

# **Lake Powell Pipeline**

## **Socioeconomics/Water Resources Economics Impacts Draft Work Plan**

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# **Lake Powell Pipeline Socioeconomics/Water Resource Economics Draft Work Plan**

## **Section 1 Introduction**

The purpose of this work plan is to define the procedures for analyzing impacts on the socioeconomics and water resources economics 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 Socioeconomics/Water Resources Economics Technical Report, identifies dependency items and relationships to other resources, and identifies potential problems and recommendations for resolving problems.

This work plan is provided in conjunction with, and in support of, the financial analyses work plan.

## **Section 2 Key Issues**

Socioeconomics and water resources economics 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 is the “no action alternative?” What does it really mean relative to the LPP project and new population and economic growth in southwest Utah? Would new water supplies be furnished from other projects? Are the other projects more costly?
- How would the LPP project address the demand for new water resources within the southwest Utah area? How would the project accommodate or affect growth? Is the project consistent with state and regional water resource planning efforts?
- How would water conservation and management programs be integrated into the LPP project? Is the LPP project needed, even with new conservation and water management programs in place?
- How cost-effective is the LPP project?
- How affordable is the LPP project to the state and local community? How would the costs be allocated among existing and new water users? What would be a typical water bill with the project in place?
- What impacts would occur on local and regional socioeconomics resources from construction and operation of the LPP?

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 socioeconomics and water resources economics impact topics include the following key topics:

- Forecasts for regional population and economic growth in southwest Utah and the specific project area (St. George to Cedar City corridor, and the service areas of the Washington, Central Iron, and Kane Counties' Water Conservancy Districts).
- State/local community alternatives for meeting new water resource supplies, with and without the LPP project.
- Application of economic analyses to the project area: 1) what is an appropriate role for direct net (NED) economic values within state level analyses; 2) the role of regional economic impact assessment (RED) for state/local-funded projects.
- Regional economic impacts (income, employment, services, housing-utilities) from water resources development to meet municipal-residential water demands.
- Costs of meeting new water resource needs for the project area, including conservation and alternative project costs.
- Cost allocation among existing and new water users.
- Local construction impacts; direct and secondary regional economic impacts.

## **Section 4**

### **Impact Area and Significance Criteria**

#### **4.1 Impact Area**

The impact area would include the following:

- Any area directly or indirectly affected by new project water supplies, primarily described as the St. George to Cedar City corridor, in Southern Utah. This would include Washington, Iron, and Kane counties and the areas served by their respective Water Conservancy Districts.
- Any area or community directly affected by project feature construction or operations.

In assessing socioeconomic impacts, the impact area is generally similar for each of the LPP alternatives, and relates to economic impact issues for new water supplies for the primary project area (as described below).

- The Project area for new water supply impacts from construction includes: the pipeline corridors from Lake Powell to St. George and Cedar City; and to some extent the service areas of the Washington, Central Iron, and Kane Counties' Water Conservancy Districts, where new water supply infrastructure would be needed.

- Construction project impacts would be related primarily to workforce needs and local population impacts, services needs for construction, and regional economic impacts associated with the direct construction phase (local income and employment impacts—RED type analyses).
- The project construction would exist within a supply curve of multiple water supply efforts and alternatives (multiple projects, including conservation measures). The construction costs for this LLP alternative would be identified and related to the supply curve options and regional demand. This would be expressed in terms of capital dollars per acre-feet of delivered water, and annualized capital costs per acre-feet of delivery (similar to NED type analyses). Relevant cost data and supply need estimates would be concisely discussed here (as they would be covered in more explicit detail within other environmental assessment sections).
- Some of the key construction related impact issues associated with water resource supply alternatives and planning, noted above in Sections 2 and 3, would be addressed, and issues directly related to project financing and cost allocation would be reviewed under the project financing review sections.
- The project area for new water supply impacts for operation includes: the St. George to Cedar City corridor, and the service areas of the Washington, Central Iron, and Kane Counties' Water Conservancy Districts).
- Operational changes include any direct population, labor force, or services/utilities/energy needs associated with project operations.
- Operational changes affect the alternative's impact of providing new water supplies to the local and state economies. This means interpreting the regional economic impacts associated with providing new water supplies, including accommodating new population growth, changes to income and employment, and the likely changes to the composition of the regional economic sectors.

## 4.2 Significance Criteria for Each Impact Topic

Impacts on socioeconomics and economics of water resource supply systems are considered significant if construction, operation or maintenance activities would result in any of the following conditions.

Population/Employment/Income/Services (Direct Project Construction):

- A significant impact would be a 10 percent near-term increase to local communities from construction or operation workforce activities.
- A significant change would be a 10 percent near-term increase to the regional and south-state employment base, and associated income impacts, related to construction or operation workforce activities.
- A significant change would be a 10 percent near-term increase to local/regional services/utilities/energy demand directly related to the project.

Population/Employment/Income/Services (Water Supply Impacts):

- A significant impact would be a 10 percent long-term (permanent) increase to local communities or the Southern Utah area from population and economic growth facilitated by access to new water supplies.
- A significant impact would be an increase to the capital/operation costs of new water resources delivery greater than 10 percent of the existing water supply delivery costs, to existing residents and municipal water users; or an increase cost of new water supply delivery that exceeded other new water supply delivery costs within the state by 10 percent, for new residences and municipal water users.

## **Section 5 Methodology**

### **5.1 Introduction and Overall Approach**

Impacts on the socioeconomics and water resources economics for the Lake Powell Pipeline (LPP) will be analyzed by relying on conventional methods for socioeconomic impact assessment and water resources economics. This will primarily include analysis techniques that are commonly used for Social Impact Assessment (SIA), Regional Economic Development (RED) assessment, and National Economic Development (NED) assessment.

#### **5.1.1 Definition of Baseline Conditions**

Socioeconomic and water resource economics baseline conditions will be defined as:

- Projected (2015) population, employment, and regional income conditions for the project area.
- Projected (2015) water demand and supply conditions and costs.
- Baseline conditions will assume that identified projects for new water supply in current Capital Improvement Plans are being actively pursued, including conservation and water right transfers already identified by the Water Conservancy Districts.

#### **5.1.2 Analysis of Alternatives**

Impacts on socioeconomics and water resources economics will be analyzed for each of the alternatives. These impacts will be measured by reviewing:

- Potential changes in population, economic activity (employment, income, and economic sector changes), and service and infrastructure needs related to direct project construction and operations.
- Forecast changes to local and southwest Utah population and economic activity, assuming that potential demand is met by the LPP water supply.
- The estimated costs of the LPP water supply for the project area.

### **5.1.3. Analysis of Cumulative Impacts**

The socioeconomics and water resources economics cumulative impacts analysis will address the combined impacts of the LPP project and any past or future proposed or planned actions that have or are likely to affect the impact area.

## **Section 6 Data Needs and Analysis**

### **6.1 Data Needed**

The data needed to perform the analysis include:

- State and regional population, services, employment, and income data, historical and forecast data/information.
- State and local water use data and forecasts.
- Project cost data, and regional, state, and West-wide data on water development costs.
- Capital Facilities Plans for WCWCD, KCWCD, and CICWCD.

### **6.2 Data Available and Adequacy**

The data required to complete the socioeconomics and water resources economics analysis can be acquired from the following identified and existing sources:

- Utah State Governor's Office of Planning and Budget (and related state agencies for population and economic activity data); and the State Water Resources Department.
- U. S. Census and Bureau of Economic Analysis agencies (and related federal agencies with socioeconomic data).
- The Water Conservancy District compiled data.
- University published reports and data sources, and journal articles.
- Other sources.

## **Section 7 Procedures For Developing Mitigation**

The analysis of impacts socioeconomics and water resources economics 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 project documents. The significance criteria for impacts on the socioeconomics and water resources economics will then be applied to determine if any impact would be significant. Mitigation measures would then be developed to offset negative 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, or the impacts may be determined to be positive in nature. 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 socioeconomics and water resource economics. 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:**

- Project alternative cost data.
- Water demand modification estimates from existing data sources.

## **Section 10**

### **Potential Problems and Recommendations**

No potential problems are anticipated in preparing these environmental document sections.