Forested Vegetation

Approximately 88% of the lands managed by CdA FO are forested (Table 3). Four forest vegetation cover types occur: Dry Conifer, Wet/Cold Conifer, Wet/Warm Conifer, and Aspen/Aspen Conifer Mix. The CdA FO cover type information was derived from an assessment of the vegetation cover classifications used by the Interior Columbia Basin Ecosystem Management Project, local National Forests, and the Idaho Gap Analysis Program. Idaho Gap

Analysis mapping data were used to calculate the acreage for each cover type category (BLM 2007).

Table 3. Vegetation Cover Types within the CdA FO.

Vegetation Cover Type	Gap Analysis Cover Type	Acres (Percent)
Dry/Conifer **(representative species—ponderosa pine, lodgepole pine, Douglas-fir, grand fir, western white pine)**	ponderosa pine, grand fir, Douglas-fir, mixed xeric, Douglas-fir/lodgepole pine, Douglas-fir/grand fir	29,450 (30%)
Wet/Cold Conifer **(representative species—whitebark pine, western white pine, lodgepole pine, mountain hemlock, Engelmann spruce, western larch, subalpine fir, grand fir, Douglas-fir)**	Engelmann spruce, lodgepole pine, subalpine fir, western larch, mixed whitebark pine, mixed subalpine, mixed mesic, western larch/lodgepole pine, western larch/Douglas-fir	44,672 (46%)
Wet/Warm Conifer **(representative species—western red cedar, western hemlock)**	western red cedar, western hemlock, western red cedar/grand fir, western red cedar/western hemlock	8,384 (9%)
Aspen/Aspen Conifer Mix	mixed conifer/broadleaf forest	2,002 (2%)
Mid-Elevation Shrub	mesic shrublands	5,384 (6%)
Perennial Grass	foothills grasslands, montane parklands, and subalpine meadows	2,451 (3%)
Riparian/Wetland	cottonwood, conifer riparian, broadleaf riparian, mixed conifer/broadleaf riparian, mixed forest/non-forest riparian, grass/forb riparian, shrub riparian, mixed non-forest riparian	1,147 (1%)
Other	urban, agriculture, rock, barren land, water	3,326 (3%)

Dry/Conifer cover type comprises approximately 30% of the CdA FO. Historically, this cover type contained ponderosa pine and Douglas-fir as co-dominant species with western larch *(Larix occidentalis)* and lodgepole pine (*Pinus contorta*) occurring in small numbers (BLM 2007, USFS 2003). Fire-maintained stands were typically open, park-like stands of ponderosa pine (Smith and Fischer 1997). Currently, this cover type consists of closed canopy and mid-seral stage stands, which reflects high tree densities (BLM 2007). Drought, root rot, and increased tree densities have also enhanced insect infestations from Douglas-fir bark beetle (*Dendroctonus pseudotsugae*) and mountain pine beetle (*Dendroctonus ponderosae*; BLM 2007).

Wet/Cold Conifer cover type comprises approximately 46% of the CdA FO and is in poor forest health due to loss of western white pine (*Pinus monticola*; BLM 2007) across most of the cover type and loss of whitebark pine (Pinus albicaulis) at high elevations. The decline of both western white pine and white bark pine may be attributed to a combination of factors including wildfire suppression and subsequent ecological succession, the spread of blister rust disease, and outbreaks of mountain pine beetle. (USDA Forest Service 2003) The resulting ecological conditions have favored the increase of Douglas fir, grand fir (Abies grandis), subalpine fir (Abies lasiocarpa); mountain hemlock (Tsuga mertensiana), and Engelmann spruce (Picea engelmannii) in this cover type. (USDA Forest Service 2003) The lodgepole pine component has also been reduced compared to historic levels, which is due to mountain pine beetle infestations and old age. Currently, this cover type consists of closed canopy and late-seral stage stands,

which reflects high tree densities, increased infection from root rot and insects, and declined stand health (BLM 2007). Historically, the structural stage consisted of 30% late-seral, 50% mid-seral, and 20% early seral (NIFTT 2005).

Wet/Warm Conifer cover type comprises approximately 9% of the CdA FO upland forest sites. Historically, this type was dominated by seral species, including western white pine and western larch. Currently, this cover type is dominated by western red cedar *(Thuja plicata)*, western hemlock *(Tsuga heterophylla)*, and grand fir and is in fair to poor health. The fair to poor health is due to high stand densities, root rot, and significant loss of western white pine due to blister rust (BLM 2007). The current structural stage is dominated by closed, mid-seral stage stands. Historically, the structural stage consisted of 55% late-seral, 35% mid-seral, and 10% early seral (NIFTT 2005).

Aspen/Aspen conifer Mix cover type comprises approximately 2% of the CdA FO and occur as pure quaking aspen (*Populus tremuloides*) stands or in association with various conifers such as subalpine fir and Douglas-fir (BLM 2007). In many aspen stands, conifer encroachment is a natural pattern in the absence of disturbance, resulting in an increased dominance by conifers and reducing the extent of aspen dominated stands. Forest health for the Aspen/Conifer Mix cover type is considered to be good to fair, with some mature stands of aspen undergoing succession to conifers (BLM 2007).

Non-Forested Upland Vegetation

Non-forested upland vegetation constitutes approximately 9% of CdA FO and is mainly composed of foothills grasslands, montane parklands and subalpine meadows, and mid-elevation shrublands.

Mid-Elevation Shrub vegetation occurs on approximately 6% of the lands managed by the CdA FO. While this cover type is often found on south- and west-facing slopes that have experienced large fires, factors such as soil type and other disturbances may influence the distribution of this vegetation across the landscape as well. Generally, this type of vegetation is found at or below 4,000 feet and is primarily composed of species such as alder *(Alnus* spp.), mallow ninebark (*Physocarpus malvaceus*), oceanspray *(Holodiscus discolor)*, snowberry (*Symphoricarpos albus*), ceanothus *(Ceanothus* spp.), and Rocky Mountain maple (*Acer glabrum*).

The Perennial Grass cover type occurs on approximately 3% of lands managed by the CdA FO. This cover type primarily consists of foothills grasslands, montane parklands, and subalpine meadows, with minor amounts of Palouse Prairie limited to small areas in the southwestern part of the CdA FO. Dominant species in this vegetation type include bluebunch wheatgrass *(Pseudoroegneria spicata)*, Idaho fescue *(Festuca idahoensis)*, and green fescue *(Festuca viridula)*.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Vegetation response to prescribed burning depends on the environmental conditions present at the time of burning, such as soil and duff moisture, plant vigor, phenological state (e.g., dormant; flowering; releasing seed) at time of burning, and fire severity (Agee 1993, Smith and Fischer 1997). Response also depends on the fire ecology of plant species under the slash piles. Some shrubs such as redstem ceanothus or herbs such as pinegrass (*Calamagrostis rubescens*) may be injured or killed, but the plants would recover by resprouting from roots, stems, seeds, or rhizomes. However, the potential higher heat levels generated by the amount of fuels in the piles could be expected to have a greater detrimental effect to any vegetation under the piles and in a small zone around each pile. The zone of damage around an individual burned pile would vary according to several factors related to how hot the pile burns, and if the fire creeps around in the ground fuels adjacent to the pile.

In the long-term, the burn pile scars would re-vegetate with a vegetation composition likely composed of species from the surrounding area. Burned pile scars that do not recover naturally within one to two years, perhaps due to localized, more severe fire effects, would continue to be vulnerable to weed invasion or expansion. Weeds may out-compete and displace desirable, native vegetation, altering plant community composition, structure, and function both in the present and future.

Direct and Indirect Effects of the No Action Alternative

There would be no direct impacts because prescribed burning of the piles would not occur. Unburned slash piles would provide concentrated hazardous fuel loads for future wildfires. These areas could burn at higher intensities scorching the soil and possibly causing temporary loss of soil fertility leading to lack of vegetation regrowth. No burning of slash piles would decrease the ability to suppress future wildfires and increase the potential for wildfires to exceed initial attack efforts. The decreased ability to suppress wildfires would increase the potential to adversely impact forest vegetation communities. This could also increase the potential for weeds to colonize the pile burn scar. Where left untreated, weeds would continue to threaten native plant communities.

Cumulative Impacts

Proposed Action

The 1910 Fire, subsequent intensive efforts to suppress wildfires, the associated ecological succession, and insect and disease outbreaks have had a profound influence on the existing vegetation community in the CdA FO. Other past and present impacts to vegetation include; weather events such as ice storms; deep snowpack; road building, use, and maintenance; hazardous fuels reduction and timber harvest on private land; recreation amenity development and use; ATV trail development and use; agricultural use or conversion; and/or home site establishment, including wildland-urban interface development. The combined impact of these actions often has been an existing vegetation community that is less resilient to wildfire.

Reasonably foreseeable future actions include pile burning on private, state, and other federal lands. The proposed action should affect < 0.25 acres for landing piles and < 0.1 acres for piles

created inside treatment areas (machine piling slash in a tractor logged unit or piled slash from slashing operations to create planting spots, wildlife forage areas, reduce fuel loading, etc.) The size of piles created on public lands is unlikely to contribute cumulatively to the effects to vegetation communities when compared to the overall extent of land managed by the CdA FO.
No Action

Under the no action alternative, there would be no measurable cumulative effects to forest vegetation communities' because no prescribed burning of slash piles would occur. However, not burning slash piles increases the opportunity for wildfires to adversely impact vegetation communities by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics. This could increase the potential for weeds to colonize the pile burn scar. Where left untreated, weeds would continue to threaten native plant communities.

3.2.6 Special Status Plants

Affected Environment

There is one federally threatened species, water howellia (*Howellia aquatilius*), and one federal candidate species, whitebark pine (*Pinus albicaulis*), that have the potential to occur within the CdA FO (Table 4). In addition, there are twenty BLM sensitive species that occur or have the potential to occur within the CdA FO. BLM special status plant species occupy diverse habitats in the CdA FO, possibly occurring in any of the cover type categories listed in Table 3 (Section 3.2.5, Forest Vegetation). Special status species lists are periodically updated; therefore, the CdA FO botanist should be consulted for the most current list. BLM includes the following as special status species:

(1) Species officially listed or proposed for listing as threatened or endangered under the ESA or candidates for listing as threatened or endangered under the ESA.

(2) Species listed by a State in a category such as threatened or endangered implying potential endangerment or extinction.

(3) Species designated by the BLM State Director as sensitive.

Table 4. Federally listed plants with potential to occur in the CdA FO.

Common name	Scientific name	Federal Status	BLM status	Global/State Rank
Water Howellia	*Howellia aquatilius*	Threatened	Type 1*	G3 S1
Whitebark pine	*Pinus albicaulis*	Candidate	Type 1*	G3G4 S3

Sources: BLM, last updated September 2011.
*BLM Type 1 = Federally Listed Species

Water howellia, a winter annual aquatic plant, inhabits ephemeral glacial ponds and abandoned river oxbow sloughs that are seasonally wet from spring moisture (Ogle et al. 2011). Currently, water howellia is only known to occur within Latah County on the flood plain of the Palouse

River in northern Idaho (Gray et al. 2005, USFWS et al. 2007). This species has not been found within the CdA FO, but has a historical record of its occurrence (BLM 2007).

Whitebark pine has declined from blister rust, fire exclusion, and mountain pine beetle (USFWS 2011). Whitebark pine occurs incidentally (less than 1%) in the wet/cold conifer cover type and has been documented in the Lund Creek areas of critical environmental concern. However, pile burning would not occur near known locations.

Slash piles would be located outside of occupied special status plant habitat. The distance between slash piles and known special status plant populations would vary according to factors such as but not limited to species' tolerance of fire, terrain, and plant community type.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

There would be no direct impacts from the proposed action because prescribed burning of slash piles would not occur near occupied special status plant habitat. A buffer would be placed around all known special status plant populations to avoid potential impacts. Burning the slash piles would increase the ability to suppress future wildfires, therefore reducing the potential of these future wildfires to effect special status plant populations.

Direct and Indirect Effects of the No Action Alternative

There would be no direct impacts to special status plants or their habitat because prescribed burning of slash piles would not occur. Remaining slash piles would increase concentrated hazardous fuel loads available for future wildfires. No burning of slash piles would decrease the ability to suppress future wildfires and increase the potential for wildfires to exceed initial attack efforts. The decreased ability to suppress wildfires would increase the potential to adversely impact special status plant populations or their habitat.

Cumulative Impacts

<u>Proposed Action</u>

Since there would be no direct/indirect effects from the proposed action, there would also be no contribution to cumulative effects.

<u>No Action</u>

A factor that likely has impacted vegetation attributes within the CdA FO is the intensive fire suppression efforts after 1910. Other actions that have affected special status plants include logging, transportation, wildlife, wildland fires, fuel reduction activities, and recreation and other uses. Reasonably foreseeable future actions include pile burning on private, state, and other federal lands. Under this alternative, there would be no measurable effects to special status plant cumulative effects because no prescribed burning of slash piles would occur. However, not burning slash piles increases the opportunity for wildfires to adversely impact special status

plants by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics.

3.2.7 Invasive, Nonnative Species

Affected Environment

Invasive plants include both noxious weeds and introduced, non-native plants that usually have few or no natural enemies to limit their reproduction and spread. Noxious weed is defined as any terrestrial or aquatic plant designated by a federal, state or county government as injurious to public health, agriculture, recreation, wildlife or property (Sheley et al. 1999). Idaho has designated 64 weeds as noxious, many of which are found on public lands (ISDA 2012). In addition to the invasive species identified on Idaho‘s designated noxious weed list, other nonnative species that may become problems includes species such as common tansy (*Tanacetum vulgare*), Russian olive (*Elaeagnus angustifolia*), cheatgrass (*Bromus tectorum*), bull thistle (*Cirsium vulgare*), St. Johnswort (*Hypericum perforatum*), and sulfur cinquefoil (*Potentilla recta; BLM 2008*). These and other invasive species were historically introduced by livestock, grain production, contaminated hay, wildlife, waterways, and escaped ornamentals.

Noxious and nonnative weed species having the greatest effect on BLM land in the CdA FO area include spotted knapweed (*Centauria maculosa*), Dalmatian toadflax (*Linaria genistifolia*), meadow hawkweed (*Hieracium pratense*), and common tansy (*Tanacetum vulgare;* BLM 2007). Pile burn activities are most likely to increase establishment of the noxious weed Canada thistle (*Cirsium arvense*) as well as other invasive plants such as bull thistle (*Cirsium vulgare*) and common mullein (*Verbascum thapsis*). These species in particular are well suited to colonize small, dispersed areas of fire disturbance resulting from pile burns (Evans field observations).

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Burning of slash piles would increase the localized spread of noxious and nonnative weeds. Pile burning would disturb the soil, remove existing vegetation under the pile, increase light to forest floor, and provide openings for propagation of noxious and nonnative seeds and plant parts. Weeds are often better adapted to colonizing newly disturbed areas than native species.

Direct and Indirect Effects of the No Action Alternative

There would be no direct impacts to noxious or nonnative species. Untreated slash piles would contribute concentrated fuel loads to future wildfires, which could increase the potential, severity, and extent of future wildfires. High intensity fire with the loss of competing vegetation and subsequent potential for soil erosion would leave the area within and surrounding the slash pile primed for noxious weed invasion.

Cumulative Impacts

Proposed Action

Other actions that have contributed to the spread of noxious weeds include logging, transportation, wildlife, wildland fires, recreation and other uses. Past events such as road-building and use; logging; fire; and OHV activity have contributed to weed invasion on BLM and non-BLM lands. Where left untreated, these weeds may have persisted and continued to threaten native plant communities; although in areas where plant canopy has provided sufficiently shaded conditions, weeds may have not established or decreased in extent over time. Where effective treatment has occurred, weeds have been either eradicated or their spread into native vegetation was curtailed. Ongoing and reasonably foreseeable actions on non-BLM land, which would increase the threat of weed invasion into native plant communities include pile burning on private, state, and other federal lands.

Short-term effects may be increased potential for weed establishment. The increased ability to suppress wildfires by removing concentrated hazardous fuels plus the decreased potential for wildfires to exceed initial attacks along with BLM weed control efforts would have beneficial cumulative impacts on noxious weeds.

No Action

Cumulative impacts would be similar to those described for the proposed action. However, the weed impacts would be minimal and less than impacts resulting from the proposed action.

3.2.8 Cultural Resources

Affected Environment

Cultural resources are locations of human activity, occupation, or use. They include expressions of human culture and history in the physical environment, such as prehistoric or historic archaeological sites, buildings, structures, objects, districts, or other places. Cultural resources can be natural features, plants, and animals that are considered to be important to a culture, subculture, or community. Cultural resources also include traditional cultural properties (TCPs), which are places associated with the cultural practices or beliefs of a living community. These sites are rooted in the community's history and are important in maintaining cultural identity.

Prehistoric refers to the time before Euro-Americans established a presence in Idaho in the early nineteenth century. Native American people living in the CdA FO area would have had access to diverse natural resources found in uplands, drainage bottoms, and around lakes. The first Euro-Americans to enter the CdA FO area in the early 1800s were fur trappers and then missionaries. Euro-American settlement was accelerated by the mining and timber industries established and the associated rail network and lake transportation systems.

There are 197 known cultural resource sites administered by the CdA FO. Most recorded sites are related to mining history and include adits, tramways, cabins, and mill sites. Many of the recorded cultural resources have not been evaluated for their eligibility for listing on the National

Register of Historic Places (NRHP), but most are thought to be eligible. Sites associated with a large fire in northern Idaho in 1910 are listed on the NRHP, which include the Pulaski Tunnel site. There are TCPs located in the CdA FO area as well.

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

There would be no direct effects from the proposed action because prescribed burning would not occur on known cultural resources. A buffer would be placed around all cultural resources to avoid potential impacts. Burning the slash piles would increase the ability to suppress future wildfires, therefore reducing the potential of these future wildfires to effect cultural resources.

Direct and Indirect Effects of the No Action Alternative

There would be no direct impacts to cultural resources because prescribed burning of slash piles would not occur. Remaining slash piles would increase concentrated hazardous fuel loads available for future wildfires. No burning of slash piles would decrease the ability to suppress future wildfires and increase the potential for wildfires to exceed initial attack efforts. The decreased ability to suppress wildfires would increase the potential to adversely impact cultural resources within the CdA FO.

Cumulative Impacts

Proposed Action

Since there would be no direct/indirect impacts from the proposed action, there would be no contribution to cumulative impacts.

No Action

Other actions that have affected cultural resources include recreation use, vandalism, or inadvertent effects from use of trails or unauthorized off-road vehicle use. Under this alternative, there would be no measurable effects to cultural resources cumulative effects because no prescribed burning of slash piles would occur. However, not burning slash piles could increase the opportunity for wildfires to adversely impact cultural resources by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics.

3.2.9 Wildlife/Habitat

Affected Environment

Wildlife species were evaluated in relation to available habitat quality and quantity occurring within the CdA FO. Over 100 species of mammals, 214 species of birds, 37 species of fish, 3 species of reptiles, and 11 species of amphibians could inhabit any of the BLM public lands in northern Idaho. The fragmented land ownership pattern in the CdA FO has made lands managed by the BLM of particular importance because these public lands provide wildlife with critical habitat niches and preferred habitats used by species for breeding, rearing young, foraging, travel between areas (connectivity corridors), and security (refuge) areas.

These animals occupy all available habitats from wetlands in valley bottoms to alpine mountain tops and forests in-between. All habitats within the CdA FO provide vegetation and insects that are primary food sources for wildlife species. Vegetation also provides shelter from adverse weather and cover either from or for predators.

Threatened, Endangered, and Candidate Species

Listed species occurring in the Idaho Panhandle include the grizzly bear (*Ursus horribilis;* threatened), Canada lynx (*Lynx canadensis*; threatened), and woodland caribou (*Rangifer tarandus caribou*; endangered). The wolverine (*Gulo gulo*), a candidate species, also occurs in the Panhandle and has been documented on BLM land. Table 5 lists the acreages of habitat in the Northern Idaho and on BLM-managed lands for federally listed species.

Table 5. Federally Listed Species Habitat Acreages* within the CdA FO

Species	Total Acres	BLM Acres	BLM Percentage
Grizzly Bear	376,640	4,324	1.15
Canada Lynx**	156,725	49,331	31.5
Woodland Caribou	290,397	231	0.08

*Source: USFWS Idaho List as of August 13, 2012.
** Includes Acres within Lynx Analysis Units- not all land within LAUs is considered suitable

Grizzly Bear

The revised rule listing to reinstate the Greater Yellowstone Area grizzly bears and to maintain as a threatened species in the contiguous Unites States was published on March 10, 2010 (FR, Volume 75, No. 58). Currently, there are five Recovery Areas in the lower 48 states that support grizzly bear populations: the Yellowstone which includes part of Wyoming, Idaho, and Montana, the Northern Continental Divide and Cabinet/Yaak in Montana, the Selkirks of Idaho and Washington, and the North Cascades of Washington (USFWS 1993). The Bitterroot Recovery Area of central Idaho and western Montana is currently considered unoccupied. In the lower 48 states, it is estimated that there are a total of approximately 1,000 to 1,200 grizzly bears (Defenders of Wildlife 2012). Within Recovery Areas, suitable habitat has been divided into

Bear Management Units (BMUs). Within these BMUs road densities and habitat conditions have been recorded and baselines and desired future conditions have been established. The CdA FO manages approximately 4,300 acres of habitat within six Bear Management Units, (BLM 2007).

Grizzly bears are opportunistic omnivores that adapt to a wide range of habitats. Throughout the year, they occupy a mosaic of dissimilar habitat types. Avalanche chutes, riparian zones, wet meadows, alpine meadows, and cirque basins are common foraging areas. Forests provide hiding and thermal cover but their use by bears seems to vary considerably between ecosystems (USDA Forest Service 2006).

Seven essential characteristics of grizzly bear habitat have been defined: space, isolation, sanitation, denning, safety, vegetation types, and food (Craighead et al. 1982). Each of these characteristics contributes to the overall suitability of an area to provide habitat for grizzly bears. If one characteristic is absent from an area, or severely depleted, the ability of the entire ecosystem to sustain a grizzly bear population is much reduced.

Effective grizzly bear habitat is defined as the amount of secure grizzly bear habitat (i.e., habitat at least one quarter mile from open roads, developments, and high levels of human activity) remaining within BMUs after affected areas are subtracted from the total habitat within the BMUs. Controlling the quantity of open and total roads within BMUs (i.e., access management) is probably the strongest tool for providing effective grizzly bear habitat.

Threats to the grizzly bear include habitat alteration, loss, and fragmentation, hunting, and increased access by humans to wilderness. In addition, there has been some displacement of primary food sources (i.e., whitebark pine nuts, cutthroat trout) by disease and by nonnative fish species (USFWS 1993). Whitebark pines have been eliminated or reduced from blister rust and mountain pine beetle infestations (USFWS 2011) and spawning cutthroat trout numbers have declined due to the introduction of nonnative species such as the lake trout (*Salvelinus namaycush;* Dunham et al. 2004, Haroldson et al. 2005).

Canada Lynx

The final rule listing Canada lynx as a threatened species in the contiguous Unites States was published on March 24, 2000 (FR, Volume 65, No. 58). The *Lynx Conservation Assessment and Strategy* (LCAS; Ruediger et al. 2000) was developed by the USDA Forest Service, USDI Fish and Wildlife Service, USDI National Park Service, and USDI Bureau of Land Management. LCAS was developed to provide a consistent and effective approach to conserve Canada lynx on federal lands in the contiguous United States.

The CdA FO manages approximately 53,000 acres within Lynx Analysis Units (LAU; BLM 2007). There is a small portion of designated critical habitat located within northeastern Idaho on Forest Service lands (USFWS 2009).

In Idaho, lynx are most often found in areas above 4,000 feet in elevation, and in Engelmann spruce (*Picea engelmannii*)/subalpine fir forests (Koehler and Brittell 1990). Important habitat features include den sites and foraging habitat. Den sites are typically located in hollow logs or

rootwads within mesic, mature or old growth coniferous forest (Koehler and Brittell 1990). Lynx foraging habitat corresponds with snowshoe hare habitat, because the hare is the lynx's favored prey. Snowshoe hare are most abundant in seedling/sapling lodgepole pine (*Pinus contorta*), subalpine fir, and Engelmann spruce forest stands. Snowshoe hares are the primary prey of lynx, comprising 35–97% of the diet throughout the range of the lynx (Koehler and Aubry 1994).

Although lynx have sometimes been portrayed as a late-successional forest species, lynx appear to be more closely associated with a mosaic of late- and early-successional states (Koehler and Aubry 1994). Suitable western mountain habitats for lynx are more fragmented and restricted in extent compared to Canada and Alaska habitats where high quality habitats are more prevalent. These habitat differences may be key to explaining why population strongholds are limited to Canada and Alaska boreal forests. Providing protected areas in optimal western mountains may be important for lynx persistence (Ruggiero et al. 1994), however, the CdA FO does not contain large amounts of high quality or optimal boreal forest habitats (e.g., subalpine/Engelmann spruce habitats). Lynx Analysis Units are located throughout the Idaho Panhandle and are comprised of BLM, Forest Service, State, Tribal, and private lands. In most cases BLM lands make up a relatively small portion of the LAUs they fall within.

In order to comply with the standards and guidelines outlined in the LCAS, several important landscape vegetation limitations must be followed when conducting timber harvest and fuel reductions in designated lynx habitats. LAUs must maintain at least 10 percent denning habitat, unsuitable acres cannot exceed the 30 percent maximum threshold of total lynx habitat within an LAU, and no more than 15 percent of the suitable lynx habitat can be converted to unsuitable habitat within a decade. The CdA FO LAUs currently have more than 10 percent denning habitat and is over the unsuitable habitat threshold with 52%.

Woodland Caribou

The Selkirk Mountains woodland caribou was federally listed as endangered on February 29, 1984 (Volume 49, FR 7390); designated critical has been proposed and is under review (USFWS 2012a). The woodland caribou primarily occurs in Canada, but there is a small population—the Selkirk Mountain population of northeast Washington and northern Idaho—that extends into the northwestern United States. This population is listed as endangered, and is generally found at elevations above 4,000 feet in the Selkirk Mountains, in Engelmann spruce/subalpine fir and western red cedar/western hemlock forest types. The woodland caribou's recovery area includes 231 acres of BLM public lands within the northeastern portion of the Selkirk Mountains.

The woodland caribou migrate seasonally moving to areas of new growth in the spring, which are typically located at mid-elevation in open-canopied areas, often adjacent to mature forest (Scott and Servheen 1985, Servheen and Lyon 1989). These areas provide high quality forage in early spring, allowing caribou to recover from the effects of winter. Pregnant females move to typical spring habitat in April or May, then move back to snow-covered areas, often at higher elevations, to calve in early June. The areas selected for calving by the Selkirk Mountain caribou typically support old noncommercial forests with high lichen densities, open canopies, and small trees (Servheen and Lyon 1989). Caribou spend the summer in alpine and subalpine vegetative zones, primarily in areas of high forage availability (Servheen and Lyon 1989). In the fall,

caribou shift to lower elevations and more densely canopied forest in the southern Selkirk Mountains where forage is less susceptible to early frost (Servheen and Lyon 1989).

The primary long-term threat to caribou is the continued loss and fragmentation of forest habitats caused by a combination of timber harvest, wildfires, and human activities that involve road development (USFSW 1994, MCTAC 2002, Cichowski et al. 2004, Apps and McLellan 2006, Wittmer et al. 2007, USFSW 2012a). In addition, overhunting and poaching, collisions with motor vehicles, and disease and genetic problems from inbreeding are also potential threats (USFWS 1994). Predation has also been found to be the primary cause of mortality in 11 of 13 subpopulations with predation predominantly occurred during summer (Wittmer et al. 2005). In the Selkirk Mountains, mountain lions are the primary threat to woodland caribou, but bears and wolves are also known predators (USFSW 2010).

Wolverine

The wolverine in the western United States was accorded candidate status on December 14, 2010 (FR 75:78030–78061). The Idaho Fish and Game Department (2012) has 141 records of wolverines in northern Idaho. In the western United States, wolverines are restricted to high mountain environments near treeline, where conditions are cold year-round and snow cover persists well into the month of May (USFSW 2012b). Deep, persistent, spring snow is required for successful wolverine reproduction because female wolverines dig elaborate dens in the snow for their offspring. These den structures are thought to protect wolverine kits from predators and the harsh conditions of alpine winters. Wolverines tend to den in remote and inhospitable places, at high elevations away from human populations (USFWS 2012b). Wolverines naturally occur at low densities, and are rarely encountered where they do occur.

There are documented sightings throughout the panhandle area with the most recent sightings occurring in the Selkirk Mountains (IDFG 2012). Potential denning and foraging habitats, and travel corridors are present throughout the high elevation mountains on BLM lands. Specifically, BLM lands within the Rochat Divide, Grandmother Mountain, Orphan Point, and Caribou Mountain Areas are considered potential denning habitat.

Other Special Status Species

Twenty-two other BLM sensitive species occur within the CdA FO (Table 6). Other BLM listed sensitive species include (1) species listed by a state in a category such as threatened or endangered implying potential endangerment or extinction or (2) species designated by the BLM state director as sensitive. These species tend to be habitat specialists, thus, their populations tend to be less secure because loss of habitat could result in more dramatic population declines and higher rates of extinction (Smith 1992).

Table 6. BLM Special Status Species within the CdA FO.

Species	Status
Northern Leopard Frog (*Rana pipiens*)	BLM Type 2—Rangewide/Globally Imperiled Species
Townsend's Big-eared Bat (*Plecotus townsendii*)	BLM Type 3—Regional/State Imperiled Species
Fisher (*Martes pennanti*)	BLM Type 3—Regional/State Imperiled Species
Gray Wolf (*Canis lupus*)	BLM Type 3—Regional/State Imperiled Species
Bald Eagle (*Haliaeetus leucocephalus*)	BLM Type 3—Regional/State Imperiled Species
Peregrine Falcon (*Falco peregrinus anatum*)	BLM Type 3—Regional/State Imperiled Species
Northern Goshawk (*Accipiter gentilis*)	BLM Type 3—Regional/State Imperiled Species
Flammulated Owl (*Otis flammeolus*)	BLM Type 3—Regional/State Imperiled Species
Calliope Hummingbird (*Stellula calliope*)	BLM Type 3—Regional/State Imperiled Species
Lewis's Woodpecker (*Melanerpes lewis*)	BLM Type 3—Regional/State Imperiled Species
Willow Flycatcher (*Empidonax traillii*)	BLM Type 3—Regional/State Imperiled Species
Hammond's Flycatcher (*Empidonax hammondii*)	BLM Type 3—Regional/State Imperiled Species
Olive-sided Flycatcher (*Contopus borealis*)	BLM Type 3—Regional/State Imperiled Species
Common Garter Snake (*Thamnophis sirtalis*)	BLM Type 3—Regional/State Imperiled Species
Coeur d'Alene Salamander (*Plethodonidahoensis*)	BLM Type 3—Regional/State Imperiled Species
Idaho Giant Salamander (*Dicamptodon aterrimus*)	BLM Type 3—Regional/State Imperiled Species
Western Toad (*Bufo boreas*)	BLM Type 3—Regional/State Imperiled Species
Northern Bog Lemming (*Synaptomys borealis*)	BLM Type 4—Peripheral Species*
Harlequin Duck (*Histrionicus histrionicus*)	BLM Type 4—Peripheral Species*
Upland Sandpiper (*Bartramia longicauda*)	BLM Type 4—Peripheral Species*
Black Swift (*Cypseloides niger*)	BLM Type 4—Peripheral Species*
White-headed Woodpecker (*Picoides albolarvatus*)	BLM Type 4—Peripheral Species*

* Rare in Idaho with the majority of breeding ranges outside the state
Source: BLM Sensitive Species List as of September 13, 2012.

Bald Eagles nest around large bodies of water with abundant supplies of fish. Bald Eagles generally utilize cottonwoods and cliffs immediately along the rivers although conifers may provide perch or roosting sites with additional thermal protection. The birds principally forage on fish and waterfowl but also feed on animals that are winter-killed or vehicle mortalities. Peregrine Falcons occupy a variety of habitats, nest primarily on cliffs or cliff-like structures, and hunts over open areas (White et al. 2002).

The Northern Goshawk is a forest-dwelling species that frequents dense conifer forests and aspen stands (Squires and Reynolds 1997). In northern Idaho and western Montana, goshawks nest in stands or groups of trees in the mature to over-mature age classes principally on the mid to lower third of slopes. Douglas-fir and Western larch are preferred nest tree species (Hayward and Escano 1989). Goshawks prey on a variety of medium-sized forest birds and small mammals. Pole stage or larger stands open enough to permit unimpeded flight are suitable for foraging (Hayward et al. 1990). However, foraging habitat may be closely tied to prey availability as to particular habitat composition or structure (Patla et al. 1995).

Harlequin Ducks breed inland and prefer fast moving streams. Migration of this species is direct, and long layover periods are not common (Robertson and Goudie 1999). Upland Sandpipers are obligate grassland birds that require three different, but nearby habitats—perches and low vegetation for visibility during courting; higher vegetation to hide its ground nest; and lower vegetation for young (Houston et al. 2011). Black Swifts nest on ledges or shallow caves in steep

rock faces and canyons typically near or behind waterfalls and forage over forests and open areas in montane habitats (Lowther and Collins 2002).

Other bird species in Table 6 are primary or secondary cavity users, so they require snags. Flammulated owls are secondary cavity nesters and are found in older ponderosa pine, Douglas-fir, and mixed coniferous forests. Lewis's woodpeckers are considered burn specialist for their use of snags in post-burn areas (Saab and Dudley 1998, Saab and Vierling 2001). Breeding habitat for Lewis's woodpecker is characterized by an open canopy, brushy understory, available perch sites and abundant insects (Bock 1970; Linder and Anderson 1998; and Sabb and Dudley 1998). White-headed Woodpeckers primarily occupy low-to-mid-elevation, multi-storied open stands of mature and large, late seral ponderosa pine, including large snags (Wisdom et al. 2000, Frederick and Moore 1991). This species generally prefers to use large-diameter ($\geq$ 21 inch dbh) snag classes for nesting and foraging in greater proportion than available (Bull et al. 1997, Idaho Partners in Flight 2000, Wisdom et al. 2000). They feed on seeds and insects extracted from the bark of trees. They are dependent on mature and older ponderosa pine as a source of seeds for winter survival (Garret et al. 1996).

Fishers are wide-ranging forest predators that prefer late seral, mesic, (moist) forest habitats (Idaho Department of Fish and Game 1995). The Idaho Comprehensive Wildlife Conservation Strategy (IDFG 2005) summarizes fisher habitat as a mosaic of mesic conifer, dry conifer, and subalpine forests. They have also been associated with riparian areas in Idaho (Powell and Zielinski 1994). Mature and older forests are used during summer; early seral and late successional forests are used in the winter. Fisher habitat often includes an abundance of logs, snags, and forest debris. A diversity of tree sizes and shapes and small forest "gaps" are also characteristic of fisher habitat. Like wolverines, female fishers raise their young in natal and maternal dens. Natal dens are where the young are born. Maternal dens are additional den sites the mother may move her kits to if she feels threatened by predator presence or needs to move kits to an area where food is more available. Very few denning sites have been described for fishers in the western United States, but logs and snags are commonly used.

Gray wolves inhabit large contiguous, coniferous forests that are relatively free of human disturbance and have adequate prey. Deer, elk, and moose are primary prey species, and small mammals and grouse are alternate prey. Adult female wolves give birth from late March to late April inside dens excavated out of the earth.

Townsend's big-eared bats are habitat specialists because they require roosting and hibernating habitats that are very specific in their temperature and airflow requirements. This bat species occurs in a variety of habitats and roosts in caves, mines, and hollow trees. Species distribution is largely limited by caves and mines, which serve as the dominate roost sites for this species and are more important than local forest or habitat types (Miller et al. 2005, Western Bat Working Group 2011).

Northern bog lemmings inhabit sphagnum bogs, wet meadows, moist mixed and coniferous forests, alpine sedge meadows, krummholz spruce/fir forests with dense herbaceous and mossy understory, and mossy streamsides (Groves et al. 1997). In Idaho, they occupy bog or marsh montane forest or subalpine zone (Groves et al. 1997).

The northern alligator lizard is relatively rare and one of only a few reptiles found in the Idaho Panhandle. The alligator lizard is a habitat specialist that can occur in many different upland habitats, but is limited to those habitats that have talus slopes, exposed soils, or rocky outcrops. Common garter snakes are found in many upland and riparian sites in the Panhandle region of Idaho. They are found in and around marshes, lakes, and meadows where they feed on insects, amphibians, and fish. This species is most common in wet meadows and along water courses, but can be found far from water in open valleys and in deep coniferous forests (Nussbaum et al. 1983).

Northern leopard frogs inhabit permanent water bodies with rooted aquatic vegetation (Groves et al. 1997). Western toads are strongly associated with wetlands, but toads may use forested terrestrial habitats outside of breeding and over-wintering periods (Keinath and McGee 2005). They appear to favor dense shrub cover, perhaps because it provides protection from desiccation and predators. The western toad will breed in a large variety of natural and artificial aquatic habitats, from the shallow margins of lakes and ponds to road-side ditches. Hibernation sites generally are deep enough to prevent freezing, and moist enough to prevent desiccation.

The Coeur d'Alene salamander is associated with three habitat types; waterfall spray zones, springs and seeps, and stream edges. In wet weather they may be found under leaf litter, logs, and bark. Forest sites where they have been documented have at least 25% canopy cover but can be highly variable in cover type; from ponderosa pine to hemlock (Montana Fish, Wildlife, and Parks 2012). Because they respire through their skin, the most important habitat component for the Coeur d'Alene salamander is moisture and humidity. In the CdA FO, salamanders would be located in perpetually wet areas, such as a seep, spring, or creek.

Idaho giant salamander larvae usually inhabit clear, cold streams, but are also found in mountain lakes and ponds. Adults are found under rocks and logs in humid forests, near mountain streams, or on rocky shores of mountain lakes (Groves et al. 1997). Adults eat terrestrial invertebrates, small snakes, shrews, mice, and salamanders (Groves et al. 1997). This salamander breeds in the spring and fall and hibernates/aestivates in the winter.

Olive-sided Flycatchers are found in forests and woodlands (especially in burned-over areas with standing dead tress) such as subalpine coniferous forests, mixed forests, and borders of lakes and streams (Groves et al. 1997). They generally breed in montane and boreal forests in the mountains of western North America, as well as throughout the boreal forests of Canada (Kaufman 1996). Olive-sided flycatchers are most often associated with forest openings, forest edges near natural (i.e., meadows, wetlands, canyons, rivers) or man-made openings, or open/semi-open stands with a low percentage of canopy closure (Kaufman 1996; Altman 1997). Although olive-sided flycatchers are more common in disturbed, early successional types, they appear to require residual large snags and/or live trees for foraging and singing perches (Altman 1997).

In preliminary results of an Idaho-Montana study, Hammond's Flycatchers were found to be old-growth associated in Douglas-fir/ponderosa pine forests (Groves et al. 1997). Hammond's Flycatcher is a common but poorly known migratory species that breeds in mature coniferous and mixed forests of western North America. This species frequently nests high in conifers,

saddling its nest on a horizontal limb well away from the main trunk. This species prefers mature and old-growth coniferous forests, generally stands of more than 10 hectares [25 acres] and a minimum age of 80 to 90 years (Sedgwick 1994).

The Willow Flycatcher is a migratory bird that breeds over a large portion of North America. Winter habitat is tropical, from Central Mexico to Columbia (Idaho Partners in Flight 2000). This species is typically found in thickets, scrubby and brushy areas, open second growth, swamps, and open woodlands (Groves et al. 1997). In an Idaho study of riparian birds, Willow Flycatchers were intermediate in association with mesic and xeric willow habitats (Groves et al. 1997). Willow Flycatchers breed in riparian habitat that has a mid-story cover layer of shrubs within 5–6 feet of the ground (Idaho Partners in Flight 2000). They nest in edge habitats of large, continuous shrub patches juxtaposed with open areas.

Calliope Hummingbirds inhabit mountains (along meadows, canyons and streams), in open montane forests, and in willow and alder thickets (Groves et al. 1997). Breeding habitats include shrub-sapling habitats 8 to 15 years following logging or fire; aspen thickets, often along running streams, and in open montane forests; late shrub-sapling habitats 14 to 16 years after burning and clear-cutting, respectively; regrowth after deforestation; willows along drainages, lodgepole pine; and birch and maple draws (Calder and Calder 1994). They defend a territory of 0.5 to 0.75 acres (Calder and Calder 1994).

Migratory Birds

All migratory birds are protected under the 1918 Migratory Bird Treaty Act (16 USC 703), as well as the Neotropical Migratory Bird Conservation Act (16 USC Chapter 80). Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* requires the BLM and other federal agencies to work with the U.S. Fish and Wildlife Service (USFWS) to improve protection for migratory birds. Migratory birds occur within the CdA FO. Most of these species are waterfowl and songbirds, but the list also includes species such as gulls, owls, and hawks. Idaho Partners in Flight has identified 243 species of birds that breed in the State of Idaho. Of these species, 119 are considered Neotropical migrants.

Idaho Partners in Flight (2000) identified four high-priority habitats in Idaho, which also include important habitats for migratory birds and include riparian; low-elevation, mixed conifer; grasslands; and ponderosa pine. Three of these habitats occur in the CdA FO area, which includes: (1) riparian habitat; (2) ponderosa pine habitat; and (3) low elevation mixed conifer habitat.

The CdA FO provides nesting, brooding, and foraging habitat for migratory birds that breed in North America but migrate to Mexico, Central America, or South America for the winter. Peak migration periods occur in May and then again from September through early October.

Other Wildlife

The CdA FO provides habitat for big game species which includes Rocky Mountain elk (*Cervus elaphus*), white-tailed deer (*Odocoileus virginianus*), mule deer (*O. hemionus*), moose (*Alces*

alces), black bear (*Ursus americanus*), and mountain lion (*Felis concolor*). Rocky Mountain elk are a security dependent species and summer and winter range habitat is present within the CdA FO. Elk winter range habitat is found throughout the CdA FO on mid- to low-elevation mountain shrub sites. Approximately 28,000 acres (3%) of winter range habitat and approximately 7,700 acres (28%) considered critical/crucial elk winter range occur on BLM administered-lands (BLM 2007). Close proximity to water remains an important factor within spring, summer, and fall habitats and is provided by both natural sources (streams, lakes, springs, seeps) and some artificial sources (stock watering ponds and tanks) in the CdA FO. Summer habitats preferred by elk include aspen/conifer, mountain shrub, dry conifer, mid-elevation shrub, and riparian vegetation types. The amount of elk summer habitat managed by BLM is minimal due to the location of (i.e., mid-to low-elevation) and scattered nature of BLM administered-lands within the CdA FO.

The CdA FO also provides habitat for upland game birds (e.g., blue grouse, mourning doves) and small mammals (e.g., flying squirrels,snowshoe hares). Most of the habitat for upland game birds occurs in transition areas (e.g., agricultural lands) from BLM-managed lands to forest service or private lands. Mourning doves nest throughout the CdA FO in most habitat types. Preferred blue grouse and ruffed grouse habitat is closely associated with dry conifer, aspen, and riparian habitat types (BLM 2007).

Effects of the Alternatives

Direct and Indirect Effects of the Proposed Action Alternative

Threatened, Endangered, and Candidate Species

Grizzly Bear

Prescribed burning of slash piles reduces concentrated hazardous fuel loads and would be expected to have a positive effect on grizzly bear habitat by reducing the likelihood of a future stand-replacing wildfire. Prescribed burning of the slash piles would increase the ability to suppress future wildfires and decrease the potential for wildfires to exceed initial attack efforts, thus reducing the likelihood of a future stand-replacing wildfire. Although grizzly bears generally benefit from periodic burns, a very large burn could destroy a large percentage of available habitat, and result in fragmentation of habitat.

During implementation of the prescribed burning increased noise due to human presence and prescribed burning could temporarily disturb denning or active bears., but these effects would be minor and temporary.

Impacts to grizzly bears and their habitat from prescribed burning of slash piles are expected to be negligible due to the limited size of treatment areas, mitigation measures, and adherence to conservation measures listed in the Coeur d'Alene RMP (2007; pages 20–26). No large-scale removal of vegetation from prescribed burning of slash piles in grizzly bear habitat is expected, so the amount of forage food available to bears would not diminish; therefore the project is determined to be "no effect" to grizzly bear or its habitat.

Canada Lynx

Lynx occurring in the CdA FO may be affected by management activities that reduce or degrade essential habitat elements used by lynx for denning, foraging, and recruitment, or that increase habitat fragmentation and lynx mortality. Prescribed burning of slash piles reduces concentrated hazardous fuel loads and would be expected to have a long-term positive effect on lynx and their habitat by reducing the likelihood of a future stand-replacing fire and by indirectly helping to maintain and improve the diversity of habitats for lynx and lynx prey species. Fire exclusion in lynx habitats has, over time, altered forest stand composition and structure, making forests more susceptible to severe fires (Quigley et al. 1996).

Impacts to Canada lynx and their habitat from prescribed burning of slash piles are expected to be negligible due to the limited size of treatment areas and adherence to standards and guidelines outlined in the LCAS (Ruediger et al. 2000) and conservation measures listed in the Coeur d'Alene RMP (BLM 2007; pages 20–26). In general, pile burning will not have any effect on foraging or denning habitat, except that the reduced likelihood of stand replacing fire will help to preserve the limited denning habitat in and around BLM lands. Creation of piles and the subsequent burning will be analyzed for impacts to the lynx at the project level if the piles are located within an LAU. The proposed action would not have any impact to key habitat components—denning, foraging, or unsuitable habitat—and the structural components of den sites preferred by Canada lynx would remain unaffected; therefore, the project is determined to be "no effect" to Canada lynx or its habitat.

Woodland Caribou

Fire could affect the limited remaining habitat in the Selkirk Mountains. Therefore, the Selkirk Mountain Woodland Caribou Recovery Plan (USFWS 1994) calls for improving methods for fire protection and control. Therefore, any treatment method that reduces fuel loading in caribou habitat would be expected to have a long-term positive effect by reducing the likelihood, intensity, and area of influence of a future wildfire. Prescribed burning of the slash piles would remove concentrated hazardous fuel loads, resulting in increased ability to suppress future wildfires and a decreased potential for wildfires to exceed initial attack, thus reducing the likelihood and intensity of a future stand-replacing wildfire. Prescribed burning is likely to create a temporary disturbance to any woodland caribou that may be present, but should only last until prescribed burns are completed. Impacts to the woodland caribou and their habitat from prescribed burning of slash piles is expected to be negligible to migration corridors, foraging, or escape cover; therefore the project is determined to be "no effect" to woodland caribou or proposed critical habitat.

Wolverines

Wolverines prefer high elevation areas where summer average temperatures do not exceed 72 degrees F (Copeland et al. 2010). They are also negatively associated with logging projects that remove much of the over story and roads (Krebs 2007, Copeland et al. 2003). Prescribed burning of piles should have a neutral if not positive impact to wolverine. Prescribed burning is likely to

create a temporary disturbance to any wolverine that may be present, but a positive effect may be easier access by scavenging wolverine to small mammals that are killed by the pile burning. The proposed action would not have any impact to potential denning habitat during spring or fall, and the structural components of denning habitat preferred by wolverine would remain unaffected; therefore, the project is determined to be "no effect" to wolverine or its habitat.

Other Special Status Species

Prescribed burning of slash piles should have negligible impacts to special status species throughout the CdA FO due to the limited size and scattered nature of the slash piles. Short-term negative impacts could occur at the time of burning if conducted during the avian breeding season. Implementing the prescribed burns in the fall or winter would mitigate some of the losses for migratory birds as many species will have completed their nesting attempts by that time. If pile burning were to occur during the breeding season, nest surveys would be conducted prior to implementation. The nest surveys will be conducted within the piles and a 20 foot buffer around the piles if burning occurs between April 15 th and August 15th. Some piles are placed close to live trees and as a result the live trees are lost. However, this results in snag creation and the impact is not substantial on a large scale. Placement of the piles to avoid loss of live trees, if needed, will be analyzed in the initial forest project proposal.

Prescribed burning of the slash piles would remove concentrated hazardous fuel loads, resulting in increased ability to suppress future wildfires and a decreased potential for wildfires to exceed initial attack, thus potentially reducing the likelihood and intensity of a future stand-replacing wildfire. This would indirectly benefit species that prefer interior forest stands, like Cordilleran flycatcher, northern goshawk, and Hammond's flycatcher if the implementation successfully helps to avert a stand replacing fire that would ultimately destroy habitat for these species. Prescribed burning is likely to create a temporary disturbance to any special status species that may be present, but should only last until prescribed burns are completed. Special status species with larger home ranges such as the gray wolf and fisher should not be impacted compared to passerine bird species like the Cordilleran flycatcher. These animals will be able to leave the vicinity of the pile burning if human activity or smoke are disturbing them. The nature of this disturbance would be of low intensity and duration and would be negligible at the population level.

Other Wildlife

Pile burning on winter range should have negligible effects to elk winter range habitat conditions and security. Short-term impacts would be temporary disturbance and displacement from human presence and associated prescribed burn activities during implementation. In addition, any impacts on reducing growing space for grass, shrubs and forbs is generally low due to the limited size of slash piles and scattered nature of the piles.

Snowshoe hares use the piles for cover and thus burning may result in mortality to hares. However the number of hares likely to be lost would be negligible.

Prescribed burning of the slash piles would remove concentrated hazardous fuel loads, resulting in increased ability to suppress future wildfires and a decreased potential for wildfires to exceed initial attack, thus potentially reducing the likelihood and intensity of a future stand-replacing wildfire. This would indirectly benefit elk and other big game species by reducing the potential for a stand replacing wildfire that would destroy large scale foraging and security and escape areas for these species. Overall, due to the size of the piles and their scattered nature, plus adherence to conservation measures listed in the Coeur d'Alene RMP (BLM 2007) winter range habitat conditions and security would remain unaffected. The conservation measures are:

- Roads on crucial and important winter range for elk will be closed to public vehicular access from December 1 to March 31 each year.
- BLM will consider Idaho Fish and Game recommendations during implementation or approval of actions affecting elk habitat.
- Where practical, suitable forage areas will be provided.
- Where practical, riparian habitat will be fenced and adjacent cover strips of at least 250 feet and at least 20 acres will be maintained.

Direct and Indirect Effects of the No Action Alternative

There would be no direct impacts because no prescribed burning of slash piles would occur. Remaining slash piles would increase concentrated hazardous fuel loads available for future wildfires. No burning of slash piles would decrease the ability to suppress future wildfires and increase the potential for wildfires to exceed initial attack efforts. The decreased ability to suppress wildfires would increase the potential to adversely impact wildlife species and/or their habitat. Unburned piles could serve as perches for raptors, leading to increased predation on shrub and grass layer nesting birds and reducing the available growing space for shrubs and grasses used as nesting habitat. Remaining piles could also function as hiding cover and shady bedding sites for big game species, such as elk and deer as well as birds and small mammals. The unburned piles could provide security and/or escape cover by providing visual screening from hunters and predators and shady spots for bedding and thermal regulation. Not removing the piles would allow the piles to continue to function as they currently do for as long as it takes for them to decompose.

Cumulative Impacts

Proposed Action

Past and present activities that have impacted wildlife populations include forest health projects and their associated impacts (road building, human disturbance, erosion, weed introduction, increased human access), wildfires, forest pathogens, prescribed fires, mining, and recreation (consumptive and non-consumptive). All of these activities have the potential to negatively affect wildlife species. Some of these actions have positively benefited wildlife species.

Reasonably foreseeable actions that may impact wildlife populations include pile burning on private, state, and other federal lands. CdA FO pile burning may enhance fire suppression efforts on adjacent lands and decrease overall wildfire severity and spread. Because this analysis covers the entire Field Office area, the reasonably foreseeable actions are widely variable in their nature and impacts. All historic activities can be expected to continue within the Field Office are to some degree. Forest health activities, timber sales, rural and suburban development, road building, the spread of forest pathogens and disease, mining, and all forms of recreation are likely to continue. In some areas of the Panhandle some of these activities will expand or contract depending on the economy, climate, and other unknown factors.

Impacts of the above activities, combined with the small scale and temporary nature of the disturbance associated with proposed action are not expected to contribute to cumulative effects on Special Status wildlife species or migratory birds.

No Action

Under this alternative, there would be no measurable direct effects to wildlife populations because no prescribed burning of slash piles would occur. However, not burning slash piles increases the opportunity for wildfires to adversely impact wildlife populations and their habitat by increasing areas of concentrated fuel loads and decreasing the ability of fire suppression tactics. This could indirectly increase the likelihood of a stand replacing fire. For many wildlife species this would be a negative scenario, in particular those species which prefer interior forest stands, large diameter trees, and high canopy cover forest types and their associated understory. Other species that prefer open brushy habitats would not be as negatively impacted by large stand-replacing fires. But if one assumes that potential fires would reduce landscape diversity at a larger scale then the impact to the wildlife community would be negative.

CHAPTER 4 – CONSULTATION AND COORDINATION

Scoping for preparation of this EA included publishing information on the Idaho BLM NEPA website. On September 4, 2012 the scoping notice was published that described the proposed action, location, and purpose and need. Although no substantive issues were identified by individuals or organizations, the agencies issues were addressed through consideration in the analysis. Scoping documentation is available at the BLM Coeur d'Alene Field Office.

This EA will be available from the Idaho BLM public internet site at: https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do. Copies may be requested by calling or visiting the BLM Coeur d'Alene Field Office, 3815 Schreiber Way, Coeur d'Alene, ID 83815, telephone 208-769–5000.

4.1 Persons, Groups and Agencies Consulted

The Bureau of Land Management, Coeur d'Alene Field Office, coordinated with the Coeur d'Alene, Kootenai, Kalispell, and Salish Kootenai Tribes concerning the Programmatic Pile Burn EA. The coordination occurred in the month of December 2012 and has not identified concerns.

4.2 Preparers

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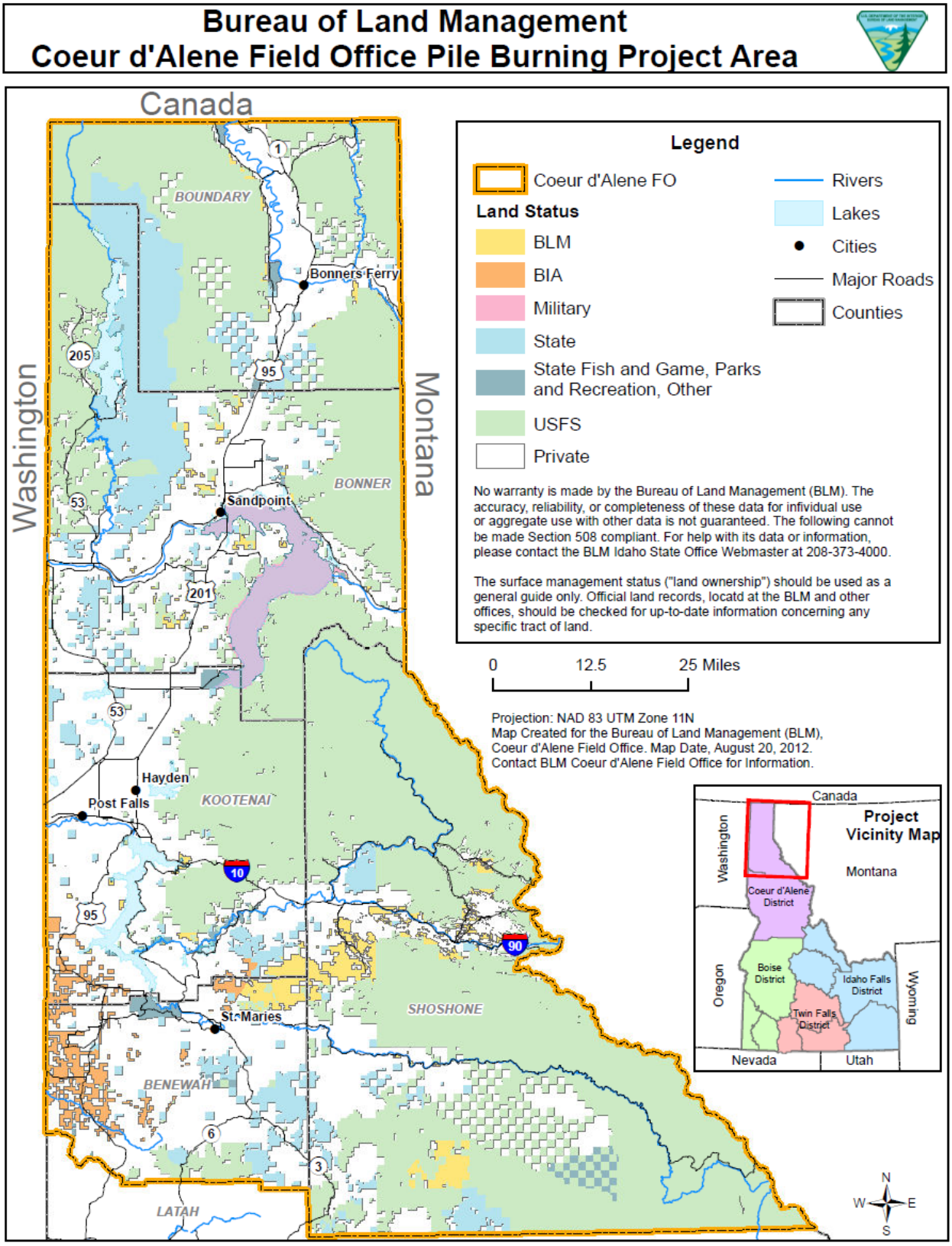
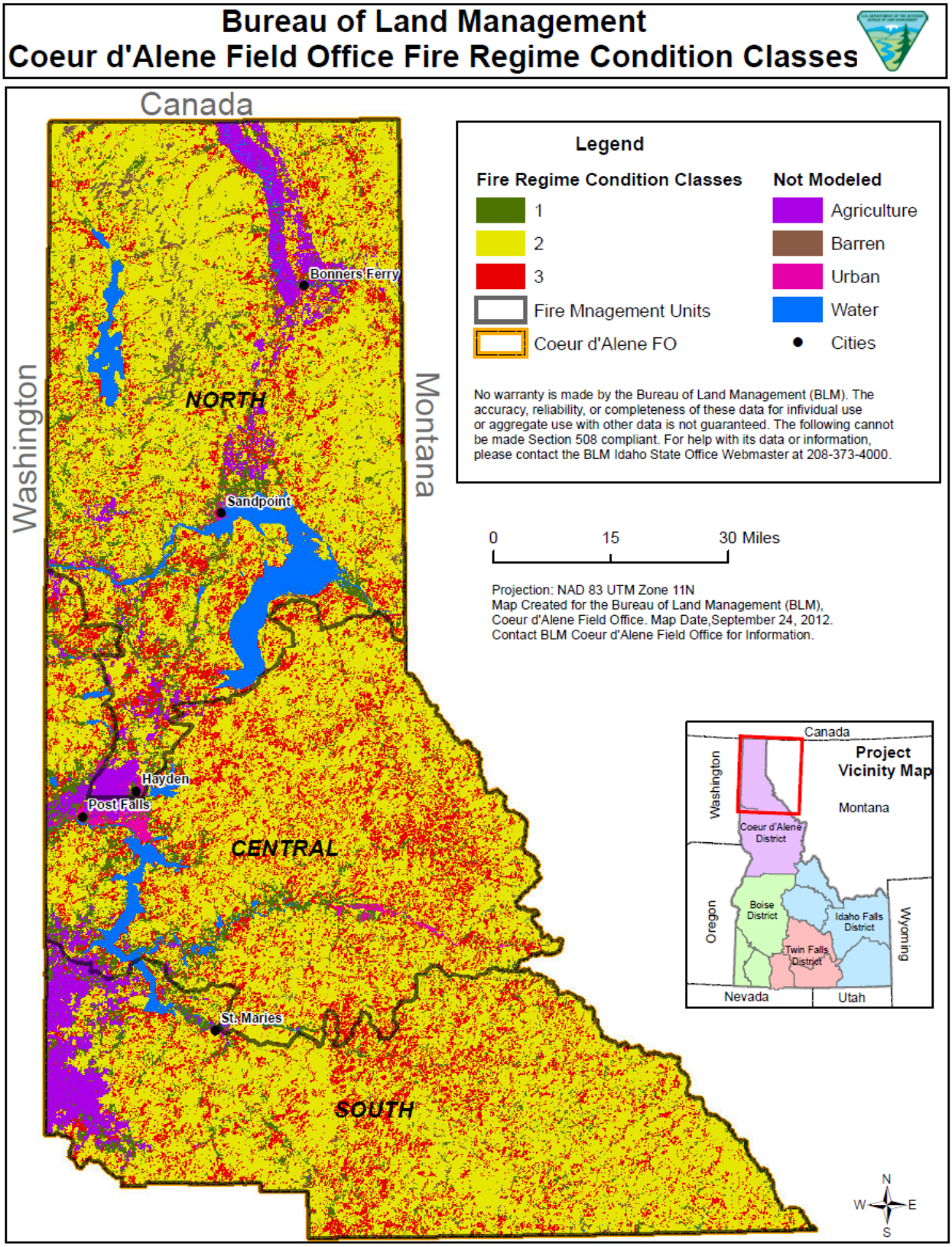
Appendix A
Maps

Map 1. Programmatic Pile Burning Program Location



Map 2. Fire Regime Condition Class Ratings for all Lands within the CdA FO.



Map 3. Idaho/ Montana Airsheds and Impact Zones.