



Pollution Identification & Correction Program

2021 Annual Report

Skagit County's Pollution Identification and Correction (PIC) Program is a partnership between state and local agencies, tribes, local non-governmental organizations, shellfish growers, and private citizens. Skagit County is the lead agency for the program. We are dedicated to protecting the public from waterborne illness by reducing the levels of fecal bacteria in the rivers and creeks of Skagit County. The PIC Program has been operating since 2010 and has successfully reduced bacterial pollution in several watersheds in Skagit County.

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. When high levels of fecal bacteria 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 by visiting nearby property owners to identify the source of pollution, and work with them to correct any problems that are found. Common sources include pets, leaking septic systems, farm animals, and wildlife.



Figure 1. A PIC staff member takes a sample of Joe Leary Slough as a herd of cows looks on from the opposite bank.

Through partnerships with the Skagit Conservation District, The Skagit County Public Health Department, Craft Clean Water Loans, and Skagit Fisheries Enhancement Group, we offer resources to find solutions to problems property owners may have. Resources they can provide include low-interest loans and grants for septic system repairs or replacements, free and confidential farm assessments with a trained farm planner, assistance with farm management, and financial assistance for fencing, invasive plant removal, native plantings and other projects.

A graphic representation of all aspects of the PIC Program is presented in Figure 2. Skagit County's PIC Program.

Skagit County Pollution Identification & Correction Program

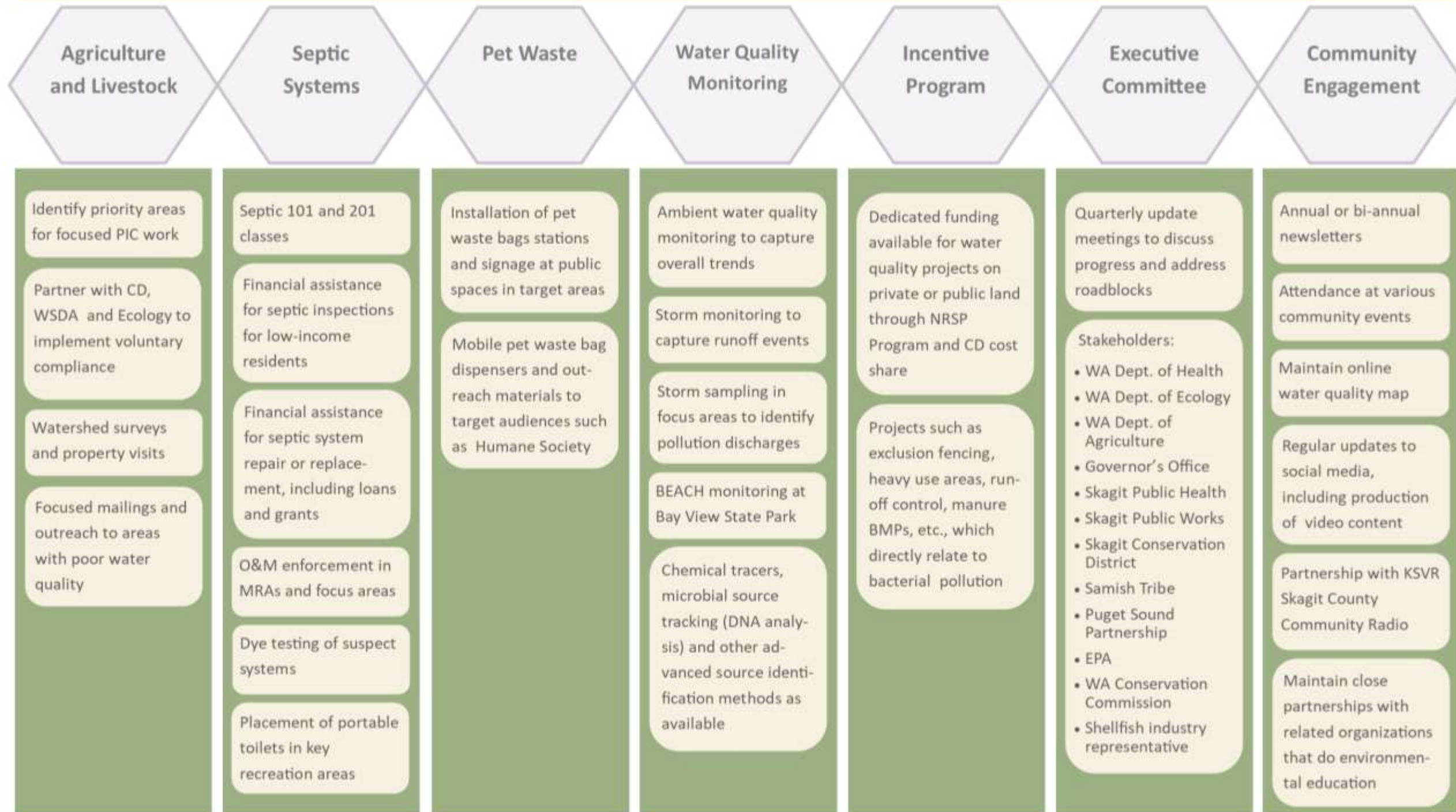


Figure 2. Skagit County's PIC Program

Areas of focus

The Samish Bay watershed has been the major focus of the PIC Program since its inception (Figure 3. The Samish Bay watershed to the north, and the Padilla Bay watershed in darker blue to the south.). Samish Bay includes contains 4,000 acres of commercial shellfish beds. Shellfish are filter feeders and can



Figure 3. The Samish Bay watershed to the north, and the Padilla Bay watershed in darker blue to the south.

accumulate fecal bacteria and other pollutants that can make people sick.

In the fall of 2009, the Washington State Department of Ecology (Ecology) completed a study on fecal coliform bacteria pollution in Samish Bay, along with a plan for reducing the level of bacteria. The PIC Program has been working to implement that plan since 2010. The Samish River and its tributaries continue to be a major focus of the program.

In 2015, the program expanded to include the Padilla Bay watershed. This watershed includes 151 acres of commercial shellfish beds, along with a popular beach at Bay View State Park that was regularly closing every summer due to water polluted by fecal bacteria.

The PIC Program also responds to reports of problems throughout Skagit County as time and resources allow.

Progress in 2021

By March 2021, we completed a survey of farms with livestock in the Samish and Padilla watersheds that was begun in 2020. The goal of the survey was to identify all of the properties that likely have livestock and assess all best management practices (BMPs) that were visible from the road. Assessments include pasture quality, overgrazing, the use of gutters and downspouts, heavy use areas, the presence of weeds in pastures, and more. A total of 471 properties were surveyed; 382 properties were surveyed in the Samish watershed and 89 in the Padilla watershed. Figure 4. Results of the livestock best management practice survey. "High risk" properties are those with three or more deficient BMPs. shows the results of the survey.

Forty percent of the properties that we were able to assess from the road lacked at least one BMP. Ten percent of properties were missing three or more BMPs and were classified as high risk for being a source of pollution. The survey found that many farms do not have heavy use areas, and do not have covers over manure storage The most common problems noted were related to pasture management,

including overgrazing, uncontrolled access to pastures, and animals on wet and muddy pastures. Weedy pastures were very frequently noted, which is a symptom of poor pasture management.

Livestock Survey Results	
Number of properties assessed	
Samish 382	Padilla 89
Number of high risk properties	
42	6
Number of properties needing improved BMPs	
163	27
Most commonly noted deficiencies	
<ol style="list-style-type: none"> 1. Overgrazing 2. Uncontrolled access to pastures 3. Grazing on wet, muddy pastures 4. Weedy pastures 5. Lacking a heavy use area 	

Figure 4. Results of the livestock best management practice survey. "High risk" properties are those with three or more deficient BMPs.

small or commercial farm properties with conditions that lead to pollution in the Samish watershed. Two have since corrected their problems and we are monitoring to ensure that the fix is adequate. Three additional problems identified in previous years were also resolved.

In the Padilla watershed, source identification investigations continued in the No Name Creek, upper Joe Leary Slough and Little Indian Slough areas. In the Little Indian Slough region, our partners at the Washington Department of Ecology (Ecology) continue to work with industrial permit holders in the area to reduce their bacterial load to the slough. The headwaters of No Name Creek has three properties that have confirmed discharges into the creek. Ecology is following up with enforcement activity on two of the properties. The county is working with the third to improve pasture management during the rainy season. Finally, the Washington State Department of Agriculture’s Dairy Nutrient Management Program continues to work with one dairy in the upper Joe Leary Slough region to find and fix sources of pollution from the dairy. The county is monitoring for the effectiveness of those actions.

Using data from the survey, we sent letters out to 471 livestock property owners in the Samish watershed, notifying them that they may be eligible for funding to help install BMPs. As a result, we made several new contacts at sites close to the Samish River where BMPs were needed. We continue to refine the survey and have begun reassessing properties to ensure the accuracy of our information.

Along with the survey, source identification activities continued in 2021. A review of the progress made in the PIC Program in 2021 is provided in Figure 5.

We focused most of our efforts on the Edison, Lower Samish, and Middle Samish River drainages. These drainages continue to have water quality concerns, and the BMP survey showed high volumes of properties lacking important BMPs in these areas.

Letters were sent to all owners of properties that were identified as high risk in the survey, with information pointing them to resources to help them improve the management of their property.

Through water quality sampling, we identified four

During the first half of 2021, several staff from the Onsite Septic Program worked part- or full-time on COVID response. One staff member remained to ensure the continuity of the program. The septic program restarted mailings of septic maintenance reminders in July. Rebates of up to \$200 per household for inspection, pumping, or installation of risers were available to homeowners throughout 2021. A financial assistance program was also available for property owners on limited, fixed incomes.

County-wide, 42 failed septic systems with surfacing sewage were discovered, and an additional 519 deficiencies were discovered that could lead to failure if not corrected. When a failure is found, the county requires that the septic system be fixed. When a deficiency is found, property owners are notified but are not required to fix the problem. A breakdown of the location and number of deficiencies and failures is provided in Table 1 below.



Figure 5: Overall progress by the PIC Program in the Samish and Padilla watershed focus areas.

Table 1. Onsite septic system failures and deficiencies found and fixed in 2021

Area of interest	Failures Found	Failures Fixed	Deficiencies Found
Samish Bay	3	8	44
Padilla Bay	0	2	11
South Skagit Bay	1	1	40
Greater Skagit County	38	101	424

During 2021, we also partnered with the EPA Manchester Laboratory on a project to use microbial source tracking (MST, sometimes called DNA testing) to identify sources of bacterial pollution in several areas. This method uses DNA from bacteria unique to the digestive systems of dogs, cattle, ruminants, and humans to indicate where pollution might be coming from. Sites visited in 2021 included several in the Lower Edison region, Willard Creek, Friday Creek and its tributaries, and the lower Samish River. Data from these sampling events was received in early 2022, and a report is being produced.

Education & Outreach

Education and outreach are a major part of our PIC Program. Skagit County Clean Water staff regularly talk with local news outlets, send mailings, attend events, and manage Facebook, YouTube, and NextDoor social media accounts. Our goal is to update the public about our activities and inspire behavior change for clean water. We also work with other organizations such as Skagit Fisheries Enhancement Group, Skagit Conservation District, Skagit Conservation Education Alliance, and Washington State University Extension to ensure that our messages are being shared by a variety of trusted information sources.

Figures 5 and 6 show highlights of our traditional and social media outreach in 2021. The pandemic reduced the number of events we could attend to just one, the Skagit County Fair. Newsletters were mailed to about 6,300 residents in the Samish and Padilla watersheds. In addition, we continue to stock pet waste bags at ten pet waste stations around the Samish watershed.

Our monthly e-newsletter audience continues to grow. Our subscriber list grew 72% during 2021. The e-newsletter's open rate and link click rate regularly exceed government industry standards, indicating the content we share is valuable and relevant to subscribers.

Through a partnership with the Washington Department of Agriculture and Whatcom Conservation District, state and local agencies can share their fecal coliform and *E. coli* water quality results on a single online map. Skagit County has been sharing water quality data on the map since 2017. The map helps us visualize the data and is an excellent public outreach tool. It can be found at <http://arcg.is/1irH8i0>.

Throughout 2021, we continued to promote our grant-funded PoopSmart campaign, designed to use social marketing tools to encourage residents to change their behaviors to improve water quality. The campaign takes a lighthearted approach to attract attention to the subject. The PoopSmart website (poopsmart.org) is the centerpiece of the campaign and serves as a central location for links to information and resources from multiple agencies. The site is available in Spanish and English.

In 2021, social media posts on NextDoor and Facebook drove the majority of traffic to the website. The PoopSmart page was visited 2,695 times in 2021. Eighty-one percent of those visitors had not visited the site before, so the campaign is still reaching new audiences.

In addition to social media posts, a radio ad and several additional video ads were created for the PoopSmart campaign. Radio ads were placed on local radio and streaming services during the months of August and September, to coincide with the Skagit County Fair and hunting season. Video advertisements were advertised on cable television and streaming services in April and September, to correspond with the Tulip Festival and hunting season. In total, streamed video and radio advertisements garnered more than 70,000 impressions, and the advertisements ran on cable and local radio more than 1,350 times.

Communications Review

2021

Skagit County Clean Water

OVERVIEW

As the pandemic has continued, we have focused our outreach on low-contact methods, including newsletters, postcards, and digital media. Our e-newsletter following continues to grow, and is proving to be of equal or more value than some social media.

EARNED MEDIA COVERAGE

Media news stories resulting from our work. Topics included microbial source tracking (aka DNA analysis) work in the Samish, the Stormwater Management Program Plan update, and the Clean Samish Initiative



TRADITIONAL PUBLIC OUTREACH ACTIVITIES

Events, presentations, newsletters, and mailings.



12

E-newsletters
1,502 subscribers (72% increase)
Newsletters were opened 9,951 times

1

Public event attended



1

Public Presentation



2

Mailed watershed newsletters



MEDIA ADVERTISEMENTS

4

Platforms

Broadcast radio, digital radio, broadcast cable, and streaming digital networks, directed at Skagit County residents



47,000

Spotify digital audio streaming impressions



1,138

Broadcast cable TV spots



228

KAPS/KBRC broadcast radio spots



23,158

Streaming digital TV network spots

Figure 6. Traditional communications highlights in 2021.

Digital Media Review

2021 Skagit County Clean Water



Figure 7. Website and social media communications highlights in 2021.

In addition to our own outreach, the work that our partners do helps us reach our shared clean water goals. With the help of an EPA National Estuary Program grant, Washington State University Skagit Extension and Skagit Conservation District have created the Pasture Management Program. The program is intended to provide information to small farmers to help them better manage their pastures both for water quality, pasture and animal health, and to save farmers time and money.

In 2021, the Pasture Management Program offered virtual classes on pasture management topics. The workshops have also been posted to WSU's Pasture Management page for those who could not attend the live sessions. In addition to the online courses, WSU advertised their Country Living Expo event to livestock owners in the Samish and Padilla watersheds, and Skagit County provided funding for free registration for a number of livestock owners in those areas.

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