

Depleted oxygen target of new study

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By **JOHN DODGE**, *The Olympian*

The state Department of Ecology is about to launch a study of dissolved oxygen problems in South Sound, fearful it could be the future home of fish kills and dead zones akin to what's happening in Hood Canal.

The \$400,000 study will monitor 80 open water sites, river mouths and areas around wastewater treatment plant outfalls to pinpoint oxygen-depleted regions and track pollution sources, Ecology water quality specialist Andrew Kolosseus said Tuesday.

Dissolved oxygen in the water is crucial to fish and other marine life, which need it to breathe. Too much nitrogen causes algae blooms, which, when they die and decay, rob the water of oxygen.

Last month, low dissolved oxygen levels in lower Hood Canal triggered a major die-off of fish and other marine life, similar to episodes there in 2002 and 2003. Scientists, shellfish growers and environmentalists have been warning that South Sound could be the next Hood Canal.

"We've been trying to say it's a problem in South Sound for years," said Bill Dewey, spokesman for Taylor Shellfish in Mason County.

"We're seeing far more algae in the water than we used to and complications on our shellfish beds."

For instance, Dewey said, oysters in South Sound suffered major mortality rates this summer in what appears to be a case in which there were too many nutrients for them to consume, leading to an explosion in oyster growth that the oysters can't handle.

"I think there's great value in this study," Dewey said.

"We're glad to see the study," added Naki Stevens, program director for People for Puget Sound, a conservation group. "We need to get a handle on the dissolved oxygen levels in Budd Inlet before we have another Hood Canal."

At the same time, there's no reason to wait for a study to take action to prevent polluted stormwater runoff and effluent from septic systems from reaching the waters of South Sound, she said.

Sources of nitrogen pollution in South Sound include discharges from wastewater treatment plants, septic systems, livestock waste and fertilizer and pet waste runoff from home lawns and

gardens. Natural factors, including South Sound's shallow waters and lengthy flushing times play a role, too.

"This study is critical to help us determine what actions communities and individual homeowners might take to reduce human-related sources of nitrogen," said Dave Peeler, who oversees statewide water quality activities for Ecology.

The South Sound dissolved oxygen study is part of Gov. Chris Gregoire's Puget Sound initiative, which aims to restore Puget Sound health by 2020. The study area borders portions of Mason, Thurston and Pierce counties.

The public-private Puget Sound Partnership the governor created last year is expected in November to deliver a set of recommendations on how to proceed with Puget Sound cleanup.

Previous water quality studies by Ecology have revealed dissolved oxygen problems in parts of South Sound, Ecology scientist Bill Backous said.

Dissolved oxygen levels in healthy marine waters should be between 5 parts per million and 7 parts per million, according to Ecology. In 2003, dissolved oxygen levels were as low as 3.1 ppm in Budd Inlet, 2.6 in Case Inlet and 4.3 in Carr Inlet.

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