Clean Water Program
2018 Annual Report

"Clean Water is Everyone's Business"

Inside this issue:

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, safe recreation, and viable habitat for fish, and shellfish.

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 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 (CWP) developed from the Clean Water (Shellfish Protection) District 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, gastroenteritis, hepatitis, and norovirus.

As a result of the continually-high bacterial levels, Skagit County created the 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 to 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 Initiative (NWSI). SMRC has been primarily supported by federal grant funding through the NWSI and the Northwest Straights Commission, and partly by the CWP. Below are some of the 2018 highlights:

Tide Pool Interpretive Sign at Washington Park

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: beach seining, beach walks, a portable touch tank with marine critters, educational displays, games, and kid's crafting activities. Over 400 visitors attended SMRC's 15th annual Fidalgo Bay Day on September 15, 2018 at the beautiful Fidalgo Bay Resort in Anacortes.

Salish Sea Stewards: SMRC's signature Salish Sea Stewards program provides over 40 hours of classroom and some field-based training for volunteers. The classes are taught by qualified experts and cover marine science-related topics and important issues impacting the Salish Sea. Twenty-five new volunteers completed the training in 2018, for a combined total of 120 Stewards in Skagit County. Since the program was established four years ago, 23,888 hours of time have been contributed by volunteers.

Volunteers are trained to monitor intertidal habitats

Kids on the Beach: Kids on the Beach was a pilot program of the SMRC in 2018 that engaged 50 eighth grade students from Conway Middle School in a variety of hands-on science activities on the beach and in the classroom. Twenty-five volunteers assisted students with the field activities. Students developed scientific proposals and generated real scientific data that will be used by the Washington Department of Fish and Wildlife, and presented their findings at a research symposium.

Marine Habitat Protection and Restoration

Nearshore Restoration Monitoring: SMRC partnered with the Northwest Straits Foundation in a coordinated effort to continue post-construction monitoring at SMRC's Bowman Bay and March's Point nearshore restoration sites using of trained volunteers. Nearshore monitoring parameters include forage fish spawning surveys, beach seining, intertidal monitoring, and beach wrack and large woody debris surveys. In 2018, 84 volunteers logged over 939 hours of nearshore monitoring.

Bowman Bay Nearshore Restoration: Skagit MRC partnered with the Skagit Fisheries Enhancement Group to recruit volunteer stewards to weed and water the nearshore vegetation at the Bowman Bay restoration site during 2018. Five volunteer work parties were held between May and August to weed and water the plants. A total of 18 volunteers contributed approximately 62.5 combined hours to assist with plant maintenance.

Marine Species Protection and Restoration

Pinto Abalone Recovery: Since 2009, as part of an ongoing collaborative effort to recover the serious declining pinto abalone population, over 9,200 hatchery-raised juvenile abalone have been introduced to six different outplant sites in Skagit County. In 2018, SMRC partnered with the Puget Sound Restoration Fund (PSRF) to conduct diver surveys. Survey data indicates that abalone are growing larger in size and density and spreading beyond the four original restoration sites.

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 2018, volunteers surveyed new oyster settlement and helped deploy oyster shell to provide additional habitat for oyster larval settlement. We now have an estimated 3 million oysters in Fidalgo Bay. Six volunteers contributed over 153 hours toward Olympia oyster restoration in 2018.

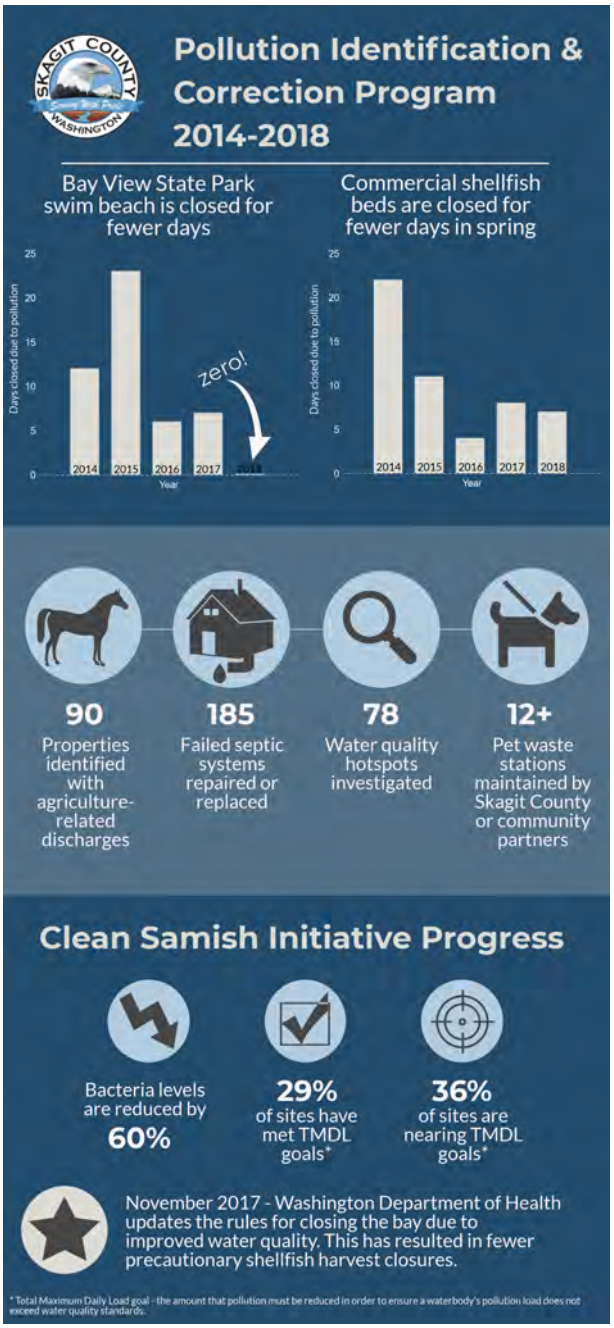
Questions about Skagit County's Marine Resources Committee can be directed to Tracy Alker at: tracya@co.skagit.wa.us or (360) 416-1462.

Pollution Identification and Correction (PIC) Program

The mission of Skagit County's Pollution Identification and Correction (PIC) program is to protect the public from waterborne illness and other related water-quality hazards. Water polluted with fecal coliform 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 and Padilla Bay watersheds.

Water quality monitoring is the core of any PIC Program. 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 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, working with them to correct any problems that are found. Common sources include pets, leaking septic systems, and livestock such as horses, cows, and pigs.

Thanks to partnerships with other organizations, the PIC program is able to offer resources to property owners who may have problems on their property that need to be solved. With the help of partners like the Skagit Conservation District, the Skagit County Health Department, and the Skagit Fisheries Enhancement Group, 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 established in 2008 between state and local agencies, tribes, and volunteers to identify and correct sources of bacterial pollution in the Samish Bay watershed. Led by Skagit County, the CSI partners work to reduce fecal coliform bacteria levels in the watershed to meet state water quality standards and protect commercial shellfish beds from pollution.

Due to strong community participation and stewardship activities, we are continuing to make progress, and we are closer to our goal than ever. Several livestock pollution problems were identified and confirmed, and eight failing septic systems were repaired or replaced in 2018. We brought a sewage-sniffing dog to Skagit County in February, and collaborated with the University of Washington during the spring and fall to look for chemicals in the water that might indicate the source of pollution.

Outreach and education to encourage property owners to identify their own problems and reduce their personal impact is a core function of our program. In April, we released our PoopSmart campaign (poopsmart.org), taking a lighthearted approach to the subject. We attended a variety of public events, were interviewed on the radio and evening news several times, produced several videos on related topics, and increased our presence on social media. Skagit County is committed to experimenting with new methods to improve our work.

Questions about the Clean Samish Initiative or PIC Program 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) was 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 throughout 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 staff 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).

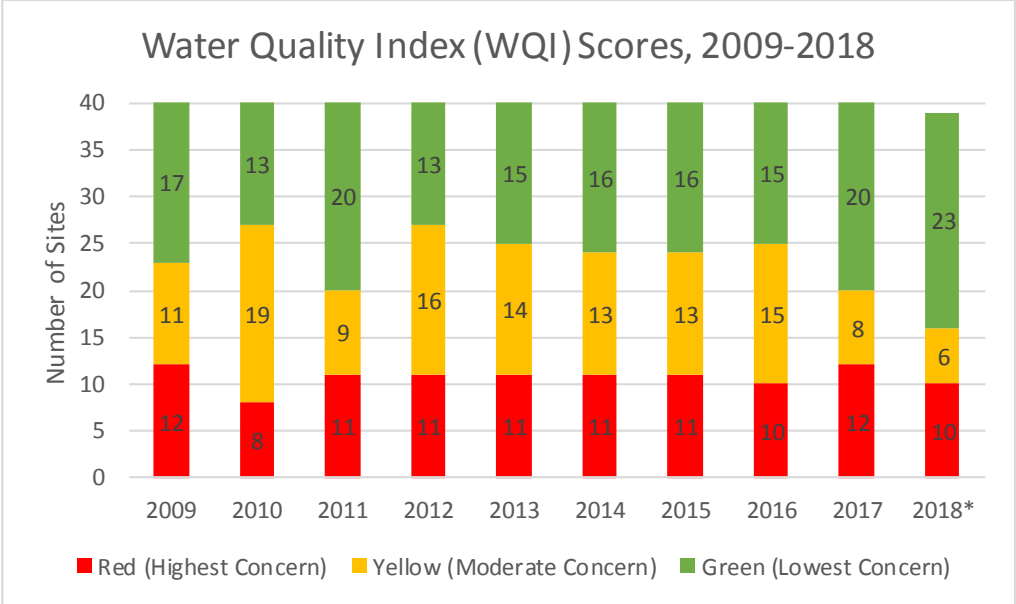
The intent of the SCMP is to assess current water quality conditions and determine if positive or negative trends in water quality are occurring in areas affected by the Ag-CAO, and to determine if those trends are unique to agricultural areas or widespread throughout the county. Data analysis indicates that for the length of the study, there are several statistically significant trends in water quality in Skagit County. As of the end of 2017 (latest data available), negative trends outnumbered improving trends, although there were more improving trends in 2017 than 2016. 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. In the last few years, there has been an increase in the number of monitoring sites that meet the "lowest concern" or green category. In 2010, there were 13 green sites out of the 40 monitoring locations. In 2018 there were 23 green sites, 8 more than in 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's effort is the 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's functions. Water quality is an important barometer of natural resource conditions as we seek to protect and restore our aquatic resources.

"Water quality is an important barometer of natural resource conditions"



* One site was dropped in 2018 due to nearby construction

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

The 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.

SCEA Public Education and Outreach

DASSH – Doing a Sprint for Samish Health

On March 3, 2018, SCEA hosted the DASSH (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 2018, SCEA collaborated with Bay View Elementary teachers to create the Skagit Watershed Letterbox **"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.

DASSH participants get ready to race!

Watershed Art and Discovery Day

Watershed Art and Discovery Day was hosted on June 23th 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

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 SFEG 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 CWP expands our ability to engage our community in keeping our water clean and healthy for all.

SFEG intern Jackie Wenala teaching kids about Salmon

Enhancing Habitat

Volunteers and staff worked with many partners to plant more than 17,000 native trees and shrubs along Skagit County's rivers, streams, and shorelines. These projects restore vegetation along waterways, which is a critical component for decreasing pollution in our waterbodies and improving 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 2018, Skagit County CWP funds helped SFEG provide out-of-classroom education opportunities to over 2,000 local students. Through three youth education programs (**Kids in Creeks, Junior Stream Stewards,** and the **School Cooperative Program**) 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 7th 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. The Oyster Creek Salmon Sighting was particularly popular for community members with over 200 people coming to observe chum salmon. Watching chum salmon spawn near active shellfish harvesting helps the community better understand the connections between habitat restoration and clean water for shellfish.

Monitoring Our Progress

Skagit County's CWP 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 2,000 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.

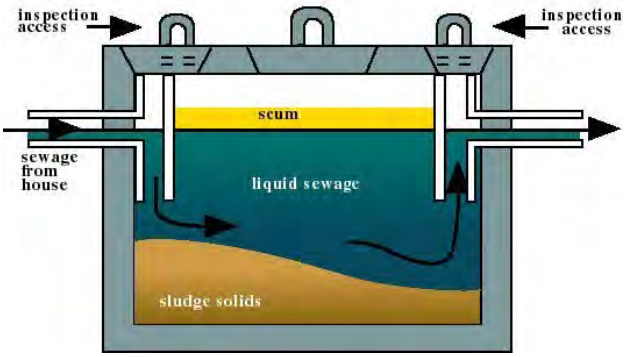
Leif Ericson Recreation Association group photo

Questions about Skagit Fisheries Enhancement Group 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 are designed, installed and maintained so that discharged effluent does not contaminate ground or surface water. The CWP 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 O/M 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.

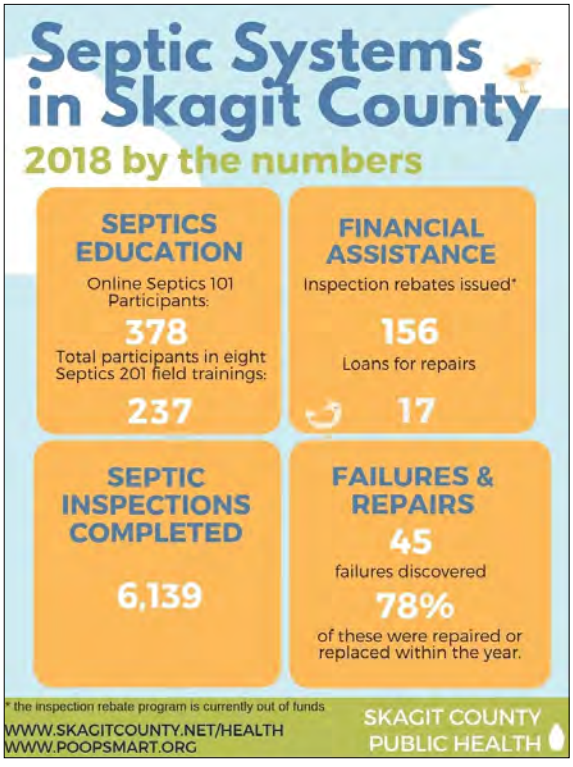
Failures and deficiencies are reported by certified O/M providers at the time of inspection or by homeowners who experience problems with their septic systems. SCPH staff offer technical assistance and financial recommendations as needed with property owners to assure that failures and deficiencies are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

Quality Assurance
This year, Public Health increased emphasis on the 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 that the submitted inspection information is complete. Annual certification may be denied if repeat deficiencies are observed. If anyone has concerns about an inspection or an O/M provider, the Health Department should be notified. We track and follow up on any complaints received from property owners about inspectors or the quality of their work.

Septics Education
Septics 101 training is a free, online tool 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. 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. Rebates were available for work done by a certified professional beginning January 1, until those funds were exhausted in October 2018.

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 (FHRP) 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, reduced pollution levels, and can improve sediment transport.

Skagit County has more than 800 miles of roads with hundreds of culverts. Since 1999, the County has replaced about 50 small, inefficient, and/or failing culverts with larger culverts or other fish-friendly crossings. Smaller, older culverts 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 into the culvert, meaning they can't access habitat available upstream. Conversely, large culverts and bridges allow water to flow through at a more natural rate while also passing debris associated with streams. This provides a more stable stream environment for fish that also reduces flooding problems on private properties and on County infrastructure. 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, National Fish and Wildlife Foundation, and private sources. Additionally, we partner with various organizations throughout the County including local Tribes, Skagit Fisheries Enhancement Group, Skagit Land Trust, and others.

Example of undersized, perched, and failing culvert blocking fish passage while increasing erosion. This culvert is slated for replacement in 2019.

Pink Salmon in Hansen Creek, photographed by Jeff McGowan

A recently-repaired fish passage culvert. This was originally a 2-foot wide culvert that was routinely plugged by beavers, and is now 11-feet wide.

Some of the Fish Habitat projects from 2018:

- County culvert analysis, prioritization, and project development
- South Fork Delta Channel on-going design
- Maintenance on existing restoration projects
- Cedargrove Avenue fish passage improvement
- Maddox Creek culvert removal
- Natural Resources Stewardship Program (page 11)

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

For the past 76 years the Skagit Conservation District (SCD) has been caring for Skagit Valley's Natural Resources that are among the most beautiful and valuable in the world. The SCD offers free technical assistance and educational opportunities for local landowners to help preserve our natural resources. The SCD is a non-regulatory sub-division of state government working co-operatively with private landowners to address water and soil concerns. SCD appreciates having been a partner with the County in assisting landowners to improve water quality conditions, and looks forward to continuing our efforts to achieve our shared goals.

Resource Conservation and Technical Assistance:

Well-designed conservation practices increase farm productivity while protecting water quality and reducing soil erosion. SCD combines free technical help with cost-share incentives to support good stewardship of natural resources. Over the last 5 years, the Conservation District Farm planners completed **64** farm plans and **5** dairy plans. There were a total of **39** structural Best Management Practices installed by the landowners with multiple cost share projects funded through the Conservation Commission and the Natural Resource Conservation Service. A total of **328** technical assistance visits were made to voluntary landowners. In addition, to date, SCD has installed **716** buffer acres in the Conservation Reserve Enhancement Program (CREP), planted **333,320** native plants, and maintains **72** active CREP contracts totaling **238,830** feet (45 miles) of riparian restoration.

Engaging the Community

The Skagit Conservation District provides a comprehensive and multifaceted series of programs and opportunities aimed at educating, engaging, and inspiring local stewardship. An informed, knowledgeable, and engaged community is crucial to the long term protection of our soil and water resources. The SCD partners with Skagit County, the Padilla Bay Research Reserve, the Cities of Anacortes, Burlington, Mount Vernon, and Sedro-Woolley, and local volunteers and residents to promote conservation and water quality education. Over the last 5 years, **804** volunteers participated in the Watershed Masters, Skagit Stream Team , Storm Team, Marine Biotoxin Monitoring and Backyard Conservation and Community Wildlife Habitat programs, contributing a whopping **27,153** hours (reported). At the current $22.00 value, that time adds up to **$597,366** in volunteer service (which doesn't include the contributing benefits to water, soil, wildlife habitat, and human health). SCD's youth education program has reached **8,756** students in the last five years. A total of **23** community workshops/trainings were held, targeting a variety of audiences (including livestock owners, contractors, urban & rural landowners, and more) with over **745** attendees. Annually, SCD hosted educational displays and activities at local events (including Skagit River Salmon Festival, Festival of Family Farms, Shellfishtival, Fidalgo Bay Days, Skagit Water Weeks, NW Straights Commission Shoreline Landowners Workshops, DASSH 5K Fun Run, Science Nights at local schools, and more) and provided presentations for local groups reaching over **12,967** residents. Over **650** residents participated in the Annual Sustainable Samish Garden Tour and **375** youth participated in the annual Kids in Nature event. In addition, a social marketing study was completed in the Thomas Creek Watershed in 2015, the Manure Share Program was put in place, a demonstration Green Stormwater Infrastructure (GSI) Project was completed in Bay View (including a rain garden, compost sock terrace, and native plant hedgerow), a demonstration stream restoration project and demonstration naturescape garden was installed at the Alger Community Hall, a Rainworks Art Trail project was held in partnership with local artists, and more!

Installing a manure storage structure is a best management practice frequently recommended by the Skagit CD, and can often be funded through cost share.

A few of the many SCD volunteers.

Clean Water Program

As a local clean water partner, SCD values the opportunity to support our local residents in efforts to protect and restore our water resources. Volunteers are our partners - working together to improve our future. Together we can leave a legacy of clean streams, rivers, and marine waters for future generations to enjoy.

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 simple 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 County-wide projects.

We want to give special thanks to Skagit Fisheries Enhancement Group for partnering on many projects.

In 2018, NRSP worked with 7 landowners, restoring 3.5 acres along a third of a mile of property. We installed 1,270 feet of fencing, 11 pieces of large woody debris, and 363 native plants. Projects can include:

Livestock Exclusion

Livestock negatively impact streams when their access to waterways is unrestricted. NRSP will install a variety of fencing types. We work 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.

Livestock exclusion fencing recently completed. Planting will occur in early 2019.

Impacts from unfenced areas can include:

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

Bank Stabilizing and Restoring Fish Habitats

Many streams in our area have failing and eroding banks caused by natural stream migration, and often exacerbated by removal of riparian vegetation and loss of deep root strength from native plants. Changes upstream can also impact residents downstream, leading to erosion where there hadn't been any in recent history. Unrestricted bank erosion increases fine sediment in the system, which is bad for water quality, salmon, and property loss. Remember, erosion through grass is very easy!

Installation of large wood used to reduce bank erosion by stabilizing the banks.

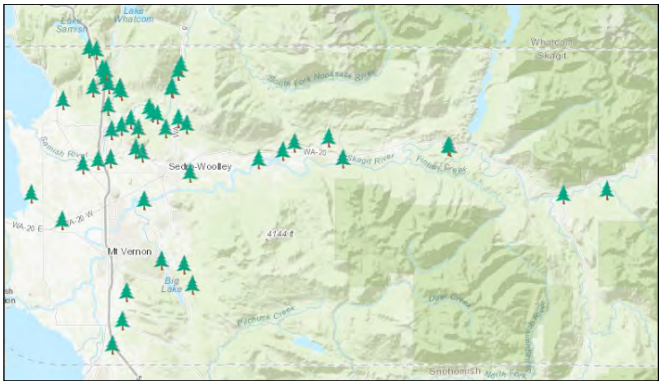
Replanting following removal of blackberry.

Restoring Riparian Areas

Removing invasive plants or converting grassy yards and planting native plants can help stabilize stream 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. The County provides maintenance for three years to help ensure a successful replanting. Native plants are better at dealing with our weather patterns, so they require less maintenance!

Projects Completed, 2009-2018

Skagit County has worked with more than **65 landowners** or community groups on **53 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 benefitting fish habitat and water quality. County residents have restored more than **99 acres** of land including planting **42,493 native plants** along more than **11.1 miles** of property. Additionally, NRSP has installed **4 livestock crossings**, **5.1 miles of fencing**, and **246 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.

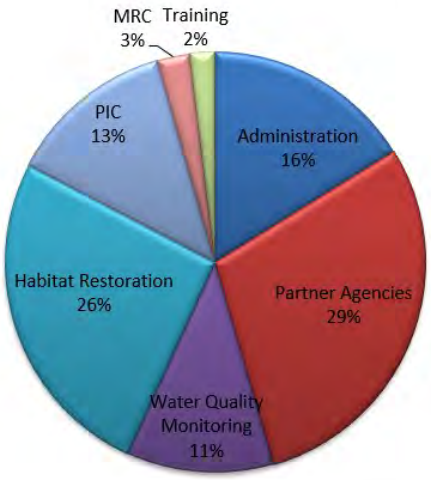
Clean Water is Everyone's Business

Clean Water Program Budget Summary

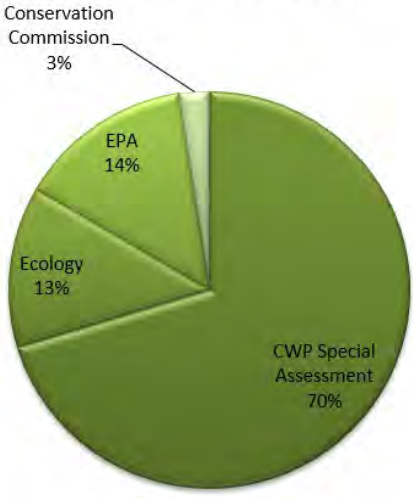
The Skagit County Clean Water Program (CWP)
Skagit County's CWP originated from the Clean Water Shellfish Protection District created in 1995, which was originally designed to reduce bacterial pollution in Samish Bay and improve the quality of local shellfish beds. The County most recently reauthorized the CWP for an additional five years in 2014 (R20140165). On your annual property tax, this is listed as Clean Water Assessment (CWA). In 2018, the CWP special assessment fee was $45 per year for a single-family residence and $150 per year for a commercial property.

What was the budget in 2018?
For 2018, the CWP revenue was expected to be approximately $2.0 million. The CWP special assessment contributes about $1.45 million of the revenue. The remaining revenue comes from a variety of state and federal grant funding.

2018 Budgeted Expenses
Total Expenses= $2,229,257



2018 Budgeted Revenue
Total Revenue= $2,067,484



Where to find us:

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Mount Vernon, WA 98273

Phone: 360-416-1400
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