Low Impact Hydropower Institute Questionnaire
Updated Information for Recertification May 2008
Applicant: Seattle City Light
Facility: Skagit River Hydroelectric Project
Submitted March 2008

The material which is provided in this submission for recertification purposes reflects changes and/or information which update responses to the Low Impact Hydropower Institute questionnaire submitted for certification in 2002. Readers who wish a full understanding of the Project are invited to view this material in conjunction with Seattle City Light's responses to the questionnaire submitted in 2002.

Background Information

11) Please attach a list of contacts in the Relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.

Updated Information:

A. Flows

Gary Sprague	Washington Department of Fish and Wildlife	360-902-2539 spraggrs@dfw.wa.gov
Steve Fransen	National Marine Fisheries Service	360-753-9440 Steven_Fransen@FWS.GOV
Stan Walsh	Skagit River System Cooperative (Skagit Tribes)	360-466-1512 swalsh@skagitcoop.org

B. Water Quality

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C. Fish Passage and Protection

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Steve Fransen	National Marine Fisheries Service	360-753-9440 Steven_Fransen@FWS.GOV
Stan Walsh	Skagit River System Cooperative (Skagit Tribes)	360-466-1512 swalsh@skagitcoop.org

D. Watershed Protection

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Lora Leschner	Washington Department of Fish and Wildlife	425-775-1311 ext. 121 leschlll@dfw.wa.gov
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E. Threatened and Endangered Species Protection

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Stan Walsh	Skagit River System Cooperative	360-466-1512 swalsh@skagitcoop.org

F. Cultural Resource Protection

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G. Recreation

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A. Flows

1) Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986, regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic in-stream flow variations) for both the reach below the tailrace and all bypassed reaches?

Answer: **Yes**

Updated Information:

The Project flow requirements are determined by a series of calculations designed to provide protection for salmon and steelhead, and change from year to year, depending on precipitation and river levels. These flow requirements are conditions by reservoir elevation, seasonal runoff, and episodic variations in runoff (including tributary outflows below the project) to provide the operational flexibility needed to provide the highest possible level of protection to all life stages of salmon and steelhead in the upper Skagit River. These calculations are fairly detailed, and are described in the Appendices of the Skagit Fisheries Settlement Agreement.

The Skagit River basin currently supports the most abundant run of naturally spawning Chinook salmon in Puget Sound, with annual returns of summer/fall Chinook salmon averaging about 8,000 fish in the mainstem Skagit River below the Project (WDFW et al. 1993; Myers et al. 1998; NMFS 1999a, NMFS Technical Review 2002). This stock has been rated as "healthy" by the WDFW (WDF et al. 1993). Although trends in Chinook salmon abundance throughout the Puget Sound region have been declining, the number of spawning Chinook in the 25-mile reach of the Skagit River below the project has remained stable based on long-term spawning survey databases maintained by the WDFW since 1974 (Olsen and Knutzen 1997). Surveys were

conducted in the mainstem Skagit River in reaches most affected by project operations. During three of the past four years (2004-07), the annual return of summer/fall Chinook has exceeded 20,000 fish. Annual returns at these levels had not occurred since 1980.

In 2007, Steelhead salmon populations, including the Skagit River population, were listed as Threatened (please refer to letter of May 24, 2007 to Fred Ayer, attached). SCL biologists have been closely tracking and analyzing trends in steelhead population abundance in the rivers below the Project and have been actively engaged in discussing trends in steelhead abundance with agency, tribal, and NGO biologists, and identifying research and monitoring needs for steelhead stocks. As reported in the original questionnaire, SCL implemented a steelhead redd monitoring program in the upper Skagit River in 1995. In 2005, a research study was initiated with the University of Washington to better understand the relationships between flows, food availability and bull trout predation on juvenile steelhead in the Skagit River downstream of the Project. SCL, in 2007, partnered with the Skagit River System Cooperative and the Upper Skagit Tribe to implement a study to look at the distribution of steelhead yearlings throughout the Skagit basin.

B. Water Quality

1) Is the facility either:

- **a. In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after Dec. 21, 1986? Or**
- **b. In Compliance with the quantitative water quality standards established by the sate that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?**

Answer: **Yes**

The upper Skagit River is in compliance with the quantitative water quality standards established by the State of Washington (Washington administrative Code (WAC) 173-201A-030) and supports the designated beneficial uses.

WAC standards for the Skagit River reach below the Project, Class AA freshwater:

- Fecal Coliform – "fecal coliform organism levels shall both not exceed a geometric mean value of 50 colonies/100 mL and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 100 colonies/100mL."
- Dissolved Oxygen – "dissolved oxygen shall exceed 9.5 mg/L."
- Temperature – "shall not exceed 16.0ºC, no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3ºC. Incremental temperature increases resulting from point source activities shall not, at any time, exceed t=23(T+5). Incremental temperature increases resulting from nonpoint source activities shall not exceed 2.8 C. For purposes hereof, "t" represents the maximum permissible temperature increase measured at a mixing zone boundary; and "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge."

- pH – "shall be within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.2 units."
- Turbidity – "shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10% increase in turbidity when the background turbidity is more than 50 NTU."

Long-term monitoring records do not indicate any violations of water quality standards. Monthly samples are collected at the nearest USGS water quality data collection site at Marblemount (RM 78.1, approximately 16 RM below the Project), and data at this sampling site exist for the years 1959 through 2006 for: fecal coliform, dissolved oxygen, pH, temperature, turbidity, and other water quality parameters for which there are no numeric standards (Washington Department of Ecology web site).

Turbidity and suspended sediments. Turbidity upstream of the project area is influenced by seasonal runoff of silt and glacial flour. The USGS monitoring station at Marblemount does show moderate levels of total suspended solids and turbidity in the last fifteen years, but this is considered related to the glacial till. The Project does not appear to exacerbate turbidity and suspended sediments, nor is this section of the Skagit 303(d) listed for turbidity (Washington Department of Ecology web site).

Temperature: Water temperatures downstream of the Project in the Skagit River remain cold throughout the year. Based on water year 2006 assessment, the overall water quality at this station met or exceeded expectations and is considered of lowest concern (Washington Department of Ecology web site).

C. Fish Passage and Protection - no changes or additions.

D. Watershed Protection

This criterion was revised in 2004, after the Project was certified. The criterion now reads: "The Watershed Protection criterion is designed to ensure that sufficient action has been taken to protect, mitigate and enhance environmental conditions in the watershed. A certified facility must be in compliance with resource agency and FERC recommendations regarding watershed protection, mitigation or enhancement." Four questions appear on the questionnaire.

Answer: **Yes**

Updated Information:

The dams and reservoirs associated with the Project are located within the National Recreation Area, which is part of the North Cascades National Park Service Complex. A portion of the transmission corridor is in National Forest, and where the transmission corridor is near the Skagit River or Sauk River, the river enjoys protection through its federal wild and scenic river status.

The historic Settlement Agreements into which SCL entered with federal and state agencies, Native American Tribes, and an environmental organization were intended to mitigate the Project's environmental impact. These were submitted to the FERC, and the operating license subsequently issued by the FERC largely incorporates agreements on fisheries, wildlife, recreation and aesthetics, and erosion control, cultural resources (archaeological and historic resources), and traditional cultural properties as license requirements. Fulfillment of these agreements meets the intent of this criterion.

It is important to note that SCL observes permitting requirements of Whatcom County's Critical Areas Ordinance, Shorelines Management Program, and all applicable regulations, and utilizes Best Management Practices (BMPs) concerning necessary maintenance, repair and other activities associated with the facility.

Readers are invited to refer to the information provided by SCL in its 2002 application for certification regarding acquisition and management of wildlife habitat lands and long-term monitoring of wildlife and environmental resources in the North Cascades National Park Service Complex.

E. Threatened and Endangered Species Protection

1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?

Answer: **Yes**

Updated Information:

In May 2007, the Puget Sound steelhead (Oncorhynchus mykiss) was listed as Threatened under the Endangered Species Act. This listing includes the steelhead population on the Skagit River.

2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?

Answer: **Yes**

Updated Information:

NOAA Fisheries and the U.S. Fish and Wildlife Service completed their processes for the designation of critical habitat after the Project's certification in 2002. The critical habitats designated by both agencies are downstream of this Project. The U.S. Fish and Wildlife Service released a draft recovery plan for bull trout in 2004. The recovery plan for Chinook salmon in Puget Sound was adopted by NOAA Fisheries in January 2006. This year (2008), NOAA Fisheries established the Steelhead Technical Recovery Team to develop steelhead population

analyses and target goals and provide technical guidance for the development of the steelhead recovery plan for Puget Sound stocks.

SCL staff actively attended the Chinook Salmon Technical Recovery Team (TRT) meetings and will continue to attend those of its successor, the Chinook Recovery Implementation Technical Team. The Puget Sound Chinook Salmon Recovery Plan goals, strategies, and actions are compatible with the Settlement Agreements which SCL entered into with federal and state agencies, Native American Tribes, and an environmental group in 1991 as part of Project relicensing. SCL staff are actively engaged in the implementation of the adopted recovery plan for Chinook salmon by the lead watershed organizations in Skagit basin.

SCL's ESA Coordinator for the Skagit watershed serves as a member of the Bull Trout Recovery Unit Team and participated in writing the chapter of the draft bull trout recovery plan for the upper Skagit River basin in partnership with the USFWS, Washington Dept. of Fish and Wildlife, U.S. National Park Service, and U.S. Forest Service. This year, the same ESA Coordinator was appointed to the Steelhead Technical Recovery Team established by NOAA Fisheries to develop population analyses and provide technical guidance for the development of the steelhead recovery plan. As well, SCL biologists have been closely tracking and analyzing trends in steelhead population abundance in rivers below the Skagit Hydroelectric Project and work collaboratively with other agencies and tribes in identifying and funding research and monitoring projects that are providing information that will be valuable for the development and implementation of recovery actions for steelhead within the watershed and in Puget Sound.

3) If the Facility has received authority to incidentally Take a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?

Answer: **Not Applicable**

Updated Information:

Chinook salmon and bull trout were listed as threatened species under the ESA in 1999, and steelhead were listed as threatened species under the ESA in 2007. The listing of these species occurred after the Settlement Agreement was completed and signed by the agencies and tribes in 1991, and following completion of relicensing in 1995. Formal consultation with the NMFS and USFWS pursuant to Section 7 of the ESA has not been required following Project relicensing, because no changes to Project operations have been proposed that would require a federal action (e.g. change in license conditions). Further, the NMFS and USFWS have opted not to reopen the license for the Skagit Hydroelectric Project to Section 7 consultation up to the present. Seattle City Light keeps in close contact with the ESA leads at NMFS and USFWS to identify any possible problems regarding project operations on Chinook salmon, bull trout, steelhead, bald eagles and other federally listed species present in the Project area.

F. Cultural Resource Protection

1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?

Answer: **Yes**

Updated information:

Historic Resources: SCL constructed a new building in Newhalem to greet visitors and answer their questions and to house new displays about the history of the Project. SCL has performed major rehabilitation work on Cambridge House for adaptive reuse as a library and on the New Cook's Bunkhouse for adaptive reuse as a Wildlife Research Laboratory. We are undertaking major rehabilitation of several additional historic resources, including Bunkhouse 13, Bunkhouse 70, Silk Stocking Row House 6, Hollywood House and Ladder Creek Gardens.

Archaeological Resources: The Upper Skagit River Valley (Ross Lake) Archaeological District was determined eligible by the Washington State Historic Preservation Officer on November 4, 2004. SCL has worked closely with the Tribes to finalize the Archaeological Resources Mitigation and Management Plan for the district and, with the Tribes' consent, has completed data recovery work at three locations, with a fourth planned in 2008. One Tribe has passed a resolution approving the plan and the other two are very close to doing so.

SCL has funded data recovery at two of the eligible archaeological sites at Ross Lake. Other sites were monitored during the spring drawdown in 2006.

G. Recreation

1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?

Answer: **Yes**

Updated Information:

Skagit Tours, suspended during 2002 for security reasons, have resumed. The web site features self-guided tours, hikes, trails and camping opportunities, and a scenic alpine boat tour. All of the activities include an emphasis on environmental stewardship and information about the upper Skagit area.

A number of projects that were underway or in the planning stages when the Project was originally certified in 2002 have now been completed.

A partial list of projects completed since the Project was certified in 2002 is provided below. Additional project lists and detailed information on projects completed or underway pursuant to the Settlement Agreement and FERC not highlighted in other sections of SCL's 2007 recertification application are available on request.

- Rehabilitation work has been completed at the Mineral Park Campground.

- Planning has been completed for the Steelhead Park boat launch and the Steelhead Park trail.

- SCL has completed certain Recreation projects including the Gorge Lake Boat ramp along with its handicap-accessible campground and trail. The FERC-approved alternative projects to the Black Peak trail are also substantially completed.

- Three new geology exhibit panels were designed for the Diablo Lake overlook and improved interpretive signs have been installed on the Happy Creek Forest Walk and at the Marblemount Hatchery.

- Additional trail segments, bridges and interpretive signs have been completed on the Skagit River Trail.

- The North Cascades Environmental Learning Center (NCELC) construction was completed. NCI moved into the buildings and began offering programs in 2006.