

**United States Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-UT-C010-2016-0006-EA**

November 2015

**Right-of-Way for
Pintura Substation Access Road**

*Granite Mountain Solar East, LLC and
Granite Mountain Solar West, LLC
179 Lincoln Street, Suite 500
Boston, MA 02111*

U.S. Department of the Interior
Bureau of Land Management
Cedar City Field Office
176 East D.L. Sargent Drive
Cedar City, Utah 84721
Telephone: (435) 865-3000
Fax: (435) 865-3058



TABLE OF CONTENTS

1.0 PURPOSE AND NEED.....1

1.1 Introduction1

1.2 Proposed Action1

1.3 Purpose and Need for the Action3

1.4 Decision to be Made.....3

1.5 BLM Responsibilities and Relationship to Planning3

1.6 Conformance with BLM Land Use Plan.....3

1.7 Relationship to Statutes, Regulations, or Other Plans.....3

1.8 Other Permits and Authorizations3

1.9 Identification of Issues5

 1.9.1 Internal Scoping5

 1.9.2 Issues.....5

2.0 DESCRIPTION OF ALTERNATIVES6

2.1 Introduction6

2.2 Alternatives Development.....6

2.3 Alternative A: ROW Grant and Access Road Construction and Operation
(Proposed Action)6

 2.3.1 Location and Overview6

 2.3.2 Access Road Construction7

 2.3.2.1 Construction Workforce Numbers, Vehicles, and Equipment7

2.4 Alternative B: No Action7

3.0 AFFECTED ENVIRONMENT.....8

3.1 Introduction8

3.2 Vegetation8

3.3 Soils.....13

4.0 ENVIRONMENTAL IMPACTS16

4.1 Direct and Indirect Impacts16

 4.1.1 Alternative A: ROW Grant and Access Road Construction and Operation
(Proposed Action).....16

 4.1.1.1 Vegetation.....16

 4.1.1.2 Soils17

 4.1.2 Alternative B: No Action17

4.2 CUMULATIVE IMPACTS ANALYSIS18

 4.2.1 Analysis Areas18

 4.2.2 Past, Present, and Reasonably Foreseeable Future Actions.....18

 4.2.3 Cumulative Impacts by Resource Issue Category18

4.2.3.1 Vegetation.....19

4.2.3.2 Soils19

5.0 CONSULTATION AND COORDINATION AND LIST OF PREPARERS21

5.1 Persons, Groups, and Agencies Consulted.....21

5.2 Summary of Public Participation21

5.3 List of Preparers21

6.0 REFERENCES AND ABBREVIATIONS.....22

6.1 References22

6.2 Abbreviations23

APPENDICES

- Appendix A. BLM interdisciplinary Team Checklist
- Appendix B. Reclamation Plan

FIGURES

Figure 1-1. Proposed project location overview.....2

Figure 3-1. Location of land cover classes in the analysis area and project area.11

Figure 3-2. Location of Soil Types in analysis area and project area.....15

TABLES

Table 1-1. Other Permits and Authorizations.....4

Table 2-1. Construction Equipment Anticipated to Be Used on the Project Site7

Table 3-1. Land Cover Classes and Land Cover Types in the Analysis Area and Project Area8

Table 3-2. Soil Types in the Analysis Area and Project Area.....13

Table 4-1. Land Cover Classes and Ecological System Surface Disturbance Acreages in the Analysis Area16

Table 4-2. Soil Type Disturbance Acreages in the Analysis Area.....17

Table 4-3. Cumulative Impacts Analysis Area by Resource Issue Category.....18

Table 5-1. BLM Staff Used in the Preparation of this Environmental Assessment.....21

Table 5-2. SWCA Environmental Consultants Staff Used in the Preparation of this Environmental Assessment21

1.0 PURPOSE AND NEED

1.1 Introduction

This environmental assessment (EA) has been prepared to analyze the potential effects of a right-of-way (ROW) application that would be used to construct a portion of an access road to the Pintura Substation across land in Iron County, Utah, that is managed by the Bureau of Land Management (BLM). Granite Mountain Solar East, LLC and Granite Mountain Solar West, LLC's (hereafter Granite Mountain Solar) submitted this ROW application to the BLM in October 2015.

This EA is a site-specific analysis of potential effects that could result from the implementation of the Proposed Action or its alternatives. An EA assists the BLM in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and determining whether any *significant* effects could result from the analyzed actions. (*Significance* is defined by Council on Environmental Quality (CEQ) regulations for implementing NEPA, and is found in 40 Code of Federal Regulations [CFR] 1508.27.) An EA provides evidence for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI). A FONSI is a document that presents the reasons why implementation of the selected alternative would not result in significant environmental effects beyond those already addressed in the BLM's *Cedar Beaver Garfield Antimony Record of Decision and Resource Management Plan*, hereafter referred to as the CBGA RMP (BLM 1986). If the decision maker determines that granting the ROW would result in significant effects, then an EIS would be prepared for the ROW action. If not, a decision record may be signed based on the findings and alternatives.

1.2 Proposed Action

Granite Mountain Solar proposes to construct an access road that partially traverses public lands administered by the BLM Cedar City Field Office (CCFO). The access road would lead to the Pintura Substation in Iron County, Utah (Figure 1-1), which is approximately 9 miles northwest of Cedar City, Utah. The access road would be 60 feet wide with an approximately 26-foot-wide travel surface with associated borrow ditches and drainages. It would be 942 feet long, of which approximately 250 feet would be on BLM-administered land. The remainder would be on private land.

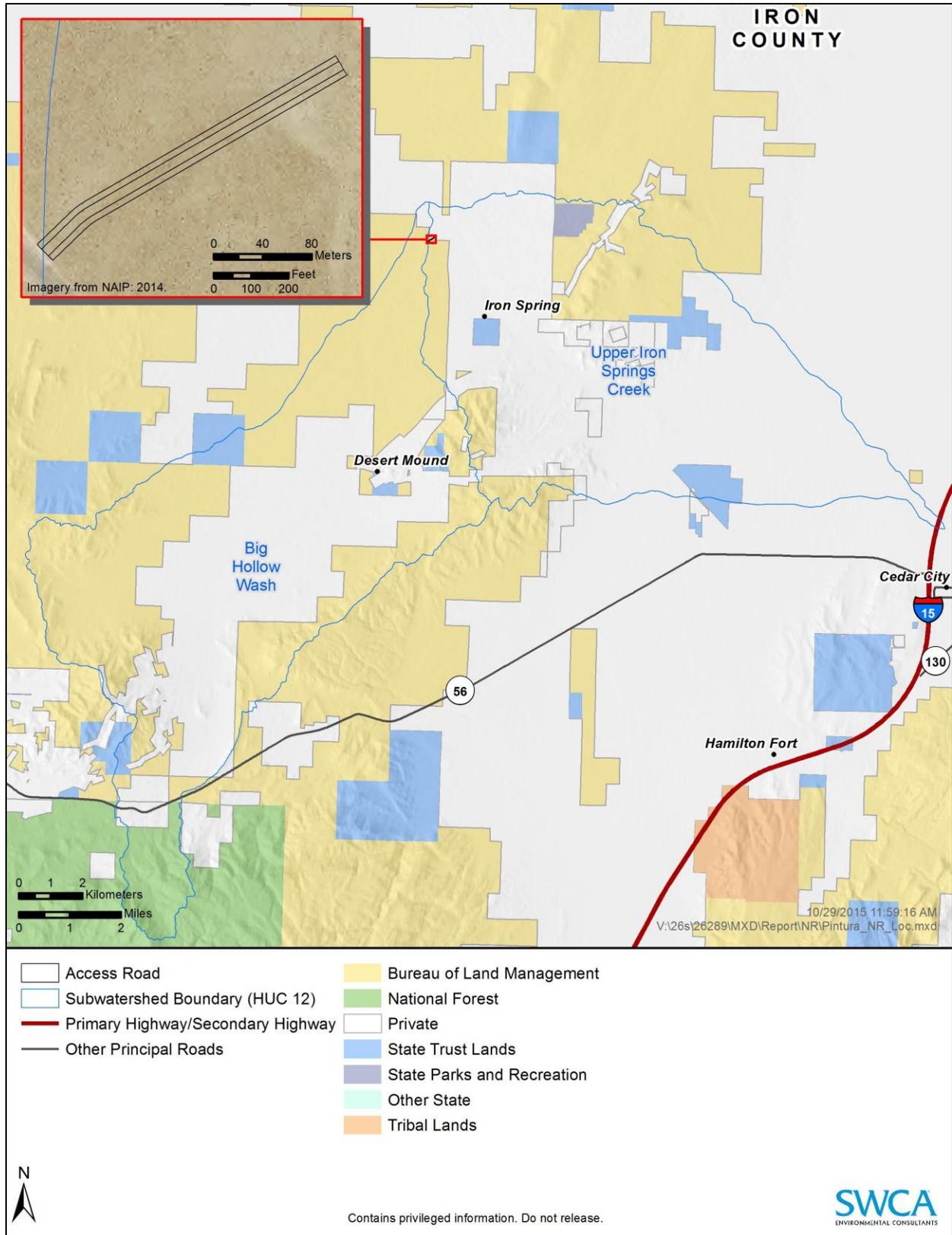


Figure 1-1. Proposed project location overview.

1.3 Purpose and Need for the Action

The purpose of the federal action is to respond to Granite Mountain Solar’s application for an ROW for siting an access road on BLM-administered land in Iron County, Utah. The need for the Proposed Action is established by the BLM’s statutory and regulatory responsibilities regarding ROWs under the Federal Land Policy and Management Act (FLPMA) of 1976 (43 CFR 2800).

1.4 Decision to be Made

The decision the BLM will make based on the NEPA analysis is whether or not to grant an ROW to Granite Mountain Solar for the construction and operation of the proposed access road, and under what terms and conditions.

1.5 BLM Responsibilities and Relationship to Planning

The BLM is responsible for the preparation of this EA, which was prepared in conformance with the policy guidance provided in the BLM NEPA Handbook H-1790-1 (BLM 2008) and CEQ regulations for implementing NEPA (40 CFR 1500–1508). This EA assists the BLM in project planning and in determining whether the Proposed Action is consistent with BLM policies. Pursuant to NEPA (40 CFR 1502.13), this EA has been prepared to provide sufficient evidence and analysis for 1) determining whether to prepare a more detailed EIS or 2) issuing a FONSI.

1.6 Conformance with BLM Land Use Plan

The CBGA RMP was approved in October 1986, and its objectives include “providing for the authorization of legitimate uses of public lands by processing use authorization such as rights-of-way, leases, permits, and State land selections in response to demonstrated public needs” (BLM 1986).

1.7 Relationship to Statutes, Regulations, or Other Plans

The application for ROW acquisition was submitted and will be processed and evaluated under the BLM statutory mandates and authority governing federal land leasing and other federal authorities listed below.

- Multiple-use Sustained Yield Act of 1960
- NEPA, as amended
- FLPMA (BLM’s multiple-use mandate)

Other than BLM land use planning, no other federal land use plans apply to the alternatives presented in Chapter 2. The *Iron County General Plan* includes a goal to “[m]aintain and improve the valid existing rights-of-way across public and private lands in accordance with appropriate safety standards and public need” (Iron County 1995:29). The *Iron County General Plan* also includes a policy to “[p]rovide adequate routes to transport natural resources, livestock, manufactured goods, and services produced or provided within or outside the County” (Iron County 1995:29).

1.8 Other Permits and Authorizations

Table 1-1 lists permits and authorizations other than NEPA that would be needed for the proposed project.

Table 1-1. Other Permits and Authorizations

Action Requiring Permit, Approval, or Review	Permit/Approval or Review	Accepting Authority or Approving Agency	Statutory Reference
Federal			
National Historic Preservation Act compliance to process ROW application	Section 106 consultation.	BLM and State Historic Preservation Office	National Historic Preservation Act of 1966, 36 CFR 800, 16 United States Code (USC) 47
Federal action on land within range of species listed under the Endangered Species Act	Review by BLM to append to existing biological opinion or initiate Section 7 consultation and Incidental Take Permit (if needed).	BLM and U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act Section 7 Consultation, 50 CFR 17, 16 USC 1536
State Of Utah			
Construction stormwater discharge	Utah Pollutant Discharge Elimination System Stormwater Permit.	Utah Division of Water Quality	Utah Administrative Code R317-8
Local/Iron County			
Encroachment Permit	Permit required to construct new access upon existing Iron County ROW.	Iron County Engineering Department	Iron County Code of Ordinances Chapter 12.08

1.9 Identification of Issues

1.9.1 Internal Scoping

A BLM interdisciplinary (ID) team formulated potential issues associated with the Proposed Action and completed a checklist on October 31, 2015 (Appendix A). External scoping is optional for EAs (40 CFR 1501.7), and the BLM has decided that because of the small size and scope of the Proposed Action, external scoping for this EA will consist of an electronic public notification on the BLM's website and a comment period of 15 days.

1.9.2 Issues

The following potential issues were identified during the internal scoping process:

- **Vegetation:** How would construction and operation of the proposed access road affect vegetation?
- **Soils:** How would construction and operation of the proposed access road affect soils in the project area?

These issues are discussed in detail in Chapter 3 Affected Environment and Chapter 4 Environmental Impacts.

2.0 DESCRIPTION OF ALTERNATIVES

2.1 Introduction

This EA analyzes the potential effects of implementing Alternative A (the Proposed Action Alternative) and Alternative B (No Action). The No Action Alternative is considered and analyzed to provide a baseline against which to compare the impacts of the Proposed Action. No other alternatives were brought forward for detailed analysis.

2.2 Alternatives Development

The alternatives are limited to the No Action Alternative and the Proposed Action because initial engineering studies determined that the Proposed Action would result in the least amount of ground disturbance and resource impacts. An alternative was considered to the north and west of the Proposed Action, but it would have been greater in length and would have required constructing a bridge to cross an ephemeral drainage. For these reasons, the BLM agreed that the Proposed Action was the only action alternative necessary to carry forward for detailed analysis.

2.3 Alternative A: ROW Grant and Access Road Construction and Operation (Proposed Action)

Under the Proposed Action, the BLM would grant a ROW for the construction and operation of an access road to the Pintura Substation in Iron County, Utah. The applicant would acquire all necessary permits and pre-construction requirements specified in the ROW grant. The applicant would then complete an engineering survey of the 942 by 60-foot work area, if not yet completed, to define the limits of construction before beginning initial ground-clearing activities, and would prepare the ROW for installation of the road surface. Depending on the existing substrate conditions, the applicant may grade and compact the cleared surface before installing new gravel and/or road base. During construction, the applicant would perform all required dust abatement, noxious weed control measures, and other actions to minimize potential environmental impacts. The applicant's proposed reclamation plan is included as Appendix B.

2.3.1 Location and Overview

The proposed ROW is located in Iron County, approximately 9 miles northwest of Cedar City. The access road spurs off of Avon Road in a northeasterly direction for approximately 942 feet and terminates at the Pintura Substation. It encompasses approximately 0.3 acre. The delineated area of the access road is as described below (also see Figure 1-1).

Township 35 South, Range 13 West, Salt Lake Base and Meridian, Utah

- Section 12, SW¹/₄NE¹/₄, NW¹/₄SE¹/₄, SE¹/₄NW¹/₄, NE¹/₄SW¹/₄

If the ROW is granted, the proposed access road would be 60 feet wide with an approximately 26-foot-wide permanent travel surface with associated borrow ditches and drainages. For the entire length of the road, permanent impacts would be contained within the 26-foot travel surface width (0.56 acre), and temporary impacts would consist of the 17 feet on either side of the road (0.74 acre). It would be 942 feet long, of which approximately 250 feet would be on BLM-administered land. The remainder would be on private land.

2.3.2 Access Road Construction

Construction would generally follow the sequence of staking/flagging the limits and boundaries of the project, conducting pre-construction environmental clearances, clearing and excavation, grading and/or compacting the substrate, laying aggregate, re-compacting the surface (if needed), and then demobilizing.

Project construction, from site preparation through operation, would take an estimated 4–6 weeks. Depending on ROW authorization and permit acquisitions, construction is anticipated for completion before the end of 2015.

2.3.2.1 Construction Workforce Numbers, Vehicles, and Equipment

A construction workforce of approximately 6–10 people would be required for construction. Vehicles that would be used are listed in Table 2-1.

Table 2-1. Construction Equipment Anticipated to Be Used on the Project Site

Equipment	Use
Pickup trucks (3/4-ton and 1-ton)	Transporting construction personnel
Flatbed trucks and flatbed boom trucks	Hauling and unloading materials
Bulldozers	Excavating, grading, and reclaiming
Compactors	Site leveling
Dump trucks	Hauling excavated materials and importing backfill
Fuel and equipment fluid trucks	Refueling and maintaining vehicles
Graders	Grading facility and roads
Loaders	Excavating and loading soil
Scrapers	Grading
Tractors	Earthmoving
Water trucks	Moisture conditioning and dust control

2.4 Alternative B: No Action

Under the No Action Alternative, the BLM would not grant an ROW to Granite Mountain Solar, and construction and operation of the proposed access road would not occur on BLM-administered land. Existing conditions would not be affected and BLM management of the project area would not change. If not approved, the applicant would most likely seek an access route to the substation on private land that would be longer and result in more resource impacts than the Proposed Action.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This section describes the existing environment of the area that would be affected by the No Action Alternative or the Proposed Action. Resources associated with supplemental authorities are listed in Appendix 1 of the BLM NEPA Handbook H-1790-1 (BLM 2008). Resources that were determined by internal scoping to be unaffected by the Proposed Action can be found in Appendix A. The elimination of non-relevant resources is consistent with 40 CFR 1500.4. Resources or uses that may be affected by the No Action Alternative or the Proposed Action are analyzed in the remainder of this chapter.

This EA uses existing data acquired from a variety of sources, including information collected as part of analyses of previous projects in the near vicinity, to describe the affected environment and to predict environmental effects that could result from the No Action Alternative or the Proposed Action. A level of uncertainty is associated with any dataset in terms of predicting outcomes, especially when natural systems are involved. The predictions described in this analysis are intended to allow comparison of alternatives, as well as to provide a method to determine whether activities proposed by the applicant would be expected to comply with applicable federal, state, and local regulations.

Through internal scoping, the BLM determined that the EA would only analyze vegetation and soil resources in detail.

3.2 Vegetation

The analysis area for vegetation-related issues consists of the Big Hollow Wash and Upper Iron Springs Creek Subwatersheds. This area covers approximately 54,760.5 acres. It was chosen because the project area intersects both watersheds; because it provides a distinct, natural topographic boundary in which to analyze potential impacts to vegetation; and because vegetative connectivity is linked to watersheds.

Vegetation communities in the analysis area were identified and described using data from the Southwest Regional Gap Analysis project (SWReGAP). Land cover types or ecological systems are defined as recurring groups of biological communities found in similar physical environments and influenced by similar ecological process, such as fire or flooding (USGS National Gap Analysis Program 2005).

Eight national land cover classes consisting of 34 land cover types were identified in the analysis area. Two national land cover classes consisting of three ecological systems were identified specifically in the project area, as shown in Table 3-1. The locations of the land cover types in the analysis area and project area are shown in Figure 3-1.

Table 3-1. Land Cover Classes and Land Cover Types in the Analysis Area and Project Area

Land Cover Class	Land Cover Type/Ecological System	Analysis Area (acres)	Project Area (acres)
------------------	-----------------------------------	--------------------------	-------------------------

Table 3-1. Land Cover Classes and Land Cover Types in the Analysis Area and Project Area

Land Cover Class	Land Cover Type/Ecological System	Analysis Area (acres)	Project Area (acres)
Barren	Rocky Mountain Alpine Bedrock and Scree	1.1	0
	Rocky Mountain Cliff and Canyon	1.4	0
	Inter-Mountain Basins Playa	47.3	0
	Inter-Mountain Basins Cliff and Canyon	92.5	0
Forest	Inter-Mountain West Aspen-Mixed Conifer Forest and Woodland Complex	2.1	0
	Colorado Plateau Pinyon-Juniper Woodland	5.5	0
	Rocky Mountain Montane Dry-Mesic Mixed Conifer Forest and Woodland	7.4	0
	Rocky Mountain Aspen Forest and Woodland	7.9	0
	Rocky Mountain Ponderosa Pine Woodland	24.3	0
	Rocky Mountain Montane Mesic Mixed Conifer Forest and Woodland	47.7	0
	Great Basin Pinyon-Juniper Woodland	21,660.3	0
Developed/Disturbed	Developed, Medium - High Intensity	108.1	0
	Developed, Open Space - Low Intensity	808.3	0
	Recently Mined or Quarried	2,072.7	0
Planted/Cultivated	Agriculture	3,200.8	0
Wetlands	North American Arid West Emergent Marsh	9.3	0
Grassland/Herbaceous	Southern Rocky Mountain Montane-Subalpine Grassland	1.1	0
	Inter-Mountain Basins Montane Sagebrush Steppe	26.3	0
	Invasive Perennial Grassland	100.0	0
	Invasive Annual Grassland	367.8	0
	Inter-Mountain Basins Semi-Desert Shrub Steppe	378.4	0
	Invasive Annual and Biennial Forbland	772.3	0.40
	Inter-Mountain Basins Semi-Desert Grassland	2,560.5	0.84
Water	Open Water	16.2	0

Table 3-1. Land Cover Classes and Land Cover Types in the Analysis Area and Project Area

Land Cover Class	Land Cover Type/Ecological System	Analysis Area (acres)	Project Area (acres)
Scrub/Shrub	Rocky Mountain Lower Montane Riparian Woodland and Shrubland	4.9	0
	Rocky Mountain Subalpine-Montane Riparian Shrubland	7.6	0
	Inter-Mountain Basins Mountain Mahogany Woodland and Shrubland	9.3	0
	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland	14.9	0
	Rocky Mountain Gambel Oak-Mixed Montane Shrubland	45.7	0
	Inter-Mountain Basins Mixed Salt Desert Scrub	616.1	0
	Inter-Mountain Basins Greasewood Flat	698.5	0
	Mogollon Chaparral	771.9	0
	Great Basin Xeric Mixed Sagebrush Shrubland	859.3	0
	Inter-Mountain Basins Big Sagebrush Shrubland	19,412.7	0.06
	Total	54,760.5	1.30

Sources: Multi-Resolution Land Characteristics Consortium (MRLC) (2011a) and USGS National Gap Analysis Program (2005).

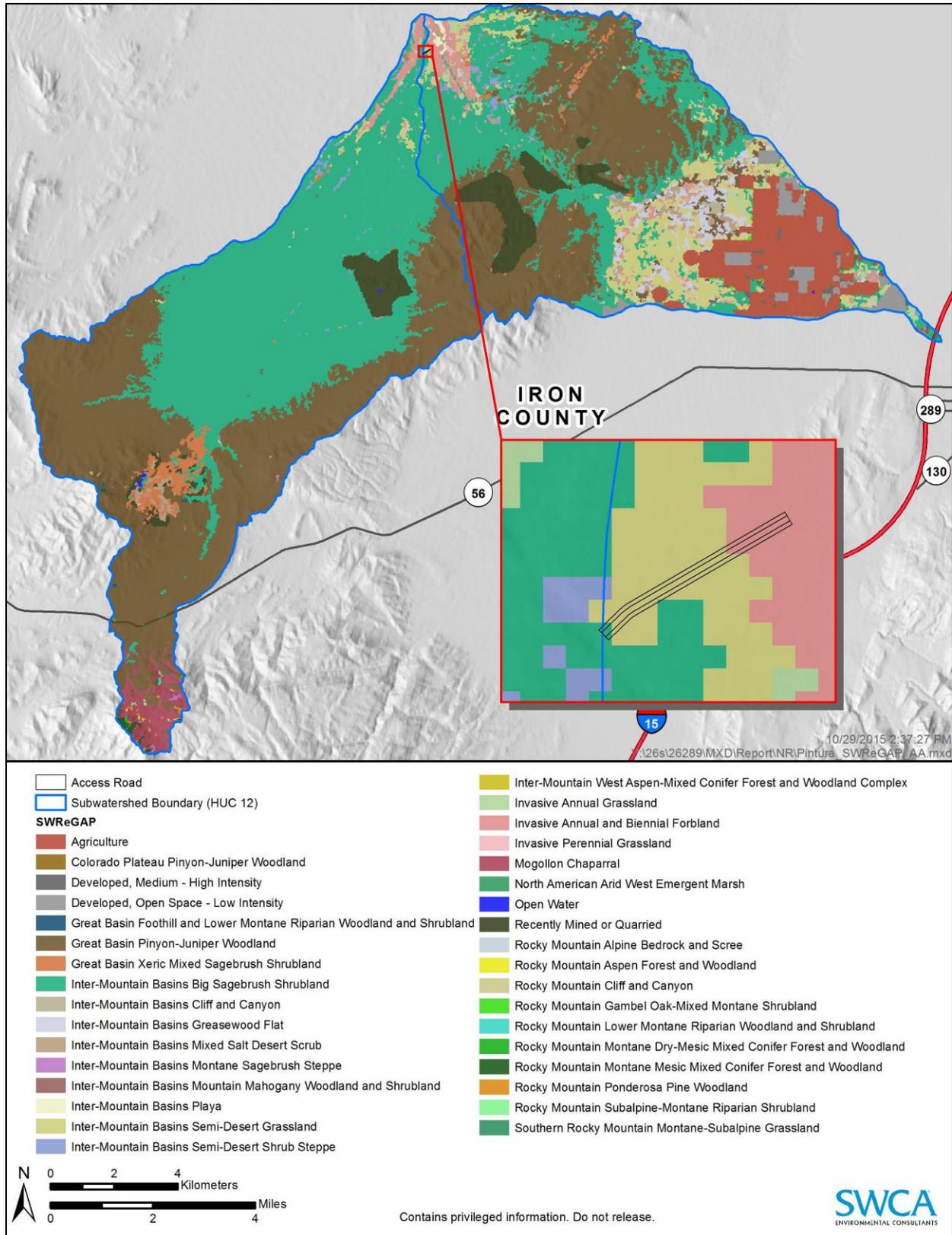


Figure 3-1. Location of land cover classes in the analysis area and project area.

The two dominant land cover types in the analysis area are the Scrub/Shrub land cover class (22,440.9 acres or 40.9%) and the Forest class (21,755.2 acres or 39.7%). The Grassland/Herbaceous accounts for approximately 4,206.4 acres or 7.6%, the Planted/Cultivated class represents 3,200.8 acres or 5.8%, and the Developed class makes up approximately 2,989.1 acres or 5.4% of the analysis area. The Barren, Wetlands, and Water land cover classes each represents less than 1% of the analysis area.

The Shrub/Scrub land cover class typically consists of areas dominated by shrubs (less than 5 meters tall with a shrub canopy typically consisting of more than 20% of the total vegetation cover). This class includes true shrubs, young trees in an early successional stage, or trees stunted from environmental conditions such as cold temperatures or lack of moisture (Multi-Resolution Land Characteristics Consortium [MRLC] 2011b).

The Forest class is divided into deciduous forest, evergreen forest, and mixed forest classes. The deciduous forests are dominated by trees typically greater than 5 meters tall and comprise more than 20% of the total vegetative cover. These tree species generally shed foliage at the same time in response to seasonal change. Evergreen forests are dominated by trees typically greater than 5 meters tall and comprise more than 20% of the total vegetative cover. These tree species generally maintain their leaves year-round. Mixed forests are dominated by trees typically greater than 5 meters tall and comprise more than 20% of the total vegetative cover. Neither evergreen nor deciduous tree species comprises more than 75% of total tree cover (MRLC 2011b).

Grassland/Herbaceous areas are dominated by graminoid or herbaceous vegetation typically representing more than 80% of the total vegetation cover in the class. These areas are not subject to intensive management such as tilling but can be used for grazing (MRLC 2011b).

The Planted/Cultivated land cover class consists of agricultural land cover types such as Pasture/Hay and Cultivated Crops. The Pasture/Hay land cover type typically consists of areas of grasses and legumes, or grass-legume mixtures planted for livestock grazing or for the production of seed or hay crops, generally on a perennial cycle. In this class, Pasture/Hay vegetation accounts for more than 20% of the total vegetation cover. The Cultivated Crops land cover type consists of areas used for the production of annual crops (e.g., corn, soybeans, and cotton) and also perennial woody crops grown in orchards or vineyards. This class also includes all land actively being tilled. Crop vegetation accounts for more than 20% of the total vegetation in this class (MRLC 2011b).

SWReGAP data links or associates its land cover types with NLCD land cover classes except for the altered or disturbed and developed land cover types. Therefore the following descriptions blend SWReGAP and NLCD definitions. The Developed/Disturbed land cover class used in this analysis is composed of three land cover types: 1) Developed/Open Space - Low Intensity, 2) Developed/Medium - High Intensity, and 3) Recently Mined or Quarried. The Developed/Open Space - Low Intensity land cover type usually consists of areas with a mixture of some constructed materials but mostly vegetation in the form of lawn grasses to areas consisting of a mixture of vegetation and constructed materials. Impervious surfaces account for 20%–49% of the total cover. The Developed/Medium - High Intensity land cover type contains a mixture of vegetation and constructed materials where impervious surfaces account for 50%–100% of the total cover. The Recently Mined or Quarried land cover type consist of areas that have recently been or are actively being mined or quarried (MRLC 2011b; USGS 2005).

3.3 Soils

The analysis area for soil-related issues consists of the Big Hollow Wash and Upper Iron Springs Creek Watersheds. This area covers approximately 54,760.5 acres. It was chosen because the project area intersects both watersheds and because it provides a distinct, natural topographic boundary in which to analyze potential impacts to soil types.

Soil types in the analysis area were identified and described using the Soil Survey Geographic (SSURGO) database. Thirty-three soil types were identified in the analysis area (Table 3-2). There are also 44.9 acres of water and 1,881.0 acres for which soils data are not available in the analysis area. The most prevalent soil type in the analysis area is Sevy-Taylorsflat complex, 2 to 8 percent slopes, which covers 8,937.3 acres (16.3% of the analysis area). Other common soil types in the analysis area include Lucero gravelly sandy loam, 2 to 8 percent slopes (5,319.4), Taylorsflat loam, 2 to 5 percent slopes (4,748.8 acres), Motoqua-Rock outcrop complex, 15 to 40 percent slopes (4,274.5 acres), and Wales loam, 0 to 2 percent slopes (4,029.9 acres). The locations of the soil types in the analysis area and project area are shown in Figure 3-2.

Sevy-Taylorsflat complex, 2 to 8 percent slopes, is the only soil type in the project area. This soil type occurs between 5,200 and 6,000 feet in elevation. It is in a very deep depth class (more than 60 inches) and a well-drained drainage class. Its potential for habitat elements ranges from poor to very poor (NRCS 1996). This soil type's susceptibility to sheet and rill erosion by water is low to moderate, and its estimated maximum average annual rate of erosion by wind or water is low to moderate (NRCS 1996).

Table 3-2. Soil Types in the Analysis Area and Project Area

Soil Type	Analysis Area (acres)	Project Area (acres)
Annabella very gravelly loam, 2 to 15 percent slopes	7.6	0
Ashdown loam, 2 to 5 percent slopes	398.6	0
Bamos-Rock outcrop complex, 2 to 25 percent slopes	2,315.5	0
Birdow loam, 0 to 5 percent slopes	380.4	0
Bullion silt loam, 0 to 5 percent slopes	621.0	0
Calcross silty clay loam, 0 to 1 percent slopes	119.3	0
Denmark gravelly loam, 2 to 15 percent slopes	427.3	0
Hiko Peak gravelly loam, 2 to 25 percent slopes	318.8	0
Hiko Peak gravelly sandy loam, 2 to 15 percent slopes	878.2	0
Ironco-Quilt complex, 25 to 60 percent slopes	1,555.2	0
Lucero gravelly sandy loam, 2 to 8 percent slopes	3,214.3	0
Medburn sandy loam, 0 to 2 percent slopes	2,102.4	0

Table 3-2. Soil Types in the Analysis Area and Project Area

Soil Type	Analysis Area (acres)	Project Area (acres)
Motoqua-Rock outcrop complex, 15 to 40 percent slopes	5,319.4	0
No Data, Not Complete, USFS	1,105.8	0
Ocambee extremely gravelly loam, 8 to 25 percent slopes	428.5	0
Pass Canyon extremely cobbly loam, 15 to 40 percent slopes	1,070.6	0
Pass Canyon-Rock outcrop complex, 25 to 60 percent slopes	1,275.6	0
Pits-Dumps complex	2,610.3	0
Plegomir gravelly sandy loam, 2 to 15 percent slopes	1,363.6	0
Quichipa silty clay loam, 0 to 2 percent slopes	177.5	0
Sackett loam, 2 to 8 percent slopes	615.4	0
Sevy loam, 2 to 8 percent slopes	1,701.1	0
Sevy sandy loam, 0 to 2 percent slopes	873.6	0
Sevy sandy loam, 2 to 8 percent slopes	10.4	0
Sevy-Taylorsflat complex, 2 to 8 percent slopes	8,937.3	1.29
Taylorsflat loam, 2 to 5 percent slopes	4,748.7	0
Tiki-Kinghorn-Rock outcrop complex, 15 to 40 percent slopes	235.8	0
Wales loam, 0 to 2 percent slopes	4,029.9	0
Wales loam, 2 to 5 percent slopes	1,604.1	0
Wales loam, flooded, 0 to 2 percent slopes	377.1	0
Wales sandy loam, 0 to 2 percent slopes	1.9	0
Water	44.9	0
Woodrow silty clay loam, 0 to 2 percent slopes	2,187.7	0
Woodrow silty clay loam, saline, 0 to 2 percent slopes	525.4	0
Wye very gravelly loam, 15 to 40 percent slopes	2,338.7	0
Total	54,760.8	1.29

Note: An additional 0.3 acres results from rounding.

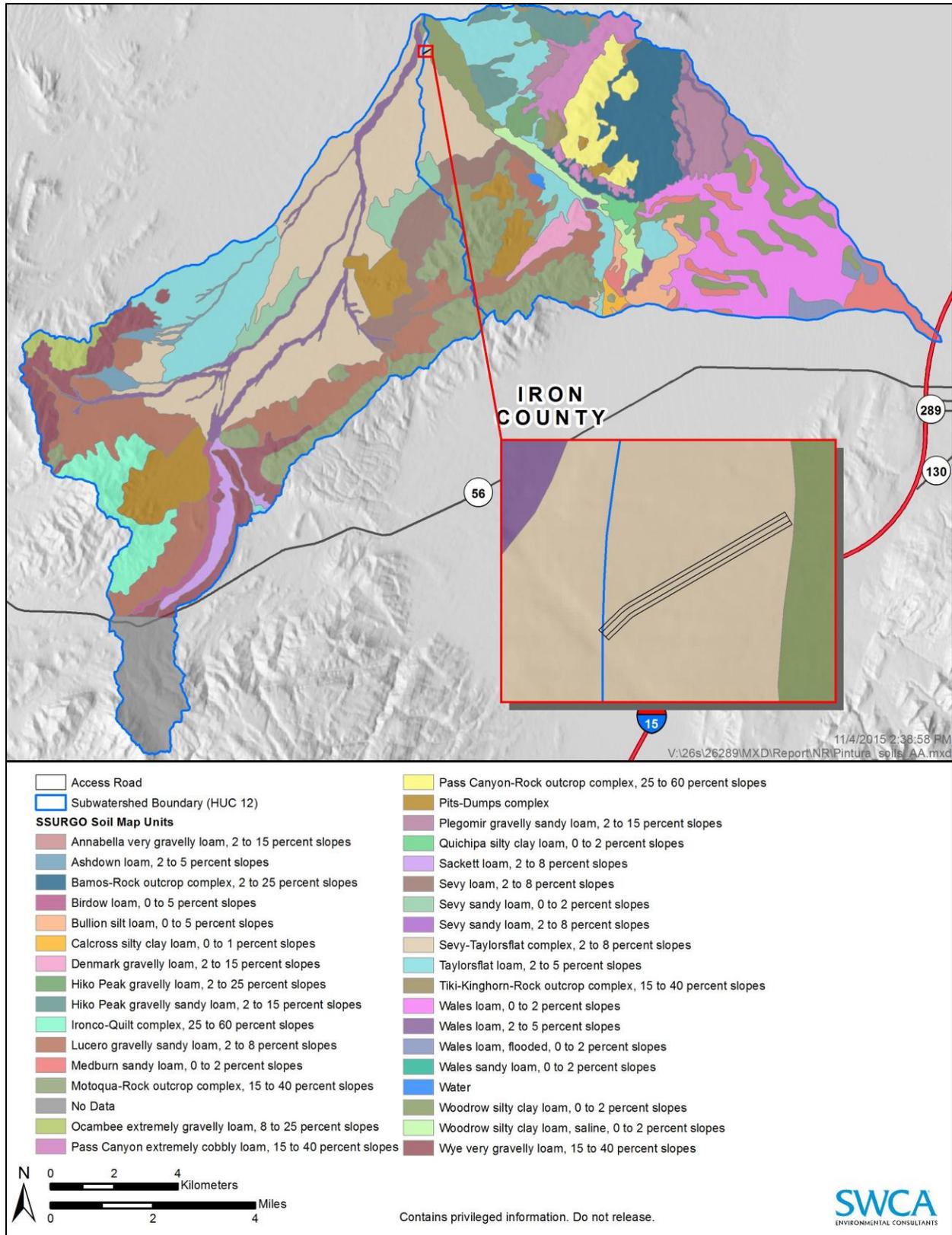


Figure 3-2. Location of Soil Types in analysis area and project area.

4.0 ENVIRONMENTAL IMPACTS

4.1 Direct and Indirect Impacts

Potential impacts can be direct or indirect, and are described in terms of cause, nature of the impact, and the context and intensity. The Council on Environmental Quality (CEQ) regulations define direct impacts as those effects "...which are caused by the action and occur at the same time and place" (40 CFR 1508.S(a)). Indirect impacts are defined as those effects "...which are caused by the action and are later in time or farther removed into the distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on water and air and other natural systems, including ecosystems" (40 CFR 1508.8(b)). In this analysis, short-term impacts are those effects that would occur over a period of one year or less (i.e., during construction of the project). Long-term impacts are those effects that would occur over a greater than one-year period (i.e., after construction is complete).

4.1.1 Alternative A: ROW Grant and Access Road Construction and Operation (Proposed Action)

4.1.1.1 Vegetation

Implementation of the proposed access road would cause 0.56 acre of permanent vegetation removal (0.0010% of the analysis area) and 0.74 acre of temporary disturbance to vegetation in the analysis area (0.0013% of the analysis area). Table 4-1 shows the surface disturbance acreages and the percentage of the cover class in the analysis area.

Table 4-1. Land Cover Classes and Ecological System Surface Disturbance Acreages in the Analysis Area

Land Cover Class	Ecological System	Permanent Disturbance Acres (% of cover class in analysis area)	Temporary Disturbance Acres (% of cover class in analysis area)	Total Disturbance Acres (% of cover class in analysis area)
Scrub/Shrub	Inter-Mountain Basins Big Sagebrush Shrubland	0.03 (0.00005%)	0.03 (0.00005%)	0.06 (0.0001%)
Grassland/ Herbaceous	Invasive Annual and Biennial Forbland	0.18 (0.0003%)	0.22 (0.0004%)	0.40 (0.0007%)
	Inter-Mountain Basins Semi-Desert Grassland	0.35 (0.0006%)	0.48 (0.0009%)	0.84 (0.0015%)
	Total	0.56 (0.0010%)	0.74 (0.0013%)	1.3 (0.0024%)

Source: USGS National Gap Analysis Program (2005).

Effects to vegetation from the Proposed Action would consist of damage to or loss of individual plants and could, as a result, include changes to community composition (species composition and plant density) on a localized basis. The land cover class that would experience the largest acreage of disturbance would be Grassland/Herbaceous class because of its abundance in the project area (1.24 acres or 95.4% of the project area). The Scrub/Shrub class (0.06 acre or 4.6%) would also experience these impacts. Permanent vegetation impacts would occur on 0.53 acre of the Grassland/Herbaceous class (0.001% of the land cover type in the analysis area) and 0.03 acre of the Scrub/Shrub class (0.00005% of the land cover in the analysis area). This vegetation would be completely removed and replaced by the access road. Temporary disturbance or removal of vegetation would occur on 0.7 acre of the Grassland/Herbaceous class (0.0013% of the land cover type in the analysis area) and 0.03 acre of the Shrub/Scrub class (0.00005% of the land cover type in the analysis area). This vegetation would be replaced through reseeding with a BLM-approved seed mix; it typically takes two growing seasons for reseeded areas to establish. See Table 3-2 for acres of temporary and permanent disturbance by ecological system.

4.1.1.2 Soils

Implementation of the proposed access road would cause 0.56 acre of permanent soil disturbance (0.0010% of the analysis area) and 0.74 acre of temporary disturbance to soils in the analysis area (0.0013% of the analysis area). Table 4-2 shows the surface disturbance acreages, the percentage of the soil type in the analysis area, and the disturbance acreages on BLM and private land.

Table 4-2. Soil Type Disturbance Acreages in the Analysis Area

Soil Type/Landowner	Permanent Disturbance Acres (% of soil type in analysis area)	Temporary Disturbance Acres (% of cover class in analysis area)	Total Disturbance Acres (% of soil type in analysis area)
Sevy-Taylorsflat complex, 2 to 8 percent slopes	0.56 (0.0010%)	0.74 (0.0013%)	1.29 (0.0023%)
BLM land	0.16	0.21	0.37
Private land	0.40	0.53	0.93

The only soil type that would experience disturbance would be the Sevy-Taylorsflat complex, 2 to 8 percent slopes, because it is the only soil type in the project area. This soil type would experience 0.56 acre of permanent disturbance from grading of the roadway, and 0.74 acre of temporary disturbance that would not be graded, but it would experience disturbance during the construction period. The permanent disturbance would increase the potential for erosion on 0.56 acre of Sevy-Taylorsflat complex, 2 to 8 percent slopes soil type, but this would affect only 0.006% of this soil type in the analysis area. The Sevy-Taylorsflat complex, 2 to 8 percent slopes soil type has a low to moderate potential for wind and water-related erosion.

4.1.2 Alternative B: No Action

Under the No Action Alternative, the BLM would not grant a ROW to Granite Mountain Solar, and construction and operation of the proposed access road would not occur on BLM-

administered land; therefore, no impacts to vegetation or soils would occur. If not approved, the applicant would most likely seek an access route to the substation on private land that would be longer and result in more resource impacts than the Proposed Action.

4.2 CUMULATIVE IMPACTS ANALYSIS

As defined in 40 CFR 1508.7 (CEQ regulations for implementing NEPA), cumulative impacts on the environment result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (RFFAs), regardless of which agency (federal or non-federal) or person undertakes such other actions.

4.2.1 Analysis Areas

The geographic extent of cumulative impacts varies by the type of resource and resource issues and by the type of potential impact. The cumulative impacts analysis areas (CIAAs) have been developed for each resource and are listed in Table 4-3.

Table 4-3. Cumulative Impacts Analysis Area by Resource Issue Category

Resource Issue Category	CIAA	Rationale	Total CIAA Acreage
Vegetation	Big Hollow Wash and Upper Iron Springs Creek watersheds	This CIAA was chosen because the project area intersects both watersheds; it provides a distinct, natural topographic boundary in which to analyze potential cumulative impacts to vegetation; and because vegetative connectivity is linked to watersheds.	54,760.5
Soils	Big Hollow Wash and Upper Iron Springs Creek watersheds	This CIAA was chosen because the project area intersects both watersheds, and because it provides a distinct, natural topographic boundary in which to analyze potential cumulative impacts to soil types.	54,760.5

4.2.2 Past, Present, and Reasonably Foreseeable Future Actions

Past and present actions in the CIAAs include agricultural development, mineral resource extraction activities, livestock grazing, and energy production and transmission development.

RFFAs are decisions, funding, or formal proposals that are either existing or are highly probable based on known opportunities or trends. RFFAs occurring within the CIAAs include wildfires, fuels and fire management activities, livestock grazing, mining, and industrial development such as the Pintura Substation, Three Peaks 138-kilovolt Power Transmission Line, and Iron Springs Solar Project Generation Tie Line.

4.2.3 Cumulative Impacts by Resource Issue Category

Cumulative impacts organized by resource issue category are described below. A choice of No Action would not contribute incrementally to the impacts of past, present, and reasonably foreseeable future actions because under the No Action Alternative, the ROW would not be

granted and the project would not be implemented. As a result, no cumulative impacts analysis associated with the No Action Alternative is presented below.

4.2.3.1 Vegetation

In the vegetation CIAA, there are 3,200.8 acres classified as the Agriculture land cover type, 808.3 acres classified as the Developed/Open Space – Low Intensity land cover type, 108.1 acres classified as the Developed/Medium - High Intensity land cover type, and 2,072.7 classified as the Recently Mined or Quarried land cover type. These land cover type indicate impacts to vegetation that include removal of native vegetation communities and soil disturbance. This past and present surface disturbance affecting vegetation totals 6,190.0 acres, which represents 11.3% of the vegetation CIAA. Other past and present actions that may have impacted vegetation include fires and grazing by livestock.

RFFAs that would affect vegetation in the vegetation CIAA include fires, implementation of fuel breaks along major routes and in pasture areas, livestock grazing, mining, and industrial development. Industrial development includes projects such as the Pintura Substation (5.17 acres), Three Peaks 138-kilovolt Power Transmission Line (0.02 acre), and Iron Springs Solar Project Generation Tie Line (9.51 acres).

The construction of the proposed access road would result in a small cumulative addition of surface disturbance to vegetation in the CIAA. The Proposed Action would create 0.74 acre of temporary surface disturbance (0.0013% of the CIAA) and 0.56 acre of permanent surface disturbance (0.0010% of the CIAA). The approximately 0.56 acre of permanent disturbance to vegetation from the Proposed Action represents approximately 0.009% of already existing surface disturbance in the vegetation CIAA, and 3.8% of the reasonably foreseeable future permanent surface disturbance from industrial development.

After the access road construction is complete, the areas of temporary disturbance would be reseeded with a BLM-approved seed mix. It typically takes two growing seasons for reseeded areas to revegetate. Once areas of temporary disturbance are successfully reseeded, they would no longer contribute to cumulative impacts in the vegetation CIAA.

4.2.3.2 Soils

The surface disturbance caused by past and present actions in the soils CIAA is the same as that described in section 4.4.3.1 for the vegetation CIAA. The past and present surface disturbance affecting soils in the CIAA totals 6,190.0 acres, which represents 11.3% of the soils CIAA. Other past and present actions that may have impacted soils include fires and grazing by livestock.

RFFAs that would affect soils in the soils CIAA are also the same as those that would affect vegetation and include fires, implementation of fuel breaks along major routes and in pasture areas, livestock grazing, mining, and industrial development. Industrial development includes projects such as the Pintura Substation (5.17 acres), Three Peaks 138-kilovolt Power Transmission Line (0.02 acre), and Iron Springs Solar Project Generation Tie Line (9.51 acres).

The construction of the proposed access road would result in a small cumulative addition of surface disturbance to soils in the CIAA. The Proposed Action would create 0.74 acre of temporary surface disturbance (0.0013% of the CIAA) and 0.56 acre of permanent surface disturbance (0.0010% of the CIAA). The approximately 0.56 acre of permanent disturbance to soils from the Proposed Action represents approximately 0.009% of already existing surface

disturbance in the soils CIAA, and 3.8% of the reasonably foreseeable future permanent surface disturbance from industrial development. The primary effect of the soil disturbance caused by the Proposed Action would be increased potential for erosion.

5.0 CONSULTATION AND COORDINATION AND LIST OF PREPARERS

5.1 Persons, Groups, and Agencies Consulted

Due to the size, scale, and location of the project, there was no need for the BLM to consult with other agencies, persons, or groups as part of completing this analysis.

5.2 Summary of Public Participation

The BLM conducted internal scoping on the Proposed Action and completed an ID team checklist on October 31, 2015. Issues identified by the ID team were incorporated into this EA for analysis.

5.3 List of Preparers

Tables 5-1 and 5-2 identify BLM staff and consultants used in the preparation of the EA.

Table 5-1. BLM Staff Used in the Preparation of this Environmental Assessment

Name	Position	Role
Michelle Campeau	Realty Specialist	Project Manager, resource specialist
Sheri Whitfield	Wildlife Biologist	Wildlife, special-status animal species, migratory birds
Gina Ginouves	Planning and Environmental Coordinator	Document adequacy review
Jeffrey Reese	Range Management Specialist	Vegetation, Soils
Jamie Palmer	Archaeologist	Cultural Resources
Jesse Bulloch	Range Technician	Invasive Species/Noxious Weeds

Table 5-2. SWCA Environmental Consultants Staff Used in the Preparation of this Environmental Assessment

Name	Position	Role
David Brown	Project Manager	Project management, quality assurance/quality control
Lindsey Kester	Cultural Resources	Cultural resources
Jeremy Eyre	NEPA Writer	Soils, cumulative impacts
Audrey McCulley	NEPA Writer	Vegetation
Allen Stutz	GIS Specialist	GIS and mapping
Linda Tucker Burfitt	Technical Editor	Technical editing

6.0 REFERENCES AND ABBREVIATIONS

6.1 References

- Bureau of Land Management (BLM). 1986. *Cedar Beaver Garfield Antimony Record of Decision and Resource Management Plan*. Available at <https://eplanning.blm.gov/epl-front-office/projects/lup/7100/17401/17601/CBGA+ROD.pdf>. Accessed October 7, 2015.
- . 2008. *BLM National Environmental Policy Act Handbook H-1790-1*. January 2008. Washington, D.C.: BLM NEPA Program.
- . 2011. *Interim Bureau of Land Management Sensitive Plant Species List for Utah*. Available at: <http://www.unps.org/miscpdf/blmspslFeb2011.pdf>. Accessed October 28, 2015
- Iron County. 1995. *Iron County, Utah General Plan*. Available at <https://www.ironcounty.net/wp-content/uploads/Iron-County-General-Plan-Adopted-10-5-95.pdf>. Accessed October 6, 2015.
- Multi-Resolution Land Characteristics Consortium (MRLC). 2011a. National Land Cover Database 2011 (NLCD 2011) Product Data Downloads. Available at: http://www.mrlc.gov/nlcd11_data.php. Accessed October 28, 2015.
- . 2011b. National Land Cover Database 2011 (NLCD 2011) Project Legend. Available at: http://www.mrlc.gov/nlcd11_leg.php. Accessed October 28, 2015.
- Natural Resource Conservation Service (NRCS). 1996. *Soil Survey of Iron-Washington Area, Utah, Parts of Iron, Kane, and Washington Counties*. Available at http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/utah/UT634/0/UT634.pdf. Accessed November 4, 2015.
- U.S. Fish and Wildlife Service (USFWS). 2015. *Pintura Substation Access Road EA: IPaC Trust Resource Report*. Available in-house at SWCA Environmental Consultants' Salt Lake City office.
- U.S. Geological Survey. 2012. *The National Land Cover Database*. Available at: <http://pubs.usgs.gov/fs/2012/3020/fs2012-3020.pdf>. Accessed October 28, 2015.
- U.S. Geological Survey (USGS) National Gap Analysis Program. 2005. *Southwest Regional GAP Analysis Project—Land Cover Descriptions*. RS/GIS Laboratory, College of Natural Resources, Utah State University.

6.2 Abbreviations

ACEC: Area of Critical Environmental Concern

BLM: Bureau of Land Management

BMP: best management practice

CBGA RMP: *Cedar Beaver Garfield Antimony Record of Decision and Resource Management Plan*

CCFO: Cedar City Field Office

CEQ: Council on Environmental Quality

CFR: Code of Federal Regulations

CIAA: cumulative impact analysis areas

EA: environmental assessment

EIS: environmental impact statement

EPA: Environmental Protection Agency

ESA: Endangered Species Act

FLPMA: Federal Land Policy and Management Act

FONSI: finding of no significant impact

ID: interdisciplinary

MRLC: Multi-Resolution Land Characteristics Consortium

NAAQS: National Ambient Air Quality Standards

NEPA: National Environmental Policy Act

NRCS: Natural Resources Conservation Service

RFFA: reasonably foreseeable future actions

RMP: resource management plan

ROW: right-of-way

SSURGO: Soil Survey Geographic

SWReGAP: Southwest Regional Landcover Data

U.S.: United States

USC: United States Code

USFWS: U.S. Fish and Wildlife Service

USGS: U.S. Geological Survey

VRM: Visual resource management

This page intentionally blank

Appendix A

Interdisciplinary Team NEPA Checklist

APPENDIX A. INTERDISCIPLINARY TEAM NEPA CHECKLIST

Project Title: Granite Mountain Solar Road ROW (SunEdison)

NEPA Log Number: DOI-BLM-UT-C010-2016-0006-EA

File/Serial Number: UTU-91451

Project Leader: Michelle Campeau (435) 865-3047 or mcampeau@blm.gov

DETERMINATION OF STAFF: *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions
 NI = present, but not affected to a degree that detailed analysis is required
 PI = present with potential for relevant impact that need to be analyzed in detail in the EA
 NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.
 The rationale column should include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED:

Determination	Resource	Rationale for Determination	Signature	Date
NI	Air Quality	Air quality in the area is currently meeting NAAQS. In the short term Air Quality would be expected to decrease due to fugitive dust associated with the instillation of the proposed project. In the long term nothing in the proposal is expected to affect this rating.	J. Reese	10/13/15
NP	Areas of Critical Environmental Concern	There are no designated ACECs within the CCFO.	Dave Jacobson	10-16-2015
NI	Cultural Resources	An intensive pedestrian survey was conducted in the project area in 2006. The results of this survey indicated no cultural resources were located within in this project area. Less than 100' to the southwest is the corridor of the Old Spanish National Historic Trail (OSNHT). Even though the proposed project is in close proximity to the OSHNT corridor, it will not cause a visual intrusion because connects to the existing Iron Springs Road.	Jamie Palmer	10/6/2015
NI	Greenhouse Gas Emissions	Construction operations would emit insignificant amounts of greenhouse gasses, cumulatively much less than continued traffic on the existing paved roads in the area itself.	J. Reese	10/13/15

Determination	Resource	Rationale for Determination	Signature	Date
NI	Environmental Justice	There are no minority populations which would be affected by the proposed action.	M. Campeau	10/15/15
NP	Farmlands (Prime or Unique)	There are currently no prime, unique or important farmlands in the area of the proposal, based on a review of NRCS farmlands in Iron County.	J. Reese	10/13/15
NI	Fish and Wildlife	The area is within crucial year-long pronghorn habitat. Since we are avoiding the fawning period impacts are not anticipated.	S. Whitfield	10/19/15
NP	Floodplains	A review of the Iron County floodplains map indicates there are no floodplains near or adjacent to the proposed action.	J. Reese	10/13/15
NI	Fuels/Fire Management	There would be no impact to Fire/Fuels management	M. Mendenhall	10/14/15
NI	Geology / Mineral Resources/Energy Production	There are no active or pending minerals-related leases, claims or permits on, or immediately adjacent to, the proposed ROW. There are no known mineral deposits on the subject lands other than surficial deposits of common-variety sand and gravel. The lands are only known to be prospectively valuable for oil and gas resources. Issuance of the proposed ROW should not substantially impact any mineral resources.	E. Ginouves	10-5-15
NI	Hydrologic Conditions	The proposed project could slightly modify surface flows and slow infiltration were new disturbance occurs, but would not be expected to impact hydrologic conditions or functionality in the watershed.	A. Stephens	10/29/15
PI	Invasive Species/Noxious Weeds	As long as noxious weed stipulations are adhered change from a PI to a NI if the proponent monitors for noxious weeds by hand treating or avoiding as needed if within the working area of the project, there would be no impacts from this proposal. ROW holder is responsible for Noxious weed treatment and monitoring within the ROW. If chemical are needed for treatment, ROW holder must contact weed specialist for chemicals approved and details on spraying and paperwork needed. Noxious weed infestations are spread in part by the movement of vehicles, humans and animals. The small, isolated noxious weed infestations should eventually be	J. Bulloch	10/14/15

Determination	Resource	Rationale for Determination	Signature	Date
		reduced in the future with the continuation of the noxious weed program which was implemented by the CCFO. The CCFO currently has an aggressive noxious weed control program and annually removes large quantities of noxious weeds throughout BLM administered lands in both Iron and Beaver counties. The BLM coordinates with County, State and Federal agencies in order to locate, treat and monitor noxious weed infestations throughout both counties.		
NI	Lands/Access	No impacts are expected to lands resources as long as the standard ROW term for valid existing rights is included in the ROW grant. There are currently no authorized ROWs that would be affected by this proposal.	M. Campeau	10/15/15
NI	Livestock Grazing	The proposed ROW is located in the Iron Springs allotment and would not be expected to adversely affect grazing operations within the area.	M. Bayles	10/22/15
NI	Migratory Birds	Road construction would occur outside the nesting period, impacts are not expected.	S. Whitfield	10/19/15
NI	Native American Religious Concerns	In accordance with the Memorandum of Understanding between the Paiute Tribe of Utah and the BLM, this project does not require formal consultation.	Jamie Palmer	10/6/2015
NI	Paleontology	The surficial geology of the proposed ROW is Quaternary sandy/silty alluvium derived from a variety of exposed nearby lithologies. The shoreline of the ancestral Bonneville Lake (maximal extent) lies some six miles distant to the west. Using the Bureau's Potential Fossil Yield Classification System the formation would fall within Class 2, low potential for the occurrence of significant fossil resource. The probability of the ROW disturbances impacting fossil resources is believed to be low and no pre-disturbance surveys or mitigation measures specific to fossil resources are warranted.	E. Ginouves	10-5-15
NI	Rangeland Health Standards	The proposed ROW will only impact 250' of BLM land and is not expected to have significant impact on the Rangeland Health Standards within the Iron Springs Allotment.	M. Bayles	10/22/15

Determination	Resource	Rationale for Determination	Signature	Date
NI	Recreation	This area is used for dispersed recreation particularly ATV riding. The proposed project will not impact recreation opportunities.	Dave Jacobson	10-16-2015
NI	Socio-Economics	The project will not have a negative impact to the communities' economy.	M. Campeau	10/15/15
PI	Soils	It is anticipated that soils would be compacted and moved with the proposed Action (especially with a 60 wide road right of way)	J. Reese	10/13/15
NI	Special Status Plant Species	Dr. Tait completed a survey for <i>Penstemon franklinii</i> in 2011 in the project area and no plants were found. The nearest plant found was ½ mile away for the proposed ROW/Project area.	J. Reese	10/13/15
NI	Special Status Animal Species	No threatened, endangered or candidate species are identified within the proposed ROW. The contractor will have a biological monitor onsite during road construction to ensure no special status species have moved into the area.	S. Whitfield	10/19/15 Update 10/29/15
NP	Wastes (hazardous or solid)	Since the road will not include man-made material, but grading and compaction of the existing land only, the road in itself would not create a waste issue on public land. During construction all applicable state and federal regulation would need to be followed to ensure that in the event of a release required reporting and mitigation would take place.	Glenn Pepper	10/16/2015
NP	Water Resources/Quality (drinking/surface/g round)	There is no surface or subsurface waters in the area of the proposal that could be affected.	J. Reese	10/13/15
NP	Wetlands/Riparian Zones	There are no wetlands/riparian zones present in the area of the proposed project	A. Stephens	10/20/2015
NP	Wild and Scenic Rivers	None within Field Office boundaries.	J. Reese	10/13/15
NP	Wilderness/WSA	The project in not within or near a wilderness study are or wilderness.	Dave Jacobson	10-16-2015
NP	Woodland / Forestry	Not Present.	C. Peterson	10/06/2015

Determination	Resource	Rationale for Determination	Signature	Date
PI	Vegetation	Vegetation would be removed with the proposed action. All disturbed areas that could be reclaimed should be reseeded.	J. Reese	10/13/15
NI	Visual Resources	The proposed project is with VRM class IV and will meet the objectives of this VRM class.	Dave Jacobson	10-16-2015
NP	Wild Horses and Burros	The proposed project is not within or adjacent to any wild horse Herd Management Areas (HMA) or Herd Areas (HA).	C. Hunter	10/9/15
NP	Lands with Wilderness Characteristics	The proposed project is not within an area identified as having wilderness characteristics in the 2011 and updated 2014 inventory.	Dave Jacobson	10-16-2015

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

Appendix B
Reclamation Plan

APPENDIX B. RECLAMATION PLAN

Pintura Substation Access Road project Seed Mix: This seed mix is appropriate for drilling or broadcasting in all sites on or adjacent to the line right-of-way.

Species Common Name	Pounds Pure Live Seed per Acre*
Grasses	
Indian ricegrass	2.0
Needle-and-thread grass	1.0
Bluebunch Wheatgrass	1.5
Sandberg Bluegrass	0.5
Western wheatgrass	1.0
Thickspike wheatgrass	1.5
Bottlebursh Squirreltail	0.5
Forbs	
Western Yarrow	0.25
Alfalfa	1.0
Small Burnett	1.0
Lewis Flax	0.5
Globemallow	0.5
Cicer Milkvetch	0.25
Palmer Penstemon	0.5
Total	12.00 pounds

*Quantities are for drill seeding. If broadcasting, including hydromulching, use 1.5 x this amount. Seed that is strictly broadcast shall be covered using approved equipment.

Seed is to be applied any time between October 15 and December 15 following ground disturbance.

General Reclamation Standards

- Erosional features are equal to or less than those in the surrounding area as indicated by lack of gulying, head cutting, deep or excessive rilling (greater than 3 inches). Water naturally infiltrates into the soil rather than running off the surface. Ground surfaces may be left roughened to aid in preventing runoff and to discourage OHV use of the ROW.
- Sites are to remain free of all county and state-listed A, B and C category noxious weeds. Weed monitoring will occur annually for the first three years after reclamation, starting during the first growing season, and continue annually until the site is free of listed noxious weeds (see Attachment A). Noxious weeds will be treated by a licensed contractor during or following each monitoring event. After the third (or subsequent) year of monitoring and treatment, if noxious weeds have been eliminated, then the monitoring and treatment will take place every other year over the life of the project.
- No hazardous substances, trash or litter is buried or obvious on ground surface. Litter includes non-biodegradable substances used in reclamation, such as silt fencing, flagging, etc. (straw wattles, natural mulch materials, etc. are not considered litter).
- Seeded vegetation establishment is successful as indicated by an average of two seeded (or desirable*) species per square foot within a time frame of three years following the seeding effort. Ten locations will be uniformly selected along the length of the ROW centerline and permanently marked with stakes for use during each monitoring event. A one-foot square frame will be randomly tossed twenty times at each of the ten locations within the ROW; the 20 tosses will be distributed evenly around each stake, with 4 to 6 frames landing within each quarter (90-degree arc). At each toss location, the species and number of plants that the frame encompasses will be recorded. Monitoring will be conducted by an individual or individuals retained by the grant holder who have basic botanical competency in identifying the plant species contained in the seed mix, noxious weeds, and native plants.

* A “desirable” species is one which may not have been seeded, but instead naturally occurs on the site, which in BLM’s opinion is favorable for site reclamation

Attachment A Noxious Weeds List

Common Name	Scientific Name	State of Utah Designations ¹	Iron County
Bermudagrass	<i>Cynodon dactylon</i>	Class B	X
Black Henbane	<i>Hyoscyamus niger</i>	Class A	X
Bull Thistle	<i>Cirsium vulgare</i>		X
Canada Thistle	<i>Cirsium arvense</i>	Class C	X
Dalmation Toadflax	<i>Linaria genistifolia</i>	Class B	X
Diffuse Knapweed	<i>Centaurea diffusa</i>	Class A	X
Dyer's Woad	<i>Isatis tinctoria</i>	Class B	X
Field Bindweed	<i>Convolvulus arvensis</i>	Class C	X
Hoary Cress/Whitetop	<i>Cardaria draba</i>	Class B	X
Houndstongue	<i>Cynoglossum officinale</i>	Class C	X
Johnsongrass	<i>Sorghum halepense</i>	Class A	
Leafy Spurge	<i>Euphorbia esula</i>	Class A	X
Medusahead	<i>Taeniatherum caput- medusae</i>	Class A	X
Musk Thistle	<i>Carduus nutans</i>	Class B	X
Oxeye Daisy	<i>Chrysanthemum leucanthemum</i>	Class A	
Perennial Pepperweed	<i>Lepidium latifolium</i>	Class B	X
Poison Hemlock	<i>Conium maculatum</i>	Class B	X
Puncturevine	<i>Tribulus terrestris</i>		X
Purple Loosestrife	<i>Lythrum salicaria</i>	Class A	X
Quackgrass	<i>Elytrigia repens</i>	Class C	
Russian Knapweed	<i>Centaurea repens</i>	Class B	X
St. John's wort	<i>Hypericum perforatum</i>	Class A	X
Saltcedar	<i>Tamarix ramosissima</i>	Class C	X
Scotch Thistle	<i>Onopordum acanthium</i>	Class B	X
Spotted Knapweed	<i>Centaurea maculosa</i>	Class A	X
Squarrose Knapweed	<i>Centaurea virgata</i>	Class B	
Sulfur Cinquefoil	<i>Potentilla recta L.</i>	Class A	
Whorled milkweed	<i>Asclepias verticillata</i>		X

Common Name	Scientific Name	State of Utah Designations ¹	Iron County
Yellow Starthistle	<i>Centaurea solstitialis</i>	Class A	X
Yellow Toadflax	<i>Linaria vulgaris</i>	Class A	X

Sources: <http://www.utahweed.org/weeds.htm>, accessed 06/02/15;

<http://www.ag.utah.gov/documents/CountyNoxiousWeeds.pdf>, 2009 list, accessed 06/02/15

¹ **Class A** - weeds have a relatively low population size within the State and are of highest priority being an *Early Detection Rapid Response* (EDRR) weed; **Class B** - weeds have a moderate population throughout the State and generally are thought to be controllable in most areas; **Class C** - weeds are found extensively in the State and are thought to be beyond control. Statewide efforts would generally be towards containment of smaller infestations.