



Clean Water Program 2017 Annual Report



*“Clean Water is Everyone’s
Business”*



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A Message from the Commissioners

As your commissioners, we are dedicated to ensuring our waters remain clean and safe. We all need clean water to ensure healthy lives and safe recreation, and viable habitat for fish, shellfish, and water quality.

The purpose of this report is to share with you our mission to enhance water quality for everyone in Skagit County. This report illustrates a variety of programs and activities aimed at improving water quality throughout the county.

We engage with our community to improve water quality as we work with tribes, state and local governments, the Skagit Conservation District, and numerous other conservation organizations to make steady progress.

Our Pollution Identification and Correction (PIC) Program is producing positive results in the Samish and Padilla watersheds. Our staff and volunteers are dedicated to working with landowners to help them be good stewards of this beautiful area. We encourage you to take part in the ongoing clean water efforts to improve the health of our watersheds and communities.

Sincerely,
 Skagit County Board of Commissioners



Ron Wesen
 District 1

Ken Dahlstedt
 District 2

Lisa Janicki
 District 3

History of the Clean Water Program

The Clean Water Program developed from the Clean Water (Shellfish Protection) District (CWD) created in 1995, which was originally designed to reduce bacterial pollution in Samish Bay by correcting failing septic systems in Edison and Blanchard.

From 1999 – 2005, Skagit County monitored water quality throughout the Samish Watershed. This monitoring revealed an ongoing fecal coliform pollution problem. Fecal coliform indicates the presence of bacterial organisms that can cause diseases such as typhoid fever, viral and bacterial gastroenteritis, hepatitis, and norovirus.

As a result of the continued high bacterial levels, Skagit County created the Clean Water Program (CWP) to strengthen non-point pollution reduction measures, educate the public, control non-point pollution, and develop a more thorough water quality monitoring program.

All of the programs listed within this publication are wholly or partially funded by the CWP and are dedicated towards improving Skagit County's water quality.

Skagit County Marine Resources Committee

Established in 1999, the Skagit County Marine Resources Committee (SMRC) is one of seven citizen-based advisory committees formed under the congressionally authorized Northwest Straits Marine Conservation Initiative (NWSI). SMRC has been primarily supported by federal grant funding through the NWSI and the Northwest Straits Commission, and partly by the Clean Water Program (CWP) and other grant funding administered through the Northwest Straits Foundation (NWSF). Below are some of the 2017 highlights:

Education and Outreach

Fidalgo Bay Day: Fidalgo Bay Day is a free, fun, educational event for citizens of all ages who want to learn about the marine environment and what they can do to help protect it. Some of the event highlights included: a beach seining demonstration, beach walks, a portable aquarium with live sea creatures to see and touch, the skull of a gray whale, educational displays, kid's craft activities, and games. Over 400 visitors attended SMRC's 14th annual Fidalgo Bay Day on August 12, 2017 at the beautiful Fidalgo Bay Resort in Anacortes.



Tide Pool Interpretive Sign at Washington Park

Salish Sea Stewards: SMRC's signature Salish Sea Stewards program provides over 40 hours of classroom and 10 hours field-based training for volunteers. In return, volunteers pledge to contribute 50 hours of volunteer services. The classes are taught by qualified experts and cover marine science-related topics and important issues impacting the Salish Sea. A record number of 34 new volunteers completed the training in 2017, for a combined total of 95 trained Salish Sea Stewards in Skagit County. In 2017, volunteers logged over 6,622 hours of volunteer services!



Volunteers are trained to monitor intertidal habitats

Marine Habitat Protection and Restoration

Nearshore Restoration Monitoring: SMRC partnered with the NWSF and multiple other partners in a coordinated effort to continue post-construction monitoring at the SMRC's Bowman Bay and NW March's Point nearshore restoration sites with the help of trained volunteers. Nearshore monitoring parameters include forage fish spawning surveys, beach seining, intertidal monitoring, and beach wrack and large woody debris surveys. In 2017, volunteers logged over 830 hours of nearshore monitoring.

Forage Fish Index Site Surveys: Forage fish index sites are being coordinated under the leadership of the Washington Department of Fish and Wildlife (WDFW). All seven MRCs are involved in conducting monthly forage fish index surveys in their own counties.

Marine Species Protection and Restoration

Pinto Abalone Recovery: The pinto (northern) abalone is the only abalone species indigenous to Washington State marine waters and is in serious decline. From 2009 to 2017, as part of an ongoing collaborative effort to build a sustainable pinto abalone population, over 9,200 hatchery-raised juvenile abalone have been introduced to six different outplant sites in Skagit County. In 2017, SMRC partnered with the Puget Sound Restoration Fund (PSRF) to conduct diver surveys and outplant an additional 1,799 juvenile pinto abalone at four of the six sites in Skagit County. Preliminary data indicates that abalone are growing larger in size and density and spreading beyond the four original restoration plots, but a lot more work needs to be done before a sustainable pinto abalone population is reached.

Olympia Oyster Restoration: Since 2002, SMRC has been working collaboratively with PSRF and other partners to establish several sustainable native Olympia oyster beds in Fidalgo Bay. In 2017, volunteers helped deploy oyster shell along the west side of Fidalgo Bay to provide additional habitat for oyster larval settlement. The oyster settlement from last year was very good (about the third highest in 15 years!). In 2017, volunteers contributed over 62 volunteer hours towards native oyster restoration in Skagit County.

Questions about Skagit County's Marine Resources Committee can be directed to Tracy Alker at: tracya@co.skagit.wa.us or (360) 416-1462.

Pollution Identification and Correction (PIC) Program

The mission of Skagit County's Pollution Identification and Correction (PIC) Program is to protect the public from water-borne illness and other related water-quality hazards. Water polluted with fecal bacteria has been our primary concern; however, PIC methods can be used for nutrients, sediment, temperature and other pollutants. Skagit County's PIC Program has been operating since 2010 and has been successful in reducing levels of fecal coliform bacteria in the Samish Bay watershed. In 2015, the program expanded to include the Padilla Bay watershed.

Water quality monitoring is the core of any PIC Program. Traditionally, sampling sites are identified near the confluence of streams and are monitored on a regular basis. Where high levels of pollutants are found, source identification sampling (sometimes referred to as "bracket sampling") occurs upstream to identify where the pollution is coming from. Staff then follow up with site visits to property owners to identify the source of pollution, then work with property owners to correct any problems that are found. Common sources include pets, leaking septic systems, livestock such as horses, cows, and pigs, and wildlife.



The PIC Program has partnered with a number of other organizations to offer resources to property owners who may have problems on their property that need to be solved. Our partners include the Skagit Conservation District, the Skagit County Health Department, and Skagit Fisheries Enhancement Group, among others. With the help of our partners, we can offer low interest loans and grants for septic system repairs or replacements, free and confidential farm assessments by trained farm planners, assistance with farm management, and financial assistance for fencing, invasive plant removal, native plantings, and other projects.



Clean Samish Initiative

The Clean Samish Initiative (CSI) is a partnership between state and local agencies, tribes and volunteers to identify and correct sources of bacterial pollution in the Samish Bay watershed. The partnership was established in 2009 after high levels of bacteria were discovered in the Samish River in 2008. Led by Skagit County, the CSI partners developed a program to identify and eliminate fecal coliform bacteria sources, with the goal of reducing bacteria levels so that the Samish River meets state water quality standards. Since 2015, the CSI partners have worked with the Governor's Office to reevaluate our work, experiment with new methods, and improve our processes.



Due to strong community participation and stewardship activities, we are continuing to make progress, and we are closer to our goal than ever. The CSI team continued our focus on the upper watershed areas of Wear Creek, Skarrup Creek, and Friday Creek and its tributaries in 2017. In these areas and others in the watershed, water quality sampling, investigations, and other work led to the identification of 23 septic system failures in the Samish watershed. We evaluated 19 properties with livestock problems. Working with the Skagit Conservation District and others, we resolved 14 livestock problems. Thanks to all the work done over the years, in late 2017, the Washington Department of Health updated the emergency closure criteria used to protect public health in recognition of the water quality improvements that have been made. In 2018, the CSI partners will continue to explore the watershed to identify potential pollution sources and get them fixed.

In addition to water quality monitoring and watershed assessments, Skagit County is working hard to encourage our citizens to adopt practices that reduce pollution through various education and outreach efforts. From attendance at a wide variety of public events to creating videos about septic systems, to maintaining a presence on social media via our Facebook page, Skagit County is committed to experimenting with new methods to improve our work.

Questions about the Clean Samish Initiative can be directed to Karen DuBose at kdubose@co.skagit.wa.us or (360) 416-1460.

Water Quality Monitoring Program

Skagit County's Water Quality Monitoring Program (SCMP) initiated as part of the Monitoring and Adaptive Management component of the current Critical Areas for Ongoing Agriculture (SCC 14.24.120)(Ag-CAO). The monitoring program began in October 2003 and consists of 40 sites through-out western Skagit County, located both within and outside of areas zoned Agricultural Natural Resources Lands (Ag-NRL) and Rural Resource.

Each sampling site is visited biweekly (26 times per year), and staffers measure such parameters as dissolved oxygen, temperature, pH, turbidity, conductivity, and salinity. Samples are also obtained for laboratory analysis of fecal coliform bacteria (each visit) and nutrients (quarterly).

The intent of the SCMP is to assess current water quality conditions and determine if positive or negative trends in water quality were occurring in areas affected by the Ag-CAO, and to determine if those trends were unique to agricultural areas or widespread throughout the county. Data analysis indicates that for the length of the study, there are several statistically significant trends in water quality in Skagit County. As of the end of 2016 (latest data available), negative trends outnumbered improving trends. Positive and negative trends occurred in both agricultural and non-agricultural locations.

Another measurement we use is the Water Quality Index (WQI), intended as an overall look at the water quality of a given watercourse. Throughout the monitoring project since 2003, there has been an increase in the number of monitoring sites that meet the "lowest concern" or green category. In 2006 there were 3 green sites out of the 40 monitoring locations. In 2017 there were 20 green sites, 5 more than 2016. See the table below for the history of WQI findings in the monitoring program.

Several years ago, SCMP monitoring revealed fecal coliform problems in the Samish River. This finding led to the formation of the Clean Samish Initiative (CSI). Part of the CSI effort is a Pollution Identification and Correction (PIC) program designed to locate and remediate sources of pollution through cooperative, common sense measures.

Water quality monitoring remains an important component of the Skagit County Public Works – Natural Resource Division functions. Water quality is an important barometer of natural resource conditions as we seek to protect and restore our aquatic resources.



Number of sites in Water Quality Index (WQI) categories
Total number = 40 sites

“Water quality is an important barometer of natural resource conditions”

Year	Green (Lowest Concern)	Yellow (Moderate Concern)	Red (Highest Concern)
2006	3	15	22
2007	6	17	17
2008	10	13	17
2009	17	11	12
2010	13	19	8
2011	20	9	11
2012	13	16	11
2013	15	14	11
2014	16	13	11
2015	16	13	11
2016	15	15	10
2017	20	8	12

Questions about Skagit County's Annual Water Quality Monitoring program can be directed to Rick Haley at rickh@co.skagit.wa.us or (360) 416-1457.



Skagit Conservation Education Alliance

SCEA is a community based non-profit organization dedicated to protecting and enhancing water quality in watersheds throughout Skagit County. SCEA accomplishes these goals by:

- Building cooperative and collaborative alliances with community residents and fellow conservation organizations.
- Hosting creative, fun educational programs for the whole family that strengthen a greater relationship to the Skagit ecosystem.
- Supporting and inspiring grassroots projects that focus on conservation and protection of water, soil and related natural resources.

D.A.S.S.H – Doing a Sprint for Samish Health

On March 4, 2017, SCEA's hosted D.A.S.S.H (Doing a Sprint for Samish Health) 5K Family Fun Run/Walk for clean water awareness which brought together over 100 citizens, 20 volunteers and numerous partner organizations to rally for clean water in the Samish Watershed.

The festivities continued after the race with an award ceremony, fun and educational booths from our partner's organizations, and Taylor Shellfish Geoduck Chowder with Breadfarm Bread.

Skagit Watershed Letterbox Trail

In 2017, SCEA collaborated with two 5th grade classrooms from Allen Elementary to create the Skagit Watershed Letterbox



2017 DASSH participants get ready to race!



SCEA Public Education and Outreach

“Mini Trail” at Padilla Bay's Upland Trail. SCEA provided three classroom lessons on Science, Art and Natural Science. The students created watershed themed letterboxes and learned about the importance of our natural resources and clean water. The students then hid their letterboxes and created clues for the community to find them throughout the summer.

Watershed Art and Discovery Day

Watershed Art and Discovery Day was hosted on June 24th at the Padilla Bay Research Reserve. More than 60 children and families spent the day blending art and science into creativity to explore the Skagit Watersheds. Through these creative activities children were able to learn and discover the wonders of local estuaries and the creatures that inhabit our local ecosystems.

Skagit ECO Net

SCEA continues to serve as the lead for Skagit ECO Net. Skagit ECO Net is a community of environmental, conservation and stewardship educators and professionals who encourage education, communication and outreach through connections and collaboration.

Connecting Kids to Conservation

The goal of this program is to inspire meaningful outdoor learning experiences for our local youth and encourage a life long pursuit of conservation.

Questions about the SCEA can be directed to Karen Summers at cwaterskagit@gmail.com or (360) 428-0154.

Skagit Fisheries Enhancement Group

The Skagit Fisheries Enhancement Group (SFEG) is a nonprofit organization providing opportunities for our community to improve the health of the Skagit Valley for salmon, wildlife and people. The work of the Skagit Fisheries Enhancement Group is accomplished by assisting landowners with habitat restoration projects, engaging volunteers with monitoring the effectiveness of these projects, and providing free education programs to local students. Funding from Skagit County's Clean Water program expands our ability to engage our community in keeping our water clean and healthy for all.



Volunteers monitor native plant restoration on Bowman Bay

Enhancing Habitat

Volunteers and staff worked with many partners to plant more than 23,900 native trees and shrubs along Skagit County's rivers, streams, and shorelines. These projects restore vegetation along waterways which is a critical component to decrease pollution in our waterbodies and improve water quality and habitat in our watersheds. SFEG staff also worked directly with landowners to respond to questions about water quality and fish passage, and to help develop restoration projects.

Educating our Youth

In 2017, Skagit County Clean Water funds helped SFEG provide out of classroom education opportunities to nearly 2,000 local students. Through three youth education programs (**Kids in Creeks, Junior Stream Stewards, and Salmon in the Classroom,**) local kids are having outdoor experiences that are connecting them to the natural world. Students are engaged in learning about how clean water is essential for salmon, shellfish and our communities.

Engaging Our Community

SFEG continues to assist the Clean Samish Initiative by educating Samish community members via outreach events, as well as securing additional grant funding and providing assistance to restore habitat, remove invasive plants, and monitor water quality improvements in partnership with Skagit County. SFEG continued as a primary organizer of the 6th annual Skagit River Salmon Festival held at Edgewater Park in Mount Vernon. Festival attendees learn, engage and celebrate the amazing watersheds of Skagit County and their resources. SFEG also hosted several "Salmon Sighting" events inviting community members to safely observe

spawning salmon at several Skagit County locations and learn more about keeping the water clean for salmon and shellfish.

Monitoring Our Progress
Skagit County's Clean Water Program helps SFEG train volunteers to collect data that tracks progress at habitat restoration sites. This information is important to developing future projects and understanding the science of watershed restoration. This year, volunteers and student interns donated more than 1,900 hours collecting data related to vegetation survival and growth; as well as adult and juvenile salmon use to share with funders, researchers and public agencies.



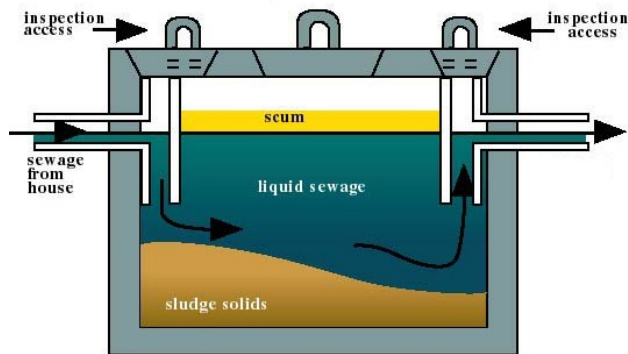
Volunteers count adult salmon returning to spawn

Questions about the SFEG can be directed to sfeg@skagitfisheries.org or (360) 336-0172.

On-site Septic Systems— Skagit County Public Health

On-site Sewage (Septic) Systems Inspections

Skagit County Public Health (SCPH) assures that on-site sewage systems (OSS) are designed, installed and maintained so that the effluent discharged to the ground does not contaminate ground or surface water. The Clean Water Program money funds the operations and maintenance (O/M) program. Like cars, septic systems need to have regular check-ups and maintenance to make sure they work as designed. Maintenance specialists certified by our department check all parts of a septic system, which can include tanks, filters, pumps, control panels, and drain fields.



A Typical Septic System Design

Inspections and Repairs

Septic systems are required to have periodic inspections by a (SCPH) certified operations and maintenance specialist. Conventional gravity systems need an inspection every three years; all other types of systems need annual inspections.

Our inspection efforts are focused in Marine Recovery Areas (MRAs) where environmental health impact is the greatest. Septic systems on shorelines pose a greater threat of contamination to surface waters.

A septic system owner whose property is not on a shoreline and whose system is a conventional gravity system may be eligible to do their own inspection after appropriate education and oversight by SCPH.

Failures and deficiencies are reported by certified O&M providers at the time of inspection or by homeowners who experience problems with their septic systems. SCPH staff offer technical assistance and financial recommendations as needed with property owners to assure that failures and deficiencies are addressed as quickly as possible.

Quality Assurance

Public Health started a quality assurance program for our certified O/M specialists. Our goal is to conduct joint inspections with each certified O&M provider to assure that inspections are thorough, consistent and the submitted inspection

information is complete. Annual certification may be denied if repeat deficiencies are observed. If you have any concerns about an inspection or an O&M provider, please contact the Health Department office.

Septics Education

Septics 101 training is available online and is free to help educate homeowners about proper care of their septic systems. A Septics 201 in-person class is held on an as-needed basis. After completing this hands-on training, homeowners with gravity septic systems may perform their own inspections.

Rebates

SCPH received funding to provide \$100 rebates on inspections and \$100 rebates for installations of septic tank risers per household. Rebates were available for work done by a certified professional between January 1, 2016 and September 30, 2017 or until those funds were exhausted, whichever came first. To be eligible for a rebate, the applicant must have taken the Septics 101 course and have had the work completed by a certified professional. Contact SCPH for [more](#) information.

Rebate Program

What is it?

\$100 rebate for completion of a septic system inspection and \$100 rebate for installation of risers and lids. Funded by an EPA grant through the Washington State Department of Health.

Is it for certain places?

These rebates are for any eligible work done on a septic system in Skagit County.

Why would I need it?

Regular inspections help prevent septic system failures. Risers make the septic system easier to inspect later. That means protecting public health and improving water quality.

Financial Help

Low-interest loans are available for covering the entire cost of a repair or replacement of a septic system. Loans can be spread out over many years to reduce the monthly cost.

Questions about Skagit County Health Department can be directed to EH@co.skagit.wa.us or (360) 416-1500.

Fish Habitat Restoration Program

The Fish Habitat Restoration Program is an ongoing County program dedicated to protecting water quality and fish habitat and is guided by the Habitat Improvement Plan (HIP). The mission of the HIP is to create and advance restoration strategies that support Skagit County goals for promoting the health of our watershed, improved water quality, and enhanced habitat for salmon. The HIP provides a road map for restoring salmonid habitat and improving water quality by identifying short, medium, and long-term project goals while allowing flexibility to work on opportunistic projects.

Projects designed to improve fish habitat also have water quality benefits. Riparian vegetation acts as a filter by removing pollutants before they reach streams, while at the same time providing distance between pollutant sources and streams and stabilizing banks. Riparian habitat restoration therefore results in improved stream temperatures and reduced pollution levels.

Skagit County has more than 800 miles of roads with hundreds of culverts. In the past two decades, the County has replaced many small, inefficient culverts with larger culverts or other fish-friendly crossings. Smaller, older culverts can act as barriers for fish attempting to make the upstream migration while also easily plugging, causing erosion or flooding upstream. Small culverts often present a velocity barrier for fish attempting to migrate through them, and perched culverts prevent fish from jumping and entering the culvert, meaning they can't access spawning or rearing grounds upstream. Conversely, large culverts and bridges allow water to flow through at a more natural rate providing a more stable stream environment for fish that also reduces flooding problems. Reducing flooding and erosion problems also improves downstream water quality throughout Skagit County.

The County routinely applies for grants from various agencies including the State Recreation and Conservation Office, Salmon Recovery Funding Board, Department of Ecology, and private sources. Additionally, we partner with various organizations throughout the County including local Tribes, Skagit Fisheries Enhancement Group, Skagit Land Trust, and others.



Trumpeter Creek Restoration project. Skagit County partnered with the Skagit Land Trust and Ducks Unlimited.



Example of undersized culvert trapping debris and blocking fish passage while potentially increasing flooding upstream.

Some of the Fish Habitat projects from 2017:

- Trumpeter Creek Restoration Project
- County culvert analysis and project development
- Maintenance on existing Restoration projects including
 - Illabot Creek
 - Martin Riparian Restoration
 - Conservation Reserve Enhancement Projects
- South Fork Delta Channel on-going Design
- Hansen Creek Reach 5 Channel-on-going Final Design
- Natural Resources Stewardship Program (page 11)



Pink Salmon, photo by Jeff McGowan

Questions about Skagit County's Habitat Restoration Program can be directed to Emily Derenne at emilyd@co.skagit.wa.us or (360) 416-1449.

Skagit Conservation District

Since 1942, the Skagit Conservation District (SCD) has cared for the people and places that make our community among the most beautiful in the world. The SCD is dedicated to assist landowners to keep our local farms and forests sustainable, our rivers and streams healthy, our fish and wildlife abundant, and our children and grandchildren outdoors. The SCD is a non-regulatory division of state government governed by a board of five supervisors, who are all local landowners. All programs provided by the SCD are voluntary and free of charge. Cost-share funds are also available for the installation of some Best Management Practices (BMPs).

The SCD provides free technical assistance to landowners who seek to improve their farming operations and minimize impacts on soil and water resources. Conservation planning provides landowners with useful guidance on pasture rotation, fencing, stormwater management, waste storage designs, alternative watering facilities, stream restoration projects, manure management, forestry, and much more.

Conservation Planning and Technical Assistance

In 2017, SCD provided assistance to 116 commercial and small farm landowners, completed 13 farm plans, implemented 12 structural BMPs, and oversaw multiple Conservation Reserve Enhancement Program projects (CREP). In addition, SCD received grant funding and coordinated the installation of a Green Stormwater Infrastructure (GSI) project at the Bay View United Methodist Church. The project was designed to capture and filter stormwater runoff from the road, roof, and other hard services, keeping it from becoming harmful water pollution and to protect the health of Padilla Bay. The project will be completed Spring of 2018.



Stream Team volunteer, Maria Magana, teaches kids about water quality at the Annual Kids in Nature Event



Solar Powered Pump, an example of SCD's Technical Assistance

Engaging the Community

The Skagit Conservation District values applied education that serves to educate and involve the public. The staff manages popular volunteer programs and environmental education opportunities for youth and adults throughout the District.

Citizen involvement is crucial to water resource protection in Skagit County. SCD values the opportunity to engage and work with our residents. In 2017, District staff supervised 166 citizen volunteers that participated in the district's Watershed Masters, Skagit Stream Team and Storm Team, Marine Biotoxin Monitoring, Backyard Conservation and Community Wildlife Habitat programs. The volunteers contributed more than 6,400 hours of service providing critical water sampling to aid in opening shellfish beds.

Connecting our youth with the natural world and introducing them to good environmental habits at a young age are important factors in our journey to a more sustainable community. SCD again hosted the Annual 6th Grade Conservation Tour, Annual Soil & Water Stewardship Week poster contest, Annual Kids in Nature: Families Outdoors at Pomona Grange Park, and the National Envirothon competitions for local high school students.

Clean Water Program

We are all neighbors and together we can have healthy watersheds! Success in keeping our valuable water resources clean relies on the participation and involvement of everyone who lives, works, or plays in the watershed.

For information about the Skagit Conservation District, call (360) 428-4313 or visit www.skagitcd.org.

Natural Resource Stewardship Program (NRSP)

Skagit County has offered the Skagit County Natural Resource Stewardship Program (NRSP) since 2009. By enrolling in the program, landowners can enhance their property at no cost to the landowner. Projects must be next to a stream, waterbody, or ditch, and can include work with the intent of protecting the property from bank erosion, removal of invasive vegetation, replanting with native vegetation, or the desire to enhance their property for the improvement of water quality or fish habitat. We are currently focusing on the Samish, Padilla, and Nookachamps watersheds but have funding for Countywide projects. Special thanks to Skagit Fisheries Enhancement Group (SFEH) for partnering on many projects.

Projects Can Include:

Livestock Exclusion

Livestock can have many negative impacts on streams when their access to waterways is unrestricted.

These impacts can include:

- Reduced vegetation along stream banks
- Compacted soil and increased runoff
- Increased erosion resulting in poor salmon spawning gravel and property loss
- Manure-contaminated runoff resulting in high fecal coliform counts downstream



Livestock exclusion fencing and plants installed by Skagit County and SFEH.

NRSP will install a variety of fencing types. We work closely with the landowner to ensure their needs are met and their animals are contained in a safe and effective manner. NRSP is also able to install livestock crossings to reduce bank erosion and limit direct access to the water.



Replanting completed by Skagit Fisheries Enhancement Group at an NRSP project site.

Restoring Riparian Areas

Re-establishment of native vegetation by removing streamside invasive plants and planting native plants can help stabilize banks, shade the stream, reduce pollution, provide a food source for invertebrates in the stream that are eaten by juvenile salmonids, and beautify local properties. Staff work with the landowner to select native plants.

Bank Stabilizing and Restoring Fish Habitats

Many streams in our area have failing and eroding banks. This can be caused by natural stream migration, often exacerbated by removal of riparian vegetation. Additionally, upstream changes can impact residents downstream sometimes leading to erosion where there hadn't been in recent history. Often landowners have limited bank vegetation which can increase rates of erosion on their property by removing all root strength below ground. Unrestricted bank erosion increases fine sediment in the system, which is bad for water quality and salmon, not to mention property loss.

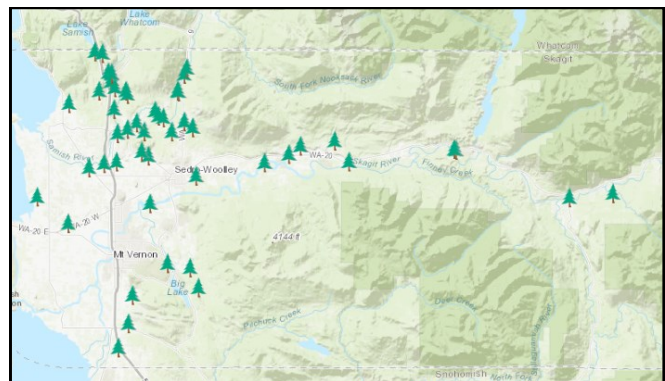


Installing Large Woody Debris for bank stabilization and fish habitat

Remember, erosion through grass is very easy!

Completed 2017 Projects

Skagit County has worked with more than **56 landowners** or community groups on **46 projects**. They have included removal of invasive plants and planting native vegetation, installation of livestock exclusion fencing and livestock crossings for safe passage, and the installation of logs to provide bank stabilization while benefiting fish habitat and water quality. County residents have restored more than **94 acres** of land including planting **41,561 native plants** along more than 10.7 miles of property. Additionally NRSP has installed 4 livestock crossings, **4.85 miles of fencing**, and 235 pieces of large woody debris used for bank stability and improved salmon habitat. Projects have ranged from 0.1 acres to more than 8 acres. No project is too small or too large for NRSP.



Projects completed through NRSP since 2009.

For more information, contact Emily Derenne at emilyjd@co.skagit.wa.us or (360)416-1449.



Skagit County Public Works
1800 Continental Place
Mount Vernon, WA 98273

Phone: 360-416-1400
E-mail: pw@co.skagit.wa.us

[www.skagitcounty.net/
CleanWater](http://www.skagitcounty.net/CleanWater)

Clean Water is Everyone's Business

Clean Water Program Budget Summary

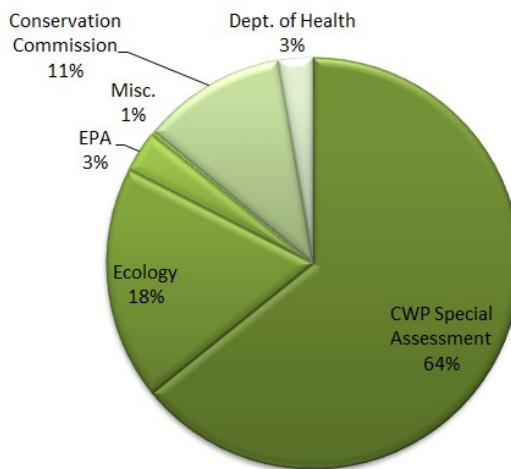
The Skagit County Clean Water Program (CWP)

Skagit County's Clean Water Program originated from the Clean Water Shellfish Protection District created in 1995, which was originally designed to reduce bacterial pollution in Samish Bay and improve the quality of local shellfish beds. The County most recently reauthorized the CWP for an additional five years in 2014 (R20140165). On your annual property tax, this is listed as Clean Water Assessment (CWA). In 2017, the CWP special assessment fee was \$45 per year for a single-family residence and \$150 per year for commercial property.

What was the budget in 2017?

For 2017, the CWP revenue was expected to be approximately \$2.3 million. The CWP special assessment contributes about \$1.4 million of the revenue. The remaining revenue comes from a variety of State and Federal grant funding.

2017 Budgeted Revenue



2017 Budgeted Expenses

