

NPS Progress on the Lake Chelan Erosion Control Plan

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Background: The Lake Chelan Erosion Control Plan was finalized in 2005 and is part of the hydroelectric project settlement agreement between Chelan PUD and the National Park Service. The plan is designed to mitigate the effects of shoreline erosion on public facilities within Lake Chelan National Recreation Area. It identifies basic approaches to stop erosion at 16 sites covering some 3,500 linear feet.

The NPS is responsible for completing this plan, but completion of work at these 16 sites is somewhat contingent on lake level and availability of permits from the U.S. Army of Corps of Engineers and the Washington DFW. For example, work at Weaver Point was delayed two years due to concerns about cultural resources and an unusually long permit process.

Progress to date: The NPS has largely completed stabilization work at four high priority sites, one medium priority, and one site that was originally listed as low priority but where conditions changed to make it important for the NPS to act earlier (site 72). The combined length of shoreline treated at these six sites is approximately 1500 linear feet, or almost half of the length originally identified for treatment in the erosion control plan (Table 1).

NPS completed parts of projects at two sites. Emergency work was also completed at site #73 Stehekin Landing in 2008 (120 ft), but the rock wall will be revisited in the future. Work at the north part of site 210 was completed in 2012 and the design was log cribbing (90 ft).

Work at all of these sites protected valuable public recreation facilities, including trails, docks, and campgrounds sites 71 and 75.

Table 1. Lake Chelan erosion sites worked on as of summer 2015.

Site identification #	Priority	Length feet	Year Completed
71 Weaver Point Camp	High	460	2014-2015
72 Stehekin Road	Low	300	2015
75 Fire Cache access road	High	440	2008-2011
79 Lakeshore trail	High	150	2010
109 Lakeshore trail	High	80	2011
110 Lakeshore trail	High	140	2015
Totals (not including sites 73 and 210)		1570	

The revegetation component of the erosion control plan lags 1-2 years behind the stabilization work because planting typically occurs in the fall after soils at new construction sites have settled.

We have had limited opportunities to collect large wood with the barge, due to a lack of large floods on the Stehekin River since 2006. Some logs from the 2006 flood that have not been used to date remain west of Weaver Point. The barge has been used extensively in the past 2 years, including work on a log structure and gravel beach at Weaver Point (site 71; photo 1) and a rock wall along the lakeshore trail (site 110).

Table 2 lists the status, and projected costs and savings for each site. Note that not all of the costs for some projects have been billed to Chelan PUD. Construction costs at sites 71 and 110 are expected to come in well below estimates, reflecting the efficiency and cost-consciousness of NPS crews.

Next 3-4 years: NPS priorities for the next three years include work at high and medium priority sites 76, 81, and 82 along the lakeshore trail and along 90 ft at the south end of high priority site 210 at Stehekin Landing.

Photo 1. Recently installed log structure at Weaver Point. Revegetation of the area to the left the structure will begin in fall 2015.



Table 2. Status of work at Lake Chelan erosion project sites as of summer 2015.

Site	Year start/completed	Available Funding	Total Cost to date	Est. to complete work	Est. to complete reveg	Remaining balance (TBD)	NOTES:
71 Weaver Point Camp	2014-2015	\$ 105,180.62	\$ 68,991.37	\$7,000	\$ 3,000.00	\$ 26,189.38	Project will be completed fall, 2015 (minimal rock work and reveg to do)
72 Stehekin Road	2015	\$ 54,249.68		\$ 20,000.00	\$ 3,000.00	\$ 51,249.68	Project will be completed fall, 2015.
75 Fire Cache Access Rd	2008-2011	\$ 65,279.00	\$ 65,279.00			\$ -	PROJECT COMPLETED
79 Lakeshore Trail	2010	\$ 46,220.00	\$ 46,220.00			\$ -	PROJECT COMPLETED
109 Lakeshore Trail	2011	\$ 24,654.00	\$ 24,654.00			\$ -	PROJECT COMPLETED
110 Lakeshore Trail	2015	\$ 63,500.00	\$ 25,000.00	\$2,000	\$ 3,000.00	\$ 33,500.00	Project will be completed fall, 2015 (minimal rock work and reveg to do)
210 Stehekin Rd/Cabana Area	2011	\$ 77,044.00	\$ 39,251.31	\$30,378.68	\$7,000	TBD	North side of site is complete; south side of site pending permit approval