

Lake Powell Pipeline

Draft Vegetation Resources Work Plan

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Section 1 Introduction

The purpose of this work plan is to define the procedures for analyzing impacts on vegetation resources for the Lake Powell Pipeline (LPP). This work plan presents the issues and concerns, defines the impact area and significance criteria, describes the analysis methodology, reviews existing data and identifies data needs, references an outline for the Vegetation Resources Technical Report, and identifies dependency items and relationships to other resources.

Section 2 Issues

Vegetation resources-related issues and concerns identified during the formal scoping process will be addressed in the analysis for the LPP alternatives. Related questions raised during the informal scoping process have been consolidated into the following issue(s).

- What impacts would occur on vegetation resources from construction and operation of the LPP?
- What potential impacts would occur on pinyon-juniper vegetation that provides important habitat for wildlife?
- What potential impacts would occur on vegetation cover?
- What potential impacts would occur on species composition, production and regeneration?
- What potential impacts would occur from invasion of disturbed areas by noxious plants and weeds?
- What potential impacts would occur with a loss of native soils from along the pipeline right-of-way from the trenching operation that could affect soils ability to support native vegetation?

Additional issues that arise during the formal scoping process, or during the preparation of the analysis, will be added and addressed.

Section 3 Impact Topics

The vegetation resources impact topics include the following:

- Changes in vegetation cover, species composition, production and regeneration
- Poisonous or noxious plants

Section 4

Impact Area and Significance Criteria

4.1 Impact Area

The impact area would include the following:

- Corridors along the area directly affected by pipelines and associated features (drains, blowoffs), access roads, pump stations, power transmission lines, hydro stations, and reservoirs
- Any vegetated areas affected by construction activities or by changes in surface or groundwater flows or changes in water supply sources

4.2 Significance Criteria for Each Impact Topic

Impacts on vegetation resources are considered significant if construction, operation or maintenance activities would result in any of the following conditions:

- Poisonous or noxious plants become established where none existed previously.
- Other significance criteria to be determined in consultation with fish and wildlife agencies

Section 5

Methodology

The following subsections describe the methodology that will be used to address issues and concerns and to define existing vegetation conditions and analyze impacts.

5.1 Introduction and Overall Approach

5.1.1 Definition of Baseline Conditions

The vegetation resources will be classified by general vegetation community type. This data will be developed in geographic information systems (GIS) format for the impact area for each alternative. These maps will be used to characterize the baseline vegetation resources in areas that could be disturbed from construction and operation of the alternatives.

5.1.2 Analysis of Alternatives

The analysis of impacts on vegetation will involve quantifying the area of disturbance of existing vegetative communities by type and then determining the effect of the disturbance on each vegetation community type. The features of each alternative will be superimposed on the baseline vegetation community maps to analyze impacts on vegetation and potential invasion of noxious weeds into disturbed areas. Impacts will be reported by the percentage of community type and the number of acres affected.

5.1.3. Analysis of Cumulative Impacts

The vegetation resources cumulative impacts analysis will address the combined impacts of the alternatives and any past or future proposed or planned actions that have or are likely to affect the

vegetation resources in the impact area. The inter-related projects will be identified for analysis of cumulative impacts.

Section 6 Data Needs and Analysis

6.1 Data Needed

The data needed to perform the analysis include aerial photographs of the project area, vegetative community mapping, vegetative community type survey results, soil surveys, surface and groundwater analysis of any reach or stream within the project area that may be influenced by operational changes from the project, extent of surface disturbance from construction and operation related activities.

6.2 Data Available and Adequacy

The impact analysis will be performed using existing published data to identify and document existing baseline conditions. The following data sources will be used in baseline inventory and to support the vegetation analysis.

- Vegetation landcover mapping available on the Worldwide Web at:
<http://earth.gis.usu.edu/swgap/>
- Ecological range site descriptions available on the Worldwide Web at:
www.websoilsurvey.nrcs.usda.gov
- Soils data for Utah and Arizona from the NRCS Soil Data Bank available at:
<http://soildatamart.nrcs.usda.gov/USDGSM.aspx>
- LPP project feature locations and pipeline corridors in ArcView GIS format
- National Wetlands Inventory (NWI) data in ArcView GIS format
- Kearny, Thomas H. and Robert H. Peebles. 1960. *Arizona Flora*. University of California Press.
- AZ Strip FEIS
- Kanab RMP

6.3 Additional Data Needs

6.3.1 Primary

The following data will be required in addition to the data described in Section 6.2:

- Field reconnaissance data to characterize baseline vegetation conditions.

6.3.2 Secondary

The following data will be required in addition to the data described in Section 6.1: (description of data need from governmental agencies, historical records, or derived from other resource analysis results, etc.)

- None identified at this time.

Section 7

Procedures For Developing Mitigation

The analysis of impacts on vegetation resources will be based on the standard operating procedures and measures to avoid or reduce impacts, both of which will be included in the project description chapter of the Draft Vegetation Resources Impact Assessment. The significance criteria for vegetation resources will then be applied to determine if any impact would be significant. Mitigation measures would then be developed to offset significant impacts. The mitigation measures will be based on applicable state and Federal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, and other responsible federal agencies and factored into the respective decision documents.

Section 8

Technical Report

A technical report will be necessary to document in detail baseline conditions of and potential impacts on vegetation resources. The technical report will follow the resource technical report outline common to all resource work plans (see Resource Technical Report Outline).

Section 9

Dependency Items From Other Resources

The following items are required from other MWH Team resource specialists:

- None identified at this time.