

CHAPTER 1

INTRODUCTION

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1.0 Purpose

Like all rivers, the Stillaguamish River is subject to regular flooding. While flooding is a natural occurrence that benefits the environment, it poses a potential hazard to county residents who live on the floodplain and lowlands. In the 1990s, Snohomish County residents experienced several devastating floods (2 in 1990, one each in 1995, 1996, and 1997), four of which were declared natural disasters. As a result of those floods, Snohomish County initiated this Stillaguamish River Comprehensive Flood Hazard Management Plan (Stilly Flood Plan) to identify areas that may contribute to increased flood damages and determine actions that can be taken to reduce those damages while preserving the positive environmental effects of flooding.

1.1 Study Area

This 684 square mile basin is located in Snohomish and Skagit counties in northwest Washington (Figure 1-1). The study area is the Stillaguamish River *basin* (Figure 1-2). Causes of flooding are evaluated on a basin scale while symptomatic effects are addressed on the floodplain of the mainstem and two major forks.

Basin is the area within which all surface water – whether from rainfall, snowmelt, springs, or other sources - flows to a single water body or water course. The boundary of a river basin is defined by natural topography. Also known as a ***Watershed*** or ***Drainage Basin***.

1.2 Plan Organization

This document identifies watershed and flooding characteristics, flood hazard areas, flood storage and conveyance areas, flood hazard management options, and recommended actions.

The Stilly Flood Plan is organized as follows:

- ✓ Chapter 1 presents the flood management plan requirements, the process used to develop this plan, and outlines information pertaining to Flood Control Account Assistance Program (FCAAP).
- ✓ Chapter 2 provides information about Stillaguamish River basin characteristics.
- ✓ Chapter 3 provides fundamental information on flooding, hydrology, and sedimentation.
- ✓ Chapter 4 provides information on the County's Flood Warning System. This chapter also provides general information of flood patterns in the Stillaguamish River basin.
- ✓ Chapter 5 documents the history of major Stillaguamish River flood events.
- ✓ Chapter 6 outlines the history of floodplain management efforts taken to protect property from flood damages and discusses previous studies of flooding and flood management on the Stillaguamish River. It also documents the impacts of those efforts on habitat.

- ✓ Chapter 7 analyzes flood hazards and flood hazard reduction opportunities. Alternative actions are evaluated and preferred recommended actions provided.
- ✓ Appendices contain the following:
 - Appendix A: Acronyms
 - Appendix B: Issue Paper # 1, an analysis of selected forest practices and their impacts on flooding in the basin;
 - Appendix C: Issue Paper #2, a detailed analysis of identified flood hazards and flood hazard mitigation opportunities in the basin;
 - Appendix D: Descriptions of applicable federal, state, and local regulations;
 - Appendix E: Funding opportunities for implementation efforts;
 - Appendix F: Meeting summaries from the Planning Advisory Committee; and,
 - Appendix G: Additional graphics.

1.3 Required Plan Elements and Funding Benefits

The plan follows state requirements regarding the preparation of flood hazard plans and conforms to the following procedures described in Revised Code of Washington (RCW) 86.26 and Washington Administrative Code (WAC) 173-145 (Appendix D):

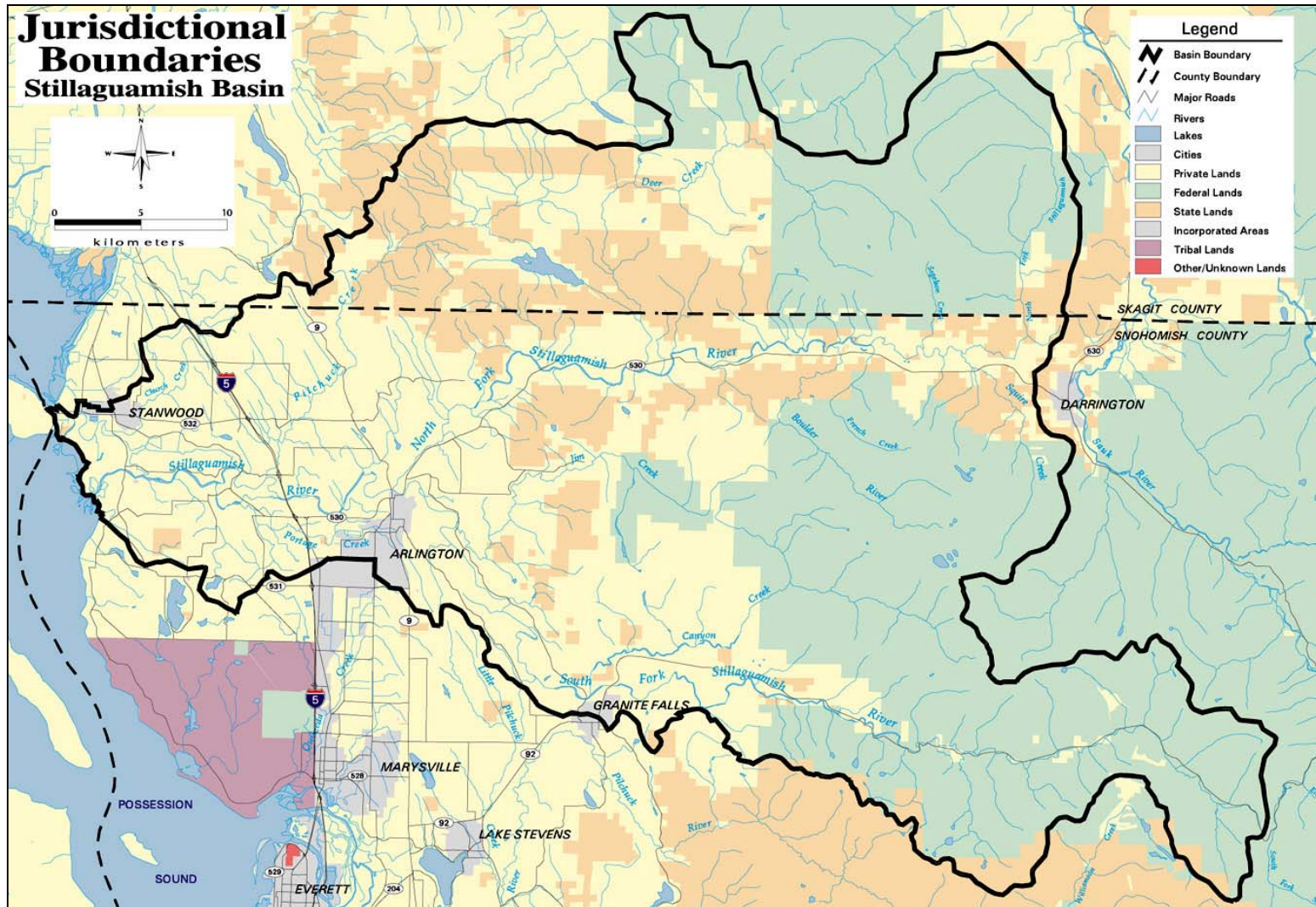
- ✓ Establish a citizen and agency participation process;
- ✓ Set short- and long-term goals and objectives for flood hazard management;
- ✓ Develop an inventory and analysis of physical conditions;
- ✓ Determine the need for and identify alternatives for flood hazard management measures;
- ✓ Evaluate alternative measures;
- ✓ Hold public workshops for evaluation of alternatives;
- ✓ Complete the draft Stilly Flood Plan and associated documentation;
- ✓ Submit the final Stilly Flood Plan to the Washington State Department of Ecology (Ecology);
- ✓ Hold a public hearing and adopt the Stilly Flood Plan; and,
- ✓ Notify Ecology that the Stilly Flood Plan was adopted.

Once Ecology has reviewed this plan, implementation actions will be eligible for state funding through the FCAAP.

Figure 1-1: Vicinity Map for Snohomish, Washington.



Figure 1-2: Stillaguamish River Basin in Snohomish County, Washington.



1.4 Public Involvement

Public involvement is critical to the success of flood hazard management planning. Proposed measures may affect local property owners. Their feedback throughout the effort is needed to develop actions. The planning process also offers an opportunity to educate the public on the issues, opportunities, and public responsibilities of flood hazard management. Because the local governments must adopt the plan, it is important that local residents take an active role in developing the plan contents.

1.4.0 ADVISORY COMMITTEE

One of the first steps in developing this plan was to establish a planning advisory committee (the Committee) to obtain public and agency involvement. The Committee consisted of representatives from public and private organizations and agencies (Table 1-1). The committee met five times to provide regular feedback to the County and also reviewed products through e-mail or regular mail. The efforts of all the Committee members were invaluable to the completion of this plan.

To reduce the amount of review the Committee was required to do at any one time, the plan was developed and distributed in parts. A background report on the basin (e.g., flood history, previous flood management efforts) was provided to the committee in December 2000. An issue paper on forest practices and their impacts on flooding in the basin was distributed at the January 2001 meeting. A second paper was distributed at the March 2001 meeting that identified flood hazards and flood hazard mitigation opportunities in the basin. The Committee comments were incorporated into these documents and the final issue papers are provided in Appendices B and C.

1.4.1 ADDITIONAL OUTREACH EFFORTS

While the Committee provided feedback to their respective groups on a regular basis, the County sought additional input from Stillaguamish residents. In September 2000, a fact sheet about the plan and a questionnaire soliciting feedback on personal experiences with flooding and flood hazards were mailed to almost 8,000 residents in the Stillaguamish basin. The County received almost 300 responses to the questionnaire.

In addition to these mailings, two open houses were held in October 2000 to provide information about the Stilly Flood Plan and to obtain additional feedback about potential flooding areas along the Stillaguamish River. Almost 70 residents, elected officials, and agency representatives from the basin attended and discussed their concerns with staff from Snohomish County, U.S. Army Corps of Engineers, U.S. Forest Service, Washington Department of Natural Resources, Washington Forest Practices Association, City of Stanwood, and the Stillaguamish Flood Control District.

Quarterly newsletters were mailed to a list of almost 500 interested residents that provided updates on the study progress. These newsletters and minutes from the Committee meetings were placed on the County's river management web page as well.

Table 1-1: Stilly Flood Plan Advisory Committee Members.

Representative	Affiliation
Mr. Bill Blake	City of Arlington
Mr. Chuck Hazelton	Stillaguamish Flood Control District
Mr. and Mrs. Dave & Bobbie Eldridge	Stillaguamish Flood Control District
Mayor Matthew J. McCune	City of Stanwood
Mr. Bill Beckman	City of Stanwood
Mr. Paul Cooke (and formerly Mr. Glen Reed)	U.S. Army Corps of Engineers
Mr. Chris Toms	Washington Department of Natural Resources
Mr. Mike Chamblin	Washington Department of Fish and Wildlife
Mr. Dave Burdick	Washington Department of Ecology
Mr. Kurt Nelson	Tulalip Tribes
Mr. Max Albert	Citizen Representative
Mr. Duane Weston	Pilchuck Tree Farm
Mr. Terry Skorheim	US Forest Service, Darrington Ranger District
Mr. Pat Stevenson	Stillaguamish Tribe (invited)
Ms. Ellen Gray	Pilchuck Audubon Society (invited)
Mr. John Engels	Silvana Community Representative (invited)
Mr. Jim Lund	Planning Commissioner, City of Stanwood (invited)
Ms. Lorna Elstadt	Ducks Unlimited (invited)
Mayor Rella Morris	City of Granite Falls (invited)
Mayor Leila Dempsey	Town of Darrington (invited)
Mr. Mike McCallister	Snohomish County Dept. of Emergency Management
Mr. Jeff Chan	U.S. Fish and Wildlife Service
Ms. DeeAnn Kirkpatrick	National Marine Fisheries Services

1.5 Plan Approval and Implementation

Following public comment on and revision of this draft plan, it will be forwarded to Ecology for their review and approval. The final plan will then be submitted to the Snohomish County Council for its consideration and adoption. Once the final plan is adopted, implementation of prioritized actions will be initiated based on availability of funds from the FCAAP, County, and other sources.

Full implementation of this plan will take time. However, committee-established priorities will allow those actions that directly impact lives and property to be initiated following County Council adoption. Implementation of all actions will involve the full participation of those who helped develop the plan and others.