tillaguamish Watershed Action Plan

Final Plan
January 1990

Department of Ecology Approved
May 15, 1990

To: Interested Parties

I am pleased to present to you the Department of Ecology Approved Final Stillaguamish Watershed Action Plan. This Action Plan is a locally developed plan to prevent and control nonpoint source pollution in the Stillaguamish River. The Stillaguamish Watershed Management Committee, which guided the development of the Action Plan, represented diverse perspectives on the difficult issues involved in protecting the Stillaguamish watershed.

The Action Plan sets forth seventy-one management recommendations intended to control, prevent, and reduce nonpoint source pollution in the Stillaguamish watershed. Twenty-one different state agencies, local governments, tribes, and interest groups have signed statements of concurrence confirming their commitment to implement the Action Plan recommendations.

This level of commitment is an indication of the hard work, compromises, and spirit of cooperation that went into developing the Stillaguamish Watershed Action Plan. Snohomish County and the Department of Public Works is appreciative of the effort and commitment made by local government, state agencies, tribes, federal agencies, interest groups, and citizens in developing, reviewing, and improving the final Action Plan.

Completion of the Stillaguamish Watershed Action Plan is just the beginning. The full support of all agencies, tribes, interest groups, local governments, and watershed residents is necessary to implement Action Plan recommendations and make the Stillaguamish River an exemplary model of watershed planning.

Sincerely,

MICHAEL M. MCGUINESS, Senior Planner
tillagumish Watershed Action Plan

Final Plan
January 1990

Department of Ecology Approved
# Stillaguamish Watershed Action Plan

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Acknowledgments

The Stillaguamish Watershed Action Plan Project (Grant No. TAX38017) is funded by Centennial Clean Water Fund Grant monies administered by the Washington State Department of Ecology. Snohomish County Department of Public Works is the lead agency for development of the Stillaguamish Watershed Action Plan.

The Stillaguamish Watershed Action Plan represents a substantial commitment on the part of the Watershed Management Committee, Snohomish County, and the public to address and develop solutions to nonpoint source pollution problems in the Stillaguamish watershed. Snohomish County wishes to sincerely thank the following Watershed Management Committee representatives and alternates, Snohomish County project staff, agency staff, and individuals who have contributed to the Stillaguamish Watershed Action Plan Project and this document.

STILLAGUAMISH WATERSHED MANAGEMENT COMMITTEE

Snohomish County Council
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ALT: Julia Gibb

City of Stanwood
REP: Robert Larson
ALT: 

The Tulalip Tribes
REP: Terry Williams
ALT: Dave Somers

Snohomish Health District
REP: Randy Darst
ALT: 

Dairy Farmers
REP: Rick Witscher
ALT: Bob Klein

WA Forest Protection Assoc.
REP: Bill Rawlins
ALT: Norm Vogt

Homeowner/Septic
REP: Mark & Carey Abrahamson
ALT: Boyd Brown

Snohomish County Executive
REP: John Martinis
ALT: William Derry

City of Arlington
REP: John Larson
ALT: Howard Christianson

Stillaguamish Tribe
REP: Kip Killebrew
ALT: Pat Stevenson

Snohomish Conservation District
REP: Stan Faber
ALT: Nathan Jacobsen

Crop Farmers
REP: Glen Johnson
ALT: Wayne Ottem

Pilchuck Audubon
REP: Bonnie Phillips-Howard
ALT: Curt Howard

Citizen-at-large
REP: Freda Tepfer
ALT: Hans Dunshee

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Acknowledgments

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Doug Beyerlein, Senior Hydrologic Engineer
Snohomish County Graphics Staff

THE TULALIP TRIBES

Jim Freeman, Environmental Coordinator

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Rosemary Walrod, Contract Project Officer
Ken Stone, Technical Assistant
Bob Duffy, Technical Assistant

PUGET SOUND WATER QUALITY AUTHORITY

Nancy Hansen, Snohomish County Liaison

In addition to those listed above, Snohomish County would like to extend gratitude to the following individuals who participated in the development of the Stillaguamish Watershed Action Plan.

Tom Niemann, Snohomish County Planning Division
Greg Ariss, Department of Natural Resources
Leon Church, WSU Cooperative Extension
Fred Harnisch, U.S. Forest Service
Summary

Introduction

The Stillaguamish Watershed Action Plan is a locally developed and implemented plan to prevent and control nonpoint source pollution in the Stillaguamish watershed (Figure 1). Nonpoint source pollution is pollution from any dispersed land-based or water-based activity, including but not limited to surface water runoff from agricultural, urban, and forest lands; subsurface or underground sources; and discharges from boats.

The Tulalip Tribes and Stillaguamish Tribe nominated the Stillaguamish watershed for "early action" watershed planning efforts as recommended by the 1987 Puget Sound Water Quality Management Plan. The Tribes nominated the Stillaguamish River because shellfish beds in Port Susan are declared unsafe for commercial harvest due to pollution in the areas draining into Port Susan. The Department of Ecology selected the Stillaguamish River, along with five other rivers in the Puget Sound region, to receive a Centennial Clean Water Fund grant for watershed planning efforts to reduce nonpoint source pollution. Snohomish County Department of Public Works, Surface Water Management, was designated lead agency for watershed planning in the Stillaguamish watershed.

As required by WAC 400-12, Snohomish County formed a watershed management committee (WMC) in January, 1988. The WMC includes the following organizations: Snohomish County Council, Snohomish County Executive's Office, City of Stanwood, City of Arlington, the Tulalip Tribes, the Stillaguamish Tribe, Snohomish Conservation District, Snohomish Health District, Washington Forest Protection Association, Pilchuck Audubon Society, dairy interest, crop farming interest, homeowners on septic, and a citizen-at-large. Recognizing the need for strong public involvement, the WMC formed a citizen advisory committee (CAC). In addition, Snohomish County identified a number of researchers and agency personnel who formed the Technical Advisory Committee.

Plan Rationale

Water quality in virtually all Puget Sound watersheds is degraded to some degree by nonpoint source pollution. The Stillaguamish watershed is no exception. Projections of steady growth for north Snohomish County and increased demands on the natural resources of the watershed indicate that further water quality
Stillaguamish Watershed Action Plan

degradation in the Stillaguamish watershed will occur if no action is taken.

The fundamental rationale for embarking on this "early action" planning process is simple: protect the Stillaguamish watershed from harmful effects of nonpoint pollution generated today, as well as from nonpoint source pollution threats posed by growth and resource development. Through the watershed planning process, the Stillaguamish WMC examined and identified the major nonpoint sources of pollution and deficiencies in local and state programs to control such pollution. The WMC established goals and recommendations to control, prevent, or reduce nonpoint source pollution. Implementing entities are identified for each recommendation. Where possible, specific actions, schedules, and estimated costs are indicated for each recommendation. The WMC developed an implementation strategy for the coordinated implementation of Action Plan recommendations.

Key Findings

Key findings of the Watershed Management Committee regarding nonpoint source pollution in the Stillaguamish watershed are presented below:

1. Nonpoint source pollution is everyone's problem and the responsibility of everyone to correct. Public involvement in the watershed action planning process is essential to the overall success and implementation of the Stillaguamish Watershed Action Plan.

2. The four major land use activities that contribute to nonpoint source pollutants in the Stillaguamish watershed are agricultural practices, onsite sewage disposal, development and urban runoff, and forest practices.

3. Bacterial contamination and sediment are the two most prevalent nonpoint source pollutants in the watershed. Nonpoint source pollutants in the Stillaguamish watershed, such as sediment, nutrients, organic materials, pesticides, and bacteria, occur as a result of a variety of land or water based activities.

4. The major source of bacterial contamination in the Stillaguamish River is from agricultural practices. Onsite sewage disposal systems are the primary source of
Summary

bacterial contamination of waters in the Warm Beach Community area.

5. The major sources of sediment in the Stillaguamish River are, in order of priority, forest practices, agricultural practices, and development and urban runoff. Natural slides also contribute a significant amount of sediment to the Stillaguamish River.

6. Public knowledge of nonpoint source pollution and how land and water based activities can have a downstream impact on water quality is inadequate and needs to be improved. This problem is not necessarily unique to the Stillaguamish watershed and really applies county-wide.

7. Existing water quality data on the Stillaguamish watershed is limited. Pollution from specific individual properties and the extent of pollution could not be determined for this planning process.

8. Coordination and communication among agencies and between agencies and interest groups regarding the management of natural resources in the Stillaguamish watershed need improvement.

Action Plan

The Stillaguamish Watershed Action Plan consists of five source control programs, a public education program, and a monitoring program, each with recommendations intended to control, prevent, and mitigate nonpoint source pollution in the Stillaguamish watershed.

Agricultural Practices: Agriculture, both commercial and noncommercial, is a major land use in the Stillaguamish watershed. The Department of Ecology identifies agricultural practices as potentially being the main contributor of bacterial contamination in the lower river because of the intensive dairy farming in the floodplain. Source control recommendations include a comprehensive program by the Snohomish Conservation District to inventory farms, develop farm conservation plans, implement agricultural best management practices, and improve enforcement of water quality standards.
Onsite Sewage Disposal: Commercial shellfish beds in Port Susan are decertified. A Department of Social and Health Services water quality study of Port Susan identified homes in the Warm Beach area as a source of potential bacterial contamination of shellfish beds in Port Susan. Source control recommendations call for increased Snohomish Health District staffing, community solutions to inadequate onsite sewage disposal in high risk areas, and other measures to reduce improper disposal of human waste.

Development and Urban Runoff: Storm and surface water runoff occurring as a result of urbanization is a potential nonpoint source of pollution in the Stillaguamish watershed. Source control recommendations include a variety of community actions to increase awareness of runoff problems, improved drainage inspection and enforcement, and others emphasizing prevention of future urban runoff problems.

Forest Practices: Sediment from timber harvesting, road construction, and natural events in the watershed can degrade water quality and damage fish and wildlife habitat in tributaries to the Stillaguamish River. Source control recommendations call for improved communication among forest land owners and managers, increased public involvement in forest management, and additional permit review and compliance staffing.

Other Nonpoint Sources: Disposal of household hazardous wastes, improper disposal of solid waste, improper disposal of waste from boats, and river channel alterations are examples of other nonpoint sources of pollution in the watershed. Source control recommendations address these issues.

Public Education Program: Water quality education and public involvement are necessary to foster public recognition of the Stillaguamish watershed as a resource. Education and involvement help to stimulate public, governmental, and private sector support for the changes in lifestyle and financial commitment necessary to prevent or correct nonpoint source pollution. Public education recommendations call for a variety of programs that educate decision makers, agency personnel, youth, and the public about water quality problems and solutions.
Summary

Monitoring Program: The size of the Stillaguamish watershed, the volume of water in the river and tributaries, and the nature of nonpoint source pollution make documentation of immediate and measurable improvements in water quality difficult. The monitoring program includes evaluation monitoring to document implementation actions taken by agencies and individuals, and water quality sampling in the form of routine and runoff-event monitoring to track water quality trends.

Implementation

The Tulalip Tribes, the Stillaguamish Tribe, and Snohomish County will function as co-lead agencies for coordinated oversight and implementation of the Stillaguamish Watershed Action Plan. Responsibility for securing grant funding and implementing specific plan recommendations remains with individual implementing entities identified for each recommendation. Contingent on the availability of grant funding, Snohomish County will fund a watershed coordinator position to work with implementing entities, administer grant funds received, assist other implementing entities in applying for grants to implement the action plan, work with a Stillaguamish Implementation Review Committee (SIRC), and prepare reports reviewing and evaluating plan implementation.

The Stillaguamish Implementation Review Committee is intended to provide an ongoing forum whereby implementing agencies, organizations, community interest groups, and the public can meet to discuss plan implementation, review new information, deal with problems in implementation, and develop workable resolutions to problems in a neutral and non-political setting. The Public Involvement and Education Subcommittee (PIES) to the SIRC will be formed to deal specifically with public education activities identified in the action plan. Revisions to the action plan by the co-lead agencies will incorporate meaningful and substantive participation by the public.

Implementing Entities: Some twenty-one implementing entities are identified as having responsibility for implementing recommendations in the Stillaguamish Watershed Action Plan. Questions regarding the coordinated implementation of the Stillaguamish Watershed Action Plan should be directed to
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Snohomish County Department of Public Works, Surface Water Management Section at 368-3464. The implementing entities are identified below in Table 1.

<table>
<thead>
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<th>Abbreviation</th>
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<td>City of Arlington</td>
</tr>
<tr>
<td>COS</td>
<td>City of Stanwood</td>
</tr>
<tr>
<td>PAS</td>
<td>Pilchuck Audubon Society</td>
</tr>
<tr>
<td>PSWQA</td>
<td>Puget Sound Water Quality Authority</td>
</tr>
<tr>
<td>SCD</td>
<td>Snohomish Conservation District</td>
</tr>
<tr>
<td>SCCDD</td>
<td>Snohomish County Community Development Division</td>
</tr>
<tr>
<td>SCDPW</td>
<td>Snohomish County Department of Public Works</td>
</tr>
<tr>
<td>SCPD</td>
<td>Snohomish County Planning Division</td>
</tr>
<tr>
<td>SCS</td>
<td>U. S. Dept. of Agriculture, Soil Conservation Service</td>
</tr>
<tr>
<td>SHD</td>
<td>Snohomish Health District</td>
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<td>ST</td>
<td>Stillaguamish Tribe</td>
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<tr>
<td>TT</td>
<td>Tulalip Tribes</td>
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<tr>
<td>USFS</td>
<td>U. S. Forest Service, Darrington District</td>
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<td>WFPDA</td>
<td>Washington Forest Protection Association</td>
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<td>OEE</td>
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BMP           | best management practices |
WQ            | water quality |
TFW           | Timber Fish and Wildlife |

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Summary

Actions and Estimated Cost Summary: Table 2 provides a summary of the actions/recommendations contained in the Stillaguamish Watershed Action Plan. One or more implementing entities are identified for each action/recommendation. Where possible, costs estimates are identified by year. These cost estimates are rough and are for watershed action planning purposes only. Actual implementation costs will vary. Refer to the individual recommendations in Chapter 2 - Nonpoint Source Control, for a more detailed discussion on estimated costs.

Implementation of Action Plan recommendations is contingent on available funding and the ability of the implementing entities to incorporate and prioritize recommendations into their existing programs and budgets. Funding to implement action plan recommendations is dependent on budgetary appropriations approved by local and state legislative bodies.
# Stillaguamish Watershed Action Plan

## TABLE 2
Actions and Estimated Cost Summary

<table>
<thead>
<tr>
<th>CO-LEAD AGENCY PLAN IMPLEMENTATION</th>
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**TOTAL ESTIMATED COSTS FOR CO-LEAD IMPLEMENTATION**: $36,000 $62,800 $125,600

## AGRICULTURAL PRACTICES RECOMMENDATION DESCRIPTION

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<td>SCD, WDOE</td>
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<td>No. 9 - Waste Distribution Systems</td>
<td>SCD, SCS</td>
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Implementation costs included in Ag. No. 6 1992-95

**TOTAL ESTIMATED COSTS FOR AGRICULTURAL PRACTICES**: $170,500 $129,500 $4,557,500

## ONSITE SEWAGE DISPOSAL RECOMMENDATION DESCRIPTION

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<th>ESTIMATED COST 1992-95</th>
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<td>No. 5 - Dump Facilities At Rest Areas</td>
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<td>No. 6 - RV Comm. To Have Dump Stations</td>
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<td>No. 7 - Soil Suitability Manual</td>
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**TOTAL ESTIMATED COSTS FOR ONSITE SEWAGE DISPOSAL**: $66,600 $44,000 $2,706,000

S-8
Summary

**TABLE 2**
Actions and Estimated Cost Summary

<table>
<thead>
<tr>
<th>Recommendation Description</th>
<th>Implementing Entities</th>
<th>Estimated Cost 1990</th>
<th>Estimated Cost 1991</th>
<th>Estimated Cost 1992-95</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1 - Clearinghouse Phone Number</td>
<td>SCDPW, WDCE</td>
<td>$4,000</td>
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<td>No. 2 - Drainage Inspect. &amp; Enforcement</td>
<td>SCDPD</td>
<td>$45,000</td>
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<td>No. 3 - Island Crossing Problem</td>
<td>WDOT, SCDPW</td>
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<td>No. 4 - Runoff Controls - State Highways</td>
<td>WDCE, WDOT</td>
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<td></td>
<td>Implementation costs of highway program undetermined</td>
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<td>No. 4a - Runoff Controls - County Roads</td>
<td>SCDPW, WDCE</td>
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<td>No. 5 - Protect Water Bodies/State Highs</td>
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<td>No. 5a - Protect Water Bodies/County Rds</td>
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<td>No. 7 - Painting Storm Drains</td>
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<td>No. 8 - Oil Separators in Devel. Areas</td>
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<td>No. 9 - Watershed Improv. Funding Options</td>
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<td>No. 10 - Aquatic Resource Protection</td>
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<td>No. 12 - Violators Resp. for Mitigation</td>
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TOTAL ESTIMATED COSTS FOR DEVELOPMENT AND URBAN RUNOFF: $1,632,200 $1,584,200 $4,357,000

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<tr>
<th>Recommendation Description</th>
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<th>Estimated Cost 1992-95</th>
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<td>No. 1 - Land Conv. Appl. Doc. &amp; Coord.</td>
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<td>No. 2 - Add Urban Forester To Plan. Div.</td>
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<td>No. 3 - Enforce Shoreline Mgmt. Program</td>
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<td>$12,000 Implementation costs undetermined</td>
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<td>No. 4 - DNR To Hire Forester</td>
<td>WDNR</td>
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<td>No. 5 - Track Forest Practice Permits</td>
<td>WDNR</td>
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<td>No. 6 - Resource Management Plans</td>
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<td>No. 7 - Inventory Of Orphan Roads</td>
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<td>Cost for preparation work is undetermined</td>
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<td>No. 8 - USFS/DNR Timber Harvest Planning</td>
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<td>No. 9 - USFS/DNR Cross Training</td>
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<td>No. 10 - USFS Hold Public Forum</td>
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<td>No. 11 - Monitor USFS Contract Compliance</td>
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<td>No. 12 - Stream Rehabilitation</td>
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<td>Rehabilitation costs on state land is undetermined</td>
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<td>No. 13 - Mitigation Of Past Impacts</td>
<td>TT, ST</td>
<td>$0</td>
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<td>No. 14 - TFW Annual Review</td>
<td>TT, ST</td>
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<td>No. 15 - Forum On Future Of Forest Ind.</td>
<td>ST, PAS</td>
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TOTAL ESTIMATED COSTS FOR FOREST PRACTICES: $221,100 $310,600 $821,400
### TABLE 2
Actions and Estimated Cost Summary

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<thead>
<tr>
<th>OTHER NONPOINT SOURCES</th>
<th>IMPLEMENTING ENTITIES</th>
<th>ESTIMATED COST 1990</th>
<th>ESTIMATED COST 1991</th>
<th>ESTIMATED COST 1992-95</th>
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</thead>
<tbody>
<tr>
<td>No. 1 - Household Hazardous Waste Disp.</td>
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<td>No. 1a - Recycling of Plastics</td>
<td>SCDPW</td>
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<td>No. 2 - Solutions To Illegal Disp. Prec.</td>
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<td>No. 3 - Visual Assessment of Water Qual.</td>
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<tr>
<td>No. 4 - Alteration of River Channels</td>
<td>SCDPW, WDoe</td>
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**TOTAL ESTIMATED COSTS FOR OTHER NONPOINT SOURCES** | $523,000 | $523,000 | $5,572,000 |

<table>
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<tr>
<th>PUBLIC EDUCATION PROGRAM</th>
<th>IMPLEMENTING ENTITIES</th>
<th>ESTIMATED COST 1990</th>
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<th>ESTIMATED COST 1992-95</th>
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<tr>
<td>No. 1 - Speaker’s Bureau</td>
<td>SCDPW</td>
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<td>$4,000</td>
<td>$16,000</td>
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<td>No. 2 - Incorp. Farm Comm. in Planning</td>
<td>SCDPW, WSUCCE</td>
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<td>No. 3 - Target Education Programs</td>
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<tr>
<td>No. 4 - Coop. Ext. Public Education</td>
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<td>No. 5 - TFW Coor. w/Public Ed. Prog.</td>
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<td>No. 6 - Employee Training Sessions</td>
<td>SCDPW</td>
<td>$6,000</td>
<td>$6,000</td>
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<td>No. 7 - Train Forest Industry Employees</td>
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<td>No. 9 - Citizen Action Training School</td>
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<td>No.10 - Demonstrate Nonpoint Treatment</td>
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<td>No.11 - Coop. Ext. Demonstration Farm</td>
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<td>No.12 - Festival Of The River</td>
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<td>No.13 - Arbor Day Activities</td>
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<td>No.14 - Pilot Sewage System Project</td>
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<td>No.15 - Scenic Posters</td>
<td>WSUCCE, PAS</td>
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<td>No.16 - Dist. Educational Literature</td>
<td>SCDPW</td>
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<td>No.17 - Newsletter For Farm Operators</td>
<td>SCDPW, WSUCCE</td>
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<td>No.18 - Educate Permit Seekers</td>
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<td>No.19 - Video Developed</td>
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<td>No.20 - Natural River Systems</td>
<td>OEE, USFS, WDNR, WDOF</td>
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**TOTAL ESTIMATED COSTS FOR EDUCATIONAL PROGRAM** | $241,860 | $273,560 | $974,240 |

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<th>ESTIMATED COST 1991</th>
<th>ESTIMATED COST 1992-95</th>
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<td>Priority Pollutants and Sediment Samples</td>
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**TOTAL ESTIMATED COSTS FOR MONITORING PROGRAM** | $135,000 | $135,000 | $540,000 |
Chapter One
Chapter 1 - Action Plan Introduction

Background

The 1987 Puget Sound Water Quality Management Plan calls for local governments, such as counties or conservation districts, to coordinate planning efforts to reduce nonpoint source pollution in Puget Sound. Unlike point source pollution which is normally associated with direct discharges from industrial waste pipe outlets, nonpoint source pollution can arise from a variety of dispersed land or water based activities.

In studying the problem of nonpoint source pollution, the Puget Sound Water Quality Authority (PSWQA) found that numerous activities contribute to degradation of water quality. Nonpoint source contaminants and their sources include: pathogens from failing onsite sewage systems, livestock waste, and urban sources; sediments from landslides, forest practices, and agricultural activities; nutrients from animal waste and commercial fertilizers; and toxicants from pesticides and urban runoff. As a result, watersheds and their hydrologic boundaries were determined to be the most logical land areas for water quality planning, particularly for nonpoint source pollution (PSWQA, 1986).

In January 1987, the Department of Ecology sought nominations from local governments and tribes to receive grant funding to conduct "early action" watershed planning efforts. The authority to produce the watershed plans comes from the state Centennial Clean Water Act, RCW 90.70. The watershed plans are funded from a state tax on tobacco products, otherwise known as the Centennial Clean Water Fund.

The Tulalip Tribes, together with the Stillaguamish Tribe, nominated the Stillaguamish watershed because shellfish beds in Port Susan are declared unsafe for commercial harvest, presumably due to widespread pollution in the areas draining into Port Susan. In addition, salmon runs returning to the Stillaguamish watershed are affected, a condition some researchers believed to be partially caused by nonpoint source pollution.

The Department of Ecology selected the Stillaguamish River, along with five other rivers in the Puget Sound region to receive funding for watershed planning. In October 1987, the Department of Ecology entered into a grant agreement with Snohomish County to conduct a watershed planning effort for the Stillaguamish watershed. The Snohomish County, Department of Public Works, Surface Water Management Section, was designated as the lead agency for watershed planning in the Stillaguamish watershed.
Nonpoint Source Control Requirements

The Stillaguamish watershed cuts across numerous political and jurisdictional boundaries involving local governments, county governments, tribal governments, and a variety of county, state, and federal resource management agencies. There is no single agency or entity with the mandated responsibility to deal with the array of nonpoint source pollution problems present in the Stillaguamish watershed. The intent of the Puget Sound Water Quality Management Plan is to develop a local response to nonpoint source pollution problems at a watershed level.

To assist counties in the early action planning process, the Puget Sound Water Quality Authority and the Department of Ecology developed guidelines regarding contents of a watershed action plan and the process for its development. The requirements for local planning and management of nonpoint source pollution are found in Chapter 400-12 Washington Administrative Code (WAC). Although the contract between the Department of Ecology and Snohomish County for the Stillaguamish early action watershed project predates adoption of WAC 400-12, Snohomish County has made every effort to meet and fulfill the requirements of WAC 400-12.

Watershed Management Committee

As required by WAC 400-12, the Stillaguamish Watershed Management Committee (WMC) was formed by Snohomish County in January, 1988. The WMC is responsible for overseeing the development of the Stillaguamish Watershed Action Plan. Membership on the Stillaguamish Watershed Management Committee includes the following organizations: Snohomish County Council, Snohomish County Executive’s Office, City of Stanwood, City of Arlington, The Tulalip Tribes, Stillaguamish Tribe, Snohomish Conservation District, Snohomish Health District, Washington Forest Protection Association (forest industry interests), Pilchuck Audubon (environmental interests), dairy interest, crop farming interest, a homeowners representative, and a citizen-at-large representative. Although not formally on the Watershed Management Committee, representatives from the Department of Natural Resources and the Department of Ecology have attended most Watershed Management Committee meetings. All Watershed Management Committee meetings are open to the public.
Public Involvement

The Puget Sound Water Quality Authority stresses the importance of public involvement in developing watershed action plans. The Watershed Management Committee also recognized the need for strong public involvement and formed a citizen advisory committee to allow for a broad base of public support and interest in the watershed planning process. Membership in the Citizen Advisory Committee was automatic and open to anyone who attended at least one workshop.

Citizen Advisory Committee evening workshops were held on a regular basis to allow the greatest number of residents to attend. Some of the planning activities of the Citizen Advisory Committee included: 1) familiarizing themselves with the issues and information about nonpoint source pollution, 2) identifying and ranking major pollution sources and issues, 3) developing goals for improving water quality in the Stillaguamish watershed, 4) participation in the source control workgroups, and 5) developing and staffing a water quality booth at local festivals and fairs.

Early in the planning process, the Watershed Management Committee and the Citizen Advisory Committee identified four land use activities (agricultural practices, onsite sewage disposal, development and urban runoff, and forest practices) that potentially contribute the most nonpoint source pollutants to the Stillaguamish watershed. In order to better inform the public about these activities, a series of public workshops were held in May, 1988. At these workshops, speakers presented information, small groups discussed problems, and residents volunteered to serve on the source control workgroups dealing with agricultural practices, forest practices, onsite sewage disposal, and development.

The four source control workgroups met from June through September 1988, to develop management recommendations to present to the Watershed Management Committee for consideration and inclusion in the Stillaguamish Watershed Action Plan.

Source Control Programs

Chapter 400-12-600 WAC, sets forth the general provisions and requirements to develop a nonpoint source control programs for agricultural practices, onsite sewage disposal, development and urban runoff, forest practices, and other nonpoint sources in the Stillaguamish watershed.
Stillaguamish Watershed Action Plan

Chapter 400-12-200 WAC defines a nonpoint source control program or strategy as a program using education, technical and financial assistance, regulation, monitoring, and/or enforcement to control, prevent, and mitigate nonpoint pollution from onsite sewage disposal, agricultural sources, stormwater and erosion, forest practices, marinas and boats, and other residential, agricultural, commercial, and industrial sources, and other sources. The purpose of a nonpoint source control program or strategy is to protect water quality and beneficial uses. Beneficial uses include: water supplies for domestic, industrial, or agricultural purposes; fish, shellfish, and wildlife habitat; recreation; and navigation.

The Watershed Management Committee developed recommendations for five nonpoint source control activities (agricultural practices, onsite sewage disposal, development and urban runoff, forest practices, and other nonpoint sources). The recommendations are presented in Chapter 2 - Nonpoint Source Control. With regard to public educational activities, Chapter 400-12-600 WAC sets forth specific educational requirements for each type of nonpoint source activity. To avoid overlap on public education solutions for each source control program developed, the Watershed Management Committee placed all recommendations dealing with public education into a separate public education program. The public education program will prevent overlap of public educational activities by implementing agencies. The public education program will maximize limited funding, grant or otherwise, that is available for implementation of public education efforts in the Stillaguamish watershed.

Watershed Action Plan Goals

The main purpose of the Stillaguamish Watershed Action Plan is to reduce and ultimately eliminate entry of nonpoint source pollutants to the waters, sediments, and shorelines of the watershed. The overall goals of the Watershed Action Plan are as follows:

Chapter 1 - Action Plan Introduction

Action Plan Goal No. 2: Improve water quality of the Stillaguamish watershed and Port Susan to a level that will allow the certification of commercial shellfish beds in Port Susan.

Action Plan Goal No. 3: Improve water quality to restore and enhance wildlife and fisheries habitat.

Action Plan Goal No. 4: Promote cooperation and coordination among agencies and between agencies and the public to improve water quality.

Action Plan Goal No. 5: Promote and encourage public involvement in the development and implementation of the Stillaguamish Watershed Action Plan.

Action Plan Goal No. 6: Identify existing and provide new incentives for the voluntary control of nonpoint source pollution.

Action Plan Goal No. 7: Develop the plan to function as an active process which responds appropriately to new information.

Action Plan Goal No. 8: Provide education opportunities to inform people to develop an appreciation and understanding of the Stillaguamish watershed, its natural and altered function, and the relationship between watershed activities and nonpoint pollution.

Action Plan Goal No. 9: Motivate the citizens and users of the watershed to use improved land and resource management to reduce nonpoint pollution.

Action Plan Goal No. 10: Develop specific measures to quantify improvements in water quality.

Action Plan Goal No. 11: Develop a coordinated data base and monitoring program in the watershed and make the information available to the public.
Action Plan Goal No. 12: Examine existing regulations for the ability to protect and enhance water quality and beneficial uses, and where necessary, propose new legislation.

Implementation Strategy

The implementation strategy for the Stillaguamish Watershed Action Plan is based on agency cooperation and initiative, community involvement, and public education. The action plan will result in new or expanded activities for implementing entities. Implementation of the action plan is contingent on available funding and the ability of the implementing entities to incorporate and prioritize action plan recommendations into their existing programs and budgets.

Components of the implementation strategy include: identification of lead agencies to coordinate implementation; funding of a watershed coordinator position; an annual public meeting on action plan implementation and evaluation; formation of a Stillaguamish Implementation Review Committee (SIRC); and procedures for revision of the action plan.

Co-Lead Agencies

The Tulalip Tribes, Stillaguamish Tribe, and Snohomish County will function as co-lead agencies for coordinated oversight and implementation of the Stillaguamish Watershed Action Plan. The Tulalip Tribes, Stillaguamish Tribe, and Snohomish County plan to enter into a memorandum of agreement specifying each agency’s role in overseeing implementation of the Stillaguamish Watershed Action Plan. The responsibility for securing grant funding and implementing specific plan recommendations remains with the individual implementing agencies identified in the recommendations. (Refer to Appendix A, Concurrence Letters No. 1, 15, and 16)
Chapter 1 - Action Plan Introduction

Watershed Coordinator Position

Contingent on the availability of grant funding, Snohomish County should fund a watershed coordinator position. The watershed coordinator will be responsible for working closely with the Tulalip Tribes, Stillaguamish Tribe, and County departments involved in implementation of the Stillaguamish Watershed Action Plan. In addition, the watershed coordinator will: coordinate the implementation efforts of agencies and organizations as identified in action plan recommendations; administer Centennial Grants received by Snohomish County for implementation of the action plan; assist other agencies and organizations in applying for grant monies to implement the action plan; work with the Stillaguamish Implementation Review Committee; and prepare an annual report on action plan implementation and evaluation. The watershed coordinator will be a County employee. (Refer to Appendix A, Concurrence Letter No. 1)

Action Plan Implementation Review and Evaluation

As action plan implementation occurs, the Watershed Coordinator will contact implementing agencies to evaluate the effectiveness of source control programs in preventing and correcting water quality impacts. The Watershed Coordinator will coordinate with the co-lead agencies and the SIRC in scheduling an annual public meeting on the Stillaguamish Watershed Action Plan. The purpose of this annual meeting is to inform the public as to how the Stillaguamish Watershed Action Plan is being implemented and to obtain comments from the public on ongoing and proposed implementation activities.

Public testimony and comments received at the annual public meeting will be incorporated into the annual report on review and evaluation of action plan implementation. Also included in the annual report will be any recommendations from the Stillaguamish Implementation Review Committee (SIRC). The annual report will be submitted to the Department of Ecology for consideration.

The first public meeting will be within one year after approval of the Stillaguamish Watershed Action Plan by the Department of Ecology and then annually for five years. The annual public meeting will be held in the watershed. The annual report on review and evaluation of action plan implementation will be completed and submitted to the Department of Ecology within two months after the scheduled date of the annual public meeting.
Stillaguamish Watershed Action Plan

Stillaguamish Implementation Review Committee (SIRC)

The Stillaguamish Watershed Management Committee will be dissolved after submittal of the final Stillaguamish Watershed Action Plan to the Department of Ecology. A new Stillaguamish Implementation Review Committee (SIRC) will be formed to review implementation actions in the Stillaguamish watershed. The SIRC will be formed within three months from Stillaguamish Watershed Action Plan approval by the Department of Ecology.

SIRC Role: The SIRC is intended to provide an ongoing forum whereby implementing agencies, organizations, community interest groups, and the public can meet to discuss plan implementation, review new information, deal with problems in implementation, and develop workable resolutions to problems in a neutral and non-political setting.

The SIRC has no legislative or administrative authority. As such, the SIRC cannot set policy, change the plan, or direct specific implementation tasks of agencies and organizations. SIRC member agencies and organizations will report their implementation progress and any problems encountered at SIRC meetings. SIRC representatives will discuss implementation problems and try to develop solutions. The SIRC will advise and assist implementing agencies and organizations in helping to set priorities and SIRC member organizations can provide support for agencies and organizations in securing funding to implement the plan. The SIRC shall review any proposed revisions and make recommendations to implementing agencies and the lead agencies for revisions to the approved action plan.

SIRC Membership: Membership on the SIRC includes: Snohomish County; Snohomish Health District; WSU Cooperative Extension; Snohomish Conservation District; City of Arlington; City of Stanwood; U.S. Forest Service (Darrington Ranger District); Department of Natural Resources (Stillaguamish District); dairy industry; crop farming industry; Pilchuck Audubon; Washington Forest Protection Association; The Tulalip Tribes; Stillaguamish Tribe; and two community group representatives. Additional agencies, organizations, or interest groups may be added to the SIRC with majority consent of the members.

Agency and organizational representatives will be selected by their respective agencies and organizations. The community group representatives will be selected by the SIRC from potential candidates nominated by community groups in the watershed. Community groups include homeowner associations and other groups.
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that are open to the public and not aligned with any industry. At least one of the community group representatives should be well informed of onsite sewage disposal issues in the watershed. The community representatives should represent a broad spectrum of community interests and be able to report back to constituency groups. Nominations for candidates for the community group representatives will be solicited by the Watershed Coordinator so that selection of the community group representatives can be made at the first SIRC meeting.

SIRC Organization: The SIRC will select, by majority vote, a chairperson from representatives of the member agencies and organizations on the SIRC. The selected individual will serve as chairperson for one year, after which, the SIRC may either reelect the chairperson for another year or select a new chairperson.

The chairperson should be selected based on his or her ability to conduct meetings and coordinate diverse interests and issues. The chairperson will be responsible for facilitating the meetings, giving parties the opportunity to speak on a subject, and making certain that all issues are given equitable time and considerations by the SIRC. The chairperson will, with input from the SIRC, set the meeting agenda and location.

SIRC secretarial duties (e.g., note taking and drafting summaries of the meetings) will be rotated among the member agencies and organizations. The Watershed Coordinator will provide limited assistance to the SIRC in reproducing meeting summaries and in mailing of SIRC meeting notices to SIRC members.

The SIRC should, at a minimum, meet quarterly. More frequent meetings can occur at the discretion of the SIRC.

SIRC Public Involvement and Education Subcommittee (PIES): The Public Involvement and Education Subcommittee (PIES) to the SIRC will be formed to deal specifically with public education activities identified in the action plan. Interested SIRC members will be given the opportunity to be on the PIES and report to the SIRC on water quality education activities in the Stillaguamish watershed. The PIES should be structured to allow for additional community group and public input. The SIRC will determine structure and membership of the PIES.

The PIES will work closely with the Watershed Coordinator and other agencies on implementing the public education recommendations. The PIES will inform the Watershed Coordinator
about community educational needs and review and advise on educational strategies and materials.

Revisions to the Action Plan

If the annual report on review and evaluation of action plan implementation determines that action plan goals are not being achieved, or action plan recommendations are not being implemented or are inadequate, the watershed coordinator will request that the co-lead agencies revise the action plan. The SIRC may make recommendations to the co-lead agencies for revisions to the action plan. The SIRC may also review and make recommendations on any proposed revisions to the action plan. The Department of Ecology reserves the option to request revisions to the action plan if no action is taken by the co-lead agencies.

All efforts to revise the action plan by the co-lead agencies will incorporate meaningful and substantive participation by the public.
Chapter Two
Chapter 2 - Nonpoint Source Control

Introduction

This chapter describes the nonpoint source control recommendations developed through a process reflecting a wide diversity of perspectives and based on consensus achieved over many months of discussion and negotiation. While every recommendation may not be ideal from each Watershed Management Committee member’s perspective, the entire set of recommendations should significantly improve the effectiveness of efforts to protect and manage the Stillaguamish watershed. Five source control programs were developed: agricultural practices, onsite sewage disposal, development and urban runoff, forest practices, and other nonpoint sources. A public education program is also included as part of this chapter.

Goals are identified for each of the five source control programs and the public education program. The goals are followed by a series of management recommendations designed to control, reduce, and prevent nonpoint source pollution in the Stillaguamish watershed. Each management recommendation is broken down into three main parts: recommendation statement, intent, and concurrence statement.

Each recommendation statement is identified by nonpoint source, number, and a unique title such as Agriculture No. 2 (Conservation Plans). The recommendation statement identifies one or more entities to carry out an action or task that will help control, reduce, or prevent nonpoint source pollution.

The intent section provides background information on how water quality in the Stillaguamish watershed is protected or enhanced by implementation of the recommendation.

The concurrence statement affirms the implementing entity’s commitment to carry out the recommendation, subject to adequate funding being available. The actual action that an entity will take to implement a recommendation, along with the schedule for implementation and estimated costs, are presented if known.

Actual implementation of Action Plan recommendations is contingent on available funding and the ability of the implementing entities to incorporate and prioritize recommendations into their existing programs and budgets. Funding to implement action plan recommendations is dependent on budgetary appropriations approved by local and state legislative bodies.
Agricultural Practices Source Control Program

Agricultural Practices Strategy

In 1982, the Department of Ecology began a water quality sampling survey of the Stillaguamish River. Results of that survey show significant bacterial contamination of the lower Stillaguamish River. The Department of Ecology identified agricultural practices as potentially being the main contribution of bacterial contamination to the lower Stillaguamish because of the intensive dairy farming in the floodplain (Washington Department of Ecology, 1984).

Agriculture, both commercial and noncommercial, is a major land use in the Stillaguamish watershed. Commercial agricultural includes dairy, livestock, and crop farming operations. Commercial dairy and crop farming operations are predominantly located in the floodplain areas adjacent to the Stillaguamish River. Noncommercial operations (hobby farms) include small upland land owners who keep livestock or grow crops for their personal use. Noncommercial farms occur throughout the Stillaguamish watershed but most typically in the rural residential fringes around urban areas such as Arlington and Stanwood.

Livestock confinement area runoff and infiltration, improper manure spreading, trampling of streamside vegetation, and direct access to streams by livestock are examples of pollution sources from agricultural practices. Nonpoint source pollutants that can come from agricultural practices include sediments, nutrients, organic materials, pesticides, and bacteria (pathogens).

State programs for control of nonpoint source pollution from agricultural practices rely on voluntary implementation of best management practices (BMPs), with enforcement of water quality standards as a last resort. Essentially, BMPs are agronomic, managerial, or structural techniques that provide at least the minimum treatment needed to protect soil, water, and related plant and animal resources and solve water quality problems.

Examples of agricultural BMPs include waste holding ponds, streamside fences, better management of fields, and crop rotation. The Snohomish Conservation District, the Washington State Cooperative Extension, and the USDA Soil Conservation Service all provide technical assistance to farmers and promote farm planning and the use of agricultural BMPs. Partial funding
Chapter 2 - Nonpoint Source Control

of BMPs by federal cost sharing programs have been important in controlling nonpoint sources at commercial farms. Federal cost share funds were reduced in the eighties. The effectiveness of these programs is limited by inadequate funding and lack of technical and other assistance for noncommercial farms (1989 Puget Sound Water Quality Management Plan).

Agricultural Practices Goals

Agricultural Goal No. 1: Reduce and ultimately eliminate adverse impacts from agricultural nonpoint source pollution entering the waters of the Stillaguamish watershed.

Bacteria and other pathogens as a result of poor animal keeping, waste handling, and pasture management practices pollute the Stillaguamish River. The Department of Ecology surveys identify agricultural practices as a main contributor of bacterial contamination in the lower Stillaguamish River (Washington Department of Ecology, 1984). Agricultural practices are potentially one of the contributors to sediment in the watershed (PSWQA, 1989).

Agricultural Goal No. 2: Improve water quality and enhance beneficial uses in the Stillaguamish watershed through implementation of agricultural best management practices on commercial and noncommercial farms.

Several studies on commercial shellfish beds have strongly implicated animal keeping practices on small noncommercial farms in contributing to the bacterial contamination that has closed several beds in the past eight years (PSWQA, 1986). Information is available to landowners to inform them of practices that will not only protect water quality, but prove cost effective for the farm operation in the long run. Unfortunately, not all farms are aware of or implement such practices, which are voluntary.

Agricultural Goal No. 3: Develop and implement conservation plans for all commercial farm operations in the Stillaguamish watershed.

The Snohomish Conservation District has the skills, but not the resources to provide technical assistance to all commercial agricultural operations in the Stillaguamish
watershed. Additional staff will allow the Snohomish Conservation District to carry out a program to help all commercial farmers develop and implement conservation plans, which include best management practices for improving water quality.

Agricultural Goal No. 4: Improve communication and understanding between the agricultural community and the general public through a program of education and involvement.

Farmers need to get their message to the general public, and hear the public’s concerns about resource protection.

Agricultural Goal No. 5: Maintain the viability of the agricultural industry while achieving water quality goals.

Agriculture has been estimated to be an $80 million a year industry in Snohomish County. Measures to protect water quality must be balanced against the realities of maintaining a viable agriculture industry. (Note: Two Watershed Management Committee members requested a minority opinion on Agricultural Goal No. 5. The two committee members prefer to see the goal worded "Achieve water quality goals while maintaining the viability of the agricultural industry.")

Agricultural Practices Recommendations

Agriculture No. 1 (Farm Inventory): The Snohomish Conservation District should work with the farm community to implement the Agricultural Source Control Program, and collect farm inventory data. The Snohomish Conservation District should contact and inventory all commercial dairies, crop farms, and commercial livestock operations within the watershed (approximately sixty-five total).

Intent: Create a foundation of information that will include priority areas for conservation planning. Inventory data collected will include: identification of farms with conservation plans in existence; waste management systems in effect; sources of pollution on the farms; ability of farm operators to implement best management practices given the physical attributes
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of the land; and other information pertaining to the size and scope of the individual farming operation (e.g. number of animals present).

Concurrence Statement: Washington Conservation Commission and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 8 and 20)

Action: Snohomish Conservation District has secured a grant to fund a SCS Soil Conservationist for a two year period to implement this recommendation and other recommendations in the Agricultural Source Control Program.

Schedule: Complete inventory in 1990.

Estimated Cost: $18,000.

Agriculture No. 2 (Conservation Plans): The Snohomish Conservation District should work with cooperating commercial farm operators to produce twelve (12) farm conservation plans per year for those farms that currently have none, and to update those plans that do not adequately address current water quality concerns.

Intent: Provide a basis for implementing conservation practices. Conservation plans will follow USDA Soil Conservation Service standards which address four elements: soil; water; animals; and plants.

Concurrence Statement: Washington Conservation Commission and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 8 and 20)

Action: Snohomish Conservation District has secured a grant to fund a SCS Soil Conservationist for a two year period to implement this recommendation and other recommendations in the Agricultural Source Control Program.


Estimated Cost: $18,000 per year for 12 farms.

Agriculture No. 3 (Annual Contact with Farm Operators): The Snohomish Conservation District should make annual contacts with commercial farm operators who have developed farm conservation plans. Snohomish Conservation District staff should evaluate progress
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being made on implementation of farm conservation plans, and encourage further implementation activities by commercial farm operators.

**Intent:** Reinforce farmers' commitment to conservation plans and water quality, and determine the effectiveness of measures to reduce or eliminate nonpoint source pollution.

**Concurrence Statement:** Washington Conservation Commission and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 8 and 20)

**Action:** Snohomish Conservation District has secured a grant to fund a SCS Soil Conservationist for a two year period to implement this recommendation and other recommendations in the Agricultural Source Control Program.

**Schedule:** Begin in January 1990.

**Estimated Cost:** $9,000 per year.

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**Agriculture No. 4 (Implementation of BMPs):** The Snohomish Conservation District should provide assistance to farm operators to implement best management practices identified in their respective conservation plans.

**Intent:** Implement twenty-six (26) best management practices per year. The number of best management practices is based on the number that one staff person can complete in one year. The 26 BMPs can take place on one farm (unlikely) or on 26 separate farms or any combination in between.

**Concurrence Statement:** Washington Conservation Commission and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 8 and 20)

**Action:** Snohomish Conservation District has secured a grant to fund a SCS Soil Conservationist for a two year period to implement this recommendation and other recommendations in the Agricultural Source Control Program.

**Schedule:** Begin in January 1990.

**Estimated Cost:** $9,000 per year for 26 BMPs.
Chapter 2 - Nonpoint Source Control

Agriculture No. 5 (Noncommercial Farm Operators): The Snohomish Conservation District should work with noncommercial farm operators to install best management practices.

Intent: Work with at least six (6) noncommercial farm operators annually to reduce water quality impacts from noncommercial farm operations. Noncommercial farm operators are having an impact on water quality problems in the Stillaguamish watershed. Although there may be a need to work with more noncommercial farms, the Snohomish Conservation District has limited staff resources. More water quality data is needed to evaluate noncommercial farm impacts.

Concurrence Statement: Washington Conservation Commission and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 8 and 20)

Action: This recommendation is part of the Snohomish Conservation District's ongoing program to work with noncommercial farm operators.

Schedule: Ongoing program.


Agriculture No. 6 (Public Law 83-566): The Snohomish Conservation District, in coordination with the Tulalip Tribes, the Stillaguamish Tribe, or Snohomish County, should cooperatively sponsor an application for the PL566 Small Watershed Program.

Intent: Direct PL566 funds received under this program to planning, design, and implementation of conservation practices. This is both a technical and financial assistance program for landowners/operators. Funds can be applied to streambank improvements, restoration of fish habitat, and the implementation of completed farm conservation plans.

Concurrence Statement: Snohomish County Department of Public Works, Washington Conservation Commission, Stillaguamish Tribe, Tulalip Tribes, Soil Conservation Service and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 1, 8, 15, 16, 19, and 20)

Action: Snohomish Conservation District and the Soil Conservation Service are in the process of scoping the
watershed to make a PL566 application feasible. Other agencies and tribes will assist Snohomish Conservation District and Soil Conservation Service in sponsoring the PL566 application.

Schedule: Work toward developing a preauthorization report in 1990.


Agriculture No. 7 (Enforcement): The Department of Ecology and the Snohomish Conservation District should enter into a Memorandum of Agreement concerning the enforcement of water quality standards with respect to agricultural practices. The Snohomish Conservation District should select and operate at level III of the Memorandum of Agreement.

Intent: Enforce water quality standards with respect to agriculture. The Department of Ecology is responsible for enforcing water quality standards with respect to agriculture. Department of Ecology determines if water quality standards have been violated and gives the landowner opportunity to work out a solution with the Conservation District.

Concurrence Statement: Snohomish Conservation District and the Washington Department of Ecology concur. (Refer to Appendix A, Concurrence Letters No. 20 and 21)

Action: Snohomish Conservation District signed a compliance memorandum with the Department of Ecology at level III.

Schedule: Completed, compliance memorandum signed in July 1989.
Estimated Cost: $12,000 per year for Snohomish Conservation District to carry out provisions of compliance memorandum.

Agriculture No. 8 (Stream Corridor Management): The Tulalip Tribes should coordinate all appropriate agencies, including Snohomish County, the Snohomish Conservation District, Soil Conservation Service, Department of Fisheries, Department of Wildlife, Department of Ecology, and Indian Tribes, to agree on stream corridor management guidelines and develop criteria for assessing surface water related proposals. Intent: Provide consistent review by permitting agencies of proposed projects involving stream corridor alterations.

Concurrence Statement: Washington Department of Fisheries, Stillaguamish Tribe, Tulalip Tribes, Snohomish Conservation District, and the Washington Department of Ecology concur. (Refer to Appendix A, Concurrency Letters No. 9, 15, 16, 20, and 21)

Action: The Tulalip Tribes will act as the coordinating agency for the development of stream corridor management guidelines for the Stillaguamish watershed.


Estimated Cost: Tribal costs estimated at $20,000 in 1990, $20,000 in 1991, and $8,000 to $20,000 for the years 1992 - 1995. Snohomish Conservation District costs are estimated at $3,500 in 1990, $4,000 in 1991, and approximately $18,000 for the years 1992 - 1995. Other agency costs are estimated at $5,000 to $10,000 per year.

Agriculture No. 9 (Waste Distribution Systems): The Snohomish Conservation District should study the feasibility of private industry or a farm cooperative expanding into providing custom pumping services for waste holding ponds. Public Law 566 funds should be used to assist farmers to install practical onsite farm waste distribution systems.

Intent: Reduce improper application of stored animal waste. Equipment availability for the pumpout of waste holding ponds on commercial dairies is a factor limiting proper application of stored animal waste.
Concurrence Statement: Soil Conservation Service and Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 19 and 20)

Action: Snohomish Conservation District will explore the installation of onsite farm waste distribution systems for individual farms. This option involves large capital expenditures by the farm owners. A PL566 project (Agriculture No. 6) may be effective in reducing costs to individual farm owners. The District will continue to work toward making a PL566 application feasible. The District is also considering requesting changes to the Agricultural Stabilization and Conservation Service's cost-share program to include onsite waste distribution systems.

Schedule: Request changes to cost-share program in 1990. Work toward a PL566 application in 1990.

Estimated Cost: Snohomish Conservation District costs are estimated at $10,500 in 1990, $11,000 in 1991, and approximately $50,000 for the years 1992 - 1995. The estimated cost to the landowners for installing waste distribution systems is included as the landowner implementation estimated costs in Agriculture No. 6.

Agriculture No. 10 (Wetland Protection): Snohomish County Planning Division should study the feasibility of purchasing riparian corridors in addition to wetlands, or the agricultural rights to riparian corridors and wetlands in agricultural areas as an additional option available to protect water quality.

Intent: Analyze all the implications and likely impacts of such a program on protecting water quality. Central to these impacts are the ability to ensure consistency/compatibility with the County's regulatory approach to preservation (Aquatic Resources Protection Program and other related ordinances) and to establish equity among affected landowners.

Concurrence Statement: Snohomish County Planning Division concurs. (Refer to Appendix A, Concurrence Letter No. 3)

Action: The Planning Division will evaluate the feasibility of purchasing riparian corridors as an additional option available to protect water quality. Results of the feasibility analysis will be sent to the County Executive and County Council for consideration. This evaluation must consider fully the consistency and compatibility of
any such approach with the County's regulatory approach to preservation of riparian corridors.

Schedule: Planning Division expects to commence evaluation in July 1990.

Estimated Cost: Planning Division costs estimated at $20,000 to 25,000 for .5 FTE in 1990 to conduct feasibility analysis. Implementation costs based on the feasibility analysis are undetermined at this time.

Onsite Sewage Disposal Source Control Program

Onsite Sewage Disposal Strategy

Recent Department of Ecology studies have implicated failed onsite sewage disposal systems as a potential source of bacterial contamination of several shellfish beds which have been closed to commercial harvesting by the Department of Social and Health Services (PSWQA, 1986). Port Susan, at the mouth of the Stillaguamish River, contains one of these decertified shellfish beds.

A recent Department of Social and Health Services water quality study of Port Susan identified homes in the Warm Beach area as a source of potential bacterial contamination of shellfish beds in Port Susan. Many homes in the Warm Beach area were built with onsite sewage disposal systems which are below today's standards (Lukes, 1987). The soils of the Warm Beach area are classified as the Alderwood Series and Norma loam with some Everett series. The Alderwood series and Norma loam provide poor septic tank absorption fields, although Everett series does provide some absorption (U.S. Soil Conservation Service, 1983). The large number of homes in the Warm Beach area using poor soils for wastewater treatment adds considerably to the fecal loading potential (Lukes, 1987).

Onsite sewage disposal systems are designed to control water carried household wastes, including sewage and gray water, originating from kitchen, bathroom, and laundry facilities. These systems provide initial treatment of the wastewater before they are further purified by the filtering action of the soil.
The two main components of traditional onsite sewage systems include the septic tank and the drainfield. The septic tank is a large underground holding tank which stores household wastes for two to three days. During this time, heavy suspended materials, such as feces and food particles, sink to the bottom of the tank to be decomposed by bacteria into sludge. The drainfield is a network of perforated pipes buried underground in gravel trenches. The purpose of the drainfield is to slowly disperse wastewater from the holding tank into a large area of soil which acts as a filter to remove remaining pollutants and bacteria.

Under the right conditions, a properly designed and maintained onsite sewage disposal system will be able to successfully treat sewage from a single family residence. However, the ability of a system to function adequately can be influenced by many factors, including: 1) installation in unsuitable soils; 2) installation in areas with a high seasonal water table; 3) compaction of soils surrounding the drainfield; 4) installation on lots which do not meet the health code requirements for minimum lot sizes; 5) installation near surface waters or wells for drinking water; and 6) the loading of a quantity of wastewater which exceeds the capacity of the onsite sewage disposal system (PSWQA, 1986). In addition to these factors, an onsite sewage disposal system can also be impaired by the disposal of excessive amounts of household products which contain hazardous chemicals which can kill beneficial bacteria found in the holding tank and in the soils surrounding the drainfield.

Any of the factors listed above can cause an onsite sewage disposal system to fail. Failing onsite sewage disposal systems pose a potential health hazard. The transmission of typhoid fever, gastrointestinal infections, and infectious hepatitis to humans has been linked to failing onsite sewage disposal systems. Surface waters can also be contaminated by bacterial water pollution from failed onsite sewage disposal systems.

Onsite Sewage Disposal Goals

Onsite Sewage Disposal Goal No. 1: Reduce and eliminate adverse water quality impacts in the Stillaguamish watershed and Port Susan from onsite sewage disposal practices.

Failed or inadequate onsite sewage disposal systems are identified by the Puget Sound Water Quality Authority (1986) as potential contributors to shellfish contamination. Commercial shellfish harvesting has been
prohibited in Port Susan since 1968. Many of the onsite sewage disposal systems in the watershed were installed in the fifties and sixties when standards were not as stringent as they are today. Conditions of soil or site in some locations make conventional systems inadequate.

Onsite Sewage Disposal Goal No. 2: Reduce and eliminate adverse water quality impacts from recreational vehicle sewage disposal.

The Stillaguamish watershed is a destination for many recreational vehicle (RV) users, especially during the summer months. Improper or inadequate disposal of wastewater from RVs is a source of potential bacterial contamination in the upper portions of the watershed. Recreational vehicle (RV) users need to be educated on proper disposal of waste, and existing regulations need to be adequately enforced.

Onsite Sewage Disposal Goal No. 3: Provide education for and involvement by target groups in the watershed, including permanent and seasonal residents with onsite sewage disposal systems, and septic tank designers, installers, and pumpers.

Many permanent and seasonal residents of the watershed and Warm Beach area do not understand their onsite sewage disposal system, the need for maintenance, and a system's potential impact on water quality. For example, many landowners believe erroneously that certain advertised chemicals improve septic tank performance, when, in fact, some additives actually inhibit proper decomposition. One of the best ways to reach residents is through those whose business involves designing, installing, or pumping onsite sewage systems. Both residents and onsite sewage designers and handlers need a better understanding of water quality problems and needs in the watershed.

Onsite Sewage Disposal Recommendations

Onsite No. 1 (Add Staff Person to Snohomish Health District): The Snohomish Health District should work with the Stillaguamish Watershed Coordinator and the Stillaguamish Implementation Review Committee

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to secure grant and other monies to fund a position for the Snohomish Health District, Environmental Health Division to focus on sewage disposal problems as they relate to water quality.

**Intent:** Allow the Snohomish Health District to participate in water quality planning programs to: address onsite sewage disposal problems; develop and coordinate special projects, such as sanitary surveys for areas of concern throughout the County; and develop a licensing program which requires proof of pumping in areas of high risk of septic tank failure.

**Concurrence Statement:** Snohomish Health District concurs. If this recommendation is to be accomplished, funding will have to come from sources external to those usually available to the Health District and be dedicated specifically to the accomplishment of the recommendation. (Refer to Appendix A, Concurrence Letter No. 4)

**Action:** The Snohomish Health District will work with the Stillaguamish Watershed Coordinator or Snohomish County Department of Public Works, Surface Water Management staff in securing grant or other monies to implement this recommendation.

**Schedule:** Submit Centennial Clean Water Fund grant proposal for implementation of recommendation in the 1990 funding cycle.

**Estimated Cost:** $44,000 per year for one staff person. Actual cost to be determined by implementing agency.

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**Onsite No. 2 (Sewage Dump Facilities at Ranger Stations):** Sewage dump facilities should be installed at or near the Darrington and Verlot Ranger Stations. If private organizations in these areas cannot install facilities, the U.S. Forest Service should investigate the possibility of proposing facilities in their capital investment program.

**Intent:** Place sewage pump out facilities in areas that are highly visible and accessible to RV users. These facilities should be available to the public for a nominal fee which would be used to pay for the facility and cover costs associated with maintenance and disposal. Sewage collected from these dump facilities should be transferred to a sewage treatment plant for proper disposal.

**Concurrence Statement:** The U.S. Forest Service concurs. Implementation by the Forest Service depends on receiving
adequate funding, staff, and appropriate management direction.  
(Refer to Appendix A, Concurrence Letter No. 18)

**Action:** The U.S. Forest Service will work with the co-lead agencies to improve and maintain water quality in the Stillaguamish watershed.

**Schedule:** The U.S. Forest Service will install a sewage dump station at the Verlot Ranger Station as part of an upgrade to the existing water system. This upgrade is scheduled to occur sometime during 1992 to 1995.

**Estimated Cost:** U.S. Forest Service costs estimate at $230,000 for the period 1992 to 1995 for upgrade of existing water system and installation of a sewage dump facility at the Verlot Ranger Station. Upgrade of the water system will cost $200,000 and the sewage dump facility will cost $30,000.

**Onsite No. 3 (Strategy for Onsite Sewage Disposal in High Risk Areas):** The Snohomish Health District identified the Warm Beach area and the Warsinski Plat area as having a high potential for onsite sewage disposal system failure. The following strategies address high risk areas in the Stillaguamish watershed.

a) Distribution of home dye testing kits and educational materials by citizen volunteers coordinated by the Tulalip Tribes.

b) Survey of onsite sewage disposal systems for the Warm Beach area conducted by DSHS and coordinated with the Snohomish Health District to document failing systems.

c) Results of the survey will be made available to local residents. Once the results have been released, local residents will be given one year to demonstrate movement toward a community solution.

d) If a movement toward a community solution is not observed within one year, then the Snohomish Health District will begin enforcement of correcting failed onsite sewage disposal systems on a case by case basis.

**Intent:** Give the Warm Beach community and residents in the Warsinski Plat area the opportunity to decide how to solve the problem of inadequate and failed onsite sewage disposal systems. Such solutions can be either a community response (e.g.,
community drainfields, sewers, etc.) or individual repair or replacement of failing onsite sewage disposal systems. Enforcement does not necessarily have to result in the eviction of year round residents. Enforcement could include prohibiting rentals and summer or vacation residences from being inhabited. The Snohomish Health District should attempt to obtain voluntary compliance from permanent residents with failed systems.

Concurrence Statement: Snohomish County Department of Public Works, Snohomish Health District, Washington Department of Social and Health Services, and Tulalip Tribes concur. (Refer to Appendix A, Concurrence Letters No. 1, 4, 11, and 16)

Enforcement actions by the Snohomish Health District are finite, limited by staff availability and legal costs, and subject to being prioritized. Health District enforcement actions in high risk areas is subject to additional funding for such action.

Action: Snohomish County Department of Public Works has purchased dye tablets and prepared educational materials for distribution in high risk areas. Staff from the Tulalip Tribes will coordinate the distribution of dye tablets and educational materials by citizen volunteers.

The Department of Social and Health Services will work with the Snohomish Health District in surveying onsite sewage disposal systems for the Warm Beach area to document failing systems.

Schedule: Tulalip Tribes will work with area citizens in distributing dye tablets and educational materials to households in high risk areas in November 1989.

Department of Social and Health Services will tentatively complete a shoreline survey of the Warm Beach area by July 1990.

Estimated Cost: 3a: Snohomish County costs estimated at $600 for purchase of dye tablets and development of educational flyer. Tribal costs estimated at $7,000 in 1990.

3b: $3,000 in 1990.

3c: $1,000 in 1990.

3d: Snohomish Health District costs for county-wide enforcement actions estimated at $40,000 to 50,000 per
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year. Enforcement actions in the Warm Beach area will be prioritized with all other enforcement actions county-wide.

Onsite No. 4 (Increase Vertical Separation): The Snohomish Board of Health should adopt a resolution to increase the vertical separation requirement from one foot to no less than two feet for onsite sewage systems in the Stillaguamish watershed.

Intent: Protect water quality by increasing the vertical distance that sewage liquids travel underground so that contaminants have more opportunity to be removed. Vertical separation refers to the depth of soil between the bottom of a septic drainfield and the top of the layer of underground water called "the water table."

Concurrence Statement: Snohomish Health District and the Department of Social and Health Services concur. (Refer to Appendix A, Concurrence Letters No. 4 and 11)

Action: The Department of Social and Health Services is studying State Board of Health rules and regulations for onsite sewage disposal systems (WAC 248-96) and will propose revisions to the State Board of Health for adoption. The Snohomish Board of Health will be required to be as stringent as the State Board of Health rules.

Snohomish Health District will forward recommendation to Snohomish Board of Health for consideration.

Schedule: Department of Social and Health Services will complete study of State Board of Health regulations by July 1990.

Estimated Cost: Cost to landowner for implementation of increased vertical separation requirement is undetermined.

Onsite No. 5 (Sewage Dump Facilities at Rest Areas): The Washington Department of Transportation should install sewage dump facilities for recreational vehicles at the Exit 207 rest stops on I-5.

Intent: Reduce nonpoint source pollution from illegal dumping of waste from recreational vehicles.
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Concurrence Statement: Washington Department of Transportation concurs. (Refer to Appendix A, Concurrence Letter No. 12)

Action: Washington Department of Transportation is developing plans to install RV sewage dump facilities at both Exit 207 (Smokey Point) rest areas. Construction of the facilities is dependent upon availability of funds, and upon the City of Arlington accepting the sewage for treatment.

Schedule: No schedule for completion at this time.

Estimated Cost: Implementation of this recommendation is part of a $2.3 million proposal to upgrade the existing facilities at Exit 207 (Smokey Point) rest areas.

Onsite No. 6 (New RV Communities to have Dump Stations): The Snohomish Board of Health should adopt a resolution to require all RV community facilities to have dump stations. User fees should be considered to support such facilities.

Intent: Prevent water quality problems as a result of improper disposal methods and inadequate facilities for handling RV sewage.

Concurrence Statement: Snohomish Health District concurs. (Refer to Appendix A, Concurrence Letter No. 4)

Action: Snohomish Health District will forward recommendation to Snohomish Board of Health for consideration.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: Snohomish Health District costs estimated at $1,000 in 1990 for presenting recommendation to Snohomish Board of Health. Implementation costs and the cost to RV facility operators are undetermined.

Onsite No. 7 (Soil Suitability Manual): The Soil Conservation Service, in consultation with the Snohomish Health District, should develop a manual on the suitability of Snohomish County soils to function as drain fields for onsite sewage disposal systems.
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Intent: Provide home buyers, septic tank designers and installers, and realtors with information concerning the suitability of soils for drainfields, the proper treatment methods for each soil, and the costs associated with applying this treatment.

Concurrence Statement: Snohomish Health District, Environmental Health Division and the Soil Conservation Service concur. (Refer to Appendix A, Concurrence Letters No. 4 and 19, and personal communication with Matt Brady, Soil Conservation Service, December 21, 1989)

Action: The Snohomish Health District, Environmental Health Division is ready to assist with the project at the convenience of the Soil Conservation Service.


Estimated Cost: Soil Conservation Service costs estimated at $10,000 for completion of manual in 1990.

Development and Urban Runoff Source Control Program

Development and Urban Runoff Strategy

Runoff occurring as a result of urbanization can be a potential nonpoint source of pollution in the Stillaguamish watershed. Urban runoff, no matter what the land use activity, carries suspended or dissolved matter into lakes, streams, rivers, and eventually, Puget Sound. As a consequence, the quality of the water is degraded, and human and environmental health are endangered. The cost of handling runoff rises with increased urbanization. In addition, prevention of urban runoff problems is far easier and less expensive than correction; if indeed, correction or restoration is even possible (PSWQA Draft, 1989).

Current thinking about the best ways to prevent nonpoint source water pollution from urban runoff is: 1) to use and reduce changes to existing natural systems to the maximum extent possible to accommodate the runoff; 2) to avoid removing or radically changing the soil's vegetative cover; and 3) to detain urban runoff on site as long as possible. Use of effective methods to control urban runoff is called best management
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practices, or BMPs. The most economical and environmentally wise method of preserving water quality is to incorporate preventive measures now, rather than installing corrective measures after an urban runoff problems exists.

Development and Urban Runoff Goals

Development and Urban Runoff Goal No. 1: Prevent, reduce, and eliminate adverse water quality impacts from development and stormwater runoff.

Development resulting in urban runoff, carries suspended or dissolved matter into lakes, streams, rivers, and eventually, Puget Sound. As a consequence, the quality of the water is degraded, and human and environmental health are endangered.

Development and Urban Runoff Goal No. 2: Provide water quality education for and involvement by target groups in the watershed, including developers, incorporated cities, agencies, and others whose development activities affect water quality.

As an area’s population increases, impacts to water quality from more intense urbanization also increase. Residents and users of the Stillaguamish watershed need to be involved in and informed about the behaviors which can improve or protect water quality. Public agencies, cities, and developers also need to understand how their actions affect water quality.

Development and Urban Runoff Goal No. 3: Provide for adequate plan review and inspection, and enforcement of development regulations.

Current Snohomish County ordinances and regulations on grading and drainage can protect water quality if they are adequately enforced. County employees who review plans and inspect construction need to consider water quality.
Development and Urban Runoff Recommendations

Development No. 1 (Clearinghouse Phone Number): Snohomish County Department of Public Works, Surface Water Management should conduct an evaluation of the costs associated with establishing and operating a clearinghouse phone number for drainage complaints, grading violations, and water quality problems. This information will then be used in preparing grant proposals or budget requests to fund the clearinghouse phone number.

Intent: Allow the Snohomish County residents to identify the proper state or local agencies to contact regarding all water quality problems and related violations. A referral tape with an emergency number and information will be used in the evenings and during the weekend. A log of reported problems and referrals should be maintained.

A key concept of this recommendation is to publicize the number with signs, initially within the Stillaguamish watershed and eventually throughout Snohomish County.

Concurrence Statement: Snohomish County Department of Public Works and the Washington Department of Ecology concur. Implementation of the recommendation is contingent on available funding. (Refer to Appendix A, Concurrence Letters No. 1 and 21)

Action: Department of Public Works, Surface Water Management staff will conduct an evaluation of the costs associated with establishing and operating such a phone number.

Schedule: Surface Water Management will complete the evaluation by July 1990.

Estimated Cost: $4,000 for evaluation. Actual cost for operation of the clearinghouse phone number to be determined by implementing agencies.

Development No. 2 (Inspection and Enforcement of Drainage Problems): Snohomish County Community Development Division should increase drainage inspection staff and assign staff specifically to drainage permitting problems only.

Intent: Place greater emphasis and priority on the inspection of drainage problems. Demand on limited County staff resources is increasing annually due to high growth and development. Drainage
problems resulting from new construction can have an adverse impact on water quality.

Concurrence Statement: Snohomish County Community Development Division concurs. (Refer to Appendix A, Concurrence Letter No. 2)

Action: An inspection and enforcement drainage inspector was not included in the 1990 budget due to funding constraints. Community Development staff will work with the Stillaguamish Watershed Coordinator and Department of Public Works, Surface Water Management staff in securing grant funding for position.

Schedule: Seek grant funding in 1990.

Estimated Cost: $45,000 per year for each inspector added.

Development No. 3 (Island Crossing Problem): The Snohomish County Department of Public Works should study and evaluate solutions to drainage and water quality problems in the Island Crossing area.

Intent: Document and evaluate the extent of drainage and water quality problems in the Island Crossing area. Identify possible solutions to the problems and evaluate local funding mechanisms. Public Works should coordinate the evaluation of problems and solutions with the Washington Department of Transportation.

Concurrence Statement: Snohomish County Department of Public Works and Washington Department of Transportation concur. (Refer to Appendix A, Concurrence Letters No. 1 and 12)

Action: Department of Public Works, Surface Water Management, will conduct study and evaluation.

Schedule: Department of Public Works, Surface Water Management staff report on findings to Stillaguamish Implementation Review Committee by December 1990.

Estimated Cost: $8,000 for evaluation. Actual cost to correct any problems in the Island Crossing area to be determined by implementing agencies.

Development No. 4 (Runoff Controls - State Highways): The Department of Ecology and Washington Department of Transportation should work
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closely and urgently in developing a highway runoff program to meet the requirements of the Puget Sound Water Quality Management Plan for state highways.

**Intent:** Provide appropriate pollution control mechanisms to treat state highway runoff prior to entering surface waters of the Stillaguamish watershed. Direct drainage from the I-5 bridges into the Stillaguamish River, Portage Creek, and Pilchuck Creek contributes nonpoint source pollution and has severe pollution potential from spills resulting from accidents.

The Stillaguamish watershed is an early action watershed selected by the Department of Ecology. The Watershed Management Committee asks that priority status be given to the Stillaguamish watershed when the Washington Department of Transportation begins implementation of the state highway runoff program.

**Concurrence Statement:** Washington Department of Transportation and Washington Department of Ecology concur. (Refer to Appendix A, Concurrence Letters No. 1, 12 and 21)

**Action:** Department of Ecology and Department of Transportation will continue to work on state highway runoff program.

**Schedule:** Current target date for draft program is June 1990.

**Estimated Cost:** Department of Ecology and Department of Transportation costs for development of the Puget Sound Highway Runoff Program are estimated at $1.4 million over the period 1989 to 1992. These costs include the development of an administrative rule (WAC), a stormwater management manual, and a vegetation management program. (Also see Chapter 3 - Ongoing Activities to Improve Water Quality, Page 3-2 and 3-3)

Estimated costs for implementation of the Puget Sound Highway Runoff Program and associated programs is undetermined at this time.

**Development No. 4A (Runoff Controls - County Roads):** The Snohomish County Department of Public Works will evaluate developing a county-wide program to address runoff from County and local roads in Snohomish County.
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Intent: Provide appropriate pollution control mechanisms to treat county and local highway runoff prior to entering surface waters of the Stillaguamish watershed. Direct drainage from county bridges contributes nonpoint source pollution and has severe pollution potential from spills resulting from accidents.

The Stillaguamish watershed is an early action watershed selected by the Department of Ecology. The Watershed Management Committee asks that priority status be given to the Stillaguamish watershed when Snohomish County Department of Public Works begins implementation of the county highway runoff program.

Concurrence Statement: Snohomish County Department of Public Works concur. (Refer to Appendix A, Concurrence Letters No. 1, 12 and 21)

Action: Department of Public Works, Maintenance and Operations Division and Surface Water Management, will evaluate a county-wide program for runoff from county roads.

Schedule: Evaluation to be completed by July 1991.

Estimated Cost: Snohomish County, Department of Public Works costs estimated at $10,000 to $15,000 in 1990 and $10,000 to $15,000 in 1991 to complete evaluation. Drainage inventory costs and implementation costs to correct potential problems are undetermined at this time.

Development No. 5 (Protect Water Bodies along State Highways): The Washington Department of Transportation should ensure that their roadside spraying program be implemented so that pesticides are not sprayed or transported in ditches which lead to streams or wetlands adjacent to state highways.

Intent: Protect water quality through review of pesticide application techniques. Many roadside ditches can carry pesticides directly into adjacent streams or wetlands, adversely impacting water quality. Except for noxious weeds, vegetation in these areas can be removed by mechanical means.

Concurrence Statement: Washington Department of Transportation concurs. (Refer to Appendix A, Concurrence Letters No. 1 and 12)

Action: Continue with existing spraying program. As part of the Puget Sound Highway Runoff Program, the Department
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of Transportation will be developing a new vegetation management program which addresses integrated pest management, pesticide use, and protection of water quality.

Schedule: Continue ongoing program.

Estimated Cost: Annual costs for spraying and vegetation control in the Stillaguamish watershed are not determined. Costs associated with development of a vegetation management program are included as part of the $1.4 million for development of the Puget Sound Highway Runoff Program (see Development No. 4).

Development No. 5A (Protect Water Bodies along County Roads): The Snohomish County Department of Public Works should ensure that their existing Integrated Vegetation Management Program be implemented so that pesticides are not sprayed or transported in ditches which lead to streams or wetlands adjacent to county roads.

Intent: Protect water quality through review of pesticide application techniques. Many roadside ditches can carry pesticides directly into adjacent streams or wetlands, adversely impacting water quality. Except for noxious weeds, vegetation in these areas can be removed by mechanical means.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letters No. 1 and 12)

Action: Department of Public Works, Maintenance and Operations Division will continue to follow the Integrated Vegetation Management Program to manage roadside vegetation. As part of Education No. 6, Surface Water Management staff will work with Maintenance and Operations field crews in identifying roadside ditches that drain into streams and wetlands.

Schedule: Continue ongoing program.

Estimated Cost: Snohomish County, Department of Public Works costs estimated at $960,000 to $1,000,000 per year for implementation of the existing Integrated Vegetation Management Program county-wide. Cost breakdown for the Stillaguamish watershed is undetermined. Per mile cost for vegetation control is provided below:
Spraying shoulder of road - $48.61/mile - once a year;

Mechanical mowing of shoulder - 21.99/mile - three times per year;

Spraying back side of ditches - $83.37/mile - once a year;

Mechanical brush cutting of back side of ditches - $466.51/mile - once a year.

Development No. 6 (Research on No-Spray Alternative): The Puget Sound Water Quality Authority should consider the water quality benefits of a no-spray program and/or Integrated Pest Management for roadside vegetation management as part of its process of preparing the 1991 Puget Sound Water Quality Management Plan.

Intent: Determine extent of pollution from roadside spray programs. Compare the water quality benefits of eliminating spraying against the cost of mechanical vegetation management.

Concurrence Statement: The Puget Sound Water Quality Authority concurs. (Refer to Appendix A, Concurrence Letter No. 7)

Action: In September, 1989, the Authority released an issue paper on Pesticides and Puget Sound for public review. The Authority may consider the issue of alternatives to spraying for roadside management as part of the 1991 plan revision process.

Schedule: This recommendation will be carried out as part of the overall process of preparing the 1991 Puget Sound Water Quality Management Plan.

Estimated Cost: Puget Sound Water Quality Authority costs estimated at $5,000 to $10,000 in 1990.

Development No. 7 (Painting Storm Drains): Snohomish County Public Works, Surface Water Management, should institute a program of stencilling storm drains with "DUMP NO WASTE -- DRAINS TO STREAM." Snohomish County Community Development Division, during plat review, should require developers to stencil all storm drains in new developments with "DUMP NO WASTE -- DRAINS TO STREAM."
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Intent: Reduce dumping of oil, gas, and other hazardous wastes into storm drains that directly reach the surface waters of the Stillaguamish watershed. Stencils can be provided by Department of Ecology, and nontoxic paint by the County.

Concurrence Statement: Snohomish County Department of Public Works, Division of Community Development, and City of Stanwood concur. (Refer to Appendix A, Concurrence Letters No. 1, 2, and 6)

Action: Department of Public Works, Surface Water Management staff will take the lead in stencilling storm drains and will work with the City of Stanwood and the City of Arlington in starting a stencilling program in incorporated cities. Community Development Division staff will add stencilling to the drainage review checklist to ensure new development complies with this recommendation.

Schedule: Target is to stencil 200 storm drains in unincorporated areas of the Stillaguamish watershed in 1990.

Estimated Cost: $1,200 per year.

Development No. 8 (Oil Separators in Developed Areas): The City of Stanwood and the City of Arlington should both begin a program of installing and maintaining oil separators or other effective devices on catch basins subject to automobile or industrial runoff.

Intent: Reduce pollutants entering the Stillaguamish watershed from urban land uses. An interlocal agreement between the cities of Stanwood and Arlington and the County for the purpose of County Public Works cleaning the cities' catch basin should address payment by the cities to the County for this service and procedures to fund such work in the event that the cities can not pay for the maintenance.

Concurrence Statement: Snohomish County Department of Public Works, City of Arlington, and City of Stanwood concur. (Refer to Appendix A, Concurrence Letters No. 1, 5, and 6, and personal communication with Bob Larson, Planning Department, City of Arlington, January 4, 1990)

Action: The City of Arlington will be reviewing storm drainage related issues during 1989 and 1990. The intent of this review is to provide the City of Arlington with a
set of requirements that will improve water control and quality.

The City of Stanwood will implement a program to require the installation and maintenance of oil separators or other effective devices on catch basins that are subject to automobile or industrial runoff. To reinforce this program, the City of Stanwood will adopt a Comprehensive Drainage Ordinance.

Schedule: The City of Stanwood plans to adopt a Comprehensive Drainage Ordinance by March 1990.

Estimated Cost: City of Arlington, City of Stanwood, and Snohomish County costs estimated for installation of new oil separators:

Type 2 oil separators - $1,650 to $2,000 for materials and installation
$100/yr for vector cleaning

Type 1 oil separators - $600 to $1,000 for materials and installation
$50/yr for vector cleaning

Vector disposal costs - $150 per vector load (waste from approximately ten Type 2 oil separators)

The number of new Type 2 oil separators that will be installed and the number of retrofitted oil separators by the City of Arlington and City of Stanwood is undetermined.

The City of Stanwood has an interlocal agreement with Snohomish County to clean existing catch basins within the Stanwood. Cost for vector cleaning estimated at $6,000 to $8,000 per year.

Development No. 9 (Local Funding Options for Watershed Improvements): The Puget Sound Finance Committee and its local government subcommittee should continue to explore ways to provide local funding mechanisms for the implementation of watershed action plans. Snohomish County Department of Public Works, in coordination with interested citizens, should evaluate and recommend for County Council approval the most appropriate local funding options.
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Intent: Create a mechanism for providing local funding for nonpoint source pollution problems in the Stillaguamish watershed.

Concurrence Statement: Puget Sound Water Quality Authority and Snohomish County Department of Public Works concur. (Refer to Appendix A, Concurrence Letters No. 1 and 7)

Action: The Puget Sound Finance Committee is currently exploring options for generating local revenue to fund water quality activities.

Schedule: This task will be carried out as part of the overall implementation of the Puget Sound Water Quality Management Plan, Element C-1.

Estimated Cost: Puget Sound Water Quality Authority and Snohomish County, Department of Public Works costs estimated at $5,000 to 10,000 in 1990.

Development No. 10 (Aquatic Resource Protection): Snohomish County should enact strong ordinances to implement a program requiring restrictions on clearing, grading, and drainage activities adjacent to aquatic systems (see Ongoing Activities).

Intent: Protect the water quality function of wetlands and stream corridors. Adoption of the proposed Aquatic Resources Protection Program currently under review by the Snohomish County Planning Commission will work toward resolving the Watershed Management Committee's concern with respect to aquatic resources protection.

Concurrence Statement: Snohomish County Planning Division concurs. (Refer to Appendix A, Concurrence Letter No. 3)

Action: The proposed Snohomish County Aquatic Resource Protection Program has not been adopted to date. The Planning Division will continue to provide staff support to County Council consideration of this program.

Schedule: The Snohomish County Council is expected to formally adopt the Aquatic Resource Protection Program in 1990.

Estimated Cost: Snohomish County Planning Division costs estimated at $45,000 to 50,000 for 3 FTE for the first four months of 1990. This represents only those estimated costs
associated with adoption of the Aquatic Resources Protection Program in 1990. Implementation costs of an approved Aquatic Resources Protection Program are undetermined at this time.

Development No. 11 (Existing Platted Lots): Snohomish County Council should enact a policy that all previously approved final plats, when developed, meet the most recent code requirements for grading and drainage.

Intent: Prevent adverse grading and drainage impacts to water quality from development on previously approved final plats (e.g., Warm Beach area). Previously approved final plats, when developed, do not have to meet the most recent code requirements for grading and drainage.

Concurrence Statement: Snohomish County Community Development Division concurs. (Refer to Appendix A, Concurrence Letters No. 2)

Action: Community Development Division will pursue and support this recommendation, given both the County Council mandate to preserve and protect wetlands and the existing legal framework upon which the Community Development Division operates.

Schedule: Develop a policy on final plat for County Council consideration by January 1991.

Estimated Cost: Snohomish County Community Development Division costs estimated at $1,000 in 1990 for preparation of policy on existing platted lots. Legal costs associated with Council approval and implementation of a policy on existing platted lots is undetermined.

Development No. 12 (Violators Responsible for Mitigation): Snohomish County ordinances should specify that violators (whether owners, subcontractors or equipment operators) of grading and drainage permit requirements will bear full responsibility for mitigation of problems caused by improper actions.

Intent: Remove the financial burden of mitigation from the tax payers to the violators. The Watershed Management Committee support the strongest regulations allowable covering such responsibility.
Concurrence Statement: Snohomish County Community Development Division concurs. (Refer to Appendix A, Concurrence Letters No. 2)

Action: The intent of the Community Development Division is to require the impacts caused by new development to be fully mitigated as required by SEPA and other state and county laws and ordinances. Community Development Division will pursue implementation of this recommendation given the limited resources for inspection and enforcement.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: Snohomish County, Community Development Division costs associated with implementation of this recommendation are included as part of the estimated cost for hiring new drainage inspection staff (see Development No. 2).

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Forest Practices Source Control Program

Forest Practices Strategy

The many tributaries to the Stillaguamish River have their origin in private, state, and federal forest lands. Timber harvesting, natural events (such as landslides), road building, and vegetation management can contribute to sediment build up, temperature elevation, pesticide contamination, and organic debris in tributaries to the Stillaguamish River. Sediment from timber harvesting, road construction, and natural events (such as landslides) in the watershed can degrade water quality and damage fish and wildlife habitat in these tributary streams. In addition, fine sediment may be acting as a transport mechanism which increases the survivability of bacteria in marine waters and contributing to the bacterial contamination of shellfish in Port Susan.

Forest practices are regulated by Washington’s Forest Practices Act, RCW 76.09. Through a permitting process, timber operators are required to comply with RCW 76.09 administered by the Department of Natural Resources. Other state and local agencies
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perform limited monitoring, review, and advisory functions. A serious deficiency in the forest practices program has been inadequate funding for enforcement and monitoring. With the adoption of the Timber/Fish/Wildlife Agreement in late 1986, improved agency coordination and increases in agency operating budgets have begun to address these concerns (PSWQA, 1988).

Forest Practices Goals

Forest Practices Goal No. 1: Reduce and ultimately eliminate adverse water quality impacts (such as sediment, chemical and organic contamination, and high water temperature) to the Stillaguamish watershed from forest practices.

Logging practices, road building, and vegetation management associated with forest practices can contribute to sediment build up, temperature elevation, and pesticide contamination.

Forest Practices Goal No. 2: Provide opportunities for organizations and individuals to work together to prevent future pollution of the Stillaguamish River from forest practices.

Local efforts to reduce nonpoint source pollution have depended on the cooperation of federal, state, and private landowners; the Timber/Fish/Wildlife process; and the State Forest Practices Act. Snohomish County has limited jurisdiction over forest practices through the administration of the Snohomish County Shoreline Management Master Program and by commenting on forest practices permits for forest land conversions. State regulations have provided guidelines for coordinating the Stillaguamish Watershed Action Plan with statewide forest practice regulations. Citizens have expressed a desire to understand and be involved in agency activities at all levels related to forest practices.

Forest Practices Goal No. 3: Maintain the viability of the forest industry while achieving water quality goals.

All water quality and forest industry interests must be balanced in such a way that no group thrives at the expense of another. (Note: Two Watershed Management Committee members requested a minority opinion on Forest Practices Goal No. 3. The two committee members prefer to see the
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goal worded "Achieve water quality goals while maintaining the viability of the forest industry."

Forest Practices Goal No. 4: Coordinate activities with the Timber/Fish/Wildlife process and the U.S. Forest Service's process.

Forest Practice activities are regulated by state, federal, and county regulations. The provisions of the Stillaguamish Watershed Action Plan cannot be implemented without coordinating with the two most important processes currently occurring: the Timber/Fish/Wildlife agreement and the public review process of the U.S. Forest Service.

Forest Practices Recommendations

Forest No. 1 (Documentation and Coordination of Forest Practice Applications for Land Conversions): Snohomish County Planning Department should provide staff and computer resources to track and coordinate the review of forest practices applications for land conversions.

Intent: Document and coordinate County review and conditioning of forest practices applications as they relate to conversions both for development and for pasture and farmland. Provide better communication between personnel responsible for review of Forest Practice applications proposing conversion from commercial forestry and personnel with responsibility for development review and county permitting. Evaluate and develop County policies which assure consistent review, conditioning, and enforcement of forest practices applications.

Concurrence Statement: Snohomish County Planning Division concurs. (Refer to Appendix A, Concurrence Letter No. 3)

Action: Planning Division will improve tracking and coordination of Class IV forest practice applications and revise applicable review policies.

Schedule: Implementation of recommended actions should begin in late 1989 with improved tracking and coordination of Class IV (conversion) forest practices applications. Revision of applicable review policies should be initiated in early 1990.

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Estimated Cost: $12,500 for .25 FTE per year.

Forest No. 2 (Planning Division Add an Urban Forester): Snohomish County Planning Division should evaluate options to fund an urban forester position. Such options may include split funding and sharing of an urban forester position with other agencies (e.g., Snohomish Conservation District, Snohomish Public Utility District, etc.). Planning Division will recommend, for County Council approval, the most appropriate funding option to hire an urban forester.

Intent: Provide the County greater expertise in urban forestry issues and allow for a more thorough County/local agency review, conditioning, enforcement, and compliance of forest practices application conversions and water quality/forest impacts of development.

Concurrence Statement: Snohomish County Planning Division concurs. (Refer to Appendix A, Concurrence Letter No. 3)

Action: Implementation of this recommendation is contingent upon availability of a funding package acceptable to Snohomish County. The level of additional staff support provided by this recommendation, in combination with Forest No. 1, is adequate to ensure improved review of Class IV (conversion) forest practice applications, but not enhanced review of commercial forest practices proposed in the watershed.


Estimated Cost: $8,000 for .15 FTE per year.

Forest No. 3 (Enforce County Shoreline Management Program): Snohomish County Planning Division should evaluate problems with monitoring and enforcement of the Shoreline Management Master Program and institute a program for correcting any deficiencies.

Intent: Protect water quality by improving monitoring and enforcement of the Snohomish County Shoreline Management Master Program.

Concurrence Statement: Snohomish County Division of Planning concurs. (Refer to Appendix A, Concurrence Letter No. 3)
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Action: Expanded monitoring of forest practices within areas of County shoreline management jurisdiction will be incorporated in the tracking system established as a result of implementing Forest No. 1. The Snohomish County Shoreline Management Master Program is considered to have limited applicability to commercial forest practices occurring within shoreline areas. The state Forest Practices Act has traditionally been relied upon to guide such forest practices.

Snohomish County Planning Division will identify the limits of existing authorities, evaluate options to obtain additional authorities to review and condition forest practices within the shoreline areas subject to the Shoreline Management Program, and recommend appropriate changes to County policies and regulations. Implementation of any program to correct known deficiencies will require approval by the County Council and the Department of Ecology.

Schedule: Expanded monitoring will commence in 1990, with any program to correct deficiencies being considered in 1991.

Estimated Cost: Snohomish County Planning Division costs estimated at $12,000 for evaluation in 1990.

Forest No. 4 (DNR to Hire Forester): The Department of Natural Resources, Northwest Regional Office, should provide additional staff resources necessary to inspect and enforce compliance with forest practices permits and assist the Stillaguamish Forest Practices Forester to review and condition forest practices applications.

Intent: Provide consistent staffing throughout the year to effectively review, condition, inspect, and enforce forest practices activities.

The Stillaguamish watershed is an early action watershed selected by the Department of Ecology and by the Timber/Fish/Wildlife process. The Watershed Management Committee asks that priority status be given to the Stillaguamish watershed when the Washington Department of Natural Resources, Northwest Region, requests additional staff for field support during the 1990 budget planning period.

Concurrence Statement: Washington Department of Natural Resources concurs. (Refer to Appendix A, Concurrence Letter No. 10)
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**Action:** The current fiscal budget (1989-1991) limits implementation of this recommendation at this time. Recommendation will be considered during the upcoming budget planning period.

**Schedule:** The Northwest Region will be requesting staff for field support during the next budget planning period in 1990. The results of this process will not be known until the spring of 1991.

**Estimated Cost:** $40,000 for 1 FTE per year. Actual cost to be determined by implementing agency.

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**Forest No. 5 (Tracking Forest Practices Permits):** The Northwest Regional Office of the Department of Natural Resources should track all forest practices applications in the Stillaguamish watershed. The results should be published in a report at the end of each fiscal year.

**Intent:** Use report to determine the cumulative impacts of forest practices to the Stillaguamish watershed. This report will also provide an overview of land use changes over time.

**Concurrence Statement:** Washington Department of Natural Resources concurs. (Refer to Appendix A, Concurrence Letter No. 10)

**Action:** The Department of Natural Resources will provide the Stillaguamish Implementation Review Committee with a summary of forest practice applications in the watershed. This summary will include: number of forest practice applications, class of forest practice applications, acres of timber harvest proposed, acres of chemical treatment proposed, miles of road construction proposed, miles of road abandonment proposed, number of stop work orders issued, number of notices to comply issued, and number of citations issued.

**Schedule:** The Northwest Region Forest Practice Coordinator will provide the summary to the Stillaguamish Implementation Review Committee by August 25th of each year.

**Estimated Cost:** $5,000 per year.
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Forest No. 6 (Resource Management Plans): The Department of Natural Resources, Northwest Region, in cooperation with the Tulalip and Stillaguamish Tribes, should convene a meeting of all affected parties to discuss the creation and implementation of a Resource Management Plan in the Stillaguamish watershed. Federal (USFS), State (DNR, DOW, DOF, DOE), and County agencies, as well as affected property owners, tribes, environmental groups, sports fishing organizations, and other affected parties should encourage the development of this Resource Management Plan.

Intent: Improve water quality through better communication and planning in the Stillaguamish watershed. (Note: A Watershed Management Committee member requested a minority opinion on Forest No. 6. The committee member prefers to see the recommendation worded "The Department of Natural Resources,... should consider the need for a Resource Management Plan in the Stillaguamish watershed.")

Concurrence Statement: Washington Department of Natural Resources, the Tulalip Tribes, and the Stillaguamish Tribe concur. (Refer to Appendix A, Concurrency Letters No. 10, 15, and 16)

Action: The Department of Natural Resources, the Tulalip Tribes, and the Stillaguamish Tribe will work together to convene a meeting to discuss the creation of a resource management plan for the Stillaguamish watershed.

Schedule: The Cascade District Manager will set up an informal meeting with the Tulalip Tribes and the Stillaguamish Tribe.

Estimated Cost: Tribal costs estimated at $10,500 per year. Department of Natural Resources costs estimated at $10,000 to $15,000 per year.

Forest No. 7 (Inventory of Orphan Roads): The Department of Natural Resources, in cooperation with other Timber/Fish/Wildlife participants and the U.S. Forest Service, should inventory roads in the Stillaguamish watershed to determine road maintenance, siting, and age problems. A Memorandum of Understanding should be developed between the DNR, the U.S. Forest Service, and other involved parties.

Intent: Assist in identifying needs for road repair or formal road abandonment. The results of the inventory will be made available to Timber/Fish/Wildlife participants and other interested parties. Problem roads will then be prioritized and
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funding sought for repairs. Note that the definitions for orphan or abandoned roads differ between state and federal jurisdictions.

Concurrence Statement: Washington Department of Natural Resources and U.S. Forest Service concur. (Refer to Appendix A, Concurrence Letters No. 10 and 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: Due to budget constraints, the Department of Natural Resources is currently not capable of conducting an inventory of all orphaned or abandoned roads on state and private land. Implementation of this recommendation is dependent on appropriation by the legislature. Department of Natural Resources will work with the co-lead agencies in trying to get funding for this recommendation.

Schedule: Secure funding for inventory of orphan roads in 1990.

Estimated Cost: Department of Natural Resources costs estimated at $45,000 to $50,000 in 1991 for inventory. U.S. Forest Service costs estimated at $105,000 for 1992 to 1995 for inventory work. Cost estimates for reparation work is undetermined at this time and should be developed as part of the inventory process as problems are identified.

Forest No. 8 (U.S. Forest Service and Department of Natural Resources Timber Harvest Planning): The Darrington Ranger District of the U.S. Forest Service and the Northwest Region of the Department of Natural Resources should meet on an annual basis to discuss planned timber sales in the Stillaguamish watershed.

Intent: Improve water quality through better communication and planning of forest practices in the Stillaguamish watershed. Discussion on planned timber sales pertain only to state and federal lands.

Concurrence Statement: Washington Department of Natural Resources and U.S. Forest Service concur. (Refer to Appendix A, Concurrence Letters No. 10 and 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: The Arlington, Darrington, and Snohomish Unit Foresters for the Department of Natural Resources will provide yearly action plans to the Stillaguamish
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Implementation Review Committee. The Cascade and Rivers District Managers will set up an annual review of the action plans with the Forest Service. Action plans may be adjusted after meetings to reduce impacts to public resources.

Schedule: Unit Foresters will provide action plans to the Stillaguamish Implementation Review Committee by December 15th of each year. District Managers will set up an annual review of the action plans with the Forest Service during January of each year.

Estimated Cost: U.S. Forest Service costs estimated at $2,000 per year. Department of Natural Resources costs estimated at $2,000 per year.

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Forest No. 9 (U.S. Forest Service and Department of Natural Resources Hold Cross Training Program): The Darrington Ranger District of the U.S. Forest Service and the Northwest Region of the Department of Natural Resources should hold a workshop to provide training to agency employees and the general public on forest practices rules and regulations, Timber/Fish/Wildlife, and U.S. Forest Service process of planning timber sales, public appeals process, etc.

Intent: Enhance communication between agencies and provide education and public involvement opportunities for residents of the Stillaguamish watershed.

Concurrence Statement: Washington Department of Natural Resources and U.S. Forest Service concur. (Refer to Appendix A, Concurrence Letters No. 10 and 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: The Department of Natural Resources will work with the Forest Service, Darrington District, to provide a workshop for respective agency employees and the public.

Schedule: The Northwest Region Forest Practices Coordinator for the Department of Natural Resources will set up a planning meeting with the Forest Service, Darrington District by November 1989. Agenda, instructors, and participants should be identified by February 1990. A workshop will be held in March 1990.

Estimated Cost: U.S. Forest Service costs estimated at $6,000 per year. Department of Natural Resources costs estimated at $6,000 per year.
Stillaguamish Watershed Action Plan

Forest No. 10 (U.S. Forest Service Hold Public Forum): The U.S. Forest Service should hold a series of public informational meetings to address community concerns regarding water quality and the U.S. Forest Service activities in the Stillaguamish watershed.

Intent: Address public concerns on water quality as they relate to U.S. Forest Service management practices and should include, but not be limited to the following: cumulative impacts; road management; pesticide use; slash burns; logging on unstable soils; protection of riparian habitat; forestry best management practices; watershed rehabilitation; budget problems; sustainable forestry practices; and off road vehicle management. These forums should be developed with input from the Stillaguamish Implementation Review Committee.

Concurrence Statement: U.S. Forest Service concurs. (Refer to Appendix A, Concurrence Letter No. 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: Forest Service will work toward implementing this recommendation.

Schedule: Forest Service is to begin public forums in 1990.

Estimated Cost: U.S. Forest Service costs estimated at $6,000 per year.

Forest No. 11 (Monitoring for U.S. Forest Service Contract Compliance): The U.S. Forest Service should provide monitoring to insure contract compliance as it relates to water quality. The U.S. Forest Service should prepare a yearly report documenting compliance time, percentage enforcement actions, penalties, and the results after action taken. This report should be evaluate each year to determine if enforcement actions are strong enough to protect water quality in the Stillaguamish watershed.

Intent: Provide documentation on the amount of time involved in compliance, the percentage of harvest operations in non-compliance, the results of enforcement actions and the ability to change enforcement actions to protect water quality in the Stillaguamish watershed.

Concurrence Statement: U.S. Forest Service concurs. (Refer to Appendix A, Concurrence Letter No. 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)
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Action: Forest Service will work toward implementing this recommendation.

Schedule: Forest Service to begin implementation of this recommendation in 1990.

Estimated Cost: U.S. Forest Service costs estimated at $1,600 per year.

Forest No. 12 (Stream Rehabilitation): The Tulalip Tribes, U.S. Forest Service, Department of Natural Resources, Department of Wildlife, Department of Fisheries, and other landowners should develop a coordinated stream inventory and rehabilitation program.

Intent: Improve riparian habitat, reduce channel aggrading, and improve pool depth. Use the results of the stream inventories conducted under the Timber/Fish/Wildlife Ambient Monitoring Program and other existing monitoring programs for identifying and prioritizing potential rehabilitation projects. A Memorandum of Understanding among these parties should identify an agreed upon process for implementation of this inventory and program.

Concurrence Statement: The Tulalip Tribes, Washington Department of Fisheries, Washington Department of Wildlife, Washington Department of Natural Resources, and U.S. Forest Service concur. The Washington Forest Protection Association was originally included as an implementing entity for Forest No. 12. Washington Forest Protection Association did not concur and was dropped from the recommendation. (Refer to Appendix A, Concurrence Letters No. 9, 10, 16, 17, 18, and 22, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: Agencies will work together in implementation of this recommendation. The Stillaguamish forest practices forester will be the Department of Natural Resources contact for this recommendation.

Schedule: Agencies to begin implementation of a stream inventory and rehabilitation program to begin by July 1990.

Estimated Cost: Tribal costs estimated at $20,000 in 1990 and $20,000 in 1991 for inventory work. Department of Natural Resources costs estimated at $25,000 in 1990 and 25,000 om 1991 for inventory work. Cost estimates for rehabilitation work on state land is undetermined at this time and should be developed as part of the inventory process as problems are identified.
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U.S. Forest Service costs estimated at $65,000 per year for 1990 to 1995 for sixty-seven miles of stream rehabilitation work on federal lands.

Forest No. 13 (Identify Need for Mitigation of Past Impacts): The Tulalip Tribes and the Stillaguamish Tribe, in coordination with forest land owners and other appropriate agencies should identify existing adverse water quality impacts resulting from past forest practices activities and natural events in the Stillaguamish watershed.

Intent: Identify and correct past forest practices problems that have adversely affected water quality in the Stillaguamish watershed.

Concurrence Statement: The Tulalip Tribes and the Stillaguamish Tribe concur. (Refer to Appendix A, Concurrence Letters No. 15 and 16)

Action: Both entities believe that this recommendation should be incorporated into the stream inventory and rehabilitation program identified in recommendation Forest No. 12.

Schedule: The Tulalip Tribes and Stillaguamish Tribe will begin identification of problem areas by July 1991.

Estimated Cost: Tribal costs estimated at $36,000 in 1991 for identification of problem areas. Cost estimates for mitigation of past impacts is undetermined at this time and should be developed as part of the problem identification process.

Forest No. 14 (Timber/Fish/Wildlife Annual Review): The Tulalip Tribes and Stillaguamish Tribe should alert the Timber/Fish/Wildlife participants about forest practices concerns expressed and recommendation made by some plan participants during the development of the Stillaguamish Watershed Action Plan.

1. Timber/Fish/Wildlife participants should address the following concerns that may impact water quality; cumulative effects and downstream impacts of forest practices; clear-cut size; improper logging practices; critical areas; consistent enforcement; riparian
management; reforestation/revegetation; slash burns; interdisciplinary team composition; upland management areas; preharvest review and planning; effective forest management; road siting in unstable areas; pesticides; erosion control; and financial and other incentives.

2. During the next Timber/Fish/Wildlife negotiations, additional participants should be considered, for example, the U.S. Forest Service, representatives of county governments, and other affected parties.

Intent: Improve water quality in the Stillaguamish watershed through a more thorough Timber/Fish/Wildlife agreement and better communication and planning by all affected parties.

Concurrence Statement: The Tulalip Tribes and the Stillaguamish Tribe concur. (Refer to Appendix A, Concurrence Letters No. 15 and 16)

Action: The Tulalip Tribes and Stillaguamish Tribe will work together to develop an issue paper based on forest practice concerns raised during the development of the Stillaguamish Watershed Action Plan.

Schedule: The Tulalip Tribes and Stillaguamish Tribe will introduce the issue paper at the Timber/Fish/Wildlife annual review in 1990 and distribute the issue paper to the Timber/Fish/Wildlife administrative committee.

Estimated Cost: Tribal costs estimated at $4,500 in 1990.

Forest No. 15 (Forum to Discuss Future of Forest Industry): The Stillaguamish Tribe and Pilchuck Audubon should coordinate a forum between federal, state, and private landowners to discuss sustainable forestry and the future of the forest industry in the Stillaguamish watershed.

Intent: Begin a dialogue between major landowners, timber industry employees, Snohomish County government, environmental and community groups, business community, and other affected parties on the need for water quality protection, sustainable forestry, and a sustainable forest products industry in the Stillaguamish watershed.

Concurrence Statement: Stillaguamish Tribe and Pilchuck Audubon concur. The Tulalip Tribes were originally included as an implementing entity for Forest No. 15. The Tulalip Tribes did
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not concur because of lack of staffing and were dropped from the recommendation. (Refer to Appendix A, Concurrence Letters No. 14, 15, and 16)

Action: The Stillaguamish Tribe and Pilchuck Audubon will work together to coordinate a forum to discuss sustainable forestry and the future of the forest industry in the Stillaguamish watershed.

Schedule: Initial planning for forum to begin by January 1990.

Estimated Cost: Stillaguamish Tribe costs estimated at $12,000 to $15,000 in 1990. Pilchuck Audubon costs estimated at $1,000 to $5,000 in 1990.

Other Nonpoint Sources - Source Control Program

Other Nonpoint Sources Strategy

Other nonpoint sources of pollution in the Stillaguamish watershed that were considered problems by the Stillaguamish Watershed Management Committee included disposal of household hazardous wastes, improper disposal of solid waste, and improper disposal of waste from boats.

Household hazardous wastes come from a variety of toxic products used in the home: paint, thinner, lawn and garden pesticides, fertilizers, cleaners, degreaser, medicine, cosmetics, transistors, dyes, and automotive products such as antifreeze, batteries, and oil (PSWQA, 1988). The use and disposal of many of these products are potentially a source of pollution in the Stillaguamish watershed.

The improper disposal of solid waste (trash) in a rural watershed such as the Stillaguamish is a substantial problem. Aside from the visual impacts normally associated with solid waste or litter, solid waste often contains hazardous household products, disposable diapers, and other contaminants that leach into ground and surface waters and eventually into the Stillaguamish River.

Disposal of waste from boats and marinas is only a minor problem in the Stillaguamish watershed. Refer to the chapter called
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"Ongoing Activities to Protect Water Quality" for a discussion of state efforts to control waste from marinas and boats.

Other Nonpoint Sources Goals

Other Nonpoint Sources Goal No. 1: Reduce and eliminate adverse water quality impacts resulting from the handling and disposal of household hazardous waste.

Many household chemicals are hazardous to human health and the environment. Users of such chemicals, unaware of the risks, frequently dispose of the unused chemicals into their septic systems, household drains, or in storm drains. Water quality impacts from these practices can be severe.

Other Nonpoint Sources Goal No. 2: Eliminate illegal waste disposal practices.

Household or industrial waste is occasionally dumped adjacent to the Stillaguamish River or tributaries. Many citizens are not aware that such dumping is not only unsightly, but could allow hazardous pollutants to leach into water and be carried long distances. The pollutants create public health and water quality problems in the watershed and ultimately, in Puget Sound.

Other Nonpoint Sources Goal No. 3: Reduce and eliminate illegal and/or improper disposal of garbage and sewage from boats.

Sewage from boats may be a potential source of bacteria in Port Susan. Other boater waste can include hazardous materials which contribute to poor water quality.

Other Nonpoint Sources Goal No. 4: Look for opportunities to expand the diversity of the river channel system.

Changes in the river have included large wood removal and concentration of river into one main channel by cutting off flood plains, sloughs, and small channels. These changes
have resulted in concentration of sediment and pollution and increase river velocities.

Other Nonpoint Sources Recommendations

Other Nonpoint Sources No. 1 (Disposal of Household Hazardous Waste): Snohomish County Department of Public Works, Solid Waste Management Division should continue to pursue development of a facility for the drop off of household hazardous waste and establishment of local "round up" events. Information about the collection site and round up schedules should be included in all brochures and other educational materials and widely publicized.

Intent: Prevent household hazardous waste, which are not currently regulated, from polluting surface and groundwater in the Stillaguamish watershed. Provide incentives for homeowners to dispose of household hazardous waste in an environmentally safe manner.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: In accordance with the draft Hazardous Waste Management Plan, the Department of Public Works will pursue development of a facility for the disposal of household hazardous waste.

Schedule: Facility planning, design, and construction of a facility for the collection of household hazardous waste is tentatively scheduled for 1990 and 1991. The facility is tentatively scheduled to open in 1992. Beginning in 1990, collection "round up" events will occur twice yearly at two locations in Snohomish County.

Estimated Cost: This recommendation will be implemented by Snohomish County Solid Waste Management Division as part of the overall County-wide Hazardous Waste Management Plan estimated to cost $8.2 million (1989 dollars) over the period 1990 to 1995. Costs associated with the hazardous waste facility are: facility planning and design - $220,000 in 1990 to 1991; construction - $1.44 million in 1992; operation and maintenance - $837,000 in 1993, $880,000 in 1994, and $923,000 in 1995. Collection "round up" events are estimated to cost $400,000 per year beginning in 1990 and continuing each year through 1995.
Chapter 2 - Nonpoint Source Control

Other Nonpoint Sources No. 1A (Recycling of Plastics): Snohomish County Department of Public Works, Solid Waste Management Division should continue to pursue development of a recycling program for plastics at the earliest possible date.

Intent: Prevent plastics from polluting waters by providing incentives for homeowners to dispose of plastics in an environmentally safe manner.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: As of January 1990, Snohomish County Solid Waste Management Division has no specific programs designed for plastics recycling. The Solid Waste Management Division acknowledges plastic as a waste to be diverted from the waste stream through recycling and waste reduction. The Final Comprehensive Solid Waste Management Plan identifies plastics as a targeted waste for county recycling market development efforts. Plastics are estimated to comprise approximately eight percent (by weight) of the estimated 330,000 tons of mixed municipal solid waste generated in Snohomish County in 1990.

Schedule: No schedule available at this time.

Estimated Cost: A plastic recycling pilot program for the City of Seattle concludes: there is no stable market for recycling mixed plastics; and collection and sorting of plastics is expensive. Cost for collection and sorting of plastics from drop-off locations is estimated at $120 to 180 per ton. Cost for collection and sorting of plastics via curbside pickup is estimated at $120 to 400 per ton.

Other Nonpoint Sources No. 2 (Solutions to Illegal Disposal Practices): Snohomish County Department of Public Works, Surface Water Management should work with the Department of Ecology in identifying and implementing solutions to illegal disposal practices in the Stillaguamish watershed. The Watershed Coordinator position within Surface Water Management will be responsible for implementing this action.

Intent: Prevent water quality degradation resulting from illegal disposal of solid waste. In addition to the visual impacts normally associated with litter, solid waste often contains hazardous household products, disposable diapers, and other contaminants that leach into ground and surface waters.
Concurrence Statement: Snohomish County Department of Public Works and the Washington Department of Ecology concur. (Refer to Appendix A, Concurrence Letters No. 1 and 21)

Action: Both agencies agree to work together to identify and implement solutions to illegal disposal practices in the Stillaguamish watershed.

Schedule: Agencies will hold initial meeting to discuss illegal disposal problems in the watershed by July 1990.

Estimated Cost: $5,000 to 10,000 in 1990 and 1991 for identification and evaluation of alternatives dealing with illegal disposal practices. Cost for implementation of alternatives will be estimated as part of the identification and evaluation process.

Other Nonpoint Sources No. 3 (Visual Assessment of Water Quality): Snohomish County, the Tulalip Tribes, and the Stillaguamish Tribe should coordinate a process to spot potential water quality problems and notify the appropriate agencies to correct the problem.

Intent: Improve response to water quality problems identified by agency and tribal field staff.

Concurrence Statement: Snohomish County Department of Public Works, Tulalip Tribes, and Stillaguamish Tribe concur. (Refer to Appendix A, Concurrence Letters No. 1, 15, and 16)

Action: Department of Public Works, Tulalip Tribes, and Stillaguamish Tribe will work together in developing a consistent process for notifying the appropriate agencies of water quality problems identified by field staff. This recommendation will be coordinated and implemented by the Watershed Coordinator with Department of Public Works.

Schedule: Department of Public Works, Tulalip Tribes, and Stillaguamish Tribe will hold initial meeting to implement this recommendation by July 1990.

Estimated Cost: $1,000 to 3,000 in 1990 for initial meeting and establishment of procedures for water quality problem notification.
Other Nonpoint Sources No. 4 (Alteration of River Channels, Floodplain, and Wetlands): Snohomish County, in cooperation with the Department of Ecology, should evaluate the reclamation of wetlands and floodplain areas in the Stillaguamish watershed as part of county and state wetland programs, floodplain management plans, open space programs, and other relevant planning efforts.

Intent: Retain and restore water quality benefits and other functional values provided by wetlands, sloughs, and flood plains which have been diked or drained. Reclamation of these resources should be considered as part of existing preservation and flood management programs and implemented where possible and practical.


Action: The Washington Department of Ecology and Snohomish County do not have specific programs dealing with the reclamation of wetlands from diked areas. The reclamation of wetlands, sloughs, and floodplains, and the possible removal of dikes will be evaluated by Snohomish County Department of Public Works through a floodplain management study for the Stillaguamish River.

Schedule: Snohomish County Department of Public Works, Surface Water Management Section, will initiate a floodplain management study for the Stillaguamish River in 1992. Washington Department of Ecology will be consulted in development of the floodplain management study.

Estimated Cost: Snohomish County Department of Public Works costs estimated at $240,000 to 280,000 in 1992 for development of a Stillaguamish Floodplain Management Study.
Public Education Program

Public Education Strategy

Prevention and correction of nonpoint source pollution problems in the Stillaguamish watershed require an ongoing commitment from an informed and involved public and government.

Education is necessary to foster public recognition of the Stillaguamish watershed as a resource, and to stimulate public, governmental, and private sector support for the changes in lifestyle and financial commitment necessary to prevent or correct nonpoint sources of pollution. Education is important both as a supplement and as an alternative to enforcement actions and programs. While enforcement can act as an educational tool, it is often an impractical solution to correct many nonpoint source pollution problems which result from individual actions such as improper disposal of wastes from recreational vehicles, households, automobiles, or boats. Individual responsibility and appropriate actions to reduce nonpoint source pollution are best achieved through education and public involvement.

Public Education Goals

Public Education Goal No. 1: Create opportunities for involvement in water quality education activities for the public and all groups associated with nonpoint source pollution.

Puget Sound Water Quality Authority, Department of Ecology, and everyone associated with the Stillaguamish Watershed Action Plan recognizes education as a key component to reduce and ultimately eliminate nonpoint source pollution. Nonpoint source pollution is everyone's problem and the responsibility of everyone to correct. By being actively involved in recognizing the causes and solutions, the watershed residents and users will take part in improving water quality.

Public Education Goal No. 2: Provide formal water quality training and information to public employees, the general public, educators, and youth.
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People learn in different ways, and have differing degrees of need for information. One important method of education is to provide formal training for those whose occupation or activities frequently impact water quality. Formal training is also needed to inform youth, whether directly or through their teachers.

Public Education Goal No. 3: Provide hands-on educational activities which involve all age groups in the community.

Informal education is an important tool for reaching a wide range of citizens. Many people who would not otherwise take formal classes or read published materials would learn from informal, hands-on types of activities. Such activities include festivals, displays, demonstrations, and tours.

Public Education Recommendations

Education No. 1 (Speaker's Bureau): A Speakers' Bureau should be developed by Snohomish County, Department of Public Works to provide educational presentations to public groups.

Intent: Have agency and expert speakers available to give water quality presentations to public groups.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: Implementation of this recommendation is dependent on obtaining grant funding for a water quality education program.

Schedule: Department of Public Works, Surface Water Management will submit a Centennial Clean Water Fund grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

Estimated Cost: $4,000 per year.
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Education No. 2 (Incorporate Farming Community in Current and Future Planning): The Snohomish Conservation District and the WSU Cooperative Extension of Snohomish County should make a special effort to increase communication between the farming community and the general public with respect to current and future water quality planning and public education activities.

Intent: Obtain increased participation by the agricultural community in water quality planning and public education projects.


Action: Agencies will work together in coordinating educational programs that are directed towards the agricultural community's participation in water quality projects.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: $3,500 per year.

Education No. 3 (Target Education Programs): Snohomish County should pursue a water quality education program targeted toward and involving active participation of the following groups: lake residents, all terrain vehicle (ATV) users, youth, forest users and residents, sewage system owners, noncommercial and commercial farm operators, land developers, septic tank industry, real estate company personnel, etc. Concerned residents should be identified and used as disseminators and facilitators of pertinent information to their neighbors.

Intent: Identify and educate key user groups that can have a large impact on the water quality of the watershed. Emphasis should be on positive alternatives to practices which can cause pollution. Include citizen monitoring programs where possible. Target education programs should address, but not be limited to: comparative functions of natural and altered river systems, household hazardous wastes; agricultural best management practices; agricultural and landowner incentive programs; care of land and water; onsite sewage disposal systems; sewage disposal from recreational vehicles; forest practices; grading and
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drainage permit requirements; and protection and enhancement of wetlands and riparian habitat.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: Implementation of this recommendation is dependent on obtaining grant funding for a water quality education program.

Schedule: Department of Public Works, Surface Water Management will submit a Centennial Clean Water Fund grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

Estimated Cost: $20,000 per year.

Education No. 4 (Cooperative Extension Public Education): WSU Cooperative Extension should plan, develop, implement, and evaluate an effective water quality education program for their target populations.

Intent: Identify and educate user groups that can have a large impact on the water quality of the watershed. Emphasis should be placed on the following water quality educational activities: brochures; watersheds tours; workshops on agricultural best management practices, home water conservation, waste disposal, and septic tank procedures; work with youth and adults in programs such as 4-H leaders, master gardeners, master food preservers, livestock masters; pesticide use training and recertification; work with limited income families; build a water quality resource file; and provide information on incentive programs.

Concurrence Statement: WSU Cooperative Extension of Snohomish County concurs. (Refer to Appendix A, Concurrence Letter No. 13)

Action: WSU Cooperative Extension of Snohomish County will work toward implementation of this recommendation.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: $20,400 per year.
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Education No. 5 (Timber/Fish/Wildlife Committees Coordinate Education with Stillaguamish Public Education Program): The Timber/Fish/Wildlife Training/Involvement/Education (TIE) Committee should coordinate with Snohomish County on public education programs on the Timber/Fish/Wildlife process and how the Timber/Fish/Wildlife process relates to water quality.

Intent: Use Timber/Fish/Wildlife participants on any water quality educational activities pertaining to the Timber/Fish/Wildlife process. Use the opportunity to educate the public on forest land management and how such management affects water quality, descriptions of best management practices and how they address water quality, current forestry water quality problems and proposed solution to these problems.

Concurrence Statement: Snohomish County Department of Public Works and Washington Department of Natural Resources concur. (Refer to Appendix A, Concurrency Letters No. 1 and 10)

Action: Department of Public Works will use Timber/Fish/Wildlife participating agencies to present water quality education about the Timber/Fish/Wildlife process. The Department of Natural Resources statewide Forest Practice Program Manager will pass this recommendation on to the Timber/Fish/Wildlife Training/Involvement/Education committee.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: Snohomish County cost estimated at $1,000 to $3,000 per year.

Education No. 6 (Training Sessions for Employees): Snohomish County should coordinate training sessions for county employees whose activities may impact or influence water quality.

Intent: Emphasize the need to protect water quality and target training for three types of employees: field crews, inspectors or permit enforcers, and supervisory staff. Inform employees of: 1) the adverse effects of pollutants and sediments in stormwater on water quality, habitat, and plants and animals; 2) applicable county, state, and local laws and regulations; and 3) individuals or agencies to contact for compliance, enforcement and spill response. Coordinate staff training sessions with similar training occurring in other agencies.
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Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: Implementation of this recommendation is dependent on obtaining grant funding for a water quality education program.

Schedule: Department of Public Works, Surface Water Management will submit a Centennial Clean Water Fund grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

Estimated Cost: $6,000 per year.

Education No. 7 (Train Employees of the Forest Industry): The Washington Department of Natural Resources, U.S. Forest Service, and WSU Cooperative Extension of Snohomish County should develop public and private education programs for the forest practices industry.

Intent: Educate employees of the forest industry and the interested public who need to know about equipment maintenance, proper herbicide use, disposal of petroleum products, spill response, road management, stream problems, watershed rehabilitation, proper fertilizer and sludge application, and proper sewage disposal.

Concurrence Statement: Department of Natural Resources, U.S. Forest Service, and WSU Cooperative Extension of Snohomish County all concur. (Refer to Appendix A, Concurrence Letters No. 10, 13, 17, and 18, and personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989)

Action: Agencies will work together to conduct workshops for industry foresters, small private landowners, loggers, and the interested public.

Schedule: Begin planning for workshops by March 1990.

Estimated Cost: U.S. Forest Service costs estimated at $10,000 per year. Department of Natural Resources costs estimated at $5,000 to $10,000 per year. WSU Cooperative Extension costs estimated at $5,000 to $10,000 per year.

Education No. 8 (Water Quality Curriculum): The Interagency Environmental Education Task Force and the Superintendent of
Stillaguamish Watershed Action Plan

Public Instruction's Environmental Education Office should incorporate water quality awareness into the existing curriculum for use in public schools throughout the Puget Sound Basin.

**Intent:** Inform youth of nonpoint source pollution issues and solutions. Program content should address, but not be limited to: comparative functions of natural and altered river systems, household hazardous wastes; agricultural best management practices; agricultural and landowner incentive programs; care of land and water; onsite sewage disposal systems; sewage disposal from recreational vehicles; forest practices; grading and drainage permit requirements; and protection and enhancement of wetlands and riparian habitat and how they affect pollution.

**Concurrency Statement:** Superintendent of Public Instruction, Environmental Education Office concur. (Refer to personal communication with Tony Angell, Environmental Education Office, Superintendent of Public Instruction, December 20, 1989)

**Action:** To be determined by implementing agency.

**Schedule:** To be determined by implementing agency.

**Estimated Cost:** Environmental Education Office costs estimated at $10,000 to $20,000 per year.

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**Education No. 9 (Citizen Action Training School):** Pilchuck Audubon should offer the Citizens' Action Training School (CATS) program on an annual basis.

**Intent:** Train interested adults in water quality issues by examining water related rules and regulations at all levels of government. The CATS program also contains a service project element which helps train future water quality citizen activists.

**Concurrency Statement:** Pilchuck Audubon concurs. (Refer to Appendix A, Concurrence Letter No. 14)

**Action:** Implementation of the Citizens' Action Training School on an annual basis is dependent on obtaining grant or other available funding.

**Schedule:** Pilchuck Audubon will seek grants or other available funding sources in 1990 to fund the Citizens' Action Training School.

**Estimated Cost:** $15,000 per year.
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Education No. 10 (Demonstration of Nonpoint Source Treatment Methods): Snohomish County, Department of Public Works should use existing installed best management practices (e.g., grassy swales, oil-water separators) as an education medium to show the public various methods of treating polluted runoff.

Intent: Increase public awareness of the water quality problems and solutions in managing stormwater runoff.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: Implementation of this recommendation is dependent on obtaining grant funding for a water quality education program.

Schedule: Department of Public Works, Surface Water Management will submit a Centennial Clean Water Fund grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

Estimated Cost: $4,000.

Education No. 11 (Cooperative Extension Demonstration Farm): The Cooperative Extension, with technical assistance from the Snohomish Conservation District, should establish water quality demonstration farms in the Stillaguamish watershed for both commercial and noncommercial farm operations.

Intent: Demonstrate conservation best management practices for individual agricultural enterprises. Access to the commercial and noncommercial farms will be available to other landowners to tour and learn about best management practices that reduce nonpoint source runoff.


Action: Agencies will work together to establish a demonstration small farm in the Stillaguamish watershed that clearly demonstrates the value of best management practices in reducing nonpoint source runoff. Demonstrations would be coupled with workshops and tours for area farmers.
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Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: $7,800.

Education No. 12 (Festival of the River): Pilchuck Audubon Society in cooperation with community groups in the Stillaguamish watershed should coordinate a committee of interested agencies, organizations, and citizens to plan an event called "Festival of the River."

Intent: Heighten community awareness of all the values of the Stillaguamish River and watershed. Examples of such values include, but are not limited to drinking water, habitat, irrigation, and recreation.

Concurrence Statement: Pilchuck Audubon and the Washington State University Cooperative Extension of Snohomish County concur. (Refer to Appendix A, Concurrence Letters No. 13, 13a, and 14)

Action: WSU Cooperative Extension of Snohomish County has submitted a Public Involvement and Education proposal to the Puget Sound Water Quality Authority to fund for coordination of the festival of the river. Cooperative Extension will work with Pilchuck Audubon and other local community groups in planning the event.

Schedule: The first annual festival of the Stillaguamish River is scheduled for August 1990.

Estimated Costs: WSU Cooperative Extension costs estimated at $31,000 in 1990 ($15,000 provided by a Public Information and Education Grant from the Puget Sound Water Quality Authority). U.S. Forest Service costs estimated at $3,000 in 1990. Festival costs estimated at $30,000 to $45,000 per year for 1991 to 1995.

Education No. 13 (Arbor Day Activities): Pilchuck Audubon, with cooperating entities, should coordinate an increased emphasis on Arbor Day celebrations through "Trees for Life" activities.

Intent: Emphasize local land and water quality enhancement projects through the planting of trees. Many organizations, both public and private, could be involved, such as WSU/Cooperative Extension, the Washington Forest Protection Association,
Chapter 2 - Nonpoint Source Control

Snohomish County, Snohomish Conservation District, Washington Nursery and Landscape Association, public schools, and others.

Concurrence Statement: Pilchuck Audubon concurs. (Refer to Appendix A, Concurrence Letter No. 14)

Action: Pilchuck Audubon will to coordinate "Trees for Life" activities with other cooperating entities.

Schedule: "Trees for Life" to continue in 1990.

Estimated Costs: Pilchuck Audubon "Trees for Life" costs estimated at $15,000 per year. U.S. Forest Service costs estimated at $1,500 per year.

Education No. 14 (Pilot Sewage System Project): WSU Cooperative Extension of Snohomish County should develop a demonstration alternative onsite sewage disposal system.

Intent: Allow homeowners to see what an alternative system looks like, understand how the system functions, and learn how much space the system requires. The demonstration system could be a scale model of an alternative onsite sewage disposal system and made available for schools, meetings, and organizations.

Concurrence Statement: WSU Cooperative Extension of Snohomish County concurs. (Refer to Appendix A, Concurrence Letter No. 13)

Action: WSU Cooperative Extension of Snohomish County will develop and alternative onsite sewage disposal system model. This table top demonstration model can then be transported to meetings, schools, and other activities.

Schedule: Complete, and have ready for display, a scale alternative onsite sewage disposal system model by July 1991.

Estimated Cost: $7,000.

Education No. 15 (Scenic Posters): WSU Cooperative Extension of Snohomish County and other local citizen groups should commission local artists or photographers to develop posters of Stillaguamish watershed scenes.
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**Intent:** Display scenic posters of the Stillaguamish watershed in government offices, public lobbies, professional offices, etc. These works will advertise the values of the watershed and illustrate why the public should protect and enhance the watershed.

**Concurrence Statement:** WSU Cooperative Extension of Snohomish County concurs. (Refer to Appendix A, Concurrence Letter No. 13a and 14)

**Action:** WSU Cooperative Extension of Snohomish County will seek funding to accomplish implementation of this recommendation.

**Schedule:** Complete posters by June 1990. Begin distribution of the posters by August 1990.

**Estimated Cost:** Undetermined. The cost of addressing this recommendation will be funded through the Festival of the River (Education No. 12) budget.

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**Education No. 16 (Distribute Educational Literature):** Snohomish County should coordinate with other agencies to distribute water quality related educational literature and materials.

**Intent:** Use existing educational information to inform the public of water quality issues and solutions to water quality problems. New educational literature will be created only if existing materials are not adequate. Educational literature and materials should address, but not be limited to: comparative functions of natural and altered river systems, household hazardous wastes; agricultural best management practices; agricultural and landowner incentive programs; care of land and water; onsite sewage disposal systems; sewage disposal from recreational vehicles; forest practices; grading and drainage permit requirements; and protection and enhancement of wetlands and riparian habitat.

**Concurrence Statement:** Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

**Action:** Department of Public Works, Surface Water Management will work toward implementation of this recommendation.

**Schedule:** Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.
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**Estimated Cost:** $5,000 per year.

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**Education No. 17 (Newsletter for Farm Operators):** The Snohomish Conservation District in conjunction with WSU Cooperative Extension of Snohomish County should continue the current bimonthly newsletter for commercial and noncommercial farm operators (Conservation News), and expand the mailing list.

**Intent:** Describe conservation best management practices and available government programs that will reduce agricultural nonpoint pollution. Include information on government cost sharing and other incentive programs for installing best management practices. The newsletter should also contribute to other newsletters such as the Sundown Farmer, Dairy Notes, Berry Basket, and the 4-H Cloverleaf.

**Concurrence Statement:** WSU Cooperative Extension of Snohomish County and the Snohomish Conservation District concur. (Refer to Appendix A, Concurrence Letters No. 13 and 20)

**Action:** Agencies will cooperate in implementing this recommendation.

**Schedule:** Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

**Estimated Cost:** $12,660 per year.

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**Education No. 18 (Educate Permit Seekers):** Snohomish County should coordinate a program to provide water quality education for those individuals applying for County administered permits.

**Intent:** Educate individuals, contractors, and developers about the water quality impacts of their activities. Use videos, brochures, environmental questionnaires, and wording on the bottom of the permit form: "this permit granted upon agreement to protect water quality." Where possible, this program should be extended to other agencies such as the Snohomish Health District.

**Concurrence Statement:** Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

**Action:** Department of Public Works, Surface Water Management will coordinate with the Community Development Division in implementing this recommendation.
Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: $3,000 per year.

Education No. 19 (Video Developed): Snohomish County Department of Public Works should review all available videos, including those videos prepared through the Round 3 Public Involvement and Education funding cycle, to see if there are appropriate videos for water quality educational purposes in the Stillaguamish watershed. If no appropriate videos are found or produced, Public Works will then seek grant funding to develop a water quality video specific to Snohomish County conditions.

Intent: Enhance public awareness of the values of the watershed and reach a broad audience through the media, schools, and other organizations.

Concurrence Statement: Snohomish County Department of Public Works concurs. (Refer to Appendix A, Concurrence Letter No. 1)

Action: Department of Public Works, Surface Water Management staff will review all available videos dealing with water quality in the Puget Sound region.

Schedule: Complete review of available videos by December 1990. If no appropriate videos found, seek grant funding in 1991 for production of a video.

Estimated Cost: $30,000 if developed.

Education No. 20 (Natural River Systems): The State Superintendent of Public Instruction Environmental Education Office, the Washington Departments of Fisheries, Washington Department of Wildlife, and the U.S. Forest Service should develop educational material and presentations designed to promote an understanding of the function of natural and altered river systems, and how the systems differ in their handling of nonpoint source pollution.

Intent: Foster an understanding of the role of changes in the river such as wood manipulation, diking, and other changes, in affecting water pollution.
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Concurrence Statement: Washington Department of Fisheries, Washington Department of Wildlife, U.S. Forest Service, Superintendent of Public Instruction, Environmental Education Office concur. (Refer to Appendix A, Concurrence Letters No. 9, 18, and 22; personal communication with Fred Harnisch, District Ranger, USFS, December 20, 1989; and personal communication with Tony Angell, Environmental Education Office, Superintendent of Public Instruction, December 20, 1989)

Action: Department of Fisheries will continue educational activities subject to available funding and staff. Department of Wildlife will provide technical assistance within their areas of expertise for development of educational material. The U.S. Forest Service will work with the co-lead agencies and other implementing entities to improve and maintain water quality in the Stillaguamish watershed.

Schedule: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology.

Estimated Cost: U.S. Forest Service costs estimated at $6,000 per year. Environmental Education Office costs estimated at $15,000 to $25,000 per year. Other agency costs estimated at $2,000 to $4,000 per year.
Chapter Three
Chapter 3 - Ongoing Activities to Improve Water Quality

Introduction

Many events and activities have taken place since the initial stages of the Stillaguamish Watershed Action Plan. Some activities have operated independently of the action plan, but a great many have occurred because individuals or organizations were inspired by the recent impetus given to water quality as a result of the enactment of the state Centennial Clean Water Act. By reading the Puget Sound Water Quality Authority’s Management Plans of 1987 and 1989, one can obtain a fuller picture of the extent of ideas and activities being applied to the improvement or maintenance of water quality in the Puget Sound region. This chapter lists those activities which have taken place as a result of the Stillaguamish Watershed Action Plan.

Several recommendations, which arose early in the planning process, are being implemented in advance of the action plan approval by the Department of Ecology, and are described in this chapter. In addition, this chapter discusses many ongoing activities which were required under Chapter 400-12 WAC administered by the Department of Ecology. Some of the activities mentioned here are brand new ideas, in which the members of the community can take particular pride. The activities are presented in the same order as the nonpoint source control programs in the preceding chapter.

Agricultural Practices

State Activities

Enforcement: The Department of Ecology has hired an additional full time staff in the Northwest Regional office. Dairy waste management in the Stillaguamish watershed is one of the responsibilities of this new position.

Pesticide Research: Various agencies in the state, such as the Department of Agriculture, WSU/Cooperative Extension, and the Department of Ecology have established a research program to find a substitute for Dinoseb, now banned by the Environmental Protection Agency. The ban could have a devastating effect on county commercial agriculture. Snohomish County Council recently donated to that research program.
Incentives for Best Management Practices: The Department of Ecology has a program to provide state match for federal funds for farmers to install best management practices on their farms. This match program will enable many farmers who could not formerly install BMPs, to afford to do so.

County Activities

Incentives for Best Management Practices: Currently, local landowners who fence off part of their property to protect stream corridors can have a special "open space" property tax assessment for the area fenced. This assessment reduces the property taxes for the owner, who is unable to use the fenced area for crops or livestock.

Onsite Sewage Disposal

Local Activities

Letter Regarding the Warm Beach Christian Camp and Conference Center: The Center has a sewage lagoon which is operating on an expired permit. Snohomish County staff, on behalf of the Stillaguamish Watershed Management Committee, wrote a letter to Department of Ecology urging priority review of the permit.

Development and Urban Runoff

State Activities

Road Runoff: State Department of Transportation has developed procedures particularly applicable to Washington State to assist the highway designer in evaluating and minimizing the impacts of highway runoff on receiving waters. Department of Transportation
Chapter 3 - Ongoing Activities to Improve Water Quality

is also now requiring that runoff from new or modified bridge structures be directed to a vegetated drainage course before entering streams (Johnson, 1989).

Road Runoff: The Washington State Department of Transportation has entered into an agreement with Department of Ecology to develop a program to treat all runoff from state roads. The program will be coordinated with all local jurisdictions with responsibility for road construction or maintenance.

Local Funding Source: One of the recommendations of the Stillaguamish Watershed Action Plan (Development No. 8) is to provide local funding to support water quality activities. A subcommittee of the Puget Sound Water Quality Authority is investigating the legalities and financial options for "water quality entities" to carry out the functions of the WMC recommendation. PSWQA will be publishing a Local Government Water Quality Finance Guidebook which will help the watershed residents to establish a local water quality funding source for the Stillaguamish and Warm Beach areas.

County Activities

Legal Advocate to County Prosecuting Attorney: Snohomish County Department of Planning and Community Development has identified a staff person responsible for enforcing grading and drainage violations. This person has access to the County Prosecuting Attorney to advocate water quality enforcement in the case of suits brought by the County against a violator.

County Drainage Facilities: In the process of planning for flood and drainage improvements, Snohomish County Surface Water Management designs detention or retention ponds which may be regional or site-specific. Such facilities are developed primarily to control flooding, but water quality is also considered. The purpose of detention and retention ponds is to change the timing of peak events, so that events in tributaries do not arrive in river systems at the same time as the river peaks. Lower peaks reduce erosion and scour, preventing sedimentation into water downstream.

County Drainage Facilities: When developing facilities, the County prefers above ground facilities using nonstructural methods such as earthen ponds and grassy swales. Vegetation is chosen for water quality and habitat enhancement. Surface Water Management staff are currently testing different types of vegetation (grass,
cattails, deciduous and evergreen woody plants) to discover which vegetation is most effective for filtering pollutants and the best times for harvest.

County Drainage Facilities: In the Stillaguamish watershed, as part of the north County road maintenance district, the County is maintaining all catch basins on an annual basis. Plans for the future include semiannual maintenance of catch basins and inspection and cleaning of culverts every three years or more often. The County presently has an agreement with Arlington and Stanwood to clean their catch basins periodically. The County is also studying the timing of ditch cleaning and the increased use of grass rather than gravel for filtering pollutants from road runoff. Surface Water Management has plans for a facility to treat all material pumped from catch basins in the entire county.

Aquatic Resource Protection Program: A proposed Aquatic Resource Protection Program is being considered for Snohomish County. The proposed program will consist of four primary components:

1. Aquatic Resource Policy Document
2. Title 24, Grading and Drainage Ordinance
3. Title 30, Aquatic Resource Protection Ordinance (including technical appendices)
4. Code amendments to various land use ordinances.

All program components of the Aquatic Resource Protection Program are interrelated, either substantively or procedurally and when considered together, comprise the provisions necessary to ensure an adequate level of protection for existing aquatic resources in the county. The proposed Aquatic Resource Protection Program contains language for a regulation to ensure enforcement of compliance with aquatic protection regulations.
Chapter 3 - Ongoing Activities to Improve Water Quality

Forest Practices

Multi-agency Activities

Communication Between Snohomish County and the Department of Natural Resources: Snohomish County Planning Division is reviewing an interlocal agreement sent by the Department of Natural Resources. The purpose of the interlocal agreement is to clarify the respective responsibilities of Snohomish County and the Department of Natural Resources with respect to the review, conditioning, and enforcement of forest practice conversion applications. One of the activities which will improve communication is the exchange of computerized information to track applications through the permit process. In addition, the Planning Division has designated one staff member to review and recommend amendments to county policies governing forest practice conversion applications.

Tracking of Forest Land Applications of Pesticides: The Department of Natural Resources and the U.S. Forest Service (if applying pesticides to federal lands) track all public and private forest land applications of pesticides. The Department of Natural Resources and the U.S. Forest Service will report annually to the Stillaguamish Implementation Review Committee the number of acres treated, the chemicals used, and the rate of application. Impacts to fish and wildlife will be addressed on a subwatershed level.

Tribal Activities

DeForest Creek Slide Study: The Stillaguamish Tribe has a Centennial Clean Water Fund grant to study geological aspects of the DeForest Creek slide to determine the potential of continued sediment loading to the river, and to begin an initial construction phase using current bioengineering technology. Snohomish County staff, on behalf of the Stillaguamish Watershed Management Committee, wrote a letter of support for this application, since much of the sediment in the Stillaguamish comes from the DeForest Creek slide.
State Activities

Department of Natural Resources to Train Reviewers of Forest Practice Permits: The Department of Natural Resources is currently training employees of tribes, environmental organizations, Snohomish County, and others who review forest practice permits. The training allows the reviewers to understand the permit process and the impact on water quality of the proposed action. The Department of Natural Resources, working with the Timber/Fish/Wildlife participants, is developing a mechanism for tracking forest practices permits in the Stillaguamish watershed. One purpose for the tracking system is to provide a statistical summary of forest practices in the watershed.

Large Organic Debris in Streams: A Timber/Fish/Wildlife subcommittee is researching the benefits of the deliberate placement of large organic debris to enhance fish and riparian habitat in streams in forestry areas. Under natural conditions, large logs and trunks which fall into streams have a beneficial effect, but clear cutting or inadequate buffers eliminate the opportunity for that benefit. The TFW committee will be consulting the Departments of Fisheries and Wildlife and the tribes regarding placement and appropriate sizes of material.

Other Source Control Activities

General Enforcement Activities

Enforcement of Water Quality Regulations: Depending on the nature of the work, permits to work in or near streams are currently required by Corps of Engineers, Department of Natural Resources, Department of Fisheries, and Snohomish County Shoreline Management Master Plan. When the current regulations are adequately enforced, they protect water quality to a great extent. In addition, the Department of Ecology is responsible for enforcement of state water quality standards in all state waters.
Chapter 3 - Ongoing Activities to Improve Water Quality

State Activities

Pesticide Monitoring: The state of Washington holds a preemption to regulate pesticides (Stone, 1989). Based upon a two or three year computer record, there have been no formal complaints, nor pesticide application investigations, in the Stillaguamish watershed. There have been some questions from concerned citizens regarding a particular pesticide application, upon seeing an aerial spraying operation close to their residence. Since it is very expensive to test for most pesticides in water, the monitoring program manager may want to utilize data available from the State Department of Agriculture to provide some direction on whether a pesticide monitoring program is needed. That information is available from Lee Faulconer at (206) 753-5064, or SCAN 234-5064. If there is evidence that a pesticide violation has occurred, the Department of Agriculture will respond, and in the event a violation is documented, Agriculture will take enforcement action.

Marinas and Boats: The Watershed Management Committee determined that they would not develop a source control program for marinas and boats in the Stillaguamish and Port Susan. The Committee felt that coordination with state activities to control waste from boats is important. The State Parks Commission has established a task force to survey and educate boaters in Puget Sound. Task force staff informs affected parties about the progress of the task force.

County Activities

Household Hazardous Waste: The Solid Waste Management Division is developed a draft Hazardous Waste Management Plan as part of the Comprehensive Solid Waste Management Plan update. The Hazardous Waste Management Plan is required by RCW 70-105-220 and is developed under Department of Ecology guidelines 87-18. The plan addresses household hazardous waste and moderate risk waste from small quantity generators. Used motor oil disposal is addressed in the Comprehensive Hazardous Waste Management Plan. Motor oil recycling receptacles will be installed at all County transfer and recycling stations, including the North County transfer station. Information will be widely distributed to homeowners and residents.

Rural Waste Management: Waste collection procedures in rural areas are regulated by the State Utilities and Transportation
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Commission, which also establishes collection rates. The North County Transfer and Recycling Station near Arlington is the major solid waste handling facility in the Stillaguamish watershed. Other collection points, called drop boxes, are in Oso and Granite Falls. The Comprehensive Solid Waste Management Plan has studied and made provisions for solid waste management in rural areas.

Flood Control Requirements by State and Federal Agencies: Regarding flooding problems identified by the state regulations, Snohomish County adopted Title 27, the County Flood Hazard Ordinance, in 1984. This ordinance was in full compliance with Federal Emergency Management Act standards. Snohomish County is currently making minor amendments to Title 27 to comply with the May 1988 amendments to 173-158 WAC. These amendments should be in effect within two months. Title 27 will be in full compliance with all laws at that time (Adamson, 1989).

Local Spill Response Program: The County has a local spill response program for small quantities of petroleum products, pesticides, and other pollutants. The response program includes the Snohomish County Hazardous Materials Mutual Response Agreement, a County policy as per County Executive letter dated May 21, 1982. Cooperating entities include local fire departments, Snohomish County Department of Emergency Management, County Sheriff, Washington State Patrol, and State Division of Emergency Management.

Local Activities

Citizen Initiatives: Activities by the Citizen Advisory Committee of the Stillaguamish Watershed Action Plan include a booth containing pamphlets about water quality and aquatic resource protection. The citizens developed, designed, built, and staffed the booth at various festivals in the watershed. The citizens are working on a project to provide roadside signs advertising a Snohomish County number to report drainage and grading violations. The citizens are also planning to implement a Festival of the River in 1990 to encourage residents of the watershed to appreciate the benefits of the river and to be aware of the impacts to water quality by their actions.
Chapter 3 - Ongoing Activities to Improve Water Quality

Public Education

Tribal Activities

Citizen Monitoring: The Tulalip Tribes have received a Centennial Grant to continue their citizen monitoring and other volunteer activities in the Stillaguamish River. This program has been very successful in gathering information about water quality, increasing awareness of the water quality of the river, and obtaining media coverage for their program.

Local Activities

Citizen Action Training School: Pilchuck Audubon Society has conducted a Citizen Action Training School to encourage individuals to learn about laws and regulations relating to water quality. Some members of the Stillaguamish Citizen Advisory Committee attended the training and have completed service projects designed to improve water quality.
Chapter Four
Chapter 4 - Monitoring Program

Introduction

The word monitoring, when used in the context of this chapter includes both water quality monitoring (e.g., taking water samples and analyzing the samples) and nonpoint source control evaluation monitoring (e.g., how many farm conservation plans were completed, which best management practices were installed, how effective was the public education program, etc.). The monitoring program is divided into four sections: monitoring goals; existing and proposed data collection efforts; nonpoint source control evaluation strategy; and water quality monitoring strategy.

Monitoring Goals

In addition to overall Stillaguamish Watershed Action Plan goals presented in Chapter One, the following specific goals regarding monitoring were developed.

Monitoring Goal No. 1: Evaluate the effectiveness of the individual source control programs with specific quantitative measures where possible.

Monitoring Goal No. 2: Involve the public in monitoring and evaluation activities.

Monitoring Goal No. 3: Provide new information to update and/or amend the action plan.

Monitoring Goal No. 4: Use the Puget Sound Estuary Program protocols for fresh and marine waters to the extent possible.

Monitoring Goal No. 5: Develop appropriate quality assurance and quality control programs.
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Monitoring Goal No. 6: Provide a data management system which is compatible with the system devised by the Puget Sound Monitoring Program.

Monitoring Goal No. 7: Monitor the effectiveness of best management practices to protect water quality.

Existing and Proposed Data Collection Efforts

The Stillaguamish watershed is rapidly becoming one of the most researched, evaluated and discussed river basins in Washington State. Several monitoring and data collection efforts have been recently completed or are underway in the Stillaguamish watershed at this time. Other monitoring and data collection efforts are proposed. Coordination with all of these programs is essential for maximizing the success of the Stillaguamish Watershed Action Plan and the overall monitoring strategy.

Existing and proposed monitoring programs and data collection efforts in the Stillaguamish watershed are summarized and presented below.

Geographic Information Systems (GIS) Projects

The Department of Natural Resources Division of Aquatic Lands is conducting a study of techniques for inventory of estuarine wetlands. This study, funded by the Environmental Protection Agency, is evaluating use of remote sensing techniques and GIS, so that regular habitat studies can be done under the Puget Sound Ambient Monitoring Program. Port Susan is included as one of six study sites in Puget Sound. This study will be completed in 1989.

The Puget Sound Water Quality Authority and Department of Natural Resources Division of Aquatic Lands are sponsoring a Washington State GIS pilot project to evaluate the use of GIS in natural resource management and environmental planning. The Stillaguamish watershed has become the focus of this project.
Chapter 4 - Monitoring Program

The project will include the following activities:

1. USGS is conducting analyses of 1:100,000 scale land use/land cover, hydrology, and elevation data for the entire watershed to evaluate correlations between land use and water quality and to identify potential problem areas in the watershed.

2. Portage Creek project - The Portage Creek portion of the project is focused towards identifying and quantifying nonpoint source pollution in a subwatershed of the Stillaguamish. Specific project goals include: identify and rank areas as potential contributors to nonpoint source pollution, and areas that show the effects of nonpoint source pollution; use Portage Creek to develop a model for nonpoint source characterization in the Stillaguamish watershed, and develop a baseline of information for long-term analysis. The project will develop a coordinated database including information on soils, streams and stream habitat, land use and land practices (including farm planning), and water quality monitoring. Data will be analyzed, modeled, and mapped. Participants include the Puget Sound River Basin Team, the Snohomish Conservation District, Department of Ecology, Snohomish County, the Tulalip Tribes, Department of Natural Resources and Puget Sound Water Quality Authority. The project will be conducted in 1989 and completed in early 1990.

3. Port Susan Project - The Port Susan portion of the project is focused toward identifying sources of fecal coliform; monitoring results and land use patterns in the area; and defining methods for GIS data collection, data storage, and data exchange. The project will develop a coordinated database including information on land use, waste management practices, estuarine wetlands, and water quality and shellfish monitoring. Project participants include Puget Sound Water Quality Authority, Department of Natural Resources, and Department of Health. The project will be conducted in 1989 and completed in early 1990.

Portage Creek Water Quality Survey Study

The Department of Ecology, Surface Water Investigations Section is conducting a year long water quality survey of Portage Creek, a tributary to the Stillaguamish River. Survey objectives include: characterize existing water quality of Portage Creek as 4-3
Stillaguamish Watershed Action Plan

related to state water quality standards; evaluate land use impacts on Portage Creek; provide information to the Portage Creek GIS Pilot Project; estimate contribution of pollutants from Portage Creek to the Stillaguamish River; and evaluate the effectiveness of the nonpoint monitoring guidance developed for Puget Sound action plan watersheds in terms of characterizing water quality and land use impacts.

Stillaguamish/Port Susan Monitoring

The Tulalip Tribes have received a Centennial Clean Water Fund Grant to conduct a water quality monitoring program for the Stillaguamish River and Port Susan through 1991. Marine sampling sites will be concentrated in the northern portion of Port Susan. Freshwater sampling sites will be located along the mainstem of the Stillaguamish River and along selected tributaries. The intent is to select sampling sites to bracket land use activities suspected as contributing nonpoint source pollution (e.g., agricultural practices, failing onsite sewage systems, development runoff, and forest practices) to the Stillaguamish River. This project will incorporate the Volunteer Water Quality Monitoring Program originally funded by a Public Involvement and Education (PIE) Grant from the Puget Sound Water Quality Authority.

Fisheries Watershed Planning Program

This program is coordinated by the Washington State Department of Fisheries. The main objective of the Watershed Planning Program for the Stillaguamish watershed is to develop a comprehensive plan for fisheries management, enhancement, and rehabilitation of fish stocks in the watershed. The program began in 1987. A long range plan on fisheries management is still to be completed. However, 20,000 chinook salmon were transferred in 1988 from the Skykomish River Hatchery to the South Fork Stillaguamish River as a result of this program.

Stillaguamish Wild Coho Salmon Study

The Tulalip Tribes are currently finishing the third year of a four-year study on wild coho salmon in the Stillaguamish watershed. The main objectives of this study are: 1) to trap and tag smolts from eleven sites in the watershed to assess
interception rates of Stillaguamish wild coho salmon in the mixed stock fisheries; and 2) to evaluate variability in production of coho smolts throughout the drainage in relation to differences in habitat and land use.

Wild Chinook Program

The Stillaguamish Tribe in cooperation with the Tulalip Tribes and Department of Fisheries have developed the Wild Chinook Program to enhance wild summer chinook salmon populations in the Stillaguamish watershed. In the fall of 1987, approximately 200,000 eggs were collected from brood stock from the river and incubated at the Stillaguamish Tribal Hatchery. Juveniles were imprinted for thirty days at Forston Ponds and released in the watershed.

Fish Habitat Inventories, Stream Rehabilitation, and Wetland Inventories

The Snohomish County Department of Planning and Community Development, Planning Division, Water Resources Section has been conducting fish habitat inventories, stream rehabilitation work, and wetland inventories on a county wide basis for several years. The objective of the fish habitat inventories is to obtain baseline information on fish habitat, stream stability, fish distribution, and land use throughout the County. The objective of the stream rehabilitation program is to provide instream improvements for fish passage, spawning, and rearing. The objective of the wetland inventory is to collect baseline information on wetlands and develop a classification system for wetland protection.

Other Studies

Several departments from the University of Washington in conjunction with the Center for Streamside Studies have been involved with various research projects in the Stillaguamish watershed. One project headed by Dr. Bob Wissmar in cooperation with the US Forest Service and Tulalip Tribes has been designed to develop a cumulative effects model for assessing the relationship between geomorphology, fish habitat conditions, and the impacts of timber management on these resources. Another project which is headed by Thomas Dunne and Lee Benda has been designed to examine the impacts of floods caused by landslides.
and dam breaks on the geomorphology of the Stillaguamish watershed. The proponents of the project have not received funding at this time. However, the project is expected to begin within the next year. Dennis Harr from the USDA Forest Service and Terrance Cundy from the College of Forest Resources at the University of Washington have developed a study plan for continuing their research on the impacts of clear cutting on "rain-on-snow" events in the Stillaguamish watershed. In addition to these studies, Tim Beechie, a graduate student from the University of Washington is conducting a fish habitat survey of the South Fork Stillaguamish. Adelaide Johnson, a graduate student from the University of Washington, is working with Dennis Harr to inventory landslides in the Canyon Creek area. She is studying the impact of the landslides on stream channels.

Deer Creek Coordinated Resource Management Planning

The Deer Creek Coordinated Resource Management Planning Program has been developed as a cooperative effort between the Soil Conservation Service, local small landowners, Georgia Pacific Corp., Washington Environmental Council, Tulalip Tribes, Stillaguamish Tribe, US Forest Service, Federation of Fly Fishers, Snohomish County, Department of Fisheries, Department of Wildlife, Department of Natural Resources, and Scott Paper to provide a forum for policy and technical level discussions to resolve management, fisheries, wildlife, and water quality issues in the Deer Creek watershed.

Thermograph Study of Deer Creek

For the past four years the Tulalip Tribes have been collecting temperature data in the Deer Creek watershed. In addition, the Timber/Fish/Wildlife Temperature Working Group of the Water Quality Steering Committee is coordinating a statewide effort to validate stream temperature models and assess stream temperature conditions in the state. Streams under consideration for this project include Deer Creek, Canyon Creek, Armstrong Creek, and Church Creek. This program is currently in the planning stages but is expected to get underway within the next year. The program will be coordinated with the Tribes' thermograph study of Deer Creek.
Chapter 4 - Monitoring Program

Deforest Creek Slide Stabilization Project

In the winter of 1983, a major landslide occurred along the west bank of DeForest Creek, a tributary to Deer Creek which is a tributary to the North Fork Stillaguamish River. The initial slide, as well as mudstreams from the still active slide area, have caused large scale habitat destruction in Deer Creek. The slide also poses a serious threat to beneficial uses such as fisheries, shellfish, navigation, water supply, and flood control in the North Fork Stillaguamish River and in Port Susan.

The Stillaguamish Tribe has received a Centennial Clean Water Fund Grant to fund a two phase project to try to stabilize the Deforest Creek slide. The first phase will be the development of an implementation plan. The second phase will be to construct proposed solutions to stabilize the slide resulting from the phase one plan.

Timber/Fish/Wildlife Ambient Monitoring Committee

Formed as a part of the Timber/Fish/Wildlife Agreement, the Ambient Monitoring Committee is responsible for developing and overseeing a work plan for conducting resource inventories, coordinating technical committees, and designing a stream classification system for state forest lands. The objective of the resource inventory is to provide baseline data which can be used to evaluate conditions and changes with respect to time in response to forest management. The purpose of coordinating technical committees is to transfer the results of investigations by the Timber/Fish/Wildlife Cooperative Monitoring Evaluation and Research Committee (see below) to resource managers in the field. The main purpose of the stream classification system is to provide a description of streams using a common framework according to their physical and biological characteristics.

As part of the Timber/Fish/Wildlife Ambient Monitoring Program, the Tulalip Tribes will be conducting fish habitat inventories on the South Fork Stillaguamish River in 1989. Boulder Creek, a tributary to the North Fork, may also be included.

Timber/Fish/Wildlife Cooperative Monitoring, Evaluation, and Research Committee (CMER)

The goal of the CMER is to obtain factual information necessary for adaptive management and, based on that information, develop
Stillaguamish Watershed Action Plan

consensus on recommendations to the Timber/Fish/Wildlife policy group. The main purpose of this committee is to function as a technical advisory group to make recommendations to prioritize proposed research and monitoring projects as a part of the Timber/Fish/Wildlife process.

Nonpoint Source Control Evaluation Strategy

The immense size of the Stillaguamish watershed, the volume of water in the river and tributaries, and the nature of nonpoint source pollution make documentation of immediate and measurable improvements in water quality difficult, if not impossible. The purpose of evaluation monitoring is not to show a measurable change in water quality, but rather to document actions being taken by agencies, organizations, and individuals to reduce nonpoint source pollution. Effective implementation of any one action plan recommendation, such as Development No. 6 (Painting Storm Drains), will not result in a measurable improvement in water quality in the Stillaguamish watershed. However, the cumulative benefit of implementing all action plan recommendations will have a positive effect on water quality of the watershed.

Evaluation of nonpoint source control programs will determine how effective implementing agencies are in following through on the many action plan recommendations identified in Chapter 2, Nonpoint Source Control. Implementing agencies identified in action plan recommendations will provide the watershed coordinator and the Stillaguamish Implementation Review Committee (SIRC) with a breakdown of tasks and schedules for implementation of specific source control recommendations. For example, with Development No. 6, Painting Storm Drains, the Snohomish County Surface Water Management staff may decide to break down the action plan recommendation into the following tasks:

1. Obtain stencils and purchase nontoxic paint for the painting of storm drains, completion time one month;

2. Identify and contact community groups, homeowner associations, youth groups, etc. for volunteer storm drain painting, completion three months;

3. Work with groups to actually paint storm drains, completion three months.
Chapter 4 - Monitoring Program

The watershed coordinator will work with the individual implementing agencies in establishing criteria for evaluating the effectiveness of action plan recommendations. The watershed coordinator will evaluate the action plan recommendations during implementation to ensure that implementation is on schedule, and at completion to verify whether or not the recommendation intent was achieved.

For example, in the case of Development No. 6, Painting Storm Drains, the watershed coordinator will work with Surface Water Management staff in determining a reasonable target number of storm drains to be painted each year, given available staff resources. The watershed coordinator will then verify that the target number of storm drains were painted.

As in Development No. 6, Painting Storm Drains, all action plan recommendations will be evaluated in a similar fashion. Evaluation criteria for all action plan recommendations will be established by the watershed coordinator and implementing agencies within two months after Department of Ecology approval of the Stillaguamish Watershed Action Plan. The watershed coordinator will present the evaluation criteria for the action plan recommendations to the SIRC for their review.

Water Quality Monitoring Strategy

The water quality monitoring strategy will provide information on trends relating to land use, water quality, habitat, and biological conditions of the Stillaguamish watershed. The main objectives of this strategy are:

1. Determine whether implementation of the recommended source control programs have been effective in protecting water quality and beneficial uses from nonpoint source pollution;

2. Detect impacts caused by human activities;

3. Measure resource improvement or degradation following changes in those activities; and

4. Increase public awareness and knowledge of the water quality problems, needs, and potential solutions in the Stillaguamish watershed.
Stillaguamish Watershed Action Plan

The water quality monitoring program for the Stillaguamish watershed can be divided into two distinct parts. The first part is routine sampling of major tributaries to the Stillaguamish to obtain an estimate of the relative contributions of pollutants from different drainages within the watershed. The second part is runoff event monitoring surveys of selected tributaries within the watershed. Both parts of this monitoring strategy will be designed to evaluate the impacts of nonpoint source pollution to the watershed. This monitoring program will begin after Department of Ecology approval of the Stillaguamish Watershed Action Plan. In addition to this strategy, several potential special studies are identified.

Routine Monitoring

The routine monitoring program allows for the long term tracking of water quality trends and comparisons between major drainages within the Stillaguamish watershed. Information collected by this program will demonstrate any improvements to water quality as a result of the implementation of the Stillaguamish Watershed Action Plan and identify certain drainages within the watershed which are significantly more impacted by nonpoint source pollution than others.

Under the routine monitoring program, permanent water quality sampling stations will be established within the watershed. These stations should remain in place for at least 20 years. Due to the land use activities in the Stillaguamish watershed, the parameters tested at each station will include but not be limited to flow, fecal coliform bacteria, total suspended solids (TSS), turbidity, conductivity, dissolved oxygen, temperature, pH, nitrate-nitrite, ammonia, and ortho-phosphate.

The routine program will be based on a stratified sampling design by concentrating sampling efforts from December through March when the greatest nonpoint pollution load is expected to occur. A minimum of four routine sampling events will be planned for this time period. At least two sampling events will be scheduled for the late dry summer period from August through September. Data collected for the wet weather and dry weather seasons will be evaluated separately in order to assess year to year variations and together in order to assess seasonal variations between stations.

Sample collection and laboratory analysis procedures should follow the Department of Ecology's "Monitoring Guidance for Early Action Watershed Water Quality Assessments." Laboratory Quality
Chapter 4 - Monitoring Program

Assurance and Quality Control (QA/QC) procedures will at least meet the minimum requirements established in the Puget Sound Estuary Program protocols as developed by the Environmental Protection Agency (EPA).

Funding constraints will determine the exact number and locations of the water quality sampling stations. The amount of available funding may alter the number and locations of water quality stations.

Runoff Event Monitoring

The purpose of stormwater runoff monitoring is to evaluate pollutant loadings in subwatersheds during high flow periods. Runoff occurs when watershed soils are at or near the saturation point and enough rain has fallen to result in surface runoff. One of the advantages of the runoff monitoring program is that by concentrating on a small portion of the watershed during worst case conditions, information can be obtained on site specific problems. Since most of the pollutant load to the river normally occurs as a result of runoff, this type of program will expedite the identification of problem areas and the evaluation of the source control programs.

Under this program, two runoff events from at least two drainages of the Stillaguamish watershed will be sampled each year. Selection of the subwatersheds to be sampled will be determined by several factors, including coordination with ongoing activities and special projects, coordination with the implementation of the source control programs, and potential problem areas as identified by either the routine monitoring program or new information as it becomes available. Runoff event monitoring of subwatersheds will be rotated until all ten major drainages of the Stillaguamish watershed have been sampled. These drainages include Church Creek, Portage Creek, Pilchuck Creek, Armstrong Creek, Jim Creek, Canyon Creek, Boulder Creek, Deer Creek, Upper North Fork, and the Upper South Fork.

Portage Creek and Church Creek will be the first two subwatersheds surveyed for runoff event monitoring. The Department of Ecology is currently collecting runoff event monitoring data for the Portage Creek drainage. The results of this study will determine the need for future runoff event sampling in Portage Creek. In 1990, the Tulalip Tribes will be conducting a survey of Church Creek under the 205(j) Clean Water Act Grant Program to identify specific sources of point and nonpoint source pollution in the drainage.
Stillaguamish Watershed Action Plan

At a minimum, two runoff events will be sampled for each survey, at least one of which will be a routine station within the subwatershed. The exact number and locations of runoff event monitoring will be determined by available resources at the time. Parameters tested will include TSS, turbidity, conductivity, and fecal coliform bacteria. Additional parameters, including nutrients, may also be sampled depending on the specific land use activities in each subwatershed.

As in the routine monitoring program, sample collection and laboratory analysis procedures for runoff event monitoring should follow the Department of Ecology's "Monitoring Guidance for Early Action Watershed Water Quality Assessments." Laboratory Quality Assurance and Quality Control (QA/QC) procedures should at least meet the minimum requirements established in the Puget Sound Estuary Program protocols as developed by the Environmental Protection Agency (EPA).

Constraints

Implementation of the monitoring program faces several constraints. The most obvious factor which may inhibit the program is a source of funding for the 20-year duration of the program. At this time the only outside funding source is the Centennial Clean Water Fund administered by the Department of Ecology. Although funding may be provided for the initiation of the monitoring program, it is unlikely that the state will continue funding for the duration of the program. A local revenue source will need to be secured eventually to carry out the program.

A second constraint involves available laboratory facilities. The labs of the Snohomish Health District and Tulalip Tribes are the only two local laboratories with the capability of testing water quality samples using the procedures recommended by Ecology. The Snohomish Health District lab is currently running at full capacity and will not be able to process additional water quality samples. The Tulalip Tribes lab facility is expected to reach maximum capacity once the Lower Stillaguamish and Northern Port Susan Monitoring Project is underway. Due to these circumstances, analysis of water quality samples will need to be contracted to private facilities, significantly increasing the cost of the program.

Another constraint is the large size of the Stillaguamish watershed. A large number of stations will need to be
Chapter 4 - Monitoring Program

established to implement a successful routine monitoring program which fulfills Department of Ecology requirements. The size of the watershed also limits the number of stations which can be sampled in one day, thereby increasing the amount of staff time required for the project and increasing the overall costs of the program.

Estimated Costs of Monitoring Strategy

All samples collected for the routine monitoring program will be contracted to private laboratories for analysis. Each sample collected will cost approximately $87 to test for the required parameters. This cost includes $20 per sample for dissolved oxygen, $8 per sample for TSS, $6 per sample for turbidity, $35 per sample for nutrient analyses, $18 per sample for fecal coliform bacteria. Remaining parameters will be tested in the field by technical staff. The total number of stations is estimated to be 44 which includes nine stations in Port Susan; four stations each in Church Creek, Portage Creek, Pilchuck Creek, Armstrong Creek, Jim Creek, Deer Creek, and the Upper South Fork drainage; three stations for the Upper North Fork drainage; and two stations for Boulder Creek and Canyon Creek. Samples at these stations will be collected at a minimum of six times per year resulting in a total number of 264 routine samples per year. The minimum cost for testing the water quality samples under the routine monitoring program will be approximately $23,000. Samples needed to fulfill QA/QC requirements will increase this cost to $25,300. An additional $2,000 to $3,000 may be required for testing certain parameters, such as biochemical oxygen demand (BOD) or oil and grease, for samples from drainages of concern due to existing land use activities.

All samples collected for the runoff monitoring program will be contracted to private laboratories for analysis. The runoff event monitoring will cost approximately $32 per sample for three stations in each of the two watersheds surveyed. The parameters tested will include TSS, turbidity and fecal coliform bacteria. Conductivity will be tested in the field by technical staff. Contract analysis of these samples will cost approximately $192 per year. QA/QC requirements will raise this cost to approximately $250 per year. An additional $500 to $1,000 may be needed to increase the number of stations or the parameters tested.

Approximately $45,000 per year will be required to support the salary and benefits of a full time staff person for collecting
Stillaguamish Watershed Action Plan

water quality samples, delivering the samples to a certified laboratory, analyzing the water quality data, and making this information available. Approximately $6,000 per year will be needed for transportation costs and $5,000 to $10,000 per year for grab samples used to track specific sources, and supplies such as collection bottles, chemical preservatives, etc.

The estimates provided above add up to a total project cost ranging from $81,558 to $90,558 per year for the routine and runoff event monitoring programs. An overhead rate of 25% will increase the estimated costs to $101,950 to $113,200 per year.

The Lower Stillaguamish and Port Susan Monitoring Project conducted by the Tulalip Tribes will help to fulfill some of the requirements of the routine and runoff event monitoring programs for the first two years after the Stillaguamish Watershed Action Plan is adopted. However, the number and locations of water quality sampling stations which will be utilized in this study has not yet been identified. Therefore, additional sampling stations which will be needed to fulfill the requirements are not known at this time.

Priority Pollutants and Sediment Sampling

Sediment sampling will be conducted every five years beginning the year that the Stillaguamish Watershed Action Plan is adopted. Sediment samples will be taken from the mouths of Douglas Slough, West Pass, South Pass, and Hat Slough. The purpose of the sediment samples will be to test for the presence of organics and heavy metals in order to provide baseline information for the presence of priority pollutants in the watershed. The samples will be collected during the summer low flow period from depositional areas, such as pools. A priority analysis of the sediment samples should include: 1) acid extractable compounds; 2) base-neutral extractable compounds; 3) pesticides; 4) herbicides; 5) polychlorinated biphenyls (PCBs); 6) heavy metals, including arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, and zinc; 7) particle size; 8) total organic carbon; and 9) percent solids. If unacceptable concentrations are observed by the sediment sampling, then samples may need to be collected more than once every five years. The cost for this sediment sampling is expected to be approximately $5,000 for the four sites each time samples are collected.
Chapter 4 - Monitoring Program

Special Studies

In addition to the monitoring programs described, a need has been identified for several special water quality and related studies in the Stillaguamish watershed.

As discussed in Chapter 3 - Ongoing Activities to Improve Water Quality, the GIS Pilot Project is currently being conducted for Portage Creek. This project will provide detailed and site specific information regarding sources of nonpoint pollution in the Portage Creek drainage. The Tulalip Tribes have received funding through the 205(j) Grant Program to conduct a similar project for the Church Creek drainage. These two projects will enhance the implementation of the watershed plan and provide a foundation for establishing a local database for the watershed. Information collected through the routine monitoring program will assist these projects.

Ambient water quality data for the South Fork Stillaguamish River shows repeated violation of state water quality standards for fecal coliform bacteria. There is not enough water quality data at this time to estimate the source of this contamination. A water quality sampling effort is needed to identify site specific sources of this contamination. The ultimate design of the routine monitoring program for the watershed may be able to shed some light on this situation.

Research has indicated that suspended sediment may be able to increase the survivability of bacteria in marine waters. The Stillaguamish River is heavily laden with silt as a result of landslides (such as the ones at Deer Creek and Hazel Creek), agricultural practices, forest practices, and development activities. Suspended sediment in the watershed may be contributing bacterial contamination to the shellfish beds of Port Susan. An understanding of the interaction of bacteria with suspended sediment in the Stillaguamish watershed can provide information regarding the relative contribution of agricultural practices in the watershed and failing septic systems in the Warm Beach area to the closure of Port Susan shellfish beds. A possible study can include developing a sediment budget for the watershed and testing the level of fecal coliform bacteria associated with suspended sediments throughout the system. The study should also examine the relative concentrations of bacteria in the water column, sediments, and shellfish tissues in Port Susan.

Concern has also been raised about the use of fecal coliform as an indicator organism of bacterial contamination of marine waters. Some research suggests that E. coli may be a more
Stillaguamish Watershed Action Plan

appropriate indicator organism for marine environments. Samples can be taken to test the presence of different bacteria in Port Susan in order to identify an appropriate indicator species. A study of this kind will help to provide a better understanding of the actual contamination of the Stillaguamish watershed.

The Watershed Management Committee has raised concern over potential water quality impacts associated with the spraying of pesticides to control vegetation growth on roadside ditches along County and State roads. The Management Committee recognizes the existence of the Snohomish County Integrated Vegetation Management program as conducted by the Road Maintenance Division of the Department of Public Works, and acknowledges that this program is more stringent than current state regulations. However, not enough information is known to adequately assess whether or not the roadside spraying practices currently employed in the watershed are resulting in any adverse impacts to water quality. In response to this lack of water quality data, a need has been identified for a water quality study which examines the persistence and transport of pesticides through the roadside environment. This water quality sampling program should be designed to identify whether or not pesticides are carried directly into adjacent streams or wetlands. The study should include consideration of the solubility of the herbicides used, effect of products resulting from breaking down of original chemical, drainage patterns, bio-filtration capacity of the ditches, and application timing and relation to rainfall.

Coordination and Analysis of Water Quality Monitoring and Data Collection

The Tulalip Tribes will be the lead agency responsible for the coordination and analysis of water quality monitoring and data collection in the Stillaguamish watershed. The Tulalip Tribes are currently involved in several water quality sampling programs in the Stillaguamish and Snohomish watersheds and have the expertise for conducting the appropriate analyses. As a Timber/Fish/Wildlife cooperator, the Tulalip Tribes are also involved in the various Timber/Fish/Wildlife monitoring and data collection efforts. Existing laboratory facilities of the Tulalip Tribes are capable of handling some, but not all of the samples generated by the recommended routine and runoff event monitoring programs. The information collected and analyzed by the Tulalip Tribes will be coordinated with the Stillaguamish watershed Coordinator and incorporated into the yearly evaluation report prepared for the Department of Ecology.
Chapter 4 - Monitoring Program

As lead agency for the monitoring program, the Tulalip Tribes will be responsible for coordinating all monitoring programs in the Stillaguamish watershed. These monitoring programs will also include the collection of fish habitat data conducted as part of the Timber/Fish/Wildlife process and other programs. In this role, the Tulalip Tribes will consult with representatives of agencies conducting monitoring and data collection projects in the watershed through either direct contacts or a committee process. The purpose of these consultations should be to prepare a monitoring report that:

1. Identifies existing and proposed monitoring programs and the survey methods being employed;

2. Makes recommendations for standardizing data collection methods to ensure the transferability of data;

3. Identifies monitoring programs which are not in place but are needed;

4. Makes recommendations for incorporating citizen volunteers into the monitoring programs and data collection efforts; and

5. Makes recommendations for establishing a local coordinated database for the Stillaguamish watershed.

The preparation of this report will take approximately one year for a 1/2 FTE. The information collected should then be used to establish a database by the end of 1991. The proposed database should be accessible to all governmental agencies with jurisdiction over activities in the watershed. In addition, data contained in the database will be available to public and private interest groups and can be used as part of the public education program of this plan. Funding may be required to support adequate staff who will manage the data, collect water quality samples which will be contracted for analysis, coordinate existing monitoring programs, and prepare the monitoring report.
Chapter Five
Chapter 5 - Unresolved Action Plan Items

Introduction

This chapter describes two action plan recommendations which did not achieve concurrence by the identified implementing agencies. The Watershed Management Committee wanted to go on record as supporting these two recommendations and have included them as an unresolved action plan item.

Unresolved Action Plan Items

Unresolved Action Plan Item No. 1 - Agriculture (Mandatory Conservation Plans):
The Puget Sound Water Quality Authority should consider changes in state laws that would require mandatory development and implementation of farm conservation plans as a means of protecting and enhancing water quality.

Intent: Provide statutory authority for the mandatory development and implementation of farm conservation plans. This recommendation could be implemented as part of the nonpoint program revision to the 1991 Puget Sound Water Quality Management Plan.

Concurrence Statement: Puget Sound Water Quality Authority does not concur. (Refer to Appendix A, Concurrence Letter No. 7)

Mandatory conservation plans would conflict with existing Authority policy, stated in Nonpoint Program element NP-2. This policy was developed in concert with the agricultural community and reflects the cooperative and volunteer nature of the existing conservation district program for assisting farmers install BMPs for water quality protection. In addition, the premise of the watershed program is that implementation of locally based solutions is the most effective approach for addressing nonpoint problems. Applying a solution developed by one watershed on a region-wide basis, such as changing state law to require farm plans, does not reflect the basic intent of the watershed program and Chapter 400-12 WAC.

The Authority will be evaluating progress under the Nonpoint Program as part of the 1991 plan revision and agrees to analyze the effectiveness of the voluntary approach to farm management at that time.
Stillaguamish Watershed Action Plan

Watershed Management Committee Direction: Recommend that the Stillaguamish Implementation Review Committee evaluate the need and opportunities to achieve the objectives of this unresolved action item at the local and/or state level.

Unresolved Action Item No. 2 - Agriculture (Agricultural Practices Review): The Department of Ecology should study the feasibility of, develop, and propose agricultural practices regulations to protect water quality.

Intent: Provide a program for agriculture similar in scope to the Forest Practices Act.

Concurrence Statement: The Washington State Department of Ecology and the Soil Conservation Service do not concur. (Refer to Appendix A, Concurrence Letters No. 19 and 21)

Current state policy is to avoid direct state regulation of agricultural practices. Existing state regulatory authority and an Agricultural Compliance Memoranda of Agreement (signed by Ecology, the Conservation Commission, and most of the conservation districts) do provide for some regulation. Ecology does not believe it is realistic to expect a significant change (such as proposed by Agriculture No. 12) within the foreseeable future. Ecology suggests deleting this recommendation from the plan. While changes in statewide nonpoint regulations may be proposed in the future, local governments may currently choose to adopt additional prescriptive measures according to provisions in the 1989 Puget Sound Water Quality Management Plan and Chapter 400-12 WAC.

Watershed Management Committee Direction: Recommend that the Stillaguamish Implementation Review Committee evaluate the need and opportunities to achieve the objectives of this unresolved action item at the state level.
Appendix A: Statements of Concurrence
Appendix A
Statements of Concurrence

Introduction

This Appendix contains all Statements of Concurrence received on the Stillaguamish Watershed Action Plan by Snohomish County Department of Public Works, both written and personal communications, as of January 10, 1990.

Statements of Concurrence Received

Letters

1. Snohomish County Public Works
2. Snohomish County Community Development
3. Snohomish County Planning
4. Snohomish Health District
5. City of Arlington
6. City of Stanwood
7. Puget Sound Water Quality Authority
8. Washington State Conservation Commission
9. Washington Department of Fisheries
10. Washington Department of Natural Resources
11. Washington Department of Social and Health Services
12. Washington Department of Transportation
13. Washington State University Cooperative Extension of Snohomish County
13a. Washington State University Cooperative Extension of Snohomish County
14. Pilchuck Audubon Society
15. Stillaguamish Tribe
16. Tulalip Tribes
17. Washington Forest Protection Association
18. U.S.D.A. Forest Service, Darrington Ranger District
19. U.S.D.A. Soil Conservation Service
20. Snohomish Conservation District
20a. Snohomish Conservation District
21. Washington Department of Ecology
22. Washington Department of Wildlife
Appendix A
Statements of Concurrency

Personal Communication


The Snohomish Conservation District concurs with Education No. 2 (Incorporate Farming Community in Current and Future Planning) and Education No. 11 (Cooperative Extension Demonstration Farm).


The Soil Conservation Service concurs with Onsite No. 7 (Soil Suitability Manual).


The Environmental Education Office of the Superintendent of Public Instruction concurs with Education No. 8 (Water Quality Curriculum) and Education No. 20 (Natural River Systems).

Personal Communication with William Derry, Snohomish County Department of Public Works, Surface Water Management Section, January 10, 1990.

Snohomish County Department of Public Works concurs with Other Nonpoint Sources No. 4 (Alteration of River Channels, Floodplain, and Wetlands).


The Wetlands Section of the Washington Department of Ecology concurs with Other Nonpoint Sources No. 4 (Alteration of River Channels, Floodplain, and Wetlands).

Personal Communication with Bob Larson, Planning Department, City of Arlington, January 4, 1990.
Appendix A
Statements of Concurrence

The City of Arlington concurs with Development No. 8 (Oil Separators in Developed Areas).


The U.S. Forest Service concurs with Forestry No. 7 (Inventory of Orphan Roads), Forestry No. 8 (U.S. Forest Service and Department of Natural Resources Timber Harvest Planning), Forestry No. 9 (U.S. Forest Service and Department of Natural Resources Hold Cross Training Program), Forestry No. 10 (USFS Hold Public Forum), Forestry No. 11 (Monitoring for U.S. Forest Service Contract Compliance), Forestry No. 12 (Stream Rehabilitation), Education No. 7 (Train Employees of the Forest Industry), and Education No. 20 (Natural River Systems).
September 7, 1989

Michael M. McGuiness, Senior Planner
Department of Public Works
5th Floor, Administration Building
Everett, WA 98201

SUBJECT: STATEMENT OF CONCURRENCE ON STILLAGUAMISH WATERSHED ACTION PLAN

Dear Mr. McGuiness:

Thank you for the opportunity to review the Stillaguamish Watershed Action Plan Public Hearing Draft. I would like to commend the Watershed Management Committee and Surface Water Management staff in preparing an action plan dealing with a difficult problem, nonpoint source pollution. The commitment made by the public, agencies, and interest groups on this project demonstrates how important maintaining clean water is to Snohomish County.

Many of the recommendations in the action plan pertain to Snohomish County Department of Public Works. This letter serves as our formal statement of concurrence with those action plan recommendations that require specific action by the Department of Public Works.

The ability of the Department of Public Works to concur with action plan recommendations is limited by our legal mandate, the availability of funding, and other Public Works priorities county-wide. Funding to implement action plan recommendations is dependent on budgetary appropriations approved by the Snohomish County Council.

Our response to specific recommendations is addressed in Attachment A to this letter. Where appropriate, we have identified special conditions or suggested modified language for inclusion in the final plan. These changes most accurately reflect our ability to carry out action plan recommendations.

Thank you once again for the opportunity to review the action plan.

Sincerely,

[Signature]

GERALD E. WEED, P.E.
Director of Public Works

cc: Jack Bilsborough, Engineering
    Jim Krause, Program Development
    Bill Derry, Surface Water
    Ken Winckler, Maintenance and Operations
    Gary Powell, Design and Construction
    Tom Farrell, Solid Waste
ATTACHMENT A

SHOHOIMISH COUNTY DEPARTMENT OF PUBLIC WORKS
STATEMENT OF CONCURRENCE
STILLAGUAMISH WATERSHED ACTION PLAN

PAGE 1-6, CO-LEAD AGENCIES FOR IMPLEMENTATION OF THE ACTION PLAN

The Department of Public Works concurs with being a co-lead to oversee and coordinate implementation of the action plan. Surface Water Management staff are responsible for drafting a memorandum of agreement with the Tulalip Tribes and Stillaguamish Tribe on co-lead agency functions.

PAGE 1-7, WATERSHED COORDINATOR POSITION

Department of Public Works concurs with the duties and responsibilities of a Watershed Coordinator position as presented in the action plan. This position is dependent on available grant funding. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1999 to fund a Watershed Coordinator position.

PAGE 2-6, AGRICULTURE NO. 6 (PUBLIC LAW 83-546)

Department of Public Works concurs with Agriculture No. 6. Surface Water Management staff will work with the Snohomish Conservation District in sponsoring the application.

PAGE 2-12, ONSITE NO. 3a (STRATEGY FOR ONSITE SEWAGE DISPOSAL IN HIGH RISK AREAS)

Department of Public Works concurs with ONSITE NO. 3a. Surface Water Management staff have purchased effervescent dye tablets and prepared educational mailers to be distributed to residents in the Warm Beach area. Tulalip Tribes staff and onsite sewage disposal workgroup members will distribute dye tablets and mailers to residents in the Warm Beach area.

PAGE 2-17, DEVELOPMENT NO. 1 (CLEARINGHOUSE PHONE NUMBER)

Department of Public Works conditionally concurs with Development No. 1. Implementation of this recommendation is contingent on the availability of grant funding. Surface Water Management staff are responsible for coordinating with other County divisions and departments and the Department of Ecology in setting up the Clearinghouse phone number.

ATTACHMENT A

The projected cost for setting up and operating the clearinghouse phone number is not realistic. Scheduled implementation date of July 1990 is overly optimistic. Surface Water Management staff will conduct an evaluation of the costs associated with establishing and operating such a phone number. This information can then be used in preparing grant proposals or budget requests to fund the clearinghouse phone number. Evaluation should be completed by July 1990.

PAGE 2-17, DEVELOPMENT NO. 3 (ISLAND CROSSING PROBLEM)

Department of Public Works does not concur with Development No. 3. Although drainage and water quality problems exist in the Island Crossing area, no study has been conducted to document the extent of the problem and identify possible solutions. Drainage in this area comes from private property and state maintained highways, not county maintained roads.

The Department of Public Works recommends that a study be conducted to identify drainage and water quality problems in the Island Crossing area. Such a study may be contingent on grant funding. Surface Water Management staff are responsible for conducting the study with assistance from Washington Department of Transportation. Such a study should also look at solutions to drainage and water quality problems and evaluate funding mechanisms to implement the solutions. Surface Water Management staff will evaluate the feasibility of establishing a watershed management area in the Island Crossing area as part of the study.

PAGE 2-18, DEVELOPMENT NO. 4 (ROAD AND HIGHWAY RUNOFF CONTROLS)

Department of Public Works does not concur with Development No. 4. Our understanding is that Washington Department of Transportation is working with the Department of Ecology in developing a program to treat runoff from state highways. County and local roads are not included in this program.

Development of a program for treatment of runoff from county roads in the Stillaguamish watershed is not feasible. Runoff from roads is a county-wide problem. The Department of Public Works will evaluate developing a county-wide program to address runoff from county and local roads in Snohomish County. The Maintenance and Operations Division and Surface Water Management staff are responsible for evaluating a county-wide program for runoff from county roads. This evaluation will be completed by December 1990.
ATTACHMENT A

PAGE 2-18, DEVELOPMENT NO. 5 (INCREASE NO-SPRAY ZONES)

Department of Public Works does not concur with Development No. 5. The Maintenance and Operations Division has developed the Integrated Vegetation Management Program. This program employs mechanical, chemical, cultural, and biological methods to manage roadside vegetation. The Integrated Vegetation Management Program, which was developed with the help of a citizen advisory committee, is more stringent than state or federal programs to control roadside vegetation. The program identifies areas where herbicides can and cannot be used. Setback distances are identified for streams, lakes, and ponds.

The Maintenance and Operations Division will continue to follow the Integrated Vegetation Management Program to manage roadside vegetation. Vegetation in existing no spray zones is managed by mechanical methods. An option available is to extend the mechanical methods beyond the current no spray zones.

As part of Education No. 6, Surface Water Management staff will work with Maintenance and Operations field crews in identifying roadside ditches that drain into streams and wetlands.

PAGE 2-19, DEVELOPMENT NO. 6 (RESEARCH ON NO-SPRAY ALTERNATIVE)

Department of Public Works does not concur with the philosophy of a total no-spray program presented in Development No. 6. The Puget Sound Water Quality Authority should evaluate what specific water quality problems occur from roadside spraying activities. They should also look at the extent of pollution resulting from roadside spraying in comparison to other activities (e.g., highway runoff, agricultural pesticide application, agricultural runoff, residential runoff, etc.).

A no-spray program is just one of several options available to control roadside vegetation. Development No. 6 should address the water quality benefits of an integrated vegetation management program for roadside vegetation management.

PAGE 2-19, DEVELOPMENT NO. 7 (PAINTING STORM DRAINS)

Department of Public Works concurs with Development No. 7. Surface Water Management staff are responsible for stencilling storm drains. This task will be coordinated with the Stillaguamish education program to take advantage of citizen participation. Initial goal is to stencil 200 storm drains in unincorporated areas of the Stillaguamish watershed in 1990.

ATTACHMENT A

Surface Water Management staff will work with the City of Stanwood and City of Arlington in starting a similar program in incorporated areas of the watershed. Surface Water Management staff will also coordinate with Community Development Division staff to implement stencilling of storm drains as a requirement for new developments.

PAGE 2-19, DEVELOPMENT NO. 8 (OIL SEPARATORS IN DEVELOPED AREAS)

Department of Public Works concurs with Development No. 8.

PAGE 2-20, DEVELOPMENT NO. 9 (LOCAL FUNDING OPTIONS FOR WATERSHED IMPROVEMENT)

Department of Public Works conditionally concurs with Development No. 9. Surface Water Management staff will work with the public in evaluating and recommending local funding options for watershed improvement. Actual selection of a funding option would depend on local support for the option and Snohomish County Council approval of the option.

PAGE 2-22, OTHER NONPOINT SOURCES NO. 1 (DISPOSAL OF HOUSEHOLD HAZARDOUS WASTE)

Department of Public Works conditionally concurs with Other Nonpoint Sources No. 1. Solid Waste Management Division is considering developing a facility for the drop off of household hazardous wastes and for local "round up" activities. However, Solid Waste Management Division cannot guarantee that this facility will be at the North County Transfer Station.

The Solid Waste Management Division does not consider plastic a hazardous waste. Solid Waste Management Division is looking into the possibility of recycling plastic in the future.

PAGE 2-33, OTHER NONPOINT SOURCES NO. 2 (SOLUTIONS TO ILLEGAL DISPOSAL PRACTICES)

Department of Public Works conditionally concurs with other Nonpoint Sources No. 2. The responsibility for implementation of this recommendation rests with the watershed coordinator position and not with the Solid Waste Management Division. The watershed coordinator position is dependent on available grant funding. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a Watershed Coordinator position.
ATTACHMENT A

PAGE 2-33, OTHER NONPOINT SOURCES NO. 3 (VISUAL ASSESSMENT OF WATER QUALITY)

Department of Public Works concurs with Other Nonpoint Source No. 3. Implementation of this recommendation is the responsibility of the watershed coordinator position. This position is dependent on available grant funding. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a Watershed Coordinator position.

PAGE 2-35, EDUCATION NO. 1 (SPEAKER'S BUREAU)

Department of Public Works concurs with Education No. 1. Implementation of this recommendation is contingent on obtaining grant funding for a water quality education program. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

PAGE 2-36, EDUCATION NO. 3 (TARGET EDUCATION PROGRAMS)

Department of Public Works concurs with Education No. 3. Implementation of this recommendation is contingent on obtaining grant funding for a watershed public education program. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

PAGE 2-37, EDUCATION NO. 5 (TITLING-FISH-WILDLIFE COMMITTEES COORDINATE EDUCATION WITH STILLAGUAMISH PUBLIC EDUCATION PROGRAM)

Department of Public Works concurs with Education No. 5. Surface Water Management staff will use timber/fish/wildlife participating agencies to present water quality education about the timber/fish/wildlife process.

PAGE 2-38, EDUCATION NO. 6 (TRAINING SESSIONS FOR EMPLOYEES)

Department of Public Works concurs with Education No. 6. Implementation of this recommendation is contingent on obtaining grant funding for a watershed public education program. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

PAGE 2-39, EDUCATION NO. 10 (DEMONSTRATION OF NONPOINT SOURCE TREATMENT METHODS)

Department of Public Works concurs with Education No. 10. Implementation of this recommendation is contingent on obtaining grant funding for a watershed public education program. Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1990 to fund a water quality education program.

PAGE 2-42, EDUCATION NO. 16 (DISTRIBUTE EDUCATIONAL LITERATURE)

Department of Public Works concurs with Education No. 16.

PAGE 2-42, EDUCATION NO. 18 (EDUCATE PERMIT SEEKERS)

Department of Public Works concurs with Education No. 18. Surface Water Management staff will coordinate with Community Development Division staff in carrying out this recommendation.

PAGE 2-43, EDUCATION NO. 19 (VIDEO DEVELOPED)

Department of Public Works conditionally concurs with Education No. 19. The Puget Sound Water Quality Authority is requesting a video on the "State of the Sound" as part of their Round 3 Public Involvement and Education funding cycle. Surface Water Management staff should review all videos developed in this current funding cycle to see if the videos can be used for educational purposes in the Stillaguamish watershed.

In the event that no appropriate videos are produced, Surface Water Management staff will seek grant funding to develop a water quality video specific to Snohomish County conditions.

PAGE 4-8, NONPOINT SOURCE CONTROL EVALUATION STRATEGY

Department of Public Works concurs with the nonpoint source control evaluation strategy presented in the action plan. Evaluation of source control program recommendations is the responsibility of the watershed coordinator position which will be in Surface Water Management. The watershed coordinator position is dependent on obtaining available grant funding. Evaluation monitoring is therefore dependent on obtaining available grant funding also.
Surface Water Management will submit a Centennial Clean Water Fund Grant proposal to the Department of Ecology in 1998 to fund a watershed coordinator position. A primary duty of the watershed coordinator is to evaluate the effectiveness of action plan recommendations.
Our response to specific recommendations is addressed in Attachment A to this letter. Where appropriate, we have identified special conditions or suggested modified language for inclusion in the final plan. These changes most accurately reflect our ability to carry out action plan recommendations.

Thank you once again for the opportunity to review the action plan.

Sincerely,

[Signature]

Randolph A. Sleigh, P.E., P.L.S.
Technical Review Supervisor
Community Development Division

cc: Ernie Berg, Manager, Community Development
    Craig Laidler, Manager, Operations/Review
    Frank Wyckoff, Manager, Inspection/Enforcement

Attachment
DEVELOPMENT NO. 2 (INSPECTION AND ENFORCEMENT OF DRAINAGE PROBLEMS): Snohomish County Community Development Division should increase drainage inspection staff and assign staff specifically to drainage permitting problems only.

INTENT: Place greater emphasis and priority on the inspection of drainage problems. Demand on limited County staff resources is increasing annually due to high growth and development. Drainage problems resulting from new construction can have an adverse impact on water quality.

COST: $45,000/yr. for each FTE inspector added.
SCHEDULE/TIMELINE: Add minimum of one new drainage inspection position by July 1990.
FUNDING SOURCE: Snohomish County, state grants

COMMUNITY DEVELOPMENT DEPARTMENT (CDD) RESPONSE TO NO. 2:
The 1990 budget submitted to Council by CDD did not include an additional inspection and enforcement drainage inspector primarily because of current funding constraints and our inability to cover one more FTE directly out of the drainage budget. However, if Department of Ecology state grants or centennial grant money or other sources become available, CDD would pursue the additional FTE at a mid-year supplemental request before the County Council. We would work with the Stillaguamish Watershed Coordinator and Implementation Review Committee to pursue and hopefully secure the necessary monies to fund the position.

DEVELOPMENT NO. 7 (PAINTING STORM DRAINS): Snohomish County Public Works, Surface Water Management, should institute a program of stencilling storm drains with "DUMP NO WASTE -- DRAINS TO STREAM." Snohomish County Community Development Division, during plat review, should require developers to stencil all storm drains in new developments with "DUMP NO WASTE -- DRAINS TO STREAM."

INTENT: Reduce dumping of oil, gas, and other hazardous wastes into storm drains that directly reach the surface waters of the Stillaguamish watershed. Stencils can be provided by Department of Ecology, and nontoxic paint by the County.

COST: Inkind
SCHEDULE/TIMELINE: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology
FUNDING SOURCE: Snohomish County, state grant

COMMUNITY DEVELOPMENT DEPARTMENT RESPONSE TO NO. 7:
CDD will add this to our drainage review checklist to make sure new development within the Stillaguamish Drainage Basin complies with No. 7. Other sensitive basins around spawning streams will receive similar treatment throughout Snohomish County.

DEVELOPMENT NO. 11 (EXISTING PLATTED LOTS): Snohomish County Council should enact a policy that all previously approved final plats, when developed, meet the most recent code requirements for grading and drainage.

INTENT: Prevent adverse grading and drainage impacts to water quality from development on previously approved final plats (e.g., Warm Beach area). Previously approved final plats, when developed, do not have to meet the most recent code requirements for grading and drainage.

COST: Inkind
SCHEDULE/TIMELINE: Policy enacted by January 1991
FUNDING SOURCE: Snohomish County
COMMUNITY DEVELOPMENT DEPARTMENT RESPONSE TO NO. 11:

This item we will pursue and support given both the County Council mandate to preserve and protect wetlands and the existing legal framework upon which CDD operates. Please note however, a few projects may have a vested right or existing zoning which may cause CDD to treat them slightly differently given our current SEPA policies in this area. Those plans recorded or developed prior to the adoption of Title 24 SCC, Snohomish County Drainage Ordinance (circa 1980) may be exempt from some of the Title 24 SCC requirements.

DEVELOPMENT NO. 12 (VIOLATORS RESPONSIBLE FOR MITIGATION):
Snohomish County ordinances should specify that violators (whether owners, subcontractors or equipment operators) of grading and drainage permit requirements will bear full responsibility for mitigation of problems caused by improper actions.

INTENT: Remove the financial burden of mitigation from the tax payers to the violators. The Watershed Management Committee support the strongest regulations allowable covering such responsibility.

COST: Unknown
SCHEDULE/TIMELINE: Begin with Stillaguamish Watershed Action Plan approval by the Department of Ecology
FUNDING SOURCE: Snohomish County

COMMUNITY DEVELOPMENT DEPARTMENT RESPONSE TO NO. 12:

It is certainly CDD's intent to require the impacts caused by new development to be fully mitigated as required by SEPA and other state and county laws and ordinances. Our existing enforcement and inspection staff have already picked up a four fold increase over the past 3 years of drainage and grading violation throughout the County. We are well aware of some major violations within the Stillaguamish Watershed Area and have pursued it given our limited resources.

Stillaguamish Watershed
September 19, 1989
Page 3
ATTACHMENT A

SNOHOMISH COUNTY PLANNING DIVISION
STATEMENT OF CONCURRENCE
STILLAGUAMISH WATERSHED ACTION PLAN

A) AGRICULTURE NO. 10 (WETLAND PROTECTION): Snohomish County Planning Division should study the feasibility of purchasing riparian corridors in addition to wetlands, or the agricultural rights to riparian corridors and wetlands in agricultural areas as an additional option available to protect water quality.

INTENT: Analyze all the implications and likely impacts of such a program on protecting water quality. Central to these impacts are the ability to ensure consistency/compatibility with the county's regulatory approach to preservation (Aquatic Resources Protection Program and other related ordinances) and to establish equity among affected landowners.

COST: Inkind
SCHEDULE/TIMELINE: Begin study July 1990
FUNDING SOURCE: Snohomish County Planning Division

STATEMENT: The Planning Division concurs and commencing approximately mid-1990 will evaluate the feasibility of purchasing riparian corridors as an additional option available to protect water quality. Results of the feasibility analysis will be forwarded to the County Executive and Council for consideration. As reflected in the stated intent of Agriculture No. 10, this evaluation must consider fully the consistency and compatibility of any such approach with the County's regulatory approach to preservation of riparian corridors.

B) DEVELOPMENT NO. 10 (AQUATIC RESOURCE PROTECTION): Snohomish County should enact strong ordinances to implement a program requiring restrictions on clearing, grading, and drainage activities adjacent to aquatic systems.

INTENT: Protect the water quality function of wetlands and stream corridors. Adoption of the proposed Aquatic Resources Protection Program currently under review by the
Snohomish County Planning Commission would work toward resolving the Watershed Management Committee's concern with respect to aquatic resources protection.

COST: Inkind
SCHEDULE/TIMELINE: Snohomish County Aquatic Resources Protection Program (ARPP) is scheduled to be adopted by the Snohomish County Council in July 1989. If ARPP is not adopted, implementation of this recommendation will begin with Stillaguamish Watershed Action Plan adoption by the Department of Ecology.
FUNDING SOURCE: Snohomish County

STATEMENT: The Planning Division concurs with Development No. 10. The proposed Snohomish County Aquatic Resource Protection Program (ARPP) has not been adopted to date. County Council consideration is anticipated to occur during Fall, 1989, with formal adoption not likely until early 1990. The Planning Division will continue to provide staff support to County Council consideration of the program.

C) FOREST NO. 1 (DOCUMENTATION AND COORDINATION OF FOREST PRACTICE APPLICATIONS FOR LAND CONVERSIONS): Snohomish County Planning Department should provide staff and computer resources to track and coordinate the review of forest practices applications for land conversions.

INTENT: Document and coordinate County review and conditioning of forest practices applications as they relate to conversions both for development and for pasture and farmland. Provide better communication between personnel responsible for review of Forest Practice applications proposing conversion from commercial forestry and personnel with responsibility for development review and county permitting. Evaluate and develop County policies which assure consistent review, conditioning, and enforcement of forest practices applications.

COST: .25 FTE - $12,350
SCHEDULE/TIMELINE: Begin January 1991
FUNDING SOURCE: Snohomish County, state grants

STATEMENT: The Planning Division concurs with Forest No. 1. Implementation of the recommended actions should begin in late 1989 with improved tracking and coordination of Class IV (conversion) Forest Practice Applications. Revision of applicable review policies should be initiated in early 1990.

D) FOREST NO. 2 (PLANNING DIVISION ADD AN URBAN FORESTER): Snohomish County Planning Division should add an urban forester and evaluate options to fund that position, including split funding and sharing of an urban forester position with other agencies (e.g., Snohomish Conservation District, Snohomish Public Utility District, etc.).

INTENT: Provide the County greater expertise in urban forestry issues and allow for a more thorough County/local agency review, conditioning, enforcement, and compliance of forest practices application conversions and water quality/forested impacts of development.

COST: .15 FTE - $7,410 per year
SCHEDULE/TIMELINE: Hire an urban forester by January 1991
FUNDING SOURCE: Snohomish County, Snohomish Conservation District, Snohomish Public Utility District, state grants

STATEMENT: The Planning Division conditionally concurs with Forest No. 2. Evaluation of available options to fund and share the urban forester must occur prior to hiring of this individual. The Planning Division will evaluate such options and initiate contact with agencies having a potential need for this expertise. Implementation of Forest No. 2 is contingent upon availability of a funding package acceptable to Snohomish County. We note that the level of additional staff support provided by this recommendation, in combination with Forest No. 1, is adequate to ensure improved review of Class IV (conversion) Forest Practice Applications. but not enhanced review of commercial forest practices proposed in the watershed.

E) FOREST NO. 3 (ENSURE COUNTY SHORELINE MANAGEMENT PROGRAM): Snohomish County Planning Division should evaluate problems with monitoring and enforcement of the Shoreline Management Master Program and institute a program for correcting deficiencies.

INTENT: Protect water quality by improving monitoring and enforcement of the Snohomish County Shoreline Management Master Program.

COST: $12,000
SCHEDULE/TIMELINE: Begin with Stillaguamish Watershed Action
Plan approval by the Department of Ecology
FUNDING SOURCE: Snohomish County, state grants

STATEMENT: The Planning Division conditionally concurs with Forest No. 3. Expanded monitoring of forest practices within areas of County shoreline jurisdiction will be incorporated in the tracking system established as a result of implementing Forest No. 1. The Snohomish County Shoreline Management Master Program is considered to have limited applicability to commercial forest practices occurring within shoreline areas. The State Forest Practices Act has traditionally been relied upon to guide such forest practices. Since additional authority to review and condition forest practices within shoreline areas may be available, the Planning Division agrees to evaluate, in conjunction with the Prosecuting Attorney's Office, available options and to recommend appropriate changes, if any. Implementation of any program to correct known deficiencies will require approval by the the County Council and Department of Ecology. Expanded monitoring will commence in 1990, with any program to correct deficiencies being considered in 1991.
August 21, 1989

DEPT. OF PUBLIC

Stillaguamish Watershed Action Plan
August 21, 1989
Page 2

Michael M. McGuiness
Surface Water Management
Snohomish County Public Works
5th Floor, Administration Building
Everett, Washington 98201

Subject: Stillaguamish Watershed Action Plan/Statement of Concurrence

Dear Mr. McGuiness:

I want to take this opportunity to congratulate you and all the others who have worked on the Stillaguamish Watershed Action Plan. The plan is a well written, straightforward document that does a commendable job of pulling together diverse pieces of the puzzle. As such, it is a good example of what a caring community's involvement can bring forth.

As the local jurisdictional public health agency, the Health District has a mandate to enforce Chapter 248-96, the State Board of Health Rules and Regulations for Onsite Sewage Disposal Systems. Consequently, we believe that we are the logical and legitimate agency to be charged with any of the recommendations in the plan that deal with onsite sewage disposal. It is in this light that the onsite sewage disposal recommendations contained in the plan have been reviewed and given our general acceptance and concurrence.

Concurrence aside, without adequate funding the recommendations will quickly be relegated to a shelf with all the other recommendations in all the other plans now long forgotten. It is unfortunate, but the realities imposed by severe funding constraints and the constant demand to fulfill already existing legal mandates almost always assure that "recommendations" get short shrift.

With regard to the specific recommendations which are to be implemented by the Health District:

"ONSITE NO. 1 (ADD ONE STAFF PERSON TO SNOHOMISH HEALTH DISTRICT): Snohomish County should provide funding for a permanent full time position for the Snohomish Health District, Environmental Health Division to focus on sewage disposal problems as they relate to water quality."

It should be understood that while the addition of one staff person, dedicated to water quality issues sounds reasonable, such a dedication of resources will most likely not withstand the necessary prioritization that must occur within a regime of inadequate resources. If personnel were to be added to the Environmental Health Division, there presently exists enough legally mandated work needing to be done to keep them busy. For example, the Onsite Sewage Disposal Program could presently best be characterized by the word "overwhelmed" and foodborne Hepatitis A is an epidemic within our jurisdiction. The plan's recommendations must not be allowed to skew what are clearly public health priorities and dictate the distribution of what meager resources are available.

It is clear that if ONSITE NO. 1 is to be accomplished in the foreseeable future, the funding will have to come from sources external to those usually available to the Health District and be dedicated specifically to the accomplishment of the recommendation.

"ONSITE NO. 3 (STRATEGY FOR ONSITE SEWAGE DISPOSAL IN HIGH RISK AREAS): The Snohomish Health District identified the Warm Beach area and the Warskinksi Plat area as having a high potential for onsite sewage disposal system failure. The following strategies address high risk areas in the Stillaguamish watershed...."

It should be understood that enforcement actions are finite and limited, for the most part, by staff availability and legal costs. Given the finite nature of the effort, enforcement is subject to prioritization. If the choice is between a failing onsite sewage disposal system that serves a day care center and a failing system that serves a single family residence on a 5 acre parcel, we would devote our resources to the day care center. In other words, it is impossible to commit the Health District to solving any and all onsite problems that might be discovered in the Warm Beach and Warskinksi Plat area. To do so would be to enter into an open-ended agreement and negate the establishment of enforcement priorities throughout the jurisdiction.

"ONSITE NO. 4 (INCREASE VERTICAL SEPARATION): The Snohomish Health District should increase the vertical separation requirement from one foot to no less than two feet for onsite sewage systems in the Stillaguamish watershed."

The Snohomish Health District Board of Health has shown its willingness and ability to impose special dedications within well-defined areas to deal with unique problems - e.g. Arsenic Areas of Concern requiring development of arsenic free water supplies before an onsite sewage disposal permit can be approved. If the Board was convinced that increased
vertical separation was required, they could impose special design requirements within the watershed and those design provisions would be implemented by Environmental Health Division personnel. Given clear authority from the Board of Health, this is an easy recommendation to implement.

"ONSITE NO. 6 (NEW RV COMMUNITIES TO HAVE DUMP STATIONS): The Snohomish Health District should require dump stations connected to a holding tank/pump out operation for all RV community facilities. User fees should be considered for such facilities."

As with ONSITE NO. 4, such a requirement would require a resolution of the Board of Health, Environmental Health Staff would recommend that this requirement be extended to include existing RV communities on compliance schedule/enforcement basis.

"ONSITE NO. 7 (SOIL SUITABILITY MANUAL): The Soil Conservation Service, in conjunction with the Snohomish Health District, should develop a manual on the suitability of Snohomish County soils to function as drainfields for onsite sewage disposal systems."

The Environmental Health Division stands ready to assist with this project at the convenience of the Soil Conservation Service.

I trust that this letter of concurrence, with all its caveats, is accepted in the cooperative spirit in which it is written. We believe that a plan of this nature calls out a direction of march over a route bound to be beset with difficulties. If we are ever to arrive at the hoped for destination, we will have to commit more than ideas to the long haul.

Sincerely,

Robert A. Pekich, Director
Environmental Health
September 11, 1989

County of Snohomish
Department of Public Works
5th Floor, Administration Bldg.
Everett, WA 98201

Attn: Mike McGuiness

Dear Mr. McGuiness:

The City of Arlington has received the Stillaguamish Watershed Action Plan dated July 1989. This review and information from our representative, Mr. Howard Christianson, provides the City the opportunity to concur in the findings of the study.

The City of Arlington will be reviewing storm drainage related issues during the next two to three months. The intent of this review is to provide the City with a set of requirements that will improve water control and quality. The Action Plan, where appropriate, will be used to help focus on policies and requirements that will provide long term benefits to the watershed. I will advise you of the City's actions as soon as the Council completes the review.

For the City, I want to thank the County, the Committee, you and your staff for the time and effort in the preparation of the Stillaguamish Watershed Action Plan. The results will help reduce pollution in the watershed which will provide long-term benefits to all who value the Stillaguamish River.

Again, thanks to all who have participated in this most worthwhile project.

Sincerely,

CITY OF ARLINGTON

John C. Larson
Mayor

cc: file

August 22, 1989

Michael M. McGuiness
Senior Planner, Project Manager
Snohomish County Public Works Department
5th Floor, Administration Building
Everett, Washington 98201

RE: Stillaguamish Watershed Action Plan

Dear Mr. McGuiness:

The City of Stanwood is in concurrence with development of an Oil Separators in Developed Areas of Chapter 2 - Nonpoint Source Control of the Stillaguamish Watershed Action Plan.

The City of Stanwood will implement a program to require the installation and maintenance of oil separators or other effective devices on catch basins that are subject to automobile or industrial run-off.

To reinforce this program the city will adopt a Comprehensive Drainage Ordinance designed to require among other things that such devices be installed in developed areas on any catch basin that is connected in to the city drainage system whether they are located within city rights-of-ways or on private property. The ordinance will be adopted by March 1, 1990.

Additionally the ordinance will require that all storm drains be stencilled or otherwise marked with the words, "Dump No Waste" - "Drains To Stream".

The City of Stanwood will enter into an Interlocal agreement with Snohomish County by July 1, 1990 providing for the cleaning of city catch basins.

Very truly yours,

CITY OF STANWOOD

Robert N. Larson
Mayor

The City with the Scandinavian Flavor
18 August 1989

Michael M. McGuiness
Senior Planner, Surface Water Management
Snohomish County Public Works
9th Floor, Administration Building
Everett, WA 98201

Statement of Concurrence

Dear Mr. McGuiness:

Thank you for the opportunity to review the recommendations in the draft Stillaguamish Watershed Action Plan that pertain to the Puget Sound Water Quality Authority. The Authority agrees with the intent of two of the three recommendations, and we would like to take this opportunity to explain how we can best help carry these out.

As with any agency, our ability to concur with the recommendations in a draft watershed action plan is limited by our legislative mandate and established decision-making processes. Our major mechanism for responding to your recommendations, therefore, is through our planning process under RCW 90.70. With the exception of the recommendation pertaining to the mandatory farm plans, we believe that the recommendations relating to the Authority can be addressed through implementation of the 1989 Water Quality Management Plan or through the process of amending it before 1991. It is also important to explain that any actions taken as part of our overall planning process need to be part of our general public involvement process and respond to Sound-wide, as opposed to localized, needs. We should also note that the Authority is scheduled to "sunset" in 1991 so our participation after that time is uncertain.

Each recommendation, in terms of what the Authority can do or is doing, is addressed below. Where necessary, we have suggested modified language for the final plan to reflect most accurately our ability to carry out the recommendation.

This letter serves as our formal "statement of concurrence" with the Stillaguamish Watershed Action Plan. If additional modifications are needed as the result of your public review process, the Authority would need to take the matter up again at the September 20 meeting.

Recommendations in Stillaguamish Watershed Action Plan Involving the Puget Sound Water Quality Authority

p. 2-8, Agriculture No. 11: Mandatory Conservation Plans

While we are sympathetic to the watershed committee's concern that all farms have farm plans for water quality protection, the Authority cannot concur with the recommendation for changes in state laws that would require mandatory farm plans. This would conflict with existing Authority policy, stated in Nonpoint Program element NP-2:

The guidelines [Chapter 400-12 WAC] shall recommend but not require the use of conservation district/SCS farm management plans as the preferred approach to controlling pollution from both commercial and noncommercial farms, and shall adopt the conservation districts' farm conservation planning and practices documents as the recommended standard. The guidelines shall permit watershed management committees to address animal keeping/pasture management through other regulatory or educational approaches, but the guidelines shall specify that any farm which has implemented an approved farm management plan through either the Dairy Waste Management Plan or the conservation district/SCS system shall be exempt from further regulations on animal keeping/pasture management under a priority watershed action plan unless water-quality violations occur. (NP-2)

This policy was developed in concert with the agricultural community and reflects the cooperative and voluntary nature of the existing conservation district program for assisting farmers install BMPs for water quality protection.

In addition, the premise of the watershed program is that implementation of locally based solutions is the most effective approach for addressing nonpoint problems. Applying a solution developed by one watershed on a region-wide basis, such as changing state law to require farm plans, does not reflect the basic intent of the watershed program and Chapter 400-12 WAC.

The Authority will be evaluating progress under the Nonpoint Program as part of the 1991 plan revision and agrees to analyze the effectiveness of the voluntary approach to farm management at that
p. 2-19, Development No. 6: Research No-Spray Alternative

The Authority will be releasing an issue paper on Pesticides and Puget Sound for public review in September 1989. The issue of water quality impacts from roadside vegetation management is addressed in this paper. One purpose of this paper is to identify potential pesticide-related actions that could be incorporated into the 1991 Plan. The Authority may consider the issue of alternatives to spraying for roadside management as part of the 1991 plan revision process. Therefore, we would like to recommend the following revised language:

The Puget Sound Water Quality Authority should consider the water quality benefits of a no-spray program and/or Integrated Pest Management for roadside vegetation management as part of its process of preparing the 1991 Puget Sound Water Quality Management Plan.

This task will be carried out as part of the overall process of preparing the 1991 plan, from December 1989 through August 1990. The cost of addressing this recommendation can be funded through the existing agency budget.

(It should also be noted that some of the research requested in this recommendation may be underway. Public works departments in Island, Jefferson, Mason, and San Juan Counties have eliminated chemical application from their vegetation management programs. Mason County, in particular, has demonstrated cost savings from this approach. Work on monitoring the impacts of roadside spraying on water quality is being conducted by the Seattle-King County Health Department.)

p. 2-20, Development No. 9, Local Funding Options for Watershed Improvement

The Local Government Subcommittee of the Puget Sound Finance Committee is currently exploring options for generating local revenue to fund water quality activities. The work of the full Finance Committee may also result in additional revenues for use by local governments. Some of their recommendations may result in legislative proposals. A likely outcome of the process is a variety of funding options for consideration by local governments. In addition, legislation may not be necessary to implement special district funding mechanisms along the lines the watershed committee has recommended. Therefore, we would like to propose the following revised language:

The Puget Sound Finance Committee and its Local Government Subcommittee should continue to explore ways to provide local funding mechanisms for the implementation of watershed action plans. Snohomish County Public Works, in coordination with interested citizens, should evaluate and select among the various local funding options.

This task will be carried out as part of the overall implementation of plan element C-1. The cost of addressing this recommendation can be funded through the existing agency budget.

We hope that these proposed revisions will meet both of our needs. If you have any questions, please contact Nancy Hansen or Naki Stevens on the Authority staff.

Sincerely,

Katherine Fletcher
Chair
Stillaguamish Watershed Management Committee  
c/o Snohomish County Public Works  
5th Floor, Administration Building  
Everett, WA 98204

July 18, 1989

Gentlemen:

This letter is to notify you that the Conservation Commission agrees to carry out its responsibilities for funding the watershed management plan activities of the Snohomish Conservation District described in the plan, with the following limitations:

Centennial Clean Water Funds administered by the Commission are awarded to conservation districts based on the competitive rating of grant proposals received from conservation districts state-wide. Funds are awarded based on the activities included in the proposal, and are committed for only the time period covered by the proposal — typically one year, but never more than two years. In the case of the Snohomish Conservation District, funding has been awarded for activities described in the Stillaguamish Watershed Management Plan for a period of two years starting in July 1989.

This statement of concurrence in no way obligates the Conservation Commission to continue funding for the activities of the Snohomish Conservation District beyond the two year period covered by contract # 89-07-16.

Sincerely,

[Signature]
Wayne Reid,  
Executive Secretary

cc: Snohomish Conservation District

890720003
STATE OF WASHINGTON
DEPARTMENT OF FISHERIES
HABITAT MANAGEMENT DIVISION
430 - 91st Avenue NE, Unit 7
Everett, Washington 98203

TO:  Marilyn Freeman

FROM:  Mike Chamberlin

DATE:  7/8/85

SUBJECT:  Concurance letter

SPECIAL INSTRUCTIONS:

Revise and/or any comments
Call Mike Chamberlin 258-3472

NUMBER OF PAGES (INCLUDING COVER PAGE) 3

IF MATERIAL IS UNREADABLE OR INCOMPLETE, PLEASE CALL (206) 292-1950

Michael McGuiness
 Snohomish County Public Works
 5th Floor, County Administration Building
 Everett, Washington 98201

SUBJECT:  Concurance with the Stillaguamish Watershed Plan

Dear Mr. McGuiness:

Our department has been identified in the Plan as an implementing entity to share responsibility for carrying out the Plans recommendations. Specifically, the plan requests WDF, among others, to "Develop a coordinated stream inventory and rehabilitation program" and develop educational material designed to "promote an understanding of the function of natural and altered river systems, and how the systems differ in their handling of nonpoint source pollution."

We have completed several projects in recent years, are completing several projects this year, and have several projects planned for the future to enhance habitat in the Stillaguamish Basin. Most of our projects are cooperative ventures with private landowners, the Tribes, and the Forest Service.

We have an existing stream inventory of the Stillaguamish System which is continuously being updated by our staff and others as new information becomes available. Any stream inventories conducted by the PWI Ambient Monitoring Program or other qualified groups will certainly be reviewed by our agency.

We annually survey hundreds of miles in the Stillaguamish Watershed counting four species of adult salmon. The data from these surveys provides the basis for the annual evaluation of salmon escapements. They can also identify potential sites for restoration or enhancement.

A MOU to identify the process and implementation of stream inventories and rehabilitation is a good idea which we support in concept. However, it should be recognized that because of the number of state and federal agencies, tribes, and others involved a final MOU could take years to complete. We will continue our enhancement efforts in the basin concurrently with any MOU discussions.

We have been involved with two recent publications called "Plants For Fish" and "Woodland Fish and Wildlife". Both of these publications try to educate the public on the need for habitat protection and how it can be accomplished. Both publications promote healthy streams and provide information which could probably be included in the Plans Natural River Systems material.

September 1, 1985
We support the Stillaguamish Watershed Plan and have been conducting
division stream rehabilitation and education within the watershed
which concurs with our responsibilities in the Plan. We will continue
these activities subject to available funding and staff.

Sincerely,

Kalmar Martinson
Michael M. McGuiness, Senior Planner  
Snohomish County Public Works  
5th Floor Administration Building  
Everett, Washington  98201  

RE: Stillaguamish Watershed Action Plan

Dear Mr. McGuiness:

Thank you for the opportunity to comment on the public hearing draft. I recognize the level of coordination, hard work and public involvement it takes to put together such a document.

The Stillaguamish Plan will be used as a guide for many other watershed plans to address non-point sources of pollution. The Department is very interested in reducing sources of pollution, especially to Puget Sound. As you are aware, the DNR manages public tidelands. Activities include aquaculture, shell fish harvesting, commercial leasing and other water dependent uses. All will benefit from reductions in non-point pollution.

The Department manages about 100 square miles (64,640 acres) within the watershed boundary. Once the management committee expanded the plan to the entire watershed, it probably would have been appropriate to invite the Department as a member. I understand that Department representatives did maintain an active role in the process, however.

Attached you will find the Department’s statement of concurrence as identified in your letter. Also, as requested Greg Ariss, Cascade District Manager, will continue to be the contact person for the Stillaguamish Action Plan.

Sincerely,

Art Stearns
Department Supervisor

cc: Bill Wallace, Northwest Regional Manager  
    Greg Ariss, Cascade District Manager

Recommendation: The Department of Natural Resources, Northwest Regional office, should provide additional staff resources necessary to inspect and enforce compliance with Forest Practices permits and assist the Stillaguamish Forest Practices Forest to review and condition Forest Practice applications.

DNR Response: Currently, as a result of the current fiscal year 99-91 budget, the Department cannot support the recommendation. We feel the proposal would restrict our ability to provide uniform program administration throughout the State and Region by having to shift limited staff resources. The Department is working with all TFW cooperators to find ways to assist with the field applications and compliance process. The cooperators in the Stillaguamish Basin have been meeting on a regular basis the last year and a half. We are finding the cooperators are providing a great deal of assistance in field review of applications and operations.

The Department’s Northwest Region will be requesting additional staff for field support during the upcoming budget planning period. The results will not be known until the spring of 1991. The Region will prioritize their needs when funding is provided and they will consider the recommendation at that time.
Recommendation: The Northwest Regional office of the Department of Natural Resources should track all Forest Practice applications in the Stillaguamish Watershed. The results should be published in a report at the end of each fiscal year.

DNR Response: The Department will provide to the Stillaguamish Implementation Review Committee a summary at the end of each fiscal year of Forest Practice applications in the watershed.

Specific Action:
1. The Northwest Region Forest Practice Coordinator (DNR) will provide the summary.
2. The summary will be provided by August 25th of each year.
3. This summary will include:
   a. Number of Forest Practice applications
   b. Class of Forest Practice applications
   c. Acres of timber harvest proposed
   d. Acres of chemical treatment proposed
   e. Miles of road construction proposed
   f. Miles of road abandonment proposed
   g. Number of Stop Work Orders issued
   h. Number of Notices to Comply issued
   i. Number of citations issued

Recommendation: The Department of Natural Resources, Northwest Region, in cooperation with the Tulalip and Stillaguamish Tribes, should convene a meeting of all affected parties to discuss the creation and implementation of a Resource Management Plan in the Stillaguamish Watershed. Federal (USFS), State (DNR, DOW, DDF, DOE), and county agencies as well as affected property owners, tribes, environmental groups, sport fishing organizations, and other affected parties should encourage the development of this Resource Management Plan.

DNR Response: The Department will work with the Tulalip and Stillaguamish Tribes to convene a meeting to discuss the creation of a Resource Management Plan.

Specific Action:
1. Cascade District Manager to set up informal meeting with Tulalip and Stillaguamish Tribe by November, 1989 to discuss R.M.P. meeting.
2. Agenda and invitations to be sent by January 15, 1990
3. R.M.P. meeting to be held late February, 1990.
Recommendation: The Department of Natural Resources, in cooperation with other Timber/Fish/Wildlife participants and the U.S. Forest Service, should inventory roads in the Stillaguamish Watershed to determine road maintenance, siting, and age problems. A Memorandum of Understanding should be developed between the DNR, the U.S. Forest Service, and other involved parties.

DNR Response: Due to current budget constraints, the Department is currently not capable of conducting an inventory of all orphaned or abandoned roads on State and private land. A test project was conducted during fiscal year 1988 and 1989. Results from the project are still being evaluated. After total evaluation of cost and benefit, a proposal for funding may be put together for the next funding cycle. Meanwhile, the Department is continuing to address any potential problems as we become aware of them.

Recommendation: The Darrington Ranger District of the U.S. Forest Service and the Northwest Region of the Department of Natural Resources should meet on an annual basis to discuss planned timber sales in the Stillaguamish Watershed.

DNR Response: The Department of Natural Resources agrees with the recommendation. Better communication and planning of timber sales should improve water quality.

Specific Action:
1. The Department’s Arlington, Darrington and Snohomish Unit Foresters will provide Action Plans by December 15th of each year, to the to the Stillaguamish Implementation Review Committee.
2. The Cascade and Rivers District Managers will set up an annual review of the Action Plans during January with the Forest Service.
3. Action Plans may be adjusted after meetings to reduce impacts to public resources.
DEPARTMENT OF NATURAL RESOURCES
STILLAGUAMISH WATERSHED ACTION PLAN
FOREST NO. 9

Recommendation: The Darrington Ranger District of the U.S. Forest Service and the Northwest Region of the Department of Natural Resources should hold a workshop to provide training to agency employees and the general public on Forest Practice Rules and Regulations, Timber/Fish/Wildlife, and the U.S. Forest Service process of planning timber sales, public appeals process, etc.

DNR Response: The Department will work with the U.S. Forest Service, Darrington District, to provide a workshop for respective agency employees and the general public.

Specific Action:
1. The Northwest Region Forest Practices Coordinator (DNR) will set up a planning meeting with the Darrington District by November 15, 1989.
2. Agenda, instructors and participants should be identified by February 1, 1990.
3. Workshop to be held in March 1990.

DEPARTMENT OF NATURAL RESOURCES
STILLAGUAMISH WATERSHED ACTION PLAN
FOREST NO. 12

Recommendation: The Tulalip Tribes; the U.S. Forest Service; Departments of Natural Resources, Wildlife, Fisheries; the Washington Forest Protection Association, and other landowners should develop a coordinated stream inventory and rehabilitation program.

DNR Response: The Department supports a coordinated stream inventory and rehabilitation program.

Specific Action:
1. The Stillaguamish Forest Practice Forester will be the Department contact.

ts054.fp
Recommendation: The Timber/Fish/Wildlife (TFW) Training/Involvement/Education (TIE) Committee should coordinate with Snohomish County on public education programs on the Timber/Fish/Wildlife process and how the TFW process relates to water quality.

DNR Response: The Department supports the recommendation and will pass the proposal on to the TFW training/involvement/education committee.

Specific Action:
1. The statewide Forest Practice Program Manager (DNR) will provide the recommendation to the TIE committee members by December 15, 1989.

Recommendation: The Washington Department of Natural Resources, U.S. Forest Service, Washington Forest Protection Association, and WSU Cooperative Extension should develop public and private education programs for the forest practices industry.

DNR Response: The Department agrees with the recommendation. DNR continues to educate the forest industry at every opportunity. Examples are annual logging industry seminars, workshops and dinners; distribution of forest practices material; personal contact; and enforcement.

Specific Action: All Department employees continue to educate forest industry employees on proper protection of public resources. Coordinate with WFFA and local forest industry representatives to conduct workshops for industry foresters, small private landowners and loggers. (Use County Extension Service and Farm Forestry Association.) Begin planning by March of 1990.
Michael M. McGuiness  
Snohomish County Public Works  
5th Floor, Administration Building  
Everett, WA 98201

September 28, 1989

Dear Mr. McGuiness:

The Department of Social and Health Services has reviewed the Stillaguamish Watershed Action Plan. The plan indicates that the Department has the following responsibilities:

1. Working with the Snohomish Health District, the Department is to survey on-site sewage disposal systems for the Warm Beach area to document failing systems.

2. The Puget Sound Water Quality Authority Plan requires the Department to study the existing State Board of Health Rules and Regulations for On-site Sewage Disposal Systems (WAC 248-96) and propose revisions to the State Board of Health for adoption. The local health jurisdiction is the primary implementing entity within Snohomish County and will be required to be as stringent as the State Board of Health Rules.

The Department of Social and Health Services concurs with the Stillaguamish Watershed Action Plan's requirements for conducting a survey and to study and propose revisions to WAC 248-96. A shoreline survey of the Warm Beach area will be conducted. The regulations will be completed within the next six to nine months.

If you have any questions, please call David Lenning at 753-3764.

Sincerely,

ERIC SLAGLE  
Office Chief  
Environmental Health Programs
Development No. 5 (Increase No-Spray Zones)
We recommend this item be changed to: (Protect Roadside Bodies of Water)
The Washington State Department of Transportation and Snohomish County
Roadside spraying programs should be conducted in such a manner to ensure
that pesticides cannot be carried directly into adjacent streams or
wetlands. These spraying programs should include consideration of the
solubility of herbicides used, drainage patterns and bio-filter capacity of
the ditches, application timing in relation to rainfall, saturated soils,
use of no-spray zones and other chemical and physical characteristics that
influence movement of pesticides in the roadside environment.
If you have questions, or need additional information, please contact Fay
Conroy at (206) 753-3877.

Sincerely,
E. R. "Skip" Ruch, P.E.
Project Development Engineer

cc: Ken Stone, Ecology FV-11
Nancy Hanson, PSWQA
John Conrad, Maint
Jack McIntosh, Project Dev.
Dick Johnson, Dist. 1, MS 138
Bob Finnis, Dist. 1 MS 138
August 29, 1989

Michael M. McGuiness, Senior Planner
Surface Water Management
5th Floor Administration Building
Snohomish County Courthouse
Everett, Washington 98201

Dear Michael:

Washington State University Cooperative Extension in Snohomish County submits this letter to express concurrence with the Stillaguamish Watershed Action Plan.

Cooperative Extension will:

1) Education No. 2- Coordinate educational programs in conjunction with the Snohomish Conservation District that are directed towards the agricultural community with the purpose of increasing that community's participation in water quality projects.

2) Education No. 4- Develop, plan, implement and evaluate an effective water quality education program for our target populations. These programs will include: brochures, watershed tours, workshops on BMP's for agriculture, home water conservation, waste disposal and septic tank management, work with youth and adults in programs such as 4-H, Master Gardeners, Master Food Preservers, Livestock Masters, pesticide use training and recertification.

3) Education No. 7- In conjunction with Washington Department of Natural Resources, U.S. Forest Service and Washington Forest Protection Association develop an education program for employees of the forest industry and the interested public on herbicide use, proper fertilization and sludge application.

4) Education No. 11- Establish a demonstration small farm in the Stillaguamish Watershed that clearly demonstrates the value of Best Management Practices in reducing non-point source runoff. Demonstrations would be coupled with workshops and tours for area farmers.

5) Education No. 14- Develop an alternative onsite sewage disposal system model. This tabletop demonstration model will be transported to educational meetings, schools, service clubs, (etc.).

6) Education No. 19- In conjunction with the Snohomish Conservation District will write and publish a bimonthly newsletter for commercial and non-commercial farm operators. In addition water quality articles will continue to be published in Extension's regular agriculture and home newsletters (Dairy Notes, Sundown Farmer, MS Newsletter, 4-H Newsletter).

Cooperative Extension’s program year is July 1 - June 30 of each year. Education tasks no's 2, 4, 11, and 17 are partially included in the 1989-90 program of work. The remainder of these education tasks will be included in the 1990-91 Annual Plan of Action. The implementation of all Educational Tasks will take three to four years, with many of the tasks Cooperative Extension has agreed on, being ongoing activities for many years.

All of these efforts and the implementation of the Educational Tasks will only be accomplished if WSU Cooperative Extension in Snohomish County has adequate funding and personnel to carry out the above programs.

Sincerely,

Leon J. Church, Chair
WSU Cooperative Extension
Snohomish County
September 27, 1989

Michael M. McGuiness, Senior Planner
Surface Water Management
5th Floor Administration Building
Snohomish County Courthouse
Everett, Washington 98201

Subject: Amendment to Statement of Concurrence dated
August 29, 1989

Dear Michael:

Based on new information received from Pilchuck Audubon Society, Washington State University Cooperative Extension in Snohomish County submits this letter to express concurrence with two additional recommendations from the Stillaguamish Watershed Action Plan.

Cooperative Extension will:

Education No. 12 - Pilchuck Audubon Society, WSU Cooperative Extension of Snohomish County, and other interested agencies in cooperation with community groups in the Stillaguamish watershed should coordinate a committee of interested agencies, organizations, and citizens to plan an event called "Festival of the River."

Education No. 15 - Cooperative Extension of Snohomish County and local citizen groups should involve local artists and photographers to develop scenarios of the Stillaguamish watershed for consideration as a scenic poster.

Education tasks no’s 12 and 15 are partially included in the 1989-1990 program of work. WSU Cooperative Extension will seek funding to accomplish these tasks. However, we will be able to implement the Festival of the River only if we receive adequate funding and personnel.

Sincerely,

Leon J. Church, Chair
WSU Cooperative Extension
Snohomish County
Michael McGinnis
Shomish County Dept. of Public Works
5th Floor, Administration Building
Everett, WA 98201

Dear Mike:

This letter constitutes the Statement of Concurrence for the Pilchuck Audubon Society as it relates to the Stillaguamish Watershed Action Plan.

As you know, PAS is a non-profit environmental organization, currently run solely by volunteers, and on a limited budget. I will attempt in this letter to give you a synopsis of each item you have listed for PAS; there is no way I can give you an absolute commitment, nor a time schedule.

2-30: Education No. 15 (Sponsor for Future of Forest Ind.) This item is in conjunction with the Stillaguamish and Tulalip Tribes. This is a forum in which I am very interested, and we will do our best to help both Tribes put together such a forum. We may decide that other agencies (such as DNREL) can help. I will contact Pat Stevenson and Jim Freeman in the fall to see what ideas and time schedule we can develop.

2-39: Education No. 9 (Citizen Action Training School). This program abbreviated CATS, was very successful for PAS; many worthwhile projects, including Festival of the River planning (see below), were developed as part of the service "payback" from the classes which were held. Ellen Gray, who was our Project Director and is currently PAS' Conservation Chair, has expressed an interest in submitting a P.I.E. grant to extend this project an additional year. The Board of PAS has encouraged Ellen to do so. Ellen is currently in Alaska working as a consultant; she will be back soon, and at that time I will check to see if she is still interested in submitting this grant. This project was discussed at our Board meeting earlier this summer where we knew Ellen would be spending so much time in Alaska. This project will not go ahead on schedule if Ellen does not submit the P.I.E. grant and this grant is not awarded. However, we will then look for additional grant money to fund this project at a later date.

2-40: Education No. 12 (Festival of the River). As you know, this idea was developed through the Forest Practices Workgroup. Catherine Clausen, who was a member of that Workgroup was also a participant in our CATS program (see above). For her service project, she choose to develop Festival of the River. She has done a great deal of work on this already, and has many people committed to seeing the project through completion. Currently, the date of the first festival is scheduled for August 1990. Catherine has done an extensive report on this, including a time schedule. She has been working closely with John Munh of VSU Cooperative Extension. The last time I talked to Catherine, we discussed with the best "lead organization" for the Festival. I told her I would be most supportive if she was going to do a P.I.E. grant through PAS, and I would help her in any other way I could. I also said if she found another agency, such as VSU, to be the recipient of grants and other donations, this was also fine with me. I feel you might have a copy of her report or further information, please contact her at: 3930 Fielding Avenue, Bellingham, WA 98225 (676-0576). It is my understanding that Marilyn Freeman has also been involved in helping Catherine develop this project; she may have a copy of Catherine's plan.

2-41: Education No. 15 (Sponsor for Future of Forest Ind.) I apologize for not noting that this was inappropriate in my previous letter as a PAS project. It was developed as part of the Festival of the River. It is my understanding that John Munh of VSU Cooperative Extension was in charge of that part of the project. John can be reached at 313-2404.

2-40: Education No. 13 (Arbor Day Activities). PAS started a project last year called TREES FOR LIFE. This centered around Arbor Day activities, during the month of April, and concentrated on the value of trees as they related to global warming (The Greenhouse Effect), but also emphasized all values of trees and forests. We had over 20 sponsors last year. We plan to continue the project in Spring of 1990. Some of our cooperators are also involved in the Stillaguamish Watershed Management (soon to be Implementation) Committee. They include: US Forest Service (Darrington RD); DNREL; VSU Cooperative Extension; and the Shomish County Council. Some of the events which will be specific to the Stillaguamish Watershed are:

Public education. Last year we had one pilot project in the Arlington School District. Next year three projects are planned for Arlington alone. We have also been approached by the Stanwood School District to help develop some planting projects in High School grounds. I believe the Forest Service has also done some public education in Darrington during Arbor Day week. PAS did a program and gave away over 300 trees (donated by Scott Paper Company) on the Tulalip Indian Reservation (Tulalip Elementary School). We were asked to come back next year; I plan to try to schedule something with the Darrington RD for this project, as they asked to have Smokey the Bear attend with me.

Educational Display. We recently received a matching grant from DNREL to develop an educational display on TREES FOR LIFE. The emphasis will be on natural forests versus managed forests as they relate to global warming. This will also include information on the value of trees and tree planting information. PAS has in its budget money for this matching grant, so the total for this will be $2600. We will also seek in-kind services and have received an offer for graphic arts services. Finally, the Society of American Foresters (SFA/Snohomish County) has a preliminary basis offered to help us with this project, as has an organization called the Greater Ecosystem Alliance.
This educational display will be available for the Festival of the River, and will be loaned to various libraries in Snohomish County. It will be offered to libraries in the Stillaguamish watershed, including Stanwood and Arlington.

Tree Planting Projects. We once again will be giving away free trees. Last year our trees were donated by the U.S. Forest Service and DNR. One major depot was in Marysville, with most of the trees being given to people who lived in North Snohomish County. In addition to free trees, we had one major planting project in the Stillaguamish watershed. We will plan more for the coming year—depending on demand and interest.

Additional Projects. We will be submitting grants later this year to fund additional projects under TREES FOR LIFE. In addition, we will be working with our other cooperators to see what parts of this Arbor Day celebration they may wish to work with us on.

I realize that this may not be the amount of detail on each project that you requested; it is, however, the best and most honest attempt I can come up with at this time. Please let me know if you need some additional information, and I will try to provide what I can.

Sincerely,

Bonnie Phillips-Howard
President

cc: Catherine Clausen
    John Rumm
guidelines.

5) Forest No. 6 (Resource Management Plans)
We concur with the recommendation to participate in any discussions concerning the creation and implementation of Resource Management Plans in the Stillaguamish Watershed. The Stillaguamish Tribe is willing to assist the Department of Natural Resources in coordinating a meeting between all affected parties.

7) Forest No. 13 (Mitigation of Past Impacts)
We concur with the general intent of this recommendation. However, this recommendation should be incorporated as part of the stream inventory and rehabilitation program identified in recommendation Forest No. 12. The Stillaguamish Tribe agrees to participate in any program as part of the Stillaguamish Watershed Action plan for stream rehabilitation and the mitigation of water quality impacts from past forest practices activities.

8) Forest No. 14 (Timber/Fish/Wildlife Annual Review)
We concur to work with the Tulalip Tribes to develop an issue paper based on the forest practices concerns raised during the development of the Stillaguamish Watershed Action Plan. This paper will be introduced at the T/F/W annual Review and distributed to the T/F/W Administrative Committee.

9) Forest No. 15 (Forum: Future of the Forest Industry)
We concur with the recommendation to coordinate a forum to discuss sustainable forestry and the future of the forest industry in the Stillaguamish Watershed.

10) Other Sources No. 3 (Visual Assessment of Water Quality)
The title of this recommendation is misleading. "Visual Assessment of Water Quality" indicates the development of a non-technical monitoring program for identifying potential water quality problems in the Stillaguamish Watershed. We assume that this is not the intent of the recommendation. The Stillaguamish Tribe concurs with the recommendation to work with Snohomish County and the Tulalip Tribes to develop a consistent process for notifying appropriate agencies of water quality problems identified by our staff in the field. We recommend that this recommendation be implemented as one of the responsibilities of the "Watershed Coordinator" position.

11) Other Sources No. 4 (Alteration of River Channels)
We agree with the general intent of this recommendation that the reclamation of wetlands and floodplain areas should be alternatives considered as part of wetland, floodplain management, and open space planning programs. However, the Stillaguamish Tribe does not typically develop and implement these types of planning programs for the
Stilaguamish Watershed. We suggest that the wording of this recommendation be changed to read: "Stilaguamish County and the Department of Ecology should evaluate the relocation of wetlands and floodplain
state within planning, floodplain management plans, or other relevant planning efforts." The purpose of this letter has been to bring the formal "Statement of
Concurrence" from the Stilaguamish Indian Tribe's behalf the Stilaguamish Watershed Action Plan of Public Works in finalizing
helpful to the Stilaguamish County Department of Public Works.

Sincerely,

Gail Cooper
Chairperson

The Stilaguamish Tribe
4) Onsite No. 3 (Sewage in High Risk Areas)

We concur with our proposed role to coordinate the distribution of home dye testing kits and educational materials by citizen volunteers in the high risk areas identified in the plan.

5) Forest No. 6 (Resource Management Plans)

We concur with the recommendation to participate in any discussions concerning the creation and implementation of Resource Management Plans in the Stillaguamish Watershed. The Tulalip Tribes are willing to assist the Department of Natural Resources in coordinating a meeting between all affected parties.

6) Forest No. 12 (Stream Rehabilitation)

We concur with the general intent of this recommendation that a coordinated stream inventory and rehabilitation program is needed for the Stillaguamish Watershed. We agree to work with the agencies identified in the plan and to seek funding for implementation of this recommendation.

7) Forest No. 13 (Mitigation of Past Impacts)

We concur with the general intent of this recommendation. However, this recommendation should be incorporated as part of the stream inventory and rehabilitation program identified in recommendation Forest No. 12.

8) Forest No. 14 (Timber/Fish/Wildlife Annual Review)

We concur with the recommendation to develop an issue paper based on the forest practices concerns raised during the development of the Stillaguamish Watershed Action Plan. This paper will be introduced at the T/F/W annual Review and distributed to the T/F/W Administrative Committee.

9) Forest No. 15 (Forum: Future of the Forest Industry)

We agree with the general intent of this recommendation. However, T/F/W participants have agreed to address these issues through the T/F/W process. A separate forum held as part of the Stillaguamish Watershed Action Plan would be a duplication of effort. Therefore, the Tulalip Tribes do not concur with the recommendation to coordinate a separate forum to discuss the future of the forest industry.

10) Other Sources No. 3 (Visual Assessment of Water Quality)

The title of this recommendation is misleading. "Visual Assessment of Water Quality" indicates the development of a non-technical monitoring program for identifying potential water quality problems in the Stillaguamish Watershed. We assume that this is not the intent of the recommendation. The Tulalip Tribes concur with the recommendation to work with Snohomish County and the Stillaguamish Tribes to develop a consistent
process for notifying appropriate agencies of water quality problems identified by our staff in the field. We recommend that this recommendation be implemented as one of the responsibilities of the "Watershed Coordinator" position.

11) Other Sources No. 4 (Alteration of River Channels)

We agree with the general intent of this recommendation that the reclamation of wetlands and floodplain areas should be alternatives considered as part of wetland, floodplain management, and open space planning programs. However, the Tulalip Tribes do not typically develop and implement these types of planning programs for the Stillaguamish Watershed. We suggest that the wording of this recommendation be changed to read: "Snohomish County and the Department of Ecology should evaluate the reclamation of wetlands and floodplain areas in the Stillaguamish Watershed as alternatives as part of county and state wetland programs, floodplain management plans, open space programs and other relevant planning efforts."

12) Monitoring (Nonpoint Source Control Evaluation, Routine and Runoff-event Monitoring, and Prioirty Pollutants and Sediment Sampling)

We concur with the monitoring recommendations contained in the Stillaguamish Watershed Action Plan and will implement these recommendations contingent upon available funding.

The purpose of this letter has been to serve as the formal "Statement of Concurrency" from the Tulalip Indian Tribes. We hope this letter is helpful to the Snohomish County Department of Public Works in finalizing the Stillaguamish Watershed Action Plan. If you have any questions, please contact Jim Freeman at 653-0220. Thank you for your cooperation.

Sincerely,
The Tulalip Tribes

[Signature]

Terry Williams
Fisheries Director
August 9, 1989

Michael M. McGinnis, Senior Planner
Snohomish County Public Works Department
5th Floor, County Administration Building
Everett, WA 98201

Dear Mike:

The purpose of this letter is to clarify Washington Forest Protection’s response to the two forest practice recommendations contained in the Stillaguamish Watershed Plan.

With respect to Forest Recommendation No. 12 (Stream Rehabilitation), WFPA cannot sign a statement of concurrence. This position is not because we disagree with the intent of the recommendation, but because we are already committed to the Timber, Fish and Wildlife Agreement which is an established structured approach to addressing these issues.

Washington Forest Protection Association and its members are signatories to and very supportive of the Timber-Fish-Wildlife Agreement. To demonstrate our commitment, our members have not only dedicated their scientists to work cooperatively on research and monitoring projects, but have agreed to contribute up to $200,000 a year for five years to TFW cooperative monitoring, evaluation and research. As I’m sure you can appreciate, a $1,000,000 contribution is a significant amount of money.

To the degree that the projects identified in No. 12 are part of the TFW research efforts cooperatively funded by WFPA and the other TFW participants, we will support this program. However, WFPA cannot commit to developing and funding separate programs outside of those agreed upon by all TFW participants. One of the greatest assets of TFW is that for the first time the participants are conducting cooperative research.

In reference to Education Recommendation No. 7, we cannot concur because we are not in a position to train forest employees in these areas. First, we are not involved in the application of sewage, sludge, etc. This is usually administered by local or state government.

Michael McGinnis
August 9, 1989
Page 2

With respect to the application of herbicides, fertilizers, etc. our members usually contract with licensed professionals to conduct these operations. Applicators are licensed by the state as are those foresters who simply buy the chemicals for applicators. Our members have set their own policies and procedures to manage these programs including how they expect contractors to conduct themselves.

As with the Forest Recommendation, we are not opposed to the intent of Recommendation No. 7. Contractors and forest industry employees are already regulated by federal and state laws, rules and regulations on these matters. WFPA cannot add to the level of information and training already available.

I hope this clarifies our position on these proposals. If you have any questions, please do not hesitate to call me.

Sincerely,

Mike Yeager
Director
Land Use

cc: Norm Schaff, Crown Pacific, Ltd.
Dick Ryon, Weyerhaeuser Company
Shirley Bartholomew, Snohomish County Council
County Of Snohomish  
Department of Public Works  
9th Floor, Administration Building  
Everett Wa. 98201  

Attn: Mike McGuiness  

This letter documents my basic concurrence with the spirit of the Stillaguamish Watershed Action Plan. The participation of the Forest Service in certain components of the plan depends on receiving adequate funding, staff, and appropriate management direction.

Specific items in the cost analysis of the plan refer to in-kind cost, covered by existing staffing and budget. Real dollar costs need to be assigned to these items, so that the Darrington District and the Mt. Baker Snoqualmie National Forest can pursue funding for these items—such as watershed rehabilitation inventories, and the Recreational Vehicle waste disposal sites. Staff costs as well as equipment and acquisition costs are needed for current and outyear planning. If adequate staffing and funding are not available, accomplishments of these unfunded items will be deferred.

My staff and I look forward to the opportunity to work with the County, the other lead agencies and implementing entities to improve and maintain water quality in the Stillaguamish Watershed.

Fred M. Harnisch  
District Ranger  

Michael M. McGuiness, Senior Planner  
Surface Water Management  
Snohomish County Public Works Dept.  
5th Floor, Administration Bldg.  
Everett, Washington 98201  

August 29, 1989

Dear Mr. McGuiness:

We have reviewed the Public Hearing Draft of the Stillaguamish Watershed Action Plan that you sent on July 17. You and the people who have worked so hard on this plan did a commendable job. One for which you deserve to be proud.

Matthew S. Brady, District Conservationist, Soil Conservation Service; 630 Vernon Road d1; Everett, Washington 98205; telephone (360) 334-2028, will continue to serve as contact person in working with your Surface Water Management Staff.

It is important that you understand that several of the action items are already initiated jointly by SCS and the Snohomish Conservation District through the position jointly funded by the Conservation District, Centennial Clean Water Fund Grant and SCS.

We have a concern with item Agriculture No. 12, page 2-8. Best Management Practices for Agriculture have been developed for many years and are accepted nation wide. We suggest that Agriculture No. 12 is not needed as a part of the Action Plan.

We support item Agriculture No. 9 (Waste Distribution Systems) which the Conservation District will carry out.

Funds for PL-565 have been at greatly reduced levels for the past several years. Our current backlog of approved projects commits program funding of our PL-565 budget into the late 1990's.  

Matt Brady and Frank Easter, Area Conservationist, SCS, Olympia will work with you in providing assistance where possible and as funding is available. We support you in this worthy effort.

Sincerely,

LARRY A. BROWN  
State Conservationist  

SEP 1 1989  

SPL. OF PUBLIC WORK
Michael M. McGuiness, Senior Planner
Surface Water Management
Snohomish County Public Works Dept.
5th Floor, Administration Building
Everett, WA 98201

Dear Mr. McGuiness:

We have reviewed the Public Hearing Draft of the Stillaguamish Watershed Action Plan. The following items identify Snohomish Conservation District (SCD) as the primary implementing agency.

SCD and Soil Conservation Service (SCS) have already taken steps to implement several of the action items. SCD secured a grant to fund a SCS Soil Conservationist for a two-year period. This person will be responsible for implementing Agricultural Practices Recommendations Numbers 1, 2, 3, and 4.

Agriculture No. 5 is part of SCD's ongoing program, and funded through a five-year agreement with Snohomish County.

Agriculture No. 6 is currently under consideration by SCD, and we are in the process of scoping the watershed to make a PL 566 application feasible.

Agriculture No. 7 has been completed. SCD signed a compliance memorandum with DOE at Level III, and we are currently operating under its provisions.

Agriculture No. 8 has been the focus of our attention for a long time, with no immediate solution in sight. In 1984-85, SCD considered purchasing equipment for a custom pumping service with Referendum 39 funds, but abandoned the idea due to the high cost of operation and maintenance required, liability problems, and other anticipated cost-related difficulties. We, and the local dairy industry, have been encouraging existing pumping businesses to expand their services, with limited success. This service is, at a minimum, capital intensive, hazardous as an occupation, and brimming with legal liability; few people are willing to assume these responsibilities. It seems the next best alternative is to explore on-site farm waste distribution systems, which would involve large capital expenditures by the farm owners. A PL 566 project may be effective in reducing those costs, but acceptance of our proposed project application is still uncertain.

We are also considering the possibility of requesting changes to the Agricultural Stabilization and Conservation Service's cost-share program, at the national level, to include on-site waste distribution systems; this was attempted by Pierce County Conservation District two years ago unsuccessfully, but may be worth another attempt.

Education No. 17 is currently planned as an ongoing activity for SCD, as long as funds are available.

The following items have a direct impact on the activities of SCD and our cooperators, even though we are not identified as the primary implementing agency.

Agriculture No. 6 was proposed to help streamline the permit process for stream projects. As most of our cooperators have some type of water body on or adjacent to their property, this proposal would have a significant impact for us. We would ask that no guidelines be approved without the support of SCD, as a representative of the agricultural community. Also, as stated previously, the term "drainage related proposals" is misleading, as it implies drainage as an agricultural practice; please substitute the term "surface water related proposals" in its place.

Currently, the only situation in which SCD would provide assistance in implementing Agriculture No. 11, mandatory conservation plans, is under the compliance memorandum with DOE, when water quality violations have been documented, and a conservation plan required by DOE.

SCD does not support Agriculture No. 12. We feel the mechanism for protecting water quality is already in place through the Department of Ecology's enforcement of water quality standards, and the Conservation District's technical assistance to solve pollution problems. More attention should be given to supporting these two agencies financially, to assure the continuation of their services.

Nathan Jacobson, District Manager, and Matt Brady, District Conservationist, will continue to work with you in providing assistance where possible and as funding is available.

Sincerely,

Monte H. Marti, Chair
Michael M. McGuinness, Senior Planner  
Surface Water Management  
Snohomish County Public Works Department  
5th Floor, Administration Building  
Everett, WA 98201

December 28, 1989

Dear Mr. McGuinness:

We have been notified that there are two items in the Stillaguamish Watershed Action Plan, that identify actions by our organization, which we failed to comment on.

Education #2 and Education #11 are both activities we agree with and hope to implement in the future.

We have also been asked to provide cost estimates for our involvement in the four action items below. These are rough estimates that should be used for planning purposes only.

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We hope the information provided is sufficient to assist you in completing the action plan. Please contact our office if you have further questions.

Sincerely,

Monte H. Marti, Chairman
October 9, 1989

Mr. Michael McGuiness
Snohomish County, Dept. of Public Works
5th Floor, Administration Building
Everett, Washington 98201

SUBJECT: Stillaguamish Watershed Action Plan

Dear Mr. McGuiness:

The Washington State Department of Ecology has reviewed the Stillaguamish Watershed Action Plan. Please pass on to the Committee our congratulations for producing such a high quality plan within the time and resource constraints you faced. This letter serves as our response to your letters of July 11, 1989, and August 17, 1989, requesting Ecology's concurrence with applicable recommendations in the plan. Our detailed response is enclosed.

The Department of Ecology agrees with the overall goals and objectives of the plan. We have listed the actions requested of Ecology; the numbers in parentheses refer to the action recommendation numbers in the plan. Our response is provided following each recommendation.

We have concerns with the wording of several action recommendations in the plan. Proposed revisions have been developed for the action recommendations of concern to us. With the incorporation of these revisions, we could concur with the action recommendations applicable to Ecology.

For those items where we do not concur with current plan wording, we will be happy to continue to work with the committee on alternative wording if the wording proposed in this letter is not acceptable. Please contact your project officer, Rosemary Walrod at (206) 459-6264, or the individuals listed in the enclosure if you have questions on our responses to the plan action recommendations which involve Ecology.

We look forward to the adoption and implementation of the Stillaguamish Watershed Action Plan.

Sincerely,

[Signature]

Carol Jolly
Assistant Director
Water and Sediments

Enclosures

cc: Bob Duffy
Phil Kneulans
Rosemary Walrod
Ann Wessel
AGRICULTURE ACTION RECOMMENDATIONS

* The Department of Ecology and the Snohomish Conservation District should enter into a Memorandum of Agreement concerning the enforcement of water quality standards with respect to agricultural practices. The Snohomish Conservation District should select and operate at level III of the Memorandum of Agreement. (Agreement No. 7)

Ecology concurs with the action recommendation. (We understand the Snohomish County Conservation District signed the Compliance MOU at level III on July 11, 1989.) It should be noted that the MOU deals with handling complaints and does not delegate enforcement of water quality standards from Ecology to the District.

* The Tulalip Tribes should coordinate all appropriate agencies, including Snohomish County, the Department of Fisheries, Department of Wildlife, Department of Ecology, and Indian Tribes, to agree on stream corridor management guidelines and develop criteria for assessing drainage related proposals. (Agreement No. 8)

Ecology concurs with this action recommendation with the following understanding: Ecology agrees to participate in efforts to coordinate stream corridor management guidelines and to attempt to develop coordinated criteria for assessing drainage related proposals. However, Ecology cannot agree to implement changes to assessment guidelines and criteria before we know what the changes are and before we know that the changes are consistent with applicable laws and regulations. For further information, please contact Phil Kauloric, Nonpoint Source Unit, at (206) 438-7092.

* The Department of Ecology should study the feasibility of developing and propose agricultural practices regulations to protect water quality. (Agreement No. 12)

Ecology cannot concur with this action recommendation. Except as provided through current regulatory authority and the Agricultural Compliance Memoranda of Agreement signed by Ecology, the Conservation Commission, and most of the conservation districts, direct state regulation of agricultural practices is not consistent with current state policy. We do not believe it is realistic to expect such a significant change within the foreseeable future. It is suggested that this recommendation be deleted from this plan. While changes in statewide nonpoint regulations may be proposed in the future, local governments may currently choose to adopt additional precriptive measures according to provisions in the 1989 Puget Sound Water Quality Management Plan (PSWQMP) and Chapter 400-12 WAC. For further information, please contact Phil Kauloric, Nonpoint Source Unit, at (206) 438-7092.

DEVELOPMENT ACTION RECOMMENDATIONS

Snohomish County Department of Public Works and the Department of Ecology should work together in establishing a publicized clearinghouse phone number for Snohomish County residents to call regarding drainage complaints, grading violations, and water quality problems and violations. (Development No. 1)

Ecology concurs with this recommendation. State funding for local implementation may be available through competitive financial assistance programs administered by Ecology's Water Quality Financial Assistance Program.

There are provisions in the 1989 PSWQMP, Stormwater Element SW-2, for urbanized areas as defined by the U.S. Census Bureau to implement a water quality complaint response program. A clearinghouse phone number, such as METRO's Trouble Call Response Program, is a good way to begin implementing this requirement.

Ecology will provide guidance for these programs through its rule and supplemental guidelines, but it will be the County's responsibility to develop and implement the program. For further information, please contact Ann Vensel, Stormwater Unit, at (206) 438-7077, or Steve Carley, Water Quality Financial Assistance Program, at (206) 459-6104, for funding information.

* The Department of Ecology and Washington Department of Transportation should work closely with Snohomish County Department of Public Works in developing a state program to treat runoff from federal, state, county, and local highways and roads. (Development No. 4)

Ecology concurs with this action. However, it is suggested that the word "treat" be changed to "manage."

Under Element SW-5 of the 1989 Puget Sound Water Quality Management Plan, Ecology is working with the Department of Transportation on a proposed Highway Runoff Program (proposed target date: June 1990) that will address runoff from state and federal (interstate) highways within the Puget Sound basin.

In addition, Element SW-1 of the 1989 PSWQMP requires local jurisdictions to address runoff from their streets and roads under the maintenance requirements (current target date: May 1991) for new and existing storm drainage systems. (Local jurisdictions may elect to enact requirements earlier).

Ecology is developing a technical manual (proposed target dates: interim - June 1990; final - May 1991) which will define the minimum technical standards for local jurisdictions. Included in the manual will be a section on Best Management Practices for the control of pollution from urban land uses. BMPs for roads will be addressed in this section. Each jurisdiction will be required to adopt an approved stormwater management technical manual.
There will be ample opportunity for all interested and affected parties, including Snohomish County, to comment on the above-mentioned rules, guidelines, and technical manual through workshops, public hearings, and written input. FOCUS sheets are available from Ecology and provide additional information. For further information please contact Gary Kruger, Stormwater Unit, at (206) 438-7529.

OTHER SOURCES ACTION RECOMMENDATIONS

* Snohomish County Solid Waste Management Division should work with the Department of Ecology in identifying and implementing solutions to illegal disposal practices in the Stillaguamish watershed. (Other Sources No. 2)

Ecology concurs with this action and will work with Snohomish County to identify and implement solutions to illegal disposal practices. For further information please contact Randy Martin, Solid and Hazardous Waste, at (206) 419-6418, or Brad Everson, Waste Reduction and Recycling, at (206) 439-6257.
Stillaguamish Watershed Management Committee
Michael McGuinness, Project Manager
c/o Snohomish County Department of Public Works
5th Floor, Administration Building
Everett, Washington  98201

October 8, 1989

Dear Mr. McGuinness:

The Washington Department of Wildlife has reviewed the draft Stillaguamish Watershed Action Plan, and concurs with recommendations the Department must implement. Specifically, under recommendation Forest No. 11, p. 2-28, we agree to join with other listed agencies in developing a memorandum of agreement (MOA) and program to identify and prioritize stream rehabilitation projects. Contact for MOA negotiations is Ted Muller, Regional Habitat Biologist at our Mill Creek Office (775-1311).

We also concur generally with recommendation Education No. 20, p. 2-43. Under the lead of the State Superintendent of Public Instruction Environmental Education Office, we would be happy to provide technical assistance within our areas of expertise for development of educational material. This assistance should be coordinated originally through the Interagency Nonpoint Technical Assistance Team, where we are represented. In addition, we suggest that the Department of Ecology, as state agency of jurisdiction regarding water quality, be included in the effort under this action recommendation.

We look forward to joining with the Watershed Management Committee in its effort to reduce nonpoint pollution in the Stillaguamish system.

Sincerely,

Curt Smith
Director

Cc:  Department of Ecology, Nonpoint Source Unit
Appendix B: SEPA Review
DETERMINATION OF NONSIGNIFICANCE

FILE NAME: Stillaguamish Watershed Action Plan

DESCRIPTION OF PROPOSAL: The Stillaguamish Watershed Action Plan is a locally developed and implemented plan to prevent and control nonpoint source pollution in the Stillaguamish watershed and Warm Beach area. The action plan contains a series of source control programs that include recommendations addressing education, technical and financial assistance, regulation, monitoring, and/or enforcement to control, prevent, and mitigate nonpoint source pollution in the Stillaguamish watershed. The total planning area is 690 square miles.

LOCATION OF PROPOSAL: The Stillaguamish watershed and Warm Beach area encompass 690 square miles, with approximately two-thirds of the area within Snohomish County.

The issuance of this Determination of Nonsignificance (DNS) should not be interpreted as acceptance or approval of the subject proposal as presented. Snohomish County reserves the right to deny or approve said proposal subject to conditions if it is determined to be in the best interests of the County and/or necessary to the general health, safety, and welfare of the public to do so.

PROONENT & LEAD AGENCY: Snohomish County Department of Public Works
5th Floor, Administration Building
Everett, WA 98201

THRESHOLD DETERMINATION: The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review by Snohomish County of a completed environmental checklist and other information on file with this agency. This information is available for public review upon request.

This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date below. Written comments may be submitted to the lead agency, to the attention of Michael M. McGuiness, at the above address. Comments must be received by August 15, 1989.

RESPONSIBLE OFFICIAL: Jack Bilsborough
POSITION/TITLE: Engineering Director

DATE: 6/30/89
SIGNATURE: [Signature]

For further information contact Michael M. McGuiness, Department of Public Works, 259-9464 extension 2267.
Bibliography


Stillaguamish Watershed Action Plan


Bibliography


B-3
Stillaguamish Watershed Action Plan


Bibliography


