

2022 Stormwater Management Program (SWMP) for  
National Pollutant Discharge Elimination System (NPDES)  
Permit Implementation in Kitsap County, Washington



7265 (03/22)

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# KITSAP COUNTY STORMWATER MANAGEMENT PROGRAM

## 1. INTRODUCTION

### 1.1 Overview and Background

*The Western Washington Phase II Municipal Stormwater Permit or National Pollution Discharge Elimination System and State Waste Discharge General Permit for Discharges from Small Municipal Separate Storm Sewers in Western Washington, hereafter referred to as the Permit, outlines stormwater program activities and implementation milestones that permittees must follow to comply with the federal Clean Water Act. All Phase II communities are expected to develop a Stormwater Management Program (SWMP) that includes all the required activities, implement those activities within the required timeframes of the permit term, and submit annual reports to the Washington State Department of Ecology (Ecology) each year to document progress toward completing program implementation.*

#### **NPDES Permit**

The 2007 Permit (modified in 2009) was in effect for the initial reporting period until February 15, 2012. By Engrossed Substitute House Bill 1478 (2011), the legislature directed Ecology to reissue the 2007 Permit without changes, to be effective for one year until a new permit could be established. A revised permit was issued by Ecology on August 1, 2012, became effective on September 1, 2012, and expired on July 31, 2013. On August 1, 2013, the new permit became effective. The 2013-2018 Permit implements actions required by the Pollution Control Hearings Board, including low impact development implementation. In 2019, Ecology issued [the most recent iteration of the Permit](#) with an expiration date of July 31, 2024.

The current Permit applies to cities and counties in Western Washington operating a municipal separate storm sewer system (MS4) that is located within, or partially within, an urbanized area and that discharges to a surface water of Washington State. Urbanized areas are defined as population centers with at least 50,000 people and densities of at least 1,000 people per square mile based on the most recent federal census data. Kitsap County has been designated by Ecology as a Phase II permittee. The Permit pertains to the MS4 contained within the census urbanized areas and the urban growth areas, including those adjacent to the cities of Poulsbo, Bremerton, and Port Orchard.

#### **Kitsap County**

Founded in 1857, Kitsap County's population (2020) is 275,611 making it one of the most densely populated counties in the state. Kitsap County occupies a unique position in the central Puget Sound region of the State of Washington, located directly between the urban areas of Seattle and Tacoma and the largely undeveloped Olympic Peninsula. It is bounded by the Hood Canal on the west, Puget Sound on the east, and Mason and Pierce Counties to the south. The county has a total landmass of 396 square miles, ranking 36th in size among all counties in Washington State.

In the first half of the twentieth century, dairy farming dominated land use. During the past 50 years, many farms were subdivided into one- and five-acre parcels. The density of animals and people has grown, resulting in increasing pollution flowing into Kitsap County's bays, streams, lakes and marine waters. Some of the county's major waterbodies, Dyes Inlet, Sinclair Inlet and Liberty Bay, are located among the more

densely developed and populated areas in the County.

With no large rivers or mountains containing snowpack, Kitsap County is similar to an island and relies on groundwater for its drinking water. The county's streams are relatively short in length and carry surface pollutants from stormwater runoff rapidly to its surface waters, making stormwater management a critical task.

## 1.2 Implementation Responsibilities

Kitsap County residents are represented by three elected County Commissioners and are served by a variety of agencies and government departments. The Board of County Commissioners (BOCC) is responsible for establishing public policy and local public laws within unincorporated Kitsap County.

Recognizing the importance of protecting Kitsap's valuable natural waters, the BOCC adopted by Resolution 109-2009 – amended and revised in 2016 as Resolution [134- 2016](#)) - the Water as a Resource Policy which recognizes that storm and surface water runoff is the leading transport of pollution into Puget Sound and its associated wetlands, creeks and rivers. Some of the guiding principles of this policy include reducing pollutant loading of ground and surface waters, maintaining natural low energy flow regime; managing assets and refining management tools to reflect latest technology and innovations. This policy guides staff in developing and implementing goals that include water resource protection and restoration as foundational elements.

Within the County organization, many staff contribute toward meeting the Permit requirements, as well as implementing the principles of the Water as a Resource Policy.

The Kitsap County Department of Public Works (KCPW or Public Works) is responsible for building, operating and maintaining public facilities and utilities within unincorporated Kitsap County, including streets, recycling, solid waste, sewers, and stormwater drainage systems. Permit-required activities and the implementation of Water as a Resource policy goals are also important functions of KCPW.

KCPW includes the Utilities Division (Solid Waste, Sewer, Stormwater); the Administrative Services Division (Public Information, Equipment and Support) and the Roads Division (Engineering, Transportation and Operations).

Managing the Permit and developing the SWMP is primarily the responsibility of the Stormwater Division, with support from the County Auditor (accounting), County Treasurer (utility billing), Department of Administrative Services (budgeting), Information Services and Facilities Maintenance.

The Stormwater Division is also responsible for the operation and maintenance (O&M) of all County closed conveyances within the right of way, water quality devices and other drainage facilities outside the right of way.

The Parks Department provides support for maintenance and operation of the county fairgrounds and park system. The Roads Division provides road maintenance, and the Department of Community Development (DCD) provides review for new and existing development projects as well as code review and enforcement. The Facilities Maintenance Department provides maintenance of and around county buildings.



### 1.3 Kitsap County Stormwater Management Program

To address the challenge of managing stormwater runoff and protecting water quality, the Surface and Stormwater Management program (SSWM) was formed in the early 1990s. Kitsap County and other local jurisdictions began working together to design a coordinated partnership to meet multiple needs:

- KCPW needed to develop a stormwater management program in response to US EPA's development of the National Pollution Discharge Elimination System Permit Program for communities with populations of more than 100,000.
- The Kitsap Conservation District, in 1989, needed to seek legislative approval for a fee to fund programs for landowner assistance.
- The Kitsap Public Health District needed stable funding to address public health issues related to shellfish bed closures, failing septic systems and other water quality complaints.
- Kitsap County Department of Community Development needed funding for state mandated watershed planning efforts.

The Kitsap County BOCC adopted Ordinance 156-1993 establishing the Surface and Stormwater Management (SSWM) program and the stormwater utility pursuant to [Chapter 36.89 RCW](#), as codified in [Chapter 12.36 KCC](#) in 1993. Key features of the ordinance were the link between surface and stormwater and the formation of the partnership between KCPW and other agencies with the common vision for stormwater management and the protection/restoration of water quality. In 2014, SSWM was rebranded to Clean Water Kitsap (CWK).



The [CWK program](#) is a collaborative partnership between Kitsap County Public Works (led by the Stormwater Division), Kitsap Conservation District (KCD), Kitsap Public Health District (KPHD), Washington State University Kitsap Extension (WSU) and Kitsap Public Utilities District (KPUD). The scopes of work and interlocal agreements are updated annually with each budget cycle. Many of the elements within the CWK Program satisfy the requirements of the Permit.

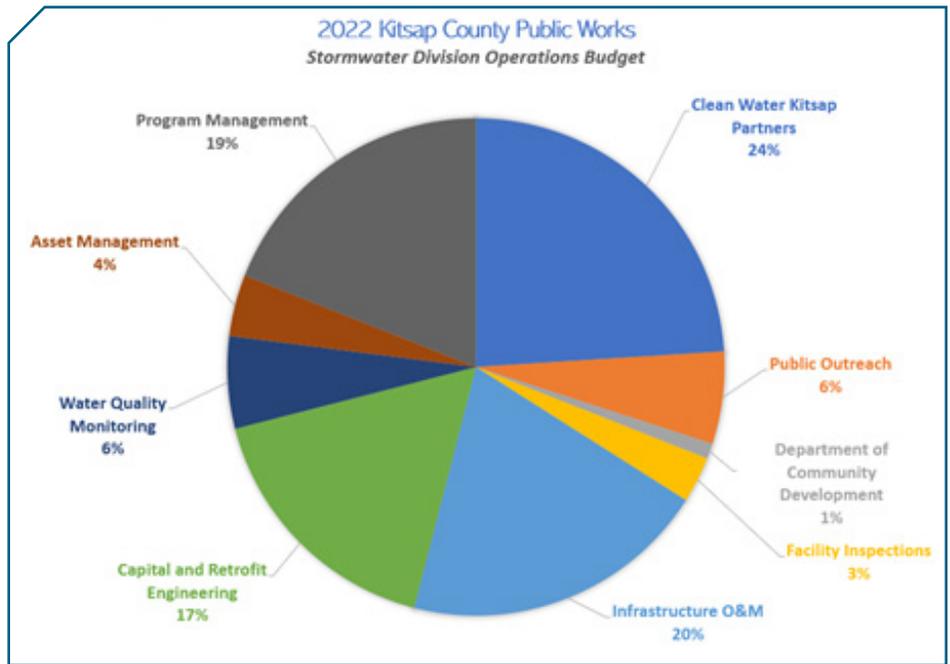
### 1.4 Stormwater Utility Rate Structure

The Stormwater Enterprise fund receives its revenues mostly from user fees billed under the authority of Chapters 12.36 and 12.40 of the Kitsap County Code (KCC) and Chapter 36.89 of the Revised Code of Washington (RCW). The utility rate structure (Chapter 12.40 KCC) was adopted in 1994 and amended in 1995, 2004, 2006, 2012 and 2017.

In 2017, the rate structure for the new permit cycle was revised (Ordinance 549-2017) and adopted by resolution by the Board of County Commissioners (Resolution 226-2017). The rate structure was designed to step up incrementally over the span of six years to fund a multitude of

different programmatic areas. This process included several public meetings and input from watershed community groups, advisory committees, and the public.

Resolution 226-2017 Increments	
2018	\$96
2019	\$105
2020	\$110
2021	\$115
2022	\$125
2023	\$130



### 1.5 Document Organization

This report comprises the written documentation of the Kitsap County SWMP that is required to be submitted with the Permit annual report. In accordance with the Permit terms, the SWMP has been designed to reduce the discharge of pollutants to the maximum extent practicable per federal regulations and meet the State of Washington criteria of using all known, available and reasonable methods of prevention, control and treatment requirements to protect water quality. The following sections describe the actions that Kitsap County has taken to comply with the requirements of the Permit. In addition, the SWMP outlines the future steps Kitsap County plans to take to further improve water quality and stormwater management.

To aid in tracking permit requirements, this document has been organized into sections that correspond to the Special Conditions in the Permit and are outlined as follows:

- Section 1.0 – Introduction (see above)
- Section 2.0 – Stormwater Planning, Special Condition S5.C.1
- Section 3.0 – Public Education and Outreach, Special Condition S5.C.2
- Section 4.0 - Public Involvement and Participation, Special Condition S5.C.3
- Section 5.0 – MS4 Mapping and Documentation, Special Condition S5.C.4
- Section 6.0 – Illicit Discharge Detection and Elimination (IDDE), Special Condition S5.C.5
- Section 7.0 – Controlling Runoff from New Development, Redevelopment and Construction Sites, Special Condition S5.C.6

- Section 8.0 – Operations and Maintenance, Special Condition S5.C.7
- Section 9.0 – Source Control Program for Existing Development, Special Condition S5.C.8
- Section 10.0 – Total Maximum Daily Load Requirements, Special Condition S7
- Section 11.0 – Monitoring and Assessment, Special Condition S8
- Section 12.0 - Reporting Requirements, Special Condition S9
- Section 13.0 - Compliance with Underground Injection Well Program Requirements, Washington Administrative Code Chapter 173-218-090

Although compliance activities associated with Special Conditions S7, S8 and S9 are not required in the SWMP, they are documented here for thoroughness. Compliance activities with Special Conditions S7 and S8 must be and are still included as part of the annual report, provided separately. Additional Permit conditions, such as Special Conditions S1 through S4 and General Conditions G1 through G20, still apply to permittees, though they do not result in specific program activities, nor is the SWMP Plan required to document compliance with these activities. These additional conditions cover topics such as the entities covered by the Permit and the discharges authorized under the Permit, as well as legal guidelines for transferring, revoking, and appealing the Permit. Penalties for non-compliance are also included in these conditions.

## 2. STORMWATER PLANNING

### 2.1 Permit Requirements

Section S5.C.1 requires Kitsap County to implement a Stormwater Planning program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters.

The program includes:

- Coordination with long-range planning updates.
- Low impact development code-related requirements.
- Stormwater Management Action Planning (SMAP).

### 2.2 Current Activities

Kitsap County's Stormwater and Roads Divisions are responsible for the operation of the County's storm drainage system under the regulatory framework of the Permit. The County carried out this responsibility in part by having a comprehensive SWMP that establishes policy and service level standards, and a 6-year Capital Facilities Plan (CFP) designed to meet the goals and objectives of the County's Stormwater Division.

Kitsap County convened an Interdisciplinary Team of Clean Water Kitsap Partners and Water as a Resource Committee members to inform and assist in the development, progress and influence of the stormwater management program before August 1, 2020. This new Team formalized efforts and coordination that were already occurring. The Team reviewed the SMAP, SWCP and results of the prioritization and took the results back to develop workplans that incorporated these tools into their next set of short- and long-range goals.

In addition to the County's Comprehensive Plan adopted under the Growth Management Act, chapter 36.70A RCW, the County adopted a Stormwater Comprehensive Plan (SWCP) in December 2020. This SWCP describes how the County will manage, operate, and finance stormwater-related activities within unincorporated Kitsap County, and guides how the County will address surface water and stormwater management needs and requirements from 2020-2026, including program management, operation and maintenance (O&M), climate change, capital facilities, and financial elements, while also balancing rates and the financial resources available to the County. These documents also provide coordination with long-range planning needs and forecasts contained in the Kitsap County Comprehensive Plan.

In summary, the SWCP:

- Reviewed previous studies, plans and other information associated with current and proposed stormwater systems. Useful information was compiled and incorporated into the SWCP.
- Provides the County with a prioritized list of projects from the current capital facilities plan (CFP).
- Evaluated County resources relating to current and future needs for NPDES compliance, including staffing, equipment, and funding.
- Developed actions for anticipated sea level rise, increased storm intensities and other issues related to climate change.

As part of the ongoing effort to remove barriers and encourage wider implementation of Green Stormwater Solutions (GSS), also known as Low Impact Development (LID), Kitsap County updated its current Stormwater Code and Stormwater Design Manual (SDM) to continue to make LID the preferred approach to stormwater management for new development. This effort is being done in cooperation with the Kitsap Builders Association (KBA), with other departments of Kitsap County and through the Kitsap County Planning Commission process.

### *2.3 Planned Activities*

As part of our ongoing Water as a Resource Policy implementation, the Stormwater Division will continue to coordinate between all departments for long-range planning related to stormwater management, water resource management, and other related activities such as road network planning, facilities development, and other Kitsap County land-use activities. In addition, we will continue to look for opportunities to expand GSS/LID as part of our retrofit activities that address existing development. The County will also continue to improve and implement the actions identified in the SWCP for accomplishing this Permit requirement.

With regard to Stormwater Management Action Planning, we plan to implement the SMAP results and recommendations by applying them to the Capital Facilities Plan, the Retrofit Plan and this SWMP plan. In addition, we will utilize the SMAP recommendations in implementing our monitoring and behavior change programs. The CWK partner organizations will also utilize the results of the SMAP by focusing their work in the top priority watersheds.

Finally, in 2022, the Stormwater Division's leadership team will finalize its Stormwater Strategic Plan. This Plan will identify a process for accomplishing some of the key goals identified in the SWCP. The Strategic Plan will serve as a roadmap for the Division's decision makers to use to enact a proactive, compliant, and sustainable stormwater management philosophy. The goals and objectives in this plan will guide annual work plans that focus on maintaining compliance and implementing policies that will not only protect our natural resources but also enhance Kitsap residents' quality of life.

## 3. PUBLIC EDUCATION AND OUTREACH

This section describes the programs and partnerships that the Stormwater Division implements to build general awareness about methods to address and reduce impacts from stormwater runoff, effect behaviors of target audiences to reduce or eliminate practices that cause or contribute to adverse stormwater impacts and create stewardship opportunities that encourage community engagement in addressing the impacts of stormwater runoff. Program implementation is done on an ongoing annual basis or strategic schedule.

The COVID-19 pandemic continued to impact events and activities in 2022. Despite the challenges of outbreaks, new variants, and vaccine related obstacles, Kitsap County and our partners continue to pivot and adapt creatively to meet the Permit requirements for Public Education and Outreach.

### 3.1 Permit Requirements

Section S5.C.2 requires Kitsap County to develop and administer a Public Education and Outreach Program for the area served by the MS4.

The program components include:

- General Awareness
- Behavior Change
- Stewardship

### 3.2 Partnerships

#### **Internal, Local and Regional Partnerships**

The Stormwater Division utilizes partnerships at a multitude of levels, from internal to local and regional groups to maximize our reach and programmatic efficiency.

To effect internal coordination, Kitsap County education and outreach staff from a variety of County departments meet every other month as a community of practice, to share information, coordinate efforts, synchronize messaging, and improve program efficiency, especially in external communications, education and outreach activities. This community of practice includes staff from the Public Works Department (Stormwater, Sewer Utility, Roads and Solid Waste Divisions) and the Information Services Department. The group produces *Everyday Kitsap*, an annual Public Works magazine that is provided to every household in Kitsap County. The magazine contains utilities-focused articles and information including stormwater issues and solutions. Due to COVID, the magazine was produced digitally for 2021.

On the local scale, our CWK partnership plays an integral role in Kitsap County's ability to meet all Permit requirements. CWK is a unique, nationally recognized multi-agency partnership created to reduce flooding, prevent pollution and restore fish habitat through stormwater management activities. CWK is managed by KCPW and includes Kitsap Public Health District, Kitsap Conservation District, Kitsap Public Utility District, and Washington State University Kitsap Extension. The structure, trust and collaboration of this group has made it a model framework for regional partnerships that innovate

and continue to raise the bar for collective actions on water quality. CWK partner agency programs are summarized below.

**Kitsap Conservation District (KCD)** provides several programs that work to protect and restore surface water quality, including the Agricultural Program, Backyard Habitat Program and the Rain Gardens and More Program.

The Agricultural Assistance program works with farmers and livestock owners to manage their land and animals to prevent pollution and protect surface water quality. KCD assists farmers with well-designed conservation practices that include pasture, crop, manure and mud management. They provide technical assistance for the implementation of best management practices as well as providing funds for cost sharing to support these best management practices. KCD also conducts workshops and farm tours.

The Backyard Habitat program helps with planning, design and funding on the ground projects to restore backyard stream habitat on private property. Projects are selected based on a scoring criterion. Staff assist with permitting, engineering, design, and construction. These projects remove barriers to improve fish passage, habitat, and water quality, as well as remove noxious weeds.

The Rain Gardens and More Program provides technical assistance and cost incentives for installing rain gardens and other green stormwater solutions on private and commercial properties in unincorporated Kitsap County. Benefits from these practices include reducing flooding and erosion in streams, filtering pollutants such as oil and grease from roads, and increasing the amount of water that soaks into the ground to recharge local groundwater.

The cost share incentive provides up to \$1,500 per project, and the popularity of the program continues to grow.

**Kitsap Public Health District (KPHD)** addresses public health issues related to shellfish bed closures, failing septic systems and other water quality complaints. KPHD's activities include:

- Collecting water and shellfish samples from streams and shoreline areas to identify potential sources of bacterial pollution
- Investigating these sources and working with property owners to correct them
- Conducting septic system inspection and educational visits, investigating citizen complaints, and supporting regional efforts to provide financial solutions for property owners faced with septic system replacement
- Responding to sewage spills and issuing public health advisories

Under the CWK umbrella, KPHD is the primary agency responsible for investigating and identifying impaired waters and prioritizing nonpoint fecal pollution identification and correction.

To address this need, KPHD implements the Pollution Identification and Correction (PIC) program, which focuses on education, prevention, and enforcement of local health regulations. Inspectors prioritize, assess, and investigate streams with elevated fecal pollution using all available data and door-to-door inspections focused on preventative and corrective actions like septic maintenance and animal waste management. Pollution sources are corrected through education and enforcement as necessary.

KPHD has routinely monitored major streams and marine waters for fecal bacteria since 1996, with monthly monitoring of roughly 90 sample stations in 69 streams. Popular recreational lakes are sampled up to twice per week during heavy use. This monitoring reveals polluted areas that need cleanup and provides the information necessary to post health advisories and shellfish closures and restrictions. In

addition, this monitoring can also demonstrate where water quality efforts have succeeded, providing the evidence needed to remove health advisory warning signs and upgrade shellfish harvest areas.

**Washington State University Kitsap Extension (WSU)** provides quality education and volunteer opportunities for stewardship projects that raise awareness about Kitsap streams to support the protection and restoration of water quality. This includes the Stream Stewards, Salmon Docents and Green Stormwater Solutions programs.

The Stream Stewards and Salmon Docents programs provide Kitsap residents with educational training, volunteer opportunities and events to help turn environmental knowledge into action.

The Green Stormwater Solutions program coordinates Rain Garden Workshops where Master Gardeners and other trained professionals are brought into train homeowners and industry professionals in the design, installation and maintenance of rain gardens. The program also performs outreach to homeowners about natural yard care which supports the overall goal of reducing water pollution while enhancing landscape management practices.

**Kitsap Public Utilities District (KPUD)** provides streamflow gauging, stream temperature logging, rainfall gauging, maintenance of the gauging network, and hydrologic analysis for streams throughout the County.

Finally, on a regional scale, Kitsap County leads the regional West Sound Stormwater Outreach Group (WSSOG) of NPDES permittees in and around the Kitsap peninsula (formed in 2008) who work collaboratively on water quality education and outreach. This partnership provides residents of Kitsap County with consistent education and outreach, maximizing regional reach and synchronizing messaging while providing smaller jurisdiction permittees with programming opportunities that they may otherwise not have access to.

Kitsap County also connects to broader regional outreach efforts with a high level of participation in the Puget Sound Stormwater Outreach for Regional Municipalities (STORM) partnership. Kitsap County represents themselves and the WSSOG group on the STORM Steering Committee and "Puget Sound Starts Here" (PSSH) Committee, attends quarterly meetings and the annual Symposium, provides local implementation of the PSSH campaign, and participates in specialized workgroups and subcommittees.

### *3.3 Current Activities*

#### **General Awareness**

##### Puget Sound Starts Here

Target Audience: General public; Subject Area: General impacts of stormwater on surface waters, including impacts from impervious surfaces.

Kitsap County works in collaboration with regional partners to create opportunities to increase public awareness. Puget Sound Starts Here (PSSH) is an ongoing regional effort which includes a communications campaigns and participation or coordination of dozens of events. PSSH raises awareness about the harm to Puget Sound from polluted stormwater runoff as well as simple actions residents can take to reduce their impact. Local implementation of the program includes a variety of outreach approaches, including the promotion of "Puget Sound Starts Here Month" in September. The County's outreach in support of PSSH, in partnership with the WSSOG, typically includes distribution of branded items that feature water quality best management practices (BMP) such as, pet waste bag leash dispensers, beverage coasters and paint stir sticks. The outreach also includes digital campaigning

during PSSH Month. Each year the campaign focuses on a specific water quality BMP, such as car washing best practices and detecting and fixing oil leaks. PSSH messaging is also featured on storm drain curb markers installed around the County, making the connection between storm drains, stormwater pollutants, and the receiving waters.

#### Youth Education Programs

Target Audience: General public (school age children); Subject Area: General impacts of stormwater on surface waters, including impacts from impervious surfaces.

In 2021, Kitsap County finalized its work with a consultant to review its robust youth education program and compare its list of stormwater topics with the current Next Generation Science Standards. Three program elements were developed, revised, or expanded: Salmon in the Classroom, the Kitsap Water Festival, and Storm Drain Detectives.

Kitsap County has been involved in the Salmon in the Classroom program for over 20 years. Through this project, a new curriculum, Salmon and Their Habitat, was created. Although the goal was to develop a curriculum for teachers that raise salmon in the classroom, the new curriculum was modified to also include a version for those teachers that are not able to raise salmon themselves. The curriculum consists of 24 lessons for those raising salmon and 14 for those not raising salmon as well as field trip opportunities, videos, vocabulary, and various other resources. The curriculum is available to teachers online and includes a live teacher workshop opportunity.

In 2021, KCPW Stormwater educators raised salmon in a Kitsap County-sponsored tank at their office. A series of virtual video content was created – Tank Talks, Observation Videos and a live virtual salmon release field trip. Videos were posted on a YouTube playlist, emailed out to teachers and shared on social media channels.

Further development of the Kitsap Water Festival and Storm Drain Detectives programs will take place as soon as COVID-19 restrictions allow.

In addition to modifying traditional lessons for virtual learning, Stormwater staff partnered with the Manchester and Silverdale branches of Kitsap Regional Library to offer six unique StoryWalks® in 2021. These were set up at Manchester Stormwater Park, Whispering Firs Stormwater Park, the Clear Creek Floodplain stormwater restoration site, and Salmon Haven at Dickerson Creek stormwater restoration site. StoryWalks® provide an opportunity for families to discover the area while reading a children's book along a trail.

#### Construction Project Outreach

Target Audience: General public; Subject Area: General impacts of stormwater on surface waters, including impacts from impervious surfaces and LID principals and LID BMPs.

Stormwater Division education and outreach staff continue to develop innovative outreach materials and initiatives related to stormwater capital construction projects. Each project is viewed as a unique opportunity to tell the "stormwater story" to those affected by and live near these projects.

#### Professional Rain Garden Workshop

Target Audience: General public (homeowners) and engineers, contractors, developers and land use planners; Subject Area: Stormwater treatment and flow control BMPs/facilities.

In this 3-part virtual workshop series for homeowners and industry professionals, attendees learned about rain garden use for stormwater treatment. The classes were offered November 4, 18 and December 2, 2021. The series included the following topics: installation and maintenance, proper plant selection, and troubleshooting problems. A list of businesses that have completed the training are available to homeowners and small business owners in Kitsap County seeking to hire professional firms

for Rain Garden projects. This WSU led, CWK-funded program, was advertised via newsletter, websites and social media.

## **Behavior Change**

Behavior change success is most likely to occur when the campaign is integrated regionally as consistent messaging can be presented and received multiple times from multiple sources. KCPW has chosen to partner with the WSSOG on each of our stormwater behavior change campaigns in order to garner the most success possible.

### Mutt Mitt Program

The WSSOG identified pet waste pick-up and proper disposal as a key behavior for reducing pathogens in stormwater. WSSOG adopted the campaign, targeting pet waste in public areas (Mutt Mitt program), in 2009. Efforts related to this key behavior have continued annually since that time and the program continues to be the primary behavior change campaign for the County and the WSSOG.

In 2014, the County surveyed and provided a report that focused on two target audiences: Mutt Mitt station sponsors and Mutt Mitt station users. The report identified strategies to improve the Mutt Mitt program, which were implemented in 2016.

The Mutt Mitt program continues to grow steadily, and currently comprises 584 stations installed throughout the county. On average between 20-40 stations are added annually.

In 2021, following several years of campaign success, the program distributed 376,000 pet-waste disposal bags through the Mutt Mitt program. This effort represents 151 tons of dog waste diverted from the natural surface waters of Kitsap County.

### Backyard Pet Waste

In 2018, WSSOG implemented a Backyard Pet Waste social marketing pilot to encourage residents to pick up and properly dispose of pet waste in their backyards. The campaign included informational postcards and encouraged residents to place a sticker on their garbage can to indicate they were placing pet waste in the garbage with the hope of creating a positive social norm. This effort represented an expansion of the existing pet waste campaign into a new audience. An evaluation of the effectiveness of the Backyard Pet waste campaign was completed in 2019 and the group chose not to move forward with this behavior and target audience.

### Natural Yard Care program

Per the requirements of the 2019-2024 Permit, the County and the WSSOG looked at their current behavior change campaign and, based on trends and the Backyard Pet Waste campaign evaluation, elected to develop a behavior change campaign focused on a new target audience and BMP. The group selected nutrient reduction as the goal, and improper/ combination fertilizer use as the new BMP, targeting homeowners who do DIY-yard care. The group hired a consultant and in 2019 and developed a new social marketing campaign to target this BMP.

The new campaign (Natural Yard Care) was set to pilot in 2020, however due to COVID-19 the pilot was postponed. Instead, the group researched the priority audience, barriers and potential ways to address these barriers in 2020. The consultant recruited respondents to participate in a paid research study to learn what barriers are discouraging people from choosing natural yard care over conventional methods. The barriers identified were cost of organic fertilizers, knowledge of whether they work and knowledge of where to purchase the product. The study also found that Kitsap residents are interested and receptive to online Master Gardener events. Lastly, the study found that the target audience is concerned about the safety of chemical fertilizers on their kids and pets. To address these concerns, the campaign marketing and advertisements were designed containing photos and language that reinforce the message that organic products are safer for families and pets.

The Natural Yard Care behavior change campaign pilot was kicked off in 2021. The campaign was piloted in Poulsbo during peak fertilizer season, spring 2021. The campaign included webinars hosted by WSU Master Gardeners, an organic fertilizer discount was also offered through a partnership with a local retailer to address the cost barrier; and campaign communications including a Facebook ad campaign, a postcard, and government delivery channels such as websites, e-newsletters, organic social media, and utility bill messaging.

## **Stewardship**

Due to COVID-19 restrictions on gathering many of the stewardship programs and activities were made virtual or hybrid in-person/virtual. In 2021, KCPW found the following creative ways to maximize partnership opportunities and provide stewardship opportunities for residents to participate in activities or events planned and organized within the community.

### Storm Drain Art Event

Kitsap County launched a three-year pilot project installing public stormwater art beginning in 2019. These public art and stormwater education installations help connect the community to our local water resources. The designs illustrate themes about stormwater pollution, water as a resource, and protecting local ecosystems - orcas, salmon and human health. The first five murals were completed in Keyport (North Kitsap) in 2019. Three murals were painted in Manchester (South Kitsap) in 2020. Five murals were painted in 2021 by artists at the Kitsap County Fairgrounds and Events Center (Central Kitsap). The County conducted an art contest, inviting the public to submit designs for the storm drain murals. A total of 21 entries were received, and a selection committee chose the winning art pieces. The designs were shared with the community via social media for voting on one "Community Choice" award.

### Stream Stewards Training

In this WSU Kitsap Extension course, local and regional experts teach potential environmental volunteers about topics like stormwater impacts on local streams and forests, stream health, water quality, forest ecology, wildlife biology, and ecological restoration. The training is a hybrid learning opportunity with both in-person field trips and virtual classroom settings. Upon completion, volunteers are required to commit to 20 hours of ecosystem-based volunteer service in the next year. Volunteer hours can be applied to a wide range of opportunities that work toward the larger goal of improving Kitsap ecosystem health. From getting involved in a [citizen science](#) project or watershed health monitoring (benthic sampling or habitat surveys) to engaging in public outreach, volunteers can connect with opportunities that fit their skills and interests.

### Salmon Docent Training

Salmon hold ecological, commercial, and cultural significance in the Pacific Northwest. WSU offers this 3-day fall training, in which regional experts teach about how salmon survive their epic migrations and the challenges that they face in today's changing world. Attendees engage with material through field trips and hands-on activities. Local organizations share current research findings and provide tangible volunteer opportunities on salmon-focused projects across Kitsap County. The training culminates with the opportunity to become a docent at the annual Kitsap Salmon Tours event, giving trainees the chance to share what they've learned with the public.

### Salmon Tours

Kitsap Salmon Tours, a CWK funded program led by WSU, is an annual event involving County and partner staff, volunteers and the community. This public outreach event builds awareness and provides education about the stormwater problem and its impact on water quality, as well as providing stewardship opportunities volunteers and program participants in the Stream Stewards and Salmon Docent programs. The 2021 in-person event was promoted via newsletters, websites (WSU and CWK) and social media.

### 3.4 Planned Activities for 2021

Kitsap County has implemented all required actions under this section of the Permit. Activities planned for 2022 will include maintaining and improving the programs outlined above and adapting them as necessary to meet permit and program objectives.

Kitsap County plans to conduct the following new activities in 2022:

- Kitsap County and WSSOG will expand the Natural Yard Care behavior change campaign throughout the county in 2022. The campaign will continue to work with Master Gardeners on coordination of several virtual workshops and will include a more robust discount with additional retailers to promote the use of organic fertilizer. Promotions of the program will be offered throughout the entire County.
- Design, construct and install a suite of native plant interpretive signage at Whispering Firs Stormwater Park.
- In conjunction with the CWK partners, host Professional Drainage Workshops for contractors and industry professionals.
- Kitsap County staff will implement the newly designed Storm Drain Detectives program and Water Festival if COVID-19 restrictions allow.

## 4. PUBLIC INVOLVEMENT AND PARTICIPATION

This Section describes the Permit requirements for current and planned compliance activities for public involvement and participation.

### 4.1 Permit Requirements

Section S5.C.3 of the Permit requires the County to:

- Provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate structures. or other similar activities. Comply with applicable state and local public notice requirements.
- Create opportunities for the public, including overburdened communities, to participate in the decision-making process involving the development, implementation and update of the SMAP and SWMP.
- Post the SWMP Plan and the annual report on the County's website, no later than May 31 each year. All other submittals shall be available to the public upon request.

### 4.2 Current Activities

Kitsap County supports various public involvement and participation opportunities that exceed the minimum measures required by this element. Public involvement activities are included through the Departments of Public Works, Parks, and Community Development, as well as through our Clean Water Kitsap (CWK) partnerships with WSU Kitsap Extension, Kitsap Conservation District (KCD), Kitsap Public Health District and Kitsap Public Utility District (KPUD). Public involvement is based upon opportunities for in-depth and meaningful conversations about stormwater challenges and solutions, including the County's projects and planning.

The County currently makes the SWMP and NPDES Annual Reports available to the public on the County's website and provides contact information and an intake form for any public feedback. The public is also invited to provide input on stormwater activities or issues via Kitsap1 (the regional hotline for County services and questions) and the SeeClickFix app.

Kitsap County utilizes a community-based outreach and feedback program designed to provide a place-based and project-based approach to engaging with the public. When Kitsap County is performing operation and maintenance, construction, retrofits or education and outreach activities in the community, these actions provide an excellent engagement opportunity and the public contact is more meaningful. Members of the public who are not also members of these communities may contact staff and programs through information provided on the Kitsap County Stormwater Division and Clean Water Kitsap webpages.

Kitsap County sponsors several Citizen Advisory Councils (CACs) in the communities of Hansville, Keyport, Kingston, Manchester, Silverdale and Suquamish. These community connections provide opportunities for the public to provide input on specific stormwater projects located in their communities, as well as the various programs and services offered to communities through the Clean Water Kitsap (CWK) partnership.

### *4.3 Planned Activities for 2021*

Kitsap County has implemented all required actions under this section of the Permit. Activities planned for 2022 will include maintaining and improving the activities outlined above.

Kitsap County plans to continue to solicit input from the public regarding the SWMP, the SMAP, the SWCP, the Stormwater Design Manual, other feedback, concerns, requests for information etc., through the website intake form, Kitsap1, and the SeeClickFix app, as well as other venues such as public meetings and Community Advisory Councils.

## 5. MS4 MAPPING AND DOCUMENTATION

This section describes the Permit requirements and planned activities related to MS4 Mapping and Documentation.

### 5.1 Permit Requirements

Section S5.C.4 of the Permit requires the County to maintain mapping data for the following features:

- Known MS4 outfalls and known MS4 discharge points.
- Receiving waters, other than groundwater.
- County-owned or operated stormwater treatment and flow control BMPs/facilities.
- Geographic areas served by the MS4 that do not discharge stormwater to surface waters.
- Tributary conveyances to all known outfalls and discharge points 24 inches or larger.

### 5.2 Current Activities

Kitsap County utilizes the Cartegraph© Software system to manage all stormwater infrastructure inventory. This database system links to the Kitsap County Geographical Information System (GIS) and stores information for each asset (size, type, as-built date, condition, inspection and maintenance history, etc.). The system is updated to reflect public and private system changes, additions, and upgrades based on as-built documents received upon project completion. The system is combined with other GIS information to create maps showing land use, topography and/or other features to aid in illicit discharge detection and elimination or spill control.

Kitsap County also maintains written agreements (memorandum of understanding) with the cities of Bremerton, Poulsbo and Port Orchard for collaboration, data sharing and mapping coordination across shared jurisdictional boundaries.

### 5.3 Planned Activities

- Continue to share information related to stormwater connections across jurisdictional boundaries, as well as mapping information with CWK partners, and the cities of Bremerton, Poulsbo and Port Orchard.
- Update Cartegraph(c) with any corrections or changes to asset information (including discrepancies found during inspections, maintenance activities, retrofit projects, and completed CIP construction projects).
- GPS and map the location of all components of the stormwater drainage system and add new assets into database as necessary.

## 6. ILLICIT DISCHARGE DETECTION AND ELIMINATION

This section describes the Permit requirements and planned activities related to Illicit Discharge Detection and Elimination (IDDE).

### 6.1 Permit Requirements

Section S5.C.5 of the Permit requires the County to:

- Implement an ongoing program to prevent, detect, characterize, trace, and eliminate illicit connections and discharges into the MS4.
- Have procedures for reporting and correcting or removing illicit connections, spills, and other illicit discharges when they are suspected or identified.
- Inform public employees, businesses and the general public of hazards associated with illicit discharges and improper disposal of waste.
- Implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the MS4 to the maximum extent allowable under the state and federal law.
- Implement an ongoing program to detect and identify illicit discharges and illicit connections (may include source control inspections).
- Implement an ongoing program to address illicit discharges, including spills and illicit connections, into the MS4.
- Train staff who are responsible for identification, investigation, termination cleanup and reporting of illicit discharges including spills and illicit connections to conduct these activities.
- Maintain records of the activities conducted to meet the requirement of this section.
- Address pollutants entering the municipal storm sewer system from interconnected, adjoining systems.
- Publicize a hotline or other local telephone number for reporting of spills or other illicit discharges. Track illicit discharge reports and actions taken in response to calls.
- Adopt and implement procedures for IDDE program evaluation and assessment.
- Summarize all illicit discharges and connections reported to the County and response actions taken in the annual report, including updates to the SWMP document.

### 6.2 Current Activities

Kitsap County maintains and operates a robust program to prevent, identify and correct illicit discharges into the MS4. Highlights of the major elements are described below.

#### **Detecting, Identifying and Addressing Illicit Discharges and Illicit Connections**

KCPW has conducted IDDE activities described by the Permit since 1995. All known municipal stormwater outfalls have been screened for potential pollution sources, and the County regularly screens over half of the MS4 annually, well beyond the 12% required by Permit.

Many IDDE efforts are carried out via the CWK partnership interlocal agreement between KCPW and KPHD. Together KCPW and KPHD conduct a comprehensive county-wide IDDE Program. Specific geographic areas are targeted based on existing water quality concerns and monitoring trends. Staff follow up on screenings through field investigations and interaction with residents and business owners.

Successful efforts to date have been made through the KPHD PIC Program that targets human-derived pathogens found in aquatic systems.

KPHD staff sample dozens of streams and swimming beaches across the county for fecal bacteria, an indicator of fecal pollution caused by human or animal waste. Fecal pollution can carry viruses and harmful bacteria that make people sick. Water Quality bacteria trends in Kitsap County have generally been improving over time.

In February 2019 the Water Quality standard changed from Extraordinary Primary Contact to Primary Contact, and KPHD began implementing these new standards in October 2019.

Parameters	Freshwater Standard	
	Extraordinary Primary Contact	Primary Contact
Fecal Coliform Bacteria (FC)	<p><b>Part 1:</b> ≤50 FC/100 ml (geometric mean)</p> <p><b>Part 2:</b> Not more than 10% of all samples obtained for calculating a geomean &gt;100 FC/100 ml</p>	<p><b>Part 1:</b> ≤100 FC/100 ml (geometric mean)</p> <p><b>Part 2:</b> Not more than 10% of all samples obtained for calculating a geomean &gt;200 FC/100 ml</p>

Water sampling results are used to notify the public of potential health risks, and to find and fix fecal pollution problems. This helps keep our streams, swimming beaches and shellfish beds safe and healthy for the public to enjoy. KPHD issues public health advisories for streams with chronic high bacteria levels during the summer (3-year geometric mean value > 320 EC/100 ml). There is an overall downward trend in the number of advisories since 2007.

KPHD staff collect shellfish for testing at 12 locations during the summer and fall, and at nine locations year-round. Samples, usually mussels, are collected and sent to the Washington State Department of Health lab, where they are tested for marine biotoxins. Shorelines are closed to harvesting when toxin levels exceed safe levels. Shorelines are re-opened for harvesting once two consecutive samples are obtained and toxin levels are safe. By reducing pollution in surface waters, the KPHD’s PIC Program improves water quality in shellfish growing areas. Since PIC work began a quarter-century ago, there has been a net increase of more than 5,000 acres of shellfish beds approved for harvest around Kitsap County.

### Mapping and Jurisdictional Coordination

Kitsap County utilizes the Cartegraph© Software system (as described in Section 5) to manage all storm sewer system infrastructure inventory. Kitsap County maintains written agreements (memorandum of understanding) with Bremerton, Poulsbo and Port Orchard for collaboration and data sharing related to stormwater connections across jurisdictional boundaries, as well as mapping information. This has allowed for the seamless coordination of illicit discharge detection, elimination and spill response where the municipal storm sewer systems are interconnected.

### Spills Hotline

There are several ways that spills can be reported in Kitsap County. This includes the Kitsap1 hotline, online through the Kitsap County website, and through the SeeClickFix mobile device application.

Kitsap1 was implemented in 2009 and continues to be marketed both internally and externally. Kitsap1 is promoted via a variety of means, including internal newsletters, hotline-branded products, and “Spills Happen” branding including the hotline number on vehicle graphics and other visible locations. Kitsap1 also has an email option ([help@kitsap1.com](mailto:help@kitsap1.com)) as well as an online request form at <https://www.kitsapgov.com/dis/Pages/callkitsap1.aspx>. The Kitsap1 spills reporting system and call flows are continuously updated based on feedback from the Kitsap1 call center, Department of Community

Development, Kitsap Public Health District and KCPW staff.

Kitsap County launched the SeeClickFix app in 2018 which provides a convenient way for the public to report spills, as other County related issues/concerns, (via smart phone/tablet). The cities of Bainbridge Island, Bremerton, Poulsbo and Port Orchard are also using SeeClickFix, and the County continues to promote the use of this app.

In general, emergency calls (unknown substance, unmanageable, or acutely hazardous to environmental or human health) are referred to 9-1-1 where their standard operating procedures are aligned with the Permit requirements for notifying State Agencies.

Non-emergency spills (manageable quantity of known substance such as oil, gas, diesel, soap, paint or mud/dirt) are routinely managed by trained Kitsap County IDDE and field staff. Kitsap County maintains three spills response trailers stocked with a variety of spill response and clean up supplies as a resource for field staff responding to spills. The trailers are located at each of the three regional Road Shops, providing coverage to the entire county.

### **IDDE Education and Outreach**

Public Education plays a strong role in identifying and preventing illicit discharges. The initial step is raising awareness that storm drains flow to surface waters and then informing target audiences of the proper practices to prevent illicit discharges.

Kitsap County informs the general public about the hazards associated with illicit discharges and improper disposal of waste through a variety of partnerships and programs including:

- The Spills Happen campaign, which is promoted locally with banners at events and distribution of paint sticks to hardware stores and coasters and coffee sleeves to restaurants.
- The Puget Sound Starts Here campaign, which connects pollution entering our storm drains to Puget Sound and the industry, recreation, economy and ecosystem it supports.
- Youth education programs focusing on where water goes and effects of pollution on salmon.
- Septic Workshops teach about the adverse environmental effects of leaking septic systems.
- Kitsap County's "Report Water Pollution and Spills" website, contains information on how to report a spill via Kitsap1 or SeeClickFix. This webpage also provides information on types of activities that are a potential for polluted water discharge, and examples of common types of spill situations. <https://www.kitsapgov.com/pw/Pages/Report-Spills.aspx>.
- The "At Your Business" page on the CWK website provides information for businesses based on specific practices including storm system maintenance and the use of proper BMPs, carpet cleaning, painting, pressure washing, automotive shops, and food service establishments.
- KCPW staff continued to provide education to business owners about leaking dumpsters and other source control issues on a complaint basis.

### **Ordinance to Prohibit Illicit Discharges**

Kitsap County Code [Title 12](#) has prohibited illicit discharges to the stormwater drainage system since at least 1996. The code was updated in September 2016 to reflect the specific requirements of the Permit regarding definitions and enforcement mechanisms.

### **IDDE Staff Training**

IDDE training is provided by the Spill Prevention and Response Coordinator to staff who are responsible for responding to spills, as well as those who may encounter them during their normal course of business. Training emphasizes that the reporting of spills and illicit discharges allows us to ensure Permit compliance and reduce environmental impacts.

Training is offered either in-person at a group's work site or shop, or available online via computer-

based training, and targeted to the following groups of municipal field staff:

- **IDDE staff** are responsible for responding to reports of spills or illicit connections and perform source tracing, enforcement, education, and complete reporting to State Agencies. IDDE field staff are the most involved and must have a good working knowledge of the notification process and spill response procedures. These staff receive intensive training on each the above activities and continue their education through continuous learning during the course of investigations and cases.
- **County field staff** may encounter an illicit discharge or connection during the normal course of their work. These groups receive training on how to identify a spill, as well as how to report and respond. Stormwater Division inspectors and O&M crews, Sewer Utility Division crews, Roads Division Shop crews, and the Traffic Division staff receive annual training. Roads Division Construction crews, Parks Department field staff and Facilities Maintenance field staff receive training every other year.
- **Kitsap County Sheriff's Department staff** are trained externally on how to report and respond to a spill, and the results and records are available to us upon request.

Typical trainings cover subjects such as: how to determine if a spill is considered an emergency or not, how to identify non-emergency illicit discharges, how to report a spill, where and how to obtain spill response supplies, using personal protective equipment when containing spills, which spill response supplies are best utilized in different situations, and how and when to implement the use of the spill response trailer that is fully stocked in case of a larger spill. Training is documented, and records are maintained of the specific training provided and staff trained.

### **Record Keeping**

Kitsap County maintains records of all activities conducted to meet the requirements of the IDDE section of the Permit and provide data on program and spill-response activities in the NPDES Annual Report and SWMP. All records will be made available upon request.

## *6.3 Planned Activities for 2022*

Kitsap County has implemented all required actions under this section of the Permit, including publication of the Kitsap County IDDE Program Plan and full implementation of all IDDE program elements. Activities in 2022 will consist of maintaining and improving the programs and adapting them as necessary to meet Permit and program objectives.

Kitsap County plans to conduct the following activities in 2022:

- Continue to conduct IDDE training for Kitsap County IDDE staff and field crews.
- Continue to refine the spill call system with greater field staff involvement in how calls are managed, documented and resolved.
- Update IDDE educational materials as needed.
- Perform targeted outfall screening for illicit discharges in priority watersheds.

## 7. CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES

This section describes the Permit requirements, programs, and planned activities related to Controlling Runoff from New Development, Redevelopment, and Construction Sites.

### 7.1 Permit Requirements

Section S5.C.6 of the Permit requires the County to:

- Develop, implement, and enforce a program to reduce pollutants in stormwater runoff that enter the municipal separate storm sewer system from new development, redevelopment and construction site activities. The program must apply to both private and public projects.
- Adopt and implement a regulatory process with the necessary legal authority for application review, inspection, and escalating enforcement procedures necessary to implement the program in accordance with Permit conditions, including the minimum technical requirements in the 2019 Ecology Stormwater Management Manual for Western Washington.
- Provide options to allow non-structural preventive actions and source reduction approaches such as LID and measures to minimize the creation of impervious surfaces and the disturbance of native soils and vegetation.
- Adopt regulations that include provisions to verify adequate long-term operations and maintenance of new post-construction permanent stormwater facilities and BMP in accordance with Permit conditions, including an annual inspection frequency and/or approved alternative inspection frequency and maintenance standards for private drainage systems that are as protective as those in the 2019 Ecology Stormwater Management Manual for Western Washington.
- Train staff on the new codes, standards, processes and procedures.
- Develop a process to record and track all inspections, maintenance and enforcement actions by staff for inclusion in the annual report.
- Make available appropriate information to Permit applicants regarding NDPES Stormwater Construction and Industrial General Permits and their notices of intent (NOI).
- Summarize annual activities for the annual report and identify any necessary update to SWMP document.

### 7.2 Current Activities

Kitsap County's Department Community Development (DCD) has a comprehensive land-use and development Permit program. This program includes a Permit review and inspection process that addresses the areas required by the Permit as follows:

- Implementation of all existing stormwater codes and programs in compliance with Section S5.C.6 of the Permit.
- Inspection of all new development for Permit compliance.
- Provision of stormwater training for Kitsap County staff and external partners in the development community.
- Provision of information to applicants for sites that may require the Construction Stormwater General Permit (CSGP) or the Industrial Stormwater General Permit (ISGP), including links to application.

Additionally, the County updated the Stormwater Design Manual and Kitsap County Code Title 12 in 2021 to reflect changes to the Ecology Manual.

### *7.3 Planned Activities for 2022*

Kitsap County has implemented all required actions under this section of the Permit and plans to conduct the following activities in 2022:

- Maintain, improve and adapt programs as necessary to meet Permit and program objectives.
- Continue to implement the enforcement process for KCPW staff to align with the updated stormwater code.
- DCD staff will continue to provide site plan review of all submitted new development, redevelopment and construction permit applications and conduct site plan inspections of issued permits to ensure construction is in accordance with the approved plan.
- DCD staff will continue to provide applicants with requirements (either in writing or during live consultation) for coverage under the ISGP and CSGP.
- When required, applicants must show proof of coverage under the NPDES SW General permits prior to project approval.
- DCD staff will continue to provide NOI information to all property owners within 800 feet of the applicant within 14 days of the permit application being submitted.

## 8. OPERATIONS AND MAINTENANCE

This section describes the Permit requirements, programs, and planned activities related to Operations and Maintenance (O&M).

### 8.1 Permit Requirements

Section S5.C.7 of the Permit requires the County to:

- Develop and implement a stormwater system O&M program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Ensure the stormwater system O&M program includes provisions to verify adequate long-term O&M of stormwater treatment and flow control BMPs/facilities for both private and public projects, that were permitted by the County.
- Establish and implement maintenance standards that are at least as protective as those specified in the most current [Stormwater Management Manual for Western Washington](#).
- Inspect permitted and all municipally owned or operated permanent stormwater treatment and flow control facilities at frequencies required in the permit.
- Establish and implement procedures to reduce stormwater impacts associated with runoff from municipal operations and maintenance activities, including but not limited to buildings/structures, parks, streets, parking lots, roads, or highways owned or maintained by the County, and to reduce pollutants in discharges from all lands owned or maintained by the County.
- Develop and implement an ongoing training program for staff whose job functions may impact stormwater quality and document the training program.
- Prepare Stormwater Pollution Prevention Plans (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the County that are not covered by the NPDES Stormwater Industrial General Permit.
- Track and maintain records of inspections, maintenance and repair activities, and summarize them in the annual report.

### 8.2 Current Activities

Kitsap County operates a robust O&M program that maintains County-owned facilities in a manner that is protective of water quality. Kitsap County Public Works' operations and maintenance practices, policies and procedures were reviewed in 2021 and have been accredited by the American Public Works Association (APWA).

Kitsap County maintains an inspection schedule including privately and county-owned/maintained stormwater facilities per Kitsap County Code Title 12.24. Enforcement procedures are established in Title 12.32.

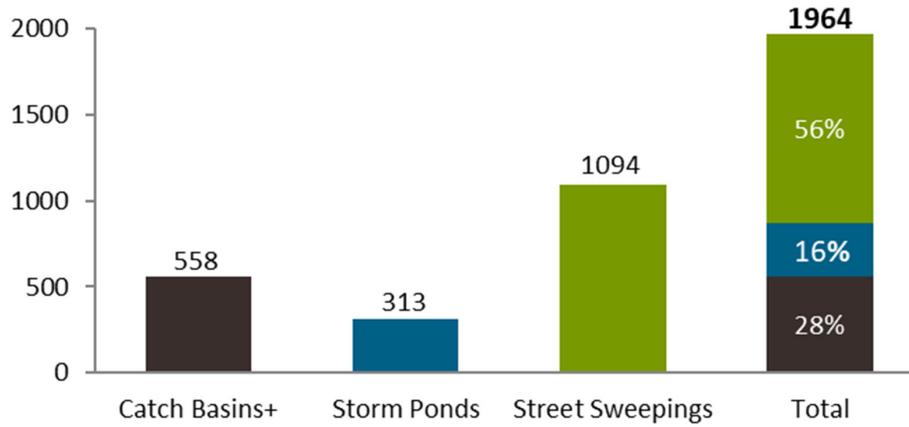
Kitsap County is one of the agencies participating in the Western Washington Regional Road Maintenance Endangered Species Act (ESA) Program. Since December 12, 2001, Kitsap County has been officially committed to implement the Regional Road Maintenance ESA program. This program includes all the activities listed under S5.C.5.f and has a training element at: <http://www.wsdot.wa.gov/maintenance/roadside/esa.htm>.

A SWPPP is a required component of the SWMP, and is a document designed to prevent and reduce pollutant runoff from pollution generating sources. Kitsap County has created SWPPPs to meet the requirements to control pollution runoff from all County-owned and maintained facilities, where heavy equipment and potentially pollution generating materials are stored, and that are not already required to be covered by an Industrial Stormwater General Permit. These include the Central Kitsap Laydown Yard, Wildcat Lake County Park, and Kitsap County Fairgrounds. All SWPPP's are reviewed annually and updated at least every four years based on the Permit (last revision in 2021). Industrial Stormwater General Permits are currently pending for the North Road Maintenance Facility, Central Road Maintenance Facility, and South Road Maintenance Facility, but also have existing SWPPPs under the Municipal Permit until such time as the ISGP takes over.

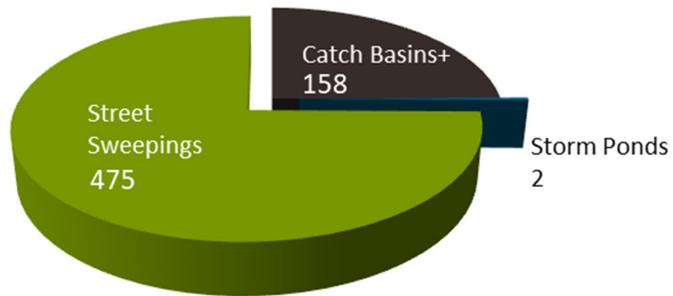
Kitsap County maintains over 600 stormwater facilities to standards consistent with the Permit and cleans or inspects over 11,000 catch basins at least every other year. All catch basin and stormwater facility inspection and maintenance activities are planned and tracked in the Cartegraph© asset management system. Street waste removed from these systems are taken to the County-owned decant facility located adjacent to the Central Kitsap Wastewater Treatment Plant. The decant facility is operated under a solid waste handling permit issued by Kitsap Public Health District.

The KCPW waste disposal monitoring program closely tracks the amount and quality of solids removed from roads and the stormwater system. These solids come from several activities, including soil removal during ditch maintenance or pond maintenance, sediment removed from catch basins and vaults, and solids removed from streets by street sweepers. All these solids, if allowed to accumulate in the stormwater system, have the potential to carry the associated contaminants to natural surface waters during runoff events. All stormwater and street solids are tested and disposed of in accordance with local and state requirements. These waste removal activities have a large impact on water quality, removing oils and heavy metals that would otherwise make their way to our natural waterways.

**Tons of Total Solids  
Removed from Kitsap County Storm System in 2021**

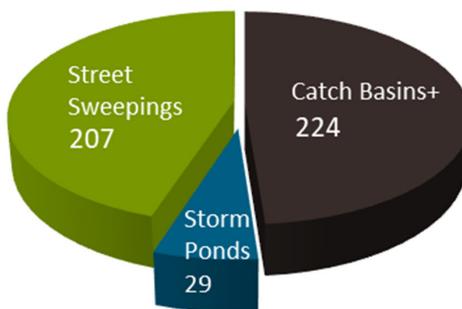


**Gallons of Oil  
Removed from the Kitsap County Storm System in 2021**



Total Gallons of Removed = 635

**Pounds of Copper, Lead & Zinc  
Removed from the Kitsap County Storm System in 2021**



Total Pounds Copper, Lead & Zinc Removed = 460

### 8.3 Planned Activities for 2022

Kitsap County plans to conduct the following activities in 2022:

- Maintain, improve and adapt programs as necessary to meet Permit and program objectives.
- Continue annual inspection of all privately-owned stormwater facilities.
- Continue to maintain stormwater management facilities to enhance water quality, reduce local flooding problems and improve stormwater runoff flow-control.
- Expand asset management program to:
  - » Maximize the efficiency of stormwater projects by coordinating water quality retrofits with road and sewer projects.
  - » Track inspection, maintenance, condition and life cycle of assets to ensure replacements occur before failures.
  - » Ensure adequate funding for all applicable requirements of the Permit.
- Coordinate with jurisdictions per Sections S5.C(4)(a) (vi) and S5A(5)(a) to maintain updated maps to facilitate inspection and maintenance.
- Kitsap County will partner with a consultant in spring 2022 to update the County's Stormwater O&M manual and document all practices, policies and procedures implemented to reduce stormwater impacts associated with runoff from all lands and roads owned or maintained by the County. The anticipated completion of this is June 2022 and is due by December 31, 2022.

## 9. SOURCE CONTROL PROGRAM

This section describes the Permit requirements and planned activities related to the Source Control Program for Existing Development.

### 9.1 Permit Requirements

Section S5.C.8 of the Permit requires the County to develop a program to prevent and reduce pollutants in existing land use areas and pollutant generating activities which include the following:

- Develop a program to reduce the application of pesticides, herbicides, and fertilizers from pollutant generating sites.
- Adopt and implement an ordinance that requires the application of source control BMPs for pollution generating sources as outlined in Ecology's Stormwater Management Manual for Western Washington.
- Establish an inventory that identifies pollutant generating businesses.
- Implement a business inspection program, inspecting 20% of all pollution generating businesses in unincorporated Kitsap County, including follow-ups.
- Inspect 100% of credible source control complaints.
- Implement progressive enforcement policy that requires pollution generating sites to comply with stormwater requirements.
- Train source control inspection staff.

### 9.2 Current Activities

The source control inspection program is a new requirement for the 2019-2024 Permit cycle. The Stormwater Division's Source Control program is currently under construction and on schedule to meet all Permit requirements.

- The pollutant generating business inventory has been started using data collected from the Department of Revenue and Kitsap County GIS property classes.
- Development of a source control inspection tracking database in Cartegraph.
- Development of an ordinance, requiring the application of source control BMPs which is currently awaiting the legal process of code adoption.
- Implement a progressive enforcement policy (KCC 12.32) for all stormwater requirements.

### 9.3 Planned Activities for 2022

The Stormwater Division is on track to begin implementation of this new program by January 1, 2023, with the following tasks scheduled to take place in 2022:

- Perform outreach to inform existing business owners and prepare them for the new Source Control Program and new ordinance. The goal of this will be for the greater Kitsap community to 1) know about the BMP ordinance and how to comply with it and 2) be provided meaningful ways to provide input and participate in the decision-making processes.

- Adopt the Source Control of Existing Development ordinance into code.
- Create a stormwater compliance plan that outlines the County's progressive enforcement policy and includes an enforcement flow chart, which would consider environmental harm, responsiveness in correction, and repeat violations. This will also include inspection prioritization and modification information.
- Finalize the source control inspection tracking database in Cartegraph.
- Finalize source control inventory and begin source control inspections.
- Train all Kitsap County Source Control Program staff.

## 10. TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

This section describes the Permit requirements, programs, and planned activities related to Total Maximum Daily Load (TMDL) Requirements that are listed in Appendix 2 of the Phase II Permit. For all other applicable TMDL programs, compliance with the Phase II Permit is considered in compliance with the TMDL and no additional SWMP documentation is required.

### 10.1 Permit Requirements

Section S7 of the Permit requires the County to comply with the requirements of the applicable TMDL listed in Appendix 2 as follows:

- Comply with the specific requirements identified in Appendix 2 and maintain records of all required actions that are relevant to the applicable TMDL. TMDL implementation activities must be included as part of the annual report.
- Where monitoring is required, conduct the monitoring according to a Quality Assurance Project Plan (QAPP) approved by Ecology.

### 10.2 Current Activities

Currently, Kitsap County is affected by two fecal coliform TMDLs. The Sinclair-Dyes Inlet TMDL was approved by EPA in 2012 and is listed in Appendix 2 of the Permit. The Liberty Bay Watershed TMDL was approved by EPA in 2013 but is not included in the Appendix.

Kitsap County has been working with Ecology on the development of both TMDLs and has implemented numerous early-action projects to meet the water quality goals of the TMDLs. For example, KCPW implements a robust Mutt Mitt Behavior Change Program to encourage pet waste pickup in public places such as parks and trails. KCPW also works with its CWK partners to screen for bacteria sources in the TMDL area. They investigate to find the source of the pollution and when they locate the source, they work with property owners to eliminate it.

Additionally, KCPW, together with the CWK partners, has provided updated information regarding actions taken for the Liberty Bay TMDL to the Department of Ecology per their request. Ecology is considering next steps for delisting Liberty Bay based on improvements in water quality, source corrections and stormwater related improvements.

### 10.3 Planned Activities for 2022

Kitsap County has implemented all required actions under this section of the Permit. Future actions will consist of maintaining and improving the programs and adapting them as necessary to meet permit and program objectives.

Kitsap County plans to conduct the following activities in 2022:

- Enhance the Mutt Mitt Program with new information from station sponsor surveys and continue to build and support the program in these areas.
- Continue to visit non-compliant dumpster sites and provide technical assistance.
- Continue funding KPHD PIC efforts in both TMDL watersheds.

## 11. MONITORING AND ASSESSMENT

This section describes the Permit requirements and planned activities related to water quality monitoring.

### 11.1 Permit Requirements

In the previous Permit term (2013-2019), Section S8 of the Permit required the County choose one of two options for Section S8.B - Status and Trends Monitoring and Section S8.C - Effectiveness Studies: Option 1 - pay into a collective fund or Option 2 - conduct stormwater discharge monitoring. The County provided notification to Ecology by December 1, 2013 that they elected to pay into the collective fund for both options.

### 11.2 Current Activities

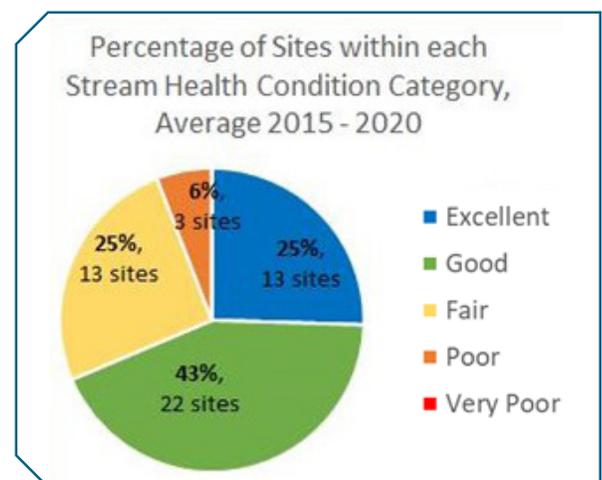
Kitsap County pays into the collective fund for Status and Trends Monitoring and for Effectiveness Studies. Payments have been made annually.

In addition to paying into the collective fund, KCPW also conducts several activities as part of the county-wide Stormwater Facility Effectiveness Program and Watershed Health Monitoring Program. KCPW collects stream flow data from three stormwater drainage basins to evaluate the effectiveness of stormwater management actions. Other effectiveness studies include long term permeable pavement infiltration and removal of pollutants contained in solids from the storm system (catch basins, street sweeping and pond maintenance).

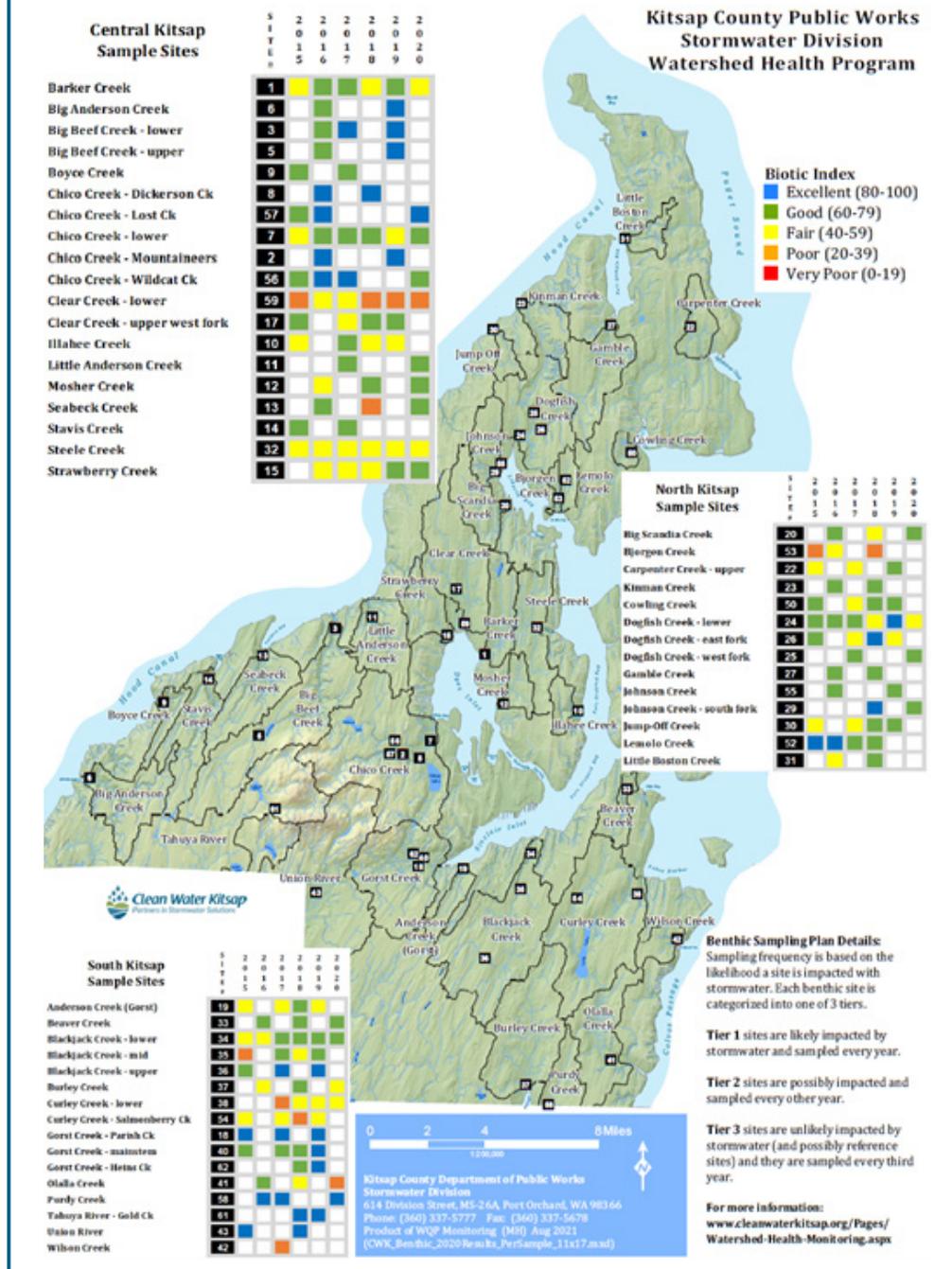
KCPW participates in the Stormwater Work Group and Source Identification subgroup. The group's work directs the [Stormwater Action Monitoring](#) (SAM) program implementation and other stormwater-related monitoring and assessment.

KCPW monitors stream health by collecting benthic macroinvertebrate samples from 50 sites. Benthic macroinvertebrates, also known as stream bugs, are animals that can be seen with the naked eye, do not have backbones and live in the stream benthos (in or near the streambed). They include insects, crustaceans, worms, snails, clams, etc. Benthic macroinvertebrates are monitored because they are good indicators of the biological health of stream systems and play a crucial role in the stream ecosystem. Sites are monitored on a rotational basis with most sites visited every other year.

The Benthic Index of Biotic Integrity (B-IBI) is a standardized scoring system describing stream health. The greater the types (diversity) of insects and number of insects represented in the sample result in a higher score. Ten metrics are calculated, then added together to provide a score up to 100 points. Stream health categories range from "excellent" to "very poor." This standardized scoring system allows Kitsap County stream health comparisons to the greater Puget Sound streams. Kitsap has been conducting macroinvertebrate sampling since 2010. The average scores from the past five years show most sites in the "good" to "fair" category.



## Benthic Macroinvertebrate Monitoring for Stream Health 2015 - 2020 Results



### 11.3 Planned Activities for 2022

Kitsap County plans to conduct the following activities in 2022:

- Continue to participate in the Stormwater Action Monitoring program.
- Continue to implement the watershed health monitoring program to demonstrate protection, improvement or decline in watershed health related to stormwater management actions.
- Continue to implement the Stormwater Effectiveness Program targeting stormwater restoration sites, stormwater capital facilities projects and stormwater retrofit project sites.

## 12. REPORTING REQUIREMENTS

This section describes the Permit requirements and planned activities related to reporting activities required under the Permit.

### 12.1 Permit Requirements

Section S9 of the Permit requires the following:

- Submit an annual report to Ecology by March 31 of the following year. The reporting period for annual reports will be the previous calendar year. The annual report shall include the SWMP, annual report form, and notification of jurisdictional boundary changes that affect the geographic area of Permit coverage, together with any implications for the SWMP.
- Retain all records related to the Permit and SWMP for at least five years and submit records to Ecology upon request.
- Make records related to the Permit and SWMP available to the public at reasonable times during business hours. The County must also provide a copy of the most recent annual report to any individual or entity upon request. The SWMP and annual reports will be posted to the website.

### 12.2 Current Activities

Kitsap County submitted an NPDES annual report and SWMP Plan as required by the Permit, and both are posted on the [Kitsap County website](#).

### 12.3 Planned Activities for 2021

This SWMP Plan has been prepared to demonstrate compliance with the requirements of the Permit and to describe future planned activities. This SWMP will be updated annually to reflect progress with implementing all elements of the stormwater management program required for compliance with the Permit and posted to the Kitsap County website.

## 13. COMPLIANCE WITH UNDERGROUND INJECTION WELL (UIC) PROGRAM REQUIREMENTS

The UIC Program rule, chapter 173-218 WAC, is the regulatory authority for underground injection control wells in Washington. This section describes the requirements of the UIC well program.

### 13.1 UIC Program Requirements

To use the presumptive approach to meet UIC program rule authorization for municipal Class V UIC wells, jurisdictions have the option of applying their SWMP to the areas served by their municipal UIC wells.

The requirements include:

- Register all UIC wells, existing (in use before 2/3/2006) and new, with Ecology.
- Complete well assessment for all existing wells in use prior to 2/3/2006.
- Site, design, construct, operate, and maintain new UIC wells according to the specifications throughout the 2019 Stormwater Management Manual for Western Washington (SWMMWW) Section I-4 Underground Injection Wells.
- Fulfill source control and O&M requirements for both new and existing UIC wells by:
  - » O&M according to the specifications of SWMMWW Section I-4.
  - » Source control activities (including targeted education and outreach) that are well-suited for land uses associated with the UIC wells and to the specifications in the SWMMWW.
  - » Provide IDDE programs in areas served by the UIC wells to prevent pet waste and control other sources of pathogens.

### 13.2 Current Activities

Kitsap County currently operates 22 municipal Class V UIC wells and meets the requirements of the UIC Program by applying the SWMP to the entire MS4, including areas served by UIC facilities.

- KCPW has registered and completed well assessments for all existing UIC wells with Ecology.
- For new UIC wells, registration forms are submitted 60 days prior to construction to allow for a full review of the application by Ecology and Kitsap County Department of Community Development. All UIC wells will comply with all the siting design, and treatment requirements through either the presumptive approach or the demonstrative approach.
- KCPW provides operations and maintenance of all UIC wells per the specifications in SWMMWW I-4.11.
- KCPW Source Control Program targets pollution generating sources that potentially contribute storm runoff to the UIC wells. KCPW inspects 100% of source control complaints utilizing BMP educational materials and illicit discharge violations as needed.
- Kitsap County Code, Title 12 outlines storm water management regulations and provides a mechanism to take enforcement actions for any code violations.
- KCPW implements a robust IDDE program to ensure all UIC wells do not receive any fluids other than stormwater and to reduce potential pollutants in stormwater.
- Through the Clean Water Kitsap interlocal agency partnership, KCPW sponsors the KPHD Water PIC Program to identify and correct sources of fecal pollution expected to reach ground water. KPHD

staff sample dozens of streams across the county for fecal bacteria, an indicator of fecal pollution caused by human or animal waste. Sampling results are used to identify and eliminate the sources of pollution. Staff also investigate public sewage complaints, agricultural complaints, and on-site sewage deficient pump reports from certified septic pumpers.

- Public education and outreach efforts such as the Mutt Mitt Program encourage pet waste pickup in public places. This program works to divert pathogens from reaching ground water through UIC wells.

### *13.3 Planned Activities for 2022*

Kitsap County has implemented all required actions under the UIC Program regarding existing UIC wells. Future actions will consist of continuing to meet the requirements for any new UIC wells, as well as maintaining and improving the programs and adapting as necessary to meet program objectives.

Kitsap County plans to conduct the following activities in 2022, including areas served by UIC wells:

- Submit all registration forms, for any new UIC wells, 60 days prior to construction to allow for a full review of the application by Ecology and Kitsap County Department of Community Development. All UIC wells will comply with all the siting design, and treatment requirements through either the presumptive approach or the demonstrative approach.
- Continue to maintain facilities to enhance water quality and meet UIC program requirements.
- Enhance the Mutt Mitt program with new information from station sponsor surveys and continue to build and support the program in these areas.
- Continue funding KPHD PIC program efforts.
- Adopt and implement an ordinance that requires the use of source control BMPs for pollution generating sources.
- Continue to implement Source Control and IDDE programs to identify and correct any potential sources of pollution.
- Continue to implement Kitsap1 and SeeClickFix, the regional spills reporting hotline and mobile app.