

## Sandra Davis

We know that Power River Basin coal contains lead, mercury, and arsenic. We also know coal dust from export terminals around the world pollutes our waterways. Coal dust does not evaporate or disappear in water.....it travels. Once in our rivers and waterways, there are no remedies to remove these contaminants. We need more scientific studies on coal pollution and the surfactants being sprayed on coal and how both can harm fish and other aquatic species. Until you know the results of these studies, you must respect the responsibilities given to the Department of Ecology to protect our Columbia River.

The Washington State Department of Ecology must therefore deny the 401 Water Quality Certification for Millennium's coal terminal until answers are available on how years of accumulation of coal dust and surfactants will impact our Columbia River ecosystem. The U.S. Fish and Wildlife, Department of Interior agrees that this project would have unavoidable and significant adverse impacts.

Below is information from a 2006 study on how coal dust travels in water and impacts flora and fauna:

"In 2006, two scientists at the University of British Columbia evaluated 22 years' worth of coal dust dispersal around the Westshore Coal Terminal at Tsawwassen, BC, just north of the US border. They found widespread coal dust on the surface of the water near the terminal, observing a film of fine coal particles floating on the water 200 meters (656 feet) from the vessel loading dock, even when no coal loading was in progress and no ship was docked. The researchers pointed out that ordinary tidal currents could disperse the coal particles 2.5 miles from the coal loading facility and potentially over 56 miles under extreme conditions."

"On the sea floor, too, they documented a steady accretion of coal dust. Concentrations in the immediate area of the coal terminal were as high as 11.9 percent in the later samples, with quantifiable concentrations even 1.5 miles away. All of that dust, they concluded, could harm the flora and fauna living on the sea bottom, since oxidizing coal particles reduce the oxygen available for clams, mussels, barnacles, and crab larvae, with damage reverberating up the food chain. Bottom-dwelling invertebrates like these affected by coal dust make up a large share of the seasonal food for salmon and herring."

Thank you for allowing me to comment on this important matter.