



Lower Nooksack River Cleaning up water pollution

Background

Located primarily in Whatcom County, Washington, the Nooksack River basin encompasses 825 square miles of diverse geography between the northwestern slopes of the Cascade Mountains, through foothills and lowlands to Bellingham Bay. The lowlands area is the focus of a plan by local, tribal and state officials to improve water quality.

The goal of the cleanup plan for the lower Nooksack River is to restore water quality so that it meets all beneficial uses, including the re-opening of Lummi shellfish beds at Portage Bay. These shellfish beds were restricted in 1998 by Washington Dept. of Health due to unsafe levels of fecal coliform bacterial pollutants.

Agriculture is the major land use in the Nooksack lowlands, with the production of 230 dairies and numerous raspberry growers among leaders statewide and nationally.

Most of the small cities in the lower Nooksack basin support farming or timber industries. Everson's population is 1,830; Nooksack – 890; Lynden – 8,900; and Ferndale – 7,890. Municipal sewage treatment is provided to households within city limits. In most cases, homes in rural, unincorporated areas rely on individual septic systems.

The Lummi Indian Reservation, located near the mouth of the Nooksack River, has an estimated population of 3,600 registered tribal members and 1,000 non-tribal “fee land” owners. Both Lummi and Nooksack tribes maintain usual and accustomed fishing and shellfishing rights within the basin.

Developing a water cleanup plan

The Clean Water Act requires states to identify waters that do not meet state standards, and to develop a cleanup plan targeted at pollution sources. Water cleanup plans – also called total maximum daily load studies (TMDL) – include an analysis of water quality sampling data and a strategy to limit pollution to meet state water quality standards.

Monthly water samples collected between March 1997 and February 1998 at 21 sampling sites along the lower Nooksack River helped identify and quantify the extent and causes of fecal coliform pollution. Many of the sampling sites were located where tributary creeks, streams and ditches drain into the Nooksack River. Many of these tributaries also fail water quality standards. Several sampling locations were chosen to measure pollutants from sewage treatment plants and stormwater discharges.

What did the lower Nooksack River TMDL study find?

High levels of *fecal coliform* pollution – caused by animal and human waste – were found at all sampling sites west of Everson at numerous times throughout the year. Fecal coliform pollution can indicate the presence of such pathogens as *e. coli*, and has been responsible for numerous shellfishing restrictions throughout Puget Sound.

Strategy for cleaning up the lower Nooksack River

Dairy Waste Management: As of April 2000, Dept. of Ecology has completed inspections of all 230 commercial dairies within the lower Nooksack basin. About 60 dairies with pollution problems have received notices to correct their practices and have received follow-up inspections by Ecology. Nine dairies with severe problems have also received monetary penalties and are required to have an NPDES dairy permit. By July 2002, all dairies must have pollution control strategies within farm plans approved by the Whatcom Conservation District. It is envisioned that full implementation of farm plans – required by Dec. 2003 – will further reduce levels of fecal coliform, nutrients and acidity, while increasing dissolved oxygen. The Whatcom Conservation District, Natural Resources Conservation Service or third-party private consultants can assist farmers with plans.

Municipal Sewage Treatment: The Dept. of Ecology administers water quality permits to the cities of Everson, Lynden and Ferndale for their sewage treatment facilities. As those permits are being renewed during the latter half of 2000, stricter limits will be set for fecal coliform limits –in some cases representing a reduction of about 60 percent.

Rural Residential Septic Waste: In 1999 and 2000, Whatcom County Health & Human Services Dept. delivered septic system operation and management information to all septic system owners in the Nooksack basin. This information will be distributed again within the next five years. Inspections have been targeted to key watersheds and several problems identified; to date, all systems with problems have been repaired. A low-interest loan program with funds provided by Ecology will be implemented by the county when additional repairs or replacement needs are identified.

County Critical Areas Ordinance Enforcement: Whatcom County Planning and Development Dept. has hired additional inspectors to enforce local manure management and stream buffer ordinances. The enforcement of these ordinances is expected to eliminate animal access to streams and manure application to bare ground. Stream buffers should help filter pollutants and provide shade to cool water temperatures.

Streamside Re-vegetation: Whatcom County Public Works Dept. is developing plans with seven drainage improvement districts to establish and maintain streamside vegetation. This effort is expected to help filter pollutants, lower water temperatures and increase dissolved oxygen.

Tracking cleanup results

Using data collected through February 1997 as “baseline,” additional sampling and analysis is already under way. Ecology dairy inspectors have verified decreases of fecal coliform pollution in several tributaries to the Nooksack where good manure management practices have been implemented by dairy farmers.

Public comment

Written public comments on the proposed Nooksack River cleanup plan will be accepted through May 31, 2000. The full text of the TMDL study and water cleanup plan can be accessed at the libraries of Everson, Lynden, Ferndale and Bellingham; the Whatcom Conservation District; Ecology’s Bellingham Field Office; or at <http://www.wa.gov:80/ECOLOGY/biblio/0003006.html>
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