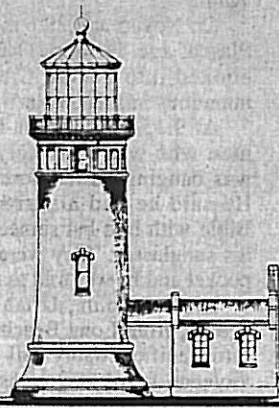


Clamming in the auburn twilight

LIFE, Page B1



CHINOOK OBSERVER

Serving the Communities of the Discovery Coast since 1900

ONE DOLLAR

109TH Year - No. 46

Long Beach, WA 98631

Week of Wednesday, November 10, 2010

CREST WORKS TO RESTORE CHINOOK WETLANDS

By CATE GABLE
Observer correspondent

CHINOOK — When U.S. Highway 101 was first built following the railroad tracks leading up to the tunnel at Fort Columbia, the riprap and construction cut off the tidal waters from a plain of wetlands at the base of Scarborough Hill. That will soon change.

In an effort to mitigate flooding in the area, Columbia River Estuary Study Taskforce (CREST) has undertaken a project to re-establish the tidal flow by excavating a channel and placing a lower, larger culvert at the bend in the road before the tunnel.

As board chair, Kenny Osborne, explained from his office at Chinook's Sea Resources, "There wasn't much thought put into how the construction of the old highway might affect the salmon or the wetlands. But this project is a win-win for everybody."

See CREST on Page A8

CREST: 'Lowering the culvert should provide better drainage from this area'

Continued from Page A1

Amy Ammer, habitat restoration specialist for CREST and project manager, said, "This project will reconnect the estuary to tidal flow, help the salmon and, we hope, lessen the danger of flooding in the area around Houchen Street."

"Some of those areas don't drain well because they were cutoff from the tidal flow. The original culvert was put in too high to take advantage of most tidal drainage," she added.

Common ground

Ammer and Osborne both mention the conversations that took place with the community and other leaders after a dispute about modifying the tide gates at the mouth of the Chinook River. There were serious concerns raised about some aspects of that project.

"We had some initial public hearings held at the Sea Resources classrooms," said Osborne, "And we had some lower river homeowners that got their hackles raised when they thought the whole Lower Chinook River was going to be flooded."

But this Fort Columbia wetlands and tidal reconnection project on the opposite end of Chinook is different in that it appears common ground has been found to benefit the goals of all affected stakeholders, including the fish. The property that will be reconnected to a tidal flow is 96 acres belonging to State Parks.

As Osborne put it, "I don't see how anything can be wrong with this project because, first, it's the correction of a situation that was created by building a highway over a railroad trestle without any forethought about cutting off an estuary."

"And, second, if CREST hadn't helped with the funding, Washington State Department of Transportation would have had to correct this culvert situation in the future."

Osborne explained that WSDOT has a six-year plan that requires them to review all the priority culvert blocks and then assign a value that establishes an order of priority. The fact that CREST stepped in to create a partnership meant that the project is happening sooner and with other funds to support it.

"Lowering the culvert should provide better drainage from this area when it is flooded and providing tidal flow into this acreage will allow juvenile salmon to come into the wetlands area and feed before

going back out to the bay and on to the ocean," said Ammer.

"Basically we're providing a flood water and a fish passage," she said. "The Chinook River estuaries are unique because all salmon use the area at least twice — when juveniles are rearing, they feed while heading down river and then again when they spawn heading up river."

Support for salmon

The physiology of juvenile salmon undergoes a transition from fresh water to salt water, and the mix of tides and currents in the Lower Columbia River is a place where juveniles linger as they acclimate to and make this habitat change.

Ammer explained, "The salmon's physiological changes as they transition from fresh to salt water mean that they need a range of different sites. This is really important. And we've been lacking certain types of sites in that range of habitat."

"At one time, this area had mature spruce swamps," Ammer continued, "But those have been reduced by 76 percent in the estuaries of Pacific and Clatsop counties in the Lower Columbia, basically from the Bonneville Dam to the mouth of the Columbia."

Spruce like "wet feet" as foresters like to say. They grow well in wetland areas where tidal currents wash in bringing nutrients before draining back out again.

In the past these areas generally occurred at the edges of river systems, but, for example, Highway 101 and State Route 401, where they border the Columbia River on the Washington side, are lined with riprap — large rocks that block both the flow of waves but also of water seeping into low areas.

Old culvert being replaced

The old culvert installed at the time the road was built is too high and too small to accommodate tidal flow into and out of the acreage at the base of Scarborough Hill. It was placed at about seven feet above the tide level so it rarely gets tidal flow in or out.

Because the old culvert was set high on the inland side, even if water does flow in on a very high tide it does not readily flow back out but sits in the wetland area and contributes to flooding along Houchen Street and the southeast area of Chinook.

The new culvert is 12 feet in diameter and will be set at mean average low tide plus two feet. Since a concrete culvert is not the best material for salmon to move through, it will be backfilled with three or four feet of gravel, roughly in a "V" shape, so that it will function more like a natural streambed.

"This lowered culvert height will mean that water will move into and out of the tidal area for most tides," said Ammer. "Also when the Chinook River is running high and water flows into that area, instead of sitting there in a pool, the culvert will allow that water to flow out."

"What this means is that over time this area, which is now primarily fresh water, will transition back to a salt water marsh or wetlands," said Osborne. "The plants are largely dying, but that could change in time as well."



SUBMITTED PHOTO
Crews have been using earth moving vehicles to clear foliage along the highway near Chinook.

Project Partnership

CREST, which is a hybrid organization made up of bi-state organizations, has brought together partners to make this project a reality.

The project, in development since 2005, includes Washington State Parks, Washington State Department of Transportation, Washington State Department of Natural Resources, Washington Department of Fish and Wildlife, Sea Resources, Pacific County, National Oceanic and Atmospheric Administration (NOAA), United States Fish and Wildlife (USFWS), United States Army Corps of Engineers, Bonneville Power

Administration and local landowners.

The project was designed by TetraTech and project contractor is Thompson Brothers Excavation Vancouver.

According to Ammer, "The total cost of the project is about \$1.1 million. Of that about \$800,000 is for the design and planning costs roughly \$240,000 remainder of \$40,000 covers staffing and permit costs."

Traffic restrictions

Traffic will be restricted during parts of the project. Ammer explained, "For the first part of the project the closures will be intermittent. There will be trucks on and off the highway to excavate approximately two acres of a 'pilot channel' to get started."

"We hope the inconvenience will be minimal," she said. "When we actually install the culvert we'll have one lane closures during daylight hours with flaggers. But those hours get shorter during winter months — so maybe from around 8 a.m. to 5 p.m."

"We'll start the major part of the project after Thanksgiving and it should go on for about half to two months," she added. "The signs will be up next week."

Monitoring for success

Osborne said that Sea Resources has been working for grants to augment the project and follow up monitoring on how salmon use the reconnected wetlands.

"We're hoping we'll see salmon back in the area soon," he said.

Ammer also talked about the monitoring that will take place after the project construction is over.

"We are anticipating that the lower 500 feet of the river will probably be intensively used and we hope to see good results in the next couple years," she said. "It's an interesting and exciting project because there is a fairly well-developed set of wetlands there that are not starting from scratch."

Osborne agrees, "As soon as the project is completed we should see some immediate things happen. There should be new little fish using the area, and the chains will open up."

"We'd like to monitor the phytoplankton that will be coming in to feed the wetlands. This is a great project for a high school or college student to be involved in," she added.