

**ATTACHMENT P1-5**

**UPDATED REVISED DRAFT NOXIOUS WEED PLAN**

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## Draft Noxious Weed Plan

### Boardman to Hemingway Transmission Line Project



1221 West Idaho Street  
Boise, Idaho 83702

September 2018; July 2020 (Modified by Oregon Department of Energy during ASC – PO Phase); November 2021 (Modified by Idaho Power during Contested Case Phase)

## Agency Review Process

The agency review process outlined in this section aligns with the OAR 345-025-0016 agency consultation process applicable to monitoring and mitigation plans.

As described in the draft Noxious Weed Plan, the certificate holder, or its contractor(s), will develop preconstruction noxious weed inventories and will control and treat weed prior to, during and after construction. The draft Noxious Weed Plan will be finalized, as described throughout the plan. In addition, the plan may be amended at any time during construction, subject to the agency review process outlined below.

To afford an adequate opportunity for applicable local, state and federal agencies to review the draft plan prior to finalization and implementation, and any future plan amendments, the certificate holder shall implement the following agency review process.

Step 1: Certificate Holder's Update of Draft Plan or Future Plan Amendment: The certificate holder may develop one Noxious Weed Plan to cover all noxious weed control activities for the entire facility; or, may develop individual plans per county, segment or phase, as best suited for facility construction. Based on the draft Noxious Weed Plan included as Attachment P1-5 of the Final Order on the ASC, the certificate holder shall update the draft plan(s) based on the final facility design and agency review. If the plan(s) are amended following finalization, the certificate holder shall clearly identify and provide basis for any proposed changes.

Step 2: Certificate Holder and Department Coordination on Appropriate Review Agencies and Agency Review Conference Call(s): Prior to submission of the updated draft plan, or any future amended plans, the certificate holder shall coordinate with the Department's Compliance Officer to identify the appropriate federal, state and local agencies to be involved in the plan review process. In this instance, "appropriate" federal agencies are based on landownership where facility components would be sited. "Appropriate" local agencies include the local planning department of the jurisdiction where facility components would be sited. Once appropriate federal, state and local agency contacts are identified by the Department and certificate holder, the Department's Compliance Officer will initiate coordination between agencies to schedule review/planning conference call(s). The Department and certificate holder may agree to schedule separate conference calls per county.

The intent of the conference call(s) are to provide the certificate holder, or its contractor, an opportunity to describe details of the updated draft or amended plan; and, agency plan review schedule. Agencies may provide initial feedback on requirements to be included in the plan during the call, or may provide written comments during the 14-day comment period. The Department will request that any comments provided be supported by an analysis and local, state or federal regulatory requirement (citation).

The certificate holder may coordinate with appropriate review agencies, in advance of or outside of the established agency review process; however, this established agency review process is necessary under OAR 345-025-0016 and may result in more efficient plan finalization and amendment if managed in a consolidated process, utilizing the Department's Compliance Officer as the lead Point of Contact.

- Step 3: Agency Review Process: Either with, or prior to, the agency conference call(s), the certificate holder shall distribute electronic copies of the draft, or future amended, plan(s) requesting that the Department coordinate agency review comments within 14-days of receipt, or as otherwise determined feasible. Following the 14-day agency review period, the Department will consolidate comments and recommendations into the draft, or amended, plan(s), using a Microsoft Word version of the plan provided by certificate holder. Within 14-days of receipt of the agency review comments, the certificate holder shall provide an updated final version of the plan, incorporating any applicable regulatory requirements, as identified during agency review or must provide reasons supporting exclusion of recommended requirements. Final plans will be distributed to applicable review agencies by the Department, including the certificate holder's assessment of any exclusions of agency recommendations, and a description of their opportunity for dispute resolution.
- Step 4: Dispute Resolution: If any review agency considers the final, or amended, plan(s) not to adhere to applicable state, federal or local laws, Council rules, Council order, or site certificate condition or warranty, the review agency may submit a written request of the potential violation to the Department's Compliance Officer or Council Secretary, requesting Council review during a regularly scheduled Council meeting. The Council would, as the governing body, review the violation claim and determine, through Council vote, whether the claim of violation is warranted and identify any necessary corrective actions.

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## ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
BOR	Bureau of Reclamation
DOI	Department of the Interior
EFSC	Energy Facility Siting Council
GPS	Global Positioning System
IPC	Idaho Power Company
kV	kilovolt
O&M	operation and maintenance
ODA	Oregon Department of Agriculture
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statute
OSWB	Oregon State Weed Board
Plan	Noxious Weed Plan
Project	Boardman to Hemingway Transmission Line Project
PUP	Pesticide Use Proposal
ROW	right-of-way
SPCC	Spill Prevention, Control, and Countermeasures
USFS	United States Forest Service

## 1.0 INTRODUCTION

### 1.1 Background

Idaho Power Company (IPC) is proposing to construct and operate approximately 296.6 miles of new transmission line known as the Boardman to Hemingway Transmission Line Project (Project). The Project will include a 500-kilovolt (kV) single-circuit line, rebuilding of a portion of a 230-kV transmission line, rebuilding of a 138-kV transmission line, and a removal of a portion of an existing 69-kV transmission line between Boardman, Oregon, and the Hemingway Substation (located approximately 30 miles southwest of Boise, Idaho). The Project includes ground-disturbing activities associated with the construction of above-ground, single- and double-circuit transmission lines involving towers, access roads, multi-use areas, light-duty fly yards, pulling and tensioning sites as well as associated stations, communication stations, and electrical supply distribution lines.

The Project area, or Site Boundary, as defined in Oregon Administrative Rule 345-001-0010(55) includes “the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micro-siting corridors proposed by the applicant.” The Site Boundary for this Project includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B, and the location of the Project features and the Site Boundary is described in Exhibit C and Table C-24. The location of the Project features and the Site Boundary is outlined in Exhibit C.

This Noxious Weed Plan (Plan) includes a discussion of 1) the Plan purpose, goals, and objectives, 2) the regulatory framework, 3) current status of noxious weeds within the Site Boundary, 4) noxious weed management practices, 5) monitoring and reporting, and 6) herbicide application, handling, and cleanup.



## 1.2 Purpose

Invasive plant species are non-native, aggressive plants with the potential to cause significant damage to native ecosystems and/or cause significant economic losses. Invasive plants are opportunistic plant species that readily flourish in disturbed areas, are difficult to control, and thereby, can compete with and/or prevent native plant species from re-establishing. Invasive plants are a concern for federal, state, and local agencies because of their potential to degrade wildlife habitat, reduce native plant diversity, adversely affect agricultural production, and impact the general ecological health and diversity of native ecosystems. Noxious weeds are a subset of invasive plants that are officially designated by a federal, state, or local agency as injurious to public health, agriculture, recreation, wildlife, or property (Sheley and Petroff 1999).

Soil disturbances, such as those caused by the construction and operation and maintenance (O&M) of the Project, could result in the establishment of new populations and spread of existing populations of noxious weeds. The purpose of this Noxious Weed Plan is to describe the measures IPC will undertake to control noxious weeds ~~s species~~ and prevent the introduction of these species prior to construction and during construction and O&M of the Project. It is the responsibility of IPC and the Construction Contractor(s), working with the appropriate land management agencies and the Oregon Department of Energy (ODOE), to ensure noxious weeds are identified and controlled during the construction and O&M of Project facilities and that all federal, state, county, and other local requirements are satisfied.

This Plan is applicable Project-wide, and it is expected ~~that~~ modifications to this Plan will be made once final Project design is complete and agreements are reached with applicable federal and state land management agencies and ODOE, as well as with counties and individual landowners. The Final Noxious Weed Plan (see Section 7.0) will meet the standards of all applicable federal and state land management agencies, ODOE, as well as county weed boards.

Measures that will be taken to restore areas that have been impacted by construction activities are discussed in the Reclamation and Revegetation Plan (Exhibit P1, Attachment P1-3). Methods in which vegetation along the transmission line will be managed during O&M of the Project are described in the Vegetation Management Plan (Exhibit P1, Attachment P1-4).

## 1.3 Goals and Objectives

The goal of this Plan is to describe methods for early detection, containment, and control of noxious weeds that will be implemented during Project construction and operation. This Plan describes the known status of noxious weeds ~~s species~~ within the Site Boundary, the regulatory agencies responsible for the control of noxious weeds, and steps IPC will take in controlling and preventing the establishment and spread of noxious weeds ~~s species~~ during Project construction and O&M activities. General preventive and treatment measures are described in Section 4.0 of this Plan. Monitoring (Section 5.0) to evaluate ~~of the~~ effectiveness of the prescribed noxious weed prevention and control measures will be implemented during the operational phase of the Project. In addition to providing updated information, the final Noxious Weed Plan (Section 7.0) will include information on locations of significant noxious weed populations within the Project construction footprint and proposed treatment methods, as applicable.

The objectives of this Plan and the focus of IPC's noxious weed control efforts will be to prevent and control the spread of new infestations resulting from Project activities. While this Noxious Weed Plan discusses noxious weeds across the entirety of the Site Boundary, for Energy Facility Siting Council (EFSC) purposes, IPC will only be responsible for the control of noxious weeds ~~that are~~ within Project rights-of-way (ROW) and that are a result of the company's

construction- or operation-related, surface-disturbing activities. For EFSC purposes, IPC is not responsible for controlling noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weeds ~~species~~ that were present prior to the Project. With respect to pre-existing noxious weed infestations, IPC recognizes Oregon Revised Statute (ORS) Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

Goals, objectives, and noxious weed control activities for the Project include:

- Inventory the existing occurrence, distribution, and abundance of noxious weeds in the Project ROW prior to construction;
- Monitor and document the occurrence, distribution, and abundance of noxious weeds in the Project ROW following the completion of construction activities along each Project segment;
- Reduce infestations of noxious weeds caused by Project-related activities and prevent the spread of new and existing populations within the Project ROW both during construction as well as operations of the Project;
- Ensure any occurrences of threatened and endangered plants along the transmission line are not negatively impacted by noxious weed-control activities by including site-specific planning where needed; and
- Coordinate and consult with appropriate land-management personnel, as appropriate, regarding noxious weed inventory and control activities conducted by IPC.

## 2.0 REGULATORY FRAMEWORK

The following provides a brief overview of federal and state legislation and regulatory compliance applicable to noxious weeds that have been considered in development of this Plan.

### 2.1 State of Oregon

In Oregon, noxious weeds are defined under ORS 569.175 as “terrestrial, aquatic, or marine plants designated by the State Weed Board under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs.” Noxious weeds have been declared by ORS 569-350 as a menace to public welfare and control of these plants is the responsibility of private landowners and operators, and county, state, and federal governments. The Oregon State Weed Board (OSWB) was established under ORS 561.650. The OSWB provides direction to control noxious weeds at the state level and develops and maintains the State Noxious Weed List. The OSWB and the Oregon Department of Agriculture (ODA) classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System (ODA 2016a). There are three designations under the State’s system:

- **Class “A” State Listed Noxious Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or /containment possible; or is not known to occur in Oregon, but its presence in neighboring states makes future occurrence seem imminent.
- **Recommended action:** Infestations are subject to eradication or intensive control when and where found.

- **Class “B” State Listed Noxious Weed:** A weed of economic importance that is regionally abundant but may have limited distribution in some counties.
- **Recommended action:** Limited to intensive control at the state, county, or regional level as determined on a site-specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.
- **Class “T” Designated State Noxious Weeds:** Priority noxious weed species selected and designated by the OSWB as the focus of prevention and control actions by the Noxious Weed Control Program. “T”-designated noxious weeds are selected annually from either the “A” or “B” list and the ODA is directed to develop and implement a statewide management plan for these species.

In addition to the state-listed noxious weeds, the five Oregon counties crossed by the Project (Baker, Malheur, Morrow, Umatilla, and Union) each maintain a county-designated noxious weed list. These lists also classify noxious weeds into different categories (typically Class A, B, and C); however, the definition of each class differs slightly from the state classification system and differs slightly by county. IPC will review the state and county lists on a regular basis annually to ensure that monitoring and control actions are targeting the appropriate species. Recommended actions for noxious weeds in the five Oregon counties crossed by the Project are as follows:

- **Class “A” County Noxious Weed:** Recommended for mandatory control county-wide in Baker, Malheur, and Morrow counties and subject to intensive control where found in Umatilla and Union counties.
- **Class “B” County Noxious Weed:** Recommended for moderate to intensive control at the county level in Baker County; subject to intensive control or eradication where feasible at the county level in Malheur and Morrow counties; limited to intensive control county-wide as determined on a case-by-case basis in Umatilla County; recommended for moderate control and/or monitoring at the county level in Union County.
- **Class “C” County Noxious Weeds:** Recommended for moderate control at the county level in Baker County; treated at landowner’s discretion in Malheur County. Morrow, Umatilla, and Union counties do not currently list Class C noxious weeds.
- Baker, Malheur, Morrow, Umatilla, and Union county weed management agencies were contacted to inquire about noxious weed species of highest-greatest concern in each of the counties, as well as to determine if each county requires or implements specific noxious weed control methods or best management practices. No specific best management practices were requested by any of the county weed management personnel contacted.

## 2.2 Federal Noxious Weed Act of 1974 (as amended 1990)

The Federal Noxious Weed Act of 1974 (7 United States Code 2801-2813) 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.” This act directs each federal agency to develop and coordinate a management program for control of undesirable plants on federal lands under the agency’s jurisdiction.

## 2.3 Executive Order 13112

Executive Order 13112 (1999) directs federal agencies to: (1) identify actions that may affect the status of an invasive species; (2)(a) prevent introduction of such species; (b) detect and control

such species; (c) monitor population of such species; (d) provide for restoration of native species; (e) conduct research on invasive species and develop technologies to prevent introduction of such species; (f) promote public education of such species; and (3) not authorize, fund, or carry out actions likely to cause the introduction or spread of invasive species in the United States or elsewhere unless the benefits of the action clearly outweigh the harm and the agencies take steps to minimize the harm.

## **2.4 U.S. Department of Agriculture, Forest Service**

United States Forest Service (USFS) Manual 2900 - Invasive Species Management directs each Forest Supervisor to “manage aquatic and terrestrial invasive species (including vertebrates, invertebrates, plants, and pathogens)” on all National Forest System lands. Per the manual, invasive species management activities of National Forest System lands will be conducted according to the following objectives: 1) prevention, 2) early detection and rapid response, 3) control and management, 4) restoration, 5) organizational collaboration. Additionally, the Decision Memo for Forest Plan Amendment #48 (USFS 2017) outlines the use of the 11 herbicides approved for use on the Wallowa-Whitman National Forest.

## **2.5 Bureau of Land Management**

The Bureau of Land Management (BLM) defines a noxious weed as “a plant that interferes with management objectives for a given area of land at a given point in time.” BLM Manual 9015 (BLM 1992) directs the BLM to manage noxious weeds and undesirable plants on BLM lands by preventing establishment and spread of new infestations, reducing existing population levels, and managing and controlling existing stands. Required management for ground-disturbing actions includes determining the risk of spreading noxious weeds associated with the project and ensuring contracts contain provisions which hold contractors responsible for the prevention and control of noxious weeds caused by their operations if the activity is determined to be moderate to high risk. Additionally, herbicide treatment of noxious weeds on BLM lands in Oregon follows the guidelines outlined in the Decision Record for Integrated Invasive Plant Management for the Vale District (BLM 2016a). The district-wide decision identified 17 herbicides available for use on BLM lands crossed by the Project.

## **2.6 Bureau of Reclamation**

The Bureau of Reclamation (BOR) is responsible for identification and proper management of pests on BOR lands in accordance with federal, state, and local policies, laws, and standards. The BOR’s Reclamation Manual (BOR 1996a, 1996b) includes standards and directives for pest management and Integrated Pest Management (Reclamation Manual ENV-01). Additionally, the Department of the Interior (DOI) Departmental Manual (609 DM 1; DOI 1995) states that “it is the DOI’s policy to control undesirable plants on the lands, waters, or facilities under its jurisdiction to the extent economically practicable and as needed for resource/environmental protection and enhancement, as well as the accomplishment of resource management objectives and the protection of human health.” This manual also provides directives and standards for control of undesirable plants and implementation of Integrated Pest Management programs on DOI lands including BOR land. In keeping with this policy, the use of Integrated Pest Management techniques is emphasized. These techniques combine the use of chemical controls (pesticides), mechanical controls (mowing, pulling), environmental controls (cultural methods), and biological controls (insects).

### 3.0 NOXIOUS WEEDS IN THE SITE BOUNDARY

This section of the Plan describes the known status of noxious weed species within the Site Boundary based on existing information, as well as results of field surveys of the Site Boundary. Section 3.1 discusses the state of Oregon listed noxious weeds that have the potential to occur in the counties crossed by the Project. Section 3.2 discusses the noxious weeds species identified within the Site Boundary based on existing BLM and USFS databases and those observed during field surveys.

#### 3.1 Oregon State Noxious Weeds Lists

The ODA updates the state of Oregon noxious weed list each year (ODA 2016a). Currently, ~~140~~34 plant species are listed as noxious in Oregon. As stated above, in addition to the state list of noxious weeds, the five Oregon counties crossed by the Project each maintain a county designated noxious weed list.

Table 1 lists the Oregon state listed noxious weeds known to occur within the counties that will be crossed by the Project. This list is based on information obtained from publicly available sources including the Oregon WeedMapper (ODA 2016b), Oregon Noxious Weed Profiles (ODA 2016c), the INVADERS database (University of Missoula-Montana 2016), and the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS database (NRCS 2016). Based on these sources, 91 state and/or county listed noxious weed species have the potential to occur within the Site Boundary (Table 1).

**Table 1. Designated Noxious Weeds Known to Occur or with the Potential to Occur within the Site Boundary**

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Abutilon theophrasti</i>	Velvetleaf	B	<del>B (Baker, Union)–</del>	<del>Baker, Union</del>
<i>Acroptilon repens</i> ( <i>Centaurea repens</i> )	Russian knapweed	B	A (Union) B (Baker, Malheur <sup>3</sup> , Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Aegilops cylindrica</i>	Jointed goatgrass	B	A (Baker, Malheur) B (Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Ailanthus altissima</i>	Tree of heaven	B	<del>B (Baker)–</del>	Baker, Malheur, Morrow, Umatilla, Union
<i>Alhagi maurorum</i> ( <i>A. pseudalhagi</i> )	Camelthorn	A	A (Malheur, Umatilla)	Umatilla
<i>Alliaria petiolata</i>	Garlic mustard	B, T	<del>A (Union, Umatilla)–</del>	Umatilla
<i>Ambrosia artemisiifolia</i>	Ragweed	B	B (Umatilla) C (Malheur)	Malheur, Morrow, Umatilla, Union
<i>Amorpha fruticosa</i>	<del>False i</del> ndigo bush	B	<del>B (Baker)–</del>	Baker, Malheur, Morrow, Umatilla
<i>Anchusa officinalis</i>	Common bugloss	B, T	A (Union, <del>Umatilla</del> ) <del>Watch List</del> <sup>4</sup> B (Baker)	Baker, Umatilla, Union
<del><i>Avena fatua</i></del>	<del>Wild-oat</del>	<del>–</del>	<del>C (Union)</del>	<del>Union</del>
<i>Bassia scoparia</i> ( <i>Kochia scoparia</i> )	Kochia; burning bush	B	B (Morrow, Umatilla) Agricultural Class B <sup>5</sup> (Union) C ( <del>Baker</del> , Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Bromus tectorum</i> <sup>6</sup>	Cheatgrass	–	C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Buddleja davidii</i> ( <i>B. variabilis</i> )	Butterfly bush	B	<del>A (Baker)–</del>	Umatilla
<i>Butomus umbellatus</i>	Flowering rush	B, T	<del>A/T (Baker)–</del>	Umatilla
<i>Cannabis sativa</i>	Marijuana	–	A (Umatilla)	Malheur
<i>Cardaria chalapensis</i> ( <i>Lepidium chalapensis</i> )	Lens-podded whitetop	B	<del>B (Baker, Malheur)–</del>	Malheur



Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Cardaria draba</i> ( <i>Lepidium draba</i> )	Whitetop; hoary cress	B	A (Baker <sup>z</sup> , Morrow, Union) B (Baker <sup>z</sup> , Malheur, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Carduus nutans</i>	Musk thistle	B	A (Morrow) B ( <del>Baker</del> , Malheur, Umatilla) <del>Watch List</del> ( <del>Baker</del> )	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea calcitrapa</i>	Purple starthistle	A, T	A ( <del>Baker</del> , Malheur, Umatilla)	Umatilla
<i>Centaurea diffusa</i>	Diffuse knapweed	B	A (Baker, Malheur, <del>Morrow</del> ) B ( <del>Morrow</del> , Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea nigrescens</i> ( <i>C. debeauxii</i> ; <i>C. jacea</i> x <i>nigra</i> ; <i>C. pratensis</i> )	Meadow knapweed Short-fringe knapweed	B	A (Malheur, Union)	Baker, Umatilla, Union
<i>Centaurea solstitialis</i>	Yellow starthistle	B	A (Baker, Malheur, Morrow, Union) B (Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea stoebe</i> subsp. <i>micranthos</i> ( <i>C. maculosa</i> )	Spotted knapweed	B, T	A (Baker, Malheur, Umatilla) B (Morrow, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Centaurea virgata</i> ( <i>C. triumphetti</i> )	Squarrose knapweed	A, T	A (Malheur)	Baker, Malheur, Union
<i>Centromadia pungens</i> subsp. <i>pungens</i> <sup>8</sup> ( <i>Hemizonia pungens</i> )	Spikeweed; common tarweed	B	A ( <del>Baker</del> , Morrow)	Morrow, Umatilla
<i>Ceratocephala testiculata</i> ( <i>Ranunculus testiculatus</i> )	Bur buttercup	–	<del>A (Umatilla)</del> C (Baker)	Baker, Malheur, Morrow, Umatilla, Union
<i>Chondrilla juncea</i>	Rush skeletonweed	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cichorium intybus</i>	Chicory	–	B (Baker)	Morrow, Umatilla, Union
<i>Cicuta douglasii</i> <sup>9</sup>	Water hemlock	–	B (Morrow) <del>C (Baker)</del>	Malheur, Morrow, Umatilla, Union
<i>Cirsium arvense</i>	Canada thistle	B	B ( <del>Baker</del> , Malheur, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union

			Morrow, Umatilla, Union)	
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Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Cirsium vulgare</i>	Bull thistle	B	B (Baker) Agricultural Class B <sup>5</sup> (Union) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Conium maculatum</i>	Poison hemlock	B	A (Baker) B (Morrow, Umatilla) Agricultural Class B <sup>5</sup> (Union) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Convolvulus arvensis</i>	Field bindweed	B, T	B (Baker, Morrow, Umatilla) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Conyza canadensis</i> <sup>9</sup>	Horseweed; mares tail	–	A (Baker) Agricultural Class B <sup>5</sup> (Union)	Malheur, Union
<i>Crupina vulgaris</i>	Common crupina	B	A (Baker, Malheur, Morrow, Union, Umatilla)	Baker, Umatilla
<i>Cuscuta</i> spp.	Dodder	B	B (Baker, Morrow, Umatilla) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cynoglossum officinale</i>	Houndstongue	B	A (Baker, Morrow) <del>Agricultural Class B<sup>5</sup></del> <del>(Union)</del> B (Malheur, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Cyperus esculentus</i>	Yellow nutsedge	B	C (Malheur)	Malheur, Morrow, Umatilla
<i>Cytisus scoparius</i>	Scotch broom	B	A (Union)	Baker, Umatilla, Union
<i>Datura stramonium</i>	Jimsonweed	–	A (Malheur)	Morrow, Union
<i>Dipsacus fullonum</i>	Fuller's teasel	–	B (Baker)	Baker, Morrow, Umatilla, Union
<i>Elymus repens</i> ( <i>Agropyron repens</i> )	Quackgrass	–	B (Umatilla) Agricultural Class B <sup>5</sup> (Union) C (Malheur)	Malheur, Umatilla
<i>Equisetum arvense</i> <sup>9</sup>	Western horsetail	–	C (Malheur)	Baker, Malheur, Umatilla, Union



<i>Euphorbia esula</i>	Leafy spurge	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Euphorbia myrsinites</i>	Myrtle spurge	B	<del>A (Umatilla, Union)</del> B (Baker, Morrow)	Baker, Malheur, Morrow, Umatilla, Union
<i>Galium aparine</i> <sup>9</sup>	Catchweed bedstraw	–	Agricultural Class B <sup>5</sup> (Union)	Baker, Malheur, Morrow, Umatilla, Union

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Halogeton glomeratus</i>	Halogeton	B	C (Malheur)	Malheur
<i>Hedera helix</i>	English ivy	B	–	Union
<i>Hibiscus trionum</i>	Venice mallow	–	B (Baker)	Malheur
<i>Hieracium aurantiacum</i> ( <i>Pilosella aurantiacum</i> )	Orange hawkweed	A, T	A (Union)	Morrow, Union
<i>Hieracium caespitosum</i> ( <i>H. pratense</i> ; <i>Pilosella caespitosum</i> )	Meadow hawkweed	B, T	A (Union)	Umatilla, Union
<i>Hieracium piloselloides</i> ( <i>Pilosella piloselloides</i> )	King-devil hawkweed Tall hawkweed	A	A (Union)	Umatilla
<i>Hyoscyamus niger</i>	Black henbane	–	A (Baker)	Baker, Morrow, Umatilla
<i>Hypericum perforatum</i>	St. Johnswort; Klamathweed	B	A (Malheur) <del>Agricultural Class B<sup>5</sup> (Union)</del> B (Baker, Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union
<i>Iris pseudacorus</i>	Yellow flag iris	B	A (Baker, <del>Morrow, Union</del> Umatilla) <del>B (Union)</del>	Baker, Malheur, Umatilla, Union
<i>Isatis tinctoria</i>	Dyer's woad	B	A (Malheur) <del>Watch List<sup>4</sup> (Baker)</del>	Baker, Malheur, Umatilla, Union
<i>Lathyrus latifolius</i>	Perennial peavine	B	–	Baker, Morrow, Umatilla, Union
<i>Lepidium latifolium</i>	Perennial pepperweed	B, T	A (Baker, Malheur <sup>10</sup> , Union) B (Malheur <sup>10</sup> , Morrow, Umatilla)	Baker, Malheur, Morrow, Umatilla, Union

<i>Linaria dalmatica</i>	Dalmation toadflax	B, T	A (Baker, Malheur, Morrow) B (Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Linaria vulgaris</i>	Yellow toadflax	B	A (Malheur, Morrow) B (Baker)	Baker, Morrow, Umatilla, Union
<i>Lythrum salicaria</i>	Purple loosestrife	B	A (Baker, Morrow, Umatilla) B (Malheur, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Melilotus officinalis</i>	Sweet clover	–	C (Malheur)	Baker, Malheur, Umatilla, Union
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	B	-	Morrow, Umatilla, Union

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Onopordum acanthium</i>	Scotch thistle	B	A (Baker, Morrow) B (Malheur, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union
<i>Orobanche minor</i>	Small broomrape	B	–	Baker
<i>Panicum miliaceum</i>	Wild proso millet	–	A (Malheur)	Baker
<i>Phalaris arundinacea</i>	Reed canarygrass; ribbongrass	B, T	–	Baker, Malheur, Morrow, Union
<i>Phragmites australis</i>	Common reed	B	B (Malheur)	Malheur, Morrow, Umatilla, Union
<i>Polygonum cuspidatum</i> ( <i>Fallopia japonica</i> )	Japanese knotweed	B	A (Baker, Union, <u>Umatilla</u> )	Baker, Malheur, Morrow, Umatilla, Union
<i>Polygonum sachalinensis</i> ( <i>Fallopia sachalinense</i> )	Giant knotweed	B	A (Union)	Morrow, Umatilla
<i>Potentilla recta</i>	Sulfur cinquefoil	B	A (Malheur, <u>Union<sup>11</sup></u> ) B (Baker, Union <sup>11</sup> )	Baker, Malheur, Morrow, Umatilla, Union
<i>Rorippa sylvestris</i>	Creeping yellow cress	B	A (Umatilla)	Morrow, Umatilla, Union
<i>Rubus armeniacus</i>	Armenian (Himalayan) blackberry	B	–	Baker, Malheur, Morrow, Umatilla, Union
<i>Salsola tragus</i> ( <i>S. iberica</i> ; <i>S. kali</i> )	Russian thistle	–	Agricultural Class B <sup>5</sup> (Union) C (Baker, Malheur)	Malheur, Morrow, Umatilla
<i>Salvia aethiopsis</i>	Mediterranean sage	B	A (Malheur, Morrow) Watch List (Baker)	Baker, Malheur, Morrow, Umatilla Union
<i>Secale cereal</i>	Cereal rye	–	B (Morrow, Umatilla)	Union
<i>Senecio jacobaea</i>	Tansy ragwort	B, T	A (Baker, Malheur, Morrow, Umatilla, Union)	Baker, Malheur, Morrow, Umatilla, Union

<i>Silybum marianum</i>	Milk thistle	B	A (Malheur)	Umatilla
<i>Solanum elaeagnifolium</i>	Silverleaf nightshade	A	A (Malheur)	Baker, Umatilla
<i>Solanum rostratum</i>	Buffalobur	B	A (Baker, Malheur)	Baker, Malheur, Umatilla, Union
<i>Sonchus arvensis</i>	Perennial sowthistle	–	B (Morrow)	Baker, Morrow, Umatilla
<i>Sorghum halepense</i>	Johnsongrass	B	A (Malheur) B (Morrow, Umatilla)	Malheur, Morrow, Umatilla
<i>Sphaerophysa salsula</i>	Swainsonpea; Alkali swainsonpea	B	A (Malheur) B (Umatilla)	Morrow, Umatilla

Scientific Name (Synonym Name)	Common Name	Oregon State Noxious Weed Category <sup>1</sup>	Oregon County Noxious Weed Category <sup>2</sup>	Project Counties in Which Known to Occur
<i>Taeniatherum caput-medusae</i>	Medusahead rye	B	A (Union) B (Morrow) C (Baker, Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Tamarix ramosissima</i>	Saltcedar	B, T	A (Baker) <del>C-B</del> (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Tanacetum vulgare</i>	Common tansy	–	<del>B/T</del> (Baker)	Baker, Umatilla
<i>Tribulus terrestris</i>	Puncturevine	B	B (Baker, Morrow, Umatilla, Union) C (Malheur)	Baker, Malheur, Morrow, Umatilla, Union
<i>Ventenata dubia</i>	Ventenata; North Africa grass	–	B ( <del>Baker</del> , Malheur, Morrow, <del>Union</del> )	Baker, Umatilla, Union
<i>Verbascum blattaria</i>	Moth mullein	–	C (Baker)	Baker, Malheur, Umatilla, Union
<i>Verbascum thapsus</i>	Common mullein	–	C (Baker)	Baker, Umatilla, Union
<i>Xanthium spinosum</i>	Spiny cocklebur	B	A (Malheur)	Baker, Malheur, Morrow, Umatilla, Union

<sup>1</sup> – = not applicable

<sup>2</sup> This column includes county listed noxious weeds for the five counties in Oregon crossed by the Project.

<sup>3</sup> Owners or occupants in Malheur County with Russian knapweed infestations are required to control a minimum 20 percent of their annual infestation per discreet parcel of land per year. This includes a 50-foot buffer plus additional amounts that total 20 percent of the infestation. <sup>4</sup>

~~Watch List – Few known sites; controlled by Weed Supervisor county-wide (Baker County).~~

<sup>5</sup> Agricultural Class B is defined as “...a weed of economic importance, specifically in Union county agriculture, which is both locally abundant and abundant in neighboring counties.”

<sup>6</sup> Due to the widespread nature of cheatgrass (*Bromus tectorum*) within the Site Boundary, this species was not mapped during surveys and is not included in Table 2.

~~<sup>7</sup> Whitetop is listed as a “B” weed in the portion of Baker County that the Project overlaps, though considered an “A” weed in nearby areas of the county, including West Baker Valley, where control is mandatory.~~

<sup>8</sup> Considered native in California, but introduced in Oregon (Baldwin and Strother 2006; Jaster et al. 2016).

<sup>9</sup> This species is native to Oregon.

<sup>10</sup> Perennial pepperweed is a “B” weed in the portion of Malheur County that the Project overlaps, though considered an “A” weed in a portion of

Malheur County south of the Project.

~~<sup>11</sup> This species is listed on both the Class A and Class B lists in Union County.~~

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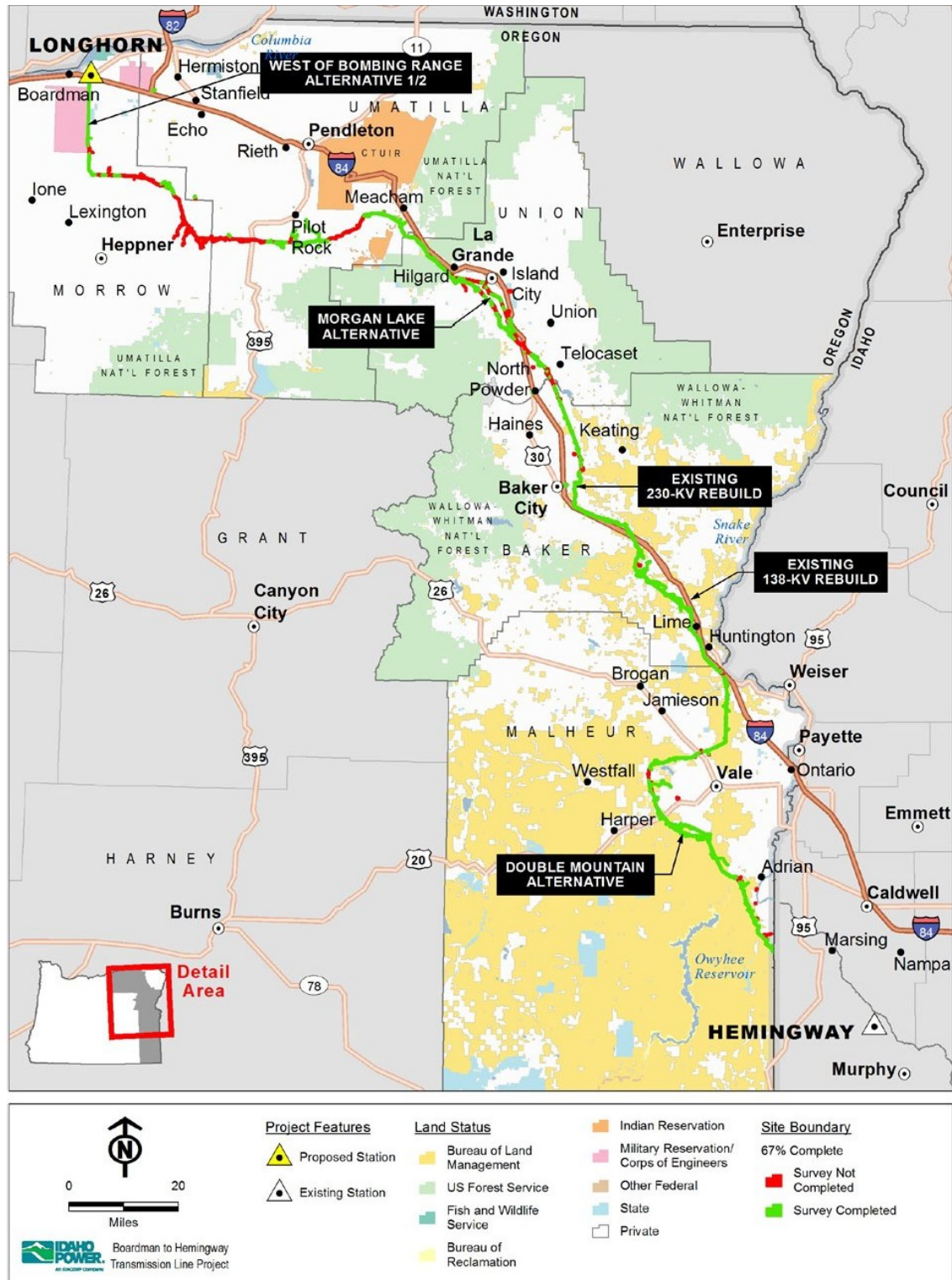
*Idaho Power*

### 3.2 Current Noxious Weed Inventories and Surveys

Surveys for Oregon State and/or Baker, Malheur, Morrow, Umatilla, or Union county listed noxious weeds were conducted within the Site Boundary between 2011 through 2016 (Exhibit P1, Attachment P1-7a, Biological Survey Summary Report). Populations of target noxious weeds (i.e., species on the state or county lists) observed were mapped using Trimble Global Positioning System (GPS) units. Additionally, existing site-specific disturbances and land uses (e.g., grazing, grading, etc.) that could be contributing to the introduction, spread, or viability of weed populations were also recorded. Surveys were based on the current state and county noxious weed lists at the time of the surveys; therefore, some species listed in Table 1 were not surveyed for in all years.

Approximately 67 percent of the Site Boundary was surveyed during Terrestrial Visual Encounter Surveys, which included surveys for noxious weeds, conducted between 2011 through 2016 (Figure 1). Surveys were conducted in all areas with signed right-of-entry agreements. Those areas that were not surveyed, due to unsigned right-of-entry agreements or changes in the Proposed Route and alternative route, will be surveyed following issuance of the site certificate. Additionally, a preconstruction noxious weed inventory of areas that will be disturbed during construction will be conducted (see Section 3.3).

In addition to surveys of the Site Boundary conducted by Tetra Tech between 2011 through 2016, the BLM National Invasive Species Information Management System and USFS Current Invasive Plants Inventory databases (BLM 2016b; USFS 2016) were queried to determine known populations of noxious weeds within the Site Boundary. Table 2 lists the 36 noxious weed species observed within the Site Boundary during the 2011 through 2016 field surveys or recorded as occurring within the Site Boundary in the BLM and USFS databases and summarizes the acres of observed or recorded noxious weed ~~s-species~~ that occur within the Project construction and operation footprint.



**Figure 1. Terrestrial Visual Encounter Surveys within the Site Boundary 2011–2016**

September 2018; June 2020 (Modified by Oregon Department of Energy during ASC – PO Phase);  
 November 2021 (Modified by Idaho Power during Contested Case Phase)



**Table 2. Oregon State and County Listed Noxious Weeds Observed during 2011–2016 Field Surveys or From Existing Databases**

Scientific Name (Synonym Name)	Common Name	Counties Where Observed <sup>1</sup>	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint <sup>2</sup>	Estimated Acres within Operation Footprint <sup>2</sup>
<i>Acroptilon repens</i> ( <i>Centaurea repens</i> )	Russian knapweed	Morrow	5.51	1.42	0.49
		Umatilla	12.95	9.92	–
		Union	0.50	0.50	–
<i>Aegilops cylindrica</i>	Jointed goatgrass	Baker	37.06	3.43	2.11
		Umatilla	21.74	4.70	1.88
		Union	0.50	0.13	0.06
<i>Ailanthus altissima</i>	Tree of heaven	Umatilla	0.50	0.06	0.05
<i>Bassia scoparia</i> ( <i>Kochia scoparia</i> )	Kochia; burning bush	Baker	6.18	1.23	0.78
		Malheur	6.27	1.27	0.11
		Morrow	4.92	1.80	0.20
		Umatilla	1.19	–	–
		Union	0.50	0.50	0.00
<i>Cardaria draba</i> ( <i>Lepidium draba</i> )	Whitetop; hoary cress	Baker	208.80	40.10	9.31
		Malheur	185.80	44.50	7.42
		Union	6.08	5.98	–
<i>Carduus nutans</i>	Musk thistle	Baker	4.26	0.59	0.23
		Malheur	6.50	1.24	0.35
		Union	10.07	0.23	0.16
<i>Centaurea diffusa</i>	Diffuse knapweed	Baker	4.98	1.11	0.19
		Malheur	1.81	0.08	0.04
		Morrow	23.58	4.53	0.77
		Umatilla	0.45	0.32	0.04
		Union	11.79	1.69	0.19
<i>Centaurea stoebe</i> subsp. <i>micranthos</i> ( <i>C. maculosa</i> )	Spotted knapweed	Baker	0.58	0.08	0.04
		Malheur	1.91	0.11	0.06
		Morrow	0.10	–	–
		Umatilla	1.99	–	–
<i>Centromadia pungens</i> subsp. <i>pungens</i> ( <i>Hemizonia pungens</i> )	Spikeweed; common tarweed	Morrow	0.46	–	–
<i>Ceratocephala testiculata</i> ( <i>Ranunculus testiculatus</i> )	Bur buttercup	Baker	26.95	9.69	1.23
		Malheur	185.07	43.91	9.61
		Umatilla	0.10	0.10	–
<i>Chondrilla juncea</i>	Rush skeletonweed	Baker	9.07	0.21	0.17
		Malheur	326.80	67.73	16.65
		Morrow	0.06	–	–
<i>Cichorium intybus</i>	Chicory	Baker	0.10	0.03	0.02
		Union	10.85	2.68	0.59

Scientific Name (Synonym Name)	Common Name	Counties Where Observed <sup>1</sup>	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint <sup>2</sup>	Estimated Acres within Operation Footprint <sup>2</sup>
<i>Cirsium arvense</i>	Canada thistle	Baker	10.70	3.26	0.46
		Malheur	3.95	0.56	0.35
		Morrow	7.23	1.30	0.23
		Umatilla	28.61	4.94	1.14
		Union	21.61	4.08	0.83
<i>Cirsium vulgare</i>	Bull thistle	Baker	1.70	0.17	0.09
		Morrow	0.10	–	–
		Umatilla	3.45	0.33	0.14
		Union	3.15	0.67	0.32
<i>Conium maculatum</i>	Poison hemlock	Baker	1.90	0.18	0.16
		Morrow	0.33	0.33	–
		Umatilla	0.16	0.06	–
<i>Convolvulus arvensis</i>	Field bindweed	Baker	67.77	8.90	2.96
		Malheur	59.52	22.24	2.71
		Umatilla	27.34	3.71	1.43
		Union	4.88	0.71	0.56
<i>Cynoglossum officinale</i>	Houndstongue	Baker	24.20	3.41	2.29
		Umatilla	21.81	5.70	1.46
		Union	63.42	8.67	2.50
<i>Dipsacus fullonum</i>	Fuller's teasel	Baker	3.52	0.49	0.42
		Morrow	0.33	–	–
		Umatilla	23.21	3.66	1.21
		Union	3.82	0.11	0.06
<i>Euphorbia esula</i>	Leafy spurge	Baker	0.69	0.04	0.03
<i>Galium aparine</i>	Catchweed bedstraw	Baker	1.09	–	–
		Union	0.10	0.01	–
<i>Halogeton glomeratus</i>	Halogeton	Malheur	6.45	1.14	0.70
		Umatilla	0.10	0.02	0.01
<i>Hypericum perforatum</i>	Klamathweed; St. Johnswort	Baker	0.10	0.05	0.02
		Umatilla	24.38	6.27	1.23
		Union	10.48	2.06	0.21
<i>Lepidium latifolium</i>	Perennial pepperweed	Baker	4.24	0.65	–
		Malheur	5.52	0.33	0.16
<i>Linaria dalmatica</i>	Dalmation toadflax	Malheur	0.24	0.04	0.03
<i>Linaria vulgaris</i>	Yellow toadflax	Umatilla	9.92	9.92	–
<i>Melilotus officinalis</i>	Sweet clover	Baker	0.82	0.03	0.02
		Malheur	1.00	0.02	0.01
		Umatilla	0.10	–	–
<i>Onopordum acanthium</i>	Scotch thistle	Baker	156.38	25.30	9.61
		Malheur	263.13	72.69	10.71
		Morrow	2.51	0.13	0.07
		Umatilla	3.19	0.37	0.15
		Union	16.43	5.56	0.88



Scientific Name (Synonym Name)	Common Name	Counties Where Observed <sup>1</sup>	Estimated Acres within Site Boundary	Estimated Acres within Construction Footprint <sup>2</sup>	Estimated Acres within Operation Footprint <sup>2</sup>
<i>Potentilla recta</i>	Sulfur cinquefoil	Baker	0.09	—	—
		Union	19.06	1.86	1.29
<i>Salsola tragus</i> ( <i>S. iberica</i> ; <i>S. kali</i> )	Russian thistle	Baker	20.33	7.81	1.50
		Malheur	75.94	18.19	3.62
		Morrow	38.89	17.80	6.10
		Umatilla	5.32	1.47	0.33
		Union	0.46	0.09	0.08
<i>Salvia aethiopis</i>	Mediterranean sage	Malheur	5.61	1.38	—
<i>Taeniatherum caput-medusae</i>	Medusahead rye	Baker	156.28	23.79	6.83
		Malheur	101.65	29.35	4.64
		Morrow	0.10	0.03	0.02
		Umatilla	124.58	24.92	5.20
		Union	41.92	7.88	2.22
<i>Tamarix ramosissima</i>	Saltcedar	Malheur	102.86	17.59	4.87
		Umatilla	0.74	0.22	0.10
<i>Tribulus terrestris</i>	Puncturevine	Baker	0.23	0.16	0.04
		Union	0.40	0.10	0.08
<i>Ventenata dubia</i>	Ventenata; North Africa grass	Baker	0.50	0.31	0.05
		Union	0.50	0.49	0.04
<i>Verbascum blattaria</i>	Moth mullein	Baker	0.09	—	—
		Malheur	0.10	—	—
		Umatilla	0.10	—	—
<i>Verbascum thapsus</i>	Common mullein	Baker	17.23	3.31	1.41
		Malheur	0.10	—	—
		Umatilla	0.50	0.03	0.02
		Union	9.01	3.07	0.31

<sup>1</sup> Not every noxious weed listed is considered noxious in the state of Oregon or in every county where observed. Refer to Table 1 for state and county designations.

<sup>2</sup> “—” = not observed within construction or operation footprint.

## 4.0 PRECONSTRUCTION NOXIOUS WEED INVENTORY

### 4.1 Procedures for Preconstruction Inventory

Prior to commencing preconstruction noxious weed surveys, IPC will contact all appropriate land management agencies to review noxious weed lists, discuss noxious weed identification, and exchange existing data on known noxious weed locations. The surveys will be conducted during the growing season that is appropriate for observing and identifying ~~relevant~~ noxious weed species. Surveyors will be trained to identify Oregon flora, specifically native plants, noxious weeds and T&E plant species. IPC will conduct the preconstruction noxious weed inventory in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWS and/or easements;

- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

## 4.2 Results of Preconstruction Inventory

The results of the preconstruction surveys will be included in the Final Noxious Weed Plan and will appear in the following form:

- A preconstruction noxious weed inventory map delineating pre-existing noxious weed infested areas; and
- A table(s) identifying the acreage(s) of each noxious weed species by county and areas set forth above in Section 4.1.

## 5.0 NOXIOUS WEED MANAGEMENT

This section of the Plan describes the steps IPC will take to prevent and control the establishment and spread of noxious weeds ~~s-species~~ during both construction and operation of the Project. For EFSC purposes, IPC will only be responsible for controlling noxious weeds that are within Project ROWs and that are a result of the company's construction- or operation-related, surface-disturbing activities in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWs and/or easements;
- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

These areas where surface disturbing activities will occur are collectively referred to as "work sites." For EFSC purposes, IPC is not responsible for controlling noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weeds ~~s-species that were~~ present prior to the Project. With respect to pre-existing noxious weed infestations, IPC recognizes ORS Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the ~~relevant~~ landowner or land management agency to address the same consistent with ORS Chapter 569.

The management of noxious weeds will be considered throughout all stages of the Project and will include:

- Educating all construction personnel regarding locations of noxious weed infestations and the importance of preventive measures and treatment methods.
- Implementing measures to prevent the spread of noxious weeds during construction, operation, and maintenance activities.
- Treating noxious weed infestations both before and after Project construction.

Weed control and prevention measures will adhere to all agency standards and guidelines.

## 5.1 Education and Personnel Requirements

Prior to construction, all construction personnel will be instructed on the importance of controlling noxious weeds. As part of start-up activities, and to help facilitate the avoidance of existing infestations and identification of new infestations, Idaho Power will provide information and training to all construction personnel regarding noxious weed identification and management. The importance of preventing the spread of noxious weeds in areas not currently infested, and controlling the proliferation of noxious weeds already present in the Project ROW, will be emphasized.

IPC will ensure that noxious weed management actions will be carried out by specialists with the following qualifications:

- Experience in native plant, non-native and invasive plants, and noxious weed identification specific to listed noxious weeds per affected county;
- Experience in noxious weed mapping;
- If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the ODA or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;
- Training in weed management or Integrated Pest Management with an emphasis in weeds; and
- Experience in coordination with agency and private landowners.

## 5.2 Prevention

Measures will be implemented to prevent the spread of noxious weeds during construction activities, reclamation efforts, and O&M activities. Detailed information regarding reclamation is contained in Exhibit P1, Attachment P1-3, Reclamation and Revegetation Plan.

### 5.2.1 Vehicle Cleaning

To ~~help~~ prevent the spread of noxious weeds during construction, all Construction Contractor(s) vehicles and equipment will be cleaned using high-pressure air or water equipment prior to arrival at the work sites. Specifically, all Construction Contractor(s) will clean construction vehicles and equipment at the Project multi-use areas or other cleaning stations each night or morning prior to returning to the Project construction areas. IPC will include in the Final Noxious Weed Plan additional protocols for frequency of cleaning vehicles as construction progresses along the ROW. The cleaning activities will concentrate on tracks, feet, or tires and the undercarriage with special emphasis on axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out or vacuumed. Additionally, when moving from noxious weed-contaminated areas to other areas along the transmission line ROW, all construction vehicles and equipment will be cleaned using compressed water or air in designated wash stations before proceeding to new locations. IPC may avoid such cleaning if the Company demonstrates, in consultation with ODOE and the relevant county weed department, that Idaho Power has sufficiently controlled the weed contamination or that seasonal limitations will be effective in avoiding the spread of the noxious weeds. All washing of construction vehicles and equipment must be performed in approved wash stations.

Vehicle cleaning stations will be located within each of the Project multi-use areas as identified in Exhibit B and Exhibit C of this application as well as other locations as necessary. IPC will include in the Final Noxious Weed Plan a detailed design identifying all of the components of the wash stations, including rock surface and geomembrane layer to provide a barrier between

noxious weeds and seeds and the soil for approval by the appropriate land management agency and ODOE. IPC will also provide a description of how residue from the wash station will be disposed of for approval by the appropriate land management agency and the ODOE. Where feasible, construction will begin in noxious weed-free areas before operating in noxious weed-infested areas. The feasibility of this approach will be determined after survey data is completed to identify noxious weed-free and weed-infested areas.

### 5.2.2 Flagging and Restricted Access

Prior to construction, areas of noxious weed infestations identified during the preconstruction surveys will be flagged by the Construction Contractor(s) and reviewed by the appropriate land management agency and ODOE. This flagging will alert construction personnel to the presence of noxious weeds and will prevent access to these areas until noxious weed control measures, as applicable, have been implemented.

All movement of construction vehicles outside of the ROW will be restricted to pre-designated access, contractor-acquired access, or public roads. All construction sites and access roads, including overland access routes, will be clearly marked or flagged at the outer limits prior to the onset of any surface-disturbing activity. All personnel will be informed that their activities must be confined within the marked or flagged areas. Disturbance of soils and vegetation removal will be limited to the minimum area necessary for access and construction.

Preventive measures, such as quarantine and closure, will be implemented to reduce and contain existing noxious weed populations. Flagging will alert personnel and prevent access into areas where noxious weeds occur. Construction disturbance will be minimized in these areas until control measures have been implemented, with the exception of reclamation treatments, as applicable. Construction personnel will inspect, remove, and appropriately dispose of noxious weed seed and plant parts found on their clothing and equipment.

### 5.2.3 Soil Management

Where preconstruction surveys have identified noxious or invasive weed species infestations, topsoil and other soils will be placed next to the infested area and clearly identified as coming from an infested area. Movement of stockpiled vegetation and salvaged topsoil will be limited to eliminate the transport of soil-borne noxious weed seeds, roots, or rhizomes, and will be marked as containing noxious seed materials to avoid mixing with weed-free soil. Topsoil will be returned to the area it was taken from and will not be spread in adjacent areas. If the topsoil is not suitable for backfill, it will be spread in another previously disturbed area and clearly identified for future weed treatments as applicable. As directed by the BLM or USFS, the Construction Contractor(s) may be required to provide additional treatments (i.e., pre-emergent pesticides) to prevent return of noxious weeds.

Soil stockpiles in areas containing noxious weeds will be kept separate from soil removed from areas that are free of noxious weed species, and the soil will be replaced in or near the original excavation. If requested by the applicable land management agency, soil stockpiles will be covered with plastic if the soil stockpile will be in place for 2 weeks or longer and is not actively being used. On lands managed by the USFS or per private landowner request, stockpiles will not be covered with plastic.

### 5.2.4 Reclamation

To help limit the spread and establishment of noxious weeds ~~s-species~~ in disturbed areas, desired vegetation needs to be established promptly after disturbance. IPC will rehabilitate significantly disturbed areas as soon as possible after ground-disturbing O&M activities and during the optimal period. To minimize potential damage from wildland fires, IPC will not reseed areas within a 20-foot radius around structures. IPC will treat and reseed disturbed areas in

accordance with the Final Reclamation and Revegetation Plan. This includes reseeding significantly disturbed areas with a non-invasive seed mix approved by the applicable land management agency, ODOE, or landowner and the Oregon Seed Certification Service.

### 5.2.5 Materials Management

Straw, hay, mulch, gravel, seed, and other imported materials must be certified weed-free. If certified weed-free materials are not available, then alternative materials will be used with agency approval. For example, certified weed-free gravel is not available in Oregon. The Final Noxious Weed Plan will address noxious weed inventory and treatment of gravel pits from which material will be drawn.

## 5.3 Treatments

Noxious weed control measures will be implemented prior to construction, during construction, and following construction. Control of noxious weeds will be implemented through mechanical, biological, and chemical control measures. IPC will be responsible for providing the necessary personnel or hiring a contractor, with qualifications demonstrating experience in listed noxious weeds in each of the five counties for which facility components would be sited, to implement noxious weed control procedures. In the event new noxious weed populations are identified on the Project in the future, the protocols and methods outlined in this Plan will be followed.

Methods to control noxious weeds associated with Project activities may include mechanical, biological, or chemical measures. Each of these control methods is briefly described below. Noxious weed control measures will be implemented in accordance with existing state and county regulations and applicable land management agency or ODOE requirements. Control measures will be based on species-specific and site-specific conditions (e.g., proximity to water or riparian areas, agricultural areas, occurrence of special status plant species, plant phenology, and season of application) and will be coordinated with the appropriate land management agencies and ODOE, as well as the OSWB and county weed boards or weed control districts, and the ~~Construction Contractor(s)~~Project's weed management specialist. Following preconstruction surveys, the ~~Construction Contractor(s)~~weed management specialist will provide a detailed control methodology for each noxious weed species to be controlled. These species-specific control methodologies will be documented in the Final Noxious Weed Plan.

For EFSC purposes, IPC will only be responsible for treating noxious weeds that are within Project ROWs and that are a result of the company's construction- or operation-related, surface-disturbing activities in the following areas:

- Transmission line: Entirety of the ROWs and/or easements;
- New roads: Entirety of the ROWs and/or easements;
- Existing roads needing substantial improvement: Only areas involving ground-disturbing construction and/or improvement (e.g., new cutouts);
- Communication stations: Entirety of the ROWs and/or easements;
- Multi-use areas: Entirety of the temporary ROWs and/or licenses; and
- Pulling and tensioning sites: Entirety of the temporary ROWs and/or licenses.

For EFSC purposes, IPC is not responsible for treating noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weed ~~s-species~~ that were present prior to the Project. With respect to pre-existing weed infestations, IPC recognizes ORS Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.

### 5.3.1 Types of Treatments

#### 5.3.1.1 Mechanical

Mechanical control methods rely on removal of plants and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc weed populations. Mechanical methods are useful for smaller, isolated populations of noxious weeds in areas of sensitive habitats, or if larger populations occur in agricultural lands, where tillage can be implemented. Some rhizomatous plants can spread by discing or tillage; therefore, implementation of this method will be species specific. If such a method is used in areas to be reclaimed, subsequent seeding will be conducted to re-establish a desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of noxious weeds. Discing or other mechanical treatments that disturb the soil surface within native habitats will be avoided in favor of herbicide application, which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new colonies.

#### 5.3.1.2 Biological

Biological control involves the use of living organisms (insects, diseases, and livestock) to control noxious weeds to achieve management objectives. Many noxious weed and invasive plants species have been introduced recently into North America and have few natural enemies to control their population. The biological control agent is typically adapted to a specific species and selected for their ability to attack critical areas of the plant that contribute to its persistence. One component of the ODA's Weed Control Policy is developing and managing a biological weed control program (ODA 2016a). Biological controls will be utilized where appropriate along the Project ROW in coordination with county weed supervisors or appropriate land management agency.

#### 5.3.1.3 Chemical

Chemical control can effectively remove noxious weeds through use of ~~selective~~ herbicides. Herbicide treatments can be ~~temporarily~~ effective for large populations of noxious weeds where other means of control may not be feasible. On federally managed lands, the type of herbicide and method of use will be approved by the applicable land-managing agency prior to their use. On private and state lands, appropriate federal and state approved herbicides will be used.

BLM (2016a) lists herbicides acceptable for use on BLM-administered lands in the Vale District. In addition to being approved by the BLM nationally, the herbicides are registered with the Environmental Protection Agency and the State of Oregon (BLM 2016a). USFS (2017) outlines the use of the 11 herbicides approved for use on the Wallowa-Whitman National Forest. The herbicides listed in Appendix A – Agency-Approved Herbicides may be used in the Project area after coordination with the Construction Contractor(s) and after submittal of a Pesticide Use Proposal (PUP) (see below). Revisions to the approved pesticide list will occur in conjunction with agency-approved pesticide list updates.

Application of herbicides on BLM or USFS land will also require submittal of PUPs, which identify and describe the location of the area to be treated, the target species, the herbicide and application rate, and application method to be used, as well as describing all anticipated impacts to non-target species and susceptible areas (BLM 2016a). PUPs may also be required for treatment on BOR-managed lands. Herbicides approved for use within the Project ROW will be reviewed and approved by the BLM, USFS, ODA, and County Weed Supervisors or Superintendents prior to beginning construction and/or prior to use. Prior to any herbicide application on federally controlled lands, a PUP that includes the dates and locations of application, target species, herbicide, adjuvants, and application rates and methods (e.g., spot spray vs. boom spray) and anticipated impacts to non-target species and susceptible areas will



be submitted. Herbicide will not be applied prior to notification and receipt of written approval from the applicable land management agency, ODOE, or private landowner.

A licensed commercial pesticide (herbicide) operator (or IPC staff licensed applicator or supervised trainee), certified by the ODA, will perform the application using herbicides selected and approved by the appropriate land management agency and ODOE in accordance with applicable laws, regulations, and permit stipulations. The pesticide applicator will have readily available copies of the appropriate safety data sheets for the herbicides used. All pesticide applications must follow Environmental Protection Agency label instructions, as well as federal, state, and/or county regulation, BLM and USFS recommendations, and landowner agreements. Application of herbicides will be suspended in accordance with herbicide labels and county, state, and federal regulations (e.g., strong winds, etc.), and all herbicide spills will be reported in accordance with applicable laws and requirements.

Transportation, mixing, and storage of herbicides will include the following provisions:

- Concentrate will be transported only in approved containers in a manner that will prevent tipping or spilling, and in a location isolated from the vehicle's driving compartment, food, clothing, and safety equipment.
- Mixing will be done over a drip-catching device in an area devoid of sensitive vegetation and in an area that will limit human, pet, and wildlife exposure. Flowing water, wetlands, or other areas of sensitive resources where herbicides may be applied will be detailed in the Final Noxious Weed Plan. Areas of flowing water, wetlands, or other sensitive resources where herbicide use will be prohibited will be described in the Final Noxious Weed Plan and be identified on construction maps and flagged.
- All herbicide equipment and containers will be inspected daily for leaks.
- Disposal of spent containers will be in accordance with the herbicide label.

Herbicides may be applied using a broadcast applicator mounted on a truck or all-terrain vehicle, backpack sprayers, hand sprayers, or any other agency-approved method as conditions dictate. Herbicide applications will be conducted by licensed operators or under the supervision of a licensed operator in accordance with state laws and BLM and USFS weed policies. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) may be used in open areas readily accessible by vehicle. Where allowed, a broadcast applicator will likely be used. In areas where noxious weeds are more isolated and interspersed with desirable vegetation, noxious weeds will be targeted by hand application methods (e.g., backpack spraying), thereby avoiding other plants. Herbicide applications will follow all label and land manager guidelines, especially for treatments near threatened and endangered species and waterbodies. Calibration checks of equipment will be conducted at the beginning and periodically during spraying to ensure proper application rates are achieved.

State and federal herbicide recording requirements, including BLM and USFS recording requirements, will be followed. Appendix B ~~The Final Noxious Weed Plan will~~ contains a list of approved herbicides that may be used, target species, best time for application, and application rates. IPC will coordinate with federal land-managing agencies annually to review any potential revisions to the agencies' lists of approved herbicides. ~~If the federal land-managing agency determines that a previously approved pesticide and/or plan is unacceptable, they will notify IPC. Revisions to the approved herbicide list will occur in conjunction with agency-approved herbicide/pesticide list updates.~~

Final species-specific noxious weed control methodologies will be included by the Construction Contractor(s) in the Final Noxious Weed Plan. Herbicide applications will be controlled, as described in Section 7.0 – Pesticide Application, Handling, Spills, and Cleanup, to minimize the

impacts on the surrounding vegetation.

### 5.3.2 Preconstruction Treatments

Based on the preconstruction noxious weed inventory, Idaho Power will identify areas where preconstruction noxious weed control measures will be implemented. Treatments will be conducted prior to the start of ground-disturbing activities and at the time most appropriate for the target species.

Noxious weed species on Oregon's OSWB Class A, B, and T lists; Baker, Malheur, Morrow, Umatilla, and Union county Class A and B lists; and priority invasive plant species on the Wallowa-Whitman National Forest will be treated prior to the start of ground-disturbing activities. For other noxious weed species, the decision whether to treat the weeds prior to the start of construction activities will be based on the nature and extent of the infestation, surrounding conditions (e.g., the predominance and density of infestations noxious weeds adjacent to the ROW), landowner permission, land-managing agency requests, timeliness of land-managing agency approval, and the construction schedule. Treatment options could consist of mechanical control, hand spraying of herbicides, and biological controls; the exact method of control will be approved by the land-managing agency or landowner prior to use and will be documented in the Final Noxious Weed Plan. All use of herbicides will comply with the label restrictions, as well as federal, state, and/or county regulations and landowner agreements. All areas treated will be documented using GPS technology and will be included in an annual report.

### 5.3.3 Treatments during Construction

The prevention measures described above in Section 5.2 include certain treatment measures that will be taken during construction to avoid, minimize, and mitigate the risk of spreading or introducing noxious weed species due to Project construction activities.

### 5.3.4 Post-Construction Treatments

Noxious weed control efforts will occur ~~on an~~ at least once annually ~~basis~~ for the first 5 years post-construction. When it is determined that an area of the Project has successfully controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE. If ODOE concurs, IPC will continue to monitor the sites as described below in Section 6.1, but will cease treatment unless determined to be necessary through subsequent monitoring. it is needed consult with ODOE to design an appropriate plan for long-term weed control. If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional noxious weed control techniques or strategies, or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss.

As described above, control efforts will be limited to noxious weed species on Oregon's OSWB Class A, B, and T lists; Baker, Malheur, Morrow, Umatilla, and Union county Class A and B lists; and priority invasive plant species on the Wallowa-Whitman National Forest. Using the prior years' treatment and monitoring information, post-construction noxious weed treatment will be planned by IPC and coordinated with the applicable land-managing agencies to ensure treatment will be conducted at the proper growing period and during favorable environmental conditions.

Herbicide use will be planned and coordinated with the applicable agencies and will be based on the results of the prior years' monitoring data to ensure spraying is conducted only where necessary, in areas approved for herbicide use, during the proper growing period, during favorable environmental conditions, and using only the appropriate and agency-approved chemicals to control target noxious weed species.



## 5.4 Reclamation Actions

As specified in Exhibit P1, Attachment P1-3, Reclamation and Revegetation Plan, reclamation activities will assist in:

- Restoring plant communities and associated wildlife habitat and range;
- Preventing substantial increases in noxious weeds in the Project area;
- Minimizing Project-related soil erosion; and
- Reducing visual impacts on sensitive areas caused by construction activities.

Measures that will be implemented during reclamation activities that will help prevent the spread and establishment of noxious weeds s-species include applying agency-approved seed mixes Project-wide (except in agricultural areas) to the appropriate habitat type, unless directed otherwise by the land management agency and/or landowner. Additionally, the Construction Contractor(s) or weed-vegetation specialist may recommend modified seeding application rates and timing of implementation to achieve site-specific noxious weed management objectives. Seed mixes will be determined by soil type and site-specific conditions and will be provided to the Construction Contractor(s) by a BLM or USFS specialist, ODOE, or landowner. If areas are not immediately seeded after construction because of weather or scheduling constraints, all noxious weeds will be adequately controlled before seeding. Appropriate herbicides will be used to ensure fall seedings are not affected by residual herbicides.

## 6.0 MONITORING AND REPORTING

### 6.1 Monitoring

The objectives of the noxious weed monitoring surveys are to: 1) identify any new noxious weed populations or infestations, and 2) monitor existing infestations and affected/disturbed areas. Monitoring will be initiated during the first summer-growing season following construction and will occur during the appropriate growing season when noxious weeds located during the preconstruction surveys are still identifiable. Growing seasons will vary from year to year, and consequently, the timing of monitoring will vary as well.

As stated above, noxious weed monitoring and control will occur at least once annually during the first 5-year period.<sup>1</sup> When it is determined that an area of the Project has successfully controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE, in consultation with the local county weed department. If ODOE concurs, IPC will conclude that it has no further obligation to monitor and control/treat noxious weeds in that area of the Project. If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC will prepare a location-specific long-term monitoring plan based on the results of the initial five-year assessment period. In addition, IPC may suggest additional noxious weed control techniques or strategies, or monitoring, or IPC may propose mitigation to compensate for any permanent habitat loss. Noxious weed control measures recommended during monitoring will follow the preventive and control measures outlined in the Final Noxious Weed Plan.

### 6.2 Reporting

An annual Noxious Weed Monitoring-Report will be prepared by the Project's Weed

<sup>1</sup> Monitoring will be completed in the spring and the fall to capture growing seasons for weed species with

Management Specialist Construction Contractor(s) and submitted to IPC and ODOE and made available to the appropriate land management agencies as required. Annual reporting will include geographic information systems data as part of the deliverable. The purpose of the report is to provide a status update on progress toward meeting the goals of controlling and preventing the spread and introduction of noxious weed species within the ROW due to Project activities.

Areas where the spread of a noxious weed infestation are noted, particularly in previously unaffected locations, will be evaluated to help determine if these areas require remedial action and treatment. The Construction Contractor(s) will note these areas in the annual report and will document any additional noxious weed control treatments implemented or recommended.

### **6.3 Ongoing Monitoring and Control**

IPC will be responsible for monitoring and control of noxious weed infestations as set forth in the terms and conditions of the ODOE Site Certificate, BLM ROW grant, and USFS special-use authorization. The BLM, USFS, ODOE, and counties may contact IPC to report on the presence of noxious weed populations of concern within the ROW.

IPC's operations personnel will be trained in the identification of the predominant noxious weed populations within the Project ROW, and IPC will control the weeds on a case-by-case basis in consultation with the land management agency and/or landowner, as appropriate. If determined necessary, a report on actions taken will be provided to the BLM and USFS on a predetermined schedule.

## **7.0 HERBICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP**

### **7.1 Herbicide Application and Handling**

The current list of BLM and USFS approved herbicides is provided in Appendix A. Before application, the list of herbicides to be used will be approved by the BLM, USFS, and other land management agencies as appropriate. Additionally, all required permits from the local authorities (e.g., Oregon County Weed Superintendents or weed districts, BLM, BOR, and/or USFS) will be obtained. Permits may contain additional terms and conditions that go beyond the scope of this Plan. Application of herbicides will follow the measures listed in Section 4.3 – Control Measures.

### **7.2 Herbicide Spills and Cleanup**

All reasonable precautions will be taken to avoid herbicide spills. Construction spills, including herbicide and pesticide spills, will be promptly cleaned up, and contaminated materials will be transported to a disposal site that meets local, state, and federal requirements. If a spill occurs whose cleanup is beyond the capability of on-site equipment and personnel, an Emergency Response Contractor available to further contain and clean up the spill will be identified. Potential contractors will be identified prior to the start of construction activities.

For spills in standing water, including herbicide and pesticide spills, absorbent materials will be used as appropriate by the contractor to recover and contain released materials on the surface of the water. If the standing water is considered a water of the state, it will be reported immediately to the appropriate agency. Materials such as fuels, other petroleum products, chemicals, and hazardous materials including wastes will be located in upland areas away from streams or wells and away from storm drains or other drainages.

Hazardous material, including herbicides and pesticides, will not be drained onto the ground or into streams or drainage areas. Totally enclosed containment will be provided for all Project-generated trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, concrete curing fluid, and other potentially hazardous materials, will be removed as necessary to a disposal facility authorized to accept such materials.

As identified in Exhibit G, Materials Analysis, concentrated liquid herbicides will be stored in the hazardous materials portion of multi-use areas during construction. During construction, hazardous materials will be delivered to the Project as needed, unless regular use requires storage at the multi-use areas. During operations, small amounts (less than 20 gallons per year) will be used to control vegetation. No herbicide will be stored on-site during the operations phase. Herbicides will be brought to the site as needed. No hazardous materials of any type will be stored on-site during the operations phase.

Spill preventive and containment measures or practices will be incorporated as described in Exhibit G, Materials Analysis, and Attachment G-4, Draft Spill Prevention, Control, and Countermeasures (SPCC) Plan.

During operations, small amounts will be used to control vegetation. No herbicide will be stored on-site during the operations phase. Herbicides will be brought to the site as needed. Additional information regarding the handling of hazardous materials, including herbicides and pesticides, may be found in the Draft SPCC Plan (Exhibit G, Attachment G-4).

### 7.3 Worker Safety and Spill Reporting

All pesticide contractors will obtain and have readily available copies of the appropriate safety data sheets for the herbicides used. All herbicide spills will be reported in accordance with applicable laws and requirements as discussed in Exhibit G, Materials Analysis, and Attachment G-4, Draft SPCC Plan. Persons should attempt to clean up or control a spill, including herbicide and pesticide spills, only if they have received proper training and possess the appropriate protective clothing and clean-up materials. Untrained individuals should notify the appropriate response personnel. In addition to these general measures, persons responding to spills will consult the SPCC Plan and the safety data sheets (SDSs) or U.S. Department of Transportation Emergency Response Guidebook (to be maintained by the Construction Contractor[s] on-site during all construction activities), which outlines physical response guides for hazardous materials spills. The Construction Contractor(s) will verify and update emergency phone numbers before and during construction. The Construction Contractor(s) (or other person in charge) will notify the applicable land management agency and ODOE of all spills or potential spills, including herbicide and pesticide spills, within the Project area.

## 8.0 PLAN UPDATES

The Construction Contractor(s) will be responsible for development of the Final Noxious Weed Plan, which will include documentation of existing infestations adjacent to the survey area, documenting results of the preconstruction noxious weed inventories, mapping areas subject to preconstruction noxious weed treatment, and providing a detailed control methodology for each noxious weed species. The Construction Contractor(s) will also be responsible for reporting noxious weed species identified during preconstruction surveys to the applicable land-managing agencies, and submitting PUPs prior to weed treatment on BLM or USFS lands.

## 9.0 LITERATURE CITED

Baldwin, B. G., and J.L. Strother. 2006. *Centromadia*. In; Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford. Volume 21.

- BLM (Bureau of Land Management). 1992. Integrated Weed Management - Manual 9015. California BLM. Available online at: <http://www.blm.gov/ca/st/en/prog/weeds/9015.html>
- BLM. 2016a. Decision Record Integrated Invasive Plant Management for the Vale District. DOI-BLM-ORWA-V000-2011-0047-EA.
- BLM. 2016b. National Invasive Information Management System (NISIMS). Available online at: <http://www.blm.gov/wo/st/en/prog/more/weeds/nisims.html>.
- BOR (Bureau of Reclamation). 1996a. Reclamation Manual. Policy: Pest Management. December 23. Available online at: <http://www.usbr.gov/recman/env/env-p02.pdf>.
- BOR. 1996b. Reclamation Manual. Directives and Standards: Pest Management – Resource Protection (Integrated Pest Management) Program. ENV 01-01, October 17, 1996. Available online at: <http://www.usbr.gov/recman/env/env01-01.pdf>.
- DOI (Department of the Interior). 1995. Departmental Manual, Public Lands, Weed Control Program. Available online at: <http://elips.doi.gov/ELIPS/DocView.aspx?id=1829>
- Jaster, T., S.C. Meyers, and S. Sundberg, eds. 2016. Oregon Vascular Plant Checklist. [Asteraceae]. Version 1.6. Available online at: <http://www.oregonflora.org/checklist.php>
- NRCS (Natural Resources Conservation Service). 2016. PLANTS Database. Available online at: <http://plants.usda.gov/java/>.
- ODA (Oregon Department of Agriculture). 2016a. Oregon Noxious Weed Policy and Classification System 2016. Available online at: <http://www.oregon.gov/ODA/shared/Documents/Publications/Weeds/NoxiousWeedPolicyClassification.pdf>
- ODA. 2016b. Oregon WeedMapper. Available online at: <http://www.oregon.gov/oda/programs/Weeds/Pages/WeedMapper.aspx>.
- ODA. 2016c. Oregon Noxious Weed Profiles. Oregon Department of Agriculture. Available online at: <https://www.oregon.gov/oda/programs/weeds/oregonnoxiousweeds/pages/aboutoregonweeds.aspx>
- Sheley, R.L., and J.K. Petroff. 1999. Biology and Management of Noxious Rangeland Weeds. Oregon State University. Corvallis, Oregon.
- University of Montana-Missoula. 2016. INVADERS Database System. Available online at: <http://invader.dbs.umt.edu/>.
- USFS (United States Forest Service). 2016. U.S. Forest Service Current Invasive Plants Inventory. Available online at: <https://catalog.data.gov/dataset/u-s-forest-service-current-invasive-plant-locations>
- USFS. 2017. Decision Memo Forest Plan Amendment #48 to add Aminopyralid to the List of Herbicide Ingredients on the Wallowa-Whitman National Forest. July 5, 2017.

**APPENDIX A**  
**AGENCY-APPROVED HERBICIDES**

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## **BLM-APPROVED HERBICIDES**

(Source: BLM 2016a)

- 2,4-D
- Aminopyralid
- Chlorsulfuron
- Clopyralid
- Dicamba
- Diflufenzopyr + Dicamba
- Diuron
- Fluridone
- Fluroxypyr
- Glyphosate
- Hexazinone
- Imazapic
- Imazapyr
- Metsulfuron methyl
- Picloram
- Rimsulfuron
- Sulfometuron methyl
- Triclopyr

## **USFS WALLOWA-WHITMAN NATIONAL FOREST APPROVED HERBICIDES**

(Source: USFS 2017)

- Aminopyralid
- Chlorsulfuron
- Clopyralid
- Glyphosate
- Imazapic
- Imazapyr
- Metsulfuron methyl
- Picloram
- Sethoxydim
- Sulfometuron methyl
- Triclopyr

**APPENDIX B**  
**Noxious Weed Treatment Methods**  
**and Timing**  
**(November 2021)**

Scientific Name (Synonym Name)	Common Name	Method and Timing of Control <sup>1</sup>
Rubus armeniacus	Armenian (Himalayan) blackberry	<p><b>Glyphosate</b> - Accord may be applied to green canes after leaves have dropped. Rodeo is best applied when leaves are present. Burning or mowing 40 to 60 days after spraying with glyphosate increases effective control. Rate: 5 pints/ac.</p> <p><b>Metsulfuron-Methyl</b> - Apply to actively growing vegetation before fall coloration. Rate: 0.6 to 1.8 oz ai/a</p> <p><b>Aminopyralid + 2,4-D + triclopyr</b> - Treat when plants are actively growing. Rate: 2.1 pints + 2 quarts in 100 gallons of water.</p>
Hyoscyamus niger	Black henbane	<p><b>Metsulfuron</b>- Apply to actively growing vegetation before fall coloration. Rate: 0.3 to 0.45 oz ai/a</p> <p><b>Picloram</b> - Apply in spring when actively growing before full bloom, or in late summer. Rate: 0.25 to 0.5 lb ae/a</p>
Solanum rostratum	Buffalobur	<p><b>Diflufenzopyr + dicamba</b> - Apply to actively growing plants. Rate: 0.175 to 0.35 lb ae/a.</p>
Cirsium vulgare, Cirsium arvense, Carduus nutans, Silybum marianum, Onopordum acanthium	bull thistle, Canada thistle, milk thistle, musk thistle, Scotch thistle	<p><b>2,4-D</b> - Apply in fall to control rosettes or spring to control before flower stalk elongates. Rate: 1.5 to 2 lb ae/a</p>
		<p><b>Aminopyralid</b> - Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes. Rate: 0.75 to 1.25 oz ae/a</p>
		<p><b>Chlorsulfuron</b> - Apply to young, actively growing weeds. Rate: 0.75 oz ai/a</p>
Ceratocephala testiculata (Ranunculus testiculatus)	Bur buttercup	<p><b>2,4-D</b> - Apply to actively growing plants. Rate: 1.5 to 2 lb ae/a</p>
Buddleja davidii (B. variabilis)	Butterfly bush	<p><b>Glyphosate</b> - Apply to stump after bush is cut down.</p>
		<p><b>Triclopyr</b> - Apply to stump after bush is cut down.</p>



Alhagi maurorum (A. pseudalhagi)	Camelthorn	<b>Imazapyr</b> - Apply to actively growing vegetation. Rate: 0.5 to 1lb ae/a
		<b>Metsulfuron</b> - Apply to actively growing vegetation. Rate: 0.6 to 1.8 oz ai/a
		<b>Piclorum</b> - Apply when plants are fully leaved and actively growing. Rate: 0.5 to 1 lb ae/a.
Galium aparine	Catchweed bedstraw	<b>Fluroxypyr</b> - Apply to actively growing plants. Rate: follow instructions on label.
Secale cereal, Bromus tectorum, Taeniatherum caput- medusae	Cereal rye, cheatgrass, medusahead rye	Consult with County Weed Supervisor - no known effective herbicide. <b>Glyphosate</b> can be applied post-emergence but does not provide residual weed control.
Cichorium intybus, Chondrilla juncea	Chicory, Rush skeletonweed	<b>Aminopyralid</b> - Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes. Rate: 0.75 to 1.25 oz ae/a
		<b>Piclorum</b> - Apply to rosette stage in fall or spring. Rate: 0.5 to 1 lb ae/a.
		<b>Imazapyr</b> - Apply as follow up spot treatment for plants that escaped broadcast spray. Rate: 1% solution.
Anchusa officinalis	Common bugloss	<b>Chlorsulfuron</b> - Apply to young, actively growing weeds. Rate: 0.75 oz ai/a
		<b>Metsulfuron</b> - Apply to actively growing vegetation. Rate: 0.6 to 1.8 oz ai/a
Verbascum thapsus	Common mullein	<b>Glyphosate</b> - Apply to actively growing vegetation. Rate: 2.25 lb ae/ac
		<b>Chlorsulfuron</b> - Apply to young, actively growing weeds. Rate: 0.75 to 1.95 oz ai/a
		<b>Metsulfuron</b> - Apply postemergence to bolting stage. Rate: 0.6 to 1.2 oz ai/ac
Phragmites australis	Common reed	<b>Imazapyr + glyphosate</b> - Apply to actively growing vegetation. Rate: use label. The most effective control of Phragmites is mowing and burning.
Tanacetum vulgare, Hypericum perforatum	Common tansy, St. Johnswort; Klamathweed,	<b>Chlorsulfuron</b> - Apply to actively growing vegetation in spring. Rate: 0.75 to 2.25 oz ai/a
		<b>Metsulfuron</b> - Apply to actively growing vegetation. Rate: 0.6 oz ai/a

Crupina vulgaris	Common crupina	<b>Chlorsulfuron</b> - Apply to seedlings in spring. Rate: 0.75 to 0.195 oz ai/a
		<b>Clopyralid</b> - Apply as a split application to foliage in spring and fall. Rate: 2 oz ae/a
Rorippa sylvestris, Cardaria chalepensis (Lepidium chalepensis), Cardaria draba (Lepidium draba)	Creeping yellow cress, hoary cress, lens-podded cress	<b>2,4-D</b> - Apply early in cress growth; control is minor after bud stage. Rate: 1 lb ae/a as a selective treatment or 2 to 3 lb ae/a in non-cropland.
		<b>Imazapic</b> - Apply after blossoms open (full bloom) until plants dessicate. Fall rosettes also may be treated. Rate: 0.125 to 0.188 lb/a
		<b>Metsulfuron</b> - Apply at prebloom to bloom growth stage or to rosettes in fall. Rate: 0.6 oz ai/a.
Linaria dalmatica, Linaria vulgaris	Dalmation toadflax, yellow toadflax	<b>Imazapic</b> - Apply in fall when top 25% of plant is necrotic, usually after a hard frost. Rate: 0.188 lb ai/a.
		<b>Dicamba</b> - Apply in early spring before toadflax reaches bloom stage. Rate: 4 to 6 lb ae/a
Centaurea diffusa, Centaurea nigrescens (C. debeauxii; C. jacea x nigra; C. pratensis), Centaurea stoebe subsp. micranthos (C. maculosa), Centaurea virgata (C. triumfetti)	Diffuse knapweed, Meadow knapweed, Short-fringe knapweed, Spotted knapweed, Squarrose knapweed	<b>2,4-D</b> - Apply at early stage of flower stem elongation (late April to early May). Rate: 1 to 2 lb ae/a
		<b>Aminopyralid</b> - Apply in spring or early summer to rosettes or bolting plants or in fall to seedlings and rosettes. Rate: 1 to 1.75 oz ae/a
		<b>Glyphosate</b> - Apply to actively growing vegetation. Rate: 3 lb ae/ac
Cuscuta spp.	Dodder	<b>Glyphosate</b> - Apply as spot treatment to actively growing plants. Rate: 0.0625 to 0.075 lb ae/a
Isatis tinctoria	Dyer's woad	<b>Chlorsulfuron</b> - Apply before or just after seedlings emerge in spring. Rate: 0.75 oz ai/a
		<b>Imazapic</b> - Apply to rosetts or after blossoms open (full bloom) until plants dessicate. Rate: 0.125 to 0.188 lb ai/a
		<b>2,4-D</b> - Apply in spring or fall to rosettes, or in early summer when plant is in bud. Rate: 1.9 to 2.85 lb ae/a

Hedera helix	English ivy	<b>Triclopyr or Glyphosate</b> - Apply to recently cut stems (preferably within 5 minutes of cutting). Rate: 33% solution in water.
Myriophyllum spicatum	Eurasian watermilfoil	Herbicides not recommended for this species. See mechanical or biological control methods.
Convolvulus arvensis, Sorghum halepense, Elymus repens (Agropyron repens)	Field bindweed, Johnsongrass, Quackgrass	<b>Glyphosate</b> - Apply to full-grown weeds. Use highest rate on field bindweed. Rate: 2.25 to 3.75 lb ae/a. For non-sodded quackgrass, use 0.75 to 1.5 lb ae/a. For sodded quackgrass, use 1.5 to 2.25 lb ae/a
Butomus umbellatus	Flowering rush	<b>2,4-D</b> - Apply in April or May after rush has made good spring growth. Foliage must be wet. Rate: 1.5 lb ae 2,4-D, 50 gallons water, and 2 gallons nonionic surfactant for spot treatments.
Dipsacus fullonum	Fuller's teasel	<b>2,4-D</b> - Apply to rosette stage in fall or spring. Rate: 1 lb ae/a
		<b>Chlorsulfuron</b> - Apply to actively growing teasel in rosette stage. Rate: 0.75 oz ai/a
Alliaria petiolata	Garlic mustard	<b>Glyphosate</b> - Apply in spring prior to flowering or in late fall. Rate: 2.0% solution of 3 lb ae/gal product with 1.0% by volume nonionic surfactant
		<b>Imazapyr</b> - Apply when plants are actively growing. Rate: 1% solution of 2 lbs ae/gal product for spot application.
Polygonum sachalinensis (Fallopia sachalinense), Polygonum cuspidatum (Fallopia japonica)	Giant knotweed, Japanese knotweed	<b>Dicamba</b> - Apply in late August to new regrowth after cutting plant back in June. Rate: 0.25 lb ae dicamba mixed with 1 gal water/400 sq ft
		<b>Glyphosate</b> - Spot treat when weeds are actively growing and most are at bud to early flowering growth stage. Rate: 0.06 lb ae with 1 gal water
		<b>Glyphosate (RoundUp Pro Concentrate)</b> - Inject with hand-held device into hollow stem of actively growing plants between second and third internodes. Rate: Inject 5 ml/stem
Halogeton glomeratus	Halogeton	<b>2,4-D</b> - Apply in early spring when plants are actively growing before bloom stage. Rate: 1 to 2 lb ae/a
		<b>Imazapic</b> - Apply preemergence or postemergence. Rate: 0.063 to 0.188 lb/a

Conyza canadensis	Horseweed; mares tail	<b>Aminopyralid</b> - Apply to actively growing plants. Rate: 1 to 1.5 oz ae/a
		<b>Clopyralid</b> - Apply to actively growing plants up to the five-leaf stage. Rate: 0.125 to 0.188 oz ae/a
Cynoglossum officinale	Houndstongue	<b>Picloram</b> - Apply anytime plants are actively growing. Rate: 0.5 lb ae/a
		<b>Metsulfuron</b> - Apply to actively growing plants. Rate: 0.6 oz ai/a
		<b>2,4-D</b> - Apply in early spring when plants are actively growing before bloom stage. Rate: 2 lb ae/a
Amorpha fruticosa	Indigo bush	Treatment data is still preliminary however the following have shown promising results (and are on the BLM approved list)- aminopyralid, clopyralid, glyphosate, imazapyr, and triclopyr + 2,4-D applied as cut stem treatments.
Datura stramonium	Jimsonweed	Treatment data is still preliminary in the PNW however the following have been reported to control this plant (and are on the BLM approved list) - glyphosate, picloram, clopyralid.
Aegilops cylindrica	Jointed goatgrass	<b>Glyphosate</b> – Apply to actively growing plants emerged before bolt stage (i.e., stage of growth where growth is focused on seed development versus leaf development). Rate: 0.38 to 0.75 lb ae/a1
		<b>Imazapic</b> – Apply pre-emergence in fall. Due to the residual effect of this herbicide, it will not be used in areas to be revegetated. Rate: 0.063 to 0.188 lb/a1
		<b>Sulfometuron</b> – Apply in fall or in late winter before jointed goatgrass is 3 inches tall. Rate: 1 to 1.5 oz ai/a (1.33 to 2 oz/a)1
Hieracium piloselloides (Pilosella piloselloides), Hieracium caespitosum (H. pratense; Pilosella caespitosum), Hieracium aurantiacum (Pilosella aurantiacum),	King-devil hawkweed/Tall hawkweed, Meadow hawkweed, Orange hawkweed	<b>2,4-D</b> - Apply to growing hawkweed before buds form. Rate: 1.43 to 1.9 lb ae/a
		<b>Aminopyralid</b> - Apply to actively growing plants in the bolting stage of growth. Rate: 1 to 1.5 oz ae/a

		<b>Clopyralid</b> - Apply after most basal leaves emerge but before buds form. Rate: 0.25 to 3.75 lb ae/a
Bassia scoparia (Kochia scoparia)	Kochia; burning bush	<b>Chlorsulfuron</b> - Apply preemergence, or postemergence from seedling to bolting stage of growth. Rate: 0.75 oz ai/a
		<b>Dicamba</b> - Apply in spring when seedlings are actively growing. Rate: 0.25 to 1 lb ae/a
		<b>Fluroxypyr</b> - Apply in spring from seedling to bolting stage of growth. Rate: 2.1 to 7.7 oz ae/a
Euphorbia esula, Euphorbia myrsinites	Leafy spurge, Myrtle spurge	<b>2,4-D</b> - Apply pre- and postemergence, highly recommend seeding grasses to outcompete spurge. Rate: 1 lb ae/a to prevent seed formation and 6 lb ae/a helps control leafy spurge infestations.
Cannabis sativa	Marijuana	<b>Glyphosate</b> - Apply to actively growing plants. Rate: 0.0625 to 0.075 lb ae/a
Salvia aethiopis	Mediterranean sage	<b>Clopyralid</b> - Apply to actively growing plants. Rate: 1 to 2 lb ae/a
Verbascum blattaria	Moth mullein/Common mullein	<b>Aminopyralid</b> - Apply postemergence from the rosette to young bolting stage. Rate: 1.75 oz ae/a
		<b>Floroxypyr</b> - Apply postemergence from the rosette to young bolting stage. Rate: 7.7 oz ae/a
		<b>Glyphosate</b> - Apply postemergence from seedling to late bolting stage. Rate: 2.25 lb ae/a
Lathyrus latifolius, Lepidium latifolium, Sonchus arvensis	Perennial peavine, Perennial pepperweed, Perennial sowthistle	<b>2,4-D</b> - Apply at the bud stage of growth. Good grass cover helps control these perennials. Rate: 4 lb ae/a
		<b>Chlorsulfuron</b> - Apply in spring or fall up through bloom stage. Rate: 0.75 oz ai/a
		<b>Imazapic</b> - Apply after blossoms open (full bloom) until plants desiccate. Fall rosettes also may be treated. Rate: 0.125 to 0.188 lb/a
Conium maculatum	Poison hemlock	<b>2,4-D</b> - Apply in seedling to rosette stage of growth. Rate: 1.5 lb ae/a
		<b>Glyphosate</b> - Apply to actively growing plants before they bolt. Rate: 0.75 lb ae/a
Tribulus terrestris	Puncturevine	<b>2,4-D</b> - Apply every 3 weeks during growing season or when new seedlings appear. Rate: 1 to 2 lb ae in 10 to 20 gallons water for spot treatment.

		<b>Chlorsulfuron</b> - Apply late fall or late winter preemergence to growth. Needs moisture to activate. Rate: 1 oz ai/a <b>Imazapic</b> - Apply early postemergence when plants are cracking. Rate: 0.125 to 0.188 lb ai/a
Lythrum salicaria	Purple loosestrife	<b>Glyphosate</b> - Apply to actively growing plants at full to late flowering stage. Seedlings may be effectively treated early in the season after a fall application to mature plants. Rate: 1% solution with handheld equipment <b>Imazapyr</b> - Apply to actively growing loosestrife after midbloom until killing frost. Rate: 0.25 to 0.5 lb ae/a
Centaurea calcitrapa, Centaurea solstitialis	Purple starthistle, yellow starthistle	<b>Aminopyralid</b> - Apply to plants at the rosette through bolting stages. Rate: 0.75 to 1.25 oz ae/a <b>Chlorsulfuron</b> - Apply to young, actively growing weeds. Rate: 1.125 oz ai/a <b>Clopyralid</b> - Apply after most rosettes have formed but before bud formation. Rate: 0.09 to 0.375 lb ae/a
Ambrosia artemisiifolia	Ragweed	<b>Clopyralid + 2,4-D amine</b> - Apply to actively growing weeds after most basal leaves emerge but before bud stage. Rate 1 to 5 quarts/a
Phalaris arundinacea	Reed canarygrass; ribbongrass	<b>Glyphosate</b> - Apply to actively growing plants at early heading or in fall from mid-September to after first light frost. Rate: 1.2 to 2.25 lb ae/a <b>Imazapyr</b> - Apply in boot stage through fall, when plant is actively growing. Rate: 0.5 to 1 lb ae/a
Salsola tragus (S. iberica; S. kali)	Russian thistle	<b>2,4-D</b> - Apply to rapidly growing plants. Rate 0.95 to 1.9 lb ae/a <b>Chlorsulfuron</b> - Apply preemergence or early postemergence. Rate: 0.75 to 1.5 oz ai/a
Tamarix ramosissima	Saltcedar	<b>Imazapyr + glyphosate</b> - Apply in late summer to early fall when plants are taking up nutrients - plants should be healthy, not stressed. Rate: 1.5 quarts + 1.5 quarts of ae/a <b>Imazapyr</b> - Apply in late summer to early fall when plants are taking up nutrients. Rate: 2 quarts ae/a
Cytisus scoparius	Scotch broom	<b>Glyphosate</b> - Apply to actively growing plants in spring. Rate: 1.5 to 3 lb ae/a

		<b>Triclopyr + 2,4-D</b> - Apply any times plants are actively growing. Rate: 1.5 lb ae/a
Solanum elaeagnifolium	Silverleaf nightshade	<b>Glyphosate</b> - Apply to actively growing plants that have reached the late bud to flower stage of growth. Rate: 2.25 lb ae/a
		<b>Imazapyr</b> - Reported to control this plant but data is lacking in the PNW. Rate: 1 lb ae/a
Orobanche minor	Small broomrape	No approved herbicides for this species on the BLM list. Chemical control is through fumigation of soil.
Centromadia pungens subsp. pungens (Hemizonia pungens)	Spikeweed; common tarweed	<b>2,4-D</b> - Apply postemergence, when plants are in rosette stage in winter or early spring (before late April). Application during cool weather allows for the use of ester formulations of 2,4-D which may have better absorption in glandular leaves. Rate: 1.4 lb ae/a
		<b>Chlorsulfuron</b> - Apply preemergence or postemergence to plants in rosette stage. Rate: 0.75 to 1.95 oz ae/a
Xanthium spinosum	Spiny cocklebur	<b>Clopyralid</b> - Apply to seedlings in spring when plants are actively growing. Rate: 1.5 to 3.75 oz ae/a
		<b>Dicamba</b> - Apply to seedlings in spring when plants are actively growing. Rate: 0.25 to 0.75 lb ae/a
		<b>Imazapyr</b> - Apply preemergence or postemergence to actively growing cockleburs. Rate: 0.75 to 1 lb ae/a
Potentilla recta	Sulfur cinquefoil	<b>Aminopyralid</b> - Apply to actively growing plants in the bolting stage of growth. Rate: 1 to 1.75 oz ae/a
		<b>Glyphosate</b> - Apply in the pre-bud stage of growth. Rate: 1.1 to 2.25 lb ae/a
		<b>Metsulfuron</b> - Apply in spring during rosette stage of growth. Rate: 0.6 to 1.2 oz ai/a
Sphaerophysa salsula	Swainsonpea; Alkali swainsonpea	<b>2,4-D</b> - Apply in early bloom stage of growth. Rate: 2 lb ae/a
Melilotus officinalis	Sweet clover	<b>Imazapyr</b> - Apply preemergence or postemergence to actively growing clove. Rate: 0.75 to 1 lb ae/a
		<b>Metsulfuron</b> - Apply in spring during early stages of growth. Rate: 0.6 to 1.2 oz ai/a
		<b>2,4-D</b> - Apply to actively growing plants. Rate: 1.5 to 2 lb ae/a

Senecio jacobaea	Tansy ragwort	<p><b>2,4-D</b> - Apply in spring before flowers appear, the earlier the application the better the control. Rate: 2 qts/a</p> <p><b>Aminopyralid</b> - Apply to actively growing plants in the rosette stage. Rate: 1 to 1.25 oz ae/a</p> <p><b>Metsulfuron</b> - Apply to actively growing plants. Rate: 0.45 to 0.6 oz ai/a</p>
Ailanthus altissima	Tree of heaven	<p><b>Triclopyr</b> - Cut stems horizontally at or near ground level, then immediately apply herbicide solution to cover the outer 20% of the stump face. Rate: 25% solution in water.</p> <p><b>Metsulfuron</b> - Treatments are best when leaves are fully expanded. Rate: 1.2 oz ai/a</p>
Hibiscus trionum	Venice mallow	Treatment data is still preliminary however the following have shown promising results (and are on the BLM approved list)- 2,4-D, chlorsulfuron, dicamba, glyphosate and picloram. Follow label instructions.
Ventenata dubia	Ventenata; North Africa grass	<p><b>Imazapic</b> - Apply in the fall after grass has emerged. Rate: 5 oz/a</p> <p><b>Sulfosulfuron</b> - Apply in the fall after grass has emerged (1 inch rain and soil temperature above 45 degrees). Rate: 0.75 oz/a</p> <p><b>Rimsulfuron</b> - Apply before or soon after seedlings emerge. Rate: 2 to 4 oz/a</p>
Cicuta douglasii	Water hemlock	<p><b>Glyphosate</b> - Apply to actively growing plants. Rate: 2% solution.</p> <p><b>Imazapyr</b> - Apply to actively growing plants. Rate: 0.75 to 1 lb ae/a</p>
Equisetum arvense	Western horsetail	<b>Chlorsulfuron</b> - Apply pre- or postemergence. Rate: 1 to 1.5 oz ai/a
Panicum miliaceum	Wild proso millet	There are no herbicides available for this plant that are also on the BLM approved list.
Iris pseudacorus	Yellow flag iris	<b>2,4-D</b> - Apply postemergence at early bloom stage. <b>This herbicide can only be applied to terrestrial populations.</b> Rate: 5 lb ae in 100 gallons water



		<b>Glyphosate</b> - Apply postemergence to foliage when plants are growing rapidly, but before flowering in late spring or early summer. Can also apply in fall. Rate: 4% solution for spot treatment
		<b>Imazapyr</b> - Apply postemergence to plants at prebloom stage or to late season plants in fall. Rate: 1 to 3% for spot spray
Cyperus esculentus	Yellow nutsedge	<b>Glyphosate</b> - Apply when nutsedge is actively growing in midseason but before new tubers begin to form. Usually by June 15 to July 1. Rate: 2.25 ae/a as broadcast spray or 1% solution using hand-held equipment.
		<b>Imazapic</b> - Apply postemergence when plants have bolted. Rate: 0.125 to 0.188 lb ai/a
Sources: DiTomaso et al. 2013; Prather et al. 2019. <sup>1</sup> a = acre; ae = acid equivalent; ai = active ingredient; lb= pound; oz = ounces		