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August 15, 2007

Honorary Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

RE: Wells Hydroelectric Project No 2149-131
Comments on the Douglas PUD Study Plan

Dear Secretary Bose:

On behalf of the City of Pateros ("the City"), we submit the following comments on Douglas County PUD's ("Douglas PUD") Proposed Study Plan dated May 2007.

BACKGROUND

In our letter dated February 28, 2007 (and supplemented on April 2, 2007), the City requested that the Douglas PUD conduct the following studies:

1. Socio-Economic Impacts. The City made a formal request for a study of the socio-economic impacts of the Wells Project on Okanogan County and the cities of Pateros, Brewster and Bridgeport, all of which are located within the Project boundary.

2. Operation and Maintenance of Recreation Facilities. The City requested Douglas PUD to conduct a study of the specific costs for operation and maintenance of city parks.

3. Visitor Information Center. The City requested that Douglas PUD study the feasibility of a regional Visitor Information Center.

In its May 2007 Proposed Study Plan submission, Douglas PUD has indicated that it believes "none of these study requests are appropriate for study during the ILP study period." See p. 14. The City respectfully disagrees with Douglas PUD for the reasons set forth below.

I. Comments on Douglas PUD's Denial of Study Request for Socio-Economic Study

The City was very clear as to the nature of the requested study of the socio-economic impacts of the Wells Dam project on the surrounding cities, specifically identifying the following issues for review:

- Identify, describe and document factors that influence regional and local economics, including health care, agriculture, schools and other public entities, industry and tourism.
- Identify the socio-economic impacts of the Wells Project on Okanogan County and the cities of Pateros, Brewster and Bridgeport.
- Identify future growth opportunities and estimate the impact of Project operations on these resources.
- Specifically identify the socio-economic impacts resulting from the City of Pateros' relocation and displacement when Wells Dam was originally built in 1962 and the continuing effects of said relocation and displacement.

As will be discussed below, despite Douglas PUD's resistance, a socio-economic study is required under the laws and regulations governing the relicensing of Wells Dam.

A. The FPA and NEPA both require FERC to consider socio-economic impacts of continued operation of a hydroelectric project.

Before granting a licensee a new license to operate a federal hydroelectric project, FERC must comply with the mandates of the Federal Power Act ("FPA") and the National Environmental Policy Act ("NEPA"). Both statutes required the socioeconomic study requested by the City of Pateros.

First, the FPA gives FERC broad guidelines to apply in its hydroelectric-licensing decisions:

In deciding whether to issue any license ... for any project, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.

16 U.S.C. § 797(e).

The FPA also provides:

The project adopted ... shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway ... for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses [.]

Id. § 803(a)(1).

These provisions recognize the numerous beneficial public uses of the waterways and courts have interpreted them as charging FERC with determining the "public interest" by balancing power and non-power values. See Udall v. Fed. Power Comm'n, 387 U.S. 428, 450, 87 S. Ct. 1712, 18 L. Ed. 2d 869 (1967) ("The test is whether the project will be in the public interest."); see also American Rivers v. FERC, 201 F.3d 1186, 1201 (9th Cir. 1999) ("The [Act] establishes an elaborate regulatory regime which charges [FERC] with the responsibility to balance the interests of hydropower licenses and other participants in the licensing process.")

In Udall, the Supreme Court stated,

The question whether the proponents of a project "will be able to use" the power supplied is relevant to the issue of the public interest. So too is the regional need for the additional power. But the inquiry should not stop there. A license under the Act empowers the licensee to construct, for its own use and benefit, hydroelectric projects utilizing the flow of navigable waters and thus, in effect, to appropriate water resources from the public domain. The grant of authority to the Commission to alienate federal water resources does not, of course, turn simply on whether the project will be beneficial to the licensee. Nor is the test solely whether the region will be able to use the additional power. **The test is whether the project will be in the public interest.** And that determination can be made only after an exploration of **all issues relevant to the "public interest,"** including future power demand and supply, alternate sources of power, the public interest in preserving reaches of wild rivers and wilderness areas, the preservation of

anadromous fish for commercial and recreational purposes, and the protection of wildlife.

Udall, 387 U.S. 428, 450 (U.S. 1967) (emphasis supplied).

The Electric Consumers Protection Act of 1986 ("ECPA") amended the relicensing provisions of Section 15 of the FPA. 16 U.S.C. §808. Subsection 15(a)(2), as amended, provides that any "new license issued under this section shall be issued to the applicant having the final proposal which the Commission determines is best adapted to serve the public interest."

In interpreting FPA and ECPA, FERC has consistently held that socioeconomic impacts must be studied to comply with the statute's mandates:

This subsection also specifies that, in making a relicensing determination, the Commission must consider the requirements of Section 10 of the FPA. **The Commission must consider socio-economic impacts in making its licensing decisions**, since it is required to consider all aspects of the public interest under Section 10(a)(1) of the FPA. See *Udall v. FPC*, 387 U.S. 428 (1987).

Elkem Metals, 45 FERC ¶61,044, at p. 61,148 (1988) (emphasis supplied). See also, *Brookside Hydroelectric Co.*, 67 FERC ¶61,041, at p. 61,122 (1994) ("the socio-economic impact on the area involved, including [the intervenor's] business, is relevant in the Commission's consideration of the public interest in licensing a project.")

In addition to the public interest factor of the FPA, the relicensing process must also satisfy the environmental review requirements of NEPA. One of the primary purposes of NEPA is to estimate the effects of an action on the "human environment." See 42 U.S.C.A. § 4332(2)(C). As the implementing regulations adopted by the Council on Environmental Quality make clear, socio-economic impacts must be studied when a project has wide-ranging effects on the surrounding communities:

"Human Environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact

statement will discuss all of these effects on the human environment.

40 CFR § 1508.14 (emphasis added; internal parenthetical omitted).

This is also true in the relicensing context, as FERC made clear in *Elkem Metals Company*, 45 FERC ¶61,044 (1988):

NEPA's aims include protection of the quality of life for residents in the area of the project. Agencies administering that act accordingly should consider the full range of the project's effects on the affected community.

Elkem, at p. 61,048.

Accordingly, FERC itself has established that a request for renewal of an existing license cannot be evaluated without full consideration of the impact on the public interest and human environment, which necessarily includes an evaluation of the socio-economic effects on the surrounding communities. The City of Pateros has proposed a reasonable set of study criteria that would provide FERC with this critical information. Under FERC's own interpretation of the FPA and FERC, a socio-economic study of this nature must be conducted before FERC can issue its relicensing decision.

B. Socio-economic Studies Have Commonly Been Conducted in Relicensing Applications, Including the Rocky Reach Project Involving the City of Entiat and Chelan PUD.

FERC's onsite representatives have suggested that the City's request for a study of socio-economic impacts is unprecedented or impractical. However, it should not be surprising given the statutory requirements discussed above that such studies are commonplace and have been done on a number of other relicensing projects, including one virtually "next door" to Wells Dam.

1. *Chelan PUD/City of Entiat/Rocky Reach Dam.*

In its April 2nd submission, the City of Pateros made repeated references to the socio-economic study that was conducted by Chelan PUD on the Rocky Reach relicensing process. Rocky Reach Dam is located approximately 50 miles south of Wells Dam and is the next dam downstream on the Columbia River. Like the City of Pateros, the City of Entiat was displaced as part of the original construction of Rocky Reach Dam in the late 1950's. According to public records, Entiat received compensation for the condemnation of its land at the time of construction. However, when the Rocky Reach project came up for relicensing, Chelan PUD

agreed to conduct a study of the socio-economic impacts of the project.

A comparison of Chelan PUD's approach to this issue is helpful by way of comparison to Douglas PUD's position. Section 1.10 of the Rocky Reach Study Plan (Exhibit A) states:

The need to assess existing socioeconomic resources of the area and project operations (low-cost power) on those resources was identified by stakeholders during the issue identification phase of relicensing the Rocky Reach Hydroelectric Project. The city of Entiat, located adjacent to the Columbia River within the Rocky Reach Project area, has also requested that the socioeconomic study identify potential opportunities for expansion of existing markets and potential for developing new markets.

Ex. A, p. 3.

Section 2 identifies the Study Goal as follows:

The purpose of the socioeconomic study is to: 1) identify, describe and document factors that affect Project economics, including long term debt, cost of power, and the cost of relicensing; 2) identify, describe and document factors that influence regional and local economics, including industry, agriculture, schools and other public entities, recreation and tourism, and estimate the impact of Project operations on these resources; and 3) identify the potential for expansion of existing markets and the potential for developing new markets.

Ex. A., p. 3.

Section 5: Task List identifies several tasks targeted by the working group. Most notably, the following specific issues are addressed:

Task 3 - Identify which facilities or activities are directly or indirectly impacted by project operations and evaluate them with respect to a number of variables such as type of use, environmental conditions, scope of services provided, revenues generated, etc. An inventory of relevant facilities and activities will be developed including, but not limited to:

- Industry
- Agriculture
- Schools and Other Public Entities
- Recreation

-Tourism

Task 4 - Identify recreation, tourism and business-related demands in the Entiat area and define current market status and potential market opportunities.

Task 4(a)- The current status of local economy will be defined using following information:

- Population and demographic characteristics
- Income characteristics
- Labor force characteristics
- Employment and unemployment rates
- New construction permits
- Retail sales trends
- Transportation indicators

Task 4(b) - A general overview of the local economy will be developed. The overview will identify, describe and document factors that influence private and commercial development, agriculture, recreation, tourism in the Rocky Reach reservoir and Entiat areas, and:

- Gather population projections for analysis of potential growth in demand of various recreation activities.
- Identify potential impacts of project operation on the city of Entiat.
- Document privilege taxes (and others) paid by Chelan PUD.
- Examine current allocations of privilege taxes by the state to the area of Entiat. (ie: Entiat School District and city of Entiat)
- Assess historical impacts of the Rocky Reach Project on the Entiat economy.

Ex. A, p. 4-5.

Surprisingly, Douglas PUD did not even mention the Rocky Reach socio-economic study in its response to the City of Pateros' request for a similar study on the Wells Project. Rather than addressing this obvious precedent, Douglas PUD apparently believes that its best argument is to ignore the Rocky Reach study and simply claim that such studies are not required and/or not worthwhile.

2. *SMUD/American River Project*

However, the Rocky Reach project is not the only recent relicensing project where socio-economic studies were conducted. In approximately 2002, the Sacramento Municipal Utility District ("Sacramento MUD") was going through the relicensing process for the Upper American River Hydroelectric Project in California,

FERC Project No. 2101. As part of the relicensing, Sacramento MUD sought to add the Iowa Hill Pumped Storage Development Project to enhance its hydropower assets. Sacramento MUD then conducted a socioeconomic study for the proposed operations.

The Study Plan (Exhibit B) states that its purpose is to:

identify the socioeconomic benefits, costs and other socioeconomic impacts of the Project to the region and to public services from the construction and operation of the Iowa Hill project. The Study will address those benefits and costs that are directly and indirectly affected by the project.

Ex. B.

3. Appalachian Power Company/Smith Mountain

Another recent example involved the Appalachian Power Company's application for a new license for the Smith Mountain Project in Virginia, FERC Project 2210. In February 2007, the Appalachian conducted a socioeconomic study as part of the relicensing process, (Exhibit C) stating:

A number of socioeconomic issues have been raised thus far by participants in the relicensing process. Participants have noted that operation of the project and implementation of enhancement measures that may be required under a new license may have direct and indirect effects on surrounding property values, the economy of the region, the fiscal condition of surrounding municipalities and counties, and overall growth in residential development. They have commented that establishment of the facility created the lakes, which in turn created certain recreational and housing opportunities, noting that ongoing operations of the facility directly affect these opportunities through management of lake water levels, access, maintenance, and other measures. The land use, population, fiscal, and economic analysis conducted in this study is intended to address these issues by providing the basis for understanding the project's effect on the local economy and community. The analysis may help relicensing participants identify enhancement measures that could address any adverse project effects and help ensure that the project continues to contribute to the long-term vitality of the region.

Exhibit C, p. iv.

As these three examples demonstrate, socio-economic studies are not only required under the FPA and NEPA, but more and more

licensees are voluntarily agreeing to conduct such studies as part of the ILP process. Douglas PUD should follow the lead of Chelan PUD, Sacramento MUD and Appalachian Power and do the same here.

C. Douglas PUD's Justifications for Denying the Study Request Are Not Valid.

Douglas PUD appears to rely on four primary arguments for denying the City's request for a socio-economic study. However, none of these arguments provide a basis for FERC to excuse Douglas PUD from conducting this required study.

First, Douglas PUD points out the economic benefits the Wells facility has provided to the local economy, including the funding and development of parks and recreation facilities and low cost electricity. See Section 3.4.3 of the *Douglas PUD Study Plan*.

With all due respect to Douglas PUD, this response misses the point. The City does not dispute that there have been some economic (and even social) benefits as a result of the construction and operation of the Wells project. However, without question, there have also been a number of significant negative impacts to the social and economic health of these communities as a result of the operation of the Wells Dam. As was stated in the City's previous study request, the following are just some of the impacts that have already been identified:

- The construction of Wells Dam resulted in the flooding of the City of Pateros' downtown area and displacement of much of its business, civic and population centers.
- The continued operation of the Dam will continue to cause the loss of area businesses, the loss of revenue (property, sales, excise and hotel/motel tax), additional cost of providing services, increased maintenance costs of new park assets, damage to the City's civic and social fabric, the continued lack of valuable agricultural land and warehouse space, the continued loss of different kinds of recreation opportunities associated with a free-flowing river, and continuing environmental costs.

Douglas PUD does not dispute that these negative impacts have occurred, but apparently wants FERC (and the City) to be satisfied that the benefits outweigh the impacts without conducting any further study of the issue. This is an unreasonable approach that completely disregards the entire purpose of the public interest and human environment studies required under the FPA and NEPA.

Douglas PUD is asking for another **50-year license** to continue operating the Wells Dam. For the reasons stated above, before FERC can issue a license, it must fully consider the impacts of the Wells project on the surrounding communities. Just as Douglas PUD cannot ask FERC (or the public) to assume that the operation of the dam will not have an adverse impact on fish or other wildlife, Douglas PUD cannot simply make the bald-face assertion that the surrounding communities will be positively impacted by the continued operation of the project. The only way to determine and quantify these impacts is to conduct a socio-economic study.

Second, Douglas PUD goes on to claim that it is not aware of any case where "FERC has required a licensee to provide compensation or to develop civic or community facilities for the sole purpose of enhancing the economy of a community, or to mitigate for lost tax revenues." However, in *Virginia Electric and Power Company*, Project No. 2716, 57 FPC 24 (1976), the licensee was required to give financial assistance to a rural community to mitigate the impact from an influx of construction workers upon the community's expenditures for education, law enforcement, solid waste disposal, general government costs and welfare and other social services. See also *Escondido Mutual Water Company*, 6 FERC ¶61,189 at 61,1409 (1979) (Stating that the Commission can condition licenses pursuant to its statutory authority to minimize adverse socio-economic consequences of a project.)

In any event, the City of Pateros is not at this point asking FERC to require an award of compensation as mitigation for the project's negative impacts. The City is merely requesting that Douglas PUD be required to conduct a study of the socio-economic impacts of the continued operation of the Wells Project on the surrounding communities, as is required by law.

The City of Pateros and Douglas PUD may also eventually reach an agreement for the provision of services or funds in compensation for project impacts, similar to the one reached between Entiat and Chelan PUD on the Rocky Reach project. The benefits provided to the City under the agreement would likely be tied to recreational-related improvements intended to offset the socio-economic impacts caused by continued operation of the Wells Dam facility.

It may be that the information contained in a socio-economic study would also be useful in determining the appropriate elements of such agreement. However, the **primary** purpose of the study would be to measure the impacts of continued project operations for FERC's consideration in determining whether the license should be renewed. A socio-economic study is required under the FPA and NEPA, regardless of whether FERC would ever

require Douglas PUD to provide compensation as part of the license renewal,

Third, Douglas PUD objects to any study of the City's pre-1962 conditions, claiming that it is improper to study "pre-project impacts" at relicensing because such impacts are not relevant for comparing the impact of relicensing on today's environment. However, FERC has recently ruled that the past environmental effects of a project should be considered:

Under our judicially-approved baseline policy, we use the existing environment as a starting point for our environmental analysis at relicensing. As a result, we do not attempt to re-create or analyze the environmental conditions that existed before a project was built. This does not mean, however, that we ignore past environmental effects. To the contrary, **past environmental effects are relevant** and may be taken into account in determining what environmental measures may be appropriate for the new license term. Therefore, the fact that the project is already constructed does not preclude us from considering measures that are related to the continuing effects of project operation during the term of the new license.

Public Utility District No. 1 of Pend Oreille County, Washington (Pend Oreille PUD), 117 F.E.R.C. ¶61,205 (2006) (emphasis supplied).

The City of Pateros has pointed out the dramatic decline in population and business activity it experienced upon construction of Wells dam, not to seek compensation for the original displacement in 1962, but to illustrate the continued impacts the Wells Dam project will have on the surrounding communities. As the *Pend Oreille PUD* case states, information about the project's historical negative impacts is relevant in determining future mitigation measures. Accordingly, the proposed study of the socio-economic impacts of the Wells Dam project should therefore include information about the City's pre-1962 population and business data.

Fourth, Douglas PUD alleges that "there are numerous confounding factors that would render the study subjective and irrelevant." It may be true that conducting a socio-economic study of the Wells Project's impact would involve some subjective elements. However, as demonstrated above, similar studies have been conducted in other hydroelectric relicensing projects, including the Rocky Reach study, and have produced information that is both reliable and relevant to FERC's evaluation of the public benefit and impact on human environment. There is no

reason why a study of the Wells Dam project would be any different.

D. City of Brewster's Request

In addition to the City of Pateros' formal request, the City of Brewster also submitted a separate request for a similar socio-economic study. While Douglas PUD has characterized Brewster's submission as an "informal" request, we believe it is important for FERC to consider that two of the three municipalities situated on the Wells Dam reservoir have requested that Douglas PUD study the socio-economic impacts of extending the Wells Dam license for another 50-year period.

II. Comments On Refusal To Study Operation and Maintenance Of The City's Recreation Facilities.

The City requested Douglas PUD to conduct a study of the specific costs for operation and maintenance of city parks. Douglas PUD responds as follows:

Studying these costs before measures are identified for recreation is not a recommended strategy. Douglas PUD is proposing to first conduct the Recreational Needs Analysis and Public Access Study. Following completion of these studies, Douglas PUD will determine which of the identified needs are related to ongoing Wells Project operations and then develop measures appropriate for meeting those needs. Costs will be evaluated at that time.

Douglas PUD Proposed Study Plan, P. 19.

The City is very concerned about the long-term costs of operating and maintaining the City's recreation facilities relating to the Wells Dam Project and wants to assure that extent of these costs is adequately studied. The City believes a formal study plan conducted as part of the ILP process is the most appropriate method of determining these costs. However, the City is willing to accept Douglas PUD's proposal provided that the obligations of Douglas PUD as set forth above are incorporated in the revised ILP Study Plan document.

III. Comments On Refusal To Study Visitor Center.

The City requested a study of the feasibility of a regional Visitor Information Center. Douglas PUD responded by proposing an alternative methodology:

Douglas PUD is proposing to first conduct the Recreational Needs Analysis during the ILP study

period. After completion of this study, Douglas PUD will evaluate the need, demand and project nexus related to reopening or relocating the existing Wells Visitor Information Center.

Proposed Study Plan, p. 14.

In subsequent discussions with Douglas PUD, the City has learned that Douglas PUD staff will recommend that a new Visitor Information Center be built at the current Wells Dam Overlook. Based on this representation, the City does not believe that a formal study of this issue is required. However, in the event Douglas PUD does not go forward as indicated, the City requests that FERC require a formal study of this issue.

CONCLUSION

For the reasons stated above, we believe that FERC should require Douglas PUD to conduct studies of (1) socio-economic impacts of the Wells Dam project, (2) the operation and maintenance of recreation facilities, and (3) a regional visitor center. We envision the results of these studies as guiding the PUD and City of Pateros to enhanced recreational facilities that would benefit both entities.

Please let me know if you need any additional information.

Sincerely,

Gail A. Howe

Gail A. Howe, Mayor
City of Pateros

Attachments:

Exhibit A

Exhibit B

Exhibit C

SOCIOECONOMIC STUDY PLAN

Final

**ROCKY REACH HYDROELECTRIC PROJECT
FERC Project No. 2145**

January 15, 2000



**Public Utility District No. 1 of Chelan County
Wenatchee, Washington**

EXHIBIT A

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SECTION 1: INTRODUCTION

1.1 Project Location

The Rocky Reach Project is located approximately seven miles north of the city of Wenatchee on the Columbia River in mid-Washington State. The dam is 215 river miles below the Canadian border and 473 river miles above the mouth of the Columbia at Astoria, Oregon.

1.2 The Columbia River

Rocky Reach Dam is located in Chelan County in north central Washington. Lake Entiat, the Rocky Reach Project reservoir, extends upriver 43 miles (to Wells Dam) and has a surface area of approximately 9,100 acres. The reservoir contains 36,400 acre feet of usable storage.

The drainage area of the project at the dam is about 90,000 square miles. The watershed lies east of the Cascade Mountains and West of the Rocky Mountains, consisting of parts of Washington, Idaho, Montana, and British Columbia. The normal headwater elevation is 707 feet above sea level. The normal tailwater elevation is 614.7 feet above sea level. The average annual minimum water temperature of 34°F normally occurs during the month of February. The average annual maximum water temperature of 65°F occurs during the months of August and September.

1.3 Physical setting

The state of Washington encompasses a wide range of geographic diversity, from the marine influenced ocean shores and the Puget Sound, over the rugged Cascade Mountain Range to the rolling hills of central Washington, to the ancient mountain ranges of north central and eastern Washington. The Rocky Reach Project is located on the Columbia River between two significantly different physiographic areas. In the Cascade Mountains to the west, a metamorphosed sedimentary, volcanic, and granitic rock predominates. On the Columbia River Plateau to the east, bedrock is covered by vast, thick layers of basalt. The vegetation ranges from forest and alpine meadows in the Cascades, down to the fertile, irrigated valleys near the Columbia and back up to sparsely vegetated arid plateaus to the east.

1.4 Climate

The climate in the vicinity of the Rocky Reach Project is the semi-arid type, which is typical of eastern Washington. There is a seasonal range of temperatures in the area with winter averaging about 25°F and summer about 75°F. Spring and Fall temperatures average 50°F. Extreme temperatures can approach -30°F in winter and 110°F in summer. The precipitation is generally low with an annual average of about 10 inches, the bulk of which falls between October and March. There are usually no more than 8 to 15 inches of snow on the ground.

1.5 Regional Economy

The economy of the north central Washington region encompassing Chelan and Douglas Counties is based primarily on agriculture. Chelan County provides 80 percent of the jobs in the two-county area and contains 75 percent of the total number of employers. Apples, pears, cherries, and other fruits are important crops in the Columbia River basin. The region's economy is also supported by other types of agriculture (wheat, hay, potatoes) retail trades, services, manufacturing, recreation and tourism.

1.6 Regional Population

The region is sparsely populated. In 1997, the population of Chelan County was 57,854 people; Douglas County, 31,054 people; and the population of the entire state of Washington, 5.4 million people. The largest community on the Rocky Reach reservoir is the city of Entiat, with a 1997 estimated population of 801. The cities of Wenatchee (1997 population estimate of 25,160) and East Wenatchee (1997 population estimate of 5,245) are located seven miles south of Rocky Reach Dam.

1.7 Current Land Use Concept

The Columbia River valley surrounding the Rocky Reach Reservoir is a wide canyon characterized by basalt cliffs and exposed rock outcroppings. The limited valley is generally rural in nature. The city of Entiat and the communities of Chelan Falls and Orondo are located along the reservoir. Project boundary encroachment includes two sanitary sewer outfalls, storm water outfalls, irrigation withdrawals, and recreational development that is part of Chelan PUD's existing recreation plan.

Within the project boundary, agricultural uses, recreational sites developed by Chelan PUD, and some residential lands surround approximately half the reservoir. Agricultural uses consist primarily of fruit orchards and some pasture lands. Irrigation pumps and pumphouses to withdraw water from the Columbia River are often located on agricultural lands. Recreation sites provide for swimming, boating, fishing, personal watercraft, camping, picnicking, water-skiing, and other recreational uses. Recreational use generated at these sites is intensive during the summer season, Memorial Day through Labor Day.

The remainder of the lands surrounding the reservoir is undeveloped. These lands can be characterized as dry lands. They include shrub steppe and grasslands vegetation with patches of exposed rock. Much of the undeveloped shoreline lies in areas where the reservoir is in close proximity to a small, private railroad on the westerly side and to State Routes 97 (westerly) and 97A (easterly). Narrow strips of riparian vegetation, including wetland areas, may be present along those areas of the reservoir where the shoreline slopes are relatively gentle.

Ownership of lands outside and/or adjacent to the project boundary include State Department of Natural Resources Land, State Department of Wildlife Land, State Park Land, USDA Forest Service Land, Bureau of Land Management Land, Chelan PUD, Railroad, State Department of Transportation, City of Entiat, and private lands.

1.8 Current Recreational Development

Public access to Rocky Reach project lands and waters is widely available. Recreation facilities located within or immediately adjacent to the Rocky Reach Reservoir include the following: Rocky Reach Dam Recreation Facilities and Visitor Center, Lincoln Rock State Park, Orondo Park, Entiat Park, Daroga State Park, Beebe Bridge Park, Chelan Falls Park. A full description of park facilities is located in the Recreation Resources Inventory Study Plan.

1.9 General Description of the Relicensing Process

The Public Utility District No. 1 of Chelan County (Chelan PUD) owns and operates the Rocky Reach Hydroelectric Project (Project). Chelan PUD is permitted to operate the Project according to terms and conditions contained in an existing Federal Energy Regulatory Commission (FERC) license, No. 2145, that was issued on July 12, 1956. On September 1, 1966, the Chelan PUD filed an application with the Federal Power Commission (FPC) to amend the Project license for the addition of four generating units. The FPC, later FERC, issued the license amendment on May 23, 1968. The existing license expires on June 30, 2006.

Chelan PUD intends to seek a new federal license to operate the Rocky Reach Project and has begun preparation for the process referred to as "relicensing." The FERC relicensing process is based on laws and regulations that require years of extensive planning, including environmental studies, agency consensus and public involvement. The process to obtain a new license has changed considerably since the existing licensee was issued in 1956. The Federal Power Act (FPA) was amended in 1986 by the Electric Consumers Protection Act (ECPA). The amendment requires the FERC, in addition to power and development purposes, to give equal consideration to the purposes of enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality.

1.10 Needs Statement

The need to assess existing socioeconomic resources of the area and project operations (low-cost power) on those resources was identified by stakeholders during the issue identification phase of relicensing the Rocky Reach Hydroelectric Project. The city of Entiat, located adjacent to the Columbia River within the Rocky Reach Project area, has also requested that the socioeconomic study identify potential opportunities for expansion of existing markets and potential for developing new markets.

SECTION 2: STUDY GOAL

The purpose of the socioeconomic study is to: 1) identify, describe and document factors that affect Project economics, including long term debt, cost of power, and the cost of relicensing; 2) identify, describe and document factors that influence regional and local economics, including industry, agriculture, schools and other public entities, recreation and tourism, and estimate the impact of Project operations on these resources; and 3) identify the potential for expansion of existing markets and the potential for developing new markets.

SECTION 3: STUDY AREA

The proposed study area is the Rocky Reach Project boundary and communities immediately adjacent to the boundary and/or likely to be directly impacted by project operations.

The Rocky Reach boundary is defined by contour lines on each side of the reservoir beginning at elevation 711 feet MSL at the Rocky Reach Dam upstream to the Wells Project tailrace. The boundary varies in elevation along the reservoir and corresponds to areas likely to be impacted by water surface elevation associated with the probably maximum flood (Rocky Reach Project Periodic Safety Inspection Report, 1997). The Rocky Reach Project contains a total of 1,345 acres of land, of which Chelan PUD owns approximately 100 acres, or seven percent.

SECTION 4: METHODOLOGY

A consultant specializing in socioeconomic analyses will conduct the study using commonly accepted economic practices. Methodologies proposed by the consultant will be presented to the Socioeconomic Working Group.

SECTION 5: TASK LIST

Task 1 - Introduction and kick-off meeting. The Socioeconomic Working Group will meet with the consultant to review the goal, objectives and methodologies proposed for the study. The group will decide the most appropriate ways to provide input during the study and will offer suggestions regarding who should be contacted. Members of the working group will provide relevant reports, surveys, contacts and other items that may be useful to the consultant.

Task 2 - Identify, describe and document factors that affect Project economics, including long term debt, cost of power, and the cost of relicensing.

Task 3 – Identify which facilities or activities are directly or indirectly impacted by project operations and evaluate them with respect to a number of variables such as type of use, environmental conditions, scope of services provided, revenues generated, etc. An inventory of relevant facilities and activities will be developed including, but not limited to:

- Industry
- Agriculture
- Schools and Other Public Entities
- Recreation
- Tourism

Task 4 – Identify recreation, tourism and business-related demands in the Entiat area and define current market status and potential market opportunities.

Task 4(a) - The current status of local economy will be defined using following information:

- Population and demographic characteristics
- Income characteristics
- Labor force characteristics
- Employment and unemployment rates
- New construction permits
- Retail sales trends
- Transportation indicators

Task 4(b) - A general overview of the local economy will be developed. The overview will identify, describe and document factors that influence private and commercial development, agriculture, recreation, tourism in the Rocky Reach reservoir and Entiat areas, and:

- Gather population projections for analysis of potential growth in demand of various recreation activities.
- Identify potential impacts of project operations on the city of Entiat.
- Document privilege taxes (and others) paid by Chelan PUD.
- Examine current allocations of privilege taxes by the state to the area of Entiat. (ie: Entiat School District and city of Entiat)
- Assess historical impacts of the Rocky Reach Project on the Entiat economy.

SECTION 6: ANALYSIS AND REPORTING

The final report will contain an executive summary section that can be directly imported into the Draft License Application. All data will be summarized in the most concise and clear format possible. Supporting information and hard data will be provided in the appendices. All reports will be provided in electronic format for importing into Chelan PUD's database and ultimately into the license application. All reports styles will be consistent with Chelan PUD's writing style guidelines (to be provided).

SECTION 7: STAFFING AND EQUIPMENT NEEDS

To be provided by consultant.

SECTION 8: SCHEDULE

The study will be completed by August 1, 2000.
A detailed schedule will be provided by the consultant.

SECTION 9: BUDGET

The consultant will provide a detailed budget.

11.16 Iowa Hill Socioeconomic Study Plan

The Socioeconomic Study for the proposed Iowa Hill Pumped Storage Development (Iowa Hill project or project) will consist of collecting labor and construction estimates (provided by SMUD) and other project-related data from existing sources.

The Study will identify the socioeconomic benefits, costs and other socioeconomic impacts of the Project to the region and to public services from the construction and operation of the Iowa Hill project. The Study will address those benefits and costs that are directly and indirectly affected by the project.

11.16.1 Pertinent Issue Questions

1. What would be the short-term effects on local services and infrastructure (e.g., police, fire, health, schools, housing) from the construction workforce?
2. What would be the long-term effects on local services and infrastructure (e.g., police, fire, health, schools, housing) from project operations?
3. What would be the growth-inducing impact of the project?
4. What are the overall benefits of the Iowa Hill pumped storage project?
5. Would construction traffic have any short-term impacts to Apple Hill tourism (e.g., traffic congestion from workers traveling to and from work sites and haul trucks transporting rock from the main access tunnel at Slab Creek Reservoir to the upper reservoir site)?
6. Would construction and operation activities have any short-term impacts to the "lifestyle" of the community of Camino?
7. What is the economic value of the long-term loss of harvestable timber at Iowa Hill?
8. In the event of a catastrophic failure, what would be the potential socioeconomic impacts of that failure?
9. Would construction and/or operations of the Iowa Hill Development affect whitewater boating downstream of Chili Bar Dam?
10. Would construction and/or operations of the Iowa Hill Development affect flat-water recreation on Slab Creek Reservoir? And if so, would there be any socioeconomic impacts (e.g., to the holder of the Special Use Permit for commercial flat-water boating on Slab Creek Reservoir recently issued by the Eldorado National Forest)?
11. Would construction and/or operations of the Iowa Hill Development affect flat-water recreation on Chili Bar Reservoir? And if so, would there be any socioeconomic impacts?
12. Would construction and/or operations of the Iowa Hill Development affect EDCWA/EID's ability to implement the 1957 (as modified) facilities use agreement with SMUD?
13. Would construction and/or operation affect public access for recreation?

The water balance model would assess how operations of Iowa Hill would affect recreational resources (in the 20-mile reach downstream of Chili Bar Dam, Chili Bar Reservoir, the 8-mile Slab Creek bypass reach, the upper reservoirs and on Slab Creek Reservoir) via likely water management and cycling scenarios, compared to existing UARP operations. In addition, the water balance model would assess whether operations of Iowa Hill would affect or hinder EDCWA/EID's ability to implement the 1957 facilities use agreement with SMUD.

11.16.3 Background

SMUD's existing Upper American River Project (UARP) is located in the rugged Sierra Nevada Mountains between the southern shores of Lake Tahoe and Sacramento. A majority of the UARP facilities are located within the Eldorado National Forest and the 85,000-acre Crystal Basin Recreation Area.

As part of the UARP relicensing process, SMUD seeks to add the Iowa Hill project to enhance its hydropower assets in the Upper American River. The pumped storage project would allow water to be pumped up to a holding pond on Iowa Hill when electricity is plentiful (generally during the night) and release it during peak electricity demand to generate peaking power. The pumped storage project would be located in El Dorado County, near the communities of Camino, Pollock Pines and Swansboro and the city of Placerville.

11.16.4 Study Objectives

The objectives of the Socioeconomic Impact Study are:

- Identify the socioeconomic costs and benefits of the Iowa Hill pumped storage project on El Dorado and Sacramento Counties.
- Identify the overall benefits (to the extent known at this time, i.e., pre-filing and pre-PM&Es) of the proposed Iowa Hill pumped storage project.
- Identify the impacts construction traffic would have on Apple Hill tourism, including impacts from workers traveling to and from work sites and haul trucks transporting rock from the main access tunnel at Slab Creek Reservoir to the upper reservoir site.
- Identify the impacts construction and operational activities would have on the “lifestyle” of the community of Camino.
- Quantify the economic value of harvestable timber lost due to the change in land use at the Iowa Hill Development.
- Review the results of the water balance model runs for Issue Questions Nos. 9 through 13, and identify any associated socioeconomic impacts.

Once this study is complete, SMUD will consult with the relicensing participants and representatives of Apple Hill tourism industry concerning the effects construction traffic would have on the community and Apple Hill tourism. Measures necessary to mitigate or minimize the effects will be included in SMUD’s application for new license. Before construction, SMUD would develop a **Traffic and Transportation Plan** that describes the level of planned road use and identifies measures to control impacts to social and environmental resources.

11.16.5 Study Area

Region of Influence – El Dorado County. The Region of Influence (ROI) from the project construction and operation is El Dorado County. The construction and operational impacts would primarily effect El Dorado County. The study area for project benefits includes Sacramento County.

11.16.6 Study Methods

Information for this study will be obtained through data provided by SMUD and existing secondary sources. Information to be obtained includes:

- Population and housing in El Dorado County.
- Employment by industry and employment by occupation in El Dorado County to determine sufficiency of local workforce.
- Local government revenues and expenditures over the past 3 years.
- Current use levels of public services, e.g., enrollment in schools, hospital use and available hospital resources in project vicinity, number of calls to police and fire stations.

Information to be provided by SMUD includes:

- Location of the project components.
- Duration of construction phase of the project.
- Expenditures on materials and supplies during construction.
- Estimate of the local portion (within El Dorado County) of expenditures on materials and supplies during construction.
- Number of construction workers including estimated split between local and non-local. Local is assumed to be those residing within El Dorado County. Construction workforce should include any subcontractor workforce so the total workforce reflects workforce required by project.

- Construction personnel by month (if possible) or the peak construction workforce as well as when that peak occurs.
- Construction personnel by discipline (or craft).
- Total construction wages (including benefits) or the average construction pay (including benefits).
- Number of workers required for operation and maintenance (O&M) of the pumped-storage project in excess of the operational workforce currently used to maintain the UARP facilities. Total operational wages (including benefits).
- Expenditures on materials, supplies and service during operation including the estimated split between local and non-local.
- If using trucks, then estimate of number and size of trucks, and number of trips per day/week to and from work site. Also provide the travel route of the trucks.
- Number of acres of timber harvested.
- List of benefits to Sacramento County from the Iowa Hill pumped storage project.
- Results of water balance model runs sufficient to address Issue Questions 9 through 13.

11.16.7 Study Analysis

The primary focus of this effort is to provide an economic impact analysis of the costs and benefits derived from the construction and operation of SMUD's Iowa Hill pump-storage project. The analysis will focus on quantifying the direct, indirect and induced regional economic impacts arising from the construction and operation of the project in terms of income and employment, as well as economic value to SMUD ratepayers. This would involve in part, the use of Input/Output (I/O) economic modeling. The IMPLAN I/O model will be used for this purpose. Additional analysis will be performed as necessary. During the course of the study, SMUD will meet with the Socioeconomic TWG to review the study approach to confirm the appropriateness of study outputs.

In addition, the analysis will also identify the overall benefits (i.e., consistent with the benefits and economic information requirements of Exhibits D and H of the relicensing regulations) of the proposed Iowa Hill pumped storage project as well as the construction and/or operation traffic impacts on: (1) Apple Hill tourism; (2) recreation resources on Slab Creek and Chili Bar Reservoirs; and (3) the "lifestyle" of the community of Camino. The analysis will also quantify the economic value of harvestable timber lost due to the change in land use at the Iowa Hill Development. Finally, the results of the applicable water balance model runs will be used to determine if there are any impacts to the socioeconomic resources in the area as a result of operations or from a catastrophic failure event.

11.16.8 Affected Environment

Data collected will be presented as a baseline for comparison. This baseline will include a description of population growth and projected growth within the ROI from 1990 through 2015. Existing housing stock for El Dorado County will also be presented. Employment and the general economy will be reviewed to determine the industry sectors that have experience growth or reductions in jobs. This section will also examine the fiscal resources of the County over the past 3-year period, current and projected school enrollment figures, and existing levels of law enforcement, fire protection, emergency response, and hospitals.

11.16.9 Environmental Consequences

The potential impacts of the Iowa Hill project would then be assessed. Included are potential impacts from the construction workforce on the County's population, housing supply, and local economy. The IMPLAN model will be used to determine the indirect and induced economic impacts from construction. The short-term fiscal impacts to El Dorado County from the project's construction will be estimated along with potential short-term impacts to the County on education, public services and public facilities. Potential long-term impacts from the increased operational workforce will also be analyzed to determine their impacts on education, public services and public facilities. The IMPLAN model will be used to determine indirect and induced economic impacts from the increased operational workforce.

The expected overall benefits of the Iowa Hill project will be presented in a manner consistent with the benefits and economic data requirements of Exhibits D and H of the relicensing regulations. The potential impacts of construction and operation traffic on tourism in the Apple Hill area and upon the lifestyle of the community of Camino will be presented. Potential socioeconomic impacts from the construction and operational activities on recreation resources will also be presented.

11.16.10 Study Output

The study output will be a technical report with tables and text describing the existing environment and displaying the economic and socioeconomic impact results of the project pertaining to fiscal resources, education, public services and public facilities. The technical report will be distributed to the Socioeconomic TWG for review and approval. The report will be prepared in a format so that it can easily be incorporated into the Licensee's draft environmental assessment that will be submitted to FERC with the Licensee's application for a new license.

11.16.11 TWG and Plenary Group Endorsement

The Socioeconomic TWG approved the issue questions and the study objectives for this study plan on February 27, 2004. The Plenary Group approved the issue questions and study objectives for this study plan on March 3, 2004.

The Socioeconomic TWG approved the draft study plan on March 29, 2004. The participants at the meeting who said they could "live with" the plan were U.S. Forest Service, El Dorado County Water Agency, City of Sacramento and SMUD. None of the participants at the meeting said they could not "live with" this study plan. On April 7, 2004, the Plenary Group agreed that if the Socioeconomic TWG Subcommittee can resolve the issues of concern, the study plan can be deemed approved by the Plenary Group. The Socioeconomic TWG Subcommittee resolved the issues of concern and approved the draft study plan on May 10, 2004. The participants at the meeting, in person or via conference call, who said they could "live with" this study plan were U.S. Forest Service, El Dorado County Water Agency, City of Sacramento and SMUD.

1.0 INTRODUCTION

Appalachian Power Company (Appalachian) is making application to the Federal Energy Regulatory Commission (Commission) for a new license for the Smith Mountain Project (No. 2210), located on the Roanoke River in south-central Virginia. In preparing its application, Appalachian is following the Integrated Licensing Process (ILP), as defined under the rules and regulations of the Commission (18 CFR Part 5). As part of this licensing process, Appalachian has solicited input from various and numerous stakeholders including governmental agencies, local governments, non-governmental organizations, and the general public to identify and analyze potential project-related issues.

A number of socioeconomic issues have been raised thus far by participants in the relicensing process. Participants have noted that operation of the project and implementation of enhancement measures that may be required under a new license may have direct and indirect effects on surrounding property values, the economy of the region, the fiscal condition of surrounding municipalities and counties, and overall growth in residential development. They have commented that establishment of the facility created the lakes, which in turn created certain recreational and housing opportunities, noting that ongoing operations of the facility directly affect these opportunities through management of lake water levels, access, maintenance, and other measures. The land use, population, fiscal, and economic analysis conducted in this study is intended to address these issues by providing the basis for understanding the project's effect on the local economy and community. The analysis may help relicensing participants identify enhancement measures that could address any adverse project effects and help ensure that the project continues to contribute to the long-term vitality of the region.

1.1 Project Location and Study Region

The Smith Mountain Project is an existing two-dam, two-reservoir, combined conventional hydroelectric and pumped storage project located on the headwaters of the Roanoke River in Bedford, Campbell, Franklin, and Pittsylvania counties in Virginia, which are referred to in this report as the study region. The conventional hydroelectric development is identified as the Lower or Leesville Development, while the pumped storage development is identified as the Upper or Smith Mountain Development. The Smith Mountain Development has five generating units, with a combined generating capacity of 586 MW. The Leesville Development has two generating units, with a combined generating capacity of 50 MW.

Smith Mountain Dam has a maximum height of 235 feet above the streambed. The reservoir behind the dam has a surface area of 20,600 acres at an operating pool elevation of 795.0 (National Geodetic Vertical Datum (NGVD)). Mean flow through the development is 1,211 cubic feet per second (cfs). Leesville Dam has a maximum height of 94 feet above the streambed. The reservoir surface area is 3,270 acres at an operating pool elevation of 613.0 NGVD.

1.2 Results of Previous Studies

A study based on 1995 data, *Smith Mountain Pumped Storage Project Economic and Fiscal Impacts* (Berger, 1996), provides an estimate of the economic importance of the Smith Mountain Project to the study region based solely on the estimated spending of recreational visitors to the project. Recreational activities at the project include boating, fishing, picnicking,