

Snohomish River Basin

The Snohomish Basin is in east central Puget Sound, immediately north of Seattle. Extending from tidewater to the crest of the Cascade Mountains, the basin encompasses nearly 2,000 square miles. Approximately 20 miles upstream from its mouth the Snohomish River divides into two major tributaries, the Skykomish to the north and the Snoqualmie to the south. Other major tributaries include the Pilchuck on the Snohomish, the Tolt and the North, South, and Middle Forks of the Snoqualmie, and the Sultan and the North and South Forks of the Skykomish. The basin's varied topography ranges from low, rolling terrain next to tidewater to steep cliffs along the eastern border. While forests cover 82 percent of the area, agricultural lands predominate throughout the coastal lowlands and extend inland along the alluvial river bottoms. The climate, typical of Puget Sound, consists of cool summers and mild winters. The precipitation varies from 30 to 40 inches along the coastal shelf to more than 100 inches in the mountainous areas.

Lower Snohomish

Flood Control Study Deferred (Seattle District) At the request of Snohomish County the Corps initiated a reconnaissance study of flood problems in the lower Snohomish River basin in 1990. The Corps completed a positive reconnaissance study in fiscal year 1991. This study was deferred at the request of the county.

Startup, Wallace River

Section 205, Completed Flood Control Project (Seattle District) This project, constructed at Startup, consists of a 7,000-foot-long levee between the Skykomish and Wallace Rivers, tying into the Burlington Northern railway embankment at each end. Side channels divert riverflows away from the levees. The project was completed in October 1965 at a federal cost of \$271,713 and a non-federal cost of \$23,500. Total flood damages prevented through fiscal year 1998 were \$3,052,000. Snohomish County is responsible for maintenance.

Sultan and Skykomish Rivers

Section 205 Small Flood Control Study, Terminated (Seattle District) The Seattle District conducted a reconnaissance study of the flooding problem within and near the town of Sultan, in Snohomish County. Sultan is subject to flooding from the Sultan River to the west and the Skykomish River to the south. The most feasible flood damage reduction alternative consists of two separate levee segments to provide protection to the city from floods up to the 100-year event. One segment would be 2,200 feet long and set back from the Sultan River, and the other segment would be 600 feet long to protect downtown Sultan from Skykomish River flooding. Interior drainage control structures and a gravel seepage control berm would also be required. An initial reconnaissance report

was completed in 1988. The full reconnaissance report was conducted in 1989, recommending feasibility studies. However, local interests were unable to meet cost-sharing requirements, and the studies were terminated.

Snohomish Estuary Wetlands

Completed Study (Seattle District) The Snohomish estuary was studied in order to identify wetlands serving important purposes relating to fish and wildlife, recreation, and the general public interest. Purpose of the study was to provide an objective basis for evaluation of permit requests for development activities. Results may be used by permit applicants and federal, state, and local agencies to evaluate impacts of activities on wetlands and associated resources. The study was completed in the fall of 1978.

Everett Harbor and Snohomish River

Completed Navigation Project (Seattle District) Built in 1912, a training dike extends northward 12,550 feet from a point opposite 23rd Street to the mouth of the Snohomish River which protects Everett Harbor. A spur dike, built in 1912, extends 400 feet from the north end of the main dike to the pierhead line and also provides protection to the city. In 1931, a 6,000-foot section of the training dike was raised to 14 feet above lower low water, and the channel between the river mouth and the lower harbor was dredged to a depth of 15 feet. A settling basin in the main channel was completed in 1940. Local interests dredged the East Waterway to accommodate deep-draft vessels. In April 1963, the Corps of Engineers dredged a new channel 8 feet deep and about 22,250 feet long and a settling basin near the upstream end of the project. In 1968, the project was modified to extend the training dike and construct a breakwater along the south and west sides of the existing small-boat basin. The downstream 3,250 lineal feet of the training dike was rehabilitated to +14 feet mean lower low water in 1974. The uncompleted portion of the project was deauthorized Jan. 1, 1990, under provisions of Public Law 99-662. Total costs through September 1998 have been \$1,766,745 federal funds for new work, and \$16,382,306 for maintenance. In addition, \$116,618 in contributed funds have been expended for new work, plus \$584,090 in contributed funds for maintenance. Other non-federal costs total \$256,000. Commerce in 1997 totaled 3,640,000 tons.

Snoqualmie River Flood Control, at Snoqualmie

Section 205 Flood Study (Seattle District) Flood studies throughout the basin began after the damaging 1959 flood. In 1969, a Corps report recommended a storage dam and reservoir on the Middle Fork of the Snoqualmie River, but the state opposed the plan. In 1974, a compromise plan known as the Snohomish

...the plan in 1981, a compromise plan between the Environment
Mediated Agreement was presented to the Corps; however, a
1982 Corps report found that the plan was economically
unfeasible. King County and the city of Snoqualmie asked the
Corps of Engineers to resume the flood damage reduction study
under Section 205 authority in 1996. Cost-shared feasibility
studies began in June 1997, and construction occurred in 2004
and 2005. The flood damage reduction measures are channel
widening just upstream of Snoqualmie Falls, and the removal of
an abandoned railroad bridge. The total project cost is estimated
to be about \$7.1 million. The project is reducing flooding in and
near the city of Snoqualmie for all levels of flooding.

Edmonds Small-Boat Basin

Completed Navigation Project (Seattle District) The Corps has responsibility for
maintenance of the south rubble-mound breakwater and an entrance channel to
the Edmonds basin. The breakwater rehabilitation was completed in 1987 at a
cost of \$224,756.

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