

Skagit County **2007 Salmon Action Report**



Skagit County 2007 Salmon Action Report

February 1, 2008

Board of County Commissioners

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TABLE OF CONTENTS

Executive Summary	v
Introduction	1
I. Interdepartmental programs	3
Extensions of Public Water	3
Salmon Heritage Program	3
Coordination with Others SPR § 1(b-d)	4
Ruckelshaus Center SSB 5248 Process	4
Climate Change Plan.....	4
Salmon Strategy Website	4
II. Geographic Information Systems.....	5
Riparian Mapping Project SPR § 3.....	5
III. Parks and Recreation.....	6
Enhancement of Riparian Areas SPR § 6(a).....	6
Riparian Acquisition SPR § 6(b).....	6
Public Outreach SPR § 6(d)	7
Coordination with Others SPR § 1(b-d).....	7
IV. Planning & Development Services	7
Enforcement SPR § 5(c)	7
Public Outreach SPR § 5(b)	8
V. Public Health Department.....	8
On-Site Sewage Management Plan.....	8
Small Quantity Hazardous Waste Generators.....	9
Illegal Dumping	10
Junk Car Round-Up	10
In-stream Flow Management	10
VI. Public Works	11
Clean Water Program	11
Fish Passage Projects.....	11
Grant Applications SPR § 1(b).....	13
Habitat Enhancement Projects	14
Instream Flow Rule.....	15
Solid Waste.....	16
Monitoring and Adaptive Management Program.....	16
Cooperation & Public Outreach.....	18
Appendices.....	19
Appendix A. Letter from Department of Ecology	19
Appendix B. PDS Critical Areas Information Handouts.....	22
Appendix C. Skagit Valley Herald Article on “Jamming Hansen Creek”.....	27
Appendix D. Skagit County Government Community Report, December 2007.....	29

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EXECUTIVE SUMMARY

On October 8, 2007, the Skagit County Board of Commissioners unanimously passed Resolution R20070499, the Salmon Policy Resolution. By articulating a coordinated policy for county staff, the Salmon Policy Resolution sets Skagit County on a path of proactive leadership toward salmon recovery in the Skagit and Samish River basins.

The Salmon Policy Resolution orders all county departments to work on salmon recovery through several different strategies and initiatives, and directs departments to consider salmon protection and recovery in all their actions. To effectively monitor progress, the Salmon Policy Resolution requires an annual “Salmon Action Report.” This document is the first such report, and it reveals that Skagit County’s policy has produced clear and decisive results since the Salmon Policy Resolution was executed a mere four months ago.

Skagit County has:

- Initiated a comprehensive mapping inventory of all lands in permanent riparian habitat status, in order to better understand the work completed and the work ahead;
- Retained a high-level academic to perform a top-down review of the county’s critical areas monitoring and adaptive management program;
- Recognized the Skagit Watershed Council as the lead agency for state and federal salmon recovery funding in the Skagit River basin;
- Tasked the county’s top administrative officer to serve as the county’s representative on the Skagit Watershed Council;
- Made key habitat acquisitions in partnership with other organizations such as the Skagit Land Trust and The Nature Conservancy;
- Completed a large-scale salmon habitat enhancement project on Hansen Creek, a key salmon-bearing tributary, in cooperation with local tribes;
- Moved forward with large-scale habitat acquisition efforts, including the Cockreham Island Buy-Out program;
- Implemented the Skagit River Instream Flow Rule, which state Ecology director Jay Manning has called the “best instream flow rule in the State of Washington”;
- Removed undersized culverts and other barriers to fish passage, and replaced them with fish-friendly conveyances;
- Taken a decisive leadership role in the ongoing Ruckelshaus Center SSB 5248 process, an effort to develop a statewide scheme for protection of riparian habitat in agricultural areas;
- Implemented the Skagit County Clean Water Program to reduce fecal coliform and other contaminants in surface waters, with the aim of protecting marine life and the marine environment;
- Initiated a far-reaching and progressive program to eliminate the deleterious effects of sewage runoff on salmon habitat.

The Skagit River is a regional treasure. Producing a third of Puget Sound’s fresh water and home to a third of its threatened wild Chinook salmon, the Skagit River is a natural resource important to both the state and the nation. Skagit County and its citizens are committed to protecting and restoring salmon runs on the Skagit through aggressive habitat acquisition. But Skagit County’s small property taxpayer base puts severe constraints on the funding available for the task. It is imperative that state, federal, tribal, and private entities interested in seeing the recovery of Skagit River salmon begin ramping up their financial contribution to habitat acquisition, a time-limited endeavor given the increasing intensity of development pressure we face in the Skagit Valley. Because lands that are best for salmon habitat are most often those worst for people given the increasingly-negative effects of climate change, we believe this strategy makes sense for humans and fish alike.

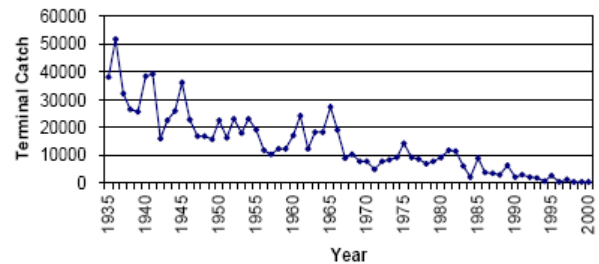
“If our salmon are not healthy, then our watersheds are not healthy—and if our watersheds are not healthy, then we have truly squandered our heritage and mortgaged our future.” — former Oregon Governor John Kitzhaber

INTRODUCTION

Skagit County’s Skagit and Samish watersheds are important to both local citizens and the entire state. The Skagit River is the largest source of fresh water and home to some of the largest salmon runs in Puget Sound, and Samish Bay is one of the leading shellfish producers in the state. The Skagit River watershed is the third largest watershed on the west coast of the contiguous United States and the largest and “one of the most unspoiled strongholds of fish and wildlife habitat in the Puget Sound.”¹ The Skagit River hosts all five species of Pacific salmon. It has six independent populations of threatened Chinook salmon, six populations of threatened steelhead, at least 26 local populations of threatened bull trout, three populations of chum salmon, two populations of Coho, and one each of pink and sockeye. Skagit County is often called the “last, best hope” for salmon recovery in Puget Sound.

If the state of the salmon is an indicator of overall watershed health, then our watersheds are sick. As the accompanying graph depicts, Skagit River Chinook salmon stocks have been declining since at least 1935. Despite occasional short-term increases, the long-term trend for Chinook populations is inexorably negative. Where Chinook catches once numbered in the tens of thousands, in the 1990s they fell to several hundred. Given climate change and increasing conversion of habitat to human uses, the prognosis for long-term species survival—absent decisive action—is poor.

Skagit Chinook Terminal Catch, 1935-2000,
Skagit Chinook Recovery Plan 2005, at 2.



A LONG HISTORY OF HELPING FISH

Skagit County is not new to salmon recovery efforts, but also has not always been a full partner. Skagit County’s work to deal with fish passage barriers predates the Endangered Species Act listing of Puget Sound Chinook salmon in 1999. When Chinook were listed, Skagit County’s response was swift, arranging for significant salmon projects, and developing long-term plans, and producing outreach materials for the public that highlight the importance of salmon recovery. But the facts call for more decisive action.

THE 2007 SALMON POLICY RESOLUTION

Despite these past and ongoing projects, 2007 found Skagit County without a cohesive, inter-departmental policy for coordinating salmon recovery efforts. A salmon recovery report had not been generated in seven years. The county had no strategy to implement the federally-recognized Skagit Chinook Recovery Plan. Coordination with outside salmon recovery groups was minimal, and the county had not recognized the Skagit Watershed Council, the lead entity for state Salmon Recovery Funding Board money. The county’s regulation of riparian land in agricultural areas had been held out of compliance by the Washington State Supreme Court. No salmon recovery webpage existed on the county website.



¹ Skagit Chinook Recovery Plan 2005, at 2.

Seeking to remedy these deficiencies, as well as set the county on a decisive path toward salmon recovery, the Skagit County Board of Commissioners approved a new salmon recovery strategy on October 8, 2007.² Known as the Salmon Policy Resolution (SPR), the plan is an executive order to county departments to consider the needs of salmon in all their actions.

The SPR recognizes that three goals are essential to successful salmon recovery strategy:

- Interdepartmental coordination;
- Partnership and collaboration with outside agencies, groups, and tribal co-managers; and
- Outreach to and education of the public.

THE 2007 SALMON ACTION REPORT

As a mechanism for ensuring compliance with the county's new salmon policy, SPR § 2 provides that county departments involved in salmon recovery shall submit a joint annual report to the Board of County Commissioners. This document, as the first of those reports, serves mainly as a baseline against which the Board may measure future progress.

The annual report has two principal objectives: (1) identify the actions the county has taken to benefit salmon in the past year, and (2) identify department efforts to comply with the Salmon Policy Resolution's directives. Administrative recommendations for the upcoming year are interspersed.


These annual reports will help build institutional knowledge of the county's current salmon recovery efforts, past projects, and past strategies. The Skagit County Salmon Strategy website, available at www.skagitcounty.net/salmonstrategy since October 2007, provides a library of information and many of the supporting documents referenced in this report.

THE FUTURE

On an organizational level, much remains to be achieved. The SPR describes itself as only "interim guidance" for salmon recovery efforts.

While the hills and valleys of Skagit County have been logged and farmed for centuries, the lakes and rivers of Skagit County have been fished for millennia. Salmon and fishing are as much a part of Skagit County's tradition as agriculture and forestry. Skagit County has committed to taking a leadership role in the protection of all three elements of our shared heritage.

Salmon Policy Resolution § 2:

On February 1 of each year, Departments shall submit to the Board of County Commissioners a joint status report detailing the projects and procedural improvements that each department has accomplished in the preceding year to improve salmon habitat and any other actions required by this Resolution. The report should also identify protocols related to emergencies, establishment of partnerships, and collaborative problem-solving efforts. Departments shall also regularly update the County's Salmon Strategy webpage with information about County salmon-specific projects and procedures. 

² Skagit County Resolution [R20070499](#).

I. INTERDEPARTMENTAL PROGRAMS

Extensions of Public Water

In 1996, ten local water utilities, cities, Indian tribes, state agencies, and Skagit County entered a long-term memorandum of agreement regarding Skagit River water resources, known as the “1996 MOA.” The 1996 MOA secures water rights for municipal water purveyors and rural landowners. The 1996 MOA includes a reciprocal promise that local jurisdictions and the State of Washington will cooperate to extend public water supplies to areas with low-flow salmon streams, with the intent of ensuring that instream flows support productive salmon habitat long into the long-range future.

In accordance with the 1996 MOA, adequate instream flows for salmon habitat have been legally secured by the 2006 Skagit River Instream Flow Rule, [WAC 173-503](#). A challenge to the Instream Flow Rule and the county’s implementation was recently settled with a creative monitoring and adaptive management program.

In a January 16, 2008, speech on water rights and climate change, Ecology Director Jay Manning called the Skagit Instream Flow Rule “the best instream flow rule in the State of Washington.”³ Skagit County is proud to have taken a leadership role on this critically important environmental issue, in partnership with the Department of Ecology as well as local tribes, cities, and water utilities. For further information about the Instream Flow Rule, page 15.

Although the long-running dispute over the Skagit River Instream Flow Rule has been amicably resolved, extending public water to low-flow basins remains a continuing obligation under the 1996 MOA. This obligation rests first and foremost with Skagit County PUD No. 1, a signatory to the 1996 MOA and the public water purveyor whose service area encompasses the low-flow stream basins at issue. Skagit County has been proactively engaged in encouraging, supporting, facilitating, and helping with extensions of the public water supply to low-flow stream areas, in full accordance with the 1996 MOA.

In 2007, Skagit County permitted a large public water expansion by Skagit County PUD No. 1 into the Hansen

and Thomas Creek watershed north of the City of Sedro-Woolley. Skagit County’s permit action was challenged by various third parties who sought to block the waterline and undermine the environmental intent of the 1996 MOA. Skagit County marshaled resources and led the fight against these various legal challenges, defending 1996 MOA.

The county’s vigorous defense of the 1996 MOA’s environmental objectives has become a rallying point for other parties to this ground-breaking agreement. The City of Anacortes and the Swinomish Tribe have intervened in the county’s defense. The Upper Skagit and Sauk-Suiattle tribes have both expressed support for the county’s actions and efforts.

The county has also been actively reviewing and commenting on Skagit County PUD No. 1’s ongoing Capital Facilities Plan update to help ensure PUD’s future construction plans fully reflect and further the intent of the 1996 MOA.

Our community needs a predictable water supply for human needs, but not at the expense of our salmon. The county protects the integrity of salmon habitat by ensuring instream flows are met in all river systems and tributary basins. In order to protect flows in salmon streams into the future, Skagit County believes it is critical that all parties to the 1996 MOA continue to act in a unified manor to defend, promote, and finance the basic intent of the 1996 MOA.

Salmon Heritage Program

In early 2007, Skagit County was poised to launch a comprehensive program to acquire conservation easements along key salmon streams in agricultural areas. The effort, known as the [Salmon Heritage Program](#), was modeled on the county’s successful Farmland Legacy program, and was intended to address long-running controversy over riparian habitat on actively-farmed land. The Salmon Heritage Program planned to raise funds through a county-wide ballot measure, pay fair market value for riparian habitat easements, and jointly manage that habitat in cooperation with the tribal-led Skagit River System Cooperative. The program was unveiled to great fanfare, including a front-page article in the Seattle Times.⁴

³ Washington State Department of Ecology Director Jay Manning, Address at Gallatin Group Breakfast with the Director (Jan. 16, 2008).

⁴ Lynda V. Mapes, [Raising taxes to save salmon?](#), Seattle Times, Mar. 23, 2007, at A1.

The initial public reaction to the Salmon Heritage Program was positive, and polling data suggests broad support for habitat acquisition as a means of balancing the environment and property rights. However, the notion of raising county property taxes as the sole funding source for such a program proved considerably less popular. The Skagit River is a regional asset, and local property taxpayers believe that the costs of safeguarding that asset should be shared region-wide. There is widespread support for the Salmon Heritage Program concept, so long as the burden of funding the effort is equitably shared by federal, state, and tribal governments. Finding funding sources for the Salmon Heritage Program, in whatever form it may ultimately take, is an ongoing and critically important topic of discussion.

The Legislature's imposition in May of a three-year timeout on modifications to critical areas ordinances regarding agricultural activities has put the Salmon Heritage Program on hold. The county is proceeding with certain components of the program, including the Riparian Mapping Project (see page 5). The Salmon Heritage Program, in modified form, will likely be a component of the county's suggested resolution to the ongoing ag-fish buffer controversy, an outcome that depends in large measure on the outcome of the ongoing Ruckelshaus Center process.

In the meantime, Skagit County is moving aggressively forward with various other riparian habitat acquisition efforts, as described later in this document.

Coordination with Others | SPR § 1(b-d)

Departments should collaborate with others to...further refine, implement, and monitor the success of the Plans, as well as other endeavors undertaken to restore the health of the County's watershed ecosystems.

County Administrator Gary Rowe has volunteered to serve on the Board of Directors of the Skagit Watershed Council, a non-profit community partnership that serves as the Lead Entity for Water Resource Inventory Areas 3 and 4. Although Skagit County Special Projects Administrator Tom Karsh has served as the county's representative on the council for the past four years, Rowe's presence on the board, as the county's top administrative officer, will help to effectively convey Skagit County's strong commitment to salmon recovery. Rowe is uniquely positioned to provide Skagit County support for the Watershed Council's goals and objectives. As the county's lead administrative officer,

Rowe can improve salmon-related coordination between county departments as well as communicate salmon recovery needs directly to the county commissioners. Through his service on the Puget Sound Partnership's Ecosystem Coordination Board, Rowe can help insure that salmon recovery keeps a strong presence in the Partnership's future action plans.

Ruckelshaus Center SSB 5248 Process

In May 2007, the Legislature passed SSB 5248, creating a three-year "time out" to the ongoing controversy and litigation over riparian buffers on agricultural land. During the time-out, various stakeholders are participating in a collaborative process at the UW/WSU William D. Ruckelshaus Center, with the intent of creating a uniform and equitable plan for protecting riparian habitat in agricultural areas. Because Skagit County is squarely in the center of this state-wide Growth Management Act dispute, the county has made the Ruckelshaus Center process a high priority.

The Board of Commissioners has appointed Special Deputy Prosecuting Attorney Ryan Walters to serve as the county's liaison to the Ruckelshaus Center. In this capacity, Walters is charged with coordinating the process with all county departments, assembling information about the county's current regulations and habitat status, and advocating for an outcome consistent with Skagit County's diverse interests.

Climate Change Plan

Climate change threatens to have a significant negative impact on salmon.⁵ Warmer waters in the summer and fall months will stress salmon beyond their tolerances, while more winter rainfall may wash out eggs from streambeds. A recent University of Washington study of projected climate effects on Snohomish Chinook predicts a 20% population decline by 2050. The county is currently working on a program to both reduce greenhouse gas emissions and to adapt to the effects of climate change. Significant action is expected on this front in 2008.

Salmon Strategy Website

The county has prepared a comprehensive website detailing its salmon projects and policies and provid-

⁵ James Battin et al., *Projected Impacts of Climate Change on Salmon Habitat Restoration*, 104 Proc. of the Nat'l. Acad. of Sci. 6720 (2007), <http://www.pnas.org/cgi/reprint/104/16/6720>.

ing resources for county departments to use in implementing the Salmon Policy Resolution. The site, available at www.skagitcounty.net/salmonstrategy, also includes information on how members of the public can help salmon both in their own backyards and through involvement in salmon action organizations.

✳ **Recommendation for 2008:**

Pursuant to SPR § 2, departments should make a concerted effort to regularly provide information for the Salmon Strategy webpage about their salmon projects and policy updates.

The county should construct a master database of salmon habitat enhancement projects modeled on the Puget Sound Partnership's database to facilitate inter-department coordination and coordination with outside salmon organizations. The database should be made available on the Salmon Strategy website with project photos and linked GIS data.

II. GEOGRAPHIC INFORMATION SYSTEMS

Riparian Mapping Project | SPR § 3

"...Geographic Information Systems shall, by June 1, 2008, assess riparian areas in the AG-NRL and RR-NRL zones to determine existing buffer type and width..."

The Salmon Policy Resolution directs the county's Geographic Information Systems (GIS) department to undertake a large-scale mapping project of riparian areas on agricultural and natural resource lands within the Skagit River watershed (some 770 miles of watercourse). This project was one of the initial inventory work items under the proposed Salmon Heritage Program.

Now titled the Skagit Watershed Ag/RRc-NRL Riparian Mapping Project, the endeavor is on track for completion by the SPR-mandated deadline of June 1, 2008. GIS has hired an additional employee to work exclusively on this project, and dedicates additional staff to the project as needed.

BACKGROUND

Many jurisdictions protect streams and other critical areas using mandatory buffers—strips of land bordering the stream where development or farming is not allowed. Like most jurisdictions, Skagit County requires riparian buffers for almost every zoning classification. But due to a lack of consensus between environmental agencies and farmers on the costs and

benefits of buffers and because buffers can impose a heavy burden on agriculture, Skagit County currently does not require farmers to install riparian buffers on actively-farmed agricultural lands where the riparian area was legally cleared many years earlier. In these areas, Skagit County relies on a program of adaptive management, which involves monitoring streams for water and habitat quality and envisions implementing site-specific solutions (see page 16).

PROJECT GOAL

Although the county's monitoring and adaptive management approach was validated by a recent Washington Supreme Court decision, it is also important to note that robust efforts by the county and other entities have led to significant protection in the Skagit River watershed. With the Riparian Mapping Project, Skagit County will assess the amount of protected riparian habitat, demonstrate the extensive efforts undertaken to date, and help identify stream basins of concern—all consistent with a watershed-level approach to salmon habitat protection and enhancement.

The project's goal is to measure the amount of existing vegetated riparian area and compare it to the amount of potential vegetated riparian area if buffers were in place along all watercourses. The project essentially attempts to answer the question, "How much riparian area is already protected?"

METHODOLOGY

GIS staff met with representatives of UW's Rural Technology Initiative to develop techniques for this project. The project uses high-resolution bird's eye aerial photography that allows easy identification of vegetation type and accurate identification of even narrow buffers less than 30-feet wide. For still more precision, project staff use LIDAR imagery that measures vegetation height. With both types of imagery at their disposal, staff will examine each watercourse and its surrounding area by hand for accurate ground cover assessment.

EXPECTED USE OF RESULTS

Beyond its applications for the Ruckelshaus Center process, Skagit County intends to use the results of this project to evaluate the current status of riparian habitat in the Skagit River Basin, and to prioritize and focus efforts to protect and enhance riparian areas.

III. PARKS AND RECREATION

For more information on Skagit County Parks including a map of park locations, please visit the Skagit Parks Foundation website at www.skagitparksfoundation.org.

Enhancement of Riparian Areas | SPR § 6(a)

Parks and Recreation shall “enhance riparian areas within parklands to promote salmon recovery.”

Skagit County Parks and Recreation (SCPR) focused its enhancement efforts in 2007 on Hansen Creek, within the 726-acre Northern State Recreation Area, as an integral component of the park’s master plan. SCPR has dedicated significant resources, including both staff and funding, to achieve the plan’s enhancement goals.

HANSEN WETLANDS

The wetlands within the Hansen Creek watershed provide an important function for the health and viability of Hansen Creek. SCPR worked with the consulting firm Edge Environmental to improve and restore the important functions of these wetlands. This partnership increases the aesthetic appeal of the park while at the same time improving the biological value of our streams for indigenous fish and wildlife. Local utility companies covered the costs of these restoration efforts through a mitigation banking program.

ALLUVIAL FAN

Parks staff has been working closely with the Upper Skagit Tribe on the next phase of Hansen Creek restoration, which will restore the creek’s alluvial fan that historically allowed sedimentation and floodwater to diffuse over a large area. The current creek runs through a channelized man-made passage. SCPR has tried hard to maximize the acreage available for the restoration of the alluvial fan.

PUMP HOUSE REMOVAL

In 2007, Parks staff discovered an old pump house (below) buried in blackberry bushes with an outdated transformer leaking PCB pollutants into the Hansen Creek watershed. SCPR partnered with the county Public Health and Public Works departments and the Upper Skagit Tribe on the environmental clean-up efforts. Parks paid for all costs associated with the clean-up effort, and will eventually completely remove the pump house building to make way for the alluvial fan project.



FISH-FRIENDLY VEGETATION ENHANCEMENT

Skagit County Parks and Recreation is using federal CREP dollars to remove the non-native vegetation from Hansen Creek riparian areas and replace them with fish-friendly native plantings. This will have several positive impacts on fish:

- The current crop of Himalayan blackberries forms a monoculture along the creek, preventing larger shade-producing trees from growing up along the banks.
- The native trees will form a canopy and keep water temperatures down.
- Native plants also better trap sediment and prevent nutrient loading.
- The trees will one day add large woody debris to the creek, improving fish habitat and increasing stream complexity.

Riparian Acquisition | SPR § 6(b)

Parks and Recreation shall “acquire important riparian lands adjacent to existing county parks...”

Working closely with Skagit Land Trust and the Nature Conservancy, SCPR is acquiring important salmon habitat at the confluence of the Cascade and Skagit Rivers. Over nine acres of riparian floodplain and connecting upland meadow will be added to Pressentin Park in Marblemount. SCPR plans to coordinate with local enhancement groups to perform restoration work in the riparian area. The flood plain portions of the property will be set aside principally for habitat use.

The 23-mile Cascade Trail connecting Sedro-Woolley and Concrete is a marvelous recreational resource for

bikers, horseback riding, running, and walking. While its proximity to the Skagit River provides unparalleled views and scenery, the frequency of public use poses maintenance challenges. Parks is working closely with WDFW and local tribes to find long-term ways to balance the maintenance of the Cascade Trail with habitat needs along the Skagit and its tributaries. Forming a partnership and leveraging grant monies for improving the riparian functions along this corridor has been the focus of these discussions.

Public Outreach | SPR § 6(d-e)

Parks and Recreation shall “provide interpretive facilities and other materials to allow park visitors to learn about salmon and other natural resources...provide appropriate park access to natural resource and salmon spawning areas to support environmental education programs.”

SCPR built an interpretive center and partnered with the Skagit Fisheries Enhancement Group, the Skagit River Bald Eagle Awareness Team, the U.S. Forest Service, and Puget Sound Energy to provide educational and outreach opportunities at Howard Miller Steelhead Park along the Skagit River.



SCPR also placed a living roof kiosk at Pomona Park with information on the life cycle of salmon. The park is bisected by Friday Creek and provides area school kids with an interpretive learning opportunity. The North Cascades Institute uses the park for teaching fourth grade students about indigenous salmon.

Coordination with Others | SPR § 1(b-d)

Skagit County Parks and Recreation has worked with local tribes, Washington State Fish and Wildlife, Skagit Fisheries Enhancement Group, Skagit Land Trust, The

Nature Conservancy, and other groups in improving salmonid habitat along the Skagit River and its tributaries.

COORDINATED PLANTINGS

SCPR has worked with Skagit Fisheries Enhancement Group coordinating work parties and assisting with the planting of vegetation along the Skagit River at Howard Miller Steelhead Park. Parks also acquired several acres of land along the river west of the park.

LARGE WOODY DEBRIS COLLECTION

The Upper Skagit Indian Tribe, the Skagit River System Cooperative, the Skagit Fisheries Enhancement Group and the county have agreed to store wood for fish projects at the county’s pit north of Sedro-Woolley. SCPR plans to collect hazard trees removed from Donovan and other county parks for use in these projects and other areas where large woody debris is required.

✳ Recommendation for 2008

The Skagit County Parks and Recreation department is to be commended for its good work in creating salmon habit. Parks should also modify policies and techniques to demonstrate compliance with SPR § 6(c):

(c) develop salmon-friendly techniques for use in parks maintenance and construction operations...

IV. PLANNING & DEVELOPMENT SERVICES

Enforcement | SPR § 5(c)

Planning and Development Services (PDS) shall “increase enforcement of Skagit County Code Title 14, in particular those sections related to salmon habitat protection.”

Since passage of the SPR, Planning and Development Services has increased their interaction with the Office of the Prosecuting Attorney, and together they are actively pursuing critical areas and other Title 14 compliance actions that have an impact on salmonid habitat. The table below lists the number of PDS critical areas compliance cases over the last six years. All legitimate critical areas compliance issues have the potential to involve fish habitat.

Year	All	Closed	No Basis	Research	Open
2002	28	28			
2003	24	24			
2004	49	47			2
2005	29	20	1		8

Year	All	Closed	No Basis	Research	Open
2006	27	13	7		7
2007	34	7	9	2	16

*** Recommendation for 2008**

To improve the Planning Department’s ability to enforce critical areas regulations, in particular those sections related to salmon habitat protection, the department would benefit from additional staff. Currently, the county’s two compliance officers receive assistance from other staff members with more specialized training in environmental activities but that time is limited by their own workloads. The optimal approach would be an additional compliance officer dedicated to environmental enforcement.

Public Outreach | SPR § 5(b)

PDS shall “develop public outreach and education materials that demonstrate how land use policies protect salmon.”

PDS has developed a series of two-page critical areas handouts (see Appendix B) that provide brief explanations of critical area policy and why those policies are important to protect the county’s environmental resources. In 2007, the Washington State Department of Community, Trade, and Economic Development recognized these handouts as models for local jurisdictions and published them as examples in its Small Communities Critical Areas Ordinance Implementation Guidebook.

PDS staff also participates in workshops and give presentations to the community. In 2007, PDS staff presented at the following events:

- Skagit County Critical Areas Open House in Concrete (March 14)
- Skagit County Critical Areas Open House in Mount Vernon (March 21)
- League of Women Voters’ Wetland Mitigation Banking Forum (October 4)
- Skagit County MAAM Program 3-Year Review Workshop (December 6)

Staff also regularly participates in Skagit Conservation District’s annual “Living on the Land Stewardship for Small Acreage Short Course,” but the district did not offer the course in 2007. County staff are signed up to participate in March 2008.

*** Goals for 2008**

PDS has identified several areas in which they can improve public outreach efforts in 2008. Critical Areas staff plan to work with Skagit21 staff to prepare a series of short public service announcement videos for air on government television and online. The videos would provide an overview of the county’s development regulations, how those regulations affect individual property owners, and why those regulations are important to protect salmon as well as citizen health and welfare.

Ecology has recommended that the county hire a “basin steward” to encourage local landowners and farmers to do more riparian planting and increase participation in CREP and similar programs. PDS will investigate partnering with the Conservation District on such an effort.

The department also plans to develop a critical areas protection signage program, similar to the ubiquitous “Keep it Clean, Drains to Stream” storm drain stenciling projects, for posting at notable critical areas countywide.

V. PUBLIC HEALTH DEPARTMENT

On-Site Sewage Management Plan

Failing or poorly functioning on-site sewage (including septic) systems do not treat wastewater well. Inadequately treated sewage effluent can mix with groundwater or surface water, endangering human health and degrading the environment, including salmon habitat.

Improper and failing septic systems are a serious and recurring problem throughout the state. Governor Gregoire’s Puget Sound Initiative supports local health department efforts to address on-site sewage systems (OSS) and Washington State law requires all homeowners to have their on-site sewage systems inspected every year or every three years, depending on the type of the system.⁶

In 2007, Skagit County Public Health developed an [On-Site Sewage Management Plan](#) to address those areas of the county most directly impacting marine waters.⁷ Over the past seven years, Health has developed a respected operations and maintenance program for sep-

⁶ WAC 246-272A-0270; see also SCC 12.05.160.

⁷ Skagit County Ordinance O20070010, codified as SCC 12.05.

tic systems, with the goal of ensuring all systems in Skagit County are functioning properly and of preventing straight pipes to the shoreline like those discovered a few years ago (below).



Skagit County Health will be working first with homeowners near marine waters to ensure their systems are upgraded and functioning properly to protect our water resources. The Health Department will conduct outreach to those communities affected by this plan between January and June 2008.

LOW-INTEREST LOANS

Once a failing OSS is identified, the Health Department works with other county departments to help the homeowner find the resources to repair it. Skagit County's planning department and Treasurer's Office administer Ecology's Revolving Fund to assist needy septic owners. The only two criteria required to be eligible for this program are a failing septic system and a good credit record. Since 1995, Skagit County has closed 391 loans totaling more than \$4.7 million. The mean system loan over the past 12 years is \$12,000. More than 200 loans remain active.

SIMILK BEACH SEPTICS

In 2001, Similk Bay was closed to commercial shellfish harvest because of the many failing septic systems at Similk Beach. After a valiant, but failed, attempt to bring in a community sewer system, Similk Beach residents stepped up to the plate to upgrade, repair, and maintain their OSS systems. Out of the 85 residents at this location, there are just a handful left who need to complete design and installation of upgraded systems, and they are working diligently to complete them, with encouragement from Skagit County Environmental Health. As a result of these efforts, Health

hopes that Similk Bay might be reopened to shellfish harvesting in the near future.

SAMISH WATERSHED FECAL CONTAMINATION

The Washington State Department of Ecology recently completed a substantial round of sampling in the Samish watershed as part of their Total Maximum Daily Load (TMDL) efforts. TMDLs for fecal coliform in the Samish exceed state water quality standards. The Skagit County Water Quality Monitoring Program has indicated additional areas of concern.

Skagit County Environmental Health is working in cooperation with Ecology and Public Works to identify the source of fecal contamination in these problem areas. If they are related to on-site sewage disposal systems, Health directs the homeowners to the resources they need to get these systems repaired.

Small Quantity Hazardous Waste Generators

The majority of hazardous wastes produced in Skagit County come from small businesses and individuals. Many small businesses and households would like information and assistance on how to safely handle, dispose, and reduce the hazardous wastes that they produce. In 2007, the Health Department applied for funding from the Department of Ecology to develop a proactive program to assist businesses with their solid and hazardous wastes handling issues. Ecology has now awarded the county more than \$125,000 to launch this effort.

The small business assistance program will provide:

- site visits to individual businesses;
- assistance with identifying pollution sources;
- advice on pollution prevention measures;
- assistance with understanding solid and hazardous waste regulations; and
- assistance with implementation of cost-effective, sustainable business practices.

In 2008, Health will employ a full-time Local Source Control Specialist to provide small businesses in the auto body, medical, and dental sectors with the technical assistance they need to comply with regulations and implement effective pollution prevention practices.

Illegal Dumping

Skagit County receives hundreds of complaints annually about illegally-dumped garbage. Decomposing garbage sends leachate into Skagit County waterways and can have a negative effect on fish. It can also ruin outdoor experiences for people.

Skagit County Health digs through illegally-dumped garbage to find personally-identifiable information and trace the junk back to the dumper. Health has found everything from single bags of household garbage to collections of trash that people have been burying for nearly 30 years.

Year	Complaints
2004	221
2005	206
2006	215
2007	271

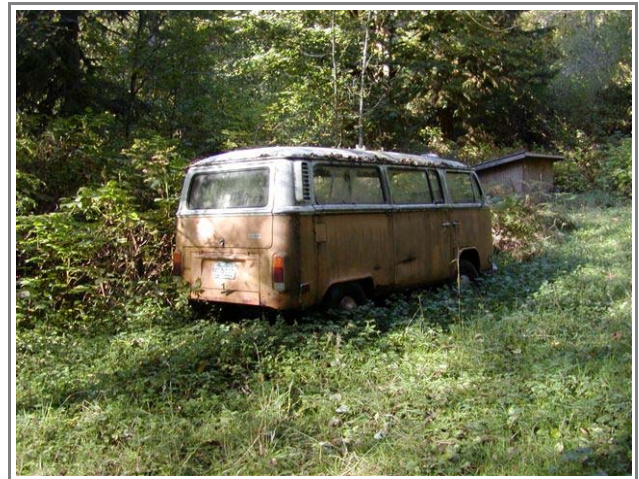
Health uses several approaches to combat the problem of illegal dumping:

- **Garbage accumulation.** In hardship situations, when someone finds their garbage stacking up because they can't afford to pay for garbage service, Skagit County Health (with funding from Public Works) will provide a voucher for one free trip to the transfer station. Health also works to assure they have a plan in place to take care of their garbage in the future.
- **Illegal dumping enforcement and fines.** Health issues fines from \$100 to \$2000 in addition to ordering clean-up of the garbage.
- **Public Works Clean-up Crew.** Public Works puts jail inmates to work cleaning up county roads. For more information, see page 16.
- **Permitted solid & hazardous waste disposal facilities.** Skagit County Environmental Health inspects composters, recyclers, and the county's own garbage and hazardous waste collection facilities to ensure they meet state and local regulations.

Junk Car Round-Up

Leaking fluids from junked cars can find their way into surface and groundwater and often, these vehicles end up being a magnet for other garbage dumping that can further contaminate water. In 2006–2007, Skagit County Environmental Health received a \$20,000 grant from Ecology to provide incentives for people to remove abandoned vehicles from their property.

The first step in this effort was to work with auto wrecking yards to ensure their operations would meet Ecology's guidelines. Almac, Art's, Larry's and Farrel's auto wrecking yards all agreed to take necessary steps to contain fluids draining from cars and properly dispose of them. All four were substantially meeting these guidelines and only needed to make a few changes to be fully compliant.



Step two involved advertising the program and collecting wrecked vehicles from the public. Citizens were able to sign up to dispose of up to four vehicles, for which the auto wrecking yards would receive \$50 per vehicle. From January to May 2007, 542 vehicles were towed from throughout the county and given a water-quality-friendly send-off.

In-stream Flow Management

Skagit County Environmental Health is part of the team that is working to ensure that sufficient water remains available in low-flow stream basins. The county drinking water ordinance was recently revised to reflect Skagit County's agreement with Ecology, and will be further revised in response to the recent litigation settlement with the City of Anacortes and Ecology. Environmental Health will now be responsible for debiting and crediting water use for building permits and land divisions within the Skagit River sub-basins and reporting on these annually.

The county hopes that these water budgets, together with USGS studies, will help us better understand how water goes in and comes out of the river sub-basins. That knowledge is critical to protecting this precious resource for fish and future generations of Skagitians. See page 3 for more information about protection of low-flow salmon streams.

VI. PUBLIC WORKS

Clean Water Program

Pursuant to [RCW 90.72](#), Skagit County established a [Shellfish Protection District](#) in 2005 that levied a special assessment on property countywide.⁸ Public Works administers this program and distributes the resulting funds to programs related to the improvement of water quality. The assessment raised \$773,000 for 2007 and is budgeted to raise \$905,000 for 2008.

DAIRY EXEMPTION

Working with the University of Washington School of Law's Berman Environmental Law Clinic, the Prosecutor's Office obtained an important legal opinion concerning the exemption of properties from the shellfish assessment. The legal opinion concludes that only NPDES I point sources are exempt from the shellfish assessment. This is consistent with the county's basic interpretation of the law, i.e., that only property owners actually paying a clean water assessment via another program should be exempted from the shellfish assessment. This matter is a topic of discussion in this year's legislative session, and the county is taking steps to ensure its views on this matter are known to our legislative delegation. For more information, please contact Chief Civil Deputy Prosecuting Attorney Will Honea at willh@co.skagit.wa.us.

SKAGIT COUNTY GOVERNMENT REPORT

The December issue of the Skagit County Government Report, which is distributed as an insert in the Skagit Valley Herald, featured several articles on the programs funded by the Clean Water Program. See Appendix D.

* Recommendation for 2008:

Given the controversy surrounding the clean water assessment and program, Public Works should take steps to familiarize the public with the program, justify its expenses, and create an expedited mechanism for individual property owners to appeal particularly onerous assessments. The department should issue a one-page annual financial report, with contributions to funded programs clearly and specifically delineated, and distribute it in the Skagit County Government

⁸ Skagit County Ordinance [O20050014](#), codified as [SCC 6.68](#).

Community Report, and to the web, among other channels.

Fish Passage Projects

While not a specific new directive within the Salmon Policy Resolution, fish passage projects constitute some of the most important salmon recovery work the county does.

Anadromous fish, including threatened Chinook salmon, spend their lives in the ocean but return many miles upstream to spawn. Unfortunately, artificial barriers across many streams prevent fish from reaching their spawning habitat. A single barrier can keep fish from reaching many miles of upstream habitat.

Undersized culverts can become clogged and stop transporting sediment and other suspended debris, making it difficult for fish to navigate the stream. A perched culvert, like the one pictured below, make it nearly impossible for fish to enter and traverse the pipe.



Removing barriers to fish passage through our streams is essential to restoring fish populations and, as recently decided by a federal district court, are one component of our state's obligation to the Point Elliot Treaty Tribes.

WALKER VALLEY

The Walker Valley Conveyance Project was initiated at the request of local property owners who experienced flooding due to an undersized culvert and constricted flow path downstream of the culvert. The county road crew was also interested in seeing this project completed because Tracey Creek would occasionally jump its banks and flow over Walker Valley Road.



This project was broken down into two phases: Phase 1 was designed to increase conveyance potential below the culvert by setting back a manmade berm, widening the stream channel, and installing large woody debris for bank protection. Phase 2 included replacement of the current 36-inch culvert with an 84-inch squashed culvert under Walker Valley Road to convey the storm water and accommodate fish passage. Associated improvements, including increasing the channel width for approximately 75 feet upstream of the culvert, were also part of Phase 2.

FISH CREEK

The county worked this project jointly with the Washington State Department of Transportation. Fish Creek commonly jumped its banks immediately downstream of the Cascade Trail crossing, so the county road crew rerouted the creek along the trail for about 150 feet, installed a new seven-foot squashed culvert, and connected the new channel with the existing channel at the WSDOT right-of-way. Next summer, the road crew will replace the existing dual 18-inch culverts under Grassmere Road and widen the channel below the road to facilitate fish passage and sediment transport.

COAL CREEK

Public Works replaced the bridge on the Cascade Trail at the Coal Creek crossing with a rail-car-type bridge with a deck and railing spanning 50 feet. A high-flow channel was excavated directly east of the current channel for approximately 500 feet downstream of the trail crossing. The new channel is between 25 to 30 feet wide and approximately three feet deep. This will diminish flooding for local property owners and allow the creek to function properly below the sediment pond.



* Goals for 2008

ADDITIONAL FISH PASSAGE PROJECTS

Public Works fish passage money has been allocated to one large project this summer (Gravel Creek on Sauk Prairie Road); therefore, operations will be limited to mainly mitigation projects for 2008, including:

- Coal Creek Sediment Pond Maintenance
- Coal Creek Conveyance Improvement, Phase 2
- Cockreham Mitigation Project
- East Sauk Prairie
- Fish Creek Conveyance Improvement, Phase 2
- Government Bridge Mitigation Project
- Jackman Creek Mitigation Project
- Little Jones Creek Conveyance Improvement
- Park Ridge Lane
- Prairie Creek Mitigation Project

COUNTY-WIDE FISH BARRIER REVIEW

In addition to replacement of known fish barriers, Public Works staff has begun an effort in conjunction with the Skagit River System Cooperative, the Washington Department of Fish and Wildlife, and the Skagit Fisheries Enhancement Group to identify all county-owned fish passage barriers. Field work to identify these barriers will likely occur this spring or summer; staff will then prioritize the barrier replacement projects, taking into account potential habitat gains and cost of replacement.

There are potentially a very large number of salmon streams that may have barriers in need of replacement. Western Washington streams are generally con-

sidered fish-bearing if they are two feet or greater in width and have a gradient of 20 percent or less. Even intermittent streams (those that go dry during a portion of the year) may have fish present during those times when the streams are flowing.

Grant Applications | SPR § 1(b)

“Departments should collaborate with others to actively pursue grants for stand-alone projects to restore or enhance salmon habitat or otherwise implement selected measures recommended by the Plans. When necessary to obtain outside funding, Departments should include requests for matching funds in future budget proposals or from the Clean Water Program funds dedicated for salmon recovery.”

COCKREHAM ISLAND BUY-OUT

Lying between the towns of Lyman and Hamilton, Cockreham Island is a peninsula formed by a bend in the Skagit River and maintained by a county levy. With its significant history of flooding and flood-related damage, a group of landowners, who collectively own a large portion of Cockreham Island, requested that Skagit County investigate the possibility of a buy-out of island properties. Removal of the levy and restoration of Cockreham salmon habitat is identified as a high-value project in the Skagit Chinook Recovery Plan.

In May 2007, Skagit County obtained a [study from GeoEngineers and Northern Economics](#) to determine the feasibility of the landowners’ proposed buy-out. The study’s economic analysis, which compared the

avoided costs of reduced levy maintenance and ecological benefits of restored salmon habitat to the cost of buying Cockreham properties, determined that a buy-out of the Cockreham Island properties would yield between 2.5 and 4.8 times greater benefits than costs.

In September 2007, Public Works staff submitted a funding request to the Salmon Recovery Funding Board (SRFB) for a study to evaluate the impacts and habitat gains of removing the southern end of the Cockreham Island levee and possibly allowing the mainstem Skagit to cut a new channel through the island. The county worked with tribal entities and the Washington Department of Fish and Wildlife on the application. Unfortunately, this project was initially deemed a “Project of Concern” by the SRFB’s Technical Review Team (TRT), and not approved for funding. Skagit County believes a clear commitment to the project will substantially aid funding efforts.

One issue of particular controversy has been the county’s continued maintenance of a training levee on the east end of Cockreham Island. This levee has cost Skagit County taxpayers hundreds of thousands of dollars over the years to maintain, and serves to prevent the Skagit River from following its natural migration. The southern end of the levee does not appear consistent with the habitat objectives of the Cockreham Island Buy-Out plan. Therefore, the Board of Commissioners will soon consider a resolution that would announce and put property owners on notice that the county will discontinue maintenance of the southern



end of the levee at a set date in the future, likely 2011.

Skagit Watershed Council chair Shirley Solomon persuaded SRFB to allow the Watershed Council to rework the proposal to be acceptable to the TRT and ultimately the SRFB. County Public Works and the County Prosecutor's Office are now working with the Watershed Council and Skagit Land Trust on a new version of the proposal and expect to resubmit the project for possible approval in May.

NATURAL RESOURCE STEWARDSHIP PROGRAM

In October 2007, Public Works submitted a grant proposal to the Washington Department of Ecology for a Centennial Clean Water grant. This grant would create a Skagit County Natural Resource Stewardship Program that would provide funding to grassroots riparian fencing and fish habitat restoration projects. Funding would be directed only at Skagit County watercourses that are impaired for temperature, dissolved oxygen, or fecal coliform.

Skagit County was notified on January 14 that the proposal made the list of projects that would be presented to the Legislature for funding. The county requested \$405,000 for the program with the county providing \$135,000 cost share over four years from the Clean Water Fund. Landowners countywide who have property on an impaired watercourse would be eligible for sub-grant funding.

Habitat Enhancement Projects

BRYSON ROAD BUYOUT

The county is working with the Skagit River System Cooperative (SRSC) to address channel migration issues associated with the Sauk River in the Bryson Road area. SRSC has received a \$1.2 million grant from the Salmon Recovery Funding Board to buy out properties in the area. Once the sales are final, the county will assist SRSC in removal of bank-hardening to allow natural river processes. The county has pledged more than \$100,000 in cash and labor to the project.

HANSEN CREEK ALLUVIAL FAN

Skagit County is supporting the Upper Skagit Indian Tribe in designing and permitting the alluvial fan project on Hansen Creek. This concept originated from the Hansen Creek Watershed Management Plan which the county produced to help guide efforts to restore fish habitat and address the flooding issues on Hansen Creek. The Upper Skagit Indian Tribe secured an EPA

319 grant to design and permit the construction of the fan. The county agreed to provide a \$25,000 cost share toward the grant. It is anticipated that Skagit County will continue to partner with the tribe to acquire additional grant funds for construction as early as 2009.

HANSEN CREEK REACH 2 RESTORATION

Skagit County Public Works recently completed a stream restoration project on Hansen Creek in the Northern State Recreation Area. This project involved the installation of 15 log structures within an 1800-foot stream reach. The goal of the project is to create habitat in the form of pools, store sediment, and restore the riparian area adjacent to the creek. See Appendix C on page 27.

The work was paid for by a \$330,000 grant from the Department of Ecology that will also pay for restoration work on Red Creek. The area adjacent to Hansen Creek is also enrolled in the Conservation Restoration and Enhancement Program though the Natural Resource Conservation Service.

ILLABOT CREEK BRIDGE STUDY

The Skagit River System Cooperative (SRSC) completed a feasibility study with a past Salmon Recovery Funding Board grant that evaluated habitat conditions and restoration alternatives in the lower portion of Illabot Creek. This study determined that diking and channelization of Illabot Creek has had a significant negative effect on habitat conditions. The study called for a more detailed design study to restore Illabot Creek to its historic channel.

The purpose of this project is to conduct a hydraulic analysis and complete engineering design for two phases of a project on Illabot Creek and to complete construction for the first phase. The first phase is to remove the left bank portion of the dike downstream from Rockport-Cascade road (approximately 900 feet). The second phase is to remove the remainder of the dikes (approximately 2400 feet), restore Illabot Creek to its historic channel, and construct a new bridge on the Rockport-Cascade road that can accommodate natural channel migration. Skagit County is providing engineering review and will help SRSC obtain construction funding for the project.

PIPELINE CREEK

This project will result in the re-establishment of fish passage to 1.75 miles of upper watershed habitat for Coho salmon, cutthroat trout, and steelhead trout on

Pipeline Creek in Lyman. The Skagit Fisheries Enhancement Group has applied for grant funding to replace four culverts on Pipeline Creek. The existing culverts do not adequately pass water, fish, sediment, large woody debris, small debris, or wildlife. The uppermost blockage is now trapping a lot of sediment above the road and there is concern that it will fail. These four fish passage barriers will be replaced with larger diameter culverts, box culverts, or bridges, designed according to the Washington Department of Fish and Wildlife's fish passage guidelines.

Instream Flow Rule

BACKGROUND

To thrive, salmon need adequate stream flow. Constantly-increasing human demand for water coupled with the decreased supply climate change seems likely to produce means that protecting instream flows for salmon will be a daunting challenge for Skagit County.

Rural residential wells have presented a particularly thorny problem for Skagit County. Single family residential wells can indeed have profound impacts on the amount and quality of water in salmon streams. However, the notion of regulating a landowner's right to dig a well to serve their residence tends to run afoul of traditional notions of property rights in the American West.

Skagit County, in conjunction with the Department of Ecology, has taken a proactive and progressive approach to dealing with these issues. In particular, Skagit County is among the first jurisdictions in Washington State to control the impact of rural residential wells on instream flows.

Skagit County is working actively with the Department of Ecology and other stakeholders to implement [WAC 173-503](#), the Skagit River Instream Flow Rule. The Instream Flow Rule and the county's implementation of the rule enact the following measures:

- limits the amount of future groundwater withdrawals to within limits that adequately protect salmon and other aquatic life;
- requires metering of all new public water systems to track usage;
- requires new developments to hook up to public water where it is timely and reasonably available; and

- encourages extension of public water into areas with low-flow salmon streams.

STUDIES AND CONSULTATION

As part of the implementation of the Instream Flow Rule, Skagit County, the Department of Ecology, and the U.S. Geological Survey are in the process of cooperatively conducting a groundwater-surface water interaction study of three critical lower Skagit River tributary basins (Carpenter, Fisher, and Nookachamps creeks), as well as a groundwater study in the Skagit River delta to determine the impact of current and future groundwater withdrawals.

Although Skagit County regulates land use through the Growth Management Act, instream flows have a substantial impact on land use patterns. While zoning decisions taken by the county involve extensive and well-documented public process, decisions about water usage have been made in the past with very little public exposure, discussion, and buy-in. Skagit County seeks to help create a lasting and commonly-understood water resources management regime, and believes that broad public process and participation is a critical component of that goal.

Accordingly, as another part of the implementation of the Skagit River Instream Flow Rule, Skagit County and Ecology have established a Water Resources Advisory Committee (WRAC), a broad-based advisory body dedicated to advising Ecology and Skagit County on the implementation of the Skagit River Instream Flow Rule. The WRAC, which includes representatives from the water utilities including the City of Anacortes, industry representatives, environmental group representatives and others, has been meeting and discussing key issues since August 2007. The county is eager to receive and review the WRAC's recommendations on these critical water resource issues.

NOOKACHAMPS STREAM FLOW AUGMENTATION

Public Works is partnering with Skagit County Sewer District No. 2 to evaluate the feasibility of providing enhanced treatment of Sewer District wastewater from the Big Lake area and returning this water back into Nookachamps Creek. The plan is to augment low flows, reduce high summer temperatures, and provide mitigation for future in-basin withdrawals.

Ecology has indicated that they will award the county \$250,000 to conduct a feasibility study of the project during 2008. If the study demonstrates that the pro-

ject is feasible, the county will then need to look for funding sources for the project itself.

Solid Waste

CLEANING UP DISPOSAL SITES

Public Works is investigating former solid waste disposal sites to determine their potential impacts on water quality and to determine the appropriate remedial action. These investigation and mitigation actions are ongoing. Public Works will continue efforts to prioritize the potential ecological impacts.

COMMUNITY LITTER CLEANUP PROGRAM

The Public Works Solid Waste Division runs the Community Litter Cleanup Program as a joint project between Public Works, the Sheriff's Office, the Health Department, and the Washington State Department of Corrections.

The program uses incarcerated state offenders to pick up litter along county roads and public lands. The total annual budget for the program is about \$100,000, forty percent of which comes from a Department of Ecology contract. The Solid Waste Division manages the program with a full-time supervisor, vehicle, and equipment. The Sheriff's Office provides a program deputy to help with scheduling and screening of offenders, offender lunches, and some minor equipment needs. The Department of Corrections pays for vehicle fuel.

In 2007 the litter program collected about 128 tons of litter from roads and public lands. Nearly 50 tons of that was collected around rivers, creeks, and boat launches. The litter crews clean up all the boat launches from Marblemount to Deception Pass Bridge and include areas along the rivers and streams described as "fishing holes" that are not related to a specific boat launch.

Monitoring and Adaptive Management Program

BACKGROUND

In places where ongoing agricultural activity is conducted, Skagit County operates a "Critical Areas Monitoring and Adaptive Management" program instead of requiring buffers. The MAAM program is intended to monitor critical areas, determine where ongoing agriculture is causing harm to critical areas, and then define steps to manage the land use activity to prevent that harm from occurring.

Skagit County's MAAM program, defined in [Resolution R20040211](#), consists of two sub-programs:

- the [Water Quality Monitoring Program](#), intended to determine water quality conditions and trends in agricultural-area streams; and
- the [Salmon Habitat Monitoring Program](#), intended to measure physical stream conditions important to salmon habitat.

Both sub-programs have accumulated years of data and issued annual reports that are available from the Skagit County Salmon Strategy website. The Department of Ecology recently recognized Skagit County's monitoring program as providing "high quality data" and "excellent reporting." See Appendix A.



In 2005, the Western Washington Growth Management Hearings Board found that Skagit County's MAAM program was not compliant with the Growth Management Act.⁹ The Washington State Supreme Court upheld that determination in September 2007.¹⁰ As a result, Skagit County remains non-compliant with the Growth Management Act. Although the Growth Board has stayed the current case against the county, that stay will expire on July 1, 2010, and the county must comply by December 28, 2010.¹¹

⁹ Swinomish Tribe, et al. v. Skagit County, WWGMHB Case No. 02-2-0012c ([Compliance Order](#), Jan. 13, 2005), at 27.

¹⁰ [Swinomish Tribe v. Western Washington Growth Management Hearings Board](#), 161 Wash.2d 415, 166 P.3d 1198 (2007), at 33.

¹¹ Swinomish Tribe, et al. v. Skagit County, WWGMHB Case No. 02-2-0012c ([Order Granting a Stay](#), July 9, 2007).

THREE-YEAR REVIEW | SPR § 4(A)

“Public Works shall...conduct the...review of the county’s Monitoring and Adaptive Management Program...with-in the constraints of SSB 5248...”

Resolution R20040211 section 3(c) committed the county to reviewing the MAAM program at least once every three years, starting in 2007, with an eye to modifying the Critical Areas Ordinance to compensate for any negative trends revealed by the county’s monitoring. With passage of **Substitute Senate Bill 5248** in early 2007, the Legislature imposed a three-year timeout on changes to Critical Areas Ordinances related to agricultural activities. Skagit County is therefore unable to update its CAO relating to ongoing agriculture until the end of the timeout in 2010.

The county commissioners recognized this limitation in the Salmon Policy Resolution, and directed Public Works to conduct a limited review consistent with SSB 5248. The review focused on evaluating the effectiveness of the MAAM program’s current monitoring strategy and conducting other associated research aimed at developing a better program to enact at the end of the timeout.

Public Works, with the assistance of the Prosecutor’s Office, took the following steps to conduct the three-year review and involve the public in the process:

- established a webpage for the MAAM program on the [Skagit County Salmon Strategy website](#) describing the program, the sub-programs, and the three-year review process;
- established a comment period to conclude December 24;
- accepted comments in person, via mail, and via e-mail;
- mailed postcards to 273 people and organizations with identified salmon interests notifying them of the comment period and the workshop;
- e-mailed notification to the Skagit County press release mailing list;
- published a public notice in the Skagit Valley Herald; and
- hosted a videotaped two-hour public workshop with presentations by Public Works on the MAAM program, a response from Sally Lawrence of the Department of Ecology, and opportunity for public questions and comment.

The workshop video, transcript, and the SPR-required summary of comments and testimony received were published to the [Skagit County Salmon Strategy website](#) soon after the event. The county will use the feedback obtained during this review in refining its MAAM program after expiration of the SSB 5248 timeout.

ACADEMIC REVIEW | SPR § 4(B)

Public Works shall “obtain a report from a credentialed academic that reviews the county’s current water quality and salmon habitat monitoring program data quality and sampling and analysis methods...”

Public Works has retained Professor Mike Barber of the Washington State Water Research Center at Washington State University to conduct an independent scientific review of the Water Quality Monitoring Program.¹² Public Works has been in regular contact with Professor Barber, and his report is expected by the March 1, 2008, deadline. As part of that report, Professor Barber will respond generally to the public comments and testimony received during the public review process.

**MONITORING ONGOING**

Public Works continues to operate the MAAM program and expects to release its annual report for the 2007 water year shortly. The monitoring data continues to indicate that many Skagit County streams do not meet state water quality standards for a variety of parameters, but further investigation is necessary to determine the causes in each case.

In July, Public Works applied for an Achieving Environmental Compliance grant from the Department of Ecology for \$247,500 that would have funded an effort

¹² Skagit County Contract C20070661 (Dec. 3, 2007).

to use the accumulated water quality data to focus on individual problem watersheds to detect pollution sources. Out of 17 applicants, Skagit County finished in the top four, but only the top two projects were funded.

* Recommendation for 2008

Skagit County should consider self-funding a pilot program to locate pollution sources in the streams identified as failing to meet state water quality standards. The data and experience obtained from the pilot program will likely prove invaluable to the county's efforts to revise its MAAM program to comply with the Supreme Court's ruling.

Cooperation & Public Outreach

Public Works staff, especially Water Quality Analyst Rick Haley and Salmon Habitat Specialist Jeff McGowan, regularly attends watershed planning and action meetings:

- Rick Haley participates in the Samish Bay Watershed Technical Committee, which focus on fecal coliform issues in the Samish Bay watershed. He also frequently speaks to Skagit Conservation District Watershed Masters classes and helps train Stream Team volunteer monitors.
- Jeff McGowan is a member of the Skagit Watershed Council's Restoration and Protection Committee and attends their monthly meetings.
- Special Projects Administrator Tom Karsh serves on the Board of Directors of the Skagit Watershed Council and as the county representative to the Puget Sound Salmon Recovery Council.

CONCLUSION

This is only the first in a series of annual reports on Skagit County's salmon recovery efforts. Future reports will evaluate department improvements over this report's baseline.

Questions or comments about county salmon projects or salmon-related policies or this report should be directed to the county's salmon recovery website at www.skagitcounty.net/salmonstrategy.

APPENDICES

APPENDIX A. LETTER FROM DEPARTMENT OF ECOLOGY

Sally Lawrence of the Washington State Department of Ecology sent the following letter to the Skagit County Public Works Director in January 2007 in appreciation of Skagit County's Water Quality Monitoring Program.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 2, 2007

Mr. W. Eugene Sampley
Director, Skagit County Public Works
1800 Continental Place
Mount Vernon, WA 98273

Re: Value of Skagit County Water Quality Monitoring Program to State Efforts to Improve Surface Water Quality

Dear Mr. Sampley,

This letter is provided as a statement of the value of Skagit County's Water Quality Monitoring Program to Ecology's efforts to improve water quality in the County. The program has assisted state efforts in a number of ways and provides information of value to local government and citizens. As a TMDL lead for Ecology, I have had many occasions to work with County staff who are in charge of the program, have observed sampling events, and have used County data to gain an understanding of the status of surface water conditions in many parts of the County.

The program provides high quality data, excellent reporting, and intangible insights regarding current freshwater conditions in the County. Both state government and residents of the watersheds benefit from these aspects of the program:

- The sampling program produces high quality data that is made available to the public via the County web site in a timely manner;
- Where data indicate a potentially serious water quality problem, County staff have been proactive in notifying the County Health Department or appropriate state agency regarding the situation. In addition, County staff have provided information, where known, about potential sources that may require investigation and have followed up with the agency to learn whether action was taken.
- The County staff contribute information gained from the monitoring program to local arenas where water quality concerns are being discussed, for example, Ecology's TMDL meetings and implementation review meetings about various local watershed Non Point Action Plans.



Ecology Letter to Mr. Eugene Sample
Skagit County Public Works 1-7-07
Page 2

- The data collected will be useful toward our understanding of the importance of urban stormwater in affecting Skagit County creeks and rivers. The monitoring program includes creeks such as Hansen and Brickyard that receive drainage from municipal stormwater drainage systems in addition to nonpoint runoff from a variety of land uses.

You are welcome to contact me if you have any questions.

Sincerely,



Sally Lawrence
Washington Department of Ecology, Northwest Regional Office
TMDL Lead for Skagit, Kitsap and Stillaguamish Watersheds
(426) 649-7036
Email: slaw461@ecy.wa.gov

APPENDIX B. PDS CRITICAL AREAS INFORMATION HANDOUTS

Skagit County Planning and Development Services prepared the following handouts for distribution to property owners seeking information on critical areas. These handouts were recognized and included as examples of best practices in CTED's Small Communities Critical Areas Ordinance Implementation Guidebook (June 2007). The handouts are available online and at the PDS front counter.



Wetlands

A Skagit County Critical Areas Ordinance Fact Sheet

The *Skagit County Critical Areas Ordinance (CAO)* regulates development affecting wetlands; fish and wildlife habitat conservation areas including streams; aquifer recharge; and frequently flooded and geologically hazardous areas.

This CAO fact sheet is one in a series, which describes the above-listed types of environmentally critical areas

protected by Skagit County under Title 14, Chapter 14.24, *Critical Areas Ordinance*, effective June 13, 1996. This has been provided to you as general information and is not intended as a substitute for the actual codes or regulations. For more information, contact the Skagit County Planning & Development Services at (360) 336-9410.

What is a wetland?

Wetlands are those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions.

Wetlands can be identified by three characteristics:

- Hydric soils—soils saturated with water.
- Water—the presence of standing water or saturated soils within the top 12” – 18” of the surface during the growing season.
- Plants—water tolerant or water dependent plant species.

They generally include, but are not limited to ponds, marshes, bogs, wet meadows, and swamps.

Why are wetlands important?

Wetlands perform a variety of functions that are important to the environmental and economic well-being of Skagit County. Wetlands:

- Control flooding by acting as natural reservoirs for incoming storm flow;
- Improve water quality by filtering contaminants;
- Maintain stream flows by gradually releasing stored water after floods and wet seasons;
- Recharge groundwater;
- Stabilize shoreline areas;
- Provide fish and wildlife habitat;
- Create places for recreation, education, scientific study, and aesthetic appreciation.

Does my property contain a wetland?

To assist you in determining if your property may contain a wetland, you may contact the Skagit County Planning & Development Services. They can provide you with inventoried wetlands maps.

Since not all County wetlands were identified in the wetland inventory, these maps should be used as a general guide for property owners. Your property may still contain a wetland that re-

quires protection under the County’s *Critical Areas Ordinance*. In this case, a qualified wetland specialist should visit your property to determine the presence, type, extent and boundaries of any wetland(s). You may contact Skagit County for a list of qualified wetlands specialists.

Wetland Classification

Skagit County relies on the Washington State Department of Ecology’s Wetlands Classification and Rating System to classify wetlands.

The County’s wetlands are classified into four categories based upon their size, function and value. Briefly, Category I wetlands receive the highest protection since they are the most biologically complex and contain the highest functions and values performed by wetlands. Conversely, Category IV wetlands receive considerably less protection, and are often minimal in size, perform limited functions, and provide less value than the other categories.

In general, all wetlands are regulated, with the exception of Category II and III wetlands less than 2,500 square feet in size and Category IV wetlands less than 10,000 square feet.

Buffers and Building Setbacks

Buffers are undisturbed areas of native vegetation which surround wetlands or other critical areas. In Skagit County, no activity is allowed within a regulated wetland or its buffer, unless otherwise specified.

Buffer widths range in size according to wetland type:

- Category I Wetland – 150 feet
- Category II Wetland – 100 feet
- Category III Wetland – 50 feet
- Category IV Wetland – 25 feet

Under certain conditions, Skagit County allows modification of these buffer widths by granting agreements for buffer averaging and decreases in buffer widths. The County also has the authority to require larger buffer zone widths when necessary to protect a particular wetland functions and values.

Existing structures within a wetland or the buffer may be remodeled, reconstructed or replaced. However, a structure cannot further intrude upon the critical area or its buffer.

Wetland Protection

Protecting wetlands requires public education, involvement, and cooperation. You can learn more about them by visiting wetland sites and familiarizing yourself with local wetlands ordinances.

If your property contains a wetland, there are ways you can protect it. Avoid dumping, draining, or filling near your wetland. Even yard waste can degrade a wetland's functions and values. Wetland animals need the benefits provided by a buffer zone. Consider marking or fencing off a buffer area around your wetland. Learn about wetland regulations and additional ways to preserve and enhance your wetland by contacting the Skagit County Planning & Development Services, or the Washington State Department of Ecology.

Other Restrictions and Provisions

Examples of activities which are subject to the standards contained in the *CAO* and other applicable federal, state, and local ordinances include:

- Forest practices, Class IV General, and Conversion Option Harvest Plans (COHPs);
- Livestock restrictions;
- Land divisions and land use permits;
- Building and clearing activities adjacent to wetland areas; and
- Draining, or placing fill in a wetland.

For specific information you may contact the Skagit County Critical Areas staff at (360) 336-9410 or read the Critical Areas Ordinance online at www.skagitcounty.net.

Prepared by Skagit County Planning & Development Services. Special thanks to Kitsap County Community Development. August 2004.



Streams

A Skagit County Critical Areas Ordinance Fact Sheet

The *Skagit County Critical Areas Ordinance (CAO)* regulates development affecting wetlands; fish and wildlife habitat conservation areas including streams; aquifer recharge areas; frequently flooded; and geologically hazardous areas.

14, Chapter 14.24, *Critical Areas Ordinance*, effective June 13, 1996. This has been provided to you as general information and is not intended as a substitute for the actual codes or regulations. For more information, contact the Skagit County Planning & Development Services at (360) 336-9410.

This CAO fact sheet is one in a series, which describes the above-listed types of environmentally critical areas protected by Skagit County under Title

What is a stream?

A stream is an area where the surface water flow is sufficient to produce a defined channel or bed. A defined channel or bed is an area which demonstrates clear evidence of the passage of water and includes, but is not limited to, bed-rock channels, gravel beds, sand and silt beds and defined-channel swales. The channel or bed need not contain water throughout the year.

This definition is not meant to include irrigation ditches, canals, storm or surface water runoff devices or other artificial water-course, unless used by salmon, or if it was a natural stream which was straightened or relocated during construction.

Why are streams important?

Streams benefit the environmental and economic well-being of Skagit County. Streams provide numerous values and functions. They:

- help maintain water quality;
- store and convey stormwater and floodwater by acting as

natural stormwater management facilities;

- are a source for groundwater recharge;
- provide important fish and wildlife habitat and food, both instream and within their corridors; and
- offer areas for recreation, education, scientific study, and general aesthetic appreciation.

How does development impact a stream corridor?

Unless appropriately mitigated, development can degrade a stream's wildlife habitat and water quality, undermining its values and functions. Uncontrolled development can:

- increase stormwater runoff and flooding;
- contribute excessive sediment and higher water conditions, thereby causing erosion;
- increase stream turbidity (cloudy appearance from sediment) which can reduce the light and oxygen necessary for plant and animal life;

- contribute toxic chemicals and organic pollutants; and remove vegetation along stream banks, a stream component crucial to maintaining water temperature, bank stabilization, and pollutant filtering capabilities.

Stream Classification

Throughout the State, water bodies—including streams—have been classified by the Department of Natural Resources based on flow volume and importance to fish and wildlife, domestic use, and public recreation. Streams in Skagit County have been classified as Type 1 through Type 5.

Type 1 streams (or waters) have the largest flow volumes (at least 20 cubic feet per second) and provide important fish and wildlife protection. Examples include the Skagit, Samish, Cascade, and Sauk Rivers. Type 5 streams tend to be very small, seasonal streams and often have no name.

You can read more about stream classification in the Forest Practice Rules produced by Washington State Department of Natural Resources in WAC 222-16-030.

Buffers and Building Setbacks

As with streams, most critical areas are provided a “buffer” of native vegetation to protect them from human activities. No clearing or grading is allowed within this buffer or within the critical area itself. Standard buffer width requirements depend on the stream type. These are minimum requirements and may be increased to protect a stream. The buffer requirements are as follows:

- Type 1 Stream – 200 feet
- Type 2 Stream – 200 feet
- Type 3 Stream – 100 feet
- Type 4 Stream – 50 feet
- Type 5 Stream – 50 feet

Alteration of a stream or its buffer may require a mitigation plan with the County. The applicant must also meet the requirements of other jurisdictions, such as the Department of Fish & Wildlife’s Hydraulic Project Approval (HPA).

Buffers begin at the “ordinary high water mark” (OHWM) of the stream channel and extend in either direction from the stream. The OHWM is typically placed at the line often found on the bank of streams which is the average extent of high water. Alternatively, the OHWM may be placed at the top of the bank if this line is not visible, or where the vegetation changes to an upland type.

Buffer widths are increased if there are streamside wetlands which provide overflow storage for stormwater, feed water back to the stream during low flows or provide shelter and food for fish.

Streams in Ravines

For streams in ravines, the minimum buffer width must be the minimum buffer required for the stream type, or a buffer width which extends 25 feet beyond the top of the slope, whichever is greater.

Stream Crossings

While stream crossing are allowed under SCC 14.24.530, all crossings must be the only reasonable alternative and any impacts to the stream and/or its buffer must be fully mitigated.

Please contact the Washington Department of Fish and Wildlife for specific stream crossing requirements.

Livestock Restrictions

In areas that would allow livestock to access streams, damage should be avoided by fencing along a stream’s outer buffer edge.

Other Restrictions and Provisions

Examples of activities which are subject to the standards contained in the CAO and other applicable federal, state and local ordinances include:

- Forest practices, Class IV General and Conversion Option Harvest Plans (COHPs)
- Land divisions and land use permits
- Road construction

For specific information, contact the Skagit County Critical Areas Staff by calling (360)336-9410 or read the Critical Areas Ordinance online at www.skagitcounty.net.

Prepared by Skagit County Planning & Development Services. Special thanks to Kitsap County Community Development. August 2004.

APPENDIX C. SKAGIT VALLEY HERALD ARTICLE ON “JAMMING HANSEN CREEK”

Franny White, *Jamming Hansen Creek*, Skagit Valley Herald, Sept. 12, 2007, at A1.

SEDRO-WOOLLEY — Logjams may have been the nemesis of early pioneers navigating the Skagit River, but along modern-day Hansen Creek, Skagit County is touting woody debris as being friendly to both fish and farmers.

On Tuesday, workers wrapped up a nearly two-week project installing 17 large, engineered logjams along part of the creek, which runs east of Sedro-Woolley from Lyman Hill into the Skagit River.

The work is being done within the Northern State Recreation Area, a 726-acre county park northeast of Sedro-Woolley that was once the working farmland of the Northern State mental hospital, which closed in 1973.

Jeff McGowan, salmon habitat specialist for Skagit County Public Works, said the jams should capture sediment flowing through the creek, thereby creating small ponds ideal for the safe growth of young salmon that hatch in the creek. Hansen Creek is home to nearly all salmon



species except sockeye, said Habitat Biologist Jeffrey Kamps of the Washington Department of Fish and Wildlife.

“It’s a highly productive stream,” Kamps said Tuesday as he examined the final touches being put on the creek. “So it’s definitely something we want to protect and enhance.”

But by catching debris during heavy rains, the jams should also prevent the flooding of downstream farm-

land, McGowan said.

“We’re not so concerned about (flooding) up here” in the Northern State Recreation Area, McGowan said. “No one lives up here; no one farms up here. ... If we can capture (debris) up here, it’ll take longer to fill up down there.”

Such flooding occurred in January 2006, leading the county to fight with state and federal agencies to gain permission to dredge the creek south of Highway 20. Though dredging lessens the flood threat, it also removes biological material, thereby disrupting aquatic habitat.

As a result, state Fish and Wildlife officials are counting the restoration at Northern State park as mitigation for the earlier dredging done further downstream. But county staff say they’ve been planning the creek’s restoration since at least 2002, when a Hansen Creek management plan was finalized. It wasn’t until Skagit County and the county’s three tribes secured two grants to pay for the work that they could move ahead, McGowan said.



A \$247,000 grant from the state Department of Ecology is paying for the logjams at Hansen Creek, as well as the future restoration of neighboring Red Creek. And a \$10,000 grant from the U.S. Department of Agriculture's Conservation Reserve Enhancement Program is funding the replacement of invasive blackberry brambles with native plants growing alongside Hansen Creek.

The Skagit County Parks and Recreation Department has received a few phone calls from park trail walkers concerned about losing favored blackberry-picking grounds. But Lands and Operations Manager Brian Adams said the project will enhance the park experience for everyone.

"You can actually see the creek, hear the creek," Adams said. Before, blackberry brambles blocked vistas and muffled the sound of trickling water, he said. "It's a project that not only (benefits) fish and wildlife, but also park use. ... The recreationists get a creek that they can really get up close to."

But Hansen Creek's restoration is still a work in progress at Northern

State Recreation Area. Next spring, workers will plant the last of the native trees and shrubs along the creek. And right now, the Upper Skagit tribe is designing the restoration of the remaining 3,200 feet of the creek within the park.

Though not finished, the design will likely include removing some man-made dikes. Without artificial, narrow channels, the county hopes the creek will reform its historic alluvial fan, which would allow sediment and water to diffuse over a large,

flat area and further alleviate flooding pressures.

Installing logjams to improve rearing salmon habitat is a common restoration project, said Kamps of state Fish and Wildlife. But the county's jams on Hansen Creek are larger and more complex than most, he said. It's also unusual for the county to undertake such a large project, Kamps said, as private groups like the Skagit Fisheries Enhancement Group more commonly tackle such restorations.



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APPENDIX D. SKAGIT COUNTY GOVERNMENT COMMUNITY REPORT, DECEMBER 2007

The quarterly Skagit County Government Community Report is distributed as an insert in the Skagit Valley Herald. The December 2007 report included several articles on clean water and salmon.

4

SKAGIT COUNTY GOVERNMENT COMMUNITY REPORT



CLEAN WATER IS EVERYONE'S BUSINESS!



Skagit County's Shellfish farming industry depends on clean water

Many residents of the County are not aware that the valley's productive agricultural lands extend out into the bays and onto the tidelands. Laws passed shortly after statehood in 1895 allowed for the sale of tidelands into private ownership specifically to culture shellfish. These laws, the Bush Act and the Gallow Act are the foundation of a long tradition of shellfish farming in Skagit County. Studying a map of Samish Bay one sees Oyster Tracts typically 100 acres in size divided into smaller 10 acre lots. These lands have been actively cultivated for shellfish for a hundred years. Samish, Similk, Padilla and Skagit Bays all have had commercial shellfish culture or harvest at some point in history. Many areas unfortunately are currently restricted for harvest due to poor water quality.

Oysters and clams are filter feeders. They feed on the microscopic algae, called plankton, growing in the water which they filter out on their gills. This filtering provides valuable ecological services to the waters of Puget Sound but leaves the shellfish vulnerable to pollutants. If septic systems are not properly maintained or pet or livestock wastes are not properly disposed of pathogens can get into our bays and be sucked up by the clams and oysters making the shellfish unsafe to eat. Careful monitoring of commercial shellfish beds by the State Department of Health determines whether shellfish harvest is safe or not. The southwest portion of Samish Bay has been on the Department of Health's threatened list for several

years. Bay View State Park is closed to shellfish harvest. Similk Bay has been closed for commercial shellfish culture for seven years due largely to failing septic systems. Thanks to the hard work of the Similk community, this situation is soon to be remedied.

Recipe: Steamed Manila Clams

Ingredients: 5 pounds Manila clams, 1/4 pound butter, 1 medium sweet onion chopped, 10 cloves garlic chopped fine, 3/4 cup white wine, 2 tablespoon Italian seasoning (optional) Preparation: Rinse clams. Discard any which are gaped and don't close when tapped. Melt butter in a pot large enough to hold the clams which has a lid. Sautee the chopped onion and garlic for a few minutes, add the clams, wine and Italian seasoning if desired. Stir the ingredients to mix the garlic and onions up into the clams. Put on the lid and turn up the heat. Steam from the butter and wine within about 5 minutes will start to pop open the clams. Cook long enough to open all the clams - about ten minutes. Holding the lid on and carefully shaking the pot will help pop open the clams and mix the broth into them. Serve in the broth with a loaf of French bread to soak it up. Serves approximately 7-10 people.



Workers harvest shellfish in Samish Bay



Oyster beds in Samish Bay

SALMON NEED CLEAN WATER TOO

When salmon come back to rivers and streams to spawn, clean water is one of the requirements for eggs and offspring to survive. Clean water is not only important to salmon but it is also important to all the organisms that support a healthy salmon population and ecosystem. Many of the Skagit Fisheries Enhancement Group's (SFEG) projects help water quality such as temperature, dissolved oxygen, fecal coliform and turbidity. Planting trees and shrubs along streams shades the water and helps control temperature. Streamside vegetation also filters out pollutants harmful to fish and stream organisms such as soil runoff, fertilizers and pesticides. Fencing livestock out of streams helps to reduce fecal coliform loading. Large wood placed in streams helps give streams habitat diversity. Wood changes stream hydrology and creates gravel bars, pools and riffles. Riffles help aerate the water and increase dissolved oxygen.

An important role SFEG plays in our community is involving volunteers in planting trees, monitoring of projects, and helping in our native plant nursery. These volunteers range in age from pre-school to retirees and many come back year after year. Each one of the volunteers is made aware of the importance of the work they are doing for the watershed, which is one of the reasons they keep returning. For more information about how you can help keep water clean for salmon please visit our web site: www.skagitfisheries.org.



Community volunteers plant native trees along Nookachamps Creek to keep water healthy and clean for salmon.

VISIT US ONLINE AT WWW.SKAGITCOUNTY.NET



YOUR TAX DOLLARS AT WORK TO PROVIDE CLEAN WATER!

WATER CLEANUP PLANS IN THE SKAGIT AND SAMISH WATERSHEDS

Sally Lawrence – Department of Ecology

Is it possible for streams and rivers to have improved water quality over time, even as land uses change and populations grow? A recent analysis of bacteria data for the Skagit River tells us this is possible. Bacteria concentrations in the Skagit River have been measured monthly since 1982 at a Mount Vernon site by Washington Department of Ecology. A recent data review by David Hallock of Ecology's Environmental Assessment Program in Olympia showed that bacteria have decreased significantly over time, and that most reaches of the mainstem Skagit River either meet or are close to meeting state water quality standards.

What is responsible for the reductions in bacteria in the river?

The data are not complete enough to tell us, but it is expected that both improvements in municipal wastewater treatment, such as improvements in the City of Mount Vernon's sewer infrastructure, and the efforts of citizens to repair failing septic systems and of farmers to improve manure management, have contributed to a slow but steady improvement since the 1980s.

Under the federal Clean Water Act, Ecology is required to establish water quality standards for bacteria and other indicators of surface water health, such as the amount of dissolved oxygen, in order to make sure the water is safe for recreation and harvest of fish and shellfish. When data indicate the water is not meeting standards, then the state conducts a study called a TMDL, or Total Maximum Daily Load study, to determine where pollutants are coming from and how much they need to be reduced in order for the water to meet standards. Currently Ecology is conducting three TMDLs in the Skagit and Samish watersheds in partnership

with local government agencies, Tribes, local watershed organizations and citizens:

1. The newly-published implementation plan for the Lower Skagit River fecal coliform TMDL included the data analysis cited above, showing the bacteria improvements in the Skagit. The plan also cites Skagit County Health Department's draft On Site Septic System Management Plan because it will help the TMDL by designating the Samish watershed and the Nookachamps basin as special areas with strict septic system inspection and repair requirements.
2. The Samish Bay watershed fecal coliform TMDL is still in development, with a year of water quality monitoring recently completed. This watershed has high bacteria concentrations at many locations, and Ecology expects that both septic system repair and improved manure management will be key to water quality improvements.
3. The lower Skagit tributaries temperature

TMDL is currently in development, and Ecology has convened a local Advisory Committee to review approaches for adding native riparian vegetation to improve stream hydrology and increase shading. The tributaries that exceed the state temperature standard in late summer are Hansen, Lake, East Fork Nookachamps, Nookachamps, Fisher and Carpenter Creeks.



The Samish River during a flood

Volunteer Program Placing Toilets at Popular Recreational Sites

Skagit County abounds in recreational opportunities to get out and enjoy nature. Unfortunately when nature calls, there often is not toilet facility nearby. There simply are not enough state and local dollars available to place toilets at all recreational sites. Even if funding were available there is often no appropriate public land to place them on. Human wastes that is improperly disposed of can be a severe health risk particularly near shellfish beds.

The Skagit Conservation Education Alliance (SCEA), a local non-profit organization is working to remedy this. In 2004 SCEA convened local recreational groups to identify and prioritize sites in need of toilet facilities. Harry Ota, a realtor on SCEA's Board of Directors came up with the clever idea of a "Sanican Timeshare Program" where concerned citizens could donate to support the placement of a portable toilet.

SCEA's vision is to have toilets placed at priority locations during the months they are needed (some accesses for say duck hunting or fishing only have seasonal usage) coupled with sponsors to pay for the portable toilets. Only three of nine priority sites are currently funded. If you know of a recreational organization who would be interested in helping sponsor a sanican please contact SCEA. If you are looking for that special gift consider giving a Sanican timeshare.

For \$40 you can get your name (or whoever you buy the timeshare for) on a sanican, a sanican timeshare certificate and of course unlimited free use of all SCEA hosted sanicans. For \$10 you can get a sanican timeshare certificate and unlimited free use of all SCEA hosted sanicans. Actually, any level of contribution is welcome and gets you unlimited free use of all SCEA hosted sanicans. For information email Steve Hoffman at steveh@skagitwater.org or call (360) 419-3161.



McElroy Slough, Samish Bay

Small Quantities of hazardous waste – A little adds up to a lot!

Just a little bit of paint in the bottom of the can; just a teaspoon of antifreeze, a cup of herbicide, a pinch of oil. This recipe can add up to a big, bad effect on the waters of Skagit County when you're talking about thousands of households, hundreds of businesses and over 110,000 people all sending just little bit of something into our waters.

Skagit County has a household hazardous waste disposal site at the Ovenell Transfer Station. Save up your items like oven cleaners, drain cleaners, shoe polish (yes! shoe polish), brake fluid and make a quick trip to the Household Hazardous Waste station for your peace of mind. Visit the Skagit County website at www.skagitcounty.com, find the Public Works Department for a list of items you can take to the site, or call 360-424-7817 for more information.

If you have a business and would like to ensure you are properly disposing of chemicals, call 360-424-9532.

VISIT US ONLINE AT WWW.SKAGITCOUNTY.NET

