Weed Management Plan

Campo Verde Solar Project Gen-tie Line on Federal Lands

Imperial County, California

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Submitted to:

Bureau of Land Management
Renewable Energy Coordinating Office
California Desert District
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1.0 Introduction

1.1 Project Description and Weed Management Area

On September 12, 2011, Campo Verde Solar, LLC ("Applicant") submitted a SF-299 application to the Bureau of Land Management (BLM) for a right-of-way (ROW) under the Federal Land Policy and Management Act (FLPMA) for a generation interconnection (gen-tie) transmission line across federal lands administered by BLM. The gen-tie line would transport renewable electrical energy from the proposed Campo Verde Solar Project to San Diego Gas and Electric's (SDG&E's) Imperial Valley Substation ("Imperial Valley Substation") located on BLM land in Imperial County, California about 8 miles southwest of the city of El Centro. The Campo Verde Solar Project is a proposed photovoltaic (PV) solar project that would generate nominally 140+ megawatts of alternating current (MWs_{AC}) of renewable energy. The Campo Verde Solar generation facility is located on approximately 1,990 acres of disturbed private land that are currently used for agriculture.

The Applicant submitted a FLPMA SF-299 right-of-way application for a proposed and alternative route for a double-circuit 230-kV gen-tie line across public lands administered by the BLM. The proposed gen-tie route would be built along one of two routes on BLM-managed lands, each approximately 1.0 mile long. It would proceed south from the solar generation facility site, following existing roads south across BLM-managed land to a point where it would turn southeast to SDG&E's Imperial Valley Substation. An alternative route for the gen-tie across BLM-managed land would be approximately 0.8 miles long, with approximately 0.4 miles on BLM-managed land and the remainder on private land. It would generally parallel the existing Imperial Irrigation District's (IID's) 230-kV S-Line south from the project sites (note: the BLM approved the S-Line to be upgraded to a double-circuit 230-kV line in Grant CACA-13206 Amended March 26, 2010). **Figure 1** shows the locations of each of the proposed and alternative gen-tie routes.

The Weed Management Area (WMA) addressed in this plan consists of the portion of the gen-tie lines on federal land managed by the BLM that would be temporarily and permanently disturbed during construction.

1.2 Plan Purpose

The term "weed" refers to invasive, non-native plant species and weeds listed on federal and state noxious weed lists. In recent years, there has been an expansion of invasive, non-native (or "alien") plant species across the United States, including California. New invasive weed species arrive in California every year. Invasive species create substantial economic losses for agriculture in both cropland and rangeland areas, and they often provide poorer habitat for wildlife than native vegetation. Proliferation of invasive plant species alters ecosystem processes and threatens certain native species with extirpation. Unchecked, these species can create economic impacts and disrupt native ecosystems.

Invasive species are becoming one of the most pressing issues for land managers. Most natural areas contain alien plant species. Due to constraints on management resources, managers must prioritize which species to control and which control methods to implement.

This plan is submitted to address weed management for those portions of the gen-tie line located on BLM-administered lands. The purpose of the plan is to provide (1) monitoring, preventative, and management strategies for weed control during construction activities; (2) control and management of weeds in areas temporarily disturbed during construction where restoration and revegetation efforts will be focused; and (3), a long-term strategy for noxious weed control and management during the operation of the Gen-tie line.

1.3 Noxious Weed Definition

The term ‘‘noxious weed’’ is defined in the federal Plant Protection Act (7 *U.S. Code* [U.S.C.] 7701 *et seq.*) as any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products); livestock, poultry, or other interests of agriculture; irrigation; navigation; the natural resources of the U.S.; the public health; or the environment. Noxious weeds are typically characterized as non-native plants that aggressively colonize new areas and can dominate native plant communities if not controlled. Noxious weeds often alter physical or chemical soil conditions, out-compete native vegetation, and dominate the landscape to the detriment of native plants and wildlife. Noxious weeds may also preempt ground and surface water resources, compromise agricultural operations, conflict with recreational values, create fire hazards, and compromise aesthetic values of native or urban landscapes. Noxious weeds are often quick to colonize disturbed areas, including construction sites, roadsides, irrigated sites, or any other area with altered hydrology, soil structure, or soil chemistry. Noxious weeds are only those species listed on federal (USDA 2012) or State of California lists (CDFA 2010).

1.4 Approach to Weed Management

This plan is focused on the persistence of desired plant species and communities, rather than on simply eliminating weeds. Preventive programs are implemented to keep management areas free of species that are not yet established but that are known to be problematic in the vicinity. Priorities are set to reduce or eradicate weeds that have already established in the WMA, according to their actual and potential impacts on the land management goals for the WMA, and according to the ability to control them now versus in the future. Weed control actions will be taken only when careful consideration indicates a lack of action would result in more damage than controlling it with the best available methods.

Weed management plans should be structured to provide a logical approach to weed management based on the best available information. This plan follows an adaptive management approach:

- Weed species are identified through an inventory of the property and by gathering information from other sources;
- Land management goals and weed management objectives are established and recorded for the property;
- Priorities are assigned to the weed species and weed infestations based on the severity of their impacts, while considering the ability to control them;

- Methods are considered for controlling weeds or otherwise diminishing their impacts and, if necessary, are reprioritized based on likely impacts on target and non-target species;
- Integrated Weed Management (IWM) plans are developed and implemented based on this information;
- Results of management actions are monitored, evaluated, and compared to weed management objectives for the management area;
- The information is used to modify and improve weed management objectives, control priorities, and IWM plans, thereby starting the cycle again.

1.5 Plan Objectives

This plan includes a list and an assessment of noxious weeds and other invasive plant species that occur, or could potentially occur, in the project vicinity; a target list of weeds that will be controlled; survey methods for weed presence during construction and operation; weed control methods; and reporting requirements. **Figure 1** shows the Campo Verde project area. **Figure 2** shows the WMA and weed infestation locations in the survey area. Certain considerations will be made in regards to wide-spread weed species (e.g. Arabian schismus [*Schismus arabicus*]) and Sahara mustard [*Brassica tournefortii*] because removal of widespread and naturalized species is impractical. Appropriate objectives will be defined on a case-by case basis by evaluating weed infestations in the survey area.

Weed management objectives are important to specify before project initiation, and need to be consistent with existing and proposed future site conditions, biology of the existing weed species, and environmental context of the project. Weed management objectives for the project include the following, applicable to temporary disturbance areas and new access roads during construction:

- Eradication: This objective involves the elimination of individuals of a particular species within a specified area. This method is generally not feasible in the WMA; it is more appropriate where the weed is of considerable economic and environmental concern and the population size is manageable (the ROW is too small to manage weed populations).

- Suppression: This objective involves reducing current infestation density, but not necessarily reducing the total area or boundary of the infestation. This applies to many widely distributed, high-density weeds where eradication is not feasible.

- Containment: This objective involves preventing infestation expansion and spread, and may be conducted with or without attempts to reduce infestation density. Containment involves stopping spread until suppression or eradication can be implemented, and is practical only to the extent that the spread of seeds or vegetative propagules can be prevented. This is the primary goal for the WMA.

1.6 Management Roles

The ROW grant-holder is ultimately responsible for implementing this plan. It is anticipated that grant-holder's contractors and other designees responsible for implementing components of this plan will include the following:

- Contractor(s) – Contractual language may be included in construction documents and maintenance contracts to ensure that contractors, subcontractors, vendors, maintenance personnel and other parties, performing either construction, maintenance or repairs at the project site, abide by and implement the provisions of this plan. Implementing the construction provisions of this plan may be a part of construction contracts. Restoration contractors, landscape contractors, and other specialists may implement specific provisions of this plan either as subcontractors to the general construction contractor, or through independent contracts with the grant-holder.

- Construction Manager – The construction manager will have ultimate oversight of the construction contractor to ensure compliance with the provisions of this plan.

- Environmental Compliance Manager – The grant-holder will designate an environmental compliance manager (ECM) to provide oversight of construction practices and ensure compliance with the provisions of this plan. The ECM (including support staff as needed) will be contracted directly by the grant-holder and coordinate with the construction manager to ensure contractor compliance with environmental requirements for construction.

- BLM – As the administering land management agency, the BLM will provide ultimate approval of the contents of this plan and compliance oversight of its provisions. BLM will provide timely review of work products including this plan, modifications or amendments to this plan, and subsequent reports as required in this plan.

1.7 Summary of Weed Management Actions

The table below summarizes the activities that must be implemented to manage weeds on the BLM-managed lands. The remainder of this plan and the appendices provide the detail associated with each of these requirements.

SUMMARY OF WEED MANAGEMENT ACTIONS / ACTIVITIES		
ACTION / ACTIVITY	**TIMING**	**REPORTING / NOTES**
Pre-Construction		
Site weed inventory	Completed	Included in Weed Management Plan
Flag weed-infested areas	Before construction	GIS mapping of weed areas
Control/treatment of infested areas	Before construction	Record location, type of treatment, time
Construction		
Worker training	Before starting work	Weeds included in environmental training
Construction equipment washing	Before they enter the site	Keep log
Avoidance of flagged areas	Before areas are initially treated	To avoid spreading existing weeds
Use weed-free straw	If used for erosion control	Document

Monitoring of construction areas for weeds	Part of daily environmental inspection	Included in daily environmental log / report
Control /treatment of infested areas	Throughout construction as needed	Document control. If used, herbicides applied by licensed applicators, herbicides and applicators pre-approved by BLM
Final construction report	30 days after construction complete	Report to BLM
Post- Construction		
Implement revegetation plan	After completion of construction	Per approved plan
Must use weed-free seed		Provide certification
Control/treatment of infested areas	As needed	Document control. If used, herbicides applied by licensed applicators, herbicides and applicators pre-approved by BLM
Operation		
Monitoring	Annually	
Control/treatment of infested areas	As needed	Document control. If used, herbicides applied by licensed applicators, herbicides and applicators pre-approved by BLM
Monitoring report	Annually	Report to BLM

2.0 Applicable Laws, Ordinances, Regulations, and Standards

2.1 Federal Laws and Regulations

2.1.1 Federal Noxious Weed Act of 1974

The Noxious Weed Act of 1974 (the "Act"; 7 U.S.C. §§ 2801-2814, January 3, 1975, as amended 1988 and 1994) provides for the control and management of non-indigenous weeds that injure, or have the potential to injure, the interests of agriculture and commerce, wildlife resources, or public health. It gives the Secretary of Agriculture broad powers in regulating transactions and movement of noxious weeds. The Act states that no person may import or move any noxious weed identified by regulations of the Secretary of Agriculture into or through the U.S., except in compliance with the regulations, which may require that permits be obtained. The Act also requires each federal agency to develop a management program to control undesirable plants on federal lands under the agency's jurisdiction, and establish and adequately fund the program. Some of the provisions of the Act were repealed by the Plant Protection Act of 2000, including U.S.C. 2802 through 2813. However, Section 2814 was not repealed (7 U.S.C. 2801 note; 7 U.S.C. 2814).

2.1.2 Plant Protection Act of 2000

The Plant Protection Act ("PPA") as amended (7 U.S.C. 7701-7786), Section 402 states that the detection, control, eradication, suppression, prevention, or retardation of the spread of plant pests or noxious weeds is necessary for the protection of the agriculture, environment, and economy of the U.S. The PPA defines the term ‘‘noxious weed’’ (7 U.S.C. 7702 § 403) to mean any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the U.S., public health, or the environment. The PPA specifies that the Secretary of Agriculture may prohibit or restrict the importation, entry, exportation, or movement in interstate commerce of any noxious weed if it is determined “that the prohibition or restriction is necessary to prevent the introduction into the [U.S.] or the dissemination of a plant pest or noxious weed within the [U.S.],” and authorizes the issuance of implementing regulations.

2.1.3 Noxious Weed Control and Eradication Act of 2004

The Noxious Weed Control and Eradication Act ("NWCEA") of 2004 (P.L. 108-412) amended the PPA by adding a new subtitle, “Subtitle E--Noxious Weed Control and Eradication" (7 U.S.C. 7781- 7786), which authorizes the Secretary of Agriculture to establish a program to provide financial and technical assistance to public and private landowners for the control or eradication of noxious weeds.

Under the NWCEA, grants are available to weed management entities for the control or eradication of noxious weeds, and agreements may be made with weed management entities to provide financial and technical assistance for the control or eradication of noxious weeds.

2.1.4 Executive Order 13112 of 1999

Executive Order 13112 defines “alien species”, “invasive species”, and other terms. It also defines federal agency duties such as preventing the introduction of invasive species, detecting

and controlling infestations, monitoring, research, and public education. The EO established the Invasive Species Council and defines the duties of the Council, including a requirement to prepare the Invasive Species Management Plan.

2.2 State and Local Laws and Regulations

2.2.1 Native Plant Protection Act

The Native Plant Protection Act ("NPPA") of the 1977 Fish and Game Code (Sections 1900 through 1913) directed the California Department of Fish and Game (CDFG) to carry out the Legislature's intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA gave the California Fish and Game Commission the power to designate native plants as “endangered” or “rare” and protect endangered and rare plants from take.

2.2.2 California Food and Agricultural Code

Various portions of this code pertain to noxious weed management. Specifically, Food and Agricultural Code Section 403 states that the Department of Food and Agriculture should prevent the introduction and spread of injurious insect or animal pests, plant diseases, and noxious weeds. The California Commissioner of Agriculture is granted the authority to investigate and control noxious weeds, and specifically to provide funding, research, and assistance to weed management entities, including eligible weed management areas or county agricultural commissioners, for the control and abatement of noxious weeds according to an approved integrated weed management plan.

California Food and Agriculture Code Section 5004 defines noxious weeds. Sections 5101 and 5205 provide for the certification of weed-free forage, hay, straw, and mulch. This portion of the code recognizes that many noxious weeds are spread through hay, straw, and mulch, used for both forage and ground covers. The code allows for in-field inspection and certification of crops to ensure that live roots, rhizomes, stolons, seeds, or other propagative plant parts of noxious weeds are not present in the crop to be harvested. Certified weed-free forage, hay, straw, and mulch are required on BLM land. Mulch and/or hay bale materials used for erosion control at the project will be required to meet this certification.

2.2.3 Imperial County General Plan

Imperial County has a General Plan which requires that proposed development projects are compatible with policies set forth in the Conservation and Open Space Element, which provide for the protection, maintenance, and use of the County’s natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the state’s natural resources (County of Imperial 1993). Imperial County does not have jurisdiction over BLM-managed land, and the applicant will adhere to the applicable requirements of the General Plan on those portions of the project on private lands.

2.2.4 Imperial County Land Use Ordinance (Title 9)

Imperial County has a County Land Use Ordinance (Title 9) to provide comprehensive land-use regulations for unincorporated areas of Imperial County. These regulations promote and protect the public health, safety, and general welfare through the orderly regulation of land uses throughout the unincorporated areas of Imperial County (County of Imperial 1998). Imperial

County does not have jurisdiction over BLM-managed land, and the applicant will adhere to the applicable requirements of Title 9 on those portions of the project on private lands.

2.3 Standards

Several existing conservation and management plans are relevant to weed control for the project. These plans were created in response to regulatory mandates or internal agency guidance.

2.3.1 Conservation and Management Plans

Bureau of Land Management

BLM prepared the Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (PEIS; DOI 2007) to address the use of chemical vegetation treatments. That document is the result of extensive public involvement and outlines the specific decisions, standard operating procedures, and mitigation measures for the use of herbicides on BLM-managed lands. The selected alternative of the PEIS identifies the active herbicidal ingredients approved for use on BLM-managed land, and the herbicidal ingredients that are no longer approved for use. The Record of Decision for the PEIS defers to approved land use plans for the determination of areas to be treated through BLM's integrated pest management program, and makes no land use or resource allocations in this regard.

Herbicide Treatment Standard Operating Procedures in the ROD specify management of noxious weeds and application of pesticides on BLM land (**Appendix 2**). Table B-1 (**Appendix 2**), Prevention Measures specify avoidance measures to limit noxious weed infestation, and Table B-2 (**Appendix 2**), Standard Operating Procedures for Applying Herbicides, provides details on herbicide application. These procedures are incorporated as requirements of this plan.

California Desert Conservation Area Plan

The California Desert Conservation Area (CDCA) is one of two national conservation areas established by Congress at the time of the passage of the Federal Land and Policy Management Act (FLPMA). The FLPMA outlines how BLM will manage public lands. Congress specifically provided guidance for the management of the CDCA and directed the development of the 1980 CDCA Plan (BLM 1980, as amended). The document provides no specifics about noxious weed or invasive species management, but specifies management strategies for broad areas of the plan boundary.

3.0 Weed Assessment

3.1 Inventory of Weed Species

The weed (noxious weeds and invasive species) inventory was compiled from several sources. A target weed species list was assembled from previous surveys conducted by the BLM and other botanists in the area. Targeted species also included those noxious weeds identified by the USDA, California Department of Food and Agriculture (CDFA 2010), the California Invasive Plant Council (Cal-IPC 2006), and those weeds of special concern identified by BLM. **Table 1** lists noxious weeds and other invasive species that occur or could potentially occur in the project vicinity.

3.1.1 Field Survey Methodology

Weed surveys were conducted from October 23 – 24, 2011, February 28, 2012, and March 3 – 4, 2012. Surveys were conducted at a time when most weeds would be observable. The survey area included the preferred and alternative gen-tie line routes and adjacent buffer areas on BLM-managed lands. Transects were spaced approximately 100 feet apart. Wide-spread weeds were mapped on aerial photographs. Population polygons were assigned a cover class (0-5 percent cover; 5-25 percent cover or >25 percent cover). Isolated individuals (e.g. athel and tamarisk) were also mapped.

3.2 Known and Potential Weed Occurrences

Several weeds are known to occur in the project vicinity. The weeds of highest concern in the general area include Sahara mustard, athel, and tamarisk. Arabian grass is another wide-spread weed that is also present; however, because of the widespread nature of this species, control is considered impracticable. **Table 1** lists potentially occurring invasive species, and identifies which species were observed during site surveys. Each invasive species has a rating based on the California Invasive Species Council rating system and the CDFA.

3.3 Noxious Weed Risk Rating

A Noxious Weed Risk Assessment was conducted for the Campo Verde project on BLM-managed lands based on the BLM Manual 9015 Integrated Weed Management (BLM 1992). This assessment was conducted only for the species observed on BLM-managed lands within the survey area boundaries and adjacent areas; invasive plant species were also evaluated. **Table 2** provides the results of the assessment. Each species in **Table 2** is assessed for the likelihood of spreading to the survey area and the consequence of establishment in the survey area. These two factors are used to determine each species risk rating.

4.0 Weed Management Areas

Weed management will occur site-wide; however, different areas will require different specific management considerations depending on a range of factors described in this section.

4.1 Temporary Disturbance Areas

The Campo Verde Project will be designed to minimize ground disturbance and environmental impacts wherever practicable. The existing access roads will be used and no new roads will be constructed.

The gen-tie line will be constructed in Sonoran creosote bush scrub and/or disturbed stabilized desert dune habitats. Construction will involve some temporary disturbance along with permanent tower placement. **Figure 2** shows the temporary work areas. (structure locations, pull sites, splicing sites, work areas, etc.) Temporary work areas will result in up to approximately 29.83 acres of temporary disturbance for the proposed Gen-tie line route. (Note: disturbance acreages presented in this report are current as of the date of the report. For updated acreage values as applicable, refer to the final Plan of Development (POD).

Weed management issues at temporary construction areas include soil disturbance during construction and temporary use will create habitat well suited to disturbance-adapted invasive species and, therefore, measures to minimize the potential for weed introduction by personnel and equipment will be needed. Areas temporarily disturbed will be revegetated in accordance with the Site Reclamation and Revegetation Plan (SRRP), but revegetated areas may continue to be susceptible to weed invasion and establishment, and ongoing monitoring and management will be required. Weed management measures for these areas, including monitoring frequency, target weed species, and control methods, are included in Section 6.

4.2 Permanently Developed Areas

Permanently developed areas are more likely to support weedy species along the periphery of disturbed areas, and function as seed reservoirs to adjacent natural habitats if not managed.

Structure Footings / Permanent Facilities

Peripheral areas surrounding structure footings are suitable for weed establishment. This may include soils that have been cleared, compacted, or otherwise disturbed; areas where hydrology is altered, such as from increased drainage from developed areas; or areas where continued vehicle or foot traffic persist. Ongoing weed management will focus on these areas for management to avoid creation of weed seed reservoir areas, which could affect adjacent undisturbed habitats. Structure footings will result in approximately 0.04 acres of permanent disturbance for the proposed gen-tie line route and configuration.

5.0 Monitoring and Survey Methods

5.1 Weed Identification

Monitoring and removal of weeds requires skill and training in plant identification. Training and field manuals with photographs of native desert plants and common weeds will be provided as necessary to field staff including biological monitors, weed abatement contractors, plant operators and staff, and construction workers. Online resources are available and include:

- The University of California digital library (http://www.calflora.org/) contains species information and an extensive photo collection.
- The California Invasive Plant Council website (http://www.cal-ipc.org) contains an invasive plant database, plant profiles, and other information on invasive plants and control.
- The U.S. Department of Agriculture (USDA) National Invasive Species Information Center (http://www.invasivespeciesinfo.gov/) has information on invasive species and links to the extensive USDA PLANTS database (http://plants.usda.gov/), with species profiles and photographs.
- The Mojave Weed Management Area has weed management goals to protect and enhance biodiversity, water resources, reduce fire hazards, and protect agricultural interests. The website is at http://www.mojavewma.org/, and has information on the common weeds in the area.
- The California Native Plant Society maintains information including a database on California vegetation including rare, threatened, and endangered plants (http://www.cnps.org/).
- BLM also maintains a website with useful information on noxious weeds, including management strategies for weeds in California (http://www.blm.gov/weeds/).
- The Center for Invasive Plant Management maintains a website with useful information and resources, including plant profiles (http://www.weedcenter.org/).
- *Weeds of the West* by Tom D. Whitson is also a valuable resource (available at many online book suppliers).

5.2 Monitoring

Monitoring is the repeated collection and analysis of information to evaluate progress in meeting resource management objectives. Periodic observation of the weeds being managed is necessary to evaluate the effectiveness of a weed control program. If management objectives are not being met, weed control actions need to be modified. Monitoring will ensure timely detection and prompt eradication of weed infestations, which are essential to a long-term strategy for weed management.

5.2.1 Monitoring Methods

Construction Areas

The ECM will oversee biological monitors who will be present during site clearing and construction activities. Biological monitors will be responsible for inspecting construction areas, identifying the presence of weeds, and inspecting equipment-cleaning facilities for weed seed

removal. The ECM will be responsible for prescribing management activities consistent with this plan if weeds become established. Monitoring of construction areas will be conducted concurrently with the other duties of the ECM/Designated Biologist, and will consist of walking or driving slowly through construction areas and searching for weed species. This will continue on a regular basis while construction crews are conducting ground-disturbing construction activities.

Revegetation Areas

Monitoring of revegetated sites will occur after revegetation activities are complete. Monitoring will be required to determine the condition of the reclaimed areas versus the performance targets specified in the SRRP, with the ultimate goal of re-establishing natural vegetation communities.

Known Infestation Areas

Areas infested with weeds where treatment has been implemented will be monitored to ensure that treatments are effective and that management goals have been achieved. Known infestation areas will be visited until noxious weeds in the area are controlled in accordance with the procedures specified in Section 6.

5.2.2 Database and Mapping

Locations of weed occurrences, species, detection date, growth stage, infestation extent, treatments implemented, results of treatment, and current status data will be maintained during the construction phase. This will not be a requirement for the previously designated wide-spread invasives (Arabian schismus and Sahara mustard). A geographic information system (GIS) will be used to map and store data. The priority of infestation areas will be established based on species, vulnerability of the site to invasion, growth stage, and effectiveness of treatment. Areas mapped as vulnerable to weed invasions will also be included. Vulnerability will be assessed based on: (1) availability of weed propagule sources, such as along roadsides, (2) disturbed areas, including land clearing and earthwork; or (3) nearby areas with known or treated weed infestations or existing infestations that are located outside of the managed area and pose a risk to the management area. During the operating phase, records will be kept in accordance with the procedures specified in the SRRP.

6.0 Weed Management

6.1 Species Descriptions

Descriptions of the more common or potentially harmful noxious weeds occurring or potentially occurring in the Campo Verde survey area are provided in this section, along with the basic weed management strategy applicable to each. **Table 1** provides a complete list of the weed species of concern in this area, and **Table 3** provides additional information on management strategy and control methods for observed and potentially occurring noxious weed species. The management strategies and control methods listed in this section apply during both the construction period and the long-term monitoring period specified in the SRRP.

Not all invasive plant species can or should be eradicated. Certain wide-spread weed species (e.g. *Schismus arabicus*) will be monitored but not controlled. Control of these aggressive colonizers is impractical, and would likely slow site rehabilitation by slowing the rate of secondary succession and surface stabilization. In addition, these species can play a beneficial role in accelerating surface stabilization and reducing soil erosion caused by sheet flow or high winds. Complete eradication of large areas where infestations are already established would negatively impact other pioneer species, and would be impractical because the area would likely be re-invaded by individuals or infestations from adjacent lands in the absence of physical barriers.

The following list provides brief descriptions of the weed species of particular concern within the Campo Verde Project Area. Additional weed species are listed in **Table 1.**

- **Sahara mustard** or **African mustard** (*Brassica tournefortii*) was observed in the survey area. Cal-IPC has declared this plant highly invasive (Cal-IPC 2006). BLM and other agencies recognize that, because of the widespread distribution of Sahara mustard, this species is not considered feasible to control, especially is small areas such as the Campo Verde ROW; therefore, weed abatement efforts for Sahara mustard will not be required.
- **Arabian grass** (*Schismus arabicus*) was widespread throughout the proposed gen-tie route. Cal-IPC has determined that this plant has a limited invasiveness rating in California (Cal-IPC 2006). BLM and other agencies recognize that, because of the widespread distribution of Arabian grass, this species is not considered feasible to control, especially is small areas such as the Campo Verde ROW; therefore, weed abatement efforts for Arabian grass will not be required.
- **Athel (***Tamarix aphylla)* was observed in the survey area. This species has been planted as a windscreen along the edges of fallow agricultural fields along the boundary of the BLM-managed lands. This species is invading the BLM-managed lands in this area, often at very high densities (**Figure 2**). Over time it is anticipated that more individuals will invade the survey area. Though Cal-IPC has rated this species as Limited, it is obvious that this species could have a large impact on the native desert scrub ecosystem by eliminating desert vegetation communities. Known individuals of this species will be mechanically removed as necessary, and occurrences of this species should be mechanically treated where observed within the WMA.

New Weeds

Weeds that were not included in the descriptions above could also potentially colonize or invade the site, both during construction and during operation. During construction, the ECM will be required to update the list of potential noxious weeds if new potential threats are identified. This will include developing a management strategy and management methods appropriate to the plant species and nature of the potential invasion.

6.2 Management Objectives and Strategy

The proposed Gen-tie line is on BLM-managed land within a designated energy corridor. The IV Substation is a hub for existing transmission line corridors entering the substation from the east and south and exiting from the north and west. The survey area contains native desert habitat, and adjacent areas also provide habitat for a number of plant and animal species; it is also within the Yuha Desert flat-tailed horned lizard (*Phrynosoma mcalli*) management area. Therefore, although this is within a designated energy corridor, noxious weeds and other invasive species should be controlled to the extent practicable in accordance with the performance targets.

The weed management objectives are:

1. Eliminate weeds that pose a threat to the energy corridor primarily through increased fuel loads, which could lead to higher fire frequency that could adversely impact the existing energy apparatus within the corridor.

2. Eliminate weed populations that could act as a continued source of propagules that would repeatedly invade the adjacent habitats and degrade those habitats compromising the long-term persistence of native plants and animals adjacent to the project site.

Integrated weed management plans for high priority weed species known to occur in the survey area are included in **Appendix 1**.

6.3 Priorities for Weed Management

6.3.1 Prevention

The most effective weed management action is to prevent weeds from becoming established in the first place. This is the most cost efficient method because, once noxious weeds become established on a site, eradication and/or control methods can be expensive, labor intensive, and potentially ineffective. **Section 6.4.1** details methods that will be employed to prevent the establishment of noxious weeds on site. These include, but are not limited to: minimizing the area of land disturbance, re-establishing native vegetation in disturbed areas as quickly as possible, washing equipment, and regularly monitoring for new noxious weed populations.

6.3.2 Weed Species Priorities

Weed management priorities are based on the actual or potential threat that weeds pose to the management goals for the property. Two factors are used to set priorities, namely the weed species and the locations of weed infestations. Weed species are important because they vary considerably in the threat they pose to the resource values of the property. In addition, weed species vary greatly in their susceptibility to control measures. Weed species that pose the

greatest threat to achieving the management goals for the property and that need to be controlled immediately are the highest priority for management.

6.3.3 Weed Infestation Priorities

One important component of any weed management strategy is to prioritize areas of infestation based upon patch size, species, and location. The highest priority weed patches are typically those that are small and isolated from larger infestations of the same high-priority weed species, and which occur on or could affect the highest-valued resource on the property.

Arabian schismus and Sahara mustard are present throughout the survey area and adjacent areas at varying densities. Highest densities are located within the disturbed desert dunes habitat (**Figure 2**). Densities are lower for the remainder of the survey area. The species is wide-spread throughout the area; therefore, high-priority areas should be those areas outside of the dunes where this species may be easier to control.

Athel in the survey area occurs as isolated individuals and a higher density patch just south of the Westside Main Canal. All individuals and patches of this species would qualify as high priority areas.

6.4 Weed Management Actions

Two general treatments methods will be employed for weeds, mechanical removal, and chemical treatments.

Sahara mustard

Mechanical removal of Sahara mustard should be conducted prior to seed set and dispersal to limit further spread. Mechanical removal will entail removal of the entire plant (stems, flowers and roots) by hand pulling and placing material in appropriate containers for proper disposal. Seedlings are easier to remove; hand pulling can commence after germination in the fall as soon as this species is detectable and identifiable. Chemical treatments for Sahara mustard should also be applied prior to seed set and dispersal. Seed set occurs as early as February in most years. Weed management for Sahara mustard will occur within temporarily disturbed areas and along the periphery of permanently disturbed areas on BLM-managed lands during the construction and long-term monitoring period specified in the SRRP.

Athel

Mechanical removal of seedlings and saplings of tamarisk and athel can occur at any time; however, late summer to late winter are the preferred times to target seedlings from the previous year before they have time grow because shoots can grow to heights of 3-4 meters in one growing season (Bossard et al. 2000). Small shrubs and large trees will be controlled by a combination of cutting the main trunk above the soil surface and applying herbicide to the cut surfaces. In California, triclopyr is most commonly used; this technique usually results in a 90% mortality rate (Bossard et al. 2000). It is assumed that treatments should be applied during late summer (post-flowering) when most plants are translocating nutrients, and herbicides to the root system Weed management for tamarisk and athel will occur within temporarily disturbed areas and along the periphery of permanently disturbed areas on BLM-managed lands during the construction long-term monitoring period specified in Chapter 4 of the SRRP.

This plan is a comprehensive, adaptive Weed Management Plan for pre-construction and long-term invasive weed abatement. It includes specific weed abatement methods, practices and treatment timing incorporating all BLM national requirements for vegetation management. Weed control treatments will include all legally permitted chemical, manual and mechanical methods applied with the authorization of the BLM.

The application of herbicides will be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator. For the lifespan of the Project (i.e., as long as the Project is physically present), long-term measures to control the introduction and spread of invasive weeds in the Project area will include annual surveying for new and spreading invasive weed populations and monitoring identified and treated populations in the project areas to ascertain the effectiveness of weed control measures.

To avoid impacts to vegetation other than noxious weeds or other invasive species, the Licensed Qualified Applicator will:

- follow application guidelines for each herbicide;
- spray in low-wind situations;
- concentrating nozzles to avoid overspray and the subsequent spreading of the herbicide by the wind.

6.4.1 Preventative Measures

The prevention of invasive plants from colonizing new areas is far more cost-effective than eradication and control (Davies and Sheley 2007). General measures to control the spread of weed propagules and inhibit germination will include the following:

- Limit disturbance areas during construction to the smallest required to perform the work; confine ingress and egress to designated access routes. This measure will keep soil crusts found onsite intact and minimize the amount of surface disturbance onsite
- Document washing of construction equipment before entering the site and closely monitor the types of materials brought onto the site to minimize the potential for weed introduction.
- Implement reclamation and restoration as quickly as practicable on disturbed sites in accordance with the SRRP.
- Regular monitoring to quickly detect new infestations of weeds, coupled with rapid implementation of control measures to prevent further infiltration.

6.4.1.1 Construction

Worker Environmental Training

Environmental training for contractors or related personnel working on the site during construction will include noxious weed and invasive species management awareness training. Personnel will include contractors, subcontractors, inspection personnel, construction managers, construction personnel, and individuals bringing construction equipment onto the site. Training will include weed identification and training on the impacts of noxious weeds on agriculture, wildlife, and fire hazard. Required measures to prevent the spread of weeds in unaffected areas, and controls on their proliferation when present, will also be explained.

Construction Equipment Washing

Prevention is the most cost-effective way to deal with invasive plant species early; therefore, construction equipment will be washed to remove mud and dirt prior to entering BLM-managed lands. This will prevent the spread of weed seeds into new habitats as construction equipment with mud and dirt are one of the most common ways weed seeds are spread to new environments. Construction equipment entering from offsite locations will be required to be cleaned before entering BLM lands. Heavy equipment entering the site on trailers will also require cleaning. This cleaning will occur at locations off BLM-managed lands. The construction contractor, with ECM oversight, will ensure that equipment is free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes before the equipment are allowed to use access roads. Construction equipment will be reasonably dry before entering the site because some weeds, such as Sahara mustard, require water for germination. Therefore, wet equipment leaving the station could promote recruitment of Sahara mustard along access roads.

Construction equipment will be washed with high-pressure water equipment or compressed air before entering the construction site. The wash down will concentrate on tracks, feet, or tires and on the undercarriage, with emphasis on axles, frame, cross members, motor mounts, and on and underneath steps, running boards, and front bumper/brush guard assemblies. Equipment cabs will be swept out and refuse will be disposed of in waste receptacles. Equipment will be washed on private lands near the site or at commercial car-washes elsewhere before being allowed on the site.

When equipment is washed, a log will be kept stating the location, date and time, type of equipment, and methods used. The crewmember that washed the equipment will sign the log. Written logs will be included in the monitoring reports.

Infestation Containment and Control

During construction, areas of concern will be identified and flagged in the field by biological monitors prior to the initiation of ground-disturbing activities. The flagging will alert construction personnel that weeds are present and will indicate the areas for which the noxious weed management control measures must be implemented. Contractors will avoid or minimize travel through these weed-infested areas until such time as required preconstruction weed treatment activities are complete. Control measures will be implemented as soon as practicable as described in the sections below. The contractor will begin project operations in weed-free areas whenever feasible before operating in weed-infested areas, until the ECM has verified completion of weed treatments within weed-infested areas.

Site Soil Management

The contractor will limit the size of ground disturbance to the minimum necessary to perform the activity safely and as designed. The contractor will also avoid creating soil conditions that promote weed germination and establishment to the greatest extent practicable. Soil conditions that promote weed germination and establishment include soil excavation/disturbance, vegetation removal, soil compaction, loss or removal of topsoil and introduction of chemical compounds, including fertilizer, and soil stockpiling.

During grading or excavation activities, the contractor will minimize transporting soil within the site to limit the potential spread of noxious weed seeds onsite. In areas where weed infestations are identified, the contractor will stockpile cleared vegetation and salvaged topsoil adjacent to the

area from which they are stripped to eliminate the transport of soil-borne noxious weed seeds, roots, or rhizomes.

Weed-free Products

Straw or hay bales used for sediment barrier installations, gravel, mulch, and soil have the potential to carry noxious weed seeds. The contractor will ensure that straw or hay bales used for sediment barrier installations are obtained from certified sources that are free of noxious weed seeds. Additional products such as gravel, mulch, and soil, also have the potential to carry weed seeds. If needed, such products should be obtained from suppliers who can provide weed-free certified materials. To the greatest extent feasible, mulch will be generated from native vegetation cleared from the site itself. At no time will soil be imported onto the site.

Weed-free Seed

It is not anticipated that seed application will be necessary for effective reclamation and revegetation of temporarily disturbed areas. However, if seed application becomes necessary, weed-free seed meeting the following criteria should be used. Seed purchased from commercial vendors for site revegetation will be labeled in compliance with the relevant provisions of the California Agriculture Code. In addition to having the correct label, the seed should be required to be free of noxious weeds and the label should identify the seed as such.

6.4.1.2 Operations

Weed management during operations will be conducted in accordance with the SRRP.

6.4.1.3 Site Closure

Site closure and reclamation will be conducted in accordance with the Termination/Restoration Plan that will be developed at the time of closure.

6.4.2 Eradication and Control Methods

6.4.2.1 Mechanical Removal of Weeds

The type of mechanical control methods will depend upon the size and extent of weed species targeted for removal as well as the root structures of these plants. Mechanical control methods range from manually pulling weeds to the use of hand tools to provide enough leverage to pull out the entire plant and associated root systems. Hand or power tools can also be used to uproot, girdle, or cut plants. The Root Talon and Weed Wrench are handheld tools designed to grip the plant stems and provide enough leverage to remove roots; they may be used to pull out woody shrubs such as tamarisk. This effort should be focused on weed species that have a single-root mass, facilitating easy removal. Hand removal by pulling is appropriate when the plants are large enough that they will not break and leave the root structures behind. For localized weed control, this is the most effective method. Hand pulling is less effective in large areas and with weed species that spread through an underground root system.

In small areas, hoeing and weed whipping can be used to control weeds. However, care must be taken when using these methods adjacent to native plants to prevent damage to native plants. Hoeing or weed whipping must only be implemented prior to a plant setting seed, otherwise this disturbance would only serve to further disperse and promote the establishment of the weed species. Pertinent considerations for hoeing and weed whipping include the following:

- Hoeing works best on patches of small weeds and with weeds that have a single-root mass. It is less effective on larger weeds that can regenerate from cut roots. It should not be used on weeds approaching maturity, as seeds can mature and be released on cut plants. Hoed plant material should be bagged and removed offsite.
- Weed whipping can be used for weed removal in limited upland areas with herbaceous plant cover; however, it should not be used on weeds approaching maturity, as seeds can mature and be released on cut plants, and care must be employed when weed whipping adjacent to native plants. Cut plant material should be bagged and removed offsite.

6.4.2.2 Chemical Methods for Weed Removal

Herbicide application is a widely employed, effective control method for removing invasive weed species. One consideration is the possible inadvertent application of herbicide to adjacent native plants. Herbicide application can become a challenge when weeds are interspersed with native cover.

Permitting and Regulatory Requirements

Contractors will be required to obtain required permits from state and local authorities prior to herbicide application. Permits may contain additional terms and conditions that go beyond the scope of this plan. Only a State of California and federally certified contractor, who is also approved by BLM, will be permitted to perform herbicide applications. Herbicides will be applied in accordance with applicable laws, regulations, and permit stipulations. Only herbicides and adjuvants approved by the State of California and BLM for use on public lands will be used within or adjacent to the project site. A list of approved herbicides and adjuvants is available in **Appendix 3**.

The *Final Environmental Impact Statement on Vegetation Treatment on BLM Lands in Seventeen Western States* lists 10 herbicides acceptable for use on BLM-managed lands (DOI 2007). Guidelines for the use of chemical control of vegetation on BLM-managed lands are presented in the *Chemical Pest Control Manual* (BLM n.d.). These guidelines require submittal of a pesticide use proposal (PUP) and pesticide application records (PAR) for the use of herbicides on BLM-managed lands. A sample form required for the submittal of a PUP is included in **Appendix 6**.

Applicant or its agent will submit PARs for each use of herbicides on BLM-managed lands within 24 hours of application. A sample form required for submittal of PARs is included in **Appendix 6**. The occurrence of noxious weeds within the project footprint or adjacent areas will be reported to the BLM district office. The appropriate weed control procedures, including target species, timing of control, and method of control, will be determined in consultation with BLM personnel. Applicant will be responsible for providing the necessary trained personnel or hiring a contractor to implement the required weed control procedures.

Types of Herbicides

Herbicides are characterized by the way in which they inhibit plant growth. Herbicides are characterized as pre-emergent, post-emergent, selective and nonselective. A pre-emergent herbicide controls ungerminated seeds by inhibiting germination, while a post-emergent herbicide is lethal to emerged plants. Some herbicides have both pre- and post-emergent activity. A selective herbicide is only effective on some species of plants, usually distinguishing between

grasses (monocots) and broadleaf plants (dicots). A non-selective herbicide is one that is lethal to any plant species to which it is applied.

Herbicides kill plants through either contact or systemic action. Contact herbicides are most effective against annual weeds and kill only the plant parts on which the chemical is deposited. Systemic herbicides are absorbed either by roots or foliar parts of a plant and are then translocated within the plant system to tissues that are away from the point of application. Although systemic herbicides can be effective against annual and perennial weeds, they are particularly effective against established perennial weeds.

Pre-emergent herbicides inhibit germination of annuals from seed, but generally do not control perennial plants that germinate from bulbs, corms, rhizomes, stolens, or other vegetative structures. Common pre-emergent herbicide classes include the following:

- Dinitroaniline Type**:** Examples of this class are pendimethalin (e.g., Weedgrass™), trifluralin (e.g., Treflan™), benefin (e.g., Balan™), and combinations of these. These herbicides provide for pre-emergence control of annual grasses and other annuals. They are mitotic (cell division) inhibitors and are primarily effective in inhibiting root growth of germinating seeds. Selectivity is physiological or chemical in nature. Some of these herbicides are volatile, and should not be applied in temperatures above 90 degrees Fahrenheit (°F). These herbicides need to be watered into the soil for proper activation. Some can persist for several months.
- Dithiopyr (e.g., Dimension™) belongs to a new class of herbicide known as pyridines. It is a selective herbicide primarily used for pre-emergence annual grass control in established turfgrass. However, it can be used for post-emergence control of young grass seedlings. It inhibits cell division and cell growth of meristematic regions (growing points of roots and shoots). Dithiopyr is lost from soil bychemical and microbial degradation.

The most commonly used post-emergent, non-selective herbicides contain a family of chemicals called glyphosates (N-[phosphonomethyl] glycine). Glyphosate (e.g., Rodeo™, Roundup™, and Accord™) is a non-selective, systemic herbicide that is effective on many annual and perennial plants. It works by blocking an enzyme pathway that is important for plant protein synthesis, which is most effective with full coverage of plant leaves. However, because of systemic action, even partial coverage can result in plant mortality. The herbicide is typically used in conjunction with linseed oil or another surfactant, which aids in spreading an even layer across the surface of the leaves. Glyphosate is also volatile and should not be applied when the temperatures exceed 90°F.

The United States Environmental Protection Agency (EPA 1993) has determined that glyphosate has a relatively low degree of oral and dermal acute toxicity. It is considered to be immobile in soil and readily degraded by soil microbes to the metabolite aminomethyl phosphonic acid and then to carbon dioxide. EPA states that it is minimally toxic to birds, fish, aquatic invertebrates, and honeybees (EPA 1993).

Application and Handling

The following general precautions will be implemented for pesticide application:

- It is the responsibility of the pesticide user to observe the directions, restrictions, and precautions on pesticide labels.

- Store pesticides in original containers with labels intact and behind locked doors.
- Keep pesticides out of the reach of children.
- Use pesticides at correct label dosage and intervals to avoid injury to plants and animals.
- Use pesticides carefully to avoid drift or contamination of non-target areas.
- Surplus pesticides and containers should be disposed of in accordance with label instructions to prevent contamination of water and other hazards.
- Follow directions on the pesticide label regarding restrictions as required by state or federal laws and regulations.
- Avoid action that may threaten a rare, threatened, or endangered species or its habitat.
- Only the minimum amount of herbicides necessary to control noxious weeds will be used in order to prevent the contamination of ground water

Limitations

Herbicide applications must follow EPA label instructions. Application of herbicides will be suspended when any of the following conditions exists:

- Wind velocity exceeds 6 miles per hour (mph) during application of liquids or 15 mph during application of granular herbicides.
- Precipitation is occurring or is imminent.
- Air temperatures exceed 90°F.

Transport and Mixing

During the construction phase, herbicides will be transported to the project site daily as necessary with the following provisions:

- Only the needed quantity for that day's work will be transported.
- Concentrate will be transported in approved containers only and in a manner that will prevent tipping or spilling, and in a location that is isolated from the vehicle's driving compartment, food, clothing, and safety equipment.
- Mixing will be done offsite, over a drip-catching device, and at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive resources. No herbicides will be applied at these areas unless authorized by appropriate regulatory agencies.
- Herbicide equipment and containers will be inspected for leaks daily. Disposal of spent containers will be in accordance with the herbicide label.
- During the operations phase of the project, herbicides will be stored in areas with the required secondary containment and security provisions implemented.

Herbicide Spills and Cleanup

Reasonable precautions will be taken to avoid herbicide spills. In the event of a spill, immediate cleanup will be initiated. Contractors will keep spill kits in their vehicles and in herbicide storage areas to allow for quick and effective response to spills.

The following items are typically to be included in the spill kit:

- protective clothing and gloves;
- absorptive clay, "kitty litter," or other commercial adsorbent;

- plastic bags and bucket;
- shovel;
- fiber brush and screw-in handle;
- dust pan;
- caution tape;
- highway flares (use on established roads only); and
- detergent.

Response to herbicide spills will vary with the size and location of the spill, but general procedures include the following, as needed:

- BLM notification;
- traffic control;
- dressing the cleanup team in protective clothing;
- stopping the leaks;
- containing the spilled material;
- cleaning up and removing the spilled herbicide or contaminated adsorptive material and soil, and
- transporting the spilled pesticide and contaminated material to an authorized disposal site.

Spray Methods

Hand application methods (*e.g.*, backpack spraying) that target individual plants will be used to treat small or scattered weed populations in rough terrain. Calibration checks of equipment will be conducted at the beginning of spraying and periodically throughout treatment to ensure that proper application rates are achieved.

Controlling Post-emergent Herbaceous Vegetation

To control herbaceous weedy vegetation, implement the following measures:

- Apply a foliar application of approved herbicide on each plant.
- Provide applications on a spray-to-wet basis with coverage uniform and complete.
- Avoid contact with established native shrub and grass species.
- Temporarily discontinue work in the event of gusty winds or winds in excess of 6 mph.
- Temporarily discontinue in the event of rainfall.
- Ensure applicators possess current pest control licenses valid in the State of California and wear appropriate personal protective equipment.
- Leave sprayed vegetation undisturbed for 7 days or until visible effects of herbicide application are present consisting of wilted and brown foliage and disintegration of root material. The ECM will determine when adequate time has been allowed for this.
- Remove treated plant materials using a flail mower or other appropriate means, and dispose of offsite at an appropriate landfill site.
- Cover loads while removing vegetation using a tarpaulin or equivalent cover.

Controlling Woody Vegetation

Woody vegetation should be controlled using the cut and paint method of removal. To control woody vegetation, implement the following measures:

- Cut sprouts or woody stems to a height of 12 inches or less above ground and remove aboveground debris for disposal at a suitable landfill.
- Apply approved herbicide at a 100 percent rate to the cut stem within 2 minutes of cutting the stem. If more than 2 minutes elapses, the cut stem should be re-cut a few inches below the original cut and herbicide can then be applied.
- Apply Rodeo™ (or equivalent) in areas that are in immediate contact with wetlands and/or other water bodies; Round-up™ (or equivalent) will be used elsewhere. The ECM will determine the appropriate herbicide to use at each location.
- Cover loads while removing vegetation using a tarpaulin or equivalent cover.
- Apply follow-up foliar applications as described in the previous section to stem re-growth that occurs after initial control effort.
- Continue monitoring and treating cut stems for as long as necessary to ensure complete mortality.

Controlling Pre-emergent Vegetation

Generally, it is anticipated that there are few areas where pre-emergent vegetation control would be required. Pre-emergent herbicides work only on vegetation reproducing from seed, and are not effective on other types of propagules, such as resprouts from root crowns which have been cut, rhizomes, or other material. Use of pre-emergent herbicides might be appropriate in areas that have repeated weed problems with annual plants, with evidence of a robust weed seed crop in the seed bank. Such areas will be sprayed with pre-emergent herbicides during appropriate pre-germination periods.

Generally, pre-emergent herbicides would not be appropriate for revegetation areas or other native habitats because they are likely to inhibit the germination and growth of desirable native plant seed being used for restoration.

6.4.2.3 Competitive Vegetation

The use of native plants to out-compete invasive weed species is an effective, long-term weed control strategy incorporated for this project site. Revegetation of temporarily disturbed areas will be conducted in accordance with the procedures in the SRRP. Establishment of native species as the result of implementation of the SRRP has the potential to exclude weed invasion, and over time, weed control will require less effort.

7.0 Reporting Requirements

7.1 Report Content

Implementation of the noxious weed management plan will include the following data collection and reporting guidelines applicable during construction.

7.1.1 Construction Reports

During the project construction phases, reporting for noxious weed management will be included in construction weed monitoring reports. Construction weed monitoring reports will include the following information:

- Monitoring results: location, type, extent, and density of noxious weeds. These data will include mapping and photographs, as appropriate, as well as textual and tabular data content to fully describe conditions on the project site.
- Management efforts: date, location, type of treatment implemented, and results. Ongoing evaluation of success of treatment will be included.
- Information on implementation and success of preventative measures: status of equipment wash facilities, summary of use data, and data for worker environmental training program, including participants.
- Summary description of revegetation efforts undertaken and their current status.

7.1.2 Long-term Monitoring Reports

After implementation of reclamation and revegetation measures in accordance with the SRRP, long-term monitoring reports will be focused on the success of those measures with respect to the performance targets specified in the SRRP. Noxious weed management performance will be documented in the long-term monitoring reports as specified.

7.2 Reporting Periods

7.2.1 Construction Period

It is anticipated that records will be kept as frequently as daily by the ECM and the monitoring team. These records will be summarized into a final construction report to be submitted to BLM within 30 days of the conclusion of gen-tie line construction period, which is expected to be approximately three to four months in duration.

7.2.2 Long-term Monitoring Reports

Annual monitoring reports will be produced for the duration of the monitoring period.

8.0 References

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Tables

Table 1: Weeds (Noxious and Other Invasive Species) Occurring and Potentially Occurring in the Campo Verde Gen-tie line Survey Area		
Noxious Weeds (on federal or state list)		
Species	**Noxious Weed Rating[1]**	**Observed or Potential for Occurrence Within Project Area on BLM-Managed Lands**
Silver-leaf horse-nettle (*Solanum elaeagnifolium*)	CDFA: B Cal-IPC: Evaluated but not listed D-B-B	Observed in survey area on agricultural non-BLM-managed lands. Primarily an agricultural weed but escaping to Wildlands in other countries. Could be more important in future (Cal-IPC 2006).
Puncture vine (*Tribulus terrestris*)	CDFA: C Not listed in Cal-IPC	Observed in survey area in desert scrub on non-BLM-managed lands.
Other Invasive Species (Cal-IPC List)		
Arabian schismus (*Schimus arabicus*)	Cal-IPC: Limited, B-C-A	Observed in survey area on BLM-managed lands. Widespread in desert (Cal-IPC 2006).
Sahara mustard (*Brassica tournefortii*)	Cal-IPC: High, A-A-B	Observed in survey area on BLM-managed lands.
Athel (*Tamarix aphylla*)	Cal-IPC: Limited, C-B-B	Observed in survey area on BLM-managed lands.
Oleander (*Nerium oleander*)	Cal-IPC: Evaluated but not listed D-B-D	Observed in survey area on BLM-managed lands. Not known to be invasive but reported from riparian areas in Central Valley and San Bernardino Mountains (Cal-IPC 2006).
Bassia (*Bassia hyssopifolia*)	Cal-IPC: Limited, C-C-B	Observed in survey area on agricultural non-BLM-managed lands. Weed of agriculture and disturbed sites. Minor impacts to Wildlands (Cal-IPC 2006).
Weeds (Noxious and Other Invasive Species) Not Observed But Reported from the Vicinity of the Project		
Noxious Weeds (on federal or state list)		
Giant reed (*Arundo donax*)	CDFA: B Cal-IPC: High, A-B-A	Reported from Imperial Solar Energy Center South Project.
Russian thistle (*Salsola tragus*)	CDFA: B Cal-IPC: Limited, C-B-B	Reported from Imperial Solar Energy Center South Project. Widespread, impacts minor in wildlands (Cal-IPC 2006).
Johnson grass (*Sorghum halepense*)	CDFA: B Not listed in Cal-IPC	Reported from Imperial Solar Energy Center South Project.
Other Invasive Species (Cal-IPC List)		

London rocket (*Sisymbrium irio*)	Cal-IPC: Moderate, B-B-A	Reported from Imperial Solar Energy Center South Project. Widespread, primarily in disturbed sites. Impacts vary locally (Cal-IPC 2006).
Red-stem filaree (*Erodium cicutarium*)	Cal-IPC: Limited, C-C-A	Reported from Imperial Solar Energy Center South Project. Widespread in many habitats. Impacts minor in wildlands. High-density populations are transient (Cal-IPC 2006).
Brome (*Bromus madritensis* ssp. *rubens*)	Cal-IPC: Limited, A-B-A	Reported from Imperial Valley Solar Project. Impacts most severe in desert washes
Prickly sow thistle (*Sonchus asper*)	Cal-IPC: Evaluated but not listed D-B-B	Reported from Imperial Valley Solar Project. Primarily an agriculture weed (Cal-IPC 2006).
Crystaline ice plant (*Mesembryanthemum crystallinum*)	Cal-IPC: Moderate, B-B-C	Reported from Imperial Valley Solar Project. Locally problematic, especially in southern California (Cal-IPC 2006).
Prickly lettuce (*Lactuca serriola*)	Cal-IPC: Evaluated but not listed D-C-B	Reported from Imperial Solar Energy Center South Project. Primarily an agriculture and roadside weed (Cal-IPC 2006).
Annual beard grass (*Polypogonmon speliensis*)	Cal-IPC: Limited, C-C-B	Reported from Imperial Solar Energy Center South Project. Widespread, impacts seem to be minor (Cal-IPC 2006)

[1] **CDFA Ratings**

A - A pest of known economic or environmental detriment and is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment. A-rated pests are prohibited from entering the state because, by virtue of their rating, they have been placed on the of Plant Health and Pest Prevention Services Director's list of organisms "detrimental to agriculture" in accordance with the FAC Sections 5261 and 6461. The only exception is for organisms accompanied by an approved CDFA or USDA live organism permit for contained exhibit or research purposes. If found entering or established in the state, A-rated pests are subject to state (or commissioner when acting as a state agent) enforced action involving eradication, quarantine regulation, containment, rejection, or other holding action.

B - A pest of known economic or environmental detriment and, if present in California, it is of limited distribution. B-rated pests are eligible to enter the state if the receiving county has agreed to accept them. If found in the state, they are subject to state endorsed holding action and eradication only to provide for containment, as when found in a nursery. At the discretion of the individual county agricultural commissioner they are subject to eradication, containment, suppression, control, or other holding action.

C - A pest of known economic or environmental detriment and, if present in California, it is usually widespread. C-rated organisms are eligible to enter the state as long as the commodities with which they are associated conform to pest cleanliness standards when found in nursery stock shipments. If found in the state, they are subject to regulations designed to retard spread or to suppress at the discretion of the individual county agricultural commissioner. There is no state enforced action other than providing for pest cleanliness.

Q - An organism or disorder suspected to be of economic or environmental detriment, but whose status is uncertain because of incomplete identification or inadequate information.

D - An organism known to be of little or no economic or environmental detriment, to have an extremely low likelihood of weediness, or is known to be a parasite or predator. There is no state enforced action.

Cal-IPC Overall Ratings

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution

may range from limited to widespread.

Limited – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Ecological Impact, Invasive Potential and Distribution Codes

A= High; B= Moderate, C=Limited, D=None, U= Unknown

Table 2: Noxious Weed Risk Assessment				
Noxious Weeds (on federal or state list) - NONE				
Species	**Likelihood of Spreading to Project Area[1]**	**Consequence of Establishment in Project Area[2]**	**Risk Rating[3]**	**Action[3]**
Other Invasive Species (Cal-IPC List)				
Arabian schismus (*Schismus arabicus*)	High = 10 High density populations already present within the project area.	Moderate=5 Populations already in high densities within project area, adverse effects already present, cumulative effects from project not likely to increase effects that are present already	50	Project must be modified to reduce risk level through preventative management measures including controlling existing infestation of weeds prior to project activity. Project must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
Sahara mustard (*Brassica tournefortii*)	High = 10 High density populations already present within the project area.	Moderate=5 Populations already in high densities within project area, adverse effects already present, cumulative effects from project not likely to increase effects that are present already	50	Project must be modified to reduce risk level through preventative management measures including controlling existing infestation of weeds prior to project activity. Project must also provide for control of newly established populations of weeds and follow-up treatment for previously treated infestations.
Athel (*Tamarisk aphylla*)	High = 10 Low density populations present within the project area; high density populations adjacent to project area.	High = 10 Species appears to be actively expanding its range from adjacent areas into the project area. Anticipated that project could result in	100	Project must be modified to reduce risk level through preventative management measures controlling existing infestation of weeds prior to project activity. Project must also provide for control of newly established populations of weeds and

		further expansion		follow-up treatment for previously treated infestations.
Oleander (*Nerium oleander*)	Moderate = 5 Species present in one small, confined area, planted as a windbreak	None = 0 Species, though present in project area does not appear to be invasive. In most areas within its range this species is not considered highly invasive.	0	None

BLM Risk Assessment Factors and Ratings (BLM 1992)

[1] Likelihood of Spread to Project Area
None (0): Noxious weed species not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area;
Low (1): Noxious weed species present in areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area;
Moderate (5): Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread on noxious weeds within the project area;
High (10): heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

[2] Consequence of Establishment in Project Area
Low to Non-Existent (1): None. No cumulative effects expected.
Moderate (5): Possible adverse effects on site and possible expansion of infestation within project area. Cumulative effects on native plant community are likely but limited.
High (10): Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant community are probable.

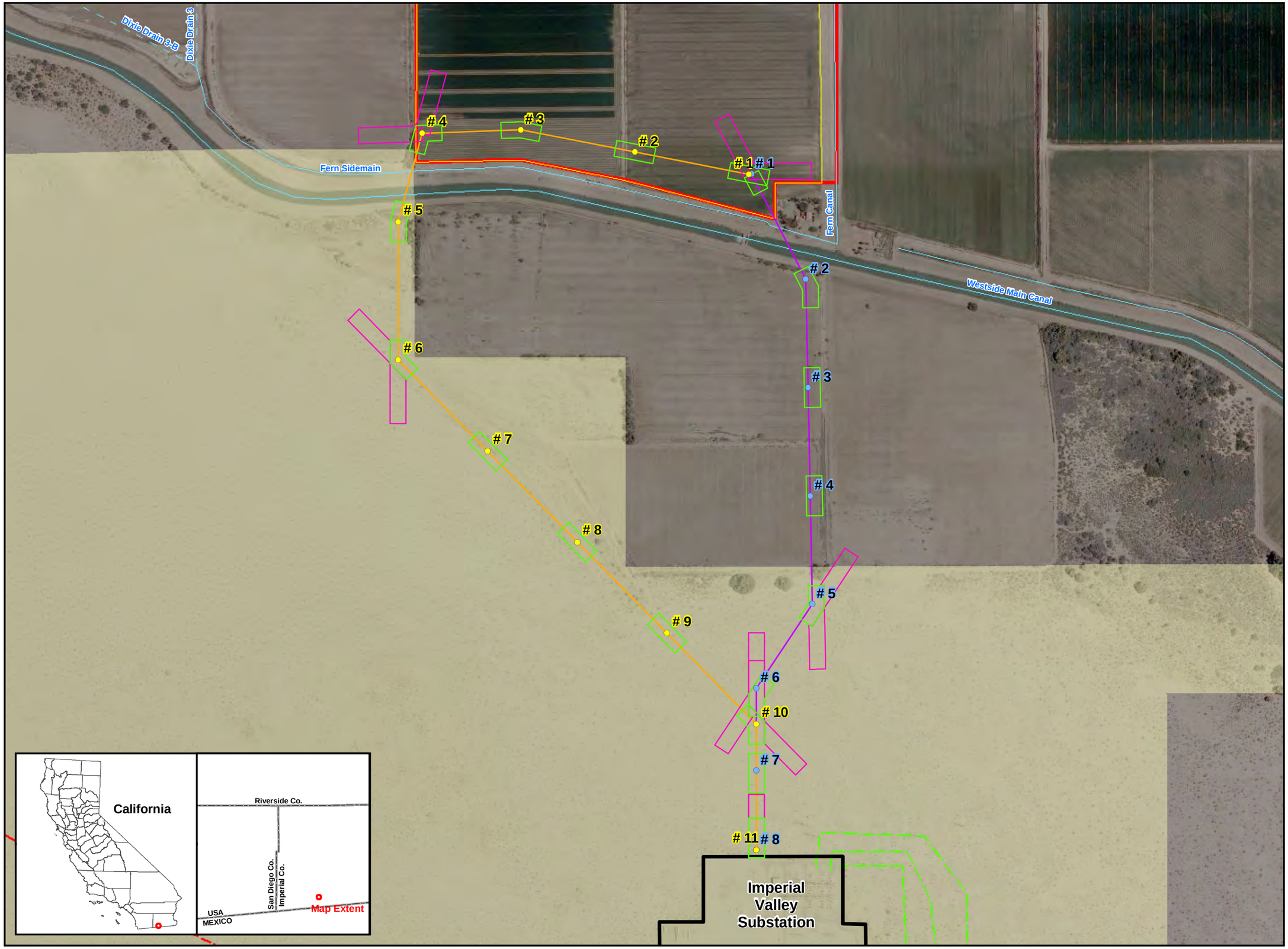
[3] Risk Rating/Action:
0 = None: Proceed as planned,
1-10 = Low: Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
25 = Moderate: Develop preventative management measures for the proposed project to reduce the risk of introduction or spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
50-100 = High: Project must be modified to reduce risk level through preventative management measures including seeding with desirable species to occupy disturbed sites and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
Note: Although horizontal mulch techniques will be implemented as part of the reclamation and revegetation process, native seed application is not proposed throughout the project alignment (except as a remedial measure if necessary) due to low native plant cover values within the impact areas, a predominance of creosote bush in most sites which has been shown to inhibit root development in competing shrub species, and extremely arid and generally unfavorable conditions for seed germination onsite. For additional information, refer to the SRRP (Appendix B of the POD).

Table 3: Management Strategy and Control Methods		
Species	**Management Strategy**	**Control Method**
Arabian schismus (*Schismus arabicus*)	No action	N/A. Species is too wide-spread for control.
Sahara mustard (*Brassica tournefortii*)	Monitor for occurrence and mechanically treat if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Consider using chemical treatments based on UCCE (UCCE n.d.).
Athel (*Tamarisk aphylla*)	Monitor for occurrence and mechanically treat if present.	Mature trees: cut trunk(s) above soil surface and apply herbicide treatments to cut surfaces. Saplings and seedlings remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly.
Oleander (*Nerium oleander*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly.
Noxious Weeds Observed Adjacent To BLM-Managed Lands		
Noxious Weed	**Management Strategy**	**Control Method**
Bassia (*Bassia hyssopifolia*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Removal should occur prior to flowering and seed set.
Cheeseweed (*Malva parviflora*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Removal should occur prior to flowering and seed set.
Silver-leaf horse-nettle (*Solanum elaeagnifolium*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, broadleaf, systemic herbicide. Pull individuals post-mortality. Both treatments should occur prior to flowering and seed set.
Puncture vine (*Tribulus terrestris*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, broadleaf, systemic

		herbicide. Pull individuals post-mortality. Both treatments should occur prior to flowering and seed set.
Noxious Weeds Not Observed Adjacent To BLM-Managed Lands But Reported from the Vicinity of the Project		
Noxious Weed	**Management Strategy**	**Control Method**
Giant reed (*Arundo donax*)	Monitor for occurrence and eradicate if present.	Combination of physical removal and chemical control. Minor infestations can be eradicated by physical methods as long as the entire rhizome is removed. Large stands require cutting of culms and direct application of herbicide (glyphosate either Rodeo in wetlands or Round-Up in non-wetland areas) to the cut culms. Most effective application is post-flowering and pre-dormancy usually late August to early November when plants are translocating nutrients to roots and rhizomes (Bossard et al. 2000).
London rocket (*Sisymbrium irio*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, broadleaf, systemic herbicide. Pull individuals post-mortality.
Tumble mustard (*Sisymbrium altissimum*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, broadleaf, systemic herbicide. Pull individuals post-mortality.
Russian thistle (*Salsola tragus*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, broadleaf, systemic herbicide. Pull individuals post-mortality.
Red-stem filaree (*Erodium cicutarium*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling; place in appropriate containers and dispose of properly.
Brome (*Bromus madritensis rubens*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, non-broadleaf, systemic herbicide. Pull individuals post-mortality.
Prickly sow thistle (*Sonchus asper*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling; place in appropriate containers and dispose of properly.
Common sow thistle (*Sonchus*	Monitor for occurrence and	Remove entire plant (stems, flowers and roots) by hand pulling; place

oleraceus)	eradicate if present.	in appropriate containers and dispose of properly.
Crystaline ice plant (*Mesembryanthemum crystallinum*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling; place in appropriate containers and dispose of properly.
Prickly lettuce (*Lactuca serriola*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling; place in appropriate containers and dispose of properly.
Barnyard grass (*Echinochloa* sp.)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, non-broadleaf, systemic herbicide. Pull individuals post-mortality.
Annual beard grass (*Polypogonmon speliensis*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, non-broadleaf, systemic herbicide. Pull individuals post-mortality.
Little seed canary grass (*Phalaris minor*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, non-broadleaf, systemic herbicide. Pull individuals post-mortality.
Johnson grass (*Sorghum halepense*)	Monitor for occurrence and eradicate if present.	Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Large stands can be treated chemically with post-emergent, non-broadleaf, systemic herbicide. Pull individuals post-mortality.

Figures



Legend

- Structure Along Proposed Gen-Tie
- Structure Along Alternative Gen-Tie
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- Major Canal
- Irrigation Canal
- County Boundary
- Proposed Gen-Tie
- Gen-Tie Alternative
- Campo Verde Facility
- Campo Verde Facility Disturbance Area
- Temporary Work Area
- Pulling and Tensioning Area

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 250 500 750 1,000
Feet

0 0.1 0.2
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 1 - PROPOSED ACTION AND ALTERNATIVES

Map Extent: Imperial County, California

Date: 03.01.12 | Author: djb

...Maps\Figure 1 Proposed Action and Alternatives

Legend

- Structure Along Proposed Gen-Tie
- Structure Along Alternative Gen-Tie
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- Major Canal
- Irrigation Canal
- County Boundary
- Proposed Gen-Tie
- Gen-Tie Alternative
- 160' Proposed Gen-Tie ROW
- 160' Gen-Tie Alternative ROW
- Campo Verde Facility
- Campo Verde Facility Disturbance Area
- Campo Verde Study Area
- Temporary Work Area
- Pulling and Tensioning Area

Jurisdictional Land Ownership

- Bureau of Land Management Land

Species and Weed Coverage Classes

- Ta - Athel
- Sa - Arabian Grass (0-5%) Bt - Sahara Mustard (0-5%)
- Sa - Arabian Grass (5-25%) Bt - Sahara Mustard (0-5%)
- Athel Tamarisk Type Woodland
- Tamarisk Thicket

0 250 500 750 1,000
Feet

0 0.1 0.2
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 2 - SITE PLAN, MANAGEMENT AREAS, AND WEED INFESTATIONS

Map Extent: Imperial County, California

Date: 03.01.12 | Author: djb

...Maps\Figure 1 Proposed Action and Alternatives

Appendix 1
Integrated Weed Management Plans for High Priority Weed Species

INTEGRATED WEED MANAGEMENT PLANS FOR HIGH-PRIORITY WEED SPECIES

Scientific name: *Brassica tournefortii*

Common name: Sahara mustard

Date _____ Updated _____

A. PRIORITY: High

B. DESCRIPTION

Sahara mustard is an annual herb with stems 4-40 inches in length. Plants flower early, but flowers are small and dull yellow and blooms from January-July (Bossard et al. 2000; Baldwin et al. 2002). Plants flower or fruit as early as December or January and set seed by February. Most plants are in fruit or dead by April. Leaves are usually in a well developed basal rosette and quickly reduce in size upward on the stems so that in the inflorescence only minute bracts are present. Basal leaves are 3-12 inches long and deeply lobed. The fruit is a dehiscent silique between 1.4-2.6 inches in length with an obvious terete beak. Saharan mustard is an abundant annual weed at low elevations throughout the southwestern deserts of North America. It is most common in wind-blown sand deposits and in disturbed sites such as roadsides and abandoned fields. It is scarce on alluvial fans and rocky hillsides (Bossard et al. 2000).

C. CURRENT DISTRIBUTION ON THE PROPERTY

Sahara mustard is present throughout the survey area on BLM lands. Densities range from very low to over 25%cover. For most of the survey area on BLM lands densities range from 0-5%. Within the wash habitats and adjacent to the agricultural fields where conditions are more mesic, densities range from 5-25%. These latter areas are along Pinto Wash south of the IV Substation, a tributary of Pinto Wash south of Hwy 98 and the edges of the desert scrub habitats adjacent to the agricultural fields between Mt Signal Road and the West Side Main Canal.

D. DAMAGE & THREATS

Dense stands of this species suppress native wildflowers. Because of its early phenology this species seems to extract all the available soil moisture, grows to a mature plant, and set seed before most native species have started to flower. Sahara mustard increases fuel loads and fire hazards in desert scrub (Bossard et al. 2000).

E. WEED MANAGEMENT OBJECTIVE

The objective is to contain and reduce the spread of Sahara mustard within the project corridor on BLM lands to reduce the threat of fire to the energy structures within the corridor and to reduce the threats of species displacements in the habitats adjacent to the corridor.

F. MANAGEMENT OPTIONS
Viable control options are:

1) Hand-Weeding Treatments
2) Chemical Treatments
3) Equipment Inspection

Month	Priority Weed or Project	Treatment Dates	Monitoring Dates

G. CONTROL ACTIONS PLANNED

1) Hand-Weeding Treatments

Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. With this method native plants can thrive. In test plots conducted by the UCCE (n.d.) almost 30% of the hand-weeded plots were covered with other annuals which was twice as much area compared to any other treatment, including untreated plots. Bossard et al. (2000) suggest that hand pulling might be effective in limited areas when seed pools have been suppressed which is not likely the scenario on the project site where this species is ubiquitous onsite and large offsite areas that are contiguous with the project site. Plants should be removed prior to seed set and dispersal. Seedlings are easier to remove so hand pulling can commence after germination in the fall as soon as this species is detectable and identifiable.

2) Chemical Treatments

Chris MacDonald and Carl Bell from the University of California Cooperative Extension (UCCE n.d.) have conducted herbicide trial experiments on Brassica tournefortii in Borrego Springs and Palm Desert. Triclopyr had the greatest control of Sahara mustard, with reductions in mustard over 99%, and Chlorsulfuron exhibited reductions over 95%. However, these two chemicals do not control invasive grasses (e.g. Schismus species), which dominate after broadleaved plants were removed. These two chemicals also removed most of the native wildflowers in the research plots and should be used with caution if management goals are to preserve established wildflowers. The high Pelargonic acid and both Glyphosate treatments exhibited acceptable control of Sahara mustard with greater than 85% reduction. The low Pelargonic acid treatment only had a 40% reduction. Glyphosate and Pelargonic acid also had the greatest post-treatment survival of native plants at 35-85% survival compared to control plots. However control plots had a low cover of native wildflowers (avg. 7% cover) because of competition with Sahara mustard. Treatments should be applied prior to seed set and dispersal. Since seed set occurs as early as February treatments in most years. After the soils chill in fall, small rainfall events can initiate mass germination.

H. MONITORING

Monitoring for this species within the corridor will occur monthly in year 1; quarterly in year 2 and semi-annually thereafter for the remainder of the monitoring period. Monitoring periods, at a minimum should occur:

1) after the first fall rains with allowances for seedling germination and development to establish the baseline condition for that season and to determine appropriate action(s). the timing of this period is dependent on fall rains and could occur from October to January depending on rainfall events which vary considerably from year to year;

2) after eradication treatments to determine success of treatments (anticipated in most years to occur after February).

Monitoring for presence of this species within the corridor will allow for an assessment of the objectives of the weed management plan. Successful eradication within the corridor would reduce fire frequency (Goal #1 from Section 7.2 of plan) and ensure that the corridor/project does not provide source populations to invade and degrade the adjacent habitats (Goal # from Section 7.2 of plan).

I. RESULTS OF EVALUATION

(fill in data after monitoring has been completed)

INTEGRATED WEED MANAGEMENT PLANS FOR HIGH-PRIORITY WEED SPECIES

Scientific name: *Tamarix aphylla*

Common name: Athel

Date _____ Updated _____

A. PRIORITY: High

B. DESCRIPTION

Tamarisk is a multi-stemmed shrub or tree usually less than 20 feet in height. Leaves are ovate in shape and very small (less than 0.14 inch) with salt glands. Flowers are white to pink and are arranged in a raceme which flower from April-August. The species is common along desert washes and streambanks in native habitats, as well as drains, canals and ditches on agricultural lands. The species can reproduce both sexually (by seed) and asexually as plants can regenerate from cuttings that fall on moist soils as well as resprouting following control treatments. Seed production occurs over a 5.5-month period and germination can occur within 24 hours in warm, moist soils (Bossard et al. 2000).

C. CURRENT DISTRIBUTION ON THE PROPERTY

Several individuals were observed on the north end of both alternatives (**Figure 2, Pages 1 and 2**). High numbers in high density patches of this species occur directly east of the site and east of the substation.

D. DAMAGE & THREATS

It is assumed that since *T. ramosissima* and *T. aphylla* are very similar in their damage and threats. Though Bossard et al., 2000 discuss threats for *T. ramosissima,* because of similar morphological, physiological and ecological traits, it is assumed that damage and threats from *T. aphylla* are very similar to those discussed by these authors for *T. ramosissima*. Causes dramatic changes in geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition and native wildlife diversity. Geomorphical impacts include trapping and stabilizing alluvial sediments which results in narrowing of stream channels and more frequent flooding. This species also lowers water tables because of its high evapotranspiration rate. Soil salinities increase as a result of salt from the glands of its leaves which increase soil salinity as these leaves abscise. Increased salinity inhibits germination and growth of native riparian species. Leaf litter from drought-deciduous leaves increases frequency of fire. Species has little value to native wildlife (Bossard et al. 2000).

E. WEED MANAGEMENT OBJECTIVE

The objective is to control athel within the project corridor on BLM lands to reduce the threat of fire to the energy structures within the corridor and to reduce the threats of species displacements in the habitats adjacent to the corridor,

F. MANAGEMENT OPTIONS
Viable control options are:

1) Mechanical/Hand-Weeding Treatments
2) Chemical Treatments

Month	Priority Weed or Project	Treatment Dates	Monitoring Dates

G. CONTROL ACTIONS PLANNED

1) Hand-Weeding Treatments

Mechanical treatments would include cutting the trunk approximately one-foot above the ground. Hand weeding treatments are effective for seedlings and saplings. Remove entire plant (stems, flowers and roots) by hand pulling place in appropriate containers and dispose of properly. Hand weeding should be done when plants are small. Hand weeding can be conducted at any time of the year. However, late summer to late winter are probably best times to target seedlings from previous year before they have time grow as under favorable conditions shoots can grow to heights of 3-4 meters in one growing season (Bossard et al., 2000).

2) Chemical Treatments

Tamarisk is difficult to control with manual/mechanical methods as it vigourously resprouts after cutting or burning. Root plowing and cutting are effective initially but only when combined with follow up application of herbicides. Six herbicides are commonly used to control this species including: imazapyr, triclopyr and glyphosate. The most common method used in California is to cut the shrub off near the ground and apply triclopyr. This technique usually results in a 90% plus mortality rate (Bossard et al. 2000). Mature trees should be cut just above the soil surface with herbicides applied to the cut surfaces. It is assumed that treatments should be applied late summer (post-flowering) when most plants are translocating nutrients, and herbicides, to the root system.

H. MONITORING

Monitoring for this species within the corridor will occur monthly in year 1; quarterly in year 2 and semi-annually thereafter for the remainder of the monitoring period. Monitoring periods, at a minimum should occur:

1) Early to late summer to determine presence/establishment of seedlings;

2) After eradication treatments to determine success of treatments (most likely late summer).

Monitoring for presence of this species within the corridor will allow for an assessment of the objectives of the weed management plan. Successful eradication within the corridor would reduce fire frequency (Goal #1 from Section 7.2 of plan) and ensure that the corridor/project does not provide source populations to invade and degrade the adjacent habitats (Goal # from Section 7.2 of plan).

I. RESULTS OF EVALUATION

(fill in data after monitoring has been completed)

Appendix 2
Herbicide Treatment Standard Operating Procedures
(Appendix B of the Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States PEIS)

APPENDIX B

HERBICIDE TREATMENT STANDARD OPERATING PROCEDURES

APPENDIX B

HERBICIDE TREATMENT STANDARD OPERATING PROCEDURES

This section identifies standard operating procedures (SOPs) that will be followed by the U.S. Department of the Interior Bureau of Land Management (USDI BLM) under all alternatives to ensure that risks to human health and the environment from herbicide treatment actions will be kept to a minimum. Standard operating procedures are the management controls and performance standards required for vegetation management treatments. These practices are intended to protect and enhance natural resources that could be affected by future vegetation treatments.

Prevention of Weeds and Early Detection and Rapid Response

Once weed populations become established, infestations can increase and expand in size. Weeds colonize highly disturbed ground and invade plant communities that have been degraded, but are also capable of invading intact communities. Therefore, prevention, early detection, and rapid response are the most cost-effective methods of weed control. Prevention, early detection, and rapid response strategies that reduce the need for vegetative treatments for noxious weeds should lead to a reduction in the number of acres treated using herbicides in the future by reducing or preventing weed establishment.

As stated in the BLM's *Partners Against Weeds: An Action Plan for the BLM*, prevention and public education are the highest priority weed management activities. Priorities are as follows:

- Priority 1: Take actions to prevent or minimize the need for vegetation control when and where feasible, considering the management objectives of the site.
- Priority 2: Use effective nonchemical methods of vegetation control when and where feasible.
- Priority 3: Use herbicides after considering the effectiveness of all potential methods or in combination with other methods or controls.

Prevention is best accomplished by ensuring the seeds and vegetatively reproductive plant parts of new weed species are not introduced into new areas.

The BLM is required to develop a noxious weed risk assessment when it is determined that an action may introduce or spread noxious weeds or when known habitat exists. If the risk is moderate or high, the BLM may modify the project to reduce the likelihood of weeds infesting the site, and to identify control measures to be implemented if weeds do infest the site.

To prevent the spread of weeds, the BLM takes actions to minimize the amount of existing non-target vegetation that is disturbed or destroyed during project or vegetation treatment actions (Table B-1). During project planning, the following steps are taken:

- Incorporate measures to prevent introduction or spread of weeds into project layout, design, alternative evaluation, and project decisions.
- During environmental analysis for projects and maintenance programs, assess weed risks, analyze potential treatment of high-risk sites for weed establishment and spread, and identify prevention practices.
- Determine prevention and maintenance needs, to include the use of herbicides if needed, at the onset of project planning.
- Avoid or remove sources of weed seed and propagules to prevent new weed infestations and the spread of existing weeds.

During project development, weed infestations are prioritized for treatment in project operating areas and along access routes. Weeds present on or near the site are identified, a risk assessment is completed, and weeds are controlled as necessary. Project staging areas are weed free, and travel through weed infested areas is avoided or minimized. Examples of prevention actions to be followed during project activities include cleaning all equipment and clothing before entering the project site; avoiding soil disturbance and the creation of other

soil conditions that promote weed germination and establishment; and using weed-free seed, hay, mulch, gravel, soil, and mineral materials on public lands where there is a state or county program in place.

Conditions that enhance invasive species abundance should be addressed when developing mitigation and prevention plans for activities on public lands. These conditions include excessive disturbance associated with road maintenance, poor grazing management, and high levels of recreational use. If livestock grazing is managed to maintain the vigor of native perennial plants, particularly grasses, the chance of weeds invading rangeland is much less. By carefully managing recreational use and educating the public on the potential impacts of recreational activities on vegetation, the amount of damage to native vegetation and soil can be minimized at high use areas, such as campgrounds and off-highway vehicle (OHV) trails. Early detection in recreation areas is focused on roads and trails, where much of the weed spread occurs.

The BLM participates in the National Early Warning and Rapid Response System for Invasive Plants (Figure B-1). The goal of this System to minimize the establishment and spread of new invasive species through a coordinated framework of public and private processes by:

- Early detection and reporting of suspected new plant species to appropriate officials;
- Identification and vouchering of submitted specimens by designated specialists;
- Verification of suspected new state, regional, and national plant records;
- Archival of new records in designated regional and plant databases;
- Rapid assessment of confirmed new records; and
- Rapid response to verified new infestations that are determined to be invasive.

Herbicide Treatment Planning

BLM Manual 9011 (*Chemical Pest Control*) outlines the policies, and BLM Handbook H-9011-1 (*Chemical Pest Control*) outlines the procedures, for use of herbicides on public lands. As part of policy, the BLM is required to thoroughly evaluate the need for chemical treatments and their potential for impact on the environment. The BLM is required to use only U.S. Environmental Protection Agency (USEPA)-registered herbicides that have been properly evaluated under National Environmental Policy Act (NEPA), and to carefully follow label directions and additional BLM requirements.

An operational plan is developed and updated for each herbicide project. The plan includes information on project specifications, key personnel responsibilities, and communication, safety, spill response, and emergency procedures. For application of herbicides not approved for aquatic use, the plan should also specify minimum buffer widths between treatment areas and water bodies. Recommended widths are provided in BLM Handbook H-9011-1 (*Chemical Pest Control*), but actual buffers are site and herbicide active ingredient specific, and are determined based on a scientific analysis of environmental factors, such as climate, topography, vegetation, and weather; timing and method of application; and herbicide risks to humans and non-target species. Table B-2 summarizes important SOPs that should be used when applying herbicides to help protect resources of concern on public lands.

Revegetation

Disturbed areas may be reseeded or planted with desirable vegetation when the native plant community cannot recover and occupy the site sufficiently.

Determining the need for revegetation is an integral part of developing a vegetation treatment. The most important component of the process is determining whether active (seeding/planting) or passive (natural recovery) revegetation is appropriate.

U.S. Department of the Interior policy states, "Natural recovery by native plant species is preferable to planting or seeding, either of natives or non-natives. However, planting or seeding should be used only if necessary to prevent unacceptable erosion or resist competition from non-native invasive species" (620 Departmental Memorandum 3 2004). This policy is reiterated in the USDI *Burned Area Emergency Stabilization and Rehabilitation* Manual, the BLM *Burned Area Emergency Stabilization and Rehabilitation* Manual (BLM H-1742-1), and the *Interagency Burned Area Rehabilitation Guidebook*.

TABLE B-1
Prevention Measures

BLM Activity	Prevention Measure
Project Planning	• Incorporate prevention measures into project layout and design, alternative evaluation, and project decisions to prevent the introduction or spread of weeds. • Determine prevention and maintenance needs, including the use of herbicides, at the onset of project planning. • Before ground-disturbing activities begin, inventory weed infestations and prioritize areas for treatment in project operating areas and along access routes. • Remove sources of weed seed and propagules to prevent the spread of existing weeds and new weed infestations. • Pre-treat high-risk sites for weed establishment and spread before implementing projects. • Post weed awareness messages and prevention practices at strategic locations such as trailheads, roads, boat launches, and public land kiosks. • Coordinate project activities with nearby herbicide applications to maximize the cost-effectiveness of weed treatments.
Project Development	• Minimize soil disturbance to the extent practical, consistent with project objectives. • Avoid creating soil conditions that promote weed germination and establishment. • To prevent weed germination and establishment, retain native vegetation in and around project activity areas and keep soil disturbance to a minimum, consistent with project objectives. • Locate and use weed-free project staging areas. Avoid or minimize all types of travel through weed-infested areas, or restrict travel to periods when the spread of seeds or propagules is least likely. • Prevent the introduction and spread of weeds caused by moving weed-infested sand, gravel, borrow, and fill material. • Inspect material sources on site, and ensure that they are weed-free before use and transport. Treat weed-infested sources to eradicate weed seed and plant parts, and strip and stockpile contaminated material before any use of pit material. • Survey the area where material from treated weed-infested sources is used for at least 3 years after project completion to ensure that any weeds transported to the site are promptly detected and controlled. • Prevent weed establishment by not driving through weed-infested areas. • Inspect and document weed establishment at access roads, cleaning sites, and all disturbed areas; control infestations to prevent weed spread within the project area. • Avoid acquiring water for dust abatement where access to the water is through weed-infested sites. • Identify sites where equipment can be cleaned. Clean equipment before entering public lands. • Clean all equipment before leaving the project site if operating in areas infested with weeds. • Inspect and treat weeds that establish at equipment cleaning sites. • Ensure that rental equipment is free of weed seed. • Inspect, remove, and properly dispose of weed seed and plant parts found on workers' clothing and equipment. Proper disposal entails bagging the seeds and plant parts and incinerating them.
Revegetation	• Include weed prevention measures, including project inspection and documentation, in operation and reclamation plans. • Retain bonds until reclamation requirements, including weed treatments, are completed, based on inspection and documentation. • To prevent conditions favoring weed establishment, reestablish vegetation on bare ground caused by project disturbance as soon as possible using either natural recovery or artificial techniques. • Maintain stockpiled, uninfested material in a weed-free condition.

TABLE B-1 (Cont.)
Prevention Measures

BLM Activity	Prevention Measure
Revegetation (Cont.)	• Revegetate disturbed soil (except travel ways on surfaced projects) in a manner that optimizes plant establishment for each specific project site. For each project, define what constitutes disturbed soil and objectives for plant cover revegetation. Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching, as necessary. • Where practical, stockpile weed-seed-free topsoil and replace it on disturbed areas (e.g., road embankments or landings). • Inspect seed and straw mulch to be used for site rehabilitation (for wattles, straw bales, dams, etc.) and certify that they are free of weed seed and propagules. • Inspect and document all limited term ground-disturbing operations in noxious weed infested areas for at least 3 growing seasons following completion of the project. • Use native material where appropriate and feasible. Use certified weed-free or weed-seed-free hay or straw where certified materials are required and/or are reasonably available. • Provide briefings that identify operational practices to reduce weed spread (for example, avoiding known weed infestation areas when locating fire lines). • Evaluate options, including closure, to regulate the flow of traffic on sites where desired vegetation needs to be established. Sites could include road and trail rights-of-way (ROW), and other areas of disturbed soils.

In addition to these handbooks and policy, use of native and non-native seed in revegetation and restoration is guided by BLM Manual 1745 (*Introduction, Transplant, Augmentation and Reestablishment of Fish, Wildlife and Plants)*. This manual states that native species shall be used, unless it is determined through the NEPA process that: 1) suitable native species are not available; 2) the natural biological diversity of the proposed management area will not be diminished; 3) exotic and naturalized species can be confined within the proposed management area; 4) analysis of ecological site inventory information indicates that a site will not support reestablishment of a species that historically was part of the natural environment; or 5) resource management objectives cannot be met with native species.

When natural recovery is not feasible, revegetation can be used to stabilize and restore vegetation on disturbed sites and to eliminate or reduce the conditions that favor invasive species. Reseeding or replanting may be required when there is insufficient vegetation or seed stores to naturally revegetate the site.

To ensure revegetation success, there must be adequate soil for root development and moisture storage, which provides moisture to support the new plants. Chances for revegetation success are improved by selecting seed with high purity and percentage germination; selecting native species or cultivars adapted to the area; planting at proper depth, seeding rate, and time of the year for the region; choosing the appropriate planting method; and, where feasible, removing competing vegetation. Planting mixtures are adapted for the treatment area and site uses. A combination of forbs, perennial grasses, and shrubs is typically used on rangeland sites, while shrubs and trees might be favored for riparian and forestland sites. A mixture of several native plant species and types or functional groups enhances the value of the site for fish and wildlife and improves the health and aesthetic character of the site. Mixtures can better take advantage of variable soil, terrain, and climatic conditions, and thus are more likely to withstand insect infestations and survive adverse climatic conditions.

The USDI BLM Native Seed program was developed in response to Congressional direction to supply native plant material for emergency stabilization and longer-term rehabilitation and restoration efforts. The focus of the program is to increase the number of native plant species for which seed is available and the total amount of native seed available for these efforts. To date, the program has focused on native plant material needs of emergency stabilization and burned area rehabilitation in the Great Basin, but is expanding to focus on areas such as western Oregon, the Colorado Plateau, and most recently the Mojave Desert. The Wildland Fire Management Program funds and manages the effort.

The National Seed Warehouse is a storage facility for the native seed supply. Through a Memorandum of

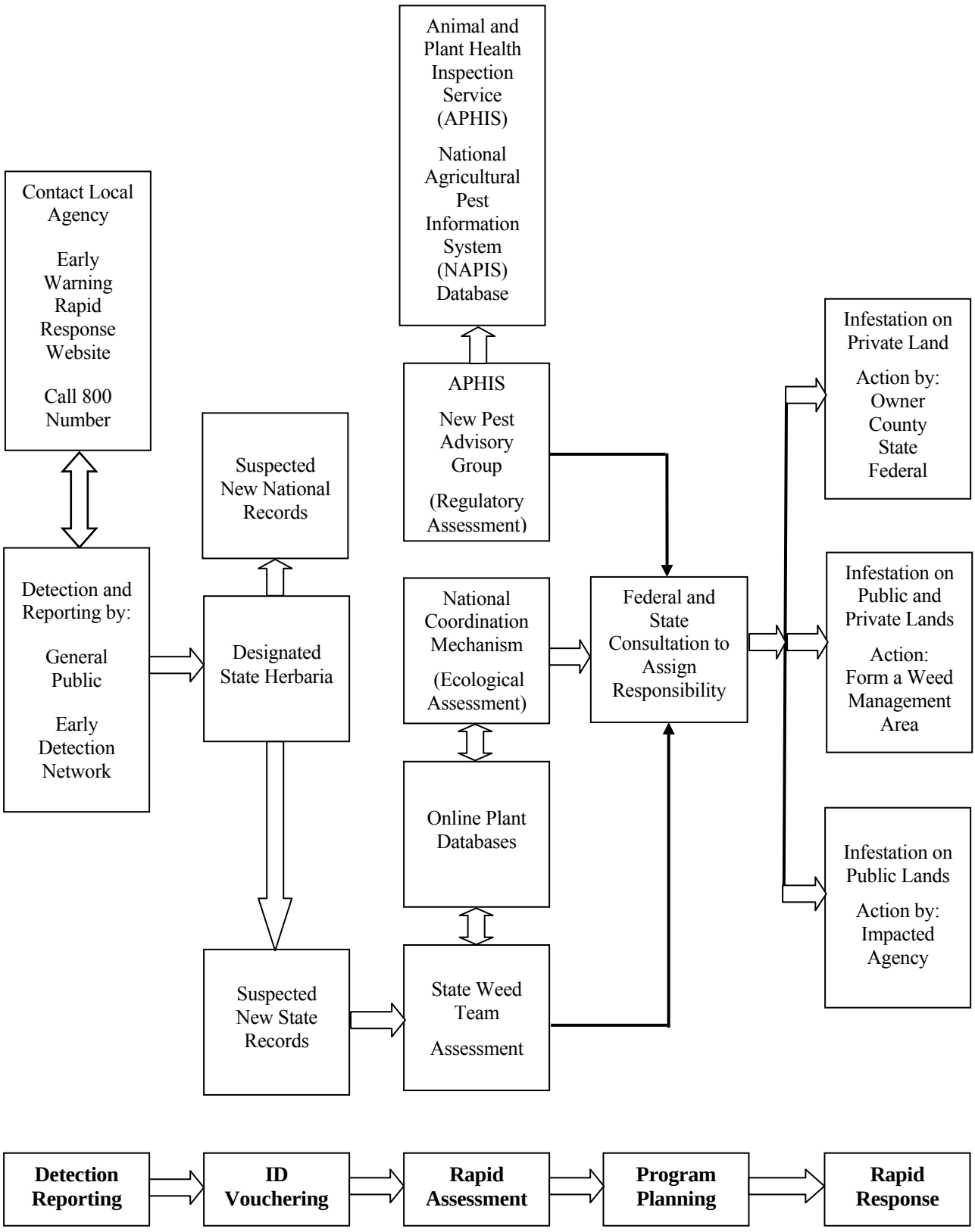


Figure B-1. National Early Warning and Rapid Response System for Invasive Plants.

Understanding with the BLM Idaho State Director, each state (Idaho, Oregon, Nevada, Utah and Colorado) can reserve an annual seed supply for purchase based on a reasonable projection of annual acreage to be stabilized or rehabilitated over a 5-year period.

The Great Basin Restoration Initiative (GBRI) grew out of concern for the health of the Great Basin after the wildfires of 1999. The goal of GBRI is to implement treatments and strategies to maintain functioning ecosystems and to proactively restore degraded ones at strategic locations. Native plants are emphasized in restoration projects where their use is practical and the potential for success is satisfactory. Monitoring is recommended to measure treatment success. To increase the availability of native plants, especially native forbs, the GBRI has established a collaborative native plant project, the Great Basin Native Plant Selection and Increase Project, to increase native plant availability and the technology to successfully establish these plants. This project is supported by funding from the BLM's Native Plant Initiative.

The BLM will follow the following SOPs when revegetating sites:

- Cultivate previously disturbed sites to reduce the amount of weed seeds in the soil seedbank.
- Revegetate sites once work is completed or soon after a disturbance.
- When available, use native seed of known origin as labeled by state seed certification programs.
- Use seed of non-native cultivars and species only when locally adapted native seed is not available or when it is unlikely to establish quickly enough to prevent soil erosion or weed establishment.
- Use seed that is free of noxious and invasive weeds, as determined and documented by a seed inspection test by a certified seed laboratory.
- Limit nitrogen fertilizer applications that favor annual grass growth over forb growth in newly seeded areas, especially where downy brome (cheatgrass) and other invasive annuals are establishing.
- Use clean equipment, free of plants and plant parts, on revegetation projects to prevent the inadvertent introduction of weeds into the site.
- Where important pollinator resources exist, include native nectar and pollen producing plants in the seed mixes used in restoration and reclamation projects. Include non-forage plant species in seed mixes for their pollinator/host relationships as foraging, nesting, or shelter species. Choose native plant species over manipulated cultivars, especially of forbs and shrubs, since natives tend to have more valuable pollen and nectar resources than cultivars. Ensure that bloom times for the flowers of the species chosen match the activity times for the pollinators. Maintain sufficient litter on the soil surfaces of native plant communities for ground-nesting bees.
- Where feasible, avoid grazing by domestic and wild animals on treatment sites until vegetation is well established. Where total rest from grazing is not feasible, efforts should be made to modify the amount and/or season of grazing to promote vegetation recovery within the treatment area. Reductions in grazing animal numbers, permanent or temporary fencing, changes in grazing rotation, and identification of alternative forage sources are examples of methods that could be used to remove, reduce or modify grazing impacts during vegetation recovery.

Special Precautions

Special Status Species

Federal policies and procedures for protecting federally-listed threatened and endangered plant and animal species, and species proposed for listing, were established by the Endangered Species Act of 1973 and regulations issued pursuant to the Act. The purposes of the Act are to provide mechanisms for the conservation of threatened and endangered species and their habitats. Under the Act, the Secretary of the Interior is required to determine which species are threatened or endangered and to issue recovery plans for those species.

Section 7 of the Act specifically requires all federal agencies to use their authorities in furtherance of the Act to carry out programs for the conservation of listed

species, and to ensure that no agency action is likely to jeopardize the continued existence of a listed species or adversely modify critical habitat. Policy and guidance (BLM Manual 6840; *Special Status Species*) also stipulates that species proposed for listing must be managed at the same level of protection as listed species.

The BLM state directors may designate special status in cooperation with their respective state. These special status species must receive, at a minimum, the same level of protection as federal candidate species. The BLM will also carry out management for the conservation of state-listed species, and state laws protecting these species will apply to all BLM programs and actions to the extent that they are consistent with Federal Land Policy and Management Act (FLPMA) and other federal laws.

The BLM consulted with the U.S. Fish and Wildlife Service (UFWS) and National Marine Fisheries Service (NMFS) during development of the *Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS) as required under Section 7 of the Endangered Species Act. As part of this process, the BLM prepared a formal consultation package that included a description of the program; species listed as threatened or endangered, species proposed for listing, and critical habitats that could be affected by the program; and a Biological Assessment (BA) that evaluated the likely impacts to listed species, species proposed for listing, and critical habitats from the proposed vegetation treatment program. Over 300 species were evaluated in the BA. The BA also provides broad guidance at a programmatic level for actions that will be taken by the BLM to avoid adversely impacting species or critical habitat.

Before any vegetation treatment or ground disturbance occurs, BLM policy requires a survey of the project site for species listed or proposed for listing, or special status species. This is done by a qualified biologist and/or botanist who consults the state and local databases and visits the site at the appropriate season. If a proposed project may affect a proposed or listed species or its critical habitat, the BLM consults with the USFWS and/or NMFS. A project with a "may affect, likely to adversely affect" determination requires formal consultation and receives a Biological Opinion from the USFWS and/or NMFS. A project with a "may affect, not likely to adversely affect" determination requires informal consultation and receives a concurrence letter from USFWS and/or NMFS, unless that action is implemented under the authorities of the alternative consultation agreement pursuant to counterpart regulations established for *National Fire Plan* projects.

Wilderness Areas

Wilderness areas, which are designated by Congress, are defined by the Wilderness Act of 1964 as places "where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." The BLM manages 175 Wilderness Areas encompassing over 7.2 million acres.

Activities allowed in wilderness areas are identified in wilderness management plans prepared by the BLM. The BLM does not ordinarily treat vegetation in wilderness areas, but will control invasive and noxious weeds when they threaten lands outside wilderness area or are spreading within the wilderness and can be controlled without serious adverse impacts to wilderness values.

Management of vegetation in a wilderness area is directed toward retaining the natural character of the environment. Tree and shrub removal is usually not allowed, except for fire, insect, or disease control. Reforestation is generally prohibited except to repair damage caused by humans in areas where natural reforestation is unlikely. Only native species and primitive methods, such as hand planting, are allowed for reforestation.

Tools and equipment may be used for vegetation management when they are the minimum amount necessary for the protection of the wilderness resource. Motorized tools may only be used in special or emergency cases involving the health and safety of wilderness visitors, or the protection of wilderness values.

Habitat manipulation using mechanical or chemical means may be allowed to protect threatened and endangered species and to correct unnatural conditions, such as weed infestations, resulting from human influence.

The BLM also manages a total of 610 Wilderness Study Areas (WSAs) encompassing nearly 14.3 million acres. These are areas that have been determined to have wilderness characteristics worthy of consideration for wilderness designation. The BLM's primary goals in WSAs are to manage them so as to not impair their wilderness values and to maintain their suitability for

preservation as wilderness until Congress makes a determination on their future.

In WSAs, the BLM must foster a natural distribution of native species of plants and animals by ensuring that ecosystems and processes continue to function naturally.

Cultural Resources

The effects of BLM actions on cultural resources are addressed through compliance with the National Historic Preservation Act, as implemented through a national Programmatic Agreement (*Programmatic Agreement among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act*) and state-specific protocol agreements with State Historic Preservation Officers (SHPOs). The BLM's responsibilities under these authorities are addressed as early in the vegetation management project planning process as possible.

The BLM meets its responsibilities for consultation and government-to-government relationships with Native American tribes by consulting with appropriate tribal representatives prior to taking actions that affect tribal interests. The BLM's tribal consultation policies are detailed in BLM Manual 8120 (*Tribal Consultation Under Cultural Resource Authorities)* and Handbook H-8120-1 (*Guidelines for Conducting Tribal Consultation).* The BLM consulted with Native American tribes and Alaska Native groups during development of the PEIS. Information gathered on important tribal resources and potential impacts to these resources from herbicide treatments is presented in the analysis of impacts.

When conducting vegetation treatments, field office personnel consult with relevant parties (including tribes, native groups, and SHPOs), assess the potential of the proposed treatment to affect cultural and subsistence resources, and devise inventory and protection strategies suitable to the types of resources present and the potential impacts to them.

Herbicide treatments, for example, are unlikely to affect buried cultural resources, but might have a negative effect on traditional cultural properties comprised of plant foods or materials significant to local tribes and native groups. These treatments require inventory and protection strategies that reflect the different potential of each treatment to affect various types of cultural resources.

Impacts to significant cultural resources are avoided through project redesign or are mitigated through data recovery, recordation, monitoring, or other appropriate measures. When cultural resources are discovered during vegetation treatment, appropriate actions are taken to protect these resources.

TABLE B-2
Standard Operating Procedures for Applying Herbicides

Resource Element	Standard Operating Procedure
Guidance Documents	BLM Handbook H-9011-1 (*Chemical Pest Control*); and manuals 1112 (*Safety*), 9011 (*Chemical Pest Control*), 9012 (*Expenditure of Rangeland Insect Pest Control Funds*), 9015 (*Integrated Weed Management)*, and 9220 (*Integrated Pest Management*).
General	• Prepare operational and spill contingency plan in advance of treatment. • Conduct a pretreatment survey before applying herbicides. • Select herbicide that is least damaging to the environment while providing the desired results. • Select herbicide products carefully to minimize additional impacts from degradates, adjuvants, inert ingredients, and tank mixtures. • Apply the least amount of herbicide needed to achieve the desired result. • Follow herbicide product label for use and storage. • Have licensed applicators apply herbicides. • Use only USEPA-approved herbicides and follow product label directions and "advisory" statements. • Review, understand, and conform to the "Environmental Hazards" section on the herbicide product label. This section warns of known pesticide risks to the environment and provides practical ways to avoid harm to organisms or to the environment. • Consider surrounding land use before assigning aerial spraying as a treatment method and avoid aerial spraying near agricultural or densely populated areas. • Minimize the size of application area, when feasible. • Comply with herbicide-free buffer zones to ensure that drift will not affect crops or nearby residents/landowners. • Post treated areas and specify reentry or rest times, if appropriate. • Notify adjacent landowners prior to treatment. • Keep a copy of Material Safety Data Sheets (MSDSs) at work sites. MSDSs are available for review at http://www.cdms.net/. • Keep records of each application, including the active ingredient, formulation, application rate, date, time, and location. • Avoid accidental direct spray and spill conditions to minimize risks to resources. • Consider surrounding land uses before aerial spraying. • Avoid aerial spraying during periods of adverse weather conditions (snow or rain imminent, fog, or air turbulence). • Make helicopter applications at a target airspeed of 40 to 50 miles per hour (mph), and at about 30 to 45 feet above ground. • Take precautions to minimize drift by not applying herbicides when winds exceed >10 mph (>6 mph for aerial applications), or a serious rainfall event is imminent. • Use drift control agents and low volatile formulations. • Conduct pre-treatment surveys for sensitive habitat and special status species within or adjacent to proposed treatment areas. • Consider site characteristics, environmental conditions, and application equipment in order to minimize damage to non-target vegetation. • Use drift reduction agents, as appropriate, to reduce the drift hazard to non-target species. • Turn off applied treatments at the completion of spray runs and during turns to start another spray run. • Refer to the herbicide product label when planning revegetation to ensure that subsequent vegetation would not be injured following application of the herbicide. • Clean OHVs to remove seeds.

TABLE B-2 (Cont.)
Standard Operating Procedures for Applying Pesticides

Resource Element	Standard Operating Procedure
Air Quality See Manual 7000 (*Soil, Water, and Air Management*)	• Consider the effects of wind, humidity, temperature inversions, and heavy rainfall on herbicide effectiveness and risks. • Apply herbicides in favorable weather conditions to minimize drift. For example, do not treat when winds exceed 10 mph (>6 mph for aerial applications) or rainfall is imminent. • Use drift reduction agents, as appropriate, to reduce the drift hazard. • Select proper application equipment (e.g., spray equipment that produces 200- to 800-micron diameter droplets [spray droplets of 100 microns and less are most prone to drift]). • Select proper application methods (e.g., set maximum spray heights, use appropriate buffer distances between spray sites and non-target resources).
Soil See Manual 7000 (*Soil, Water, and Air Management*)	• Minimize treatments in areas where herbicide runoff is likely, such as steep slopes when heavy rainfall is expected. • Minimize use of herbicides that have high soil mobility, particularly in areas where soil properties increase the potential for mobility. • Do not apply granular herbicides on slopes of more than 15% where there is the possibility of runoff carrying the granules into non-target areas.
Water Resources See Manual 7000 (*Soil, Water, and Air Management*)	• Consider climate, soil type, slope, and vegetation type when developing herbicide treatment programs. • Select herbicide products to minimize impacts to water. This is especially important for application scenarios that involve risk from active ingredients in a particular herbicide, as predicted by risk assessments. • Use local historical weather data to choose the month of treatment. Considering the phenology of the target species, schedule treatments based on the condition of the water body and existing water quality conditions. • Plan to treat between weather fronts (calms) and at appropriate time of day to avoid high winds that increase water movements, and to avoid potential stormwater runoff and water turbidity. • Review hydrogeologic maps of proposed treatment areas. Note depths to groundwater and areas of shallow groundwater and areas of surface water and groundwater interaction. Minimize treating areas with high risk for groundwater contamination. • Conduct mixing and loading operations in an area where an accidental spill would not contaminate an aquatic body. • Do not rinse spray tanks in or near water bodies. Do not broadcast pellets where there is danger of contaminating water supplies. • Maintain buffers between treatment areas and water bodies. Buffer widths should be developed based on herbicide- and site-specific criteria to minimize impacts to water bodies. • Minimize the potential effects to surface water quality and quantity by stabilizing terrestrial areas as quickly as possible following treatment.
Wetlands and Riparian Areas	• Use a selective herbicide and a wick or backpack sprayer. • Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths of 100 feet for aerial, 25 feet for vehicle, and 10 feet for hand spray applications.
Vegetation See Handbook H-4410-1 (*National Range Handbook*), and manuals 5000 (*Forest Management*) and 9015 (*Integrated Weed Management*)	• Refer to the herbicide label when planning revegetation to ensure that subsequent vegetation would not be injured following application of the herbicide. • Use native or sterile species for revegetation and restoration projects to compete with invasive species until desired vegetation establishes. • Use weed-free feed for horses and pack animals. Use weed-free straw and mulch for revegetation and other activities. • Identify and implement any temporary domestic livestock grazing and/or supplemental feeding restrictions needed to enhance desirable vegetation recovery following treatment. Consider adjustments in the existing grazing permit, to maintain desirable vegetation on the treatment site.

TABLE B-2 (Cont.)
Standard Operating Procedures for Applying Pesticides

Resource Element	Standard Operating Procedure
Pollinators	• Complete vegetation treatments seasonally before pollinator foraging plants bloom. • Time vegetation treatments to take place when foraging pollinators are least active both seasonally and daily. • Design vegetation treatment projects so that nectar and pollen sources for important pollinators and resources are treated in patches rather than in one single treatment. • Minimize herbicide application rates. Use typical rather than maximum rates where there are important pollinator resources. • Maintain herbicide free buffer zones around patches of important pollinator nectar and pollen sources. • Maintain herbicide free buffer zones around patches of important pollinator nesting habitat and hibernacula. • Make special note of pollinators that have single host plant species, and minimize herbicide spraying on those plants (if invasive species) and in their habitats.
Fish and Other Aquatic Organisms See manuals 6500 (*Wildlife and Fisheries Management*) and 6780 (*Habitat Management Plans*)	• Use appropriate buffer zones based on label and risk assessment guidance. • Minimize treatments near fish-bearing water bodies during periods when fish are in life stages most sensitive to the herbicide(s) used, and use spot rather than broadcast or aerial treatments. • Use appropriate application equipment/method near water bodies if the potential for off-site drift exists. • For treatment of aquatic vegetation, 1) treat only that portion of the aquatic system necessary to achieve acceptable vegetation management, 2) use the appropriate application method to minimize the potential for injury to desirable vegetation and aquatic organisms, and 3) follow water use restrictions presented on the herbicide label.
Wildlife See manuals 6500 (*Wildlife and Fisheries Management*) and 6780 (*Habitat Management Plans*)	• Use herbicides of low toxicity to wildlife, where feasible. • Use spot applications or low-boom broadcast operations where possible to limit the probability of contaminating non-target food and water sources, especially non-target vegetation over areas larger than the treatment area. • Use timing restrictions (e.g., do not treat during critical wildlife breeding or staging periods) to minimize impacts to wildlife.
Threatened, Endangered, and Sensitive Species See Manual 6840 (*Special Status Species*)	• Survey for special status species before treating an area. Consider effects to special status species when designing herbicide treatment programs. • Use a selective herbicide and a wick or backpack sprayer to minimize risks to special status plants. • Avoid treating vegetation during time-sensitive periods (e.g., nesting and migration, sensitive life stages) for special status species in area to be treated.
Livestock See Handbook H-4120-1 (*Grazing Management*)	• Whenever possible and whenever needed, schedule treatments when livestock are not present in the treatment area. Design treatments to take advantage of normal livestock grazing rest periods, when possible. • As directed by the herbicide product label, remove livestock from treatment sites prior to herbicide application, where applicable. • Use herbicides of low toxicity to livestock, where feasible. • Take into account the different types of application equipment and methods, where possible, to reduce the probability of contamination of non-target food and water sources. • Avoid use of diquat in riparian pasture while pasture is being used by livestock. • Notify permittees of the herbicide treatment project to improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment. • Notify permittees of livestock grazing, feeding, or slaughter restrictions, if necessary. • Provide alternative forage sites for livestock, if possible.

TABLE B-2 (Cont.)
Standard Operating Procedures for Applying Pesticides

Resource Element	Standard Operating Procedure
Wild Horses and Burros	• Minimize using herbicides in areas grazed by wild horses and burros. • Use herbicides of low toxicity to wild horses and burros, where feasible. • Remove wild horses and burros from identified treatment areas prior to herbicide application, in accordance with herbicide product label directions for livestock. • Take into account the different types of application equipment and methods, where possible, to reduce the probability of contaminating non-target food and water sources.
Cultural Resources and Paleontological Resources See handbooks H-8120-1 (*Guidelines for Conducting Tribal Consultation*) and H-8270-1 (*General Procedural Guidance for Paleontological Resource Management*), and manuals 8100 (*The Foundations for Managing Cultural Resources*), 8120 (*Tribal Consultation Under Cultural Resource Authorities*), and 8270 (*Paleontological Resource Management*) See also: *Programmatic Agreement among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act*	• Follow standard procedures for compliance with Section 106 of the National Historic Preservation Act as implemented through the *Programmatic Agreement among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act* and state protocols or 36 Code of Federal Regulations Part 800, including necessary consultations with State Historic Preservation Officers and interested tribes. • Follow BLM Handbook H-8270-1 (*General Procedural Guidance for Paleontological Resource Management*) to determine known Condition I and Condition 2 paleontological areas, or collect information through inventory to establish Condition 1 and Condition 2 areas, determine resource types at risk from the proposed treatment, and develop appropriate measures to minimize or mitigate adverse impacts. • Consult with tribes to locate any areas of vegetation that are of significance to the tribe and that might be affected by herbicide treatments. • Work with tribes to minimize impacts to these resources. • Follow guidance under Human Health and Safety in the PEIS in areas that may be visited by Native peoples after treatments.
Visual Resources See handbooks H-8410-1 (*Visual Resource Inventory*) and H-8431-1 (*Visual Resource Contrast Rating*), and manual 8400 (*Visual Resource Management*)	• Minimize the use of broadcast foliar applications in sensitive watersheds to avoid creating large areas of browned vegetation. • Consider the surrounding land use before assigning aerial spraying as an application method. • Minimize off-site drift and mobility of herbicides (e.g., do not treat when winds exceed 10 mph; minimize treatment in areas where herbicide runoff is likely; establish appropriate buffer widths between treatment areas and residences) to contain visual changes to the intended treatment area. • If the area is a Class I or II visual resource, ensure that the change to the characteristic landscape is low and does not attract attention (Class I), or if seen, does not attract the attention of the casual viewer (Class II). • Lessen visual impacts by: 1) designing projects to blend in with topographic forms; 2) leaving some low-growing trees or planting some low-growing tree seedlings adjacent to the treatment area to screen short-term effects; and 3) revegetating the site following treatment. • When restoring treated areas, design activities to repeat the form, line, color, and texture of the natural landscape character conditions to meet established Visual Resource Management (VRM) objectives.

TABLE B-2 (Cont.)
Standard Operating Procedures for Applying Pesticides

Resource Element	Standard Operating Procedure
Wilderness and Other Special Areas See handbooks H-8550-1 (*Management of Wilderness Study Areas (WSAs)*), and H-8560-1 (*Management of Designated Wilderness Study Areas*), and Manual 8351 (*Wild and Scenic Rivers*)	• Encourage backcountry pack and saddle stock users to feed their livestock only weed-free feed for several days before entering a wilderness area. • Encourage stock users to tie and/or hold stock in such a way as to minimize soil disturbance and loss of native vegetation. • Revegetate disturbed sites with native species if there is no reasonable expectation of natural regeneration. • Provide educational materials at trailheads and other wilderness entry points to educate the public on the need to prevent the spread of weeds. • Use the "minimum tool" to treat noxious and invasive vegetation, relying primarily on the use of ground-based tools, including backpack pumps, hand sprayers, and pumps mounted on pack and saddle stock. • Use chemicals only when they are the minimum method necessary to control weeds that are spreading within the wilderness or threaten lands outside the wilderness. • Give preference to herbicides that have the least impact on non-target species and the wilderness environment. • Implement herbicide treatments during periods of low human use, where feasible. • Address wilderness and special areas in management plans. • Maintain adequate buffers for Wild and Scenic Rivers (¼ mile on either side of river, ½ mile in Alaska).
Recreation See Handbook H-1601-1 (*Land Use Planning Handbook, Appendix C*)	• Schedule treatments to avoid peak recreational use times, while taking into account the optimum management period for the targeted species. • Notify the public of treatment methods, hazards, times, and nearby alternative recreation areas. • Adhere to entry restrictions identified on the herbicide product label for public and worker access. • Post signs noting exclusion areas and the duration of exclusion, if necessary. • Use herbicides during periods of low human use, where feasible.
Social and Economic Values	• Consider surrounding land use before selecting aerial spraying as a method, and avoid aerial spraying near agricultural or densely-populated areas. • Post treated areas and specify reentry or rest times, if appropriate. • Notify grazing permittees of livestock feeding restrictions in treated areas, if necessary, as per herbicide product label instructions. • Notify the public of the project to improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment. • Control public access until potential treatment hazards no longer exist, per herbicide product label instructions. • Observe restricted entry intervals specified by the herbicide product label. • Notify local emergency personnel of proposed treatments. • Use spot applications or low-boom broadcast applications where possible to limit the probability of contaminating non-target food and water sources, especially vegetation over areas larger than the treatment area. • Consult with Native American tribes and Alaska Native groups to locate any areas of vegetation that are of significance to the tribes and Native groups and that might be affected by herbicide treatments. • To the degree possible within the law, hire local contractors and workers to assist with herbicide application projects and purchase materials and supplies, including chemicals, for herbicide treatment projects through local suppliers. • To minimize fears based on lack of information, provide public educational information on the need for vegetation treatments and the use of herbicides in an integrated pest management program for projects proposing local use of herbicides.

TABLE B-2 (Cont.)
Standard Operating Procedures for Applying Pesticides

Resource Element	Standard Operating Procedure
Rights-of-way	• Coordinate vegetation management activities where joint or multiple use of a ROW exists. • Notify other public land users within or adjacent to the ROW proposed for treatment. • Use only herbicides that are approved for use in ROW areas.
Human Health and Safety	• Establish a buffer between treatment areas and human residences based on guidance given in the HHRA, with a minimum buffer of ¼ mile for aerial applications and 100 feet for ground applications, unless a written waiver is granted. • Use protective equipment as directed by the herbicide product label. • Post treated areas with appropriate signs at common public access areas. • Observe restricted entry intervals specified by the herbicide product label. • Provide public notification in newspapers or other media where the potential exists for public exposure. • Have a copy of MSDSs at work site. • Notify local emergency personnel of proposed treatments. • Contain and clean up spills and request help as needed. • Secure containers during transport. • Follow label directions for use and storage. • Dispose of unwanted herbicides promptly and correctly.

Appendix 3
Herbicides Approved for Use on BLM-Managed Lands

*Herbicides Approved for Use on BLM Lands**

Update September 30, 2010

ACTIVE INGREDIENT	STATES WITH APPROVAL BASED UPON CURRENT EIS/ROD & COURT INJUNCTIONS	TRADE NAME	MANUFACTURER	EPA REG. NUMBER	CA REG. **
Bromacil	AK, AZ, CA, CO, ID, MT, ND,	Bromacil 80DF	Alligare, LLC	81927-4	Y
	NE, NM, NV, OK, SD, TX, UT,	Hyvar X	DuPont Crop Protection	352-287	Y
	WA, WY	Hyvar XL	DuPont Crop Protection	352-346	Y
Bromacil +	AK, AZ, CA, CO, ID, MT, ND,	Bromacil/Diuron 40/40	Alligare, LLC	81927-3	Y
Diuron	NE, NM, NV, OK, SD, TX, UT,	Krovar I DF	DuPont Crop Protection	352-505	Y
	WA, WY	Weed Blast Res. Weed Cont.	Loveland Products Inc.	34704-576	N
		DiBro 2+2	Nufarm Americas Inc.	228-227	Y
		DiBro 4+4	Nufarm Americas Inc.	228-235	N
		DiBro 4+2	Nufarm Americas Inc.	228-386	N
		Weed Blast 4G	SSI Maxim	34913-19	N
Chlorsulfuron	AK, AZ, CA, CO, ID, MT, ND,	Alligare Chlorsulfuron	Alligare, LLC	81927-43	N
	NE, NM, NV, OK, SD, TX, UT,	Telar DF	DuPont Crop Protection	352-522	Y
	WA, WY	Telar XP	DuPont Crop Protection	352-654	Y
		NuFarm Chlorsulf SPC 75 WDG Herbicide	Nufarm Americas Inc.	228-672	N
		Chlorsulfuron E-Pro 75 WDG	Nufarm Americas Inc.	79676-72	N
Clopyralid	AK, AZ, CA, CO, ID, MT, ND,	Spur	Albaugh, Inc.	42750-89	N
	NE, NM, NV, OK, SD, TX, UT,	Pyramid R&P	Albaugh, Inc.	42750-94	N
	WA, WY	Clopyralid 3	Alligare, LLC	42750-94-81927	Y
		Cody Herbicide	Alligare, LLC	81927-28	Y
		Reclaim	Dow AgroSciences	62719-83	N
		Stinger	Dow AgroSciences	62719-73	Y
		Transline	Dow AgroSciences	62719-259	Y
		CleanSlate	Nufarm Americas Inc.	228-491	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Clopyralid +	AK, AZ, CA, CO, ID, MT, ND,	Commando	Albaugh, Inc.	42750-92	N
2,4-D	NE, NM, NV, OK, SD, TX, UT,	Curtail	Dow AgroSciences	62719-48	N
	WA, WY	Cutback	Nufarm Americas Inc.	71368-72	N
2,4-D	AK, AZ, CA, CO, ID, MT, ND,	Agrisolution 2,4-D LV6	Agriliance, L.L.C.	1381-101	N
	NE, NM, NV, OK, OR, SD, TX,	Agrisolution 2,4-D Amine 4	Agriliance, L.L.C.	1381-103	N
	UT, WA, WY	Agrisolution 2,4-D LV4	Agriliance, L.L.C.	1381-102	N
		2,4-D Amine 4	Albaugh, Inc./Agri Star	42750-19	Y
		2,4-D LV 4	Albaugh, Inc./Agri Star	42750-15	Y
		Solve 2,4-D	Albaugh, Inc./Agri Star	42750-22	Y
		2,4-D LV 6	Albaugh, Inc./Agri Star	42750-20	N
		Five Star	Albaugh, Inc./Agri Star	42750-49	N
		D-638	Albaugh, Inc./Agri Star	42750-36	N
		Alligare 2,4-D Amine	Alligare, LLC	81927-38	N
		2,4-D LV6	Helena Chemical Company	4275-20-5905	N
		2,4-D Amine	Helena Chemical Company	5905-72	N
		2,4-D Amine 4	Helena Chemical Company	42750-19-5905	N
		Opti-Amine	Helena Chemical Company	5905-501	N
		Barrage HF	Helena Chemical Company	5905-529	N
		HardBall	Helena Chemical Company	5905-549	N
		Unison	Helena Chemical Company	5905-542	N
		Clean Amine	Loveland Products Inc.	34704-120	N
		Low Vol 4 Ester Weed Killer	Loveland Products Inc.	34704-124	N
		Low Vol 6 Ester Weed Killer	Loveland Products Inc.	34704-125	N
		Saber	Loveland Products Inc.	34704-803	N
		Salvo	Loveland Products Inc.	34704-609	N
		Savage DS	Loveland Products Inc.	34704-606	Y
		Aqua-Kleen	Nufarm Americas Inc.	71368-4	N
		Aqua-Kleen	Nufarm Americas Inc.	228-378	N
		Esteron 99C	Nufarm Americas Inc.	62719-9-71368	N
		Weedar 64	Nufarm Americas Inc.	71368-1	Y
		Weedone LV-4	Nufarm Americas Inc.	228-139-71368	Y
		Weedone LV-4 Solventless	Nufarm Americas Inc.	71368-14	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
2,4-D - cont.	AK, AZ, CA, CO, ID, MT, ND,	Weedone LV-6	Nufarm Americas Inc.	71368-11	Y
	NE, NM, NV, OK, OR, SD, TX,	Formula 40	Nufarm Americas Inc.	228-357	Y
	UT, WA, WY	2,4-D LV 6 Ester	Nufarm Americas Inc.	228-95	Y
		Platoon	Nufarm Americas Inc.	228-145	N
		WEEDstroy AM-40	Nufarm Americas Inc.	228-145	Y
		Hi-Dep	PBI Gordon Corp.	2217-703	N
		2,4-D Amine	Setre (Helena)	5905-72	N
		Barrage LV Ester	Setre (Helena)	5905-504	N
		2,4-D LV4	Setre (Helena)	5905-90	N
		2,4-D LV6	Setre (Helena)	5905-93	N
		Clean Crop Amine 4	UAP-Platte Chem. Co.	34704-5 CA	Y
		Clean Crop Low Vol 6 Ester	UAP-Platte Chem. Co.	34704-125	N
		Salvo LV Ester	UAP-Platte Chem. Co.	34704-609	N
		2,4-D 4# Amine Weed Killer	UAP-Platte Chem. Co.	34704-120	N
		Clean Crop LV-4 ES	UAP-Platte Chem. Co.	34704-124	N
		Savage DS	UAP-Platte Chem. Co.	34704-606	Y
		Cornbelt 4 lb. Amine	Van Diest Supply Co.	11773-2	N
		Cornbelt 4# LoVol Ester	Van Diest Supply Co.	11773-3	N
		Cornbelt 6# LoVol Ester	Van Diest Supply Co.	11773-4	N
		Amine 4	Wilbur-Ellis Co.	2935-512	N
		Lo Vol-4	Wilbur-Ellis Co.	228-139-2935	N
		Lo Vol-6 Ester	Wilbur-Ellis Co.	228-95-2935	N
		Base Camp Amine 4	Wilbur-Ellis Co.	71368-1-2935	N
		Broadrange 55	Wilbur-Ellis Co.	2217-813-2935	N
		Agrisolution 2,4-D LV6	Winflied Solutions, LLC	1381-101	N
		Agrisolution 2,4-D Amine 4	Winfield Solutions, LLC	1381-103	N
		Agrisolution 2,4-D LV4	Winfield Solutions, LLC	1381-102	N
Dicamba	AK, AZ, CA, CO, ID, MT, ND,	Dicamba DMA	Albaugh, Inc./Agri Star	42750-40	N
	NE, NM, NV, OK, OR, SD, TX,	Vision	Albaugh, Inc.	42750-98	N
	UT, WA, WY	Cruise Control	Alligare, LLC	42750-40-81927	N
		Banvel	Arysta LifeScience N.A. Corp.	66330-276	Y
		Clarity	BASF Corporation	7969-137	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Dicamba - cont.	AK, AZ, CA, CO, ID, MT, ND,	Rifle	Loveland Products Inc.	34704-861	Y
	NE, NM, NV, OK, OR, SD, TX,	Banvel	Micro Flo Company	51036-289	Y
	UT, WA, WY	Diablo	Nufarm Americas Inc.	228-379	Y
		Vanquish Herbicide	Nufarm Americas Inc.	228-397	Y
		Vanquish	Syngenta	100-884	N
		Sterling Blue	Winfield Solutions, LLC	7969-137-1381	Y
Dicamba +	AK, AZ, CA, CO, ID, MT, ND,	Range Star	Albaugh, Inc./Agri Star	42750-55	N
2,4-D	NE, NM, NV, OK, OR, SD, TX,	Weedmaster	BASF Ag. Products	7969-133	Y
	UT, WA, WY	Outlaw	Helena Chemical Company	5905-574	N
		Rifle-D	Loveland Products Inc.	34704-869	N
		KambaMaster	Nufarm Americas Inc.	71368-34	N
		Veteran 720	Nufarm Americas Inc.	228-295	Y
		Weedmaster	Nufarm Americas Inc.	71368-34	N
		Brash	Winfield Solutions, LLC	1381-202	N
Dicamba +	AZ, CO, ID, MT, ND, NE, NM,	Distinct	BASF Corporation	7969-150	N
Diflufenzopyr	NV, OK, SD, TX, UT, WA, WY	Overdrive	BASF Corporation	7969-150	N
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of this herbicide is prohibited.					
Diquat	AK, AZ, CA, CO, ID, MT, ND, NE,	Alligare Diquat	Alligare, LLC	81927-35	Y
	NM, NV, OK, SD, TX, UT, WA, WY	NuFarm Diquat SPC 2 L Herbicide	Nufarm Americas Inc.	228-675	N
		Diquat SPC 2 L Herbicide	Nufarm Americas Inc.	79676-75	Y
		Diquat E-Ag 2L	Nufarm Americas Inc.	79676-75	Y
		Reward	Syngena Professional Products	100-1091	Y
Diuron	AK, AZ, CA, CO, ID, MT, ND,	Diuron 80DF	Agriliance, L.L.C.	9779-318	N
	NE, NM, NV, OK, SD, TX, UT,	Diuron 80DF	Alligare, LLC	81927-12	Y
	WA, WY	Karmex DF	DuPont Crop Protection	352-692	Y
		Karmex XP	DuPont Crop Protection	352-692	Y
		Karmex IWC	DuPont Crop Protection	352-692	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Diuron - cont.	AK, AZ, CA, CO, ID, MT, ND,	Direx 4L	DuPont Crop Protection	352-678	Y
	NE, NM, NV, OK, SD, TX, UT,	Direx 80DF	Griffin Company	1812-362	Y
	WA, WY	Direx 4L	Griffin Company	1812-257	Y
		Diuron 4L	Loveland Products Inc.	34704-854	Y
		Diuron 80 WDG	Loveland Products Inc.	34704-648	N
		Diuron 4L	Makteshim Agan of N.A.	66222-54	N
		Diuron 80WDG	UAP-Platte Chem. Co.	34704-648	N
		Vegetation Man. Diuron 80 DF	Vegetation Man., LLC	66222-51-74477	N
		Diuron-DF	Wilbur-Ellis	00352-00-508-02935	N
		Diuron 80DF	Winfield Solutions, LLC	9779-318	N
Fluridone	AK, AZ, CA, CO, ID, MT, ND,	Avast!	SePRO	67690-30	Y
	NE, NM, NV, OK, SD, TX, UT,	Sonar AS	SePRO	67690-4	Y
	WA, WY	Sonar Precision Release	SePRO	67690-12	Y
		Sonar Q	SePRO	67690-3	Y
		Sonar SRP	SePRO	67690-3	Y
Glyphosate	AK, AZ, CA, CO, ID, MT, ND,	Aqua Star	Albaugh, Inc./Agri Star	42750-59	Y
	NE, NM, NV, OK, OR, SD, TX,	Forest Star	Albaugh, Inc./Agri Star	42570-61	Y
	UT, WA, WY	GlyStar Gold	Albaugh, Inc./Agri Star	42750-61	Y
		Gly Star Original	Albaugh, Inc./Agri Star	42750-60	Y
		Gly Star Plus	Albaugh, Inc./Agri Star	42750-61	Y
		Gly Star Pro	Albaugh, Inc./Agri Star	42750-61	Y
		Glyphosate 4 PLUS	Alligare, LLC	81927-9	Y
		Glyphosate 5.4	Alligare, LLC	81927-8	Y
		Glyfos	Cheminova	4787-31	Y
		Glyfos PRO	Cheminova	67760-57	Y
		Glyfos Aquatic	Cheminova	4787-34	Y
		ClearOut 41 Plus	Chem. Prod. Tech., LLC	70829-3	N
		Accord Concentrate	Dow AgroSciences	62719-324	Y
		Accord SP	Dow AgroSciences	62719-322	Y
		Accord XRT	Dow AgroSciences	62719-517	Y
		Accord XRT II	Dow AgroSciences	62719-556	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Glyphosate - cont.	AK, AZ, CA, CO, ID, MT, ND,	Glypro	Dow AgroSciences	62719-324	Y
	NE, NM, NV, OK, OR, SD, TX,	Glypro Plus	Dow AgroSciences	62719-322	Y
	UT, WA, WY	Rodeo	Dow AgroSciences	62719-324	Y
		Mirage	Loveland Products Inc.	34704-889	Y
		Mirage Plus	Loveland Products Inc.	34704-890	Y
		Aquamaster	Monsanto	524-343	Y
		Roundup Original	Monsanto	524-445	Y
		Roundup Original II	Monsanto	524-454	Y
		Roundup Original II CA	Monsanto	524-475	Y
		Honcho	Monsanto	524-445	Y
		Honcho Plus	Monsanto	524-454	Y
		Roundup PRO	Monsanto	524-475	Y
		Roundup PRO Concentrate	Monsanto	524-529	Y
		Roundup PRO Dry	Monsanto	524-505	Y
		Roundup PROMAX	Monsanto	524-579	Y
		Aqua Neat	Nufarm Americas Inc.	228-365	Y
		Credit Xtreme	Nufarm Americas Inc.	71368-81	Y
		Foresters	Nufarm Americas Inc.	228-381	Y
		Razor	Nufarm Americas Inc.	228-366	Y
		Razor Pro	Nufarm Americas Inc.	228-366	Y
		GlyphoMate 41	PBI/Gordon Corporation	2217-847	Y
		AquaPro Aquatic Herbicide	SePRO Corporation	62719-324-67690	Y
		Rattler	Setre (Helena)	524-445-5905	Y
		Buccaneer	Tenkoz	55467-10	Y
		Buccaneer Plus	Tenkoz	55467-9	Y
		Mirage Herbicide	UAP-Platte Chem. Co.	524-445-34704	Y
		Mirage Plus Herbicide	UAP-Platte Chem. Co.	524-454-34704	Y
		Glyphosate 4	Vegetation Man., LLC	73220-6-74477	Y
		Agrisolutions Cornerstone	Winfield Solutions, LLC	1381-191	Y
		Agrisolutions Cornerstone Plus	Winfield Solutions, LLC	1381-192	Y
		Agrisolutions Rascal	Winfield Solutions, LLC	1381-191	N
		Agrisolutions Rascal Plus	Winfield Solutions, LLC	1381-192	N

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Glyphosate +	AK, AZ, CA, CO, ID, MT, ND,	Landmaster BW	Albaugh, Inc./Agri Star	42570-62	N
2,4-D	NE, NM, NV, OK, OR, SD, TX,	Campaign	Monsanto	524-351	N
	UT, WA, WY	Landmaster BW	Monsanto	524-351	N
Hexazinone	AK, AZ, CA, CO, ID, MT, ND,	Velpar ULW	DuPont Crop Protection	352-450	N
	NE, NM, NV, OK, SD, TX, UT,	Velpar L	DuPont Crop Protection	352-392	Y
	WA, WY	Velpar DF	DuPont Crop Protection	352-581	Y
		Pronone MG	Pro-Serve	33560-21	N
		Pronone 10G	Pro-Serve	33560-21	Y
		Pronone 25G	Pro-Serve	33560-45	N
Hexazinone +	AK, AZ, CO, ID, MT, ND, NE,	Westar	DuPont Crop Protection	352-626	Y
Sulfometuron methyl	NM, NV, OK, SD, TX, UT, WA, WY	Oustar	DuPont Crop Protection	352-603	Y
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of these herbicides is prohibited.					
Imazapic	AZ, CO, ID, MT,ND, NE, NM,	Panoramic 2SL	Alligare, LLC	66222-141-81927	N
	NV, OK, SD, TX, UT, WA, WY	Plateau	BASF	241-365	N
Imazapic +	AZ, CO, ID, MT,ND, NE, NM,	Journey	BASF	241-417	N
Glyphosate	NV, OK, SD, TX, UT, WA, WY				
Imazapyr	AK, AZ, CA, CO, ID, MT, ND,	Imazapyr 2SL	Alligare, LLC	81927-23	N
	NE, NM, NV, OK, SD, TX, UT,	Imazapyr 4SL	Alligare, LLC	81927-24	N
	WA, WY	Ecomazapyr 2SL	Alligare, LLC	81927-22	N
		Arsenal Railroad Herbicide	BASF	241-273	N
		Chopper	BASF	241-296	Y
		Arsenal Applicators Conc.	BASF	241-299	N
		Arsenal	BASF	241-346	N
		Arsenal PowerLine	BASF	241-431	N
		Stalker	BASF	241-398	N
		Habitat	BASF	241-426	Y

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Imazapyr - cont.	AK, AZ, CA, CO, ID, MT, ND,	Polaris	Nufarm Americas Inc.	228-534	Y
	NE, NM, NV, OK, SD, TX, UT,	Polaris AC	Nufarm Americas Inc.	241-299-228	Y
	WA, WY	Polaris AC	Nufarm Americas Inc.	228-480	Y
		Polaris AQ	Nufarm Americas Inc.	241-426-228	Y
		Polaris RR	Nufarm Americas Inc.	241-273-228	N
		Polaris SP	Nufarm Americas Inc.	228-536	Y
		Polaris SP	Nufarm Americas Inc.	241-296-228	Y
		Polaris Herbicide	Nufarm Americas Inc.	241-346-228	N
		SSI Maxim Arsenal 0.5G	SSI Maxim Co., Inc.	34913-23	N
		Ecomazapyr 2 SL	Vegetation Man., LLC	74477-6	N
		Imazapyr 2 SL	Vegetation Man., LLC	74477-4	N
		Imazapyr 4 SL	Vegetation Man., LLC	74477-5	N
Imazapyr +	AK, AZ, CA, CO, ID, MT, ND, NE,	Mojave 70 EG	Alligare, LLC	74477-9-81927	N
Diuron	NM, NV, OK, SD, TX, UT, WA, WY	Sahara DG	BASF	241-372	N
		Imazuron E-Pro	Etigra, LLC	79676-54	N
		SSI Maxim Topsite 2.5G	SSI Maxim Co., Inc.	34913-22	N
Imazapyr +	AK, AZ, CA, CO, ID, MT, ND,	Lineage Clearstand	DuPont Crop Protection	352-766	N
Metsulfuron methyl	NE, NM, NV, OK, SD, TX, UT,				
	WA, WY				
Imazapyr +	AK, AZ, CA, CO, ID, MT, ND,	Lineage HWC	DuPont Crop Protection	352-765	N
Sulfometuron methyl +	NE, NM, NV, OK, SD, TX, UT,	Lineage Prep	DuPont Crop Protection	352-767	N
Metsulfuron methyl	WA, WY				
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of these herbicides is prohibited.					
Metsulfuron methyl	AK, AZ, CO, ID, MT, ND, NE,	MSM 60	Alligare, LLC	81927-7	N
	NM, NV, OK, SD, TX, UT, WA,	Escort DF	DuPont Crop Protection	352-439	N
	WY	Escort XP	DuPont Crop Protection	352-439	N
		Patriot	Nufarm Americas Inc.	228-391	N

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Metsulfuron methyl - cont.	AK, AZ, CO, ID, MT, ND, NE,	PureStand	Nufarm Americas Inc.	71368-38	N
	NM, NV, OK, SD, TX, UT, WA,	Metsulfuron Methyl DF	Vegetation Man., L.L.C.	74477-2	N
	WY				
Metsulfuron methyl +	AK, AZ, CO, ID, MT, ND, NE,	Cimarron Extra	DuPont Crop Protection	352-669	N
Chlorsulfuron	NM, NV, OK, SD, TX, UT, WA,	Cimarron Plus	DuPont Crop Protection	352-670	N
	WY				
Metsulfuron methyl +	AK, AZ, CO, ID, MT, ND, NE, NM	Cimarron MAX	DuPont Crop Protection	352-615	N
Dicamba + 2,4-D	NV, OK, SD, TX, UT, WA, WY				
Picloram	AZ, CO, ID, MT, ND, NE, NM,	Triumph K	Albaugh, Inc.	42750-81	N
	NV, OK, OR, SD, TX, UT, WA,	Triumph 22K	Albaugh, Inc.	42750-79	N
	WY	Picloram K	Alligare, LLC	42750-81-81927	N
		Picloram K	Alligare, LLC	81927-17	N
		Picloram 22K	Alligare, LLC	42750-79-81927	N
		Picloram 22K	Alligare, LLC	81927-18	N
		Grazon PC	Dow AgroSciences	62719-181	N
		OutPost 22K	Dow AgroSciences	62719-6	N
		Tordon K	Dow AgroSciences	62719-17	N
		Tordon 22K	Dow AgroSciences	62719-6	N
		Trooper 22K	Nufarm Americas Inc.	228-535	N
Picloram +	AZ, CO, ID, MT, ND, NE, NM,	GunSlinger	Albaugh, Inc.	42750-80	N
2,4-D	NV, OK, OR, SD, TX, UT, WA,	Picloram + D	Alligare, LLC	42750-80-81927	N
	WY	Picloram + D	Alligare, LLC	81927-16	N
		Tordon 101M	Dow AgroSciences	62719-5	N
		Tordon 101 R Forestry	Dow AgroSciences	62719-31	N
		Tordon RTU	Dow AgroSciences	62719-31	N
		Grazon P+D	Dow AgroSciences	62719-182	N
		HiredHand P+D	Dow AgroSciences	62719-182	N
		Pathway	Dow AgroSciences	62719-31	N
		Trooper 101	Nufarm Americas Inc.	228-561	N

	STATES WITH APPROVAL				
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ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Picloram +	AZ, CO, ID, MT, ND, NE, NM,	Trooper P + D	Nufarm Americas Inc.	228-530	N
2,4-D - cont.	NV, OK, OR, SD, TX, UT, WA,				
	WY				
Picloram +	AZ, CO, ID, MT, ND, NE, NM,	Trooper Extra	Nufarm Americas Inc.	228-586	N
2,4-D +	NV, OK, OR, SD, TX, UT, WA,				
Dicamba	WY				
Sulfometuron methyl	AK, AZ, CA, CO, ID, MT, ND,	SFM 75	Alligare, LLC	81927-26	Y
	NE, NM, NV, OK, SD, TX, UT	Oust DF	DuPont Crop Protection	352-401	N
	WA, WY	Oust XP	DuPont Crop Protection	352-601	Y
		SFM E-Pro 75EG	Etigra, LLC	79676-16	Y
		Spyder	Nufarm Americas Inc.	228-408	Y
		SFM 75	Vegetation Man., L.L.C.	72167-11-74477	Y
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of these herbicides is prohibited.					
Sulfometuron methyl +	AK, AZ, CA, CO, ID, MT, ND,	Landmark XP	DuPont Crop Protection	352-645	Y
Chlorsulfuron	NE, NM, NV, OK, SD, TX, UT				
	WA, WY				
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of this herbicide is prohibited.					
Sulfometuron methyl +	AK, AZ, CA, CO, ID, MT, ND,	Oust Extra	DuPont Crop Protection	352-622	N
Metsulfuron methyl	NE, NM, NV, OK, SD, TX, UT				
	WA, WY				
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS), the aerial application of this herbicide is prohibited.					

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Tebuthiuron	AZ, CA, CO, ID, MT, ND, NE,	Alligare Tebuthiuron 80 WG	Alligare, LLC	81927-37	Y
	NM, NV, OK, SD, TX, UT, WA,	Alligare Tebuthiuron 20 P	Alligare, LLC	81927-41	Y
	WY	Spike 20P	Dow AgroSciences	62719-121	Y
		Spike 80DF	Dow AgroSciences	62719-107	Y
		SpraKil S-5 Granules	SSI Maxim Co., Inc.	34913-10	Y
Tebuthiuron +	AZ, CA, CO, ID, MT, ND, NE,	SpraKil SK-13 Granular	SSI Maxim Co., Inc.	34913-15	Y
Diuron	NM, NV, OK, SD, TX, UT, WA,	SpraKil SK-26 Granular	SSI Maxim Co., Inc.	34913-16	Y
	WY				
Triclopyr	AK, AZ, CA, CO, ID, MT, ND,	Triclopyr 4EC	Alligare, LLC	72167-53-74477	Y
	NE, NM, NV, OK, SD, TX, UT	Triclopyr 3	Alligare, LLC	81927-13	Y
	WA, WY	Triclopry 4	Alligare, LLC	81927-11	Y
		Element 3A	Dow AgroSciences	62719-37	Y
		Element 4	Dow AgroSciences	62719-40	Y
		Forestry Garlon XRT	Dow AgroSciences	62719-553	Y
		Garlon 3A	Dow AgroSciences	62719-37	Y
		Garlon 4	Dow AgroSciences	62719-40	Y
		Garlon 4 Ultra	Dow AgroSciences	62719-527	Y
		Remedy	Dow AgroSciences	62719-70	Y
		Remedy Ultra	Dow AgroSciences	62719-552	Y
		Pathfinder II	Dow AgroSciences	62719-176	Y
		Relegate	Nufarm Americas Inc.	228-521	Y
		Relegate RTU	Nufarm Americas Inc.	228-522	Y
		Tahoe 3A	Nufarm Americas Inc.	228-384	Y
		Tahoe 3A	Nufarm Americas Inc.	228-518	Y
		Tahoe 3A	Nufarm Americas Inc.	228-520	Y
		Tahoe 4E	Nufarm Americas Inc.	228-385	Y
		Tahoe 4E Herbicide	Nufarm Americas Inc.	228-517	Y
		Renovate 3	SePRO Corporation	62719-37-67690	Y
		Renovate OTF	SePRO Corporation	67690-42	Y
		Ecotriclopyr 3 SL	Vegetation Man., LLC	72167-49-74477	N
		Triclopyr 3 SL	Vegetation Man., LLC	72167-53-74477	N

	STATES WITH APPROVAL				
	BASED UPON CURRENT				
ACTIVE	EIS/ROD & COURT			EPA REG.	CA
INGREDIENT	INJUNCTIONS	TRADE NAME	MANUFACTURER	NUMBER	REG. **
Triclopyr +	AK, AZ, CA, CO, ID, MT, ND,	Everett	Alligare, LLC	81927-29	Y
2,4-D	NE, NM, NV, OK, SD, TX, UT,	Crossbow	Dow AgroSciences	62719-260	Y
	WA, WY	Candor	Nufarm Americas Inc.	228-565	Y
Triclopyr +	AK, AZ, CA, CO, ID, MT, ND,	Prescott Herbicide	Alligare, LLC	81927-30	Y
Clopyralid	NE, NM, NV, OK, SD, TX, UT,	Redeem R&P	Dow AgroSciences	62719-337	Y
	WA, WY	Brazen	Nufarm Americas Inc.	228-564	Y
*** Refer to the complete label prior to considering the use of any herbicide formulation. Label changes can impact the intended use through, such things as,**					
creation or elimination of Special Local Need (SLN) or 24 (c) registrations, changes in application sites, rates and timing of application, county restrictions, etc.					
**** Just because a herbicide has a Federal registration, and is approved under the current EIS, it may or may not be registered for use in California. This**					
column identifies those formulations for which there is a California registration.					

Appendix 4
Herbicide Use Protocols
(*insert information if herbicide use is planned and when specific herbicides are known*)

Appendix 5
Herbicide Labels
(*insert information if herbicide use is planned and when specific herbicides are known*)

Appendix 6
Example California BLM Pesticide Use Form
Example California BLM Pesticide Application Records Form

EXHIBIT 3
Example California BLM Herbicide Use Proposal

PROPOSAL NUMBER:
REFERENCE NUMBER:

FIELD OFFICE _____ **COUNTY** _____

LOCATION:

_____

DURATION OF PROPOSAL:

_____

I. HERBACIDE APPLICATION (including mixtures and surfactants):

	Trade Names	Common Names	EPA Registration No.	Manufacturer	Formulations (Liquid or Granular)	Method of Application
1						
2						
3						

MAXIMUM RATE OF APPLICATION:	
USE UNIT ON LABEL:	**POUNDS ACID EQUIVALENT/ACRE:**
1.	1.
2.	2.

INTENDED RATE OF APPLICATION:

APPLICATION DATES:

NUMBER OF APPLICATIONS:

II. PEST (List specific pest(s) and reason(s) for application):

III. MAJOR DESIRED PLANT SPECIES PRESENT:

IV. TREATMENT SITE: (Describe land type or use, size, stage of growth of target species, slope and soil type).

EXHIBIT 3 (Cont.)
Example California BLM Herbicide Use Proposal

ESTIMATED ACRES

V. SENSITIVE ASPECTS AND PRECAUTIONS: (Describe sensitive areas [e.g., marsh, endangered, threatened, candidate and sensitive species habitat] and distance to treatment site. List measures taken to avoid impact to sensitive areas).

VI. NON-TARGET VEGETATION: (Describe the impacts, cumulative impacts, and mitigations to non-target vegetation that will be lost as a result of this chemical application).

VII. INTEGRATED PEST MANAGEMENT: (Describe how this chemical application fits into your overall integrated pest management program for the treatment area.)

Originator: _____ Date: _____
Company Name: _____
Phone: _____

Certified Herbicide Applicator:
_____ Date: _____
(Signature)

Field Office Pesticide/Noxious Weed Coordinator
_____ Date: _____
(Signature)

APPROVALS:
_____ Date: _____
BLM Assistant Field Manager
Renewable Resources
(Signature)

APPROVALS (State Office Use Only):
_____ Date: _____
BLM State Pesticide Coordinator
(Signature)
_____ Date: _____
Deputy State Director, Natural Resources,
Lands and Planning
(Signature)

___ CONCUR OR APPROVED
___ NOT CONCUR OR DISAPPROVED
___ CONCUR OR APPROVED WITH MODIFICATIONS

EXHIBIT 3 (Cont.)
Example California BLM Herbicide Application Records Form

1. General Information
a. Project Name: _____
b. Operator: _____
c. Herbicide Use Proposal Number: _____
d. Reference Number: _____

2. Name of Applicator or Employee(s) Applying the Herbicide:
_____
_____

3. Date(s) of Application: _____ _____ _____
(MONTH, DAY, YEAR)

4. Time Frame of Application: _____

5. Location of Application: T_____ , R_____ , and Sec. _____
County _____

6. Type of Equipment Used: _____
_____

7. Herbicide(s) Used: _____
Company or Manufacturer's Name: _____
_____
Trade Name: _____
_____

Type of Formulation: Liquid ____/ Granular ____/

8. Rate of Application Used:
a. Active Ingredient per Acre_____
b. Volume of Formulation per Acre_____

9. Treatment Area
a. Actual Area Treated: _____
b. Total Project Area: _____

10. Primary Pest(s) Involved: _____
_____

11. Stage of Pest Development: _____
_____

12. Site Treated: ____/ Native Vegetation ____/ Seeded Vegetation ____/ Other

13. Weather Conditions:
a. Wind velocity:_____ b. Wind direction _____ c. Temperature _____

14.Monitoring Record (IF INSUFFICIENT SPACE-CONTINUE ON BACK):

This record is required and must be completed, except for monitoring within 24 hours after completion of application of herbicides. This record must be maintained for minimum of 10 years.