



City of Seattle

Gregory J. Nickels, Mayor

Seattle City Light

Jorge Carrasco, Superintendent

Project No. 553 -- Washington
Skagit River Hydroelectric Project
Seattle City Light
Article 409

August 11, 2008

Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Suite 1A
Washington, D.C. 20426

RE: Skagit Hydroelectric Project No. 553 – 2006-2007 Erosion Control (Article 409) Report

Dear Secretary:

Seattle City Light (SCL) is pleased to submit an electronic copy of the 2006-2007 Erosion Control Report for the Skagit Hydroelectric Project No. 553. We are filing this report under License Article 409 and FERC's May 15, 1996 order approving the *Soil Erosion Control Plan*. In 1998, SCL and the National Park Service (NPS) agreed to change the variable yearly funding amounts to uniform annual funding amounts. SCL and the NPS also agreed to begin using a portion of the \$500,000 "New Sites & Maintenance" contingency fund for maintenance of erosion control measures installed at identified sites. SCL's total financial obligation for erosion control remains the same. FERC approved these changes in its July 6, 1998, Order Amending Approved Soil Erosion Plan. This is our first biennial report per the Erosion Control Settlement Agreement, which required annual reports for the first ten years of the license and then reports covering two years until the end of the license.

The NPS has performed Skagit erosion control work in 2007 and previous years pursuant to the Erosion Control Settlement Agreement (Section 6.1). Work accomplished in 1991-1995 is described in the 1995 *Supplement to Annual Statement* that was submitted to FERC on May 9, 1996. All work performed in subsequent years is detailed in annual reports submitted to FERC in May of the following year.

In 2006 and 2007, the NPS continued erosion control activities (including re-vegetation with native plants) with SCL funding on several sites, as described in the attached report. They used seed collection funds from SCL to continue gathering plant material (including seeds and cuttings from Ross Lake National Recreation Area sites) to support these re-vegetation efforts at erosion control sites and to track plant genetics from seeds and cuttings.



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FERC Secretary
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In 2004, a major milestone was reached: the NPS completed work on all identified sites on Ross Lake. In 2005, work began on erosion control sites identified on Diablo Lake, the next reservoir down from Ross Lake. At the end of 2008, the list of road sites will be reviewed to see if it will be possible to "retire" them from the original list of identified sites. Full license-year implementation of the erosion control program continues in 2008.

The 2007 *Annual Expenditures Statement* for the Skagit Hydroelectric Project, submitted on March 31, 2008, provides more detail about expenditures for these erosion control activities, should you need this information.

If you have any questions about this report, please contact Ela Esterberg by telephone at (206) 386-4519 or e-mail: ela.esterberg@seattle.gov.

Sincerely,



Colleen McShane, Manager
Natural Resources and Environmental Planning
Environmental Affairs Division

EE:pw

Enclosure

cc: [w/enclosure](#)
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SKAGIT - FERC PROJECT #553
EROSION CONTROL PROGRAM
2006 -2007 COMPLETION REPORT

North Cascades National Park and Seattle City Light

May, 2008

INTRODUCTION

As stipulated in the 1991 Erosion Control Settlement Agreement (SA) between the National Park Service (NPS) and Seattle City Light (SCL), erosion control activities in Ross Lake National Recreation Area (NRA) continued for a thirteenth year (including pre-license work).

NPS crews, funded by SCL, conducted erosion control work at several sites in 2006 and 2007 (Figure 1). Work in 2006 focused on a contingency haul road site at the intersection of the Ross Lake haul road and the high water mark of Ross Lake. This site was not identified in the original site plan, but has deteriorated markedly in the intervening years. In addition, work continued at East Bank Trail sites E-64 and E-68 depositing large woody debris behind the log jams previously installed.

NPS crews focused on D-43 Buster Brown Camp on Diablo Lake in 2007. (Figure1). In addition, work continued at sites East Bank Trail sites (E-64 and E-68), depositing large woody debris behind the log jams previously installed. A new log boom was installed at site, E-116, East Bank Trail north of the Lightning Creek Bridge.

Detailed accounting of expenditures is provided in other reports and is not duplicated here. The purpose of this report is to update the Federal Energy Regulatory Commission (FERC) on progress under the terms of the current operating license for the Skagit Project.

PROGRESS REPORTS BY PROJECT

Ross Lake Haul Road (“New”site):

This site was not designated as an erosion control site in the 1991 Erosion Control site plan. However, in the intervening years, there has been significant raveling of the bank where the haul road intersects with the high water mark on Ross Lake. Boat traffic has increased significantly since 1995, and the resulting wake had caused serious undercutting of the bank below the road. In 2006, Park Service erosion control crews remedied the situation with 70 linear feet of dry lay rock wall, incorporating filter fabric as per standard erosion control wall design. Beyond the established rock wall, crew will install breakwater logs to protect another 30 feet of more stable shoreline and prevent wave activity from infiltrating behind the finished wall.

East Bank Trail (SITES E64 and E68): Both of these sites have had breakwater log booms installed and anchored to shoreline bedrock. Crews have been in the process of collecting, when available, large woody debris floating on Ross Lake and placing the debris behind the log booms to further enhance the dissipation of wave energy. This process will continue as debris becomes available. Initial surveys indicate that debris placement has worked well in reducing wave impact on the shore soil structures thus greatly lessening the raveling effect of wave energy.

East Bank Trail (Site E70A-6B): This is a contingency cribbing site along the East Bank Trail. A second tier was added to bring cribbing up to existing trail grade.

Buster Brown Campground (Site D-43), Diablo Lake:

At this site, the NPS Erosion Control Crew installed 70 linear feet of dry lay rock wall per design to a height of 3 feet above full pool. Rock work was extended on either side of the dock bulkhead to address the severe undercutting of the shoreline bank. In addition, another 80 linear feet of shoreline (not undercut but still fronting the campground) was protected with the installation of boom logs to mitigate wave energy along that length of shoreline.

Trail North of Lightning Creek (Site E116), Ross Lake:

Crews installed a temporary log boom at this site that serves to lessen the wave energy that could further deteriorate shoreline soils. This installation will be made permanent in 2008 and the process of installing woody debris behind the boom as an additional wave buffer will be undertaken.

NPS Greenhouse and Plant Propagation: In 2006 the Ross Lake Plant Propagation Crew grew approximately 2,500 plants in the Marblemount native plant and maintained the nursery facility. The work in 2006 included the collection of seeds and cuttings, and plant propagation in preparation for planting at erosion control sites on Ross and Diablo Lakes.

In 2006 the crew installed 400 plants in new sites and supplemental plantings at the E-70 cribbing site. 30 plants were installed at site E-64 on Ross Lake. Plant and seeding care was conducted at the Thunder Point Campground on Diablo Lake (D-11).

In 2007 the Ross Lake Plant Propagation Crew grew approximately 1,500 plants in the Marblemount native plant nursery and maintained the nursery facility. Work also included collection of seeds and cuttings, propagation in the nursery, and planting in the fall.

Planting work occurred at five erosion control sites in 2007. The NPS crew planted native plants and grass seed at the Diablo Lake Buster Brown Site and a total of 1,006 plants at erosion control sites at Cougar Island, Little Beaver, Tenmile Island and Dry Creek.

MONITORING: Where erosion was severe, sites have usually been monitored every other year to determine the rate of bank recession, assuming that this information would aid in design of future erosion control structures and prioritization of “new” sites. However, no monitoring data were collected in 2007. Since 2 years have passed, plans call for all monitoring sites to be revisited late in summer 2008, once the lake levels start to drop. Erosion rates for different bank materials are available in earlier FERC reports and from the NPS Geology office in Marblemount.

COMPLIANCE: Permits from the U.S. Army Corps of Engineers (404 permit) and the State Department of Wildlife (hydraulic permit) were obtained before work began at all erosion control work sites. Copies of these permits are kept at the NPS Geology office in Marblemount and are available on request.

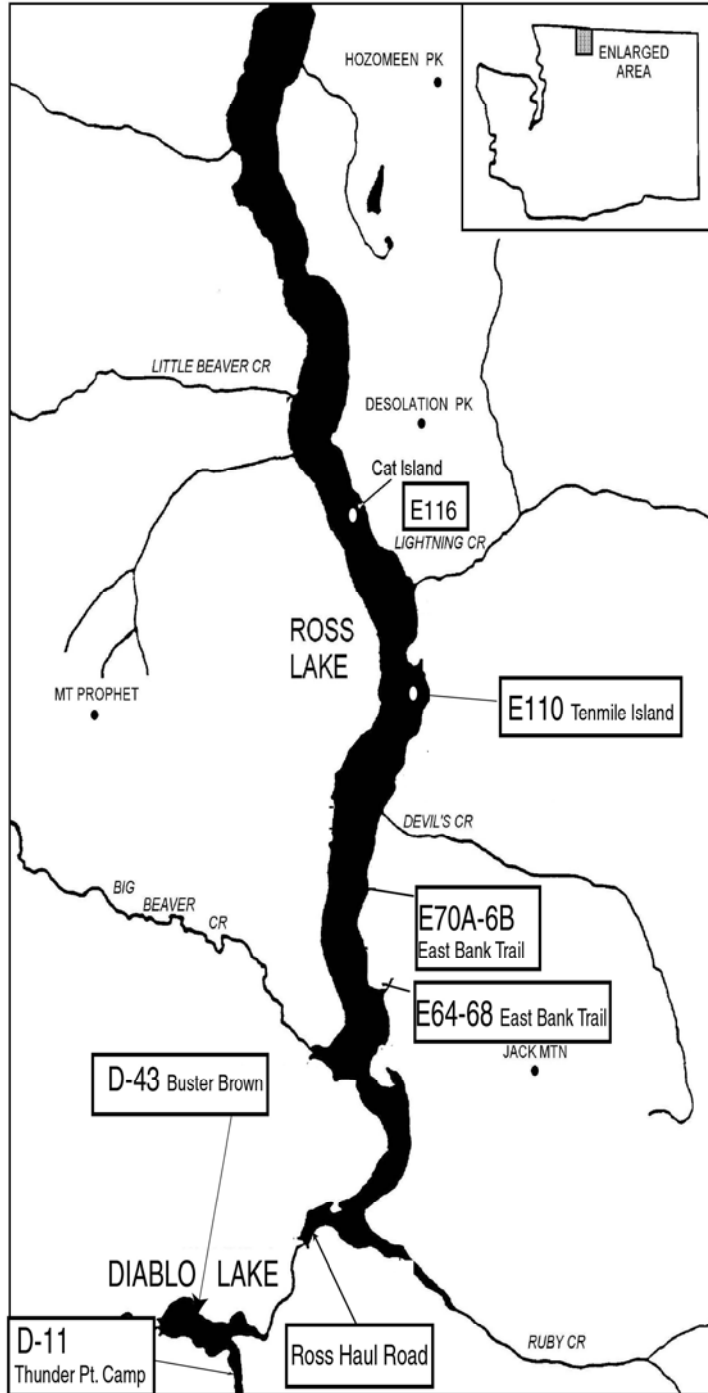


Figure 1. Skagit Erosion Control and Re-vegetation sites worked at in 2006 and 2007

Photo 1: Buster Brown Campground before erosion control measures, June, 2005



Photo 2: Buster Brown Campground after construction of rock wall in Sept. 2007.



Photo 3: NPS staff installing new plants at Diablo Lake campground



Photo 4: Planting native vegetation at Tenmile Island on Ross Lake



Photo 5: Haul Road site on Ross Lake during construction



Photos 6: Re-vegetation signs encouraging public involvement

