

# SHORELINE SUCCESS STORIES

*Liz and Lee Thorson, Juanita*



"We are quite pleased at how this has all turned out though we weren't so sure in the beginning," notes Lee Thorson of the natural beach restoration he and his wife, Liz, completed on their Juanita area waterfront in 2008.

Removal of 50 feet of failing bulkhead and replacement with boulders, logs and native plants has vastly improved the appearance of their property, as well as provided better water access, according to the couple. They are cautiously optimistic that the project will protect their shoreline.

"So far so good. We've been through one major storm and just had a little gravel migration. Everything is still intact," notes Mr. Thorson.

Environmental regulations required the restoration as part of new home and dock permitting. Strong wind-driven waves had undercut an existing bulkhead, causing it to begin to collapse. Reconstruction of the bulkhead was not an option if they wanted to build their new home and dock.

The Thorson property faces southwest, taking the brunt of Lake Washington's strongest storm winds. Years of pounding on the four-foot-high vertical concrete bulkhead had actually created erosion on its landward side. The bulkhead was perched with water along both sides, and access to the lake was tough. Their first instinct was to build a bigger bulkhead to protect themselves. But once the couple realized that a natural beach would be much better for fish and wildlife and could protect their property, they were enthusiastic, Mr. Thorson says.



Work included excavation of 90 yards of soil and the old concrete bulkhead. This was followed by regrading to soften the formerly horizontal slope and create a sinuous rather than flat beach edge. Rocks and a 36-inch-diameter cedar log were positioned to give the new beach structural integrity and attenuate wave energy while enhancing near-shore habitat complexity for juvenile salmonids. Spawning gravel was placed along the shoreline and native emergent plants were installed.

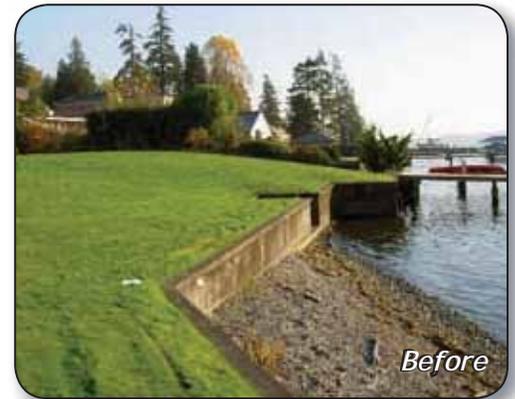
"Probably the biggest improvement is in aesthetics," Mr. Thorson says. "We didn't used to be able to enjoy the lake. We never spent time down there. It just wasn't a nice place. Now it is very pleasant to sit and throw the ball for the dogs."

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*Steve Moore, North Kirkland*

Steve Moore characterizes the bulkhead removal and beach restoration he did on his North Kirkland waterfront as “win-win.”

“It has made our beach useable and it has been good for the environment,” says Mr. Moore. “I knew that our bulkhead wasn’t working for us because we couldn’t access the beach without jumping from 6 feet high. But I’ll be the first to admit that I had to be educated on the fact that the bulkhead wasn’t good for fish and wildlife either.”



The Moore’s beach restoration was part of an extensive home remodel and landscaping upgrade at their Lake Washington property just north of Kirkland in King County. The beach project was completed in 2006 and required extra permitting and fish and wildlife evaluation because of its potential impact on endangered species of salmon. Regulators gave it quick approval because it was a boon to fish.



Work included removal of 85 feet of concrete bulkhead; excavation of 160 cubic yards of soil to soften the beach slope; and addition of stairs, a rockery, shoreline gravels, and native vegetation. Boulders and plants along the waterline create a complex shallow-water refuge and fish foraging habitat while attenuating wave energy from water storms and large boats. The project created an “outdoor room” along the new beach from which the Moores’ can enjoy Lake Washington.

“Basically, we sacrificed 10 to 15 feet of lawn we didn’t use for a beach where we can sit, wade into the water and throw tennis balls to the dogs,” Moore says.

Though the Moore property faces westerly, it still is subject to storms, waves, and the fluctuating levels of Lake Washington, which are two feet higher in summer than in winter. The beach has been through two winters unscathed. Moore credits good engineering, which excavated the beach to the correct level so that it’s not subject to excessive erosion. Some installed beach gravels have migrated.

“We have had a complete transformation of our relationship to the lake,” Mr. Moore says.

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*Liz and Bill Baxter, Bellevue*



*Before*

Eagles perch in the trees, muskrats haul out on the beach, and sockeye salmon spawn along the shoreline at Elizabeth and Bill Baxter's home within five minutes of downtown Bellevue.

"We feel like we are camping every day. It's magical for our family," notes Elizabeth Baxter as she talks about a shoreline reconstruction and re-landscaping of the couple's Lake Washington front yard.

No beach access, a failing and dangerous bulkhead, a sinkhole, exposed sewer pipes, and erosion created

by heavy waves prompted the Baxters to do extensive research and make dramatic changes to their waterfront in 2005.

The project required extensive environmental review because of possible impacts on endangered salmon, but received approvals in record time because of its positive effects on improving fish and wildlife habitat.

More than 100 linear feet of rock and concrete bulkhead were removed and 350 cubic yards of earth were excavated to soften the slope to the water's edge and eliminate the three-foot vertical drop from the former bulkhead. A sloped rockery and new installed boulders create two gravel coves lined with a mix of habitat logs, gravel/cobble and native vegetation. Mature native trees, including a Douglas fir, were saved because plant roots promoted beach stability. Additional native plants and emergent vegetation were installed to control erosion.



*After*

Waves that used to swamp the Baxters are now deflected, and children and adults can play safely in the water. The project has survived three winters without damage.

"Basically, we didn't used to be able to use our beach. It wasn't safe for the children," Mrs. Baxter notes. "Now, we have a wonderful, natural space to explore and enjoy."

This natural style may not be to the taste of some who want a perfectly manicured yard, she says. Ease of maintenance and the positive effect on the environment make the change perfectly suited to the Baxters.