

Lake Powell Pipeline

Draft Wildlife Resources Work Plan

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Section 1 Introduction

The purpose of this work plan is to define the procedures and methodologies for analyzing potential impacts on wildlife resources for the Lake Powell Pipeline (LPP). The work plan is prepared to meet requirements for preparation of a Wildlife Resources Technical Report (TR). This work plan presents preliminary issues and concerns, defines the impact area and significance criteria, describes the analysis methodology, summarizes data available and needed, references an outline for the Wildlife Resources TR, and identifies dependency items and relationships to other resources.

Section 2 Issues

Wildlife-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 issues.

- What impacts would occur on wildlife species and habitats from construction in corridors along the Project alignment and habitat changes from the presence of new facilities such as pipelines, penstocks and associated features (drains, blowoffs), access roads and construction staging areas, pump stations, substations and power transmission lines, hydro stations and reservoirs?
- What impacts would occur on wildlife species and habitats from material borrow sites and spoil disposal areas?
- What impacts would occur on wildlife species and habitats in riparian corridors impacted by Project construction activities?
- What impacts would occur on wildlife species and habitats in wetlands affected by Project construction activity or changes in surface or groundwater flows?
- What impacts would occur on wildlife species and habitats in critical seasonal ranges and migration routes crossed by the Project alignment?

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 following wildlife impact topics have been identified.

- Wildlife populations
- Wildlife habitat

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 and staging areas, pump stations, substations and power lines, power generation facilities and reservoirs
- All streams and rivers and associated riparian corridors impacted by construction activities or that would have alterations in flow from baseline conditions
- Any wetlands affected by construction activity or changes in surface or groundwater flows

4.2 Significance Criteria for Each Impact Topic

As there are no regulatory guidelines for wildlife population or habitat loss or impacts, the significance criteria are based on past experience with similar projects and best professional judgment.

The following criteria will be used to determine significant impacts on wildlife and habitats:

- Activities resulting in substantial disturbance to wildlife habitat or populations. A substantial disturbance is one that destroys a large area of utilized habitat, disturbs or displaces a resident population or sub-population, or results in losses of a large number of individuals of the species within the impact area. Disturbance may arise from direct construction effects on habitat or indirectly by noise or human activity that would reduce wildlife habitat values. Substantial disturbance is based on the status, population dynamics, behavior, habitat availability and quality for each species group (e.g., game or non-game species) relative to the type, intensity and duration of a specific impact. For example, species that are regionally common (e.g., red-winged blackbird [*Agelaius phoeniceus*]) or have a high reproductive potential and the ability to recolonize disturbed sites rapidly (e.g., deer mouse [*Peromyscus maniculatus*]) would not be significantly affected by LPP development.
- Project activities that would cause the loss (temporary or permanent) or unavailability of “critical” big game range (as officially designated by the BLM, Utah Division of Wildlife Resources or Arizona Game and Fish Department) from December 1 to April 15.

Section 5

Methodology

The following subsections describe the methodology that will be used to address issues and concerns and to define existing wildlife distributions and habitat use and analyze impacts.

5.1 Introduction and Overall Approach

Wildlife impacts will be analyzed by estimating the impact of habitat disturbance developed by the vegetation resource specialist, estimating the area of critical wildlife habitat disturbed by construction and operation of the LPP alternatives, estimating the impact of project construction and operation on wildlife breeding habitat and migration corridors and by estimating direct mortality of wildlife from construction and operation of LPP alternatives and indirect mortality from habitat loss and changes in human population and activity.

5.1.1 Definition of Baseline Conditions

Wildlife resources baseline conditions will be defined by existing wildlife species populations and habitat in the impact area and surrounding area. Species and habitats will be described at a landscape scale and quantitative field surveys within the impact area are not anticipated.

5.1.2 Analysis of Alternatives

Critical wildlife habitat maps will be developed using a geographic information systems (GIS) for the impact area for each alternative. Acres of disturbance of general habitat by vegetative community type will be obtained from the vegetation resource analysis. Undisturbed habitat will be differentiated from disturbed habitat along transportation or utility corridors. Disturbance will include direct alteration or loss of habitat from construction or operation of LPP features and noise impacts from construction or operation of LPP features that would reduce wildlife habitat values or wildlife habitat use. The time frame of impacts – short and long-term – will be considered as part of the analysis.

Wildlife species recorded within the impact area will be analyzed by habitats utilized and the impacts on those habitats by construction or operation of LPP features. Loss or fragmentation of habitat will be evaluated in terms of minimum home range requirements of species, where known. Some species may require a critical amount of contiguous habitat. Where such species have been found in the study area in recent surveys, the available habitat and potential changes will be evaluated in terms of their critical habitat needs. Indirect impacts on wildlife species from changes in human population or activities associated with the LPP in the impact area will be analyzed for impacts on habitat utilization and wildlife mortality. Direct and indirect impacts will be quantified to the degree possible and compared to the significance criteria to determine significant impacts.

5.1.3 Analysis of Cumulative Impacts

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

Section 6 Data Needs and Analysis

6.1 Data Needs

The following data are needed to perform the analysis.

- Identification of unique (critical) habitat present within the impact area
- Information on wildlife species distributions, life history (home ranges/migration patterns, habitat use, reproduction etc.) and responses to project-related activities (noise and vibrations)
- Vegetative community distribution in the impact area, acres disturbed and estimated changes in vegetation communities from the vegetation resource analysis, including riparian areas and wetlands
- Estimated noise levels from project construction and locations of blasting sites and estimated noise produced by blasting

6.2 Data Available and Adequacy

6.2.1 Available Data

The following data sources have been identified to date.

- Utah wildlife species accounts and general distribution information for most of the commonly found wildlife species in Utah from the Utah Division of Wildlife Resources available on the Worldwide Web at: <http://www.utahcdc.usu.edu/ucdc/>
- Utah critical and high-value wildlife range data available from the Utah Division of Wildlife Resources in Geographic Information Systems (GIS) format for a number of species including elk, mule deer, sage grouse, pronghorn, black bear, desert bighorn sheep and moose available on the Worldwide Web at: <http://www.utahcdc.usu.edu/ucdc/DownloadGIS/disclaim.hTR>
- BLM Grand Staircase – Escalante National Monument GIS files, available on the Worldwide Web at: <http://www.ut.blm.gov/monument/gis-data-library.php>
- Arizona wildlife species accounts and general distribution for most of the commonly found wildlife species in Arizona from the Arizona Natural Heritage Program available on the Worldwide Web at: http://www.gf.state.az.us/w_c/edits/species_concern.shtml
- Arizona wildlife species GIS distribution maps from the Southern Arizona Data Services Program available on the Worldwide Web at: <http://sdrsnet.snr.arizona.edu/index.php?page=datamenu&lib=0&sublib=all>
- Arizona Game and Fish Department: Comprehensive Wildlife Conservation Plan: 2005 -2015
- Burt, W.H. and R.P. Grossenheider. 1989. *A Field Guide to the Mammals: North America North of Mexico* (Peterson Field Guides). Houghton Mifflin Co. New York, N.Y.
- *National Geographic Field Guide to the Birds of North America*, Third Edition. National Geographic Society. Washington, D.C. 1999
- LPP project features and pipeline corridors in ArcView GIS format

- National Wetlands Inventory (NWI) data in ArcView GIS format for the LPP project area
- Arizona Strip FEIS
- Kanab Field Office Resource Management Plan
- Kanab Field Office Areas of Critical Environmental Concern Draft Report
- Grand Staircase-Escalante National Monument EIS

6.2.2 Level of Analysis With Available Data

The available data are sufficient to analyze preliminary proposed alternatives to estimate general levels of impact on wildlife species and habitat for comparison of alternatives.

6.3 Additional Data Needs

6.3.1 Primary

The following primary data needs have been identified.

- Field reconnaissance data on wildlife species and habitats along the LPP alternative corridors

6.3.2 Secondary

The following secondary data needs have been identified:

- BLM wildlife distribution and habitat data for the project area
- Migration corridors for terrestrial species

6.3.3 Level of Analysis with Additional Data

The additional data will be sufficient to perform detailed analysis of impacts on wildlife species and habitat for alternatives carried forward after fatal flaw engineering analysis.

Section 7 Procedures for Development of Mitigation

The analysis of impacts on wildlife resources will be based on standard operating procedures and measures to avoid or reduce impacts that have been used in similar water pipeline and power generation and transmission projects. The significance criteria for wildlife 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. 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 wildlife 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:

- **Vegetation Resources:** General vegetation (habitat) types occurring in alternative footprints and area of each vegetation type disturbed by project construction and operation.
- **Noise:** Magnitude of noise levels from construction activity and location and timing of blasting, if utilized. Operating noise levels from project facilities.
- **Wetland Resources:** Location, type and area of wetlands impacted by project construction or operation.