

# **WSDOT Constructing Innovative Project on the Skagit River**

## *Engineered log jams with concrete dolos will protect highway and fish*

The Chronic Environmental Deficiencies or “CED” Program is intended to find environmentally friendly permanent fixes to problems at sites on state highways where repetitive maintenance has impacts on fish habitat.

Megan White, Director of WSDOT’s Environmental Services Office, says “This project is providing immediate results in terms of protecting the road and providing fish habitat. It is exciting to see this project underway to address erosion in a way that protects the productive Skagit River resource.”

Near Rockport in Skagit County the Skagit River has been causing problems with State Route 20 for many years. The river runs right next to the highway and only emergency action – dumping large amounts of large rocks – has kept the river from washing out the road in 2004, 2006 and 2007. This is not a good way to protect the highway – the rocks simply don’t work in the long run and they impact fish habitat.

To provide a long-term solution, we’re building “engineered log jams” and log revetments at the site. These logjams combine logs and root wads with large concrete objects shaped like jacks, the children’s toys. These are called “dolos” (singular) or “dolosse” (plural). The log jams protect the highway from the river’s erosive force, the dolosse anchor the logs in place. At the same time, the completed structures provide significant fish habitat improvements. Dolosse have a long history of use protecting marine shorelines from high-energy waves, but have not been used much in freshwater environments. WSDOT believes this to be the largest log jam / dolosse project ever built.

Construction began in late 2013 and the major work – actually placing the woody material and dolosse in the river – is proceeding rapidly in March, 2014. We’re timing construction around the fish runs, bald eagles, tourist traffic, and river levels. So far, we’re ahead of schedule and under budget!

Project Website:

<http://www.wsdot.wa.gov/projects/sr20/skagitriverrestoration/>

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Emergency Repairs, November 2006



The same location, under construction, March 2014



Contraction using a trackhoe with a grapple, March, 2014.



A single dolo with logs attached.



A partially constructed logjam.



Looking downstream along most of the construction site.