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Environmental Assessment

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HERBICIDE APPLICATION AT THREE WESTERN AREA POWER ADMINISTRATION SUBSTATIONS

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Environmental Assessment for Herbicide Application

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1. INTRODUCTION

The Bureau of Land Management (BLM) and Western Area Power Administration (Western) share a common goal in the need to be proactive in controlling hazardous vegetation as well as noxious weed and invasive plant infestations. Furthermore, federal agencies are required to control these plants by *Executive Order* (EO) *13112* and resulting agency policies. While the BLM manages 12.2 million acres within the state of Arizona, Western's Desert Southwest Region is responsible for maintaining approximately 3,100 miles of transmission line and 90 substations across Arizona, southern California, and southern Nevada. Western's transmission lines and substations occur on land managed by Native American tribes, numerous federal entities, state and local governments, and private landowners. In order to address the control of vegetation within three Western substations on BLM-managed land (Figure 1-1), this environmental assessment (EA) has been prepared. The EA addresses issues related to the use of herbicides for treatment of undesirable vegetation, as described below, within the three substations.

1.1 Background

Western must manage vegetation near the transmission lines and within substations to provide a safe and reliable supply of electricity and to prevent blackouts and wildfires, which can harm people, wildlife, habitat, and property. Western is committed to implementing the best integrated vegetation management (IVM) solution utilizing industry accepted best management practices (American National Standards Institute [ANSI] A300, Part 7, ISA 2014) and maintaining compliance with the North American Electric Reliability Corporation Reliability Standard FAC-003. Current IVM solutions being implemented by Western on BLM-managed lands within Arizona include mechanical treatments using heavy machinery equipped with industrial masticators and manual treatments such as hand cutting.

A substation is part of the electric grid and connects two or more transmission and/or distribution lines. Although specific functions may vary, substations are designed to accomplish the following:

- Change voltage from one level to another
- Regulate voltage to compensate for system voltage changes
- Switch transmission and distribution circuits into and out of the grid system
- Measure characteristics of electric power flowing in the circuits
- Connect communication signals to the circuits
- Eliminate lightning and other electrical surges from the system
- Connect electric generation plants to the system
- Make interconnections between the electric systems of more than one utility
- Change alternating current to direct current or direct current to alternating current
- Control reactive kilovolt-amperes supplied to, and the flow of reactive kilovolt-amperes in, the circuits

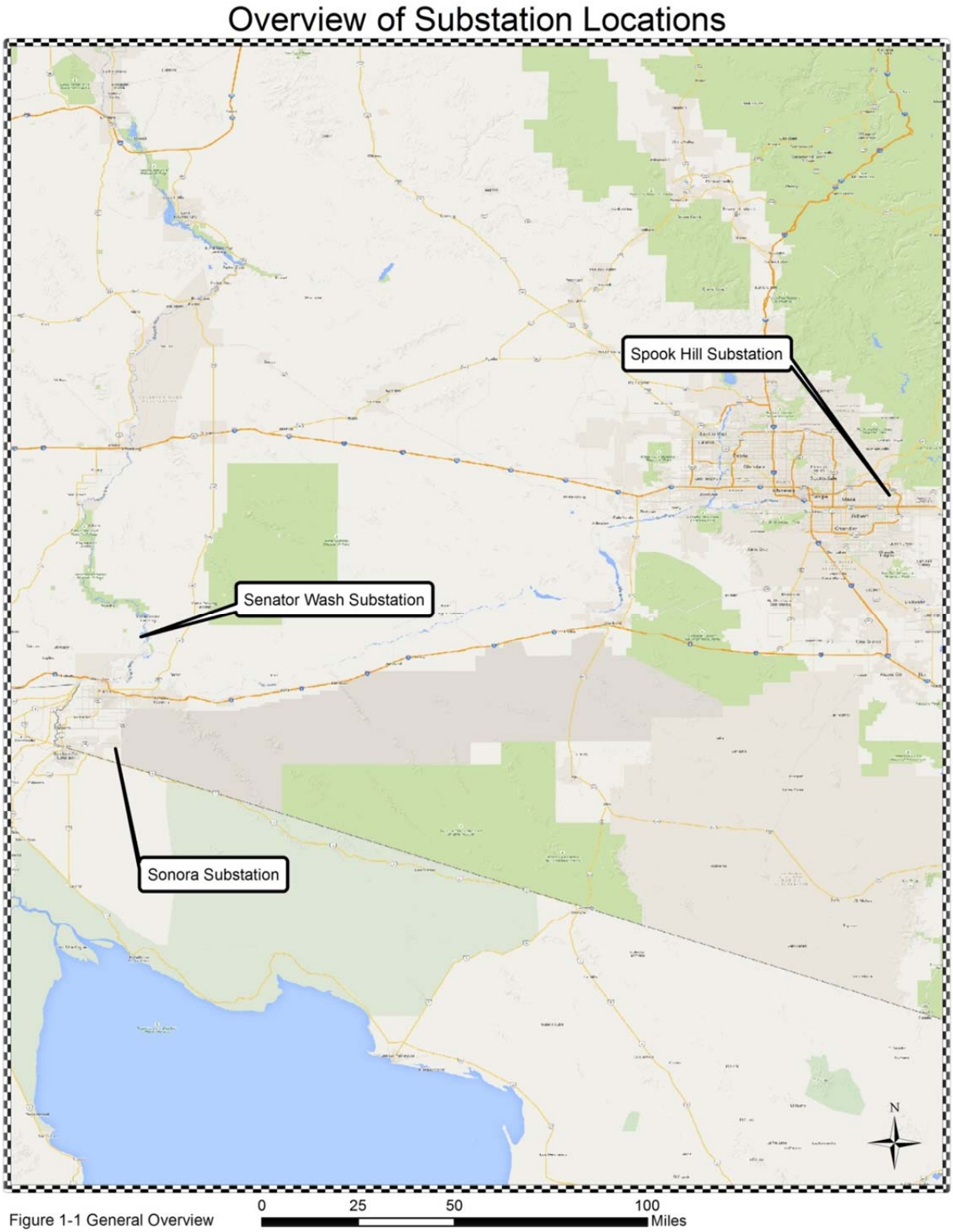

Figure 1-1 General Overview

Substations can range from simple to complex. A small substation of about 500 square feet may contain little more than a transformer and associated switches. Other substations are very large and may be several acres in size with several transformers and dozens of switches. Regardless of their size, substations have several common features, including a gravel pad with concrete foundations that support the necessary electrical equipment, a tall chain link fence surrounding the equipment for safety purposes, and an access road from the nearest public road. Buried beneath the gravel in a substation yard is a grid of wires that functions as the grounding for the high voltage equipment.

Figure 1-2 Vegetation at Spook Hill Substation

Electrical facilities are critical sites for vegetation control for safety reasons. If an electrical fault or lightning strike occurs, current flows through the structure and into the ground, creating step and touch electrical potentials that can cause injury or death to workers. These current flows can also be transferred outside the station into water, sewer, electrical, and rail lines, thereby putting the public at risk.

For these reasons, buried underneath each of these sites is a grid of bare wires. This provides a common grounding system for electrical and metallic structures. The purpose of the grounding system is to protect staff and the public from electrocution in case of a system fault, equipment failure, or lightning strike, by limiting electrical potentials to safe levels. It also supports the proper operation of the electrical system by providing a low impedance path for fault currents.

A surface of clean, crushed rock (similar to gravel) is laid over the electrical ground grid to provide an insulating layer between the grid and the surface of the ground. Crushed rock has

many features that contribute to electrical and engineering safety. In particular, it has a high level of electrical resistivity, which means it does not conduct electricity, thereby reducing the risk of electrocution over the ground grid. If vegetation becomes established in the crushed rock, its function as an insulating layer is reduced. Vegetation in the crushed rock interferes with the ground grid, seriously compromising the safety functions of the grid and posing an electrical hazard to workers.

Areas outside the facility fence must also be kept clear of all vegetation. For example, nearby trees that act as a fuel source for fire, fall into and damage the site, or drop debris onto the equipment, must be removed.

Western must manage undesirable vegetation and reduce hazardous fuels to ensure a safe and reliable supply of electricity and to maintain the utility rights-of-way and infrastructure in safe and reliable operating conditions pursuant to industry standards, regulations, and recommendations. To meet these requirements, Western must implement vegetation management. Adding herbicide application to existing practices reduces the frequency, duration, and cost of vegetation management when compared to manual and mechanical methods alone. Herbicide treatment in combination with current manual and mechanical vegetation management methods (e.g., hand pulling, digging, or sawing; mowing; weed whacking) can be an effective, economical, and environmentally sound method to maintain vegetation within substations and along transmission line rights-of-way.

Western has been using mechanical and manual methods to control vegetation at the three Western substations on BLM-managed land. These methods of vegetation control at the substations have not been successful, however, and excessive vegetation growth has become an issue. This excessive vegetation growth hampers travel within the substations during maintenance and emergency response, and causes vegetative interference with operational equipment. In addition, vegetation within substations provides habitat for species that are not compatible with substation operations. Recently, a Great Horned Owl was found nesting within vegetation underneath electrical equipment at Lone Butte substation. Electricians have also observed rattlesnakes in vegetation at numerous substations this year.

Often, the terms "noxious weeds" or "invasive plants" are used to apply to the same plants, but these terms are not considered to be synonymous in this document. Generally, a weed is an unwanted plant that grows or spreads aggressively. The term "noxious" has legal ramifications for states that have noxious weed laws or regulations. An invasive plant is one that grows and spreads rapidly, replacing desirable native plants. *Executive Order 13112* defines an invasive weed as an alien species. This EA uses the term "undesirable vegetation" to encompass invasive species, noxious weeds, and other plant species including native species that may adversely affect operations or equipment within a substation. The Proposed Action includes the control of undesirable vegetation to protect adjacent resources on neighboring lands. Early detection and treatment of infestations within substations could prevent them from spreading onto public land administered by the BLM, adversely affecting resource values and uses. Section 302(b) of the *Federal Land Policy and Management Act of 1976* directs the BLM to "take any action necessary to prevent unnecessary or undue degradation of the [public] lands" (43 United States

Code [USC] 1732). Supplementing this mandate is Section 2(b) (2) of the *Public Rangelands Improvement Act of 1978* in which Congress reaffirms a national policy and commitment to "manage, maintain, and improve the condition of public rangelands" (43 USC 1711). In response to the threats of wildfire and invasive vegetation and noxious weeds, the president and Congress have directed the U.S. Department of the Interior (USDI) and BLM, through implementation of the *National Fire Plan of 2000* and the *Healthy Forests Restoration Act of 2003,* to take more aggressive actions to reduce catastrophic wildfire risk on public lands.

Figure 1-3 Great Horned Owl chicks in a ground nest in Lone Butte Substation

The BLM completed the *Final Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement* (PEIS) in 2007. The PEIS analyzed the effects of using herbicides for treating vegetation on public lands in the western U.S. and identified impacts on the natural and human environment associated with herbicide use and known public concerns and issues. The Record of Decision for this PEIS (09/27/2007) approved the herbicide active ingredients assessed and analyzed under the Preferred Alternative (Alternative B) in the PEIS for use on public lands administered by the BLM in 17 western states, and approved the protocol for consideration of the use or non-use of herbicides by the BLM. The PEIS provides a broad, comprehensive background source of information to which any necessary subsequent environmental analyses can be tiered. Tiering allows local offices to prepare more specific environmental documents without duplicating relevant portions of the PEIS. In general, the National Environmental Policy Act (NEPA) process is implemented at multiple scales depending on the scope of the proposal. This document will tier off the PEIS and will define the parameters for use of herbicides within the three Western substations on BLM-managed lands.

Figure 1-4 Vegetation at Tucson Substation

1.2 Purpose and Need

The purpose of the Proposed Action is to authorize Western to use the necessary tools for the treatment of undesirable vegetation within three existing substations on federal lands to fulfill its compliance requirements under the following industry standards, regulations, and recommendations:

- ANSI A300 Standards for Tree Care Operations: Tree Shrub, and other Woody Plant Maintenance (ANSI A300 Part 1 – 2008; ANSI A300 Part 7 –2006)
- ANSI Z133.1 Standard for Tree Care Operations: Pruning, Trimming, Repairing, Maintaining, and Removing Trees and Cutting Brush – Safety Requirements (ANSI Z133.1 2012)
- Occupational Safety and Health Administration (OSHA) 1910.269 Regulations for Electric Power Generation, Transmission, and Distribution (29 CFR 1910.269)
- International Society of Arboriculture (ISA) Best Management Practices Utility Pruning of Trees (ISA 2004)
- ISA Best Management Practices: Integrated Vegetation Management, second edition (2014)
- Utility Arborist Association Best Management Practices: Field Guide to Closed Chain of Custody for Herbicides in the Utility Vegetation Management Industry (2011)

- National Wildland-Urban Interface Code (ANSI 2012)
- National Electrical Safety Code (NESC 2007)
- Federal Energy Regulatory Commission (FERC) Mandatory Reliability Standards, Uniform Fire Code (Uniform Fire Code 2012).

The need for the Proposed Action is to control vegetation which may lead to the following undesirable conditions:

- Creation of a fire hazard or contribution to fires as a fuel source
- Interference with electrical components, thereby causing power outages
- Covering or hiding fences, thereby increasing the risk of unauthorized entry and theft
- Increased corrosion of steel equipment
- Increased risk of tripping and slipping
- Interference with equipment access and safety inspections
- Creation of food and shelter for birds, rodents, ants, termites, and other pests
- Degraded appearance of site

1.3 Decision to be Made

The responsible officials for the BLM are the Field Managers for the Yuma and Lower Sonoran Field Offices. Based on the information, data, and analysis included in the EA, they will approve, approve with modifications, or not approve the Proposed Action. In doing so they will:

- Determine if significant environmental effects would result from implementing the proposed use of herbicides, which would require the preparation of an environmental impact statement.
- Determine if the Proposed Action, using selected herbicides to manage undesirable vegetation, has acceptable environmental consequences that, individually or cumulatively, are not considered to be significant, resulting in a finding of no significant impact (FONSI).
- Determine if additional mitigation measures should be applied.
- Determine not to allow the use of herbicides for management of undesirable vegetation.

The completed EA will provide the responsible official with the basis upon which to make an informed decision. The decision will outline the requirements necessary to authorize the proposed use of herbicides for undesirable vegetation and hazardous plant management. The BLM State Weed Coordinator, BLM Field Managers, and the BLM Deputy State Director are responsible for reviewing and approving or disapproving the herbicides proposed for use in the annual treatment plans, maintenance projects, and construction projects and consequent pesticide

use proposals (PUP) submitted to the BLM for the use of herbicides to control undesirable vegetation.

The responsible official for Western is Ron Moulton, Senior Vice President and Desert Southwest Regional Manager. Based on the information, data, and analysis included in the EA, Western's Regional Manager will approve or not approve the Proposed Action.

1.4 Land Use Plan Conformance

The Proposed Action would occur within areas managed under guidance from the Yuma Field Office Resource Management Plan and Lower Sonoran Resource Management Plan. The Proposed Action is in conformance with these plans and will not preclude attainment of any other resource goals, objectives, or desired resource conditions, or otherwise interfere with carrying out other resource decisions contained in any of these plans. These determinations were made based on coordination and internal scoping with BLM Field Office staff. The applicable plans and the sections of those plans which show conformance of the Proposed Action are listed below:

Lower Sonoran Record of Decision & Approved Resource Management Plan (September 2012) - Section 2.2.6 Vegetation Resources, page 2-33; Wildland Fire Management Section 2.2.11, page 2-45; Section 2.2.13 Lands and Realty, page 2-72.

Yuma Field Office Record of Decision & Approved Resource Management Plan (January 16 2010) - Section 1.7.1 Cooperating Agencies, page 1-21;Section 2.5.5 Invasive Non-Native Plants, page 2-49; Section 2.18 Lands and Realty Management, page 2-164.

1.5 Scoping and Public Participation

Western conducted public scoping to solicit input on the scope of the Proposed Action and to identify issues, concerns, and suggestions that should be considered in the EA. A scoping letter was issued on August 28, 2015, which started a 30-day scoping period for the Proposed Action (August 28 through September 30, 2015), and included information about the Proposed Action and instructions on how to provide comments. The letter was mailed and emailed to 48 entities including tribal, federal, state, and local agencies, property owners, and non-governmental organizations. The scoping letter was also posted on Western's website for public review: https://www.wapa.gov/regions/DSW/Environment/Pages/EA-for-Herbicide-Use-at-Three-Substations.aspx.

1.6 Issues Identified

No issues were identified during scoping. Three responses were received during scoping: one deferred to another entity, one with no concerns, and one with no comment due to lack of jurisdiction.

2. ALTERNATIVES

This section describes the alternatives considered to address the purpose and need, including the No Action Alternative.

2.1 Alternative 1 - Proposed Action

The BLM proposes to authorize Western to conduct herbicide treatment programs to contain, control, or eradicate undesirable vegetation at Senator Wash, Sonora, and Spook Hill substations (see figures 2-1, 2-2, and 2-3). The treatment area would include the property within the fence line of each substation, as well as up to ten feet outside the fence line but within Western's existing right-of-way. The herbicide applications would be consistent with right-of-way terms and conditions, as well as with the methods analyzed for herbicide use in the PEIS. Western would follow all Prevention Measures and Standard Operating Procedures (SOPs) per Appendix B of the BLM PEIS as part of the Proposed Action, which are hereby incorporated by reference.

Western proposes to use a subset of those herbicides approved for use in PEIS; this subset of herbicides is included in Attachment A. Herbicides would be applied and associated surfactants and dyes would include the following:

- LI 700 (24 ounces per acre)
- Methylated seed oil (MSO) (32 ounces per acre)
- Hi-Light (6-10 ounces per acre)

Although the Proposed Action is generated by Western, it is considered to be supportive of BLM goals regarding undesirable vegetation on public lands.

2.1.1 Herbicide Control Methods

An herbicide is a chemical used to kill or suppress the growth of plants. The most satisfactory classification of herbicides is based upon how they are used for noxious weed control and how they work. Accordingly, herbicides are classified into two major types:

- Selective herbicides kill certain plants but do not significantly affect the most desirable plants. For example, some selective herbicides kill broadleaf plants (including brush) but do not affect grasses.
- Nonselective herbicides are chemicals that are generally toxic to plants without regard to species.

There are several different ways to apply herbicides, and the method selected depends on the type of control needed, the type of vegetation, and the site situation (i.e., site conditions, location). Application methods Western would use include stump treatment, basal spray treatment, foliage spray treatment, and soils treatment.

Stump Treatment. This type of treatment is used when vegetation is cut to the ground. This method is primarily used after initial clearing and during maintenance clearing to prevent regrowth by sprouting. This treatment type would be used rarely under the Proposed Action.

Figure 2-1 Senator Wash Location

Figure 2-2 Sonora Location

Figure 2-3 Spook Hill Location

Basal Spray Treatment. This treatment method involves spraying the lower part of the stem and the exposed roots of incompatible vegetation with an oil- or wax-based formula. Basal spray treatment would be used on re-sprouting species and nonnative and invasive plant species. This method is more selective than a foliage spray and does not cause immediate brownout of vegetation. In general, this treatment is prescribed in the following situations:

- Brush is too tall to use foliage spray without causing unacceptable drift.
- The treatment area is adjacent to cropland, residences, susceptible vegetation, or other sensitive areas, and drift is a problem.
- The treatment area contains a high density of compatible species, and a foliage spray cannot be applied without injuring the compatible cover.

Foliar Spray Treatment. Foliar spraying is a common method of applying herbicides on brush up to 15 feet tall. This method uses a water- or wax-based formulation that is applied to the entire plant's foliage and stems. Because it is sprayed into the air, drift can be a problem under certain atmospheric conditions. Also, most foliage sprays cause immediate brownout of vegetation. This method would not be used in areas where drift and brownout are concerns (e.g., adjacent to cropland, residences, susceptible vegetation, or other environmentally or visually sensitive areas).

Soils Treatment. Herbicides considered "soil sterilants" may be defined as compounds that, when applied to the soil, prevent the establishment of vegetation, ranging from a short time to relatively long periods of time. In the soil treatment method, applications are made to the base of plants or, when non-selective treatment is needed, to the ground surface. These herbicides are available in both liquid and solid (granular or pellet) formulations.

Documentation and Reporting. Per federal regulations, Western would document and report information pertaining to herbicide application within the three substations. This information could include herbicide type, quantity, application method, and application area. Reporting format and frequency would be decided in coordination with the land manager.

The following equipment may be used to apply herbicides:

- Backpack
- Powerhose
- Mechanized boom sprayer
- Squirt bottle
- Injection tools
- Brush saw with herbicide

Backpack

A backpack is a portable, manually operated, pressurized container with a nozzle for spraying herbicides. Directed spray from a backpack unit will selectively control targeted plants. Backpack spray is effective on established, low-density species, tree seedlings, and noxious weeds.

Powerhose

A hand-held spray gun and hose attached to a portable tank with a motorized pump system filled with herbicide will selectively control a variety of vegetation with directed spray. Spray guns are efficient for larger scale applications, and can be used for the application of all herbicide liquid mixtures.

Mechanized Boom Sprayer

Boom sprayers are widely available commercially for all-terrain vehicle (ATV) and agricultural tractor equipment. They use a solution tank and spray apparatus similar to a powerhose sprayer, except the solution is delivered to nozzles mounted at designated intervals along the boom length.

Squirt Bottle/Injection Tools

A squirt bottle is a hand-held, non-pressurized container. Some may have a trigger pump sprayer. Injection tools may be a battery-powered drill or automatic lance that is used to inject capsules of herbicide into stems.

Brush Saw with Herbicide

A brush saw or chainsaw has an attachment that deposits the herbicide on the spinning blade or chain, and automatically applies the herbicide onto the stump when cutting the stem.

2.1.2 Standard Western Protocols

Western has developed SOP and Best Management Practices (BMPs) as part of its operation and maintenance program. Western developed these protocols to proactively protect sensitive resources. Following these protocols is considered part of the Proposed Action. Western and its contractors would follow all BMPs and SOPs at all times during all Proposed Action activities. Western's personnel would monitor maintenance activities to make sure that the contractor complies with the applicable BMPs and SOPs. These protocols are discussed below.

2.1.2.1 SOPs

Pre-Treatment

- Select only approved herbicides that are 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.
- Have all pre-treatment special status species surveys conducted by a qualified biologist.

- Consider site characteristics, environmental conditions, and application equipment in order to minimize damage to non-target vegetation.
- Avoid directly applying herbicides to open water or aquatic habitats.
- Use only herbicides that have been approved in the BLM PEIS (2007).
- Follow habitat conservation measures based on special conditions in aquatic and terrestrial habitats.

During Treatment

- Apply the least amount of herbicide needed to achieve the desired result.
- Follow herbicide product label for use and storage.
- Allow only licensed applicators to apply herbicides.
- Use only herbicides approved by the US Environmental Protection Agency (EPA) 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.
- Minimize the size of application area, when feasible.
- Keep a copy of safety data sheets (SDSs) at work sites.
- Keep records of each herbicide application, including the active ingredient, formulation, application rate, date, time, and location.
- Avoid accidental direct spray and spill conditions to minimize risks to resources.
- Take precautions to minimize drift by not applying herbicides when winds exceed ten miles per hour, or when a serious rainfall event is imminent.
- Use drift control agents and low volatile formulations.
- Turn off applied treatments at the completion of spray runs and during turns to start another spray run.
- Remove all attached plant/vegetation and soil/mud debris from vehicles and equipment prior to leaving a treatment location.
- Calibrate equipment, maintain records of actual application quantities, and track incidents of impacts on non-target organisms.

Post Treatment

- Survey to determine efficacy of treatment and if any follow up treatment may be needed.

2.1.2.2 Resource-Specific Best Management Practices

Resource	BMP
Biological Resources	• Follow all species-specific Project Conservation Measures as stated in the Biological Opinion for Western maintenance actions in the West Area (2015). • Survey for special status species before treating an area. • Avoid treating areas with suitable habitat that have not been recently surveyed. • 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 when spraying in special status species habitat. • Avoid treating vegetation during time-sensitive periods (e.g., nesting and migration, sensitive life stages) for special status species which may occur in treatment area.
Migratory Birds, Non-Sensitive Wildlife, and Vegetation	• Use herbicides of low toxicity to wildlife, where feasible. • Use spot applications or low-boom (20 inches or less) 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. • Use appropriate application equipment and methods at Senator Wash substation if the potential for off-site drift exists.
Invasive Species/Noxious Weeds	• Wash vehicles and equipment used during treatment activities prior to leaving the equipment storage facility.
Livestock Grazing and Rangeland Health	• When feasible and applicable, 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 areas adjacent to treatment sites prior to herbicide application, where applicable. • Use herbicides of low toxicity 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. • The BLM shall notify permittees of the herbicide treatment project to improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment.

Resource	BMP
Wild Horses and Burros	• Minimize use of herbicides in areas grazed by wild horses and burros. • Use herbicides of low toxicity where feasible. • 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.
Water Quality	• Establish appropriate (herbicide-specific) buffer zones for the canal at Senator Wash substation. • Consider climate, soil type, slope, and vegetation type when developing herbicide treatment programs near waterways. • 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. • 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. • Avoid rinsing spray tanks in or near water bodies. Do not broadcast pellets where there is danger of contaminating water supplies. • Minimize the potential effects to surface water quality and quantity by stabilizing terrestrial areas as quickly as possible following treatment. • Calibrate equipment, maintain records of actual application quantities, and track incidents of impacts on non-target organisms.
Wetlands/Riparian Zones	• Use drift reduction agents to reduce the risk of drift hazard. • Use a selective herbicide and a wick or backpack sprayer. • Use an appropriate herbicide-free buffer zone for herbicides not labeled for aquatic use.

Resource	BMP
Recreation	• Schedule treatments to avoid peak recreational use times, while taking into account the optimum management period for the targeted species. • Adhere to entry restrictions identified on the herbicide product label for public and worker access. • Use herbicides during periods of low human use, where feasible.
Human Health and Safety	• Notify the National Response Center (NRC) immediately at 800-424-8802 if any leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs in any 24-hour period. Contact information must be posted in locations that are readily accessible and available in the area where the spill, leak, or other unpermitted discharge may occur. • Mandate that all applicators wear appropriate personal protective equipment as required on the label. • Follow all requirements in a Safety and Spill Plan. • Observe restricted entry intervals specified by the herbicide label. • Have a copy of SDSs 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 herbicide label directions for use and storage. • Dispose of unwanted herbicides promptly and correctly.
Soils	• Minimize treatments in areas where herbicide runoff is likely, such as steep slopes when heavy rainfall is expected.
Native American Cultural or Religious Concerns	• Do not exceed the typical application rate of any herbicide in known areas with plants of cultural or religious importance to tribes. • Avoid applying bromacil or tebuthiuron in known areas with plants of cultural or religious importance to tribes. • Limit diquat applications to areas away from areas with plants of cultural or religious importance to tribes. • Avoid identified Traditional Cultural Properties (TCPs) or areas with plants of cultural or religious importance. If avoidance is not possible, Western shall consult with the State Historic Preservation Officer (SHPO) and tribes to determine the appropriate course of action.

2.2 Alternative 2 - No Action

Under this alternative, BLM would not authorize Western to use herbicides on the three substations. Western would continue to use hand-pulling and mechanical means to remove vegetation.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing condition of the potentially impacted resources and how they would or might be affected by the Proposed Action and alternatives.

3.1 Approach for Impact Analysis

The potential impacts of the Proposed Action and alternative are analyzed in terms of their type, context, duration, and intensity. These terms are generally defined as follows:

- Type describes the impact as beneficial or adverse, direct or indirect.
  - Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
  - Adverse: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
  - Direct: An effect on a resource by an action at the same place and time.
  - Indirect: An effect from an action that occurs later or perhaps at a different place and often to a different resource, but is still reasonably foreseeable.
  - Cumulative: Impacts to resources that are added to existing impacts from other actions.
- Context describes the area (site-specific) or location (local or regional) in which the impact would occur.
- Duration is the length of time an effect will would occur.
  - Short-term impacts generally occur during construction or for a limited time thereafter, generally less than two years, by the end of which the resources recover their pre-construction conditions.
  - Long-term impacts last beyond the construction period, and the resources may not regain their pre-construction conditions for a longer period of time.
- Intensity reflects the amount of impact on each resource as a result of the Proposed Action. The levels of intensity are defined as follows:
  - Negligible: Impact at the lowest levels of detection with barely measurable consequences.
  - Minor: Impact is measurable or perceptible, with little loss of resource integrity and changes are small, localized, and of little consequence.
  - Moderate: Impact is measurable and perceptible and would alter the resource but not modify overall resource integrity, or the impact could be mitigated successfully in the short-term.
  - Major: Impacts would be substantial, highly noticeable, and long-term.

3.2 Analysis of Resources

Table 3-1. Resources and rationale for detailed analysis

Resource	Not Present	Present, Not Affected	Present, May Be Affected	Rationale
Air Quality		X		Detailed analysis of air quality is provided in the PEIS. Effects to air quality from this Proposed Action would be lower than those identified in the PEIS.
Areas of Critical Environmental Concern (ACEC)	X			Nearest ACEC is 20 miles southwest of Senator Wash substation and 20 miles northwest of Sonora substation. The closest ACEC to Spook Hill substation is 37 miles southwest.
Cultural Resources	X			No cultural resources are present at the three substations.
Environmental Justice	X			None of the alternatives would disproportionately impact any low income or minority populations as described in Executive Order 12898.
Farmlands (Prime and Unique)	X			No farmlands are located adjacent to the three substations.
Floodplains	X			The Proposed Action is restricted to substation properties and would not change topographic conditions or modify flood flows.
Hazardous Materials and Human Health and Safety			X	See Section 3.3
Vegetation			X	See Section 3.4

Resource	Not Present	Present, Not Affected	Present, May Be Affected	Rationale
Native American Religious Concerns	X			Native American tribes were consulted for concerns. No tribal cultural properties, sacred sites, or other Native American religious concerns have been identified at the three substations.
Water Quality (Surface and Ground)		X		See Section 3.5
Wetlands and Riparian Zones	X			No aquatic or riparian vegetation exists at the three substations. A canal is adjacent to Senator Wash substation; however implementation of BMPs and SOPs would limit herbicide use to the substation and reduce the potential for herbicides to come into contact with the canal.
Wild and Scenic Rivers	X			No Wild and Scenic Rivers are located within 50 miles of the three substations.
Wilderness	X			The nearest designated wilderness is 2.5 miles west of Senator Wash substation.
Fish and Wildlife, including Threatened and Endangered Species, Special Status Species, and Migratory Birds			X	See Section 3.6

3.3 Hazardous Materials and Human Health and Safety

3.3.1 Affected Environment

This section describes the affected environment for hazardous materials used currently within the Project area. Hazardous substances are defined by federal and state regulations to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14).

Current Western maintenance practices throughout the Desert Southwest Region include the use of herbicides for vegetation management. All herbicides currently used by Western are registered for use by the US EPA, California Department of Pesticide Regulation, Arizona Department of Agriculture, and Nevada Department of Agriculture. Other local agencies and land managers may have additional requirements or restrictions to follow. Special restrictions may also be set forth on federal lands. Under the Proposed Action, herbicides would be used on BLM-managed lands; therefore, herbicide use will follow BLM and applicable state regulations.

Equipment currently used for substation operation and maintenance activities requires fuel (such as diesel fuel and gasoline) and other general substances for upkeep of equipment (such as oil and grease). This equipment includes several different types of trucks, dozers, ATVs, chainsaws, and other brush-cutting tools. California Department of Toxic Substances and Arizona Department of Environmental Quality serve as the main state regulatory agencies for toxic substances control. These agencies are only involved if a substantial spill of these substances occurs and contaminates soil, water and other resources. The treatment area would include the property within the fence line of each substation, as well as up to ten feet outside the fence line but within Western's existing right-of-way.

3.3.2 Proposed Action

For a description of Western's herbicide application procedures, see Section 2.1. Herbicide use under the Proposed Action would include the property within the fence line of each substation, as well as up to ten feet outside the fence line but within Western's existing right-of-way. Herbicide applicators and other maintenance workers would be exposed to herbicides during normal application and use. If a spill were to occur, herbicide applicators and maintenance workers would be exposed to a more substantial level of herbicide. Direct and indirect exposure to the public is possible, but limited to either touching or consuming plants that have been treated with herbicide, eating animals that have consumed herbicide-treated plants, drinking water that may have been contaminated by herbicide runoff or spills, or airborne drift. The potential for public exposure is considered very low. Substations have restricted and prohibited public access, and Western shall implement BMPs and SOPs, thereby minimizing or avoiding public exposure to these potential hazards.

Maintenance workers may be exposed to fuels, greases, and other hazardous materials during maintenance activities included under the Proposed Action. If an accidental spill occurs, maintenance workers would be responsible for the cleanup and proper disposal of contaminated soils.

3.3.3 No Action Alternative

Under the No Action Alternative, Western would continue to use manual and mechanical methods to manage vegetation. Without the use of herbicides, invasive plants within the within the three substations are more likely to persist and resprout more often; therefore, the use of physical treatment methods (manual hand pulling and mechanical equipment) would be greater in intensity, and treatment would need to occur more frequently. The increased frequency of treatment that would be required would also result in increased vehicle use and associated exposure to substances such as fuels and greases relative to the Proposed Action. No exposure of workers or the public to herbicides would occur under the No Action Alternative.

3.4 Vegetation

3.4.1 Affected Environment

Descriptions of the vegetation communities, biotic communities, and plant associations that occur within the Project area are provided below. All three terms—vegetation communities, biotic communities, and plant associations—are defined based on the presence of dominant plant species that characterize the species composition and physical structure of the landscapes.

The three affected substations are all located within the Lower Colorado River Subdivision of the Sonoran Desertscrub biotic community. Broad, flat valleys with widely scattered, small mountain ranges of mostly barren rock are the characteristic physiography within the Lower Colorado River Valley Subdivision. Within the Sonoran Desertscrub ecoregion, saguaro *(Carnegiea gigantea)* is the characteristic plant species, and biodiversity can be high. Within the Lower Colorado River Subdivision, which includes the affected area, the creosote *(Larrea tridentata)*-white bursage *(Ambrosia dumosa)* series is the predominant association. Detailed descriptions of each of these communities and series can be found in Brown (1982).

As described above in Section 1.0, the area within the fenced boundaries of the substations are highly modified and, under ideal conditions, devoid of vegetation. Brief descriptions of the local plant communities in which each of the substations are located are provided below. These communities would occur primarily in proximity to but outside the substation fences.

Senator Wash Substation

Senator Wash Substation is located adjacent to the Senator Wash Reservoir spillway in eastern Imperial County, California. The spillway empties into Squaw Lake and eventually into the Lower Colorado River at Imperial Reservoir. The substation is located within an area that has existing disturbance from Senator Wash Dam, the spillway, and nearby boat ramp. Vegetation around the substation is sparse and consists of oleander *(Nerium oleander)* for visual screening around the fence line, and scattered fan palms (*Washingtonia* spp.).

Sonora Substation

Sonora Substation is located within the five-mile zone in Yuma County, Arizona. The five-mile zone is a five-mile-wide, 13-mile-long strip of land in southwestern Arizona managed largely for water delivery to Mexico per Minute No. 242 of the International Boundary and Water Commission. Within this zone, the landscape is characterized by low, sandy plains dominated primarily by a low density of creosote bush, white bursage, and Emory's smokebush

(Psorothamnus emoryi). Stands of creosote bush and white bursage are generally uniform in spacing, density, and height. Vegetative cover is usually 10 percent of the land surface but can be as low as 3 percent when rainfall is less than 3.9 inches (Crosswhite and Crosswhite 1982), as is the case at Sonora Substation. Creosote bush is often spaced more regularly than bursage because creosote bush roots contain chemical inhibitors that reduce competition by other plants.

Spook Hill Substation

Spook Hill Substation is located within the City of Mesa in Maricopa County, Arizona. The substation is situated within a largely undeveloped quarter section surrounded by commercial and residential development. Vegetation within the undeveloped quarter section is characteristic of Sonoran Desertscrub with interspersed, braided riparian scrub. Representative plant species include creosote bush (*Larrea tridentata*), mesquite *(Prosopis velutina)*, yellow palo verde *(Parkinsonia microphylla)*, ironwood *(Olneya tesota)*, catclaw acacia *(Acacia greggii)*, desert broom *(Baccharis sarothroides)*, barrel cactus (*Ferocactus* sp.), and other mixed cacti.

3.4.2 Proposed Action

Under the Proposed Action, vegetation would be affected directly and indirectly by herbicide use. Herbicides kill or damage plants by inhibiting or disrupting basic plant processes. Impacts from herbicide treatment to non-target vegetation result from misuse. Herbicides can unintentionally contact vegetation by drift, leaching, or spilling. The degree to which a habitat is impacted depends on the selectivity (type) of the herbicide, application treatment, and accidental contact. The implementation of BMPs and SOPs for herbicide use would ensure that impacts to non-target vegetation and sensitive habitats do not occur.

All vegetation within the substations was removed or altered from its natural state during construction. Since that time, substations have been consistently maintained to a bare-earth standard (i.e., no vegetation growth within the substation). Under the Proposed Action, Western would continue to manage substations to this standard using herbicides in addition to current manual and mechanical techniques. Therefore, the Proposed Action would not result in a measurable change to the amount or type of vegetation managed, but would affect the method by which this management occurs.

Many common weeds are found throughout the three affected substations and the adjacent landscapes. Control of these species at a landscape level is not practical. However, noxious and invasive weeds found within the landscape but which are currently absent from, but could become introduced in, the affected area present the greatest concern. Western's vegetation management activities would suppress the spread of noxious and invasive species by controlling for all species within the substations. The use of herbicides, rather than strictly manual or mechanical methods, would ensure that vegetation is controlled quickly and effectively before plants are able to set seed; therefore, the Proposed Action would result in some minor beneficial effects by reducing the potential for noxious and invasive species to propagate within the affected area.

Western would implement a clean vehicle policy, reducing the potential for propagating soil, weeds, vegetative matter, or other debris that could transfer seeds into or out of the affected area.

3.4.3 No Action Alternative

Under the No Action Alternative, Western's vegetation management would continue to be limited to manual and mechanical methods. Using only manual and mechanical treatment may allow for removal of some plant populations, but is not as effective as chemical treatments at controlling many invasive plants that can regrow, resprout, and set seed after manual and mechanical treatments. Without the use of herbicides, invasive plants within the affected area are more likely to persist and potentially spread and result in adverse impacts to the native habitat composition. The continued use of only a manual and mechanical treatment approach would also result in greater surface soil disturbance due to activities such as pulling and mowing, which would increase the potential for pioneer or disturbance-adapted species to germinate and become established.

3.5 Water Quality

3.5.1 Affected Environment

This section describes the potential impacts to water quality resulting from the Proposed Action and No Action Alternative.

Senator Wash Substation

Senator Wash Substation is located adjacent to the Senator Wash Reservoir spillway and is a Spill Prevention, Control, and Countermeasures site per 33 U.S.C. 2701. As such, measures are in place within the substation to prevent oil spills from reaching navigable waters.

Sonora Substation

Other than the Colorado River, groundwater is the only potentially viable source of water in the vicinity of Sonora Substation. Groundwater in the five-mile zone originates almost exclusively from the Colorado River, either as direct recharge from the river itself, or from water diverted from the river and applied as irrigation on Yuma Mesa or in Yuma Valley. No surface water is present at Sonora Substation.

Spook Hill Substation

Spook Hill Substation is located adjacent to braided desert washes. However, drainage at this location is highly altered by the surrounding urban development. No surface water is present at this substation.

3.5.2 Proposed Action

Impacts could occur if an accidental release of herbicides drifts or flows into surface water. The Proposed Action does not include the application of herbicides directly to surface waters and therefore no direct impacts to water resources are anticipated. No herbicides would be used in riparian areas. Furthermore, SOPs include the establishment of appropriate buffer zones when working near waterbodies.

Surface water quality could be indirectly affected by runoff, drift, spills, and leaching of herbicides from the soil. Vegetation management may increase these impacts by reducing the natural buffer and filtration capabilities provided by vegetation. However, surface water is only present at Senator Wash Substation, which is constructed with secondary containment. The

ground surface within all three substations is already highly altered and engineered to manage drainage. In addition, Western would minimize or avoid potential impacts through proper management of herbicides to avoid overspray and potential contamination of surface water or lands outside the affected area. Western also requires training and licensing of herbicide applicators; compliance with herbicide label and SDS instructions; assessment of climate, geology, and soil types before selecting and applying herbicide; herbicide spill cleanup requirements; and several other measures. Therefore, the effects of the Proposed Action on water quality would be negligible.

3.5.3 No Action Alternative

Under the No Action Alternative, Western would continue to use manual and mechanical methods to manage vegetation. The continued use of only a manual and mechanical treatment approach would result in greater surface soil disturbance due to activities such as pulling and mowing. This soil disturbance would increase risk of erosion by wind and rain, and result in minor and localized surface runoff relative to the Proposed Action.

3.6 Fish and Wildlife

3.6.1 Affected Environment

This section describes the general wildlife within the three substations and assesses the potential impacts to wildlife from the Proposed Action and No Action Alternative. The term "general wildlife" refers to all mammal, bird, invertebrate, reptile, and amphibian species that are not protected under state or federal laws or regulations. Data presented in this section were compiled from a literature review and recent field work conducted throughout the Project area.

Wide-ranging wildlife such as common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), great-tailed grackle (*Quiscalus mexicanus*), house finch (*Carpodacus mexicanus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), rabbits, woodrats (*Neotoma* spp.), and ground squirrels occur across southern Arizona, including desertscrub habitats and urbanized areas such as those in the affected area. Turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), Gambel's quail (*Callipepla gambelii*), common raven *(Corvus corax)*, and white-winged dove (*Zenaida asiatica*) are common birds. Common bats such as the Mexican free-tailed bat (*Tadarida brasiliensis*) are also widespread in the affected area. Reptiles such as the tiger whiptail *(Aspidoscelis tigris)*, gopher snake (*Pituophis catenifer*), and rattlesnake (*Crotalus* spp.) occur in a variety of desert habitats. Rattlesnakes, in particular, have been reported at numerous Western substations. Brief descriptions of the local wildlife for each substation are included below.

Senator Wash Substation

Senator Wash is located on a sparsely vegetated area associated with the Senator Wash Dam. Wildlife in this area includes great-tailed grackle, house finch, house sparrow *(Passer domesticus)*, and desert cottontail.

Sonora Substation

Sonora Substation is located within low, rolling sandy plains. Common wildlife in the surrounding habitat includes desert horned lizard *(Phrynosoma platyrhinos)*, sidewinder

(Crotalus cerastes), desert iguana *(Dipsosaurus dorsalis)*, and horned lark *(Eremophila alpestris)*.

Sonora Substation is located within the range of the flat-tailed horned lizard (FTHL). The FTHL was proposed for federal threatened status on November 29, 1993. This proposed listing was later withdrawn in 1996 after the signing of a Conservation Agreement to implement the Rangewide Management Strategy for the protection of the species. A second proposal to list the FTHL as threatened status was published on December 26, 2001, and then withdrawn on January 3, 2003, when the U.S. Fish and Wildlife Service (USFWS) determined that the threats "are not as significant as earlier believed" (USFWS 2003b). The proposed listing was then reinstated by court order on August 30, 2005 (Tucson Herpetological Society 2005), but on June 28, 2006, the USFWS reaffirmed its previous decision not to list the FTHL under the Endangered Species Act (USFWS 2006). Detailed life history for the FTHL can be found in The *Flat-Tailed Horned Lizard Rangewide Management Strategy, 2003 Revision* (FTHLICC 2003), and is summarized below.

The FTHL is specialized for sandy habitats and has only been observed on shifting sand substrates with fine, wind-blown particles. It is present in several vegetation communities, including habitats dominated by creosote bush, white bursage, and Emory's smokebush (California Department of Fish and Game [CDFG] 1994). These densely branching and low-growing plants provide the FTHL with refuge from predators and heat.

The primary food source for the FTHL is harvester ants (*Messor* and *Pogonomyrmex* spp.). These ants compose 97 percent of the FTHL diet, a higher percentage of ants than in the diets of other horned lizard species (FTHLICC 2003).

The FTHL is endemic to the Sonoran Desert and has the most restricted range of all the horned lizard species (FTHLICC 2003, USFWS 2002). This species is limited to the desert areas of southern California, southwestern Arizona, and northwestern Sonora and northeastern Baja California Norte, Mexico (USFWS 2002). Urban and agricultural development, off-highway vehicle use, utilities, sand and gravel mining, and military activities are responsible for the loss in habitat for this species and pose major threats to its survival (FTHLICC 2003). The Flat-Tailed Horned Lizard Rangewide Management Strategy established five Management Areas (MAs) for the protection of the species and provided guidance for management and conservation of the habitat. Four of the MAs are located in California (Borrego Badlands MA, West Mesa MA, Yuma Desert MA and East Mesa MA) and one is located in Arizona (Yuma Desert MA).

Sonora Substation is located within the Yuma Desert MA, although the Substation itself does not contain suitable habitat for the FTHL.

Spook Hill Substation

Spook Hill Substation is located within a developed area of the City of Mesa. Although remnant desertscrub habitat occurs west of and adjacent to the substation, this parcel is isolated and is not connected to any larger native habitat blocks. Wildlife occurring near Spook Hill Substation is typical of a subset of desertscrub and urban species which occur in the Phoenix metropolitan area such as red-tailed hawk, rock pigeon *(Columba livia)*, Gila woodpecker *(Melanerpes uropygialis)*, great-tailed grackle, common raven, verdin *(Auriparus flaviceps)*, house finch, house sparrow, coyote, and desert cottontail *(Sylvilagus audubonii)*.

3.6.2 Proposed Action

Western reviewed the U.S. Fish and Wildlife Service Information for Planning and Conservation (IPaC) website for the lists of threatened, endangered, proposed, and candidate species for each of the three substations. IPaC species lists are included in Attachment B. Due to the highly modified conditions and lack of suitable habitat within the affected area, Western determined that the Proposed Action will not affect any listed species or their habitats.

Effects to general wildlife are assessed based on the potential for direct wildlife injury or mortality in treatment areas; bioaccumulation within the food chain; loss or degradation of occupied habitat; or disruption of bird breeding and consequent loss of eggs, chicks, or fledglings. The potential for wildlife to be injured or killed by herbicides depends on the toxicity of the herbicide to a given species, herbicide persistence in the environment, length of exposure, and the exposure amount. The US EPA has standards for formula registration and application methods intended to reduce risks in the environment to an acceptable level. Herbicides approved for use by Western are low in toxicity to wildlife and most have a minimal potential to bioconcentrate. At least one herbicide, Diuron, approved for use by Western, has a low to moderate potential to bioconcentrate in fish tissue when used in aquatic systems (BLM 2007). Western would implement BMPs for safe herbicide use, and use targeted application techniques to further reduce the potential for bioaccumuation.

Because of the altered existing condition and associated lack of natural habitat within the three substations, effects to wildlife due to lost or degraded habitat would be local and negligible. Wildlife use occurring at the three substations is generally limited to birds or woodrats associated with electrical equipment; therefore, vegetation treatment is unlikely to have major effects on wildlife use. If vegetation treatment is done during the bird breeding season, disturbance to nesting birds could cause loss of eggs, chicks, or nestlings, which would violate the Migratory Bird Treaty Act. Western would require that crews receive training about sensitive biological resources including protected migratory bird species, and require protection of nesting birds, thereby further minimizing potential wildlife disturbance, injury, and mortality.

Western would further minimize impacts as follows: environmental laws and regulations and applicable agency requirements would be included in the annual training program for Western O&M personnel; Western would coordinate with regulatory and land-management agencies to ensure that specific actions have the lowest potential for adverse effect; and potential effects of herbicide use would be minimized through measures described in Section 2.1.2.

3.6.3 No Action Alternative

Under the No Action Alternative, Western would continue to use manual and mechanical methods to manage vegetation. Using only manual and mechanical treatment may allow for short-term removal of some plant populations, but is not as effective as chemical treatments at controlling many plant species that can regrow, resprout, and set seed after manual and mechanical treatments. The potential for vegetation to regrow between treatments also presents increased likelihood that wildlife may use substations for nesting or foraging, therefore increasing the potential for interaction with personnel or electrical equipment.

Without the use of herbicides, vegetation, including invasive species, within the three substations is more likely to persist and potentially spread and result in adverse impacts to the adjacent

native habitat composition. In addition, without herbicide application, the use of physical treatment methods (manual hand pulling and mechanical equipment) would be greater in intensity, and treatment would need to occur more frequently. The increased frequency of treatment that would be required could also result in increased noise and personnel presence in and adjacent to wildlife habitat areas. These effects would be minor, short-term, and localized.

4. CUMULATIVE EFFECTS

As defined by Council on Environmental Quality (CEQ) Regulations at 40 CFR Part 1508.7, cumulative impacts are those that "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (federal or non-federal) or individual who undertakes such other actions." Therefore, a cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions in the Proposed Action's region of influence.

4.1.1 Past and Present Actions

The effects of past actions may warrant consideration in the analysis of the cumulative effects of a proposal for agency action. CEQ interprets NEPA and CEQ's NEPA regulations on cumulative effects as requiring analysis and a concise description of the identifiable present effects of past actions to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the agency proposal for action and its alternatives may have a continuing, additive and significant relationship to those effects. However, NEPA analyses are not required to routinely list and separately analyze all individual past actions within the cumulative effects analysis area. Only those past actions that are relevant and useful because of their cause and effect relationship with the resources of concern should be included. Generally, an adequate cumulative effects analysis can be focused on the aggregate effects of past actions without delving into the historical details of individual past actions.

For this analysis, the following is a general description of the past actions that could combine with the Proposed Action to result in cumulative effects. In recent years (i.e., 2005 through early 2014), Western has completed maintenance actions at and around the three substations. These actions include vegetation removal, building maintenance, inspections, replacement of existing equipment, and battery installation and maintenance. Western conducts ongoing operation and maintenance activities that may result in similar temporary effects as the Proposed Action. In particular, temporary nuisance impacts, such as increased dust, noise, or traffic levels, would result from maintenance activities. However, all of these past actions have plans and mitigation measures in place to help minimize or avoid potential nuisance impacts of operations and maintenance activities.

4.1.2 Reasonably Foreseeable Future Actions

Western's future actions would entail operations and maintenance activities at substations and on transmission lines. In addition to normal ongoing maintenance activities, Western is proposing to install a communications tower at Sonora substation. The electric transformer at Senator Wash substation is planned to be replaced in the near future as well.

4.2 Hazardous Materials and Human Health and Safety

Cumulative effects from hazardous materials may occur if a large abundance of hazardous materials, such as herbicide, gasoline, engine oil, and other toxic pollutants, were spilled or not handled appropriately. Any potential spills associated with the Proposed Action would be localized, and no other current projects are located immediately adjacent to the substations. Therefore, cumulative impacts regarding hazardous materials are minimal. In addition, with the implementation of SOPs and BMPs, the contribution of Western's actions to cumulative effects associated with hazardous materials would be minimized or avoided.

4.3 Vegetation

The geographic scope for potential cumulative impacts to vegetation includes the area adjacent to the three substations. Potential cumulative effects to vegetation could include removal, type conversion, or degradation. These cumulative effects could occur when vegetation is permanently or temporarily affected by multiple projects, and when multiple projects are implemented in the same general area at the same time increasing the magnitude of noise, general disturbance, and other effects. The effects of the Proposed Action, along with other projects in the affected area, could increase the loss or degradation of vegetation. Implementation of the SOPs and BMPs, identified in Section 2.2, will minimize the Proposed Action's potential to result in these adverse impacts, and the contribution of Western's actions to cumulative effects is not adverse.

Table 2-10 of the PEIS (pgs. 2-46 and 2-47) summarized the cumulative effects on vegetation and concluded that herbicide application would have both positive and negative impacts but the proposed herbicides could reduce risks to non-target plants and special-status species, and provide greater ecosystem benefits. The PEIS concluded that the cumulative impacts of herbicide application would not be cumulatively significant.

4.4 Water Quality

Cumulative effects to water resources may occur if other projects located within the same geographic and temporal scope of the three affected substations include activities that could result in similar impacts as the Proposed Action. These activities may include soil disturbance, substantial alternation of drainage patterns, and accidental release of hazardous materials. Resulting cumulative impacts could include modification channel flow, increased erosion and sedimentation, impedance or re-direction of floodwaters, disturbance of jurisdictional waters, or contamination of surface waters. In addition, an accidental release of hazardous materials from cumulative projects that is allowed to infiltrate into a groundwater aquifer could result in cumulative impacts to the aquifer. The probability of these impacts occurring is low, and several of the identified impacts associated with the Project are localized. Furthermore, with the implementation of BMPs and SOPs, the contribution of Western's actions to cumulative adverse effects on water resources would be negligible.

4.5 Fish and Wildlife

The geographic scope for potential cumulative impacts to wildlife include the area within the fence line of each of the three substations, as well as up to ten feet outside the fence line but

within Western's existing right-of-way. Potential cumulative effects to wildlife could include harassment, injury, and mortality; and habitat loss, modification, and degradation. These cumulative effects could occur when vegetation and other wildlife habitats are permanently or temporarily affected by multiple projects, and when multiple projects are implemented in the same general area at the same time increasing the magnitude of noise, general disturbance, and other effects. The effects of the Proposed Action, along with other construction projects in the affected area, could increase the displacement of wildlife due to habitat loss and disturbance from construction activities. Additional impacts could result from disruption of breeding and consequent loss of eggs, young animals, fledglings, or breeding adults through noise or human disturbance, collision mortality on roads, increased predation and competition due to loss of cover or increase in opportunistic predators that use the altered habitat or its edges, or direct or indirect contact with herbicides and mechanical equipment. However, Western's SOPs and BMPs, identified in Section 2.1.2, minimize the Proposed Action's potential to result in these adverse impacts, and the contribution of Western's actions to cumulative effects is not adverse.

5. PARTIES CONSULTED

Ak-Chin Indian Community of the Maricopa (Ak-Chin) Indian Reservation, Scottsdale, Arizona

American Bird Conservancy, Washington, DC

Arizona Antelope Foundation, Glendale, Arizona

Arizona Archaeological Society, Phoenix, Arizona

Arizona Cattlemen's Association, Phoenix, Arizona

Arizona Department of Environmental Quality, Phoenix, Arizona

Arizona Game and Fish Department, Phoenix, Arizona

Arizona Natural Resource Conservation Districts State Association, Phoenix, Arizona

Arizona State Land Department, Phoenix, Arizona

Bureau of Indian Affairs, Reston, Virginia

BLM Gila District Office, Tucson, Arizona

BLM Phoenix District Office, Phoenix, Arizona

BLM California District Office, Moreno Valley, California

Bureau of Reclamation, Boulder City, Nevada

California State Clearinghouse, Sacramento, California

Center for Biological Diversity, Tucson, Arizona

City of Apache Junction, Arizona

City of Goodyear, Arizona

Colorado River Indian Tribes of the Colorado River Indian Reservation, Parker, Arizona

Department of Interior, Albuquerque, New Mexico
Department of Interior, San Francisco, California
Environmental Protection Agency, Region 9, San Francisco, California
Federal Energy Regulatory Commission, Washington, DC
Fort Mojave Indian Tribe, Needles, California
Gila River Indian Community, Sacaton, Arizona
Goswick Cattle Company, Humboldt Arizona
Imperial County Board of Supervisors, El Centro, California
Maricopa County, Phoenix, ArizonaMule Deer Foundation, Salt Lake City, Utah
National Audubon Society, New York, New York
The Nature Conservancy, Arlington, Virginia
Quechan Tribe of the Fort Yuma Indian Reservation, Yuma, Arizona
Sierra Club, Grand Canyon Chapter, Phoenix, Arizona
Tohono O'odham Nation of Arizona, Sells, Arizona
Town of Gila Bend, Arizona
USDA Natural Resources Conservation Service, Phoenix, Arizona
U.S. Fish and Wildlife Service, Arizona Ecological Services Office, Phoenix, Arizona
U.S. Army Corps of Engineers, Arizona Regulatory Branch, Phoenix, Arizona
Yuma County Administrator, Yuma, Arizona
Western Watersheds Project, Tucson, Arizona
The Wilderness Society, Denver, Colorado

6. LIST OF PREPARERS

Table 6-1. List of Preparers of this EA

Name	Agency or Company	Title	Responsibilities
John Hall	BLM	Rangeland Management Specialist	Vegetation
Thomas Jones	BLM	Assistant Field Manager	NEPA Compliance
Matt Plis	BLM	Environmental Engineer	Hazardous Materials
Erica Stewart	BLM	Wildlife Biologist	Biological Resources
Gloria Tibbetts	BLM	Planning and Environmental Coordinator	NEPA Compliance
Ron Tipton	BLM	Wildlife Biologist	Fish and Wildlife
Doug Whitbeck	BLM	Rangeland Management Specialist	Vegetation
Sean Heath	Western (formerly)	Environmental Planner	Project Manager
Johnida Dockens	Western	Environmental Planner/Biologist	Project Manager, Biological Resources
Linda Marianito	Western	Environmental Manager	NEPA Compliance
Lisa Meyer	Western	Historic Preservation Specialist/Archeologist	Cultural Resources

7. REFERENCES

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_____. 2003b. Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule to List the Flat-tailed Horned Lizard as Threatened. Federal Register, Volume 68, number 2, page 331-348. January 3, 2003.

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ATTACHMENT A: LIST OF BLM-APPROVED HERBICIDES FOR USE AT THREE WESTERN SUBSTATIONS

Active Ingredient	Trade Name(s)	Manufacturer	EPA Registration Number
Bromacil	Bromacil 80DF/80WG	Alligare, LLC	81927-4
	Ceannard Bromacil 80DF	Ceannard, Inc.	58035-19
	Hyvar X	DuPont Crop Protection	352-287
	Hyvar XL	DuPont Crop Protection	352-346
Bromacil + Diuron	Bromacil/Diuron	Alligare, LLC	81-927-3
	Ceannard Diuron/Bromacil 80DF	Ceannard, Inc.	58035-18
	DiBro 2+2	Nufarm Americas Inc.	228-227
	DiBro 4+4	Nufarm Americas Inc.	228-235
	DiBro 4+2	Nufarm Americas Inc.	228-386
	Weed Blast 4G	SSI Maxim	34913-19
Dicamba	Dicamba DMA	Albaugh, Inc./Agri Star	42750-40
	Vision	Albaugh, Inc.	42750-98
	Cruise Control	Alligare, LLC	42750-40-81927
	Banvel	Arysta LifeScience N.A. Corp.	66330-276
	Clarify	BASF Corporation	7969-137
	Vision	Helena Chemical Company	5905-576
	Rifle	Loveland Products, Inc.	34704-861
	Banvel	Micro Flo Company	51036-289
	Diablo	Nufarm Americas Inc.	228-379
	Vanquish Herbicide	Nufarm Americas Inc.	228-397
	Vanquish	Syngenta	100-884
	Sterling Blue	Winfield Solutions, LLC	7969-137-1381
Diquat	Alligare Diquat	Alligare, LLC	81927-35
	NuFarm Diquat SPC 2 L Herbicide	Nufarm Americas Inc.	228-675
	Diquat SPC 2 L Herbicide	Nufarm Americas Inc.	79676-75
	Diquat E-Ag 2L	Nufarm Americas Inc.	79676-75
	Reward	Syngena Professional Products	100-1091
Diuron	Diuron 80DF	Agriliance, LLC	9779-318
	Diuron 80DF	Alligare, LLC	81927-12
	Ceannard Diuron 80DF	Ceannard, Inc.	58035-16
	Karmex DF	DuPont Crop Protection	352-692
	Karmex XP	DuPont Crop Protection	352-692
	Karmex IWC	DuPont Crop Protection	352-692
	Direx 4L	DuPont Crop Protection	352-692
	Direx 80DF	Griffin Company	1812-362
	Direx 4L	Griffin Company	1812-257

Active Ingredient	Trade Name(s)	Manufacturer	EPA Registration Number
	Diuron 4L	Loveland Products Inc.	34704-854
	Diuron 80 WDG	Loveland Products Inc.	34704-648
	Diuron fL	Makteshim Agan of N.A.	66222-54
	Diuron 80WDG	UAP-Platte Chem. Co.	34704-648
	Vegetation Man. Diuron 80 DF	Vegetation Man., LLC	6622-51-74477
	Diuron-DF	Wilbur-Ellis	00352-00-508-02935
	Diuron 80DF	Winfield Solutions, LLC	9779-318
Glyphosate	Aqua Star		
	Forest Star/GlyStar Gold/GlyStar Plus/GlyStar Pro	Albaugh, Inc./Agri Star	42750-61
	Glyphosate 4 PLUS	Alligare, LLC	81927-9
	Glyphosate 5.4	Alligare, LLC	819-27-8
	Glyfos	Cheminova	4787-31
	Glyfos PRO	Cheminova	67760-57
	ClearOut 41 Plus	Cheminova	70829-3
	Accord Concentrate	Chem. Prod. Tech., LLC	62719-324
	Accord SP/Glypro Plus	Dow AgroSciences	62719-322
	Glypro/Rodeo	Dow AgroSciences	62719-324
	Showdown	Helena Chemical Company	71368-25-5905
	Mirage	Loveland Products Inc.	34704-889
	Mirage Plus	Loveland Products Inc.	34704-890
	Aquamaster/Roundup Custom	Monsanto	524-343
	Roundup Original	Monsanto	524-445
	Roundup Original II/Honcho Plus	Monsanto	524-454
	Roundup Original II CA/Roundup PRO	Monsanto	524-475
	Honcho	Monsanto	524-445
	Roundup PRO Concentrate	Monsanto	524-529
	Roundup PRO Dry	Monsanto	524-505
	Roundup PROMAX	Monsanto	524-579
	Aqua Neat	Nufarm Americas Inc.	228-365
	Credit Xtreme	Nufarm Americas Inc.	71368-81
	Foresters	Nufarm Americas Inc.	228-381
	Razor/Razor Pro	Nufarm Americas Inc.	228-366
	GlyphoMate 41	PBI/Gordon Corporation	2217-847
	AquaPro Aquatic Herbicide	SePRO Corporation	62719-324-67690
	Rattler	Setre (Helena)	524-445-5905
	Buccaneer	Tenkoz	55467-10

Active Ingredient	Trade Name(s)	Manufacturer	EPA Registration Number
	Buccaneer Plus	Tenkoz	55467-9
	Mirage Herbicide/Mirage Plus Herbicide	UAP-Platte Chem. Co.	524-445-34704
	Gly-4 Plus	Universal Crop Protection Alliance, LLC	72693-1
	Gly-4 Plus	Universal Crop Protection Alliance, LLC	42750-61-72693
	Gly-4	Universal Crop Protection Alliance, LLC	42750-60-72693
	Glyphosate 4	Vegetation Man., LLC	73220-6-74477
	Agrisolutions Cornerstone/Rascal	Winfield Solutions, LLC	1381-191
	Agrisolutions Cornerstone Plus/Rascal Plus	Winfield Solutions, LLC	1381-192
	Cornerstone 5 Plus	Winfield Solutions, LLC	1381-241
Hexazinone + Sulfometuron methyl**	Westar	DuPont Crop Protection	352-626
	Oustar	DuPont Crop Protection	652-603
Imazapic	Panoramic 2SL	Alligare, LLC	66222-141-81927
	Plateau	BASF	241-365
	Nufarm Imazapic 2SL	Nufarm Americas Inc.	71368-99
Imazapyr	Imazapyr 2SL	Alligare, LLC	81927-23
	Imazapyr 4SL	Alligare, LLC	81927-24
	Ecomazapyr 2SL	Alligare, LLC	81927-22
	Rotary 2SL	Alligare, LLC	81927-6
	Arsenal Railroad Herbicide	BASF	241-273
	Chopper	BASF	241-296
	Arsenal Applicators Conc.	BASF	241-299
	Arsenal	BASF	241-346
	Arsenal PowerLine	BASF	241-431
	Stalker	BASF	241-398
	Habitat	BASF	241-426
	Polaris	Nufarm Americas Inc.	228-534
	Polaris AC	Nufarm Americas Inc.	241-299-228
	Polaris AC	Nufarm Americas Inc.	228-480
	Polaris AC Complete	Nufarm Americas Inc.	228-570
	Polaris AQ	Nufarm Americas Inc.	241-426-228
	Polaris RR	Nufarm Americas Inc.	241-273-228
	Polaris SP	Nufarm Americas Inc.	228-536
	Polaris SP	Nufarm Americas Inc.	241-296-228
	Polaris Herbicide	Nufarm Americas Inc.	241-364-228
	Habitat Herbicide	SePRO	241-426-67690

Active Ingredient	Trade Name(s)	Manufacturer	EPA Registration Number
	SSI Maxim Arsenal 0.5G	SSI Maxim Co., Inc.	34913-23
	SSI Maxim Arsenal 5.0G	SSI Maxim Co., Inc.	34913-24
	Ecomazapyr 2 SL	Vegetation Man., LLC	74477-6
	Imazapyr 2 SL	Vegetation Man., LLC	74477-4
	Imazapyr 4 SL	Vegetation Man., LLC	74477-5
Imazapyr + Diuron	Mojave 70 EG	Alligare, LLC	74477-9-81927
	Mojave 70 EG	Alligare, LLC	81927-25
	Sahara DG	BASF	241-372
	Imazuron E-Pro	Etigra, LLC	79676-54
	SSI Maxim Topsite 2.5G	SSI Maxim Co., Inc.	34913-22
Metsulfuron methyl	MSM 60	Alligare, LLC	81927-7
	AmTide MSM 60DF Herbicide	AmTide, LLC	83851-3
	Escort DF/Escort XP	DuPont Crop Protection	352-439
	MSM E-Pro 60 EG Herbicide	Etigra, LLC	81959-14
	MSM E-AG 60 EG Herbicide	Etigra, LLC	81959-14
	Patriot	Nufarm Americas Inc.	228-391
	PureStand	Nufarm Americas Inc.	71368-38
	Netsulfuron Methyl DF	Vegetation Man., LLC	74477-2
Picloram	Triumph K	Albaugh, Inc.	42750-81
	Triumph 22k	Albaugh, Inc.	42750-79
	Picloram K	Alligare, LLC	81927-17
	Picloram 22K	Alligare, LLC	81927-18
	Grazon PC	Dow AgroSciences	62719-181
	OutPost 22K	Dow AgroSciences	62719-6
	Tordon K	Dow AgroSciences	62719-17
	Tordon 22K	Dow AgroSciences	62719-6
	Trooper 22K	Nufarm Americas, Inc.	228-535
Sulfometuron methyl**	SFM 75	Alligare, LLC	81927-26
	Oust DF	DuPont Crop Protection	352-401
	Oust XP	DuPont Crop Protection	352-601
	SFM E-Pro 75EG	Etigra, LLC	79676-16
	Spyder	Nufarm Americas Inc.	228-408
	SFM 75	Vegetation Man., LLC	72167-11-74477
Sulfometuron methyl + Chlorsulfuron**	Landmark XP	DuPont Crop Protection	352-645

Active Ingredient	Trade Name(s)	Manufacturer	EPA Registration Number
Sulfometuron methyl + Metsulfuron methyl**	Oust Extra	DuPont Crop Protection	652-622
	SFM Extra	Alligare, LLC	81927-5
Tebuthiuron	Alligare Tebuthiuron 80 WG	Alligare, LLC	81927-37
	Alligare Tebuthiuron 20 P	Alligare, LLC	81927-41
	Spike 20P	Dow AgroSciences	62719-121
	Spike 80DF	Dow AgroSciences	62719-107
	SpraKil S-5 Granules	SSI Maxim Co., Inc.	34913-10
Tebuthiuron + Diuron	SpraKil SK-13 Granular	SSI Maxim Co., Inc.	34913-15
	SpraKil SK-26 Granular	SSI Maxim Co., Inc.	34913-16
	Triclopyr 3	Alligare, LLC	81927-13
	Triclopyr 4	Alligare, LLC	81927-11
	Triclopyr RTU	Alligare, LLC	81927-33
	Element 3A	Dow AgroSciences	62719-37
	Element 4	Dow AgroSciences	62719-40
	Forestry Garlon XRT	Dow AgroSciences	62719-553
	Garlon 3A	Dow AgroSciences	62719-37
	Garlon 4	Dow AgroSciences	62719-40
	Garlon 4 Ultra	Dow AgroSciences	62719-527
	Remedy	Dow AgroSciences	62719-70
	Remedy Ultra	Dow AgroSciences	62719-552
	Pathfinder II	Dow AgroSciences	62719-176
	Trycera	Helena Chemical Company	5905-580
	Relegate	Nufarm Americas Inc.	228-521
	Relegate RTU	Nufarm Americas Inc.	228-522
	Tahoe 3A	Nufarm Americas Inc.	228-384
	Tahoe 3A	Nufarm Americas Inc.	228-518
	Tahoe 3A	Nufarm Americas Inc.	228-520
	Tahoe 4E	Nufarm Americas Inc.	228-385
	Tahoe 4E Herbicide	Nufarm Americas Inc.	228-517
	Renovate 3	SePRO Corporation	62719-37-67690
	Renovate OTF	SePRO Corporation	67690-42
	Ecotriclopyr 3 SL	Vegetation Man., LLC	72167-49-74477
	Triclopyr 3 SL	Vegetation Man., LLC	72167-53-74477
Triclopyr + Clopyralid	Prescott Herbicide	Alligare, LLC	81927-30
	Redeem R&P	Dow AgroSciences	62719-337
	Brazen	Nufarm Americas, Inc.	228-564

**Not approved for aerial application.

ATTACHMENT B: IPAC REPORTS

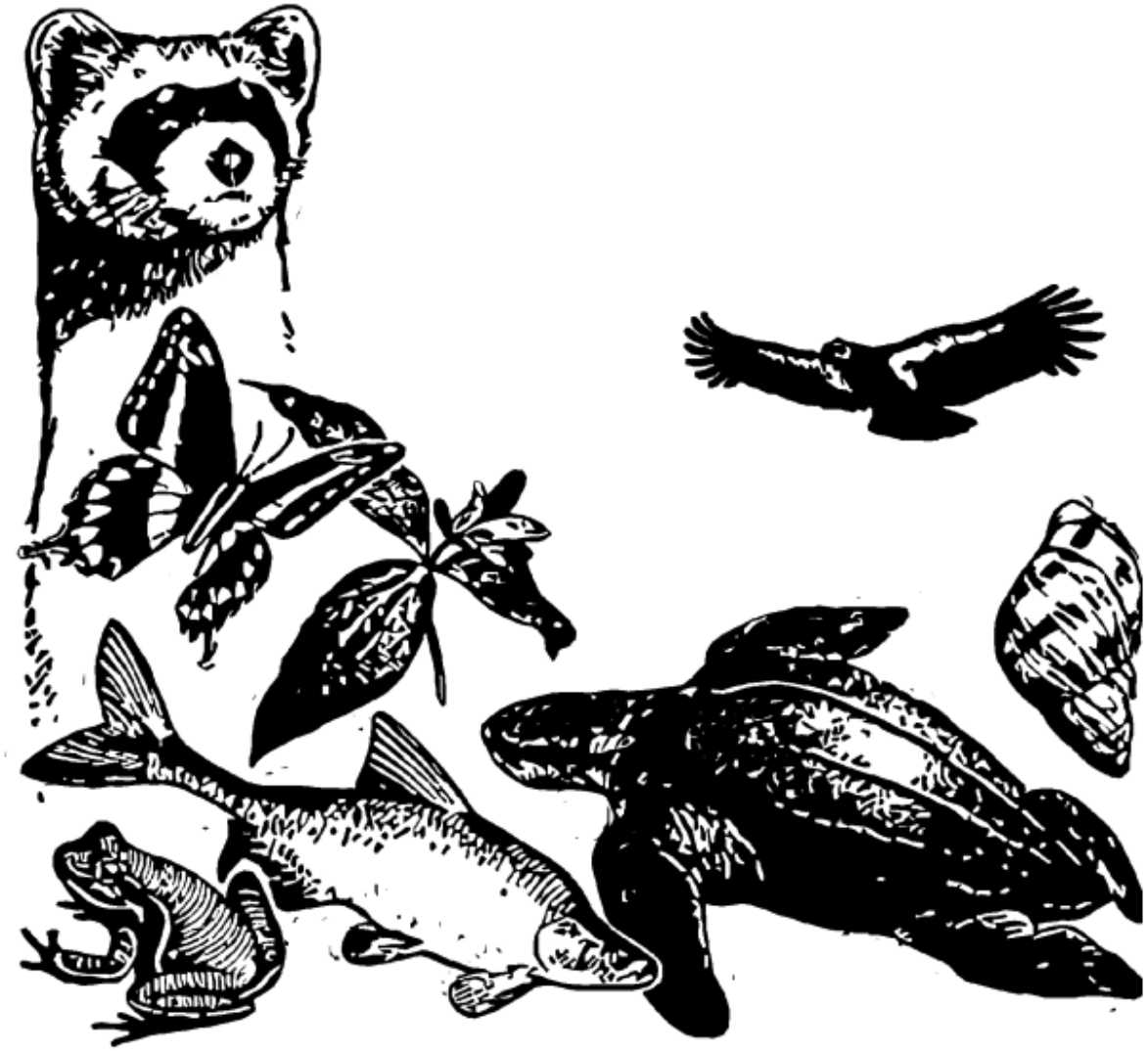
U.S. Fish & Wildlife Service

Senator Wash

IPaC Trust Resource Report

Generated December 16, 2015 10:25 AM MST, IPaC v2.3.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (http://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

US Fish & Wildlife Service

IPaC Trust Resource Report

NAME

Senator Wash

LOCATION

Imperial County, California

DESCRIPTION

Herbicide treatment/IVM at substation.

IPAC LINK

http://ecos.fws.gov/ipac/project/SC77B-7WXVB-AWRFG-SME3Y-NIGYPI

U.S. Fish & Wildlife Contact Information

Trust resources in this location are managed by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require FWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from the Regulatory Documents section in IPaC.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B094

Yuma Clapper Rail Rallus longirostris yumanensis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B00P

Fishes

Razorback Sucker Xyrauchen texanus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E054

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JX

Bendire's Thrasher Toxostoma bendirei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IF

Black Rail Laterallus jamaicensis — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09A

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Gila Woodpecker Melanerpes uropygialis — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EH

Gilded Flicker Colaptes chrysoides — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EG

Green-tailed Towhee Pipilo chlorurus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IO

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Le Conte's Thrasher toxostoma lecontei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GE

Least Bittern Ixobrychus exilis — Bird of conservation concern
Year-round

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Lucy's Warbler Vermivora luciae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Olive-sided Flycatcher Contopus cooperi — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Prairie Falcon Falco mexicanus — Bird of conservation concern

Year-round

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ER

Sage Thrasher Oreoscoptes montanus — Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ID

Short-eared Owl Asio flammeus — Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana — Bird of conservation concern

Season: Wintering

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F7

Western Grebe aechmophorus occidentalis — Bird of conservation concern

Season: Breeding

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuges in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

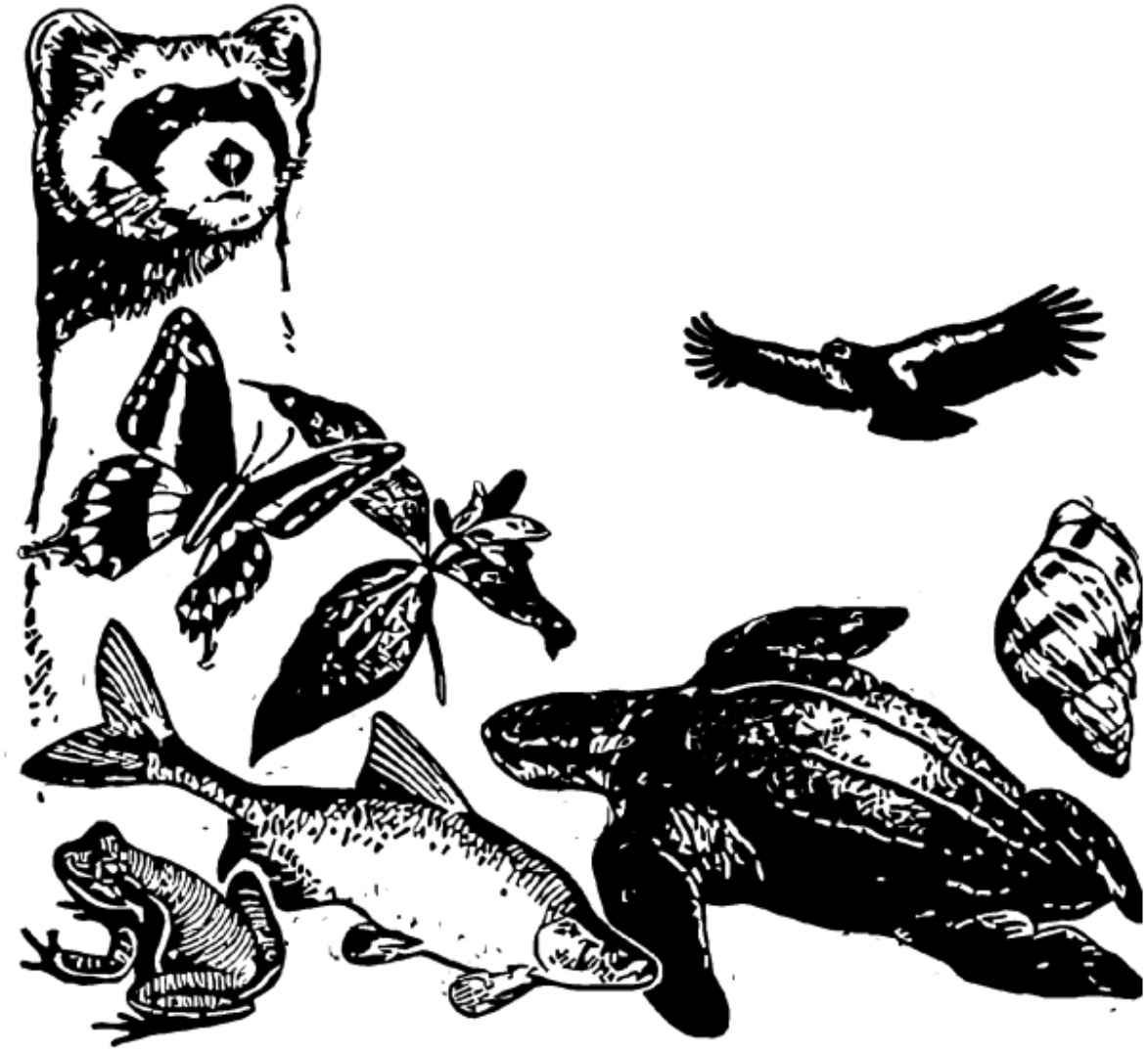
U.S. Fish & Wildlife Service

Sonora Substation

IPaC Trust Resource Report

Generated December 16, 2015 10:37 AM MST, IPaC v2.3.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (http://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

US Fish & Wildlife Service

IPaC Trust Resource Report

NAME

Sonora Substation

LOCATION

Yuma County, Arizona

DESCRIPTION

Herbicide/IVM treatment at Substation.

IPAC LINK

http://ecos.fws.gov/ipac/project/ZNLHY-LIZEZ-CY5CD-LNKY4-AQVZH4

U.S. Fish & Wildlife Contact Information

Trust resources in this location are managed by:

Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4915
(602) 242-0210

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require FWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from the Regulatory Documents section in IPaC.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Sprague's Pipit Anthus spragueii — Candidate

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GD

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT
There is **proposed** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JX

Bendire's Thrasher Toxostoma bendirei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IF

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Gila Woodpecker Melanerpes uropygialis — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EH

Golden Eagle Aquila chrysaetos — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DV

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Le Conte's Thrasher toxostoma lecontei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GE

Least Bittern Ixobrychus exilis — Bird of conservation concern
Year-round

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Lucy's Warbler Vermivora luciae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DL

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Prairie Falcon Falco mexicanus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ER

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Sonoran Yellow Warbler Dendroica petechia ssp. sonorana — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F7

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Refuges

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There are no refuges in this location

Wetlands in the National Wetlands Inventory

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For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

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The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

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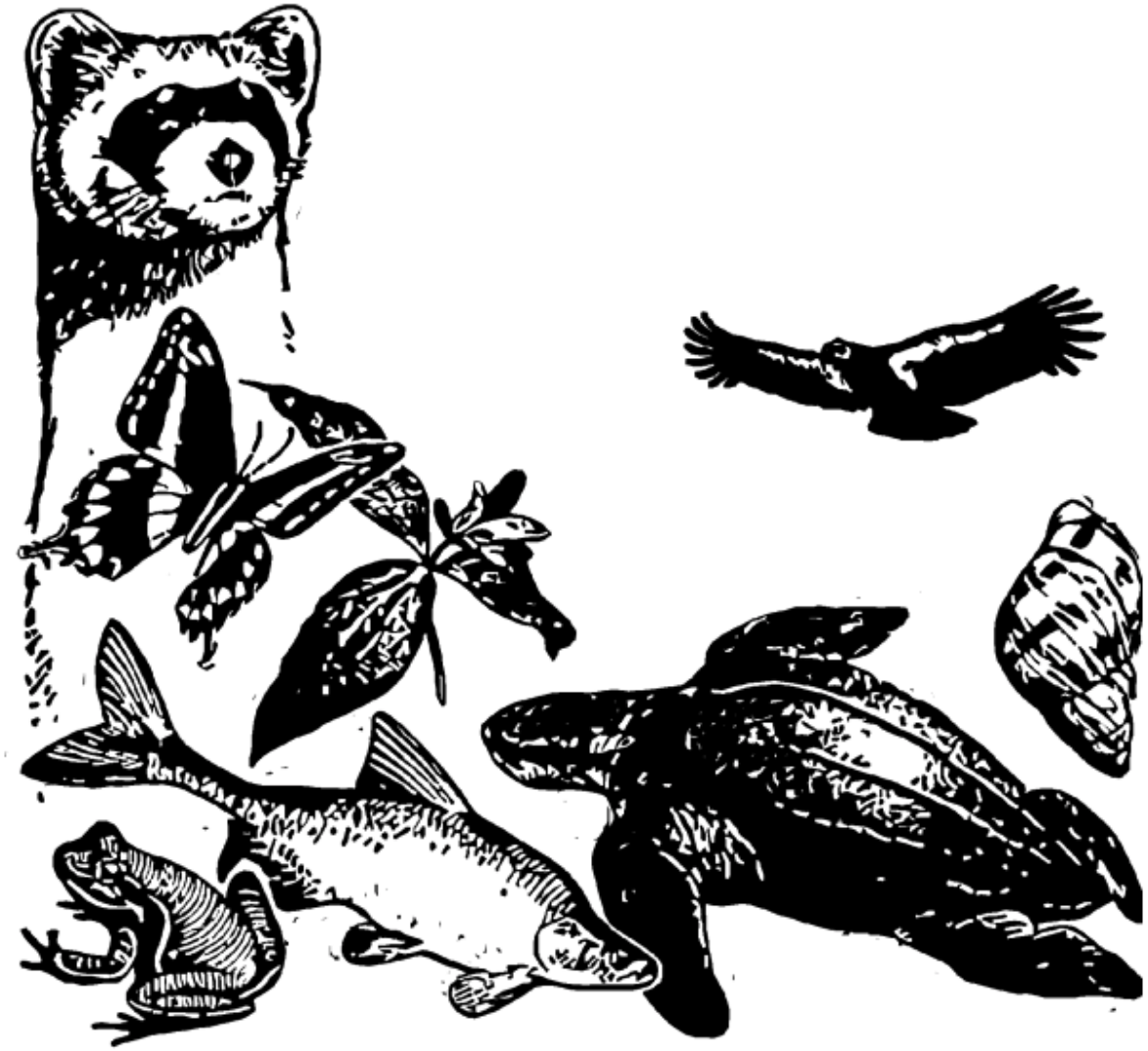
There are no wetlands in this location

Spook Hill Substation

IPaC Trust Resource Report

Generated December 16, 2015 10:44 AM MST, IPaC v2.3.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



US Fish & Wildlife Service

IPaC Trust Resource Report

NAME

Spook Hill Substation

LOCATION

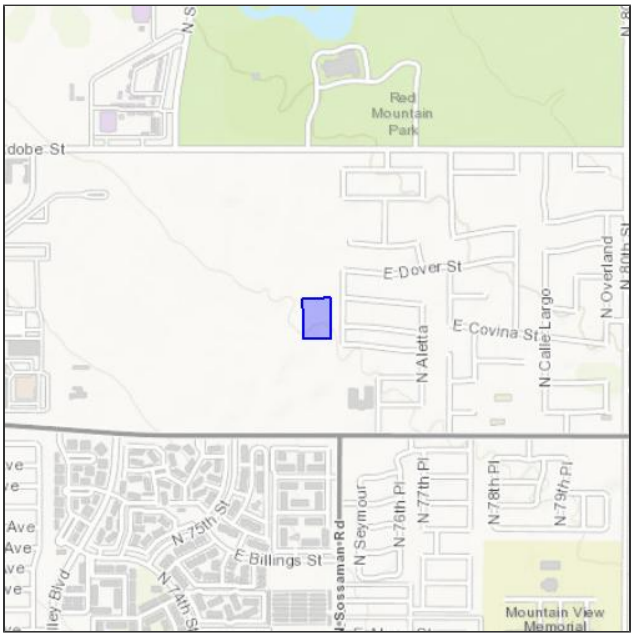
Maricopa County, Arizona

DESCRIPTION

Herbicide/IVM treatment at substation.

IPAC LINK

http://ecos.fws.gov/ipac/project/4LVLE-VY2QN-BGPFK-R6RB5-ZF5NZM



U.S. Fish & Wildlife Contact Information

Trust resources in this location are managed by:

Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4915
(602) 242-0210

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require FWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from the Regulatory Documents section in IPaC.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

California Least Tern Sterna antillarum browni — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B03X

Sprague's Pipit Anthus spragueii — Candidate

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GD

Yellow-billed Cuckoo Coccyzus americanus — Threatened

CRITICAL HABITAT
There is **proposed** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Yuma Clapper Rail Rallus longirostris yumanensis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B00P

Fishes

Roundtail Chub Gila robusta — Proposed Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E02Z

Mammals

Lesser Long-nosed Bat Leptonycteris curasoae yerbabuenae — Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0AD

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Vireo Vireo bellii — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JX

Bendire's Thrasher Toxostoma bendirei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IF

Black-chinned Sparrow Spizella atrogularis — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0IR

Brewer's Sparrow Spizella breweri — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HA

Burrowing Owl Athene cunicularia — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Chestnut-collared Longspur Calcarius ornatus — Bird of conservation concern
Season: Wintering

Common Black-hawk Buteogallus anthracinus — Bird of conservation concern
Season: Breeding

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Elf Owl Micrathene whitneyi — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GV

Gila Woodpecker Melanerpes uropygialis — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EH

Gilded Flicker Colaptes chrysoides — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EG

Golden Eagle Aquila chrysaetos — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DV

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Le Conte's Thrasher toxostoma lecontei — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GE

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Lucy's Warbler Vermivora luciae — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Pinyon Jay Gymnorhinus cyanocephalus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0I0

Prairie Falcon Falco mexicanus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0ER

Red-faced Warbler Cardellina rubrifrons — Bird of conservation concern
Season: Breeding

Rufous-crowned Sparrow Aimophila ruficeps — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MX

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Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F7

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Willow Flycatcher Empidonax traillii — Bird of conservation concern
Season: Breeding
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6

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