

AVISTA, PARTNERS WORK TO REDUCE EROSION ON COEUR D'ALENE, ST. JOE RIVERS

By Steve Stuebner

Power boats are getting increasingly bigger and faster with more horsepower, and the larger boats also are leaving behind larger wakes. These factors – plus the boats that are made especially for the popular sport of wake-boarding – are creating more bank erosion on the shores of the Coeur d'Alene and St. Joe rivers.

To deal with that bank erosion issue, Avista Corp. has partnered with the Conservation Commission, Natural Resources Conservation Service (NRCS), Kootenai-Shoshone Soil and Water Conservation District, Benewah Soil and Water Conservation District, Trout Unlimited and Idaho Department of Fish and Game to address two bank stabilization projects, one on each river.

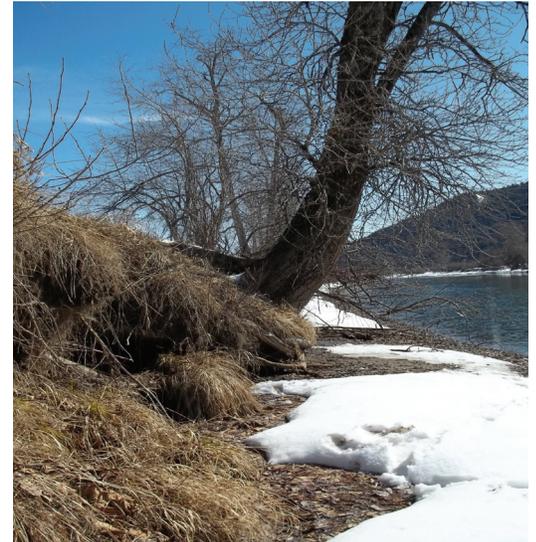
Because of a combination of fluctuating summer/winter water levels at Post Falls Dam, combined with the repeated wave action of powerboat traffic on the rivers,

Conservation Commission Engineer Bill Lillibridge expects that there will be a need for more projects - potentially more expensive - with larger-diameter rock to cope with the big wave action repeatedly hitting the riverbanks.

"NRCS has been working on these kinds of projects for years, and we're constantly updating our designs because of the changing technology being used by the recreational boating community," Lillibridge said. "We've recently been bumping up the size of the rock and the scope of the bank treatment to deal with the larger waves coming from the wake-boarding boats and other larger boats.

"We're chasing technology."

Lake Coeur d'Alene's shoreline has evolved with large wind-caused wave action, he said, but the waves created by powerboat wakes are a new thing to



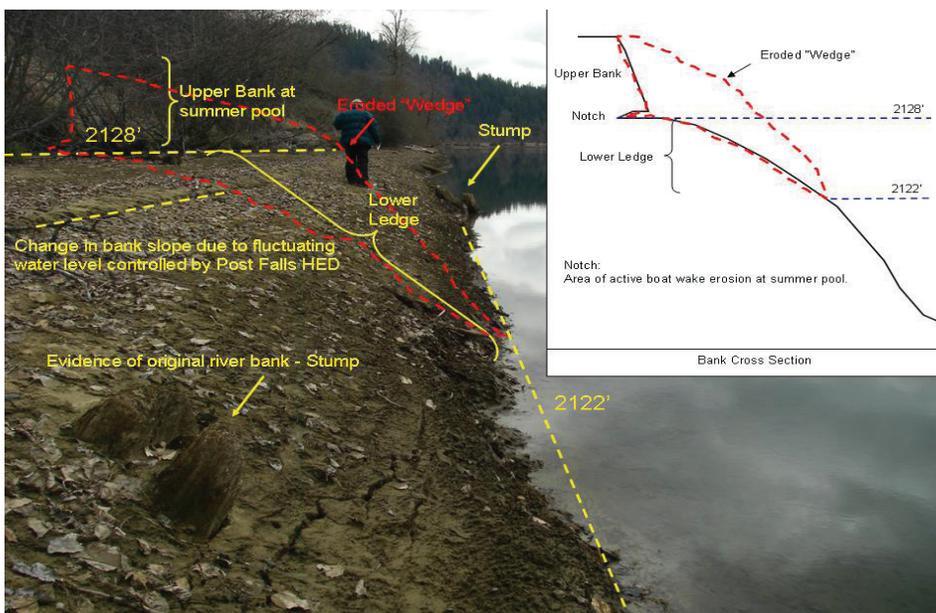
Shoreline erosion on St. Joe River.

the riverbank environment on the lower portions of the St. Joe and Coeur d'Alene Rivers.

In late 2013, over one mile of eroding shoreline was stabilized along the St. Joe River on land owned by Avista and IDFG. The project is located immediately downstream from the U.S. Forest Service Shadowy St. Joe Campground. It complements a wetland-restoration project on the same property.

The location had a high-priority ranking from an Idaho Department of Environmental Quality shoreline erosion study that had been completed in 2010. In addition, Avista had developed a five-year Water Quality Improvement and Erosion Control Plan for the area as a result of the relicensing of Post Falls Dam with the Federal Energy Regulatory Commission.

The Shadowy St. Joe project was included in the Avista 5-year plan, along with the Medimont Wildlife Management Area Stabilization project. Avista contributed \$75,000 a year for the implementation of



Bank cross section on the Shadowy St. Joe Project.

the 5-year plan, and contributed additional amounts financially to individual projects in the plan. The Shadowy St. Joe project cost about \$300,000, Avista officials said.

“The Shadowy St. Joe project was unique in that it treated more than a mile of riverbank – that’s a really long stretch to cover with a bank-stabilization project,” said Meghan Lunney, Spokane River manager for Avista. “We thought it turned out really well. The bank stabilization is looking really good.”



Over time, wakes from surf boats have significantly eroded the St. Joe and Coeur D’Alene Rivers.

“It was a very successful project in that it stabilized a lot of contiguous riverbank in one project,” added Jamie Brunner, Coeur d’Alene Lake management coordinator for Idaho DEQ.

Lillibridge provided the engineering for the Shadowy St. Joe Project, using the NRCS’s standard design that they had used

We Goofed!

Last month’s article on agencies providing assistance to ranchers and landowners incorrectly attributed credit for arranging a Grassy Ridge Fire landowners’ meeting to Robbie Taylor and the Clark SWCD.

Robbie, humble man that he is, got ahold of us right away to let us know that we got it wrong.

Robbie and Clark District arranged for the venue and funded the meeting, but NRCS - specifically Tracie O’Neill, Range Conservationist - did the heavy lifting in contacting agencies and landowners to get them there.

Great job, Tracie, NRCS, Robbie, and Clark District!

on the Medimont project. The design called for a rock “wedge” or slope, angled at a 2:1 ratio from the top of the bank to a point several feet under the river’s surface to protect the bank from being eroded by wave action. The rock wedge was installed 2 feet above the summer lake level (2,128 feet), and 2 feet below, officials said.

The project will reduce bank erosion by 70,000 cubic feet of sediment or 5,200 tons per year, Lillibridge said.

The bank-stabilization project was built concurrently with the Shadowy St. Joe wetland-restoration project on adjacent uplands. About 1,400 native willow bundles were placed every five feet on the bank’s edge prior to the rock placement to provide additional stability to the treated riverbank, Lillibridge said. To prevent damage to the wetland-restoration work on top, all of the streambank-stabilization work was done by barge at low-water levels in the late fall/winter.

“The project consisted of both hard armor and vegetation to address the combined influence of boat wakes, flood erosion and the altered vegetation line,” Avista’s Summary Report said. “In addition, the rock toe protection was coupled with planting riparian species in order to stop toe erosion and allow the re-establishment of riparian communities.”

About 7,005 cubic yards of 8-inch-minus rock was used to create the rock wedge, covering 6,004 feet of shoreline. Additional vegetation may be planted above the ordinary high water mark to further enhance the riparian community on site, officials said.



First, small filter rocks and willows were installed at Medimont Next would come large rocks to stabilize the bank.

Medimont Wildlife Management Area Stabilization Project

The Medimont site had been recommended in 2011 for treatment by Idaho DEQ as a potential cost-share partnership opportunity via a Section 319 grant with potential partners Kootenai-Shoshone Soil & Water Conservation District, EPA, IDFG and Avista.

The site also had been identified by NRCS



Large rocks were placed on top of the small filter rock to protect the bank from being eroded by wave action.

and the Kootenai-Shoshone SWCD as one of the more severely eroding riverbanks located on IDFG’s Coeur d’Alene River shoreline properties. Located on the inside bend of the river, the site also had had a major bank failure in the past. Avista supported the project and placed it in its five-year Water Quality Improvement and Erosion Control Plan.

In August 2012, the Kootenai-Shoshone District received a \$217,000 Section 319 grant from Idaho DEQ/EPA to treat about 4,000 linear feet of the Coeur d'Alene River. The project is located directly across from the U.S. Forest Service Medimont boat launch. Avista contributed \$75,000 to the project, and IDFG provided in-kind services amounting to \$13,000.

NRCS estimated that the erosion at the Medimont location exceeded 15 tons per year for every 100 feet of riverbank, totaling 600 tons per year for the 4,000-foot section to be treated.

Using the same NRCS standard design as they used for the St. Joe project, the contractor placed 3,515 cubic yards of 8-inch-minus rock to create the rock wedge 2 feet above and 2 feet below the summer lake level. In addition, they placed 1,600 cubic yards of 1.5-inch-minus sand/gravel for a filter underlayment. All of the work was done by barge.

Idaho Fish and Game provided 800 willow bundles (five willows per bundle) that were placed every five feet along the shoreline.

The project was constructed in late 2012 prior to ice-up and heavy snow, allowing the contractor to complete the project ahead of schedule and under budget by several thousand dollars. The Kootenai-Shoshone District and IDFG used those surplus funds to purchase additional streambank vegetation. Those plantings included western red cedar, black cottonwood, woolgrass, thinleaf alder, Douglass hawthorn, water sedge, Nebraska sedge, slough sedge, water birch, paper birch, quaking aspen, tufted hairgrass and Douglass spirea.

Information and Education Outreach

Capping off the Shadowy St. Joe project, the Benewah SWCD developed a brochure detailing the wetland restoration and bank stabilization projects with assistance from Avista and Idaho DEQ. The brochure was distributed at the district's display booth at the Benewah County Fair.

Lillibridge, Brunner and Lunney are looking at treating more riverbanks to fix erosion issues, and they are expecting to



Large rocks were added to armor the bank, preventing further erosion.

tweak the designs to deal with larger boat wakes and wave action.

Another project on the St. Joe River is in the works that is a former log landing where loggers dumped logs into the river for transport to sawmills via the lake waterways, Brunner said. "We're going to address that one with a layering system of willow cuttings, geotextile fabric with coconut fiber, soil and rock," she said.

"Once we get that one done, it'll be a demonstration site because we'll be able to talk about the log-landing project and the Shadowy St. Joe project."

Trying different designs to deal with the larger wave action and erosion issues "has been a learning experience," Brunner said.

"We're all open-eared about the potential

EROSION, cont. on pg. 4



The Medimont project one year after construction..

EROSION, cont. from pg . 3

need for design changes,” added Lunney.

The Benewah and Kootenai-Shoshone districts have been a great partner in the projects, and will be in the future because they can provide a tie-in to landowners who are interested in protecting stream-banks on their property, Lunney said.

“The conservation districts often hear from property owners who want to preserve their property from further bank erosion,” she said. “We look to them to guide us on future projects.”

Steve Stuebner writes for Conservation the Idaho Way monthly. 

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FY 2018 COMMISSION STATS

TRUSTEE & BENEFITS INCREASED FUNDING

The Commission and IASCD work together to increase T&B funding. The Commission develops the "ask", IASCD weighs in and recommends an ask for consideration by ISWCC, and Districts inform legislators.

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ADDITIONAL FUNDING REQUESTED & RECEIVED BY BUDGET YEAR



FY 2019

Asked: +\$1,000,000, WQPA
Received: no additional



FY 2020

Asked: +\$280,000, matching funds
Received: TBD



FY 2017

Asked: +\$200,000, grant incentives
Received: one time \$100,000 for 5-district wildfire mitigation



FY 2018

Asked: +\$300,000 Wildfire Mitigation Funds
Received: no additional



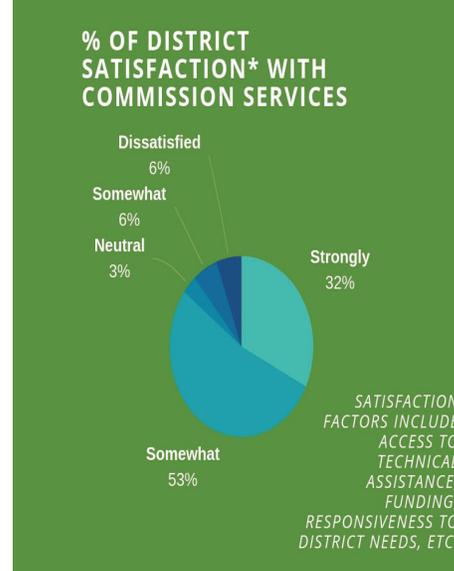
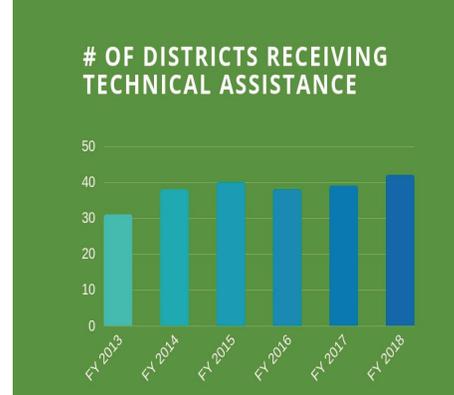
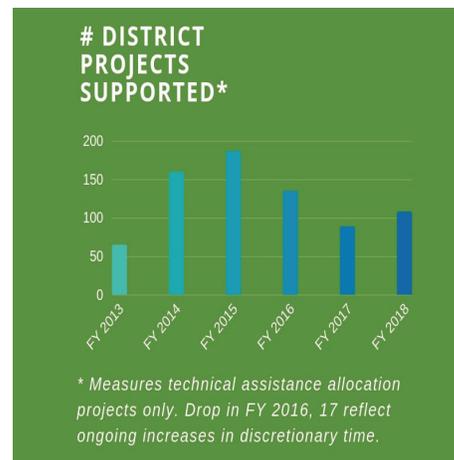
FY 2013

Asked: +\$174,300 for full 2:1 matching funds
Received: no additional



FY 2014-2016

Asked: +\$209,700 matching (14)
+\$60,000 equal distribution (15)
+\$50,000 equal distribution (16)
Received + \$50,000/yr + \$150,000 over 3 years



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