Rocky Mountain Power
Exhibit RMP___(RAV-17)
Docket No. 17-035-40
Witness: Rick A. Vail

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

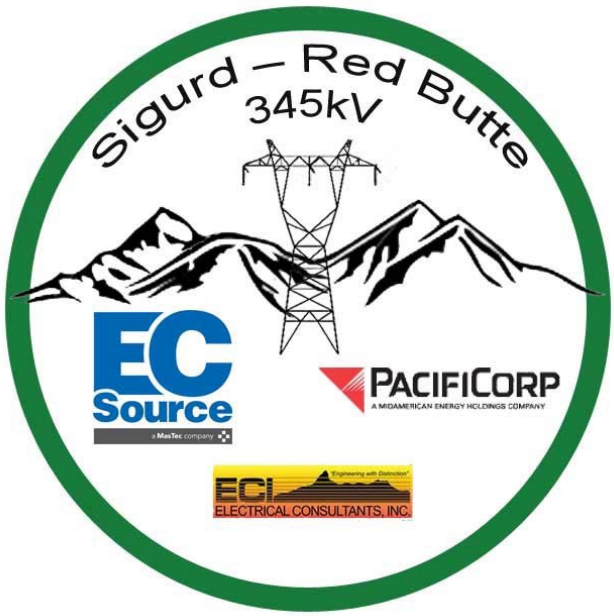
ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Rick A. Vail

Proxy Stormwater Pollution Prevention Plan

June 2017

Submittal Number: 11051-PLAN-010 (FINAL)



ECS Project No. 11-051
Contract No. 3000091215
Sigurd – Red Butte 345kV
Transmission Line Project

STORMWATER POLLUTION PREVENTION PLAN

Volume I

Prepared by:

Energy Environmental Group, Inc.

4143 E. Quartz Circle, Suite 104,

Mesa, Arizona

www.ecsourceservices.com

April 2013

ECS Project No. 11-051
Contract No. 3000091215
PacifiCorp Sigurd – Red Butte
345kV Transmission Line Project

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

The 1972 amendments to the Federal Water Pollution Control Act (known as the Clean Water Act or CWA) provide the statutory basis for the National Pollutant Discharge Elimination System (NPDES) permit program. Section 402 of the CWA specifically required the US Environmental Protection Agency (EPA) to develop and implement the NPDES program (CWA Title 40 CFR at Part 122). To comply with the criteria in the EPA's Clean Water Act, all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, must obtain a NPDES permit for stormwater discharges.

The CWA also allowed the EPA to authorize the NPDES Permit Program to State governments, enabling States to perform many of the permitting, administrative, and enforcement aspects of the NPDES Program (CWA section 402 Title 40 CFR at Part 123). For the State of Utah, the Utah Department of Environmental Quality (UDEQ) issues the Utah Pollutant Discharge Elimination System (UPDES) Storm Water General Permit for Construction Activities (General Permit) No. UTR300000. This General Permit, as currently issued by the UDEQ, expires at midnight, June 13, 2013 except as described in Part 2.4 of the permit. At that time, coverage under a new or alternate permit may be required. A copy of General Permit can be found in Appendix A.

General requirements of the General Permit includes submission of UPDES Notice of Intent (NOI); permitting fee; development, implementation, and maintenance of a Stormwater Pollution Prevention Plan (SWPPP); and submission of Notice of Termination (NOT).

Submission of the NOI and permitting fee must be made to the UDEQ Division of Water Quality prior to construction. Coverage starts on the date the NOI is submitted. The fee is determined based on the length of time coverage is required. If a facility has the potential to discharge into a municipal separate storm sewer system (MS4), the MS4 may require a copy of the NOI. A MS4 is an organization of drainage basins, curbs, gutters, ditches, pipes, tunnels, or storm drains that discharges into waters of the United States. Coverage under the General Permit ends upon submittal of the NOT.

Once received, a copy of the NOI for the Sigurd to Red Butte 345 kV Transmission Line Project (Project) will be located in Appendix B – Notice of Intent of this SWPPP.

A NOT form is located in Appendix C – Notice of Termination. The NOT for the General Permit will not be submitted for the Project until final stabilization are measures, as defined in the General Permit and signed off on by Rocky Mountain Power.

UDEQ - Division of Water Quality
Mailing Address: P.O. Box 144870
Salt Lake City, Utah 84114-4870
Physical Address: 195 North 1950 West
Salt Lake City, Utah 84116
Phone: 801-538-4300
Fax: 801-538-4301
Office Hours: Monday-Friday, 8am to 5pm

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STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Stormwater runoff becomes polluted by picking up soil particles and other pollutants as it flows over surfaces where construction activities are occurring. The basic goal of stormwater management, therefore, is simple: "Improve water quality by reducing pollutants in storm water discharges."[1] This document establishes a program to manage the quality of stormwater runoff from construction activities associated with the Project, and to fulfill the requirements of the General Permit.

In order to meet the requirement of the General Permit, this SWPPP will:

- Identify the responsible party or parties for SWPPP implementation
- Define site characteristics and the type of construction that will be occurring
- Describe the practices that will be implemented to control erosion and the release of pollutants in stormwater
- Identify an implementation schedule to ensure the practices described in the SWPPP are in fact implemented
- Describe the inspection and evaluation program used to evaluate the plan's effectiveness in reducing erosion, sediment, and pollutant levels in stormwater discharge from the site
- Describe maintenance requirements to ensure the continued effectiveness of erosion and sediment control devices
- Describe the final stabilization/termination design to minimize erosion and prevent stormwater impacts after construction is complete

A master copy of this SWPPP, including a copy of the General Permit, NOI, and any amendments to the SWPPP, shall be retained at the primary Project office in Milford, Utah until Project completion and submission of the NOT. Additional copies of the SWPPP will be available at each field office. Posted notices will also be located throughout the Project indicating the location of the SWPPP, along with a contact phone number. The SWPPP will be made available for review to the public or representatives of a Federal, State or local agency upon request.

All records pertaining to the SWPPP shall retained by EC Source for a minimum of three years after submission of the Project NOT.

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[1] U.S. Environmental Protection Agency, 1992. Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices. Washington, D.C.

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PLAN CERTIFICATION

I certify under penalty of law that this document and all of its attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Printed Name: Larry Kahl Title: Senior Vice President of Project Management

Signature: Larry Kahl Date: 4/30/13

Printed Name: Debbie Greenacre Title: Vice President of Environmental Management

Signature: Debbie Greenacre Date: 4/30/13

GENERAL INFORMATION

Company Name:	EC Source Services
Facility Address:	1345 S. 350 W., Richfield, UT 84701.
County:	Sevier County
Phone:	(435)503-5900

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DELEGATION OF AUTHORITY

I, Larry Kahl, hereby designate Company below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, for the Sigurd to Red Butte 345kV Transmission Line Project. The designee is authorized to sign any reports, stormwater pollution prevention plans, and all other documents required by the permit.

Company : Energy Environmental Group, Inc. (EEG)

Company Address: 4143 E. Quartz Circle, suite 104

Name: Sid Strauss

Title: President

Signature:

Phone Number: (480)297-8762

Date:

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in the Storm Water General Permit for Construction Activities Permit No. UTR300000, and that the designee above meets the definition of a "duly authorized representative" as set forth in the General Permit.

"I certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name: Larry Kahl

Company: EC Source Services, LLC

Title: Senior Vice President of Project Management

Signature: Larry Kahl

Date: 4/30/13

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SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: T&D Power, Inc

Address: 4143 E. Quartz Circle Suite 104, Mesa, AZ

Telephone Number: (480) 218-9711

Type of construction service to be provided: Powerline construction services to include access roads, pad sites, foundations, steel erection, and wire installations.

Signature: Joe Stone

Printed Name: Joe Stone

Title: Construction Superintendent

Date: 4-30-13

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STORMWATER POLLUTION PREVENTION PLAN

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Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: Energy Environmental Group, EEG

Address: 4143 E. Quartz Circle Suite 104, Mesa, AZ

Telephone Number: (480) 218-9711

Type of construction service to be provided: Environmental compliance services to include installation, maintenance, and monitoring of SWPPP BMPs.

Signature: 

Printed Name: Sid Strauss

Title: President

Date:

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APPENDICES

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project Name

Sigurd to Red Butte 345 kV Single-Circuit Transmission Line Project (Project)

Project Location

The Sigurd to Red Butte 345 kV Transmission Line is a utility project whose purpose is to deliver electrical power and address system reliability to customers in the Rocky Mountain Power (RMP) service area. The Project is approximately 170 miles and spans from the Sigurd Substation in Sevier County, Utah to the Red Butte Substation in Washington County, Utah. The Project will traverse through five Utah Counties: Sevier, Millard, Beaver, Iron, and Washington. Of the 170 mile long transmission line, approximately 112 miles will be located on Federal lands with the remaining 58 miles located on privately owned and State lands.

The northern terminus of the line, at the Sigurd Substation, is located 6 miles northeast of the City of Richfield, Utah. The southern terminus, at the Red Butte Substation, is located just west of State Route 18, near the community of Central in Washington County, Utah.

To date, seven material and construction support yards have been identified for the Project as listed below.

Facility Name (1):	Milford Headquarters/Operating Facility
Address (1):	1341 Utah 257, Milford, UT 84751
Phone Number (1):	(435) 503-5900
Facility Name (2):	Beaver City Operating Facility
Address (2):	2065S 550W Beaver, UT 84713
Phone Number (2):	
Facility Name* (3):	Richfield Materials Yard
Address (3):	1345S 350W, Richfield, UT 84701
Phone Number (3):	(435) 503-5900
Facility Name* (4):	Cove Fort Material Yard
Address (4):	38˚36’49.38”N, 112˚36’48.67”W
Phone Number (4):	
Facility Name* (5):	New Castle Multi Use Construction Yard
Address (5):	UTM 0276492, 4172750
Phone Number (5):	(435) 503-5900

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Facility Name* (6):	Enterprise Yard
Address (6):	5200S & Utah State Hwy 18, Enterprise, UT 84725
Phone Number (6):	(435) 503-5900
Facility Name* (7):	Elsinore Staker-Parson Pit
Address (7):	180W 1400S, Elsinore, UT 84724
Phone Number (7):	(435) 503-5900

**Additional locations will be added as they are established.*

Location maps can be found in Appendix D- Facility Location and Site Maps.

Midpoint on the Project alignment is: Latitude: 38° 44' 66.02" N Longitude: 113° 04' 00.01" W

The method used for determining the midpoint latitude/longitude was U.S. Geological Survey (USGS) topographic map (Scale 1:24000). Additional geographic coordinates for the Project route are located in Appendix E- Geographic Coordinates.

Additional Site Information

The Project is not located in Indian Country.

This Project is not considered a federal facility.

UPDES Project or Permit Tracking Number

UTR363463 **This will be the number assigned to the Project by the Utah Department of Environmental Quality (UDEQ) after application under the Utah Pollutant Discharge Elimination System (UPDES) General Permit.*

1.2 Contact Information / Responsible Parties

RMP has contracted EC Source Services (ECS) to provide Engineering, Procurement, and Construction (EPC) services for the Project. T&D Power, Inc. (TDP) will be the Prime Contractor onsite. Stormwater Pollution Prevention Plan (SWPPP) implementation and inspection services are to be performed by Energy Environmental Group, Inc. (EEG).

For the Project, the following responsibilities have been delineated.

- Submit Notice of Intent (NOI) – ECS
- Development of the SWPPP – ECS and EEG
- Selection of Best Management Practices (BMPs) – ECS and EEG
- Installation and Maintenance of BMPs – EEG
- Inspections and Reports – EEG

- Maintenance of the SWPPP, including site maps – EEG
- Notice of Termination (NOT) submittal – ECS

EPC Contractor:

EC Source Services
Larry Kahl, Senior Vice President Project Management
Milford Operating Facility
1341 Utah 257
Milford, UT 84751
Office Number: (480) 245-7221
Cell Number: (480) 694-7187
Efax Number: (480) 463-4733

Construction Contractor:

T&D Power, Inc.
Joe Stone, Construction Manager
Milford Operating Facility
1341 Utah 257
Milford, UT 84751
Office Number: (480) 245-7221
Cell Number: (307) 202-1178
Efax Number: (480) 463-4733

SWPPP Contractor:

Energy Environmental Group, Inc.
Sid Strauss, President
4143 E. Quartz Circle, Suite 104
Mesa, Arizona
Office Number: (480) 218-9711
Cell Number: (480) 297-8762
Fax Number: (480) 218-9715

Site Contact Person:

Energy Environmental Group, Inc.
Bryan Watt, Lead Environmental Inspector
Milford Operating Facility
1341 Utah 257
Milford, UT 84751
Office Number: (480) 245-7221
Cell Number: (435) 671-1585
Efax Number: (480) 463-4733

Alternate Site Contact Person:

EC Source Services
Dave Teichert, Environmental Superintendent
Milford Operating Facility
1341 Utah 257
Milford, UT 84751
Office Number: (480) 245-7221
Cell Number: (832) 289-6536
Efax Number: (480) 463-4733

SWPPP Prepared By:

EC Source Services
Debbie Greenacre, Vice President Environmental Management Services
Intermountain West Regional Headquarters
3280 N Hwy 36
Rush Valley, UT 84069
Office Number: (480) 254-7221
Cell Number: (480) 253-2951
Fax Number: (480) 218-9715

Energy Environmental Group, Inc.
Tori Gruenewald, Environmental Scientist
Intermountain West Regional Headquarters
3280 N Hwy 36
Rush Valley, UT 84069
Office Number: (480) 254-7221
Cell Number: (480) 253-2951
Fax Number: (480) 218-9715

Emergency 24-Hour Contact:

Energy Environmental Group, Inc.
Bryan Watt, Project Environmental Scientist/Utah Registered Stormwater Inspector
Milford Operating Facility
1341 Utah 257
Milford, UT 84751Office Number: (435) 866-3174
Cell Number: (435) 671-1585
Efax Number: (480) 463-4733

Emergency Alternate Contact:

Energy Environmental Group, Inc.
Rain Gmuer-Johnson, Certified Stormwater Inspector
Richfield Operating Facility
1345 S 350 W
Richfield, UT 84701
Cell Number: (435) 503-5592

Emergency Alternate Contact:

Energy Environmental Group, Inc.
Kari Kerwin, Utah Registered Stormwater Inspector
Enterprise Operating Facility
5200S & Utah State Hwy 18, Enterprise, UT 84725
Cell Number: (435) 253-3035

1.3 Nature and Sequence of Construction Activity

The Project is a linear utility project whose purpose is to deliver electrical power and address system reliability to customers in the RMP service area. The estimated Project start date is 1 May 2013 with an estimated Project completion date of 15 May 2020 at final stabilization.

The following permanent facilities will be installed to construct this Project.

- Approximately 170 miles of new single-circuit 345kV alternating current (AC) transmission line from the terminal bay at the existing Sigurd Substation to the terminal bay at the existing Red Butte Substation
- 673 tubular steel, 2 footed (small number of 3 footed), H-Frame Structures with direct embedded footings utilizing engineered backfill
- 121 lattice steel, 4 footed, self-supporting deadend towers anchored in reinforced concrete, cast-in-place drilled piers utilizing stub angels
- 1 Fiber optic regeneration station located at the existing Milford Substation
- Improvements to existing roads and construction of permanent and temporary access roads as shown on SWPPP Volume II Map Set I
- Installation or rerouting of gates and fences as needed for construction access
- Construction of temporary ancillary multi-use construction laydown yards for material storage, temporary office locations, concrete batch plants, and helicopter assisted operations
- Stringing of a single circuit 345kV overhead transmission line (including shield wires, conductors, and insulators) between the Sigurd Substation and Red Butte Substation

Construction activities and approximate timeframes follow:

Phase	Activity	Date
Phase I	Preconstruction Survey and Site Specific Planning	1 February 2013- 15 October 2014
Phase II	Installation of Stormwater controls, Clearing and Vegetative Management	1 May 2013 – 15 October 2014
Phase III	Access Roads and Pad Site Construction	7 May 2013 – 15 November 2014
Phase IV	Foundation Excavation	14 May 2013 – 1 August 2014
Phase V	Structure Assembly and Erection	28 May 2013 – 1 Sept 2014
Phase VI	Wire Installation	1 August 2013 – 1 October 2014
Phase VII	Final Grading, Cleanup, and Restoration	1 Sept 2013 – 15 November 2014
Phase VIII	Seeding for Permanent Stabilization	1 September 2013 – 15 December 2014
Phase IX	Removal of Temporary BMPs	1 June 2014 – May 2020

The layout of the Project is shown on SWPPP Volume II Map Set 1. Soil disturbing activities during construction will consist primarily of clearing, grubbing, access road and worksite grading, foundation excavation, and final grading for restoration.

Additionally, a copy of the construction schedule is located in Appendix F- Project Schedule.

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil Types

Soils within the Project area are variable due to parent materials, topography, and other factors that affect the distribution and formation of these soils. A total of 125 soil units occur in the Project area and are identified on the table below. This soils analysis was prepared by Environmental Planning Group (EPG) as part of the Wetland and Other Waters Delineation Report completed during the U.S. Army Corps of Engineers (USACE) Section 404 process. ECS has included with this assessment the USGS listed K-factor for each soil unit. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values for K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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The Wetland and Other Waters Delineation Report for this Project will be maintained at the Project office with this SWPPP. In general, the soils on plateaus, mesas, hillsides, and fan terraces range from very shallow to deep and are generally well drained. In these areas, the water erosion potential is typically slight to moderate, while wind erosion potential is often moderate to severe. On the valley floors the soils range from very shallow to deep and are typically gravelly, sandy, or loamy with caliche in the subsurface. The erosion potential is slight to moderate and typically increases with greater slope.

Overall, with the implementation of Project mitigation measures and BMPs, erosion and sedimentation impacts are expected to be low.

Additional information regarding subsurface soils can also be found in the 2011 Geotechnical Report prepared by Shaw Environmental & Infrastructure Inc. located in Appendix G- Geotechnical Report.

WETLAND AND OTHER WATERS DELINEATION REPORT APPENDIX G – SOILS OCCURING IN THE STUDY AREA					
Area Symbol	**Code**	**Soil Map Unit Name**	**County**	**Hydric Rating**	**K Factor**
UT628	102	Amtoft-Rock outcrop complex, 15 to 60 percent slopes	Sevier	Not Hydric	0.07
UT628	107	Annabella cobbly sandy loam, 5 to 20 percent slopes	Sevier	Partially Hydric	0.07
UT628	140	Hiko Peak very cobbly sandy loam, 5 to 30 percent slopes, extremely bouldery	Sevier	Not Hydric	0.25
UT628	141	Hiko Peak-Annabella complex, 5 to 30 percent slopes	Sevier	Not Hydric	0.25
UT628	144	Hiko Peak-Saxby-Rock outcrop association, 30 to 70 percent slopes	Sevier	Not Hydric	0.07
UT628	145	Hiko Peak-Tarnach-Rock outcrop association, 4 to 45 percent slopes	Sevier	Not Hydric	0.3
UT628	159	Kapture-Sigurd-Stillman complex, 2 to 5 percent slopes	Sevier	Not Hydric	0.11

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UT628	168	Medburn-Glenwood fine sandy loams, 2 to 5 percent slopes	Sevier	Not Hydric	0.11
UT628	193	Rock outcrop-Tiki-Amtoft complex, 15 to 75 percent slopes	Sevier	Unknown Hydric	0.13
UT628	197	Sanpete very cobbly sandy loam, 4 to 15 percent slopes, very bouldery	Sevier	Not Hydric	0.04
UT628	206	Stillman-Sigurd complex, 2 to 8 percent slopes	Sevier	Not Hydric	0.11
UT634	304	Annabella very gravelly loam, 2 to 15 percent slopes	Sevier	Partially Hydric	0.15
UT634	309	Ashdown loam, 2 to 5 percent slopes	Sevier	Not Hydric	0.37
UT634	323	Berent loamy fine sand, 0 to 10 percent slopes	Sevier	Not Hydric	0.32
UT634	325	Beryl sandy loam, 2 to 5 percent slopes	Sevier	Not Hydric	0.2
UT634	334	Bullion silt loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.55
UT634	336	Bullion-Antelope Springs complex, 0 to 2 percent slopes	Sevier	Not Hydric	0.55
UT634	346	Checkett gravelly loam, 5 to 40 percent slopes	Sevier	Not Hydric	0.17
UT634	348	Checkett-Rock outcrop complex, 8 to 25 percent slopes	Sevier	Not Hydric	0.24
UT634	349	Chuska-Checkett gravelly loams, 8 to 25 percent slopes	Sevier	Not Hydric	0.2

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UT634	370	Dixie gravelly loam, 2 to 8 percent slopes	Sevier	Not Hydric	0.32
UT634	375	Escalante sandy loam, 0 to 5 percent slopes	Sevier	Not Hydric	0.24
UT634	376	Escalante sandy loam, 1 to 5 percent slopes	Sevier	Not Hydric	0.24
UT634	407	Lucero-Checkett complex, 15 to 40 percent slopes	Sevier	Not Hydric	0.05
UT634	413	Manselo-Ashdown complex, 0 to 5 percent slopes	Sevier	Not Hydric	0.24
UT634	417	Medburn sandy loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.24
UT634	467	Rock outcrop	Sevier	Not Hydric	0.05
UT634	476	Sevy sandy loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.13
UT634	477	Sevy sandy loam, 2 to 8 percent slopes	Sevier	Not Hydric	0.28
UT634	479	Sevy-Taylorsflat complex, 2 to 8 percent slopes	Sevier	Not Hydric	0.37
UT634	482	Skumpah silt loam, 0 to 2 percent slopes	Sevier	Partially Hydric	0.55
UT634	489	Taylorsflat loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.43
UT634	491	Taylorsflat loam, saline, 0 to 5 percent slopes	Sevier	Not Hydric	0.37
UT634	504	Wales loam, 0 to 2 percent slopes	Sevier	Partially Hydric	0.37
UT634	507	Wales sandy loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.32

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UT634	509	Wales very fine sandy loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.37
UT634	516	Woodrow silty clay loam, saline, 0 to 2 percent slopes	Sevier	Not Hydric	0.43
UT640	AND2	Antelope Springs-Kessler association, 1 to 10 percent slopes	Sevier	Not Hydric	0.3
UT640	BLE	Blackett-Blue Star association, 3 to 20 percent slopes	Sevier	Not Hydric	0.24
UT640	DeB	Decca loam, 1 to 3 percent slopes	Sevier	Not Hydric	0.32
UT640	ECD2	Escalante sandy loam, 2 to 10 percent slopes, eroded	Sevier	Not Hydric	0.28
UT640	ESD2	Escalante-Hiko Peak complex, 2 to 10 percent slopes, eroded	Sevier	Not Hydric	0.28
UT640	Et	Etta loam	Sevier	Not Hydric	0.28
UT640	Ev	Etta clay, heavy variant	Sevier	Not Hydric	0.28
UT640	FGC2	Flowell gravelly loam, 3 to 6 percent slopes, eroded	Sevier	Not Hydric	0.2
UT640	HHD	Haybourne coarse sandy loam, 1 to 10 percent slopes	Sevier	Not Hydric	0.13
UT640	HIF	Hiko Peak coarse sandy loam, 3 to 30 percent slopes	Sevier	Partially Hydric	0.17
UT640	KPE	Kessler-Penoyer association, 1 to 20 percent slopes	Sevier	Not Hydric	0.1
UT640	MaB	Manderfield loam, 1 to 3 percent slopes	Sevier	Not Hydric	0.3

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UT640	MaC	Manderfield loam, 3 to 6 percent slopes	Sevier	Not Hydric	0.3
UT640	MNF	Mill Hollow-Pharo association, 2 to 30 percent slopes	Sevier	Not Hydric	0.1
UT640	MPG	Mineral Mountain extremely rocky loam, 30 to 60 percent slopes	Sevier	Not Hydric	0.05
UT640	MRG2	Mineral Mountain-Snake Hollow association, 3 to 60 percent slopes, eroded	Sevier	Not Hydric	0.05
UT640	MT	Mine wash	Sevier	Not Hydric	0.05
UT640	PGB	Penoyer silt loam, 1 to 3 percent slopes	Sevier	Not Hydric	0.43
UT640	POF2	Phage-Black Ridge association, 3 to 30 percent slopes, eroded	Sevier	Not Hydric	0.1
UT640	SEF	Sheeprock-Cokel complex, 3 to 30 percent slopes	Sevier	Not Hydric	0.05
UT640	SKE	Sigurd gravelly loam, 3 to 15 percent slopes	Sevier	Not Hydric	0.15
UT640	SLD	Snake Hollow coarse sandy loam, 3 to 10 percent slopes	Sevier	Not Hydric	0.2
UT640	SLD2	Snake Hollow coarse sandy loam, 3 to 10 percent slopes, eroded	Sevier	Not Hydric	0.07
UT641	MOG	Motoqua-Rock outcrop complex, 30 to 70 precent slopes	Sevier	Not Hydric	0.05
UT641	Lb	Lavate sandy loam	Sevier	Not Hydric	0.24

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UT649	105	Anco-Kirkham complex, 0 to 1 percent slopes	Sevier	Not Hydric	0.24
UT649	109	Atepic-Rock outcrop complex, 10 to 50 percent slopes	Sevier	Not Hydric	0.55
UT649	117	Christianburg silty clay loam, strongly saline, 0 to 1 percent slopes	Sevier	Not Hydric	0.32
UT649	122	Denmark-Sanpete complex, 2 to 10 percent slopes	Sevier	Not Hydric	0.04
UT649	140	Hiko Peak very cobbly sandy loam, 5 to 30 percent slopes, extremely bouldery	Sevier	Not Hydric	0.05
UT649	141	Hiko Peak-Annabella complex, 5 to 30 percent slopes	Sevier	Not Hydric	0.15
UT649	145	Hiko Peak-Tarnach-Rock outcrop association, 4 to 45 percent slopes	Sevier	Not Hydric	0.2
UT649	154	Jodero loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.04
UT649	159	Kapture-Sigurd-Stillman complex, 2 to 5 percent slopes	Sevier	Not Hydric	0.1
UT649	167	May Day gravelly silt loam, 2 to 8 percent slopes	Sevier	Not Hydric	0.38
UT649	168	Medburn-Glenwood fine sandy loams, 2 to 5 percent slopes	Sevier	Not Hydric	0.18
UT649	173	Naser silt loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.49

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UT649	175	Okerland clay loam, 0 to 2 percent slopes	Sevier	Not Hydric	0.3
UT649	176	Parkay-Faim-Wallsburg complex, 10 to 50 percent slopes	Sevier	Not Hydric	0.18
UT649	183	Povertyflat very cobbly loam, 3 to 15 percent slopes	Sevier	Not Hydric	0.13
UT649	191	Redfield silt loam, 1 to 3 percent slopes	Sevier	Not Hydric	0.38
UT649	208	Torriorthents-Xeric Haplogypsids association, 5 to 35 percent slopes	Sevier	Not Hydric	0.37
UT626	103	Manselo sandy loam, 0 to 3 percent slopes	Beaver	Not Hydric	0.24
UT626	104	Uvada-Playas complex, 0 to 2 percent slopes	Beaver	Partially Hydric	0.49
UT626	105	Pyrat-Garbo, gravelly surface complex, 1 to 5 percent slopes	Beaver	Not Hydric	0.24
UT626	106	Dixie-Garbo complex, 3 to 8 percent slopes	Beaver	Not Hydric	0.24
UT626	107	Bandag loam, 0 to 2 percent slopes	Beaver	Not Hydric	0.37
UT626	108	Thermosprings silt loam, 0 to 3 percent slopes	Beaver	Partially Hydric	0.49

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UT626	109	Harding-Berent association	Beaver	Partially Hydric	0.55
UT626	114	Hiko Peak gravelly loam, 3 to 8 percent slopes	Beaver	Not Hydric	0.15
UT626	115	Woodrow, slightly saline-Blue Star complex, 0 to 5 percent slopes	Beaver	Partially Hydric	0.43
UT626	116	Hiko Peak-Crestline complex, 3 to 8 percent slopes	Beaver	Not Hydric	0.15
UT626	124	Garbo-Biblesprings-Manselo, strongly alkaline complex, 0 to 5 percent slopes	Beaver	Not Hydric	0.24
UT626	126	Manselo, moderately saline-Thermosprings complex, 0 to 5 percent slopes	Beaver	Not Hydric	0.24
UT626	128	Harding silt loam, 0 to 2 percent slopes	Beaver	Not Hydric	0.55
UT626	134	Heist-Crestline, thick surface complex, 0 to 5 percent slopes	Beaver	Not Hydric	0.07
UT626	137	Escalante sandy loam, 3 to 15 percent slopes	Beaver	Not Hydric	0.24
UT626	139	Thermosprings-Taylorsflat, moderately saline-Kunzler complex 0 to 2 percent slopes	Beaver	Not Hydric	0.43
UT626	147	Woodrow, moderately saline-Musinia, moderately saline-Playas association	Beaver	Partially Hydric	0.43

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UT626	149	Riverwash-Medburn association	Beaver	Partially Hydric	0.43
UT626	152	Drum-Taylorsflat, moderately saline association	Beaver	Not Hydric	0.49
UT626	163	Taylorsflat sandy loam, 2 to 5 percent slopes	Beaver	Not Hydric	0.28
UT626	167	Crestline sandy loam, 3 to 8 percent slopes	Beaver	Not Hydric	0.1
DixieNF	10	Kolob - Ashfork families complex, 3 to 30 percent slopes	Washington	Unknown	0.3
DixieNF	12	Bodacious - Pioche families complex, 20 to 60 percent slopes	Washington	Unknown	0.3
DixieNF	17	Motoqua - Showalter families association, 20 to 60 percent slopes	Washington	Unknown	0.3
DixieNF	18	Bernal - Muzzler - Mokiak families complex, 15 to 60 percent slopes	Washington	Unknown	0.18
DixieNF	23	Mokiak, deep - Motoqua families complex, 0 to 20 percent slopes	Washington	Unknown	0.18
DixieNF	26	Draper - Wineg families association, 0 to 15 percent slopes	Washington	Unknown	0.18
DixieNF	28	Wye - Nehar families complex, 20 to 40 percent slopes	Washington	Unknown	0.3
DixieNF	29	Wye - Nehar families complex, 10 to 20 percent slopes	Washington	Unknown	0.3

DixieNF	30	Bernal - Pastorius - Dalcan families association, 30 to 80 percent slopes	Washington	Unknown	0.38
DixieNF	34	Kolob - Dalcan - Detra families complex, 3 to 35 percent slopes	Washington	Unknown	0.18
DixieNF	3	Bookcliff - Bernal - Mokiak families complex, 20 to 60 percent slopes	Washington	Unknown	0.18
DixieNF	I304	Anabella very gravelly loam, 2 to 15 percent slopes	Washington	Unknown	0.18
DixieNF	I309	Ashdown loam, 2 to 5 percent slopes	Washington	Unknown	0.18
DixieNF	I349	Chuska - Checkett gravelly loams, 8 to 25 percent slopes	Washington	Unknown	0.3
SOURCE: Natural Resources Conservation Service 2011c					

Slopes

Pre-existing

The Project area is located within the Central Basin and Range Level III Ecoregion (Woods et al. 2001). Area mountain ranges include the Mineral Mountains, Pahvant Range, Tushar Mountains, Pine Valley Mountains, the Wah Wahs, and Indian Peak Mountain. The western portion of the Project area lies in the Escalante Desert. Project elevations range from approximately 5,000 feet above mean sea level in the northern valleys to over 7,000 feet above mean sea level. Topographic elevations can be found on the SWPPP Volume II Map Set 1 and POD Map Set 2.

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During Construction

A safe, level working area will be required at each work site for foundation, structure, and wire installation. In addition, access roads will be constructed, where needed and permissible, to each work area. Where topography and slope exceed safe access and working levels, cut and fill methods will be utilized. At these locations, disturbance will be minimized to the extent necessary to perform the work. Those sites identified within the Project POD as helicopter assist/low impact vehicle sites will be constructed using alternative construction methods. As such, work areas will be adjusted to meet the minimum work area needed to safely perform the work. After construction is complete, all temporary work sites and access roads will be re-contoured and reclaimed to the greatest extent possible. Structure locations, planned work site locations, and access roads are shown on the SWPPP Volume II Map Set 1 and POD Map Set 2.

Post Construction

Permanent access roads will be required for long-term maintenance activities. Permanent access roads to be constructed or improved are shown on SWPPP Volume II Map Set 1 and POD Map Set 2. These access roads will be constructed to PacifiCorp's Transmission Construction Standards to include those through steep terrain. Please reference Appendix R- PacifiCorp's Transmission Construction Standards for more information.

Where approved, a permanent work area at the base of each structure will be constructed for long-term maintenance activities. The work area will be level with a slope no greater than 3 percent. Revegetation could occur in this work area and the area would be re-contoured to the greatest extent possible. The dimensions of this work area will vary by structure type but could be as large as the temporary work area used during construction.

Drainage Patterns

Drainage patterns within the Project area collect in several area creeks and follow site topographical patterns. Because of the semi-arid climate, most of the drainage channels convey little or no stream flow for long periods of time during the year.

Drainage along the flanks of the Pahvant Mountains collects in several area creeks, which generally flow from south to north, and end up in the Sevier River. Along the eastern side of the Pahvant Mountains, drainage collects in several area creeks that generally run from west to east. In other areas, the natural drainage is primarily overland runoff that generally flows from west to east. Drainage within this basin region ultimately discharges into Sevier Lake.

Vegetation

Vegetation within the Project area has been consolidated into the following vegetation communities: Conifer/Woodlands (Zone 1), Shrub-lands (Zone 2), Grasslands (Zone 3), Wetlands/Riparian and Playa (Zone 4). Per the POD, the classification of vegetation communities in the Project area was based on geographic information system (GIS) data obtained from the Southwest Regional Gap Analysis Project (GAP).

These vegetation communities are shown on SWPPP Volume II POD Map Set 2 as Reclamation Zones 1 through 4. Please note that select areas of the Project have been impacted by wildfire. Wildfire impacted areas are identified on the SWPPP Volume II POD Map Set 2 as Reclamation Subzone 1.

Descriptions of the four vegetation communities follow.

Zone 1: Conifer/Woodlands

Zone 1 (Conifer/Woodlands) consists of an aggregation of aspen, pinyon-juniper, and ponderosa pine. This zone is typically composed of coniferous and deciduous trees and woody plants, with a limited grass understory. This zone will typically range from approximately 4,400 to 8,000 feet in elevation, and receive approximately 10-25" of rainfall per year. Vegetation communities are detailed below.

Aspen

Aspen habitat consists of the GAP Rocky Mountain aspen forest and woodland land cover categories. This community occurs in montane areas and is dominated by quaking aspen (*Populus tremuloides*) with less than 25 percent conifer species. The understory vegetation generally includes a complex shrub-herb community or a simple herbaceous layer. Primary shrub species include snowberry (*Symphoricarpos* spp.), thimbleberry (*Rubus parviflorus*), Saskatoon serviceberry (*Amerlanchier alnifolia*), and kinnikinnick (*Arctostaphylos uva-ursi).*

Pinyon-Juniper

Pinyon-Juniper vegetation communities consists of the GAP Colorado plateau pinyon-juniper woodland, Great Basin pinyon-juniper woodland, and recently chained pinyon-juniper land cover types. These communities occur on dry, mid-elevation foothills and mountain slopes. Utah juniper (*Juniperus osteosperma*) and pinyon pine *(Pinus monophylla* and *P. edulis*) represent the dominant tree species. Common understory species include Greenleaf Manzanita (*Arctostaphylos patula*), antelope bitterbrush (*Purshia tridentata*), sagebrush (*Artemisia* spp.), mountain mahogany (*Cercocarpus intricatus* and *C. montanus*), oaks (*Quercus* spp.), Stansbury's cliffrose (*Purshia mexicana*), and various grasses.

Ponderosa Pine

This vegetation community occurs on a wide variety of slopes and aspects commonly with moderate to steep slopes, rocky areas with good soil aeration and drainage, and periods of drought during the growing season. Ponderosa pine (*Pinus ponderosa*) is the predominant conifer with juniper (*Juniperus* spp.) often present in the tree canopy. The understory is usually shrubby, dominated by sagebrush and Gambel oak. Muhlygrasses (*Muhlenbergia* spp.), and blue grama (*Bouteloua gracilis*) are common grasses.

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Zone 2: Shrub-lands

Zone 2 (Shrub-Lands) consists of an aggregation of big sagebrush, desert shrub, mountain shrub, and shrub steppe areas. The zone is typically composed of a variety of low, shrubby and woody vegetation, with a limited to moderate grass understory. This zone will typically range from approximately 4,400 to 8,000 feet in elevation, and receives approximately 7 to 20 inches of rainfall annually. Vegetation communities are detailed below.

Big Sagebrush

Big sagebrush habitat consists of the GAP inter-mountain basins big sagebrush shrubland cover type. This community occurs on well-drained, nonalkaline soils at middle elevations and is dominated by basin big sagebrush (*Artemisia tridentata spp. tridentata*) and Wyoming big sagebrush *Artemisia tridentata ssp. wyomingensis*). Typical codominant species include antelope bitterbrush (*Purshia tridentata*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), and rubber rabbitbrush (*Chrysothamnus nauseosa*).

Desert Shrub

Desert shrub habitat consists of the GAP inter-mountain basins greasewood flat and inter-mountain basins mixed salt desert shrub land cover types. These represent open-canopied shrub communities that occur on alkaline soils in desert basins. Greasewood flat is typically dominated by greasewood with saltbush (*Atriplex* spp.), sagebrush (*Artemisia* spp.), and winterfat (*Krascheninnikovia lanata*). Salt desert shrub is typically dominated by one or more species of saltbush, including shadscale saltbush (*Atriplex confertifolia*), fourwing saltbush (*Atriplex canescens*), cattle saltbush (*Atriplex polycarpa*), and spinescale saltbush (*Atriplex spinifera*). Common codominant species include Wyoming big sagebrush, yellow rabbitbrush, rubber rabbitbrush, winterfat, Mormon tea (*Ephedra nevadensis*), and spiny hopsage (*Grayia spinosa*).

Mountain Shrub

Mountain shrub habitat consists of the GAP mogollan chaparral and Rocky Mountain Gambel oak-mixed montane shrubland land cover types. Mogollan chaparral is associated with xeric, coarse-textured substrates on foothills and mountain slopes. Dominant species include shrub live oak (*Quercus turbinella*), Toumey oak (*Quercus toumeyi*), mountain mahogany (*Cercocarpus montanus*), desert ceanothus (*Ceanothus greggii*), and Stansbury cliffrose (*Purshia stansburiana*). This community occurs in the Bull Valley Mountains northwest of the Red Butte Substation. Gambel oak-mixed montane shrubland occurs on more mesic habitats. Vegetation is dominated by Gambel oak (*Quercus gambelii*) alone or codominant with antelope bitterbrush, serviceberry (*Amelanchier* spp.), and chokecherry (*Prunus virginiana*). This community occurs on mid-elevation slopes in the Tushar Mountains, Mineral Mountains, and Bull Valley Mountains.

Shrub Steppe

Shrub steppe habitat consists of the GAP Colorado plateau mixed low sagebrush shrubland, Great Basin zeric mixed sagebrush shrubland, inter-mountain basins montane sagebrush steppe, and inter-mountain basins semi-desert shrub steppe land cover types. These communities occur on relatively xeric sites with

shallow, rocky, nonsaline soils. While specific species composition varies, common dominant shrub species include sagebrush (*Artemisia nova*, *A. arbuscula*, and *A. bigelovii*), rabbitbrush, Mormon tea, broom snakeweed (*Gutierrezia sarothrae*), and semi-arid grasses such as bluebunch wheatgrass (*Pseudoroegneria spicata*), Indian ricegrass (*Achnatherum hymenoides*), desert needlegrass (*Hesperostipa comata).*

Zone 3: Grasslands

Zone 3 (Grasslands) consists of an aggregation of native grassland and invasive grassland areas. This zone is typically composed of a variety of low, abundant grasses, both native and exotic. This zone is typically found in both valley and montane environments randing from 4,400 to 8,000 feet in elevation and receives approximately 15 to 25 inches of rainfall annually. Vegetation communities are detailed below.

Native Grassland

Grassland habitat consists of the GAP southern Rocky Mountain montane-subalpine grassland land cover type. This vegetation community typically occurs on flat to gently rolling topography at higher elevations. This habitat often consists of a mosaic of several plant associations with a dominant bunch grass, such as an oatgrass (e.g., *Danthonia intermedia* and *Danthonia parryi*), fescue (e.g., *Festuca idahoensis*, *F. arizonica*, and *F. thurberi*), or slimstem muhly (*Muhlenbergia filiculmis*).

Invasive Grassland

The invasive vegetation community consists of the GAP invasive annual and biennial forbland, invasive annual grassland, and invasive perennial grassland land cover types. This habitat is dominated by invasive non-native species, including cheatgrass (*Bromus tectorum*), smooth brome (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*), halogeton (*Halogeton glomeratus*), kochia (*Kochia prostrata*), and Russian thistle (*Salsola spp*.).

Zone 4: Riparian

Zone 4 (Riparian) is composed of only riparian areas and consist of stream channel and vegetated banks with woody overstory vegetation**.** Riparian habitats typically are associated with perennial and intermittent drainages. Within the Project area, the majority of this habitat includes Pinto and Little Pinto creeks, the Beaver, Sevier, and Santa Clara rivers and their associated reservoirs and tributaries.

Riparian

Riparian communities occur along small creeks and small springs, with the specific community type and species composition dependent on elevation and hydrological characteristics. Typical species in lower elevation shrub riparian habitats include: tamarisk (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), willow (*Salix* spp.), and red osier dogwood (*Cornus stolonifera*). Typical species in higher elevation, forest riparian communities include: box elder (*Acer negundo*), bigtooth maple (*Acer grandidentatum*), water birch (*Betula occidentalis*), narrowleaf cottonwood (*Populus angustifolia*), and Engelmann spruce (*Picea engelmannii*).

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Additional Information

Agriculture

Agriculture habitat consists of both irrigated and nonirrigated agricultural lands. This vegetation community occurs in the Sevier River Valley and the Milford-Minersville area.

Barren/Sparsely Vegetated

Barren/sparsely vegetation habitat includes the GAP inter-mountain basins playa land cover type and occurs at lower elevations in the Escalante Desert. This community includes barren or sparsely vegetated playas (less than 10 perfect plant cover) that are intermittently flooded. Characteristic plant species include inland saltgrass (*Distichlis spicata*), iodinebush (*Allenrolfea occidentalis*), greasewood (*Sarcobatus verminsulatus*), sickle saltbush (*Atriplex falcata*), pickleweed (*Salicornia europeae*), spiny hopsage (*Grayia spinosa*), and basin wildrye (*Laymus cinereus*).

Noxious Weeds

The Utah Noxious Weed Act defines noxious weeds as "any plant the commissioner determines to be especially injurious to public health, crops, livestock, land, or other property". The State of Utah currently classifies 27 plant species as noxious weeds. The following species have been identified in the Project area:

- Black henbane (*Hyoscyamus niger*)
- Diffuse knapweed (*Centaurea diffusa*)
- Leafy spurge (*Euphorbia esula*)
- Spotted knapweed (*Centaurea masculosa*)
- Hoary cress (*Cardaria draba*)
- Musk thistle (*Carduus nutans*)
- Scotch thistle (*Onopordum acanthium*)
- Field bindweed (*Convolvulus arvensis*)
- Houndstongue (*Cynoglossum officinale*)
- Saltcedar (*Tamarix ramossissima*)
- Bull thistle (*Cirsium vulgare*)

Please note that a Noxious Weed Management Plan has been developed for this Project and is located in Appendix B10-Noxious Weed Management Plan of the POD. This plan outlines the mitigation measures and protective stipulations that will be implemented on the Project for the control of noxious weeds.

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1.5 Construction Site Estimates

Project Land Requirements

A permanent 150-foot wide right-of-way (ROW) has been acquired by RMP for the Project. Additional features to the Project include:

- ROW access roads (temporary and permanent) as shown on Project maps; and
- Off-ROW material storage yards/staging areas as identified in Section 1.1 of this plan.

The following table, taken from the Project POD, displays disturbance estimates for the Project.

TABLE A3-3
SUMMARY OF GROUND DISTURBANCE AND VEGETATION CLEARING

	Temporary Disturbance (acres)[1, 4]	Permanent Disturbance (acres)[2, 4]	Total Disturbance (acres)[4]	Right-of-way Vegetation Clearing (acres)[3, 4]
Total for selected route	**1,608.8**	**508.4**	**2,117.2**	**938.1**

NOTES:
[1]Temporary disturbance: Estimated area of disturbance associated with structure work areas (not including base area); wire splicing sites, wire pulling sites, wire tensioning sites, multi-use construction yards, staging areas, helicopter refueling sites, guard structures, and temporary access roads (refer to Table 3-1).
[2]Permanent disturbance: Estimated area of disturbance associated with H-frame and lattice structure base areas, communication regeneration stations and associated fiber optic and power lines, and permanent access roads (refer to Tables 3-2 and 3-3).
[3]Right-of-way vegetation clearing: Vegetation clearing was estimated for the full area of the right-of-way and the area of tree clearing outside of the right-of-way associated with temporary and permanent access roads and other temporary and permanent Project facilities where vegetation communities within the right-of-way only. Calculations include vegetation types with the potential to grow 12 feet tall (aspen, mountain shrub, pinyon-juniper, and riparian) occur.
[4]A 5 percent contingency has been added to the total calculated acreage.

The total estimated area of disturbance Project wide is 2,117.2 acres. Of this 1,608.8 acres is estimated to be temporary disturbance and 508.4 acres is estimated to be permanent disturbance. The areas to be disturbed are described further below.

Structure Work Sites

A work area at the base of each structure is required for construction activities. In order to provide a safe working space, the work area must be level with a slope no greater than 3 percent. The dimensions of this work area will vary by structure type and onsite physical and environmental conditions. Typically, a temporary disturbance area of approximately 150 feet x 200 feet (0.69 acres) is assumed for each non-

lattice structure work area, and a temporary disturbance area of 250 feet x 250 feet (1.43 acres) for each lattice structure work area.

Within the work areas described above, the permanent disturbance associated with the tower footings will be up to 40 square feet for H-frame structures, 80 square feet for lattice deadend structures, and 116 square feet for three-pole running angle structures.

Wire Stringing Sites

Wire string sites will typically be 150 feet x 750 feet for the Project. However, when construction occurs in steep and rough terrain, these sites may require larger, less symmetrical areas. Disturbance has been estimated at approximately 2.59 acres per site.

Wire Splicing Locations

During wire stringing operations, splicing of the conductor wires will be necessary. This work often occurs mid-span between structures unless site or environmental conditions warrant the use of implosive sleeves. Where wire splicing activities occur, additional access and worksites may be required. A temporary work area of approximately 100 feet x 100 feet (0.23 acres) is estimated for each wire splicing work area.

Guard Structure Work Areas

Temporary guard structure work areas will typically be 75 feet x 150 feet in dimension, more when the transmission line meets the obstacle at an angle. Disturbance has been approximated at 0.26 acres per work area.

Existing Access Roads

Existing access roads will be utilized to the greatest extent possible during construction. A percentage of these roads do not require improvement, however, in some cases, repairs and/or improvements may be necessary to provide safe access for vehicles, equipment, and materials. More information on existing roads identified for Project use can be found in SWPPP Volume II Map Set 1 and POD Map Set 2.

New Access Roads (Temporary and Permanent)

In some areas, only temporary roads will be needed. Typically, these temporary roads will be graded to a standard travel-surface width of approximately 14 feet. In areas of steeper terrain, the travel-surface width could be a maximum of 22 feet for curves in the road, dependent on site-specific conditions. Normally, a ditch drainage system will not be constructed for temporary roads. Temporary roads are shown on the SWPPP Volume II Map Set 1 and POD Map Set 2 and will be reclaimed after construction.

Permanent access roads will be constructed where needed for construction and/or long-term maintenance, or where landowners or land-managing agencies require road construction. Permanent roads will be graded to a travel-surface width of approximately 14 feet. In areas of steeper terrain, the travel-surface width could be a maximum of 22 feet for curves in the road, dependent on site-specific

conditions. These access roads will be constructed to PacifiCorp's Transmission Construction Standards. Please reference Appendix R- PacifiCorp's Transmission Construction Standards for more information. In general, access roads follow the natural grade of area terrain with a typical slope of up to 10 percent.

Turnout areas may be required along access roads so that vehicles and equipment may safely pass. Turnouts will be approximately 100 feet x 10 feet wide and will be located about every 1,000 feet along the road.

Multi-Use Construction Yards / Support Facilities

Multi-use construction yards and other support facilities will be located within proximity to the Project. This will include construction yards, helicopter support sites and staging areas. Activities within these areas may include the following: temporary batch plant locations; administrative offices; vehicle and equipment parking; fueling and maintenance areas; and material storage. These facilities will range in size from approximately 5 to 20 acres per site.

Additional Construction Site Estimates

The calculated percentage of impervious area before construction is 0.43%
The calculated runoff coefficient before construction is 0.07

The calculated percentage of impervious area after construction is 0.74%
The calculated runoff coefficient after construction is 0.19

1.6 Water Resources

As described within the POD, only low impacts on water resources will be anticipated in the northern Project area. The mitigation of any high or moderate impacts can be attributed to spanning riparian areas or avoiding ground-disturbing activities that would remove soil-stabilizing vegetation in riparian areas such as at Dry Creek. Avoiding surface-disturbing activities on steep slopes like those occurring in the Dry Hollow area, where the potential for increased erosion following ground disturbance or removal of vegetation exists, also would reduce impacts.

In the southern project area, the selected route is located within the Upper Virgin Watershed, which contains a state-listed impaired water (Santa Clara River) that has the potential for being affected by construction and maintenance activities. Ground disturbance related to the construction and maintenance of the transmission line could potentially increase erosion in disturbed areas and reduce permeability of soils where compacted, potentially contributing to an increased level of total dissolved solids, salinity, chlorides, and selenium being discharged into the Santa Clara River. If not avoided or mitigated, this potentially could exceed effluent limits set by the EPA. However, with implementation of planned mitigation, most effects on state-listed impaired waters, as well as the municipal and agricultural needs of citizens living downstream, will be avoided and/or mitigated to acceptable levels.

Receiving Waters

A Wetland and Other Waters Delineation Report was prepared for the Project by EPG. This report contains a comprehensive list of wetlands and stream crossings that intersect the Project Route to include perennial, intermittent, and ephemeral streams. A copy of this report will be maintained and available for review at Project office locations with the SWPP.

Springs and Wells

Six springs and twelve wells have been identified within 600 feet of the Project ROW. Phillips 9-1 Well and Utah State 31-33 Well are approximately 300 feet from the centerline at Links 349 and 66, respectively. CalEnergy 28-3 Well is approximately 2,500 feet from the centerline at Link 75. Irvine Spring is approximately 13,000 feet from the centerline at Link 260. There are an additional three unnamed wells located at Links 365, 386, and 430 and one unnamed spring at Link 444 within the Project area. Springs and wells are also shown on the SWPPP Volume II Map Set 1 and POD Map Set 2.

Reservoirs, Lakes, and Ponds

During the FEIS process, several reservoirs, lakes, and ponds exist within the Project area. Large reservoirs in the Project area include Rock Ford Reservoir, Piute Reservoir, Three Creek Reservoir, Minersville Reservoir, Grass Valley Reservoir, and Newcastle Reservoir. Typically, natural lakes are found at higher elevation, where the cooler climate reduces the amount of water lost to evaporation and snowmelt is retained in semi-impermeable basins. Examples of natural lakes in the Project area include Duck Lake, Deep Lake, Hunts Lake, Barney Lake, Puffer Lake, Birch Lake, and Kent's Lake. Other man-mad lakes, ponds, and small reservoirs are found in the Project area, and are typically used for agricultural purposes. These include Taylor Pond, Moscow Reservoir, Sand Pond, Mound Pond, and Danish Reservoir.

Impaired Water bodies

As previously referenced, the Santa Clara River, a state-listed impaired water, is located within the Project area. The Santa Clara River is located approximately 1.7 miles southeast of the Red Butte Substation.

Municipal Storm Sewer Systems (MS4s)

No known municipal Storm Sewer Systems (MS4s) occur along the Project.

1.7 Site Features and Sensitive Areas

Unique features and sensitive areas within the Project will include soil resources, water resources, biological resources, natural vegetation, wildlife species, and other environmentally sensitive areas. These areas and sites are identified on the SWPPP Volume II Map Set 1 and POD Map Set 2.

To protect and minimize impacts to these resources a series of Project mitigation measures have been selected and will be implemented on the Project. Tables identifying Project standard mitigation

measures and Project selective mitigation measures can be found in Appendix H- Project Mitigation Tables. Appendix H includes Table 5-3 from the POD which provides milepost to milepost locations of where the selective mitigation measures are applied.

1.8 Summary of All Potential Pollutant Sources

Potential pollutant sources that may reasonably be expected to affect the quality of stormwater discharges, other than sediment, are listed on the following table.

Storage of materials will primarily be at the material and construction support yards identified in Section 1.1 Some materials will also be located on maintenance vehicles and work truck for as needed maintenance along the ROW. The appropriate BMPs will be implemented to limit any pollutants from mixing with stormwater and potentially being discharged off the Project. On-site fueling will occur. All areas were fueling is prohibited are specifically identified on SWPPP Volume II Map Set 1 and POD Map Set 2. One dedicated mobile batch plant will be utilized on the Project. This batch plant will be operated at multiple construction support yards and approved work area locations on the Project.

Potential pollutant sources are also addressed within the POD and the Project Hazardous Materials Management Program (HMMP). The mitigation measures and stipulations contained within these plans will be implemented throughout the Project. A copy of these plans will be located at all Project offices.

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Potential Pollutant	Comments
Sediments	Caused by ground disturbing activities and erosion. BMPs will be installed and maintained throughout the Project until final stabilization is achieved.
Fuels	Used by vehicles and equipment on site. Secondary containment will be provided as necessary to contain leaks and spills. Spill response materials will be located on all vehicles.
Oils	Used by vehicles and equipment on site. Drip pans will be utilized when changing oil. Spill response materials will be located on all vehicles.
Grease and other lubricants	Used by some vehicles and equipment. Will be contained in staging areas or on vehicles in minimal amounts.
Trash	Trash to be contained and removed frequently.
Concrete Curing Compound	Will properly store on site. Weather will be monitored to reduce the chance of chemicals entering stormwater.
Concrete Wash Water	Contained onsite in designated areas.
Soil Stabilizers	Will properly store on site. Weather will be monitored to reduce the chance of chemicals entering stormwater.
De-Watering	Will be pumped out on to vegetated area, dissipation device, or filter device to contain sediment.
Sanitary/Septic Waste	Portable toilets will be contained on-site and secured to avoid tipping. All services will be performed by a Licensed Sanitary Company.
Solvents	Will be properly stored, used, and disposed of. Storage areas will be inspected regularly.
Stains or Paints	Will be properly stored, used, and disposed of. Storage areas will be inspected regularly.
Glues and Adhesives	Will be properly stored, used, and disposed of. Storage areas will be inspected regularly.
Fertilizers	Will be properly stored, used, and disposed of. Storage areas will be inspected regularly.
Pesticides	Will be properly stored, used, and disposed of. Storage areas will be inspected regularly.

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1.9 Endangered Species Certification

Special Status Wildlife Species

During Project permitting, a number of biological and avian resource inventories were performed for special status wildlife species that have the potential to occur in the Project area. Special status wildlife species include those species listed as threatened, endangered, or candidate under the Endangered Species Act (ESA); classified as sensitive by the state of Utah, BLM, or USFS; and/or identified as Management Indicator Species by the USFS.

As discussed within the Project POD, the Project route crosses habitats mapped by the Utah Division of Wildlife Resources (UDWR) as crucial sage-grouse brood-rearing and winter habitat. Additionally, field surveys were performed to identify greater sage-grouse leks (2010 and 2012), dark kangaroo mouse habitat (2012), and raptor nests (2012), as well as Utah prairie dog (2010), pygmy rabbit (2012), and kit fox (2012) burrows. These field surveys were performed by EPG, the BLM's third party contractor. The following POD table identifies those wildlife species analyzed during the FEIS and field surveys.

TABLE B6-1
SPECIAL STATUS AND USFS MANAGEMENT INDICATOR SPECIES LIKELY TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Likelihood of Occurrence
Special Status Species		
American white pelican	*Pelecanus erythrorhynchos*	Transients may occur – no preconstruction surveys performed
Arizona toad	*Bufo microscaphus*	May occur – no preconstruction surveys performed
Bald eagle	*Haliaeetus leucocephalus*	Likely to occur – no active nests detected during preconstruction surveys; winter roosting may occur
Bonneville cutthroat trout	*Oncorhynchus clarki utah*	Known to occur – no preconstruction surveys performed
Burrowing owl	*Athene cunicularia*	Known to occur – active nests detected during preconstruction surveys
California Condor	*Gymnogyps californianus*	Not likely to occur – no preconstruction surveys performed
Cutthroat trout	*Oncorhynchus clarki*	Known to occur – no preconstruction surveys performed
Dark kangaroo mouse	*Microdipodops megacephalus*	Likely to occur – potentially suitable habitat detected during preconstruction surveys
Desert Sucker	*Catostomus clarki*	May occur – no preconstruction surveys performed
Ferruginous hawk	*Buteo regalis*	Known to occur – active nests detected during preconstruction surveys
Greater sage-grouse	*Centrocercus urophasianus*	Known to occur – active lek detected during preconstruction surveys and an incidental observation of a single sage-grouse hen was recorded near the town of Newcastle in 2012
Kit fox	*Vulpes macrotis*	Known to occur – active den detected in Project area in 2010; however, no active dens detected along the selected route during kit fox surveys in 2012
Long-billed curlew	*Numenius americanus*	Likely to occur – no preconstruction surveys performed
Peregrine falcon	*Falco peregrinus anatum*	Known to occur – single active nest detected during 2012 surveys within 0.5 mile of selected route; no active nest detected in 0.5 to 1.0 mile of selected route
Pygmy rabbit	*Brachylagus idahoensis*	Not likely to occur – no individuals detected during

TABLE B6-1
SPECIAL STATUS AND USFS MANAGEMENT INDICATOR SPECIES
LIKELY TO OCCUR IN THE PROJECT AREA

Common Name	Scientific Name	Likelihood of Occurrence
		preconstruction surveys
Short-eared owl	*Asio flammeus*	Known to occur – individuals observed during preconstruction surveys
Southern leatherside chub	*Lepidomeda aliciae*	May occur – no preconstruction surveys performed
Spotted bat	*Euderma maculatum*	Likely to occur – breeding and foraging habitat present
Townsend's big-eared bat	*Corynorhinus townsendii*	Likely to occur – breeding and foraging habitat present
Utah prairie dog	*Cynomys parviden*	Not likely to occur – no colonies detected during surveys conducted for Section 7 consultation
Western toad	*Bufo boreas*	May occur – no preconstruction surveys performed
USFS Management Indicator Species		
Black-throated grey warbler	Dendroica nigrescens	Likely to occur - no preconstruction surveys performed
Brewer's sparrow	*Spizella breweri*	Likely to occur – no preconstruction surveys performed
Brown trout	*Salmo trutta*	Known to occur – no preconstruction surveys performed
Hairy woodpecker	*Picoides villosus*	Likely to occur – no preconstruction surveys performed
Lincoln's sparrow	*Melospiza lincolnii*	Likely to occur – no preconstruction surveys performed
MacGillivray's warbler	*Oporornis tolmiei*	May occur – no preconstruction surveys performed
Macroinvertebrates	Multiple species	Known to occur – no preconstruction surveys performed
Mountain bluebird	*Sialia currucoides*	Likely to occur – no preconstruction surveys performed
Mule deer	*Odocoileus hemionus*	Known to occur – no preconstruction surveys performed
Northern flicker	*Colaptes auratus*	Likely to occur – no preconstruction surveys performed
Northern goshawk	*Accipiter gentilis*	May occur – no nesting habitat but may forage in Project area
Rainbow trout	*Oncorhynchus mykiss*	Known to occur – no preconstruction surveys performed
Rocky Mountain elk	*Cervus canadensis*	Known to occur – no preconstruction surveys performed
Sage thrasher	*Oreoscoptes montanus*	Likely to occur – no preconstruction surveys performed
Song sparrow	*Melospiza melodia*	Likely to occur – no preconstruction surveys performed
Vesper sparrow	*Pooecetes gramineus*	Likely to occur – no preconstruction surveys performed
Virgin spinedace	*Lepidomeda mollispinis*	Known to occur – no preconstruction surveys performed
Western bluebird	*Sialia mexicana*	Likely to occur – no preconstruction surveys performed
Wild turkey	*Meleagris gallopavo*	Likely to occur – no preconstruction surveys performed
Yellow warbler	*Dendroica petechia*	Likely to occur – no preconstruction surveys performed

It should also be noted that there is the potential for the southwestern willow flycatcher (Empidonax traillii extimus), a federally listed endangered species, to occur within the Project area. However, no occurrences of the southwestern willow flycatcher were noted during preconstruction surveys.

Special Status Plant Species

Special status plant species include species listed as threatened, endangered, or candidates under the ESA; classified as sensitive by the BLM or USFS; and identified as Management Indicator Species by the

USFS. Field surveys were performed in 2011 and 2012 by EPG to identify occurrences of USFS and BLM sensitive plants along the selected route. Sensitive plant locations were mapped and are shown on SWPPP Volume II Map Set 1 and POD Map Set 2. The following table identifies those sensitive plant species that were identified during field surveys.

TABLE B6-2
SPECIAL STATUS PLANTS WITH LIKELIKHOOD OF OCCURRENCE ALONG THE PROJECT ROUTE

Common Name	Scientific name	Likelihood of Occurrence
Pink egg milkvetch	*Astragalus oophorus* var. *lonchocalyx*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Welsh milkvetch	*Astragalus welshii*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Mound cryptanth	*Cryptantha compacta*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Nevada willowherb	*Epilobium nevadense*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Elsinore buckwheat	*Eriogonum batemanii* var. *ostlundii*	Known to occur – detected during preconstruction surveys
Wirestem buckwheat	*Eriogonum pharnaceoides* var. *cervinum*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Spoon-leaf buckwheat	*Eriogonum spathulatum* var. *kayeae*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Franklin's penstemon	*Penstemon franklinii*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Pinyon penstemon	*Penstemon pinorum*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Ward's penstemon	*Penstemon wardii*	Known to occur – detected during preconstruction surveys
Jones globemallow	*Sphaeralcea caespitosa* var. *caespitosa*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys
Sigurd townsendia	*Townsendia jonesii var. lutea*	May occur – unoccupied potentially suitable habitat detected during preconstruction surveys
Utah phacelia	*Phacelia utahensis*	Not likely to occur – no individuals or suitable habitat detected during preconstruction surveys

The purpose of the Plant and Wildlife Species Conservation Measures Plan is assist the BLM, USFS, and Project personnel in meeting their obligations to protect biological resources (i.e., wildlife, plants, and habitats) during the planning, design, and implementation of the Project. The Plant and Wildlife Species Conservation Measures Plan provides guidance on specific biological concerns associated with the Project and identifies the mitigation measures, stipulations, protocols, and/or techniques required to minimize impacts to biological resources. Please refer to Appendix I- Plant and Wildlife Species Conservation Measures Plan for further information.

1.10 Historic Properties

For this Project, a Class III cultural resource inventory was completed by EPG to identify, record, and determine the extent and significance of identified cultural resources within the Project area. Areas where historic properties are located are designated as "Environmentally Sensitive Areas" on Project maps, but are not defined for protective reasons. Further information is contained with the FEIS, the Project Programmatic Agreement, and Historic Properties Treatment Plan (HPTP). A copy of the HPTP will be maintained by Project Archeologist and other authorized personnel.

The HPTP prescribes specific treatment for specific sites identified through Class III cultural surveys conducted for the project. These treatment methods will be implemented prior to construction, during construction, and post construction. Also identified in the HPTP are the protocols to be taken in the instance of an unanticipated discovery.

1.11 Applicable Federal, State, and Local Programs

As applicable, this SWPPP will incorporate by reference the appropriate elements of plans required by other agencies. The SWPPP will be updated as necessary to remain consistent with any revisions.

USACE Nationwide Permit Summary 12

This Project is covered under the USACE Nationwide Permit Summary Number 12. Work performed on this Project will comply with the general terms and conditions of the permit and BMPs will be implemented and maintained on site to preclude construction materials and/or activities from adversely affecting any waters of the United States beyond the scope of those authorized.

PacifiCorp has completed the terms of the USACE preconstruction notification and provided notice of this activity to ECS on 21 February 2013. The Project will not result in any permanent impacts greater than 0.10 acre.

Stream Alteration Permit

The Stream Alteration Program (Rule R655-13) is regulated by the Utah Division of Water Rights. The purpose of this rule is to clarify the procedures necessary in order to obtain approval by the state engineer for any Project that proposes to alter a natural stream within the state of Utah.

All stream crossings associated with this Project will be evaluated for regulation under the Stream Alteration Program. As needed, the appropriate plans, applications, and fees will be submitted to the UDEQ Division of Water Rights for approval. Stream alteration permits for this Project will be obtained prior to performing the jurisdictional work covered under this rule.

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UDEQ Division of Water Rights Main Office

1594 West North Temple, Suite220
Salt Lake City, UT 84114
Phone: (801) 538-7240

Stream Alteration Specialist
Chuck Williamson
Phone: (801) 538-7404

1.12 Maps

This SWPPP will contain a series of site maps (located in Volume II and Volume III of the SWPPP), which will be completed to scale and will show the entire Project to identify the following:

- The direction of stormwater flow and the approximate slopes that are anticipated after major grading activities;
- Areas of soil disturbance;
- Areas that will not be disturbed;
- Natural features to be preserved;
- Locations of major structural and non-structural BMPs;
- Location of stabilization measures;
- Locations of any off-site material, waste, burrow, or equipment storage areas;
- Locations of all waters of the United States, including wetlands;
- Locations where stormwater discharges to a surface water;
- Locations of storm drain inlets; and
- Areas where final stabilization has been accomplished.

Construction sites will be evaluated prior to construction in coordination with the Project Compliance Inspection Contractor (CIC). BMPs will be updated on Project Maps to include the Site Specific Environmental Plans (SSEP) located in Volume III of the SWPPP. Sequencing of events is discussed in Section 2.2 of the SWPPP.

Maps included with this SWPPP are as follows:

1. Location Maps

   A Project location map, along with construction support facility location maps, is located in Attachment D- Facility Location and Site Maps.

2. SWPPP Volume II – SWPPP Map Set 1 and POD Map Set 2

   SWPPP Map Set 1 is a dynamic map set which includes map panels that illustrate the location of project features at a fixed scale of 1:8500, or 1" = 708' for the entire alignment. Features included in this map set are the location of tower sites, ROW, transmission line centerline, multi-use

construction yards, staging areas, substation locations, access routes, environmentally sensitive areas, and various environmental geographic elements. This map set will be utilized to show the location of ECS environmental BMPs along Project access roads.

POD Map Set 2 includes panels that show (1) the ROW in detail, including the specific location of facilities and sensitive environmental resource areas in the immediate vicinity, and (2) key mitigation measures to be implemented during the design, construction, and operation of the transmission line.

3. SWPPP Volume III – Site Specific Environmental Plans

Information contained on the SSEPs include site drainage patterns, erosion and sediment control BMPs, site disturbance limits, sensitive area/resource data, proximate surface water bodies, locations of environmental exclusion zones, material stockpile information, and seeding information.

SWPPP maps will be updated and amended throughout the Project to adequately reflect past, present, and future planned construction and SWPPP activities.

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

This SWPPP will describe all BMPs that will be implemented to control pollutants in storm water discharges. For every major activity identified in this SWPPP, appropriate control measures will be described along with the general implementation sequence. All BMPs will be properly selected, installed, and maintained as per the manufacturers' specifications and good engineering practices. If inspections or information indicates a BMP has been used inappropriately, incorrectly, or is ineffective, it will be replaced or modified.

The sequence of major construction activities found in Section 1.3 outlines the schedule to implement the proposed erosion and sediment control devices. Appendix J- Best Management Practices contains information and guidelines for the placement of sediment control barriers, stabilization practices, good housekeeping procedures, and other BMPs. The BMP's in Appendix J were obtained from the Salt Lake County Public Works Department.

All sediment/perimeter control BMPs will be installed at work sites as shown on Project SWPPP maps and SSEPs. Temporary BMPs will not be removed until final stabilization is achieved except when temporary structures must be removed in order to allow construction activities to continue. The decision to remove a BMP will be made by the appropriate SWPPP team member. In these cases, the SWPPP will be modified and amended to implement protective measures to ensure continued protection from pollutant discharges.

2.1 Minimize disturbed area and protect natural features and soil

The overall approach toward erosion control on this Project is to minimize ground disturbance and enable native vegetation to re-emerge and permanently stabilize the construction areas against erosion.

Construction work areas, approved roads, and areas for avoidance will be identified on maps and identified in the field through the use of signs, flagging and/or fencing. In addition, the following mitigation measures will be implemented to protect sensitive Project features:

- Construction disturbance limits will be minimized to the extent feasible.
- Existing roads will be utilized to the extent feasible and as approved through Project easements and permitting.
- Grading will be minimized by driving overland within pre-designated work areas whenever possible.
- Vegetation shall be left in place where feasible to preserve root structures and provide increased opportunity for resprouting.
- To minimize ground disturbance, construction traffic routes will be clearly marked with temporary markers such as easily visible flagging.
- Topsoil from excavations shall be stockpiled separately from other soil material and salvaged for reclamation activities.
- As identified on site maps, selective removal of vegetation (i.e., trees) within and along the edges will be performed.
- Avoidance of disturbance to sensitive resources (i.e., streams, riparian areas, trails, etc.) will be performed to the greatest extent possible. Supplemental erosion and sediment control devices will be installed at these crossings where necessary to further protect these resources.
- Natural vegetation buffers will be left in place wherever possible and in particular, at stream crossings.
- As shown on site maps, helicopter supported construction will be performed in selected areas and will further reduce construction impacts.

Additionally, the construction schedule may be modified to minimize construction activities in rain soaked or muddy conditions. Existing roads and trails would be used for travel to the maximum extent feasible unless otherwise authorized. During wet road conditions, any ruts deeper than 4 inches remaining on Project roads would be repaired at the Authorized Officer's discretion.

2.2 Phase Construction Activity

Phase I - Preconstruction Survey and Site Specific Planning
(1 February 2013 – 15 Oct 2014)

Prior to clearing and construction, environmental scientists, monitors, and construction planners will access the ROW to evaluate project environmental and POD requirements. At this time, SSEPs will be developed and the information will be incorporated into Project plans. Project monitoring requirements and Cultural Resource treatment activities will also be conducted along with the installation of construction signage, flagging, and buffer fencing. Project constructability surveys, preconstruction geotech, and transmission line surveys will also be performed.

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Phase II - Installation of Stormwater Controls, Work Area/Access Road Clearing, and Vegetation Management
(1 May 2013 – 15 Oct 2014)

During Phase II, environmental work crew(s) will install BMPs as directed by SSEPs. This will include the installation of sediment control devices such as mulch berms, silt fence, straw wattles, rock berms, and stabilized construction entrances. Temporary stream crossings along with other identified BMPs will also be installed at this time.

Trees and other vegetation will be removed selectively (e.g. edge feathering) to blend the edge of the ROW into adjacent vegetation patterns, as practicable and appropriate. Trees will be selectively removed in riparian habitats and in the Great Basin Desert to protect biological resources. Mechanical tree clearing methods will involve the use of equipment such as chain saws, weed trimmers, rakes, shovels, brush hooks, and mowers to clear vegetation. Mowing will be pursued whenever practical and will be limited to within the transmission ROW, work areas, and access road delineations. Clearing efforts in heavy growth areas will use a Hydro-Ax excavator mounted brush mower or similar equipment. Hand clearing methods will also be utilized in areas of sensitivity such as the Project identified Inventoried Roadless Area.

Vegetation Management activities will be performed in accordance with the Project's Vegetation Management Plan and the POD. A copy of these plans will be maintained in the Project office along with the SWPPP.

Phase III – Access Roads and Pad Site Construction
(7 May 2013 – 15 Nov 2014)

During Phase III, access roads and pad sites will be constructed. Sediment and erosion control measures installed during the construction phase may include, but not necessarily be limited to, waterbars, drainage ditches, dissipation devices, and culverts. BMP's for access roads and pad sites will be identified on SWPPP Volume II Map Set 1 and on SWPPP Volume III SSEPs.

Phase IV – Foundation Excavation
(14 May 2013 – 1 Aug 2014)

During Phase IV, foundations will be constructed for the lattice steel self-supporting steel-lattice structures. Footings will primarily be excavated using track mounted or rubber tired drill rigs.

Work activities during this phase will be maintained within the established pad sites constructed during Phase III. These sites will be monitored and inspected to ensure all installed BMPs and mitigation measures are implemented and are working effectively. If inspections indicate that a BMP is ineffective, it will be replaced or modified.

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Phase V – Structure Assembly and Erection
(28 May 2013 – 1 Sept 2014)

Assembly and erection will be performed via both conventional crane and helicopter methods as indicated on the SWPPP Volume II Map Set 1 and POD Volume II. Assembly will occur either at the designated structure site or at a preapproved assembly yard.

Work activities at these locations will be maintained within established work sites. These sites will be monitored and inspected to ensure all installed BMPs and mitigation measures are implemented and are working effectively. If inspections indicate that a BMP is ineffective, it will be replaced or modified.

Phase VI – Wire Installation
(1 Aug 2013 – 1 Oct 2014)

Primary wire stringing operations will be performed at prearranged puller and tensioning sites. Sediment and erosion control measures at these locations may include, but are not necessarily limited to, silt fences, straw wattles, seeding, and mulching. These sites will be monitored and inspected to ensure all installed BMPs and mitigation measures are implemented and are working effectively. If inspections indicate that a BMP is ineffective, it will be replaced or modified.

***Phase VII* – Final Grading, Cleanup, and Restoration**
(1 Sept 2013 – 15 November 2014)

Cleanup and restoration activities along the ROW, material yards, and other construction related areas, will be performed on an ongoing basis and phased throughout the Project as construction activities are completed. This will include tower site locations, pull sites, sleeving sites, staging areas, material yards, maintenance yards, and temporary office locations. These activities will follow the requirements and stipulations of Appendix B14- Reclamation, Revegetation, and Monitoring Framework Plan. Activities will include, but are not limited to, the following.

Final cleanup and restoration activities will include the following:

- Access roads will be restored to landowner and regulatory authority satisfaction
- Excess material left onsite will be relocated or disposed of at approved locations
- Construction facilities will be removed or returned
- All project related materials will be removed to include all temporary fences and gates, temporary poles, guard poles, anchors and guys etc.
- Storage tanks will be removed
- Temporary construction pads will be return to preconstruction grade or left in place for future maintenance needs
- All ruts will be repaired
- All work generated trash and debris will be removed
- All construction staking, flagging and fencing will be removed, unless requested by the client to remain in place

- Work sites will be graded to landowner, regulatory authority and permit satisfaction
- Topsoil salvaged during grading operations will be spread onsite

Work activities and BMPs will continue to be monitored and inspected at these locations to ensure effectiveness. If inspections indicate that a BMP is ineffective, it will be replaced or modified.

Phase VIII - Seeding for Permanent Stabilization
(1 Sept 2013 – 15 Dec 2014)

Temporary work sites and other disturbed areas, such as access road cuts and fills, that have been disturbed to the point where re-emergence of native vegetation is not considered likely will be seeded with a native seed mix. An exception to this is if the landowner or land manager requests an alternative seed mixture. Overall, native vegetation will be the primary approach to final (permanent) stabilization.

Phase IX - Removal of Temporary BMPs
(1 June 2014 – 5 May 2020)

Temporary BMPs will be removed once site conditions, at each location, have met final stabilization requirements as identified in Section 7 of this SWPPP. The Project will continue to be monitored and inspected as per the SWPPP and UPDES Permit until final stabilization requirements are met and an NOT has been submitted.

2.3 Control Stormwater flowing onto and through the Project

This Project will use structural controls to help divert the flow of stormwater from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from the exposed areas of the site. Controls for controlling stormwater flows onto and through the Project will include the use of diversion berms, ditches, check dams, and waterbars.

2.4 Stabilize Soils

The General Permit requires stabilization measures to be initiated on disturbed surface areas as soon as practicable, but no more than 14 days after construction activity has either temporarily or permanently ceased on any portion of the construction site. There are 2 exceptions to this requirement.

- Stabilization does not need to be initiated when construction activities will resume on a portion of the site within 14 days from the suspension of previous construction activities.

- Stabilization does not need to be initiated when construction activities have been precluded by snow cover or frozen ground conditions within 14 days from the suspension of previous construction activities. Stabilization measures shall occur as soon as practicable.

EEG will identify any interim and permanent stabilization practices for the site, including a schedule of when the stabilization practices will be implemented. This SWPPP will identify where existing vegetation is to be preserved in the SSEPs. The Project will primarily utilize permanent seeding with native vegetation to permanently stabilize exposed soils at the close of the Project.

EEG will maintain records that show the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease, and the dates when stabilization measures are initiated.

The following temporary stabilization measures have been identified for this Project. Slopes will be protected with hydraulic mulch, geotextiles/mats, temporary seeding with sterile oats or rye, soil binders, site compaction, or a combination of erosion control practices to limit rill, gully, and channel erosion. Areas that are generally flat with no slope will be temporarily stabilized with wood mulch, straw mulch, hydro-seeding, binders, site compaction, or a combination of erosion control practices to limit sheet flow erosion on flat areas.

EEG will be responsible for seeding the Project area upon completion of construction. Permanent seeding methods will consist primarily of drill seeding with alternative methods, such as hydroseeding or broadcast seeding in areas where conditions do not allow for drill seeding (e.g. steep, rocky or remote sites).

Seed selection will be based on site-specific conditions and landowner or land manager requirements. Native species will be given preference pending seed availability, cost, and chance of success. Seed mixes and application rates may also be modified to achieve site-specific weed management objectives. Agency-approved seed mixes can be found in POD Appendix B14 – Reclamation, Revegetation, and Monitoring Framework Plan, and are shown below.

TABLE 2
REVEGETATION SEED MIXTURE 1A – RICHFIELD FIELD OFFICE
(Pinyon-Juniper, Sagebrush/Shadscale/Grass Steppe – Precipitation Less Than Eight Inches)

Common Name	Scientific Name	Quantities
Luna Pubescent Wheatgrass	*Thinopyrum intermedium 'Luna'*	1.00
Bozoisky Russian Wildrye	*Psathyrostachys juncea*	2.00
Trailhead Great Basin Wildrye	*Leymus cinereus'Trailhead'*	1.50
Sand Dropseed	*Sporobolus cryptandrus*	0.50
Alkali Sacaton	*Sporobolus airoides*	0.50
Covar Sheep Fescue	*Festuca ovina 'Covar'*	1.50
Northern Sweetvetch	*Hedysarum boreale*	1.50
White Sweetclover	*Melilotus albus*	0.50
Small Flower Globemallow	*Sphaeralcea parvifolia*	0.50
Showy Blanketflower	*Gaillardia aristita*	0.50
Cedar Palmer Penstemon	*Penstemon palmeri*	0.50
Appar Lewis Flax	*Linum lewisii (L. perenne)*	1.50
Common Sunflower	*Helianthus annuus*	2.00
Yellow Beeplant	*Cleome lutea*	0.50
Sagebrush (whichever species is dominant)	*Artemisia sp.*	0.50
Forage Kochia	*Kochia sp.*	1.00
	TOTAL	**16.00**

NOTE: Application rates in pounds per acre of pure live seed

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TABLE 3 **REVEGETATION SEED MIXTURE 1B – RICHFIELD FIELD OFFICE** (Pinyon-Juniper, Big Sagebrush Steppe, Mountain Browse – Precipitation Eight Inches or More)		
Common Name	**Scientific Name**	**Quantities**
Sandberg Bluegrass (High Plains Variety)	*Poa secunda* J. Presl.	1.00
Luna Pubescent Wheatgrass	*Thinopyrum intermedium 'Luna'*	1.00
Bozoisky Russian Wildrye	*Psathyrostachys juncea*	2.00
Magnar Great Basin Wildrye	Leymus cinereus 'Magnar'	1.50
Covar Sheep Fescue	*Festuca ovina 'Covar'*	1.50
Gooseberry Leaf Globemallow	*Sphaeralcea grossulariifolia*	0.50
Yellow Sweetclover	*Melilotus officinalis*	0.50
Delar Small Burnet	*Sanguisorba minor 'delar'*	1.00
Richfield Firecracker Penstemon	*Penstemon eatonii*	0.50
Palmer Penstemon	*Penstemon palmeri*	0.50
Rocky Mountain Beeplant	*Cleome serrulata*	0.50
Appar Lewis Flax	*Linum lewisii (L. perenne)*	1.00
Common Sunflower	*Helianthus annuus*	2.00
Sagebrush (whichever species if dominant)	*Artemisia sp.*	0.50
Forage Kochia	*Kochia sp.*	1.00
Fourwing Saltbush	*Atriplex canescens*	1.00
	TOTAL	**16.00**
Note: Application rates in pounds per acre of pure live seed		

TABLE 4 **REVEGETATION SEED MIXTURE 2A – CEDAR CITY FIELD OFFICE** (Sagebrush Shrub and Pinyon-Juniper Woodland Communities – Lower Elevations <6,000 feet)		
Common Name	**Scientific Name**	**Quantities**
Crested Wheatgrass – Ephraim	*Agropyron cristatum 'Ephraim'*	1.0
Intermediate Wheatgrass	*Thinopyrum intermedium*	2.0
Lincoln Smooth Brome	*Bromus inermis 'Lincoln'*	2.0
Pubescent Wheatgrass	*Thinopyrum intermedium*	1.0
Needle-and-Thread	*Hesperostipa comata*	2.0
Indian Ricegrass – Nezpar	*Achnatherum hymenoides 'Nezpar'*	2.0
Alfalfa-Ladak	*Medicago sativa 'Ladak'*	1.00
Small Burnet	*Sanguisorba minor*	1.00
Utah Sweetvetch	*Hedysarum boreale*	1.00
Western Yarrow	*Achillea millefolium var. occidentalis*	0.50
Yellow Sweetclover	*Melilotus officinalis*	1.00
Lewis Flax	*Linum lewisii*	1.00
Globemallow	*Sphaeralcea sp.*	1.00
Palmer Penstemon	*Penstemon palmeri*	1.00
Four-wing Saltbush	*Atriplex canescens*	1.00
Wyoming Sagebrush	*Artemisia tridentata* ssp. *wyomingensis*	0.50
	TOTAL	**20.00**

NOTES:

- Mixture 2A provides the recommended seeding mixture and rate for the re-vegetation of sagebrush shrub. The exact seeding mixture may differ depending on seed availability. Sagebrush was included to mitigate visual and wildlife habitat impacts, although this species may invade the right-of-way from adjacent habitats rapidly. Any other changes should first be cleared with the appropriate Utah BLM field office.

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TABLE 5
REVEGETATION SEED MIXTURE 2B – CEDAR CITY FIELD OFFICE
(Sagebrush Shrub and Pinyon-Juniper Woodland Communities – Upper Elevations >6,000 feet)

Common Name	Scientific Name	Quantities
Crested Wheatgrass – Ephraim	*Agropyron cristatum 'Ephraim'*	1.00
Intermediate Wheatgrass	*Thinopyrum intermedium*	1.00
Lincoln Smooth Brome	*Bromus inermis 'Lincoln'*	2.00
Bluebunch Wheatgrass	*Pseudoroegneria spicata*	2.00
Needle-and-Thread	*Hesperostipa comata*	2.00
Indian Ricegrass – Nezpar	*Achnatherum hymenoides 'Nezpar'*	2.00
Alfalfa-Ladak	*Medicago sativa 'Ladak'*	1.00
Small Burnet	*Sanguisorba minor*	1.00
Yellow Sweetclover	*Melilotus officinalis*	1.00
Utah Sweetvetch	*Hedysarum boreale*	1.00
Lewis Flax	*Linum lewisii*	1.00
Globemallow	*Sphaeralcea sp.*	1.00
Palmer Penstemon	*Penstemon palmeri*	1.00
Antelope Bitterbrush	*Purshia tridentata*	1.00
Wyoming Sagebrush	*Artemisia tridentata* ssp. *wyomingensis*	0.50
Mountain Sagebrush	*Artemisia tridentata*	0.50
	TOTAL	**20.00**

NOTES:

- Mixture 2B provides the recommended seeding mixture and rate for the re-vegetation of sagebrush shrub. The exact seeding mixture may differ depending on seed availability. Sagebrush was included to mitigate visual and wildlife habitat impacts, although this species may invade the right-of-way from adjacent habitats rapidly. Any other changes should first be cleared with the appropriate Utah BLM field office.

TABLE 5
REVEGETATION SEED MIXTURE 2B – CEDAR CITY FIELD OFFICE
(Sagebrush Shrub and Pinyon-Juniper Woodland Communities – Upper Elevations >6,000 feet)

Common Name	Scientific Name	Quantities
Crested Wheatgrass – Ephraim	*Agropyron cristatum 'Ephraim'*	1.00
Intermediate Wheatgrass	*Thinopyrum intermedium*	1.00
Lincoln Smooth Brome	*Bromus inermis 'Lincoln'*	2.00
Bluebunch Wheatgrass	*Pseudoroegneria spicata*	2.00
Needle-and-Thread	*Hesperostipa comata*	2.00
Indian Ricegrass – Nezpar	*Achnatherum hymenoides 'Nezpar'*	2.00
Alfalfa-Ladak	*Medicago sativa 'Ladak'*	1.00
Small Burnet	*Sanguisorba minor*	1.00
Yellow Sweetclover	*Melilotus officinalis*	1.00
Utah Sweetvetch	*Hedysarum boreale*	1.00
Lewis Flax	*Linum lewisii*	1.00
Globemallow	*Sphaeralcea sp.*	1.00
Palmer Penstemon	*Penstemon palmeri*	1.00
Antelope Bitterbrush	*Purshia tridentata*	1.00
Wyoming Sagebrush	*Artemisia tridentata* ssp. *wyomingensis*	0.50
Mountain Sagebrush	*Artemisia tridentata*	0.50
	TOTAL	**20.00**

NOTES:

- Mixture 2B provides the recommended seeding mixture and rate for the re-vegetation of sagebrush shrub. The exact seeding mixture may differ depending on seed availability. Sagebrush was included to mitigate visual and wildlife habitat impacts, although this species may invade the right-of-way from adjacent habitats rapidly. Any other changes should first be cleared with the appropriate Utah BLM field office.

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TABLE 7
REVEGETATION SEED MIXTURE 2D – CEDAR CITY FIELD OFFICE
(Saline/Alkaline Wetland Communities)

Common Name	Scientific Name	Quantities
Shadscale Saltbrush	*Atriplex confertifolia*	3.00
Gardner Saltbush	*Atriplex gardneri*	3.00
Greasewood	*Sarcobatus vermiculatus*	4.00
Alkali Sacaton	*Sporobolus airoides*	2.00
Inland Saltgrass	*Distichlis spicata*	2.00
Forage Kochia	*Kochia sp.*	2.00
Tall Wheatgrass – Jose	*Thinopyrum ponticum'Jose'*	2.00
	TOTAL	**18.00**

NOTES:

- For wetland areas where the soils are considered saline and/or alkaline, the seeding mixture and rate listed in Mixture 2D will be used. Because of the potential high soil salinity/alkalinity in these areas, only plants that are tolerant of such conditions will be used for revegetation. During reclamation, soils that occur above the water table should be salvaged and used for the seedbed. The soils should be worked as little as possible after replacement to reduce compaction. However, seed and fertilizer should be raked or harrowed into the top 2 to 3 inches of the soil.
- Shrub species that are appropriate for transplanting to mitigate visual impacts of this vegetation type include rabbitbrush, shadscale, greasewood, and iodine bush. Rhizomes of inland saltgrass also can be transplanted to minimize visual concerns.

TABLE 8
REVEGETATION SEED MIXTURE 2E – CEDAR CITY FIELD OFFICE
(Desert Scrub and Blackbush Scrub Communities)

Common Name	Scientific Name	Quantities
Crested Wheatgrass	*Agropyron cristatum*	2.00
Indian Ricegrass–Nezpar	*Achnatherum hymenoides 'Nezpar'*	2.00
Galleta Grass	*Pleuraphis sp.*	1.00
Bottlebrush Squirreltail	*Elymus elymoides*	1.00
Sand Dropseed	*Sporobolus cryptandrus*	0.25
Lewis Flax	*Linum lewisii*	1.00
Gooseberry Leaf Globemallow	*Sphaeralcea grossulariifolia*	1.00
Palmer Penstemon	*Penstemon palmeri*	1.00
Western Yarrow	*Achillea millefolium* var. *occidentalis*	0.50
Alfalfa	*Medicago sativa*	0.50
Small Burnett	*Sanguisorba minor*	1.00
Forage Kochia	*Kochia sp.*	1.00
Four-wing Saltbush	*Atriplex canescens*	2.00
Winterfat	*Krascheninnikovia lanata*	1.00
	TOTAL	**15.25**

NOTES:

- Mixture 2E provides the seeding mixture and rate for the revegetation of desert scrub and blackbush scrub. The exact mix to be used may differ from the proposed mixture, depending on seed availability.
- Shrub species that are appropriate for transplanting to mitigate visual impacts of this vegetation type include bud sagebrush, fourwing saltbrush, big sagebrush, winterfat and greasewood.

TABLE 9
REVEGETATION SEED MIXTURE 2F – CEDAR CITY FIELD OFFICE
(Utah Greasewood Shrub Communities)

Common Name	Scientific Name	Quantities
Tall Wheatgrass – Jose	*Thinopyrum ponticum'Jose'*	3.00
Crested Wheatgrass – Ephraim	*Agropyron cristatum 'Ephraim'*	1.00
Intermediate Wheatgrass – Oache	*Thinopyrum intermedium 'Oache'*	1.00
Thickspike Wheatgrass – Critana	*Elymus lanceolatus 'Critana'*	1.00
Red Fescue	*Festuca rubra*	1.00
Russian Wildrye – Vinall	*Psathyrostachys juncea 'Vinall'*	2.00
Fourwing Saltbush	*Atriplex canescens*	3.00
Forage Kochia	*Kochia sp.*	2.00
	TOTAL	**14.00**

- NOTE: The recommended revegetation seeding mixture and rate along the greasewood scrub vegetation type are listed in Mixture 2F. As discussed above, the exact seeding mixture to be used in this vegetation type may differ from the proposed mix, depending on the availability of the seed. Possible substitutions or additions include rabbitbrush, Gardner saltbrush, alkali sacaton, and basin wildrye.

Final reseeding will be conducted at the first appropriate growing season after completion of construction and reclamation. Seeding will be repeated until a satisfactory stand is established.

2.5 Protect Slopes

Slopes will be protected with hydraulic mulch, geotextiles/mats, soil binders, or a combination of erosion control practices to limit rill, gully, and channel erosion. The following factors will be considered when selecting protective controls for slopes:

- How steep is the slope? Steep slopes (2:1 or greater) will require more protection than flatter slopes.
- What types of soils are present? Those slopes with highly erodible soils (silty soils) will need more protection than those with less erodible soils (sands and gravels).
- What is the length of the slope? Longer slopes are at greater risk for erosion than shorter slopes.

Additional measures for slope protection include erosion control blankets, slope drains, and cat tracking.

2.6 Protect Storm Drain Inlets

ECS and EEG will be responsible for identifying and installing controls at storm drain inlets along the Project. The type of storm drain inlet protection will not be determined until the inlets are identified. Controls for inlet protection may include inserts or rock filled bags.

2.7 Establish Perimeter Controls and Sediment Barriers

The ROW will be protected against sedimentation using vegetative buffer zones. Additional perimeter control BMPs such as silt fence, straw wattles, and mulch berms will be added, as necessary, to control sedimentation due to erosion. Selection of specific site controls will be determined during the site specific planning phase (Phase I). All selected BMPs will be clearly noted and updated on SWPPP maps and plans. Perimeter controls will remain in place until final stabilization is met at the location the

control is serving. All BMPs will be installed per the manufacturers recommended specifications and in conjunction with the BMP detail sheets in the Appendix J- Best Management Practices of this SWPPP.

2.8 Retain Sediment On-Site

This Project will not utilize any Sediment / Retention / Detention Basins as a structural BMP due to the scope and linear nature of the Project. Alternative BMPs such as silt fence, straw wattles, and vegetative buffer strips will be utilized instead to control potential sediment and erosion discharges. If structures are necessary, these will be designed by a civil engineer and installed by ECS. EEG will monitor the effectiveness of temporary sediment controls to ensure no sediment or other pollutants are leaving the Project to the extent practical.

2.9 Establish Stabilized Construction Exits

Where feasible, a gravel exit pad (stabilized construction exit) will be installed where dirt access roads intersect with a paved public road. If determined necessary, additional devices such as rumble grates or wheel wash systems may be added. As these items are installed, the SWPPP will be amended to reflect the change in the BMP and detail sheets will be added to Appendix J- Best Management Practices of the SWPPP. The purpose of a stabilized construction exit is to prevent sedimentation track out from occurring on paved roads.

SECTION 3: GOOD HOUSEKEEPING BMPS

3.1 Material Handling and Waste Management

All litter, construction debris, and construction chemicals as outlined in Section 1.8 will be prevented from entering a receiving water or MS4. This will be achieved through the use of on-site trash receptacles and proper storage and containment of materials on-site.

This SWPPP will also address any pollutants from other areas other than construction, such as dedicated concrete plants. Currently, one mobile concrete batch plant has been identified for Project use. Material storage areas associated with the mobile batch plant will be monitored and mitigated for dust control and run off. A dust collector will also be utilized during concrete batching operations. Additional BMPs will be selected for the site as needed based on site specific circumstance. All mitigation measures and stipulations regarding materials and waste management will be implemented as outlined in the POD.

WASTE MANAGEMENT PRACTICES	
Solid Waste	**Comments**
Trash Containers	Covered containers will be used whenever possible. If they are not covered, they will be leak proof and trash will be removed often to prevent from blowing.
Roll Off Dumpsters	Will be used to control trash and debris. Lids are to be closed when not in use.
Daily Site Clean Up	Personnel will look for evidence of trash daily and dispose of in the appropriate containers
Collection of Waste	Solid waste contractors will pick up on a regular schedule
Concrete Wash Out Areas	Will be present where needed and cleaned out when capacity dictates.
Regulated Materials/Waste	
Fueling Areas	Secondary containment will be in place around fuel storage and fueling areas in material yards. Fueling on ROW will be performed in approved areas, using the approved fueling tools. Spill response materials will be readily available in the instance of a spill.
Oils (hydraulic, motor etc.)	Secondary containment will be in place around oil storage areas in material yards. Spill response materials will be readily available in the instance of a spill.
Fertilizers and Chemicals	Stored in controlled storage facility. Only those materials necessary to perform the work will be stored on vehicles.
Spills	Spill response materials and bulletins will be readily accessible to all work crews.
Portable Toilets	Placed in approved locations away from flow lines. Will be secured to prevent tipping.

3.2 Establish Proper Material Staging Areas

This Project anticipates having a total of eight to twelve primary material staging areas. Seven locations are currently listed in Section 1.1 of the SWPPP. As additional locations are obtained, they will be amended to the SWPPP.

BMPs for material handling and storage will be implemented as identified in Section 3.1 and will include the use of secondary containment structures, and secure storage locations. Additionally, topsoil and spoil stockpiles will be temporarily stored on the ROW. If current perimeter controls are not adequate to contain potential sediment laden runoff from stockpile locations, additional controls will implemented. This may include the use of BMPs such as silt fence, straw wattles, tackifing, and seeding. Operators will also ensure that no stockpiles of any bulk material are placed in a surface water way, wash, or other conveyance system. After construction activities are complete, spoil and top soil stockpiles will be spread onsite, or at other approved locations, and seeded for permanent stabilization.

3.3 Designated Concrete Washout Areas

Concrete chutes will be washed out into designated concrete wash locations. These locations will be located at least 100 feet from streams and wetlands and contained with berms and barriers to prevent migration of waste water and/or sediments into streams and waterways. If washout containers are utilized, they will be inspected frequently to ensure the container is not leaking and walls have not been damaged. Collected materials will be properly disposed of when the container is 75% full.

3.4 Proper Equipment/Vehicle Fueling and Maintenance Practices

Potential pollutants used for fueling and maintenance during construction will include products such as gasoline, diesel fuel, hydraulic fluid, lubricating oils solvents, cleansers, and other substances. Some of these materials will be stored and used in relatively large quantities at material yards and in rare instances on the ROW to operate and maintain equipment during construction. All materials will be used according to labeling and disposed of properly according to Federal, State, and local regulations.

As identified on the SWPPP Volume II Map Sets, select areas along the ROW have been designated as no fueling areas. No fueling activities may occur at these locations unless a determination is made by the Project CIC under the conditions outlined in the Project's HMMP.

All fueling and maintenance procedures and protocols will conform to the mitigation measures and stipulations outlined in the POD which includes, but is not limited to, the following.

- Heavy equipment used in the Project area will be inspected daily for leaks. No leaking equipment will be used within 100 meters (328 feet) of any water of the United States, including wetlands.

- Use, storage, and transport of materials and wastes will be performed in accordance with all applicable Federal, State, and local regulations, and the requirements of the Project HMMP.

- Storage of fuel, lubricant, or hazardous materials within 100 meters (328 feet) of a waterbody, wetland boundary, or within a designated municipal watershed is prohibited on the Project, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas.

- To prevent introduction of petrochemicals into the waters of Utah, fuel, oil, hydraulic fluid, lubricants, and other petrochemicals stored within a floodplain will have an appropriately sized impervious secondary containment system to prevent spills.

- Containers must be kept closed unless material is being transferred. Personnel will ensure that all transferring operations are monitored and not left unattended.

- Fueling of vehicles and equipment will be performed under controlled conditions using approved fueling tools.

- Refueling and storing potentially hazardous materials shall not occur within a 100-meter (328 foot) radius of a waterbody, a 200-foot radius of all identified private water wells, and a 400-foot radius of all identified municipal or community water supply wells. Spill preventive and containment measures or practices will be incorporated as needed.

- Washing of vehicles will adhere to guidelines under the allowable non-storm water discharges by not using detergents. If detergents are needed, vehicles will be taken off ROW to an approved wash facility.

Unique conditions can occur along the Project ROW where fueling within 100 meters (328 feet) of a waterbody, wetland boundary, or within municipal watersheds may occur. In the instance of such an occurrence the following factors shall be addressed prior to fueling.

- An evaluation of the environmental risks of relocating equipment to a refuel/lubrication area versus those risks involved with fueling/lubricating in place shall be made.

- Appropriate measures will be taken to prevent spills. This includes the use of secondary containment structures and/or drip pans to prevent spills. The appropriate absorbent materials will also be readily available for application as needed.

- Spill response kits will be stationed at sensitive work locations. Additional spill response materials will be located on each work truck including the fuel truck. Spill response kits will include a U.S. Department of Transportation approved container to allow for rapid containment and recovery of any spill of hazardous material.

- Approvals must be obtained from Project environmental personnel prior to fueling.

3.5 Equipment/Vehicle Washing

Weed wash stations will be required at select locations as identified on the SWPPP Volume II Map Set 1. Cleaning activities will concentrate on tracks, feet, or tires and the undercarriage with special emphasis on axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles.

A gravel pad will be installed at each wash location consisting of 3”-5” rock, placed a minimum of 8” deep. Geotextile filter fabric will be placed underneath the rock. Vehicle washing will be performed using a portable wash station consisting of a water tank and pressure wash system. Pad dimensions will be a minimum of 15 feet x 50 feet.

Perimeter berms, diversion devices and/or sediment traps will be installed where needed to control runoff. Washing areas will be clearly marked and personnel will be informed that washing activities must occur in this area. Other activities, such as vehicle repairs, will not be permitted in the wash area. No detergents will be used at weed wash locations. Weed wash areas will be regularly inspected as directed by this SWPPP. Maintenance and repair will be performed as needed throughout the duration of the Project until the wash station is removed and the site is restored.

3.6 Spill Prevention and Control Plan

This Project has a comprehensive HMMP that includes the following plans.

- Hazardous Materials Management Plan;
- Spill Prevention Containment and Countermeasure (SPCC) Plan; and
- Spill Emergency Response for Hazardous Substances Plan (SERHSP)

This program describes the Projects approach toward hazardous materials management, spill prevention, and response/remediation. Also discussed are disposal methods and the personnel responsible for the program.

A copy of the HMMP will be maintained with this SWPPP in the Project office at all times and will be an integral component of the SWPPP.

3.7 Allowable Discharges

The following is a list of allowable non-stormwater discharges, per the General Permit, that could be associated with the construction process. All non-stormwater discharge will be contained and reduced to the extent feasible and BMPs will be in place to minimize any pollutants that may potentially be discharged. The proper BMPs are listed below each non-stormwater discharge and will be in place to help control potential sediment and other pollutants from discharging into receiving waters or MS4s. In general, this site would be discharging allowable non-stormwater. It is anticipated that all non-stormwater discharges will be contained on-site to the extent practicable.

- Discharges from fire-fighting activities;
    - Due to the emergency nature of firefighting activities, protective measure will be implemented as able.

- Waters used to wash vehicles where detergents are not used.
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Water will be directed toward the Project area to be captured onsite as much as possible.

- Discharges from fire hydrant flushing's
    - As necessary, protective measures will be placed at hydrant locations to prevent the potential discharge of pollutants.

- Discharges from water to control dust provided effluent or wastewaters are not used;
    - Water will be directed toward the Project area to be captured onsite as much as possible.
    - Water filling stations will be evaluated for BMP implementation. Water filling stations will be kept away from slopes and areas graded back toward the site to the extent practical.
- Discharges from potable water sources including uncontaminated water line flushing.
    - Water will be directed toward the Project area to be captured onsite as much as possible.

- Discharges from routine external building wash downs where detergents are not used;
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Water will be directed toward the Project area to be captured onsite as much as possible.

- Discharges from pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless the spilled material has been removed) and where detergents are not used.
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Water will be directed toward the Project area to be captured onsite as much as possible.

- Discharges from uncontaminated air conditioning or compressor condensate.
    - If necessary, a capture system will be placed underneath equipment to catch potential discharges.

- Discharges from uncontaminated ground or water springs.
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Direct flow toward the Project area to be captured onsite as much as possible.

- Discharges from foundation or footing drains where flows are not contaminated with process material such as solvents; and
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Direct flow toward the Project area to be captured onsite as much as possible.

- Uncontaminated excavation dewatering.
    - As necessary, protective measures will be placed at these locations to prevent the potential discharge of pollutants.
    - Use of dissipation or retention devices to detain or retain flows as necessary.
    - Direct flow toward the Project area to be captured onsite as much as possible.

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SECTION 4: POST-CONSTRUCTION BMPS

This construction site will not utilize permanent structures such as on-site retention/detention basins. This site will utilize velocity dissipation devices, and stabilization from landscaping. These post-construction stormwater management measures will be installed during the construction process to help control pollutants in stormwater discharges after construction operations have been completed.

All temporary BMPs will be removed prior to filing a NOT for the Project. ECS understands that this may mean the Project is complete, but if final stabilization has not been achieved the NOT may not be filed regardless of the removal of the temporary BMPs.

This Project does not have a discharge connection or permanent stormwater outfall to unique water and understands that it would be prohibited under the General Permit.

The post-construction stormwater BMPs selected to reduce pollutants in storm water discharges after all construction phases have been completed will take into account local post-construction storm water management requirements, policies, and guidelines, as well as site-specific and seasonal conditions.

SECTION 5: INSPECTIONS

5.1 Inspections

EEG will perform site inspections to ensure BMPs are functional and the SWPPP is being properly implemented. As identified in Section 3.5.4 of the General Permit, inspections must be conducted in accordance with one of the two schedules listed below.

- At least once every 7 calendar days; or
- At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

Inspection frequency may be reduced to at least once a month if:

- The entire site is stabilized; or
- Runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or ground is frozen).

The inspection requirement is waived until one month before thawing conditions are expected to result in discharge if all the requirements are met:

1) The Project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month)
2) Land disturbance activities have been suspended
3) The beginning and ending dates of the waiver period are documented in the SWPPP

This site will be inspected weekly. If the inspection schedule is changed it will be noted in this SWPPP.

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Within 24 hours after the inspection, the report shall be updated and placed in the SWPPP Volume IV binder. The inspection reports for this Project will be placed in chronological order.

As identified in the General Permit Section 3.5.4.f., inspections at construction sites involving utility line installation may be more limited if the areas described above are not reasonably accessible or could cause additional disturbance of soils and increase the potential for erosion. In these circumstances, controls must be inspected at the same frequency as other construction Projects, but personnel may instead inspect controls along the construction site for 0.25 miles above and below each access point where a roadway, undisturbed ROW, or other similar feature intersects the construction sites and allows access to the areas described above. In the absence of evidence to the contrary, the conditions of the controls along each inspected 0.25 mile segment may be considered as representative of the condition of controls along that reach extending from the end of the 0.25 mile segment to either the end of the next 0.25 mile inspected segment, or to the end of the Project, whichever occurs first.

All inspections shall be performed by qualified personnel. A "qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity.

Inspection duties for the Project will be performed by EEG. The following personnel are responsible for conducting inspections. Personnel qualifications can be found in Appendix K- Employee Qualifications.

Name	Qualifications	Company	Phone Number
Bryan Watt	Lead Environmental Inspector/ Utah Registered Stormwater Inspector	EEG	(435) 671-1585
Chris McCarty	Environmental Coordinator	EEG	(435) 503-5876
Rain Gmuer-Johnson	Certified Stormwater Inspector and Preparer	EEG	(435) 503-5592
Kari Kerwin	Utah Registered Stormwater Inspector	EEG	(435) 253- 3035
Josh Mikel	Utah Registered Stormwater Inspector	EEG	(832) 525-8598
Ryan Thompson	Utah Registered Stormwater Inspector	EEG	(435) 841-0448

The inspections for this construction Project will include all areas of the Project that have been disturbed by construction activity, to include the ROW, access roads, construction yards and support facilities. At a minimum, inspectors shall examine the following areas during each inspection:

- Good housekeeping BMPs
- All erosion and sediment control BMPs to ensure they are in place and functioning as intended

- All areas disturbed by construction activity and areas used for storage of materials that are exposed to precipitation
- Locations where vehicles and equipment enter and exit the job-site for evidence of off-site sediment accumulations and effectiveness of the tracking device being used
- Site conditions for the evidence of, or the potential for, pollutants entering the MS4
- Accessible discharge points or locations to ascertain whether erosion and sediment control BMPs are effective in preventing significant impacts to receiving waters or tributaries of
- Where discharge locations are inaccessible, nearby downstream locations to the extent that the inspections are practical

The inspection report will have at a minimum:

- The inspection date
- Names, titles, and qualifications of the personnel making the inspection
- Weather information for the periods since the last inspection (or since commencement of the construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each event (in inches), and whether any discharges occurred
- Weather information and a description of any discharges occurring at the time of inspection
- Locations(s) of discharges of sediments or pollutants from the site
- Locations(s) of BMPs that need to be maintained
- Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
- Location(s) where additional BMPs are needed that did not exist at the time of inspection
- Corrective action required, including any changes to the SWPPP necessary and implementation dates

In general, sediment captured by sediment control devices must be removed when it has accumulated half way up the height of the BMP device. Removed sediment will be secured on site where it will not wash into inlets, ditches, channels, or streams or cause other adverse environmental impacts. All maintenance needs identified in inspections, shall be accomplished before the next anticipated storm event, or as necessary to maintain continued effectiveness of stormwater controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable (General Permit Section 3.5.3).

A record of each inspection and of all corrective actions taken in accordance with this SWPPP will be maintained for at least three years from the date that permit coverage's expires or is terminated. Inspection reports and corrective action logs will be maintained in Volume IV- Inspection Reports and Corrective Action Log of this SWPPP.

Any revisions to this SWPPP will be completed within 7 calendar days following the inspection. Implementation will be completed before the next anticipated storm event of 0.5 inches or more. If this is not possible, then implementation will be completed as soon as practicable.

5.2 Delegation of Authority

ECS has delegated EEG to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the General Permit for the Project. The designee is authorized to sign any reports, stormwater pollution prevention plans, and all other documents required by the General Permit.

A copy of the signed delegation form is located at the beginning of this SWPPP.

5.3 Corrective Action Log

Please refer to Appendix L- Corrective Action Log, which will be used to describe repair, replacement, and maintenance of BMPs undertaken as a result of the inspections and maintenance procedures. This log will describe the action taken, the date completed, and the person that completed the work.

SECTION 6: RECORDKEEPING AND TRAINING

6.1 Recordkeeping

A copy of this SWPPP and all reports required by the General Permit, and records of all data used to complete the NOI application will be maintained for a period of at least 3 years from the date that the site is finally stabilized and the permit is terminated. This will include, but is not limited, to the following:

- Dates of grading, construction activity, and stabilization
- A copy of the General Permit
- The signed NOI form or permit application
- A copy of the State notification indicating their receipt of your complete NOI application
- Inspection records
- Records relating to endangered species and historic preservation

After final stabilization the SWPPP is no longer required to be onsite, but may be maintained at the Permitee's primary headquarters.

6.2 Amendments to the Plan

This SWPPP shall be revised as necessary during its permit coverage (until a NOT is filed) to reflect current conditions and maintain its accuracy. The following conditions warrant an amendment to the Plan.

- This SWPPP shall be amended whenever there is a change in construction or operations that may affect the discharge of pollutants to surface waters or groundwater.

- This SWPPP shall be amended whenever inspections or investigation by site operators, local, State, or Federal officials indicate the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants from the sources identified under Part 3.5.1 of this Permit, or otherwise

not achieving the general objective of controlling pollutants in storm water discharges associated with construction activity.

- This SWPPP shall be amended whenever a new owner/operator becomes responsible for implementing all or part of the SWPPP, as described in Part 3.4 and Part 4.3 of the General Permit.

Amendments and implement schedules shall be performed in a timely manner, but in no case more than 14 days after it has been determined that the SWPPP is inadequate. All amendments will be dated and directly attached to the SWPPP.

Please reference Appendix M- Amendment Log for more information.

6.3 Training

Training of Project employees and subcontractors is an effective BMP. Stormwater training will include the following topics: erosion control BMPs, sediment control BMPs, non-stormwater BMPs, and good housekeeping BMPs. This training will be additionally tailored and/or supplemented for those employees with specific stormwater responsibilities. Training records will be maintained in the Project office along with this SWPPP.

SECTION 7: FINAL STABILIZATION

Final stabilization along the ROW, material yards, and other construction related areas, will be phased throughout the Project as construction activities are completed. This will include tower site locations, pull sites, sleeving sites, staging areas, material yards, maintenance yards, temporary access roads, and temporary construction support facilities.

Overall, native vegetation will provide for the final (permanent) stabilization of the work area. Seed selection will be based on site-specific conditions and tailored for each work location or region throughout the Project. Information on Project seed requirements was previously discussed in Section 2.4 of this SWPPP.

Areas that have achieved final stabilization will be noted in the SWPPP.

ECS will terminate coverage under the General Permit (UTR 300000) by submitting a NOT within thirty days after completion of all construction activities and completion of final stabilization of all areas of the site as defined in Part 6.15.

Part 6.15 contains the definition of "Final Stabilization". Per the General Permit, Final Stabilization means that all soil disturbing activities at the site have been completed, and that a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geo-textiles). In some parts of the project, background native vegetation will cover less than

100% of the ground (e.g. arid areas). Establishing at least 70% of the natural cover of native vegetation meets the vegetative cover criteria for final stabilization. For example, if the native vegetation covers 50% of the ground, 70% of 50% would require 35% total cover for final stabilization.

The NOT shall be submitted on the form specified by the Executive Secretary.

SECTION 8: CERTIFICATION

This SWPPP will be signed and certified by all Project construction operators and subcontractors. Operator and subcontractor certifications are located at the beginning of this SWPPP.