

Getting the Copper Out!

Puget Soundkeeper Alliance targets two sources of a troublesome pollutant

To protect our salmon and the economic value of Puget Sound, Puget Soundkeeper Alliance (PSA) recently settled a legal appeal with two state agencies, the Washington Departments of Ecology and Transportation. Echoing PSA's other victories with municipal stormwater permit appeals, this precedent-setting agreement will curb the flow of pollutants from our roadways into our waterways through improved stormwater infrastructure on both new and existing state highways. [Read the press release](#). In addition PSA recently sent Clean Water Act 60-day notice letters to five Seattle area boatyards found to be in violation of their National Pollutant Discharge Elimination System (NPDES) stormwater permits. The common issue? Copper.

Copper is one of the biggest offending pollutants in stormwater and is deadly to aquatic life even in low concentrations. **Copper is fatal to Chinook and coho salmon and rainbow trout (steelhead) at an average concentration of 22-25 parts per billion (ppb).*** At even lower levels, it can disrupt crucial survival behaviors like feeding, predator avoidance and migration.**

Every time we use our cars, small particles of copper from the brake pads drop onto our roads. When it rains, stormwater transports the copper into our lakes, streams, rivers and Sound. The new agreement with the state will reduce the amount of copper and other pollutants in our waters and thereby directly benefit the health of our struggling salmon and steelhead populations.

Another source of copper in our waterways comes from the ablative paint applied to boat bottoms in boatyards. This commonly used anti-fouling paint type has a high copper content to inhibit marine growth, but without adequate containment and treatment, copper-laden paint dust from prep work can seep into the water from stormwater runoff. Although boatyards may contribute only a small amount of the total copper entering our waters, without adequate containment and treatment it often reaches our waterways at a much higher concentration than from other sources. Boatyard Discharge Monitoring Reports submitted from certain boatyards routinely show copper levels in the range of 1000–7000 ppb, hundreds of times higher than levels shown to disrupt or kill salmon.

To address this serious source of copper pollution, while recognizing the value of a healthy maritime industry, PSA has undertaken a multi-year project to:

- help write a boatyard stormwater permit that protects water quality and salmon.
- partner with the industry to evaluate new treatment technologies.
- help boatyards understand their obligations under their permits.

- take action against those that are not in compliance with the federal Clean Water Act. [Read more](#) about how PSA takes action.

In December of 2009, PSA initiated 60-day notice letters to five boatyards with the worst violations, alleging that they are in violation of the Clean Water Act, in part because of the high levels of copper in their discharges. PSA has a long and productive record of working with boaters, marinas and boatyards to protect salmon and other marine life. Protecting water quality and compliance with the law by all parties is our goal. PSA applauds the efforts of other boatyards to bring down their copper concentrations through containment and treatment technologies. [Read more](#) about citizen enforcement of the Clean Water Act.

PSA appreciates your continued support of our mission. For more information, visit our web site at www.pugetsoundkeeper.org. If you have specific questions or comments, please contact Puget Soundkeeper, Bob Beckman, at 206-297-7002 or by email at bob@pugetsoundkeeper.org.

References:

*2007 *Update of Ambient Water Quality Criteria for Copper*, by the US EPA, which is used to determine federal water quality standards.

**EPA 2007. Also NOAA Fisheries 2007: *A Sensory System at the Interface Between Urban Stormwater Runoff and Salmon Survival* by Sandahl, Baldwin, Jenkins and Scholz from *Environmental Science and Technology*, 41:2998-3004.



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