

APPENDIX E
PHASE 2 SOCIOECONOMIC ANALYSIS

High-Level Socioeconomic Analysis of the Landscape Options—Phase 2

This Phase 2 analysis was originally prepared for the Socioeconomic Resources Draft Technical Report. In October 2003, the Phase 2 study plan was phased out by the plenary, except in so far as it provides reference material for the socioeconomic work group members. The analysis was removed from the Socioeconomic Resources Final Technical Report and placed in this appendix to the consultation record.

Description and Purpose

The socioeconomic study consists of three phases. The first phase describes the existing socioeconomic condition in the study area and the current Klamath Hydroelectric Project (Project) and environmental and social measures as they relate to socioeconomic factors. The second phase is to conduct a high-level socioeconomic analysis of the landscape options defined by the plenary group. The third phase primarily will assess the changes in the socioeconomic condition in the study area owing to the differences in the proposed Project and the current Project, which will include protection, mitigation, and enhancement (PM&E) measures (e.g., new environmental and social measures). This will involve examining only the incremental effects resulting from any changes in the Project and PMEs.

This discussion addresses only Phase 2. The effects of the landscape options will be defined in terms of the changes to the current condition characterized by the Phase 1 study. This Phase 2 study will provide information on the anticipated changes in the socioeconomic condition that may result from each of the landscape options defined by the plenary group.

For each of the options, the Phase 2 study will address the following key questions at a landscape level:

1. Which major economic sectors will be affected and what would be the nature of the effects on those sectors?
2. Would the effects on economic sectors translate into changes in employment and earnings in the economies of the study region?
3. Would there be effects on population growth, and community services in the study area?
4. What would be the expected direction and economic significance of the changes in market and nonmarket economic benefits and costs (i.e., described in monetary, nonmonetary, or qualitative terms)?

5. How would the potential benefits and costs be distributed within and across regions in the study area (i.e., which societal groups would bear the burdens and who would reap the benefits)?

Objectives

The objective of the Phase 2 study is to conduct a high-level socioeconomic analysis of the landscape options defined by the plenary group. This will involve completing the socioeconomic sections of the System Landscape Options Matrix (SLOM) based on the key Phase 2 study questions identified above.

The Phase 2 objectives will be revised as necessary in the course of conducting the study.

Relicensing Relevance and Use in Decisionmaking

The results of this Phase 2 study will be provided to the Federal Energy Regulatory Commission (FERC) and will be used to support the environmental analysis required under the National Environmental Policy Act (NEPA).

PacifiCorp will use the Phase 2 study results to increase stakeholder understanding of the anticipated changes in the socioeconomic condition that may result from each of the landscape options defined by the plenary group.

Methods and Geographic Scope

This study will begin with the descriptions of the landscape options defined by the plenary group and trace through the resource changes to identify the anticipated changes in socioeconomic endpoints needed to complete the socioeconomic sections of the SLOM. This will involve the following tasks:

1. Discuss the landscape options defined by the plenary group to ensure a common understanding among members of the socioeconomic work group.
2. Study the SLOM and trace through the identified resource effects to determine potential linkages to socioeconomic effects (taking care to maintain the linkage to the resource change).
3. Add the socioeconomic effect categories to the SLOM and indicate what information will be used to predict the direction and likely socioeconomic significance of the effects.
4. Develop a list of question for the resource specialists if needed to assist with interpreting entries to the SLOM and to further refine the socioeconomic entries to the SLOM.
5. Identify the geographic scope of the socioeconomic effects.
6. Identify types of information needs, information resources, as well as anticipated data and information gaps.
7. Conduct a review and high-level analysis of the readily available data and information to address the key Phase 2 study questions defined above.

Discuss Landscape Options

This section will describe the changes resulting from the landscape options that the study will evaluate. The socioeconomic study specialists will coordinate with the other resource study specialists to identify potential effects with significant linkages to socioeconomic resources. It also will be important to assess the extent to which such relationships can be disentangled from the non-Project factors that influence those same socioeconomic resources.

Develop Socioeconomic Entries for the SLOM

The Phase 2 study will develop entries for the SLOM that result from the socioeconomic work group efforts to trace through the resource changes that would result from the landscape options and identify the anticipated changes in socioeconomic endpoints. As per the key study questions identified above, these socioeconomic endpoints will include identifying the economic sectors likely to be affected, the direction and likely economic significance of the changes in sectoral employment and earnings (or harvest), how these changes may in turn affect local socioeconomic resources such as population, community services, and infrastructure, economic benefit and cost effect categories as per Table 1 below, and the distribution of economic benefits and costs by identifiable population subgroups or geographic regions.

Economic Sectors

Examples of sectors that could be affected by changes from the current Project operations and PM&E measures include but may not be limited to the following:

- Marine commercial fishing, American Indian river commercial fishing, and American Indian subsistence fishing
- Recreation and ecotourism businesses (e.g., ocean sport fishing, river sport fishing, white-water boating, recreational mining, and reservoir recreation) that rely on the Klamath River resources in the study area
- Irrigated agriculture that relies on the Klamath Hydroelectric Project for water supply
- Construction
- Ecosystem Restoration
- Municipal water and wastewater services

Other Regional Socioeconomic Effects

The matrix would identify effects on each of the following socioeconomic variables:

- Population
- Housing
- Local government fiscal conditions
- Public services (police, fire, emergency personnel, schools)

- Infrastructure (transportation, utilities)
- Locations of businesses and households

Economic Benefit and Cost Categories

The matrix will identify economic benefit and cost effect categories and likely direction and economic significance of effects. Market and nonmarket effects may include (but are not limited to) the following resources:

- Power Production
- Market, nonmarket, and indirect effects from changes in ecological services (e.g., restored sport, commercial and tribal fisheries; restored aquatic habitat, changes in property values, changes in flood moderation, changes in municipal water supply, changes in irrigation water supply) (see Table 1). Column one of Table 1 identifies the resources potentially affected by the landscape options. The economic benefits associated with such changes are listed in column two. Often the same beneficial effect, such as sport fishing, can be affected by multiple resources. Therefore, approaches that capture the combined influence of multiple resource changes may be required to avoid double counting of benefits.

Table 1. Ecological services.

Resource	Benefits
Water Quality	Market Commodities <ul style="list-style-type: none"> • Guided recreation/ecotourism • Fish (commercial fishing) Nonmarket Commodities <ul style="list-style-type: none"> • Recreation (sport fishing, near - shore recreation, swimming) • Aesthetics (property values) Indirect: Ecosystem Services <ul style="list-style-type: none"> • Aquatic habitat • Other Passive Use values
Fisheries	Market Commodities <ul style="list-style-type: none"> • Fish (commercial fishing) Nonmarket Commodities <ul style="list-style-type: none"> • Sport fishing • Subsistence Fishing Passive use values
Hydrology (Instream Flow, Water Quantity, Water Levels)	Market Commodities <ul style="list-style-type: none"> • Fish (Commercial fishing) Nonmarket Commodities <ul style="list-style-type: none"> • Recreation opportunities (whitewater boating, flatwater boating, sport fishing, near-

Table 1. Ecological services.

Resource	Benefits
	shore recreation) <ul style="list-style-type: none"> • Subsistence fishing • Aesthetics (property values) Indirect Ecosystem Services <ul style="list-style-type: none"> • Irrigation • Flood control • Water supply • Sediment trapping • Other Passive Use Values
Terrestrial	Market Commodities Nonmarket Commodities Indirect Ecosystem Services
Visual/Aesthetics	Nonmarket Commodities
Cultural	Nonmarket Commodities <ul style="list-style-type: none"> • Cultural enhancements • Cultural recreation/education opportunities Tribal Values Passive Use Values
Recreation Facilities/Access	Nonmarket Commodities <ul style="list-style-type: none"> • Recreation opportunities

- Real resource costs associated with constructing, operating, and maintaining new facilities or removing or altering existing facilities
- Real resource costs associated with changes in Project operations

The list of potential Project benefits and costs will depend on clear descriptions of the landscape options and the anticipated resource changes.

Pathway to Economic Endpoints

This task will involve coordinating with the work of each study team to describe how the group of associated actions making up the landscape options (the hydrologic modifications, construction and operation, changes in water quality, and fishery resources) is likely to affect the regional and sub-regional economy within the study area, as well as the other regional socioeconomic endpoints and economic benefit and cost categories.

Determine Geographic Scope

The geographic scope of the Phase 2 analysis depends on the spatial extent of the landscape options' spheres of influence.

Identify and Review Existing Information

PacifiCorp will compile the readily available information supplied by members of the socioeconomic work group.

Relationship to Regulatory Requirements and Plans

The Phase 2 study goes above and beyond any regulatory requirements associated with the license application.

Technical Work Group Collaboration

Refer to Section 2.6 of the Socioeconomic Resources Final Technical Report for a summary of the socioeconomic work group collaboration. Worthy of repeat is that a turning point for the socioeconomic work group came when the members agreed to coordinate with the plenary group on issues related to defining options for reconnaissance-level analysis and defining the proposed Project and PM&E measures. This will be an iterative process primarily driven by fish passage options, especially because they are likely to differ in their potential consequences for the socioeconomic environment. This understanding paved the way for developing the third phase of the study plan, which primarily will assess the changes in the socioeconomic condition in the study area owing to the incremental changes resulting from the proposed Project and PM&E measures (e.g., new environmental and social measures). For more information on the collaborative process, refer to the consultation record text..

Study Observations and Findings

This study has not yet been approved by the plenary group, nor has it been implemented. Therefore, there are no results to report at this time.

Discussion

This study has not yet been implemented.