

**Grouse Bear Management Unit
Compliance Project
Non-Native Invasive Species Assessment**

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Introduction

This report discusses the environmental effects of implementing the Grouse Bear Management Unit (BMU) Compliance (hereafter called Grouse BMU) Project on non-native, invasive plant species (commonly called noxious weeds or weeds). A summary of this report is included as part of the “Affected Environment and Environmental Consequences” section of the environmental assessment.

The Forest Service Handbook (FSH 3409) defines a strategy for managing pests, including noxious weeds, as “a decision-making and action process incorporating biological, economic and environmental evaluation of pest-host systems to manage pest populations” (FSH 3409.11, 6/86). This strategy is termed Integrated Pest Management (IPM).

The overall Idaho Panhandle National Forests (IPNF) strategy is to contain weeds in currently infested areas and to prevent the spread of weeds to susceptible but generally uninfested areas. The 1989 IPNF Weed Pest Management EIS describes the strategy. Weed management activities in the North Zone (Kaniksu) of the IPNF are guided by respective noxious weed control management strategies on the three districts comprising the North Zone: Sandpoint Ranger District, Priest Lake Ranger District, and Bonners Ferry Ranger District.

Noxious weeds are those plant species that have been officially designated as such by federal, State or county officials. In *Weeds of the West* by Whitson et al. (1991), a weed is defined as “a plant that interferes with management objectives for a given area of land at a given point in time.” The federal Noxious Weed Act of 1974 defines a noxious weed as “a plant which is of foreign origin, is new to, or is not widely prevalent in the United States, and can directly or indirectly injure crops or other useful plants, livestock or the fish and wildlife resources of the United States or the public health” (P.L. 93-629).

The Idaho Noxious Weed Law defines a “noxious weed” as any exotic plant species established or that may be introduced in the State which may render land unsuitable for agriculture, forestry, livestock, wildlife or other beneficial uses and is further designated as either a statewide or countywide noxious weed (Idaho Code 24 Chapter 22).

Both federal and state laws define weeds primarily in terms of interference with commodity uses of the land. However, the impacts of noxious weeds on non-commodity resources such as water quality, wildlife, and natural diversity are of increasing concern.

Regulatory Framework

Federal legislation, regulations, policy, and direction that require development and coordination of programs for the control of noxious weeds and evaluation of noxious weeds in the planning process include the following:

National Forest Management Act (NFMA) (1976)

National Environmental Policy Act (NEPA) (1969)

Forest Service Manual (Chapter 2900) (USDA 2011)

Executive Order #13112 (1999)

IPNF Land Management Plan (2015)

IPNF Weed Pest Management EIS (1989)

Bonnors Ferry Noxious Weed Management Project EIS (1995)

Priest Lake Ranger District Weed Control Project EIS (1997)

Sandpoint Ranger District Noxious Weed Control Project EIS (1998)

Existing Condition

Methodology

Information on current weed infestations and results of weed management in the project area is derived from records of previous weed treatments, weed monitoring, and from observations during botanical field surveys for the Grouse BMU project.

Documented Noxious Weed Infestations

Documented weed species in the project area include the following:

Species	Infestation Level*	Idaho State Ranking	IPNF Ranking
spotted knapweed (<i>Centaurea stoebe</i> L.)	moderate	Contain	Widespread
Canada thistle (<i>Cirsium arvense</i> [L.] Scop.)	low	Contain	Widespread
bull thistle (<i>Cirsium vulgare</i> [Savi] Ten.	very low	unlisted by state	Widespread
St. Johnswort (<i>Hypericum perforatum</i> L.)	moderate- high	Contain	Widespread
meadow hawkweed (<i>Hieracium caespitosum</i> Dumort.)	moderate	Control	Widespread
orange hawkweed (<i>Hieracium aurantiacum</i> L.)	low	Control	Widespread
oxeye daisy (<i>Leucanthemum vulgare</i> L.)	moderate- high	Contain	Widespread
sulfur cinquefoil (<i>Potentilla recta</i> L.)	low	unlisted by state	Widespread
common tansy (<i>Tanacetum vulgare</i> L.)	moderate	unlisted by state	Widespread
hare's foot clover (<i>Trifolium arvense</i> L.)	low	unlisted by state	New Invader

* A description of weed infestation levels is included in floristic surveys in the project file

These species primarily occur along Forest roads in the project area. Spotted knapweed and St. Johnswort also occur in natural openings in the project area, but off-road weed infestation levels are generally low overall and are scattered. Tansy is also fairly common in riparian habitat areas adjacent to roads, and orange hawkweed is present scattered along roads in the project area, particularly in moister stretches of the road segments or along roadside ditches.

Current Weed Management Efforts

Many of the Forest System Roads and trails within the project area were specifically identified for treatment in either the Sandpoint or Bonnors Ferry Ranger District noxious weed control FEIS (USDA 1995 and USDA 1998.) A complete list of those roads and trails treated within the project area is in the project file.

Spotted knapweed, St. Johnswort, and oxeye daisy are considered naturalized in northern Idaho and scattered throughout the project area. Management of these species will emphasize reducing infestation levels and slowing their rate of spread. Biological control agents for knapweed

(*Metzneria paucipunctella*, *Urophora affinis* and *U. quadrifasciata*) are established in Idaho (Rees et al. 1996) and have been identified in the project area. The biological control agent for St. Johnswort, *Chrysolina quadrigemina*, was first released in the United States in 1946 and is now well-established in Idaho (Rees et al. 1996); it too, has been identified in the project area. Additional biological control agents for St. Johnswort and knapweed may be released in the project area as appropriate and as prescribed in the pertinent noxious weed control or management plan.

Meadow and orange hawkweed, sulfur cinquefoil and Canada thistle are currently established but are not considered naturalized in the project area. They are largely confined to Forest roads in the project area. Infestations will be monitored and contained, with eradication where feasible.

Of major concern are potential new invaders (see project file) not yet documented in the project area. In accordance with guidelines in the Northern Region Overview (USDA 1999), management priorities emphasize identification and eradication of tansy ragwort, leafy spurge and yellow starthistle. Some additional weed species listed as new invaders or potential new invaders on the IPNF weed priority list have been found in Bonner or Boundary counties, but have not yet been recorded in the project area. These species would be a high priority for eradication when or if they were observed during operations or monitoring in the project area. Additionally, hare's foot clover has been identified on the IPNF weed priority list as a new invader and was located in a few areas within the Grouse BMU project area. As a result, this species has been identified for treatment to help prevent the likelihood of spread.

The inclusion of weed treatment and prevention practices in public works and timber sale contracts since 1998 and increased funding for weed treatment have increased the likelihood of success in containing and reducing weed infestations throughout the district.

Environmental Consequences

Methodology

Analysis was conducted based on current distribution of weed species in habitats similar to those found in the proposed treatment areas. Floristic surveys conducted by the project botanist and botanical technicians also identified non-native invasive plant species and distribution. The estimation of risk of weed spread and introduction of new weed invaders from the proposed activity is based on peer-reviewed literature, professional judgment of the project botanist, as well as experience in the project area and on similar sites in the IPNF.

Effects of proposed actions on noxious weed spread are dependent upon the amount of forest canopy removal and the degree of soil and/or understory vegetation disturbance. As described earlier with many noxious weed species, greater forest canopy removal equates to more sunlight reaching the forest floor. More sunlight reaching the forest floor creates more favorable conditions in which noxious weeds can grow and dominate. From personal observations, when forest canopy cover is greater than 20 percent, noxious weed cover is less abundant and does not typically expand (Costich-Thompson, 2009-2018.)

The cumulative effects analysis area describes the area beyond which effects of the proposed project cannot be detected. Determination of the cumulative effects area for weeds considered the extent of currently documented weed infestations and likely seed dispersal distances. While patterns of dispersal are not known with certainty for many plant species, in studies of

Botrychium virginianum most spores fell within three meters of the source plant (Peck et al. 1990). Noxious weed species' seeds that are heavier than *Botrychium* spores might be assumed to have similar if not more restricted dispersal patterns. Transport of weed seeds out of the project area is possible, with occasional transport over long distances (such as on vehicles). However, it would be difficult to predict the extent of such long-distance dispersal. It is likely that most seeds of noxious weeds would fall close to the parent plant.

In addition, road systems and lands adjacent to the project area have noxious weed infestations similar in composition and distribution to those in the project area, so transport of weed seeds to these lands from the project area would have little additional impact. For these reasons, the cumulative effects analysis area for noxious weeds is the project area.

Grouse BMU Proposed Action

Alternative 1: No Action Alternative

The No Action Alternative would not preclude activities already approved in this area or activities planned as separate projects. Alternative 1: No Action Alternative provides a baseline of current conditions against which to compare the effects of the action alternative. Under the No Action Alternative, none of the project activities associated with the action alternatives would take place.

Alternative 2: Proposed Action

Road Storage

Approximately 28 miles of road in the project area are proposed to be stored. Only 7.9 miles of roads proposed to be stored are open for public motor vehicle travel from December 1 through March 31. The remaining 21.1 miles of roads proposed for storage are not open to public motor vehicle travel.

Stored roads would no longer be drivable; they would be blocked with an earthen berm or a short section would be recontoured to match the original slope of the land. High-risk drainage structures would be removed and additional drainage, such as waterbars, would be installed. Culverts could be removed with machinery or by using explosives.

Stored roads would be stable, have little surface erosion, and no anticipated maintenance. They would remain part of the Idaho Panhandle's transportation system and could be reopened in the future. Roads stored to meet requirements for grizzly bear core habitat would remain stored for at least ten years. Storage would reduce road maintenance costs and reduce the risk of roads failing and adding sediment to streams.

The existing condition of, and proposed actions for, the roads are described below. Roads not discussed in the proposed action would remain as currently designated on the current motor vehicle use map. The proposed road storage activities are anticipated to begin in the summer or fall of 2018 and continue for approximately 2 to 3 years.

Table 1. Grouse BMU Project Affected Roads

FS Road	Length of Proposed Storage (Miles)	Existing Condition	Proposed Action	Comments From Road Surveys
215	3.8	Gated, but open seasonally to public motorized access from December 1 through March 31.	The first 1.5 miles of the road would remain open seasonally to the public from December 1 through March 31. The remaining miles would be stored and no public motorized access would be allowed.	Road is currently drivable
215A	0.8	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is currently drivable
2236	1	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Brush has been cleared, drivable
2236A	1.9	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Brush has been cleared, drivable
2625C	1	Gated, but open seasonally to public motorized access from December 1 through March 31.	The first 0.3 miles of the road would remain open seasonally to the public from December 1 through March 31. The remaining miles would be stored and no public motorized access would be allowed.	Road is brushed in not drivable.
2636	4.1	Gated, not open to public motorized access	The road would be stored (the portion on NFS lands). No public motorized access would be allowed.	Road is brushed in, may be atv drivable down the middle.
2656B	2.5	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in, may be atv drivable down the middle.
2656B1	0.5	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in, may be atv drivable down the middle.
2656C	1	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in, may be atv drivable down the middle.
2656E	0.8	Gated, but open seasonally to public motorized access from December 1 through March 31.	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable

FS Road	Length of Proposed Storage (Miles)	Existing Condition	Proposed Action	Comments From Road Surveys
2686A	1.9	Gated, but open seasonally to public motorized access from December 1 through March 31.	This road would be stored starting at the NFS boundary. No public motorized access would be allowed.	
2693A	0.4	Gated, but open seasonally to public motorized access from December 1 through March 31.	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable.
2695	3.9	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable.
2742	2.9	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable.
2743	0.8	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable.
2743A	0.3	Gated, not open to public motorized access	This road would be stored. No public motorized access would be allowed.	Road is brushed in not drivable.

Undetermined Roads 215UC, 2236UA, 2656BUA, 2656BUAA, 2636UC, 2686AUB, 2686AUD, 2686AUA, 2686AUC, and 729UV.

Existing condition: Generally impassable. They do not provide legal public access.

Proposed action: Approximately 2.7 miles of undetermined roads would be closed. Proposed work would remove any resource risks associated with these routes, and the road prism would be in an impassable state to discourage illegal use.

The proposed storage action minimizes impacts to other land owners in the project area and impacts to public access (to the extent feasible) while still meeting required Grouse bear management unit standards. TAPs was conducted for this project to assist with identifying roads to be stored to meet standards for the bear management unit. Access for fire protection and future management were the primary reasons roads were stored rather than decommissioned.

Road Re-route and Decommission

The re-route of a section of the Grouse Creek Road (Forest System Road 280) from the bridge over North Fork Grouse Creek to approximately the Wylie Knob trailhead is also proposed. Completion of the Grouse Creek Road re-route is anticipated in the next ten years. However, the re-route would require an agreement with Hancock Forest Management and the landowner, and we would need funding to do the work.

Lower Grouse Creek Road FSR#280 in sections 20, 21, 16, and 15 between North Fork Grouse Creek and Wylie Creek Trailhead has a history of road maintenance problems. Several locations encroach upon the Grouse Creek floodplain and frequently wash out or route flood waters down the road.

The length of the re-route is 2.03 miles, which includes 1.38 miles of road decommissioning, and 1.5 miles of new road construction. The length of existing Grouse Creek road that the reroute replaces is 1.96 miles. As part of the decommissioned length of the re-route, approximately 0.32 miles of decommissioned road through Grouse meadows would be restored, using native vegetation and would have restricted access.

Design Features to Prevent Invasive Species Establishment and Spread

1. Gravel or borrow pits to be used during road construction, reconstruction, storage, or decommissioning activities would be free of new weed invader species (as defined by the IPNF NZ Botanist.) A list of suitable borrow pits (those which either are State-certified as “weed free” or those National Forest System (NFS) borrow pits which are routinely treated for weed control) is included in the project file. A list of weed species considered to be potential new invaders is also included in the project file.
2. Road segments identified for weed treatment and proposed for decommissioning or storage would be treated prior to decommissioning or closure.
3. Weed treatment of all open, drivable roads on NFS lands in the project area would occur prior to ground disturbing activities where feasible. If the timing of ground disturbing activities would not allow weed treatment to occur when it would be most effective, it would occur in the next treatment season following the disturbance.
4. Additionally, prior to decommissioning of the portion of the FSR280 which goes through Grouse Creek meadows, off-road treatment of weeds may also be conducted in accordance with existing weed management protocols/decision documents (i.e. Sandpoint Ranger District Noxious Weed Environmental Impact Statement, Idaho Panhandle Pesticide Discharge Management Plan, Forest Service Best Management Practices, etc.)
5. All associated public works contracts would require cleaning of road maintenance and off-road equipment prior to entry onto NFS lands. If operations occur in areas infested with new invaders (as defined by the IPNF NZ Botanist), all equipment would also be cleaned prior to moving to new sites.
6. All newly constructed roads, staging areas or other areas of disturbance (including cut/fill slopes, as well as maintenance and reconstruction of existing roads) would be seeded with the most current IPNF native, moist site, locally-adapted, certified, weed-free seed mix upon activity completion. (Lists available from the NZ Botanist.) Areas would also be fertilized and/or mulched if deemed necessary by the Soil Scientist or NZ Botanist. Revegetation species utilized should be source-identified, site-appropriate, and genetically-adapted to the project area, when feasible, to comply with FSM 2070. Areas that are underburned would be evaluated by the North Zone Botanist or Forest Soil Scientist after the burn and seeded/revegetated, mulched, and/or fertilized as necessary.
7. When reseeded is necessary, seeding would occur during an appropriate season (spring-March through early June or fall- September through early November) or weather conditions (at least 2 weeks prior to forecasted cooler, wetter weather) to ensure the most effective germination/establishment.
8. If mulching is necessary to reduce erosion potential or in conjunction with watershed restoration activities, all mulch will either be locally-sourced wood straw, engineered oriented wood straw, or certified weed-free grain stubble straw.

9. In addition, in an effort to further reduce potential for illegal, off-road access in Grouse Creek meadow, interpretation and barricades (either rocks, jack-leg fencing, etc.) would be placed adjacent to road decommission points and along the road-to-trail conversion segment (to keep trail users on trail within the meadow).
10. All noxious weed treatment would be conducted according to guidelines and priorities established in the Sandpoint Ranger District Noxious Weed Control Project FEIS (USDA 1998). Methods of control may include biological, chemical, mechanical and cultural. Follow-up treatments and monitoring would be conducted as needed.
11. Any priority weed species (as defined by the IPNF NZ Botanist) identified during project work would be reported to the District Weed Specialist to aid in monitoring and expedite treatment. A list of priority or “new invader” weed species is included in the project file.
12. Monitoring of all project-related access routes on NFS lands would occur during project implementation, so that identified weed infestations would be treated as soon as possible.

Estimated Effectiveness

The above mitigation measures are accepted weed prevention practices developed by public land management agencies and university cooperative extension offices and promoted by weed management organizations across the nation (e.g. Sheley et al. 2002, Drlik et al. 1998, USDA 2001a). The above measures include those required in Forest Service Manual (FSM) 2080 for activities related to timber harvest and roads. They are described in FSM 2981.2- 1a and FSM 2081.2 - 6a, respectively (see project file). Also included are weed prevention practices recommended but not required (see project file).

For new weed invaders, the estimated effectiveness of the above measures is high; the measures are expected to be very effective at preventing establishment of new invaders. According to current research (Hobbs and Humphries 1995), early detection and treatment of infestations before explosive spread occurs can significantly reduce the social cost of weed invasions.

For existing infestations that occur along road rights-of-way, estimated effectiveness is moderate; the measures are expected to be somewhat effective at reducing the spread of these into previously un-infested portions of the project area. For existing infestations that have spread off the road, estimated effectiveness is low. Effectiveness of treatments on NFS lands could be even more reduced if adjacent landowners do not treat their weed infestations. Existing weeds and new invaders are also spread by wildlife, winds, water and hikers – the mitigation measures would have no effect on these sources of weed spread.

Effects Analyses

Effects with regard to noxious weeds from proposed activities are generally described as very low, low, moderate or high, with the following definitions:

- *very low* = no measurable effect on existing weed infestations or susceptible habitat
- *low* = existing weed infestations and/or susceptible habitat not likely affected
- *moderate* = existing weed infestations or susceptible habitat affected, with the potential for expansion into uninfested areas and/or establishment of new invaders
- *high* = weed infestations and/or susceptible habitat affected, with a high likelihood of expansion into uninfested areas and/or establishment of new invaders.

The period for measuring short-term cumulative effects to noxious weeds and susceptible habitat is ten years following completion of the proposed activities, or, in the event of selection of the No Action Alternative, ten years after the date of the signing of the Decision Notice and FONSI. The ten-year period is based on the expected recovery and/or establishment of desired species in disturbed areas. Long-term effects to noxious weeds from loss of canopy cover are addressed below.

The following past, current, ongoing and reasonably foreseeable events apply to the cumulative effects analysis for noxious weeds:

Past Activities and Events

- Large wildfires
- Timber harvest on NFS lands
- Mining activities on NFS lands
- Timber harvest on other ownership lands
- Road and trail construction
- Development on private lands
- Wildfire suppression

Current and Ongoing Activities

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- Timber harvest on NFS lands
- Timber harvest on other ownership lands
- Road and trail maintenance
- Wildfire suppression
- Helispot maintenance
- Development on private lands
- Recreational use on NFS lands

Reasonably Foreseeable Actions

- Road and trail maintenance
- Wildfire suppression
- Helispot maintenance
- Development on private lands
- Recreational use on NFS lands

Effects Common to Both Alternative 1 (No Action) and Alternative 2 (Proposed Action)

With implementation of either alternative, seeds from any weeds on private and Forest System Roads and NFS lands in the project area may still be transported within and out of the area by vehicles, people, birds, wildlife, wind, and even potentially free-flowing water.

Existing weed population spread and the likelihood of new weed introductions on roads not proposed for treatment in the project area would be affected by either the no action or proposed

action alternative. Additionally existing weed populations which are present off-road would not be influenced by either the no action or proposed action alternative.

Effects Specific to Alternative 2 (Proposed Action)

The Grouse BMU project would implement approximately 28 miles of road storage, 1.38 miles of road decommissioning, and 1.5 miles of new road construction activities. Storage and decommissioning activities generally involve removal of culverts and drainage structures, closure device installation (rocks, berms, gates, or other barriers), and in some cases, short distances of slope re-contouring. Decommissioning activities may also include ripping (or decompacting) of the road prism where necessary, re-distributing slash and debris on the road prism, as well as revegetation and meadow restoration efforts. New road construction activities include clearing trees and vegetation, completely disturbing a swath of vegetation and soils to build a road prism (cut bank, travelway, and fill slope) of varying widths (depending upon side slope), and installing drainage structures to allow water to drain away from the road.

The proposed storage and decommissioning activities would result in soil disturbance within existing road prisms, many of which are currently occupied by many widespread weed species. Design features would require that prior to storage or decommissioning treatments, these roads would incur at least one herbicide weed treatment to try to control existing weed populations on the prism. Following storage or decommissioning activities, these roads would be effectively closed to motor vehicles, limiting that future source of new weed species introductions. Although design features include cleaning of all project-related equipment, there is a slight, but unlikely potential that the activities could result in new weed introductions. Because of the future state of these old prisms as stored or decommissioned, future weed monitoring may be more time consuming. If new weed introductions occur along these segments, any future weed treatment would need to occur through the use of backpack spraying, because the segments will no longer be accessible to typical motor vehicle-mounted weed sprayers. However, as these stored and decommissioned road prisms begin to revegetate and recover, natural successional processes will likely lead to increased site occupation by native plants (grasses, forbs, shrubs, and eventually trees). These natural succession processes will slowly result in increased shade and lead to long term decreases to soil disturbance in those areas. As a result, eventually new weed introductions and spread of existing weed infestations will likely be reduced.

The new road construction proposed as part of the Grouse BMU project would not only remove a swath of trees and vegetation (of approximately five acres), but also would result in substantial soil displacement or removal. By increasing solar insolation to this site (which is currently undisturbed) and causing soil disturbance, new weed establishment in this location is highly likely to occur initially. Additionally, this new road segment will likely serve as a new, high use vehicle corridor. This type of high use will undoubtedly lead to a higher potential for new weeds to be inadvertently introduced to this specific site. Once established, weeds would continue to spread up and down along the road, which is a conduit of continuous soil disturbance. However, because this new road construction segment would serve as part of the FSR280 re-route, the agency would continue to treat weeds along this road, according to the district's weed management decision document and federal policy. Therefore, this new road segment is not likely to incur any higher or more severe weed infestations than the existing route.

Based on past monitoring (see project file), successful weed treatment would remove the majority of new seed source for existing weed infestations, which occurs on roadsides, and would slow the spread of existing weed infestations along open roads (including newly constructed roads) within the project area. These weed treatments would also likely slow spread of existing weed populations which are present along roads proposed for storage or decommissioning.

Continued treatment of existing weeds along open routes on NFS lands and those routes proposed for road storage or decommissioning would also reduce the risk of weed spread. Contract requirements to clean project-related equipment prior to entry into the project area would further reduce the risk of introduction of new weed species. The risk of introduction and establishment of new weed invaders to the project area is expected to be low with implementation of the required design features.

Preventive seeding of native and desired nonnative species in areas of new disturbance would reduce, but would not eliminate, the risk of weed spread from existing weed populations.

Past Activities and Events

Past wildfires, mining activities, timber harvest and road and trail construction provided areas of soil disturbance and/or changes to vegetation and forest canopy cover, enabling invasion by non-native plant species, including noxious weeds. Because of inadequate past weed prevention and control practices, the effects of these activities on noxious weed spread are still evident.

Current (Ongoing) and Reasonably Foreseeable Activities

Road maintenance activities may result in ground disturbance that would be conducive to the spread of existing weed populations. The current levels of weed treatment and monitoring on Forest System roads in the project area would help reduce the risk of weed spread from these activities.

Road maintenance activities are managed by previous policy, and the effects of road maintenance from either alternative would therefore be the same. Effectively, road maintenance activities described under these alternatives would result in no soil disturbance or changes to forest canopy cover outside of the existing road prisms already in place.

Ongoing road maintenance activities have the potential to affect weeds in the project area through three modes. First, road maintenance equipment (although required to be effectively cleaned, as per Design Features for each alternative) has the potential to accidentally provide a vector from weed infestations outside the project area to previously un-infested lands within the project area. Second, soil disturbance intrinsic to road maintenance (blading, ditch-pulling, etc.) displaces existing vegetation and exposes bare mineral soil, creating suitable habitat for establishment of non-native species, including noxious weeds. Finally, the act of road maintenance along a road corridor has the potential to spread existing populations of weeds from one point along the road to new, previously un-infested areas.

Ongoing trail and helispot maintenance will continue to both cause minor soil disturbance, but also maintain those specific sites in early ecological succession phases. Both soil disturbance and high solar insolation (associated with early successional phases) tend to increase likelihood of new weed establishment and spread of existing weed infestations.

Wildfire suppression will continue under either alternative. Such suppression efforts usually include fireline construction (which exposes bare mineral soil) or firebreak construction (which usually through burning or mechanical vegetation removal both decreases forest canopy cover and also exposes bare mineral soil.) Both of these suppression tactics usually increase potential for weed spread.

Recreational use on public lands in the project area will undoubtedly continue regardless of alternative selection. Recreational use generally increases the potential for new weed

introductions, as well as noxious weed dispersal and spread. Noxious weed education efforts at trailheads throughout the forest continue to serve as the only mitigation for this activity.

Noxious weed treatment and monitoring would follow guidelines and priorities established in the commensurate district's noxious weed control policy (USDA 1995 and USDA 1998.) Treatment of Forest System roads in the project area would likely continue to protect previous investments.

Summary of Cumulative Effects

When combined with all of the above activities and design features, cumulative effects to *existing weed infestations* resulting from road storage or decommissioning activities as part of the Grouse BMU project are expected to be low to moderate. Cumulative effects to *existing weed infestations* resulting from new road construction activities as part of the Grouse BMU project are expected to be moderate. Small or isolated weed populations adjacent to the road prisms of oxeye daisy, common tansy, Canada thistle, sulfur cinquefoil, and hawkweeds in the project area will continue to be managed and controlled according to each district's noxious weed control policy.

When combined with all of the above activities and design features, cumulative effects to *new weed introductions or potential for new weed invader establishment* in the project area resulting from road storage and decommissioning activities as part of the Grouse BMU project are expected to be low. Cumulative effects to *new weed introductions or potential for new weed invader establishment* in the project area resulting from new road construction activities as part of the Grouse BMU project are expected to be moderate.

Compliance with the Forest Plan and Other Regulatory Direction

The Forest Service Manual (FSM), Chapter 2900 directs a strategy for managing invasive species, including noxious weeds, using five primary objectives: prevention, early detection rapid response (EDRR), control and management, restoration, and collaboration with other organizations.

According to IPNF Forest Plan (USDA 2015) direction, a desired condition (FW-DC-VEG-10) is that "newly invading, non-native invasive plant species are treated and populations are contained or eradicated. The weed program on the Forest uses integrated pest management approaches, including prevention and control measures that limit introduction, intensification, and spread due to management activities. Agreements and cooperatives weed management areas assist in control efforts across jurisdictional boundaries." To that end, an objective (FW-OBJ-VEG-02) specifies that every decade: a) all sites that are discovered with newly-invading non-native invasive species are treated; and b) treatment of approximately 15,000 to 30,000 acres to reduce non-native invasive plant density, infestation size, and/or occurrence.

The Grouse BMU proposed activities help make progress towards achieving forest plan desired condition (FW-DC-VEG-10) by incorporating integrated pest management approaches, including prevention, through project design, to prevent new weed species from becoming established. Furthermore, implementation of the proposed activities (including more comprehensive treatment areas in the project area), along with ongoing weed management treatments in the area, as well as collaborative pest management actions with cooperators, will help to treat newly-documented occurrences of new invaders and existing infestations of widespread weed species in the project

area and will allow the District to make progress towards achieving FW-OBJ-VEG-02, as well as adhere to FSM2900 direction.

Executive Order 13112 defines [noxious weed] control "...as appropriate, eradicating, suppressing, reducing, or managing invasive species populations, preventing spread of invasive species from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further infestations" (E.O. 13112, Section 1B). The proposed activities align with this Executive Order both by enacting measures to prevent new weed establishment, and also by taking steps to pro-actively monitor for new weed introductions or spread from existing weed infestations, so that treatments can be implemented effectively to prevent new introductions from spreading.

At the project level, noxious weeds have been identified and weed prevention measures incorporated into the proposed activities. The potential for weed spread was disclosed for the proposed actions.

Mitigation measures described above to reduce the risk of weed spread (see Design Features, page 11-12) are as required in Forest Service Manual Chapter 2900 (USDA Forest Service 2011.) FSM requirements and regulations related to noxious weeds are included in the project file.

According to Executive Order 13112 (1999), "Federal agencies whose actions may affect the status of invasive species, shall, to the extent practicable and permitted by law, identify such actions; subject to the availability of appropriations and within Administration budgetary limits, use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and (vi) promote public education on invasive species and the means to address them; and not authorize, fund or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species...unless...the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

Noxious weed management within the Grouse BMU project area (the proposed action), as directed by Federal and State laws, as well as both the Sandpoint Ranger District Noxious Weed Control Project FEIS (USDA 1998) and Bonners Ferry Ranger District Noxious Weeds Control Project FEIS (USDA 1995), meets full compliance with the Federal "Policy of Noxious Weed Management" (P.L. 93-629), the Federal Noxious Weed Act of 1974, Idaho Code 24 Chapter 22, and Executive Order 13112.

Because the Council for Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) require Federal agencies to "Integrate the requirements of National Environmental Policy Act (NEPA) with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively" (40 CFR Sec. 1500.2), the Sandpoint and Bonners Ferry Ranger District's respective noxious weed control decision documents (USDA 1998 and USDA 1995) were designed to coordinate and implement all pertinent federal and state laws

and procedures concurrently. Therefore, the districts' noxious weed control projects and the Grouse BMU project comply with the United States Code of Federal Regulation 40 CFR 1500.2.

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