

2020 Highlights

SNOHOMISH COUNTY CONSERVATION & NATURAL RESOURCES | SURFACE WATER MANAGEMENT

Working to Keep People Safe and Waters Healthy

Snohomish County Surface Water Management (SWM) provides essential services to Snohomish County residents. We are here to partner with the community to help reduce the impacts of flooding and to protect and enhance our water resources for current and future generations. SWM provides services to the community in four primary categories: water quality, salmon and marine habitat, drainage and road flooding, and river flooding.

This report showcases a few highlights from our work with the community over the past year.



Lake Ketchum.

“Facing challenges in 2020, particularly from the COVID-19 pandemic, SWM staff proved resilient and adaptable in continuing to provide valuable services to our community.”
Gregg Farris, SWM Director

WATER QUALITY



SWM Inspections Team Turns Focus to Institutional Facilities

With COVID-19 making it difficult and potentially unsafe to visit many local businesses, the SWM Pollution Source Control Inspection Program focused more in 2020 on institutional facilities, such as Snohomish County owned facilities, Paine Field, Schools, and local Utility District properties. Not only did this effort help ensure the best pollution management strategies were being used at these sites, it supported the county’s efforts to comply with their National Pollution Discharge Elimination System (NPDES) Permit. Visit SWM’s [Drainage Services webpage](#) to learn more.



Pollution Control Spill Kit

State of Our Waters Reports Highlight Health of Local Waterways

Our award-winning [State of Our Waters](#) report cards continue to help residents and recreational users learn about the health of over 60 local waterways. Residents can discover information about water quality, habitat conditions, and the health of life in our rivers, streams, and lakes. In 2020, SWM staff visited 35 streams over the summer to collect habitat information, marking the third year of the program’s efforts to track the health of streams. We are using this information to communicate with the community, to track changes over time and focus resources to make improvements where needed.

SWM Capital Projects Improve Water Quality

SWM’s capital program is focused on construction projects that address drainage, flooding and water quality concerns throughout the county. Two low impact development (LID) projects completed in 2020 highlight water quality benefits:

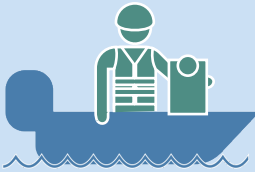
- At [Logan Park](#), an LID project replaced the asphalt parking lot with pervious concrete pavement.
- At [Meadow Creek Park](#), the Carter Road stormwater facility was rebuilt to improve water quality.



Logan Park Pervious Concrete Pavement



Drainage Facility Inspections
 979 stormwater drainage facilities inspected to ensure proper maintenance



Lake Monitoring Volunteers
 57 volunteers spent 986.5 hours monitoring the health of lakes



Water Quality Investigations
 121 water quality complaints investigated

SALMON & MARINE HABITAT

Fish Passage Culverts Help Fish Travel Upstream

To allow streams to move under roads, culverts have been built throughout Snohomish County. Many of these culverts were built years ago and are too small or too steep to allow fish to travel through them to upstream spawning grounds and feeding areas. In 2020, 10 new culverts were designed and replaced to provide better passage for fish traveling upstream. Making [culverts](#) bigger doesn't just help fish, it also helps to reduce flooding by giving the stream more capacity to carry water during the wet months.



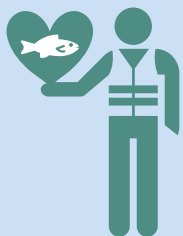
MRC Mapped Toxic Pilings in Snohomish Estuary

In September, Congressman Rick Larsen met with the [Snohomish County Marine Resources Committee](#) (MRC) and SWM staff to discuss the recently completed [Snohomish Estuary Pilings Prioritization for Removal Project](#). The project used MRC grant funds to map the 15,564 pilings on private and public lands within the estuary and developed a prioritization plan for removal. This report aims to inform agencies and private landowners of high-priority piling removal opportunities based on the highest potential to improve estuary habitat and water quality.



Native Plants Help Restore Habitat

[SWM's Native Plant Program](#) provides native plants and skilled plant installation for a variety of projects around Snohomish County. Project goals range from minimizing damage from flooding and erosion, to protecting and enhancing aquatic habitat and water quality. In 2020, SWM staff planted over 5,000 native trees and shrubs adjacent to water bodies to improve habitat. In addition to native plantings, the SWM team also conducted efforts to control invasive plants around the county, including removal of 15 acres of invasive knotweed and blackberry.



Conservation Volunteers
1,402 hours volunteered by MRC members toward marine conservation on **11** different MRC projects

Erosion Project
24 logs, **18-24** inches in diameter with rootwads, installed in Swamp Creek to address erosion issues



Habitat Projects
36 site visits conducted at the request of landowners, related to stream or native growth protection area issues

DRAINAGE & ROAD FLOODING

SWM Construction Projects Improve Drainage and Infrastructure

SWM worked with other Public Works divisions to construct 15 projects in 2020 at a total construction cost of \$2.34 million. Six projects were completed by contract construction and nine were constructed by Road Maintenance. In addition to the two water quality projects, this list included: four drainage improvement projects to address local flooding issues; eight failing culvert replacements; and one project that replaced five driveway culverts to address fish passage and flooding issues on Connors Road near Lake Stevens.



Sauk Prairie Rd Culvert Before



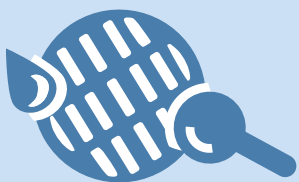
Sauk Prairie Rd Culvert After

SWM Staff Investigate Drainage Complaints to Reduce Local Flooding

October typically marks the start of flood season in Snohomish County. Increased rainfall can wash leaves into storm drains and cause localized flooding in our neighborhoods. SWM staff work year-round to help residents protect property and prevent flooded streets by addressing drainage concerns near their homes. In 2020, SWM staff initiated 384 [drainage investigations](#) in response to drainage complaints from residents.



Storm Catch Basin



Drainage Investigations
384 drainage investigations initiated in response to drainage complaints



Drainage System Mapping
2126 drainage features inventoried and added to the County's drainage system mapping



Drainage Projects
6 drainage improvement projects completed in 2020 to resolve road and property flooding

RIVER FLOODING

Community Floodplain Solutions Launches in Sky Valley

In the fall of 2020, SWM and Sustainable Lands Strategy (SLS) partners introduced a new program called [Community Floodplain Solutions](#) (CFS) to address the complex problems that come with living and working in a floodplain. The goal of CFS is to protect people in frequently flooded areas while restoring fish habitat and protecting agriculture lands.

With the help of a \$4.8 million award from the Washington State Department of Ecology’s Floodplains by Design (FbD) grant program, CFS outlined specific actions to reduce flood risks and protect natural resources along the lower Skykomish River, in the “Sky Valley” region near the City of Sultan.

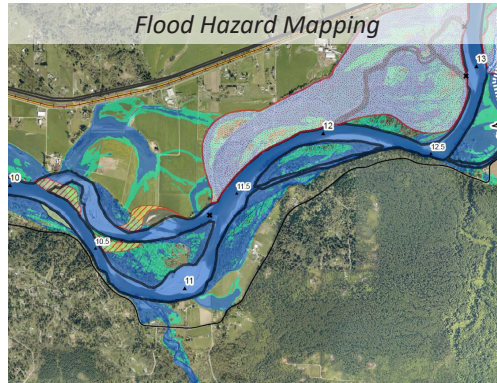


Skykomish River near Sultan

Flood Hazard Studies Aim to Understand and Reduce Flood Risks in the Lower Skykomish

As a key part of the Community Floodplain Solutions (CFS) program, SWM and partners studied river movement, or channel migration, to better understand and predict risk to people, infrastructure and our natural resources. [Geomorphic hazard studies](#) mapped the river’s changing shape, location and velocity, not just water depth, across a broader reach scale.

With a better understanding of potential risks associated with rainfall and river movements, we are using this information to evaluate and assess potential projects and how they will affect the landscape.



Flood Hazard Mapping

Emergency Repairs Completed at Ebey & Haskel Levees

Ebey Slough Levee on the Snohomish River estuary is one of many [flood control structures](#) managed by the County. Continued flood events can potentially damage nearby private property and pose a threat to public infrastructure. Following a February flood event, SWM partnered with the US Army Corps of Engineers (Corps) to repair damage to the Ebey Slough Levee. In the Lower Skykomish River, the geomorphic assessment completed in the fall identified immediate flood risk at Haskel Slough levee near Sultan that led to an emergency repair in November.



Erosion at Ebey Slough Levee



Levee Repair
300 lineal feet of the Haskell Slough levee repaired



Flood Safety Information
8,329 county households in the floodplain received flood safety and insurance information through direct mailings



River and Stream Monitoring
25 stream/river gauges and 12 rain gauges maintained and monitored

OTHER SWM NEWS

SWM Staff Adapt Services to COVID-19

With the onset of COVID-19, SWM quickly adapted work plans to meet pandemic safety protocols. All SWM staff started working remotely in March. Staff working in the field or visiting the SWM office were required to follow adopted safety protocols, such as wearing masks and maintaining social distancing. Starting in March, SWM also dispatched 9 field staff directly from home in county vehicles to their worksites instead of requiring them to commute daily to the county campus. This new approach kept employees safe, improved efficiency and freed up labor hours for critical tasks.

Plans for in-person workshops pivoted in February when in-person gatherings were limited as a safety measure. Planning for SWM’s educational workshops immediately shifted to online platforms readily accessible to the public. Beginning in May 2020, a total of 11 virtual workshops covering septic care and natural yard care topics were held with 768 people from 591 households attending. Participants expressed gratitude to SWM for offering online workshops during the pandemic.



Online Workshops
 11 online Natural Yard Care and Septic Care workshops conducted and attended by **591** households

County Executive Proposes New Department of Conservation and Natural Resources, a Move for SWM

In September, County Executive Dave Somers announced a proposal to form a new county [Department of Conservation and Natural Resources](#) (DCNR). The proposal moved Surface Water Management out of Public Works and into the new DCNR, together with the Parks, Recreation and Tourism Department, the Agriculture Program and the Office of Energy & Sustainability. To advance this goal, the required code changes were submitted in November to the County Council to officially create the new department.

With the adoption of the proposed code changes in January 2021, full implementation is targeted for 2022. The new department will focus on partnering with Snohomish County communities to steward resources and manage infrastructure for the purpose of protecting and enhancing the use and enjoyment of our land, air, and water now and into the future.



Field Staff Working During COVID-19
 Starting in March, **9** field staff dispatched from home using county vehicles