



Farmers Protect Water Quality

Volume 35 Number 2

SOIL • WATER • WOODLAND

Summer 2019

Created Wetland to Manage Stormwater Runoff Benefits Wildlife

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This photo tells the story of how a stormwater treatment pond can also provide wildlife habitat for one of our most beautiful species of water fowl. A nest box was installed adjacent to the stormwater treatment pond and a pair of wood ducks is successfully raising their family in the created habitat. Washington State Department of Ecology estimates that up to half of Washington's wetlands have been lost, so recreating these habitats is key to having wetland dependent species around for future generations to enjoy. *Photo credit: Ron Holmes*

BEST MANAGEMENT PRACTICES

The first half of 2019, the District had great success in responding to customer requests for cost-share assistance. The District was able to assist 9 landowners to install 13 Best Management Practices (BMPs). Nine of those BMP's received cost-share funding from the Washington State Conservation Commission for a total of \$182,502.00. The District had a goal of increasing the amount of on the ground work getting done and we achieved that goal early in the year. These projects help meet the larger shared goals of our partners in helping to improve water quality for shellfish beds, along with salmon and Orca recovery.

Harrison Creek Buffer Fencing

Harrison Creek is a dynamic, salmon-bearing stream that drains the southern Chuckanut Mountains in northwest Skagit County. Where the stream comes out of the hills and enters the Samish River delta, the water loses velocity and drops much of the sediment it holds. This causes the stream to move and change course frequently.

Ms. Beverly Macken operates a beef farm along Harrison Creek and has worked with Skagit County and Skagit Conservation District in the past, to exclude cattle from this stream.

Over the past couple years, a portion of the pasture near the stream has grown wetter and less productive, and the stream has carved a new channel into grazed areas. Ms. Macken worked with Skagit Conservation District to install a new fence to protect water quality and native salmon stocks. While the fence was being installed, we observed Coho Salmon (*Oncorhynchus kisutch*) fry in the now protected reach of Harrison Creek. We are looking forward to future projects with Ms. Macken.



Manure Line

Mark and Dean Wesen operate Wesen Organics, a progressive organic dairy in northwestern Skagit County. The brothers manage several hundred acres of grass and corn. The Wesens collect and store their cow's manure over the winter, then apply it at agronomic rates to crop fields in the spring and summer; this ensures their crops have the proper nutrition they need from a local, organic source of fertilizer.



Getting manure to all of their crop fields can be heavy, time consuming, and expensive work. Trucking manure requires specially equipped vehicles and can compact the soil, which reduces soil and root health; it is not a viable option once some crops are established. Using flexible hoses to transfer manure also has potential drawbacks. Hoses can get in the way of livestock and equipment, and have the potential to leak over time. The Wesens reached out to the Skagit Conservation District for help to design and install an underground pipeline that allows application equipment to connect at convenient locations throughout the fields. This pipeline helps the brothers maintain soil health and protect water quality by reducing the risk of spilling manure and simplifying their operation and application schedule. The pipeline also reduces their carbon footprint by reducing trucking time and increasing efficiency.

BEST MANAGEMENT PRACTICES

Dairy Runoff Management

Dwayne Faber, a young, enthusiastic farmer, manages a dairy in Burlington in the lower Skagit River Watershed. Mr. Faber contacted the Skagit Conservation District this spring to see what resources were available to upgrade aging infrastructure at his dairy. Mr. Faber and planners at Skagit CD identified a failing concrete slab and gutter system along one of the barns as good candidates for cost-share assistance. The team had very little time to implement these best management practices before cost-share funds

reached the end of their grant cycle; the planners worked swiftly to put together application materials and project designs. With little more than a month to complete the job, Mr. Faber and his contractors got to work demolishing the damaged infrastructure, pouring a new concrete slab, and installing a new roof runoff management system.



The new gutters and outlet piping will divert more than 119,000 gallons of clean rainwater from their waste management system.



The new concrete slab collects manure and runoff. This system protects water quality by allowing the dairy to capture excess nutrients and pathogens, reduce tractor time scraping up runoff and keeps water clean through diversion.

Planting Trees for Wildlife

Jeff Walden is a lifelong resident of the Alger area. He is an avid outdoorsman and enjoys wildlife. His peaceful property offers a variety of habitat types, including a pond, stream, forest, and fields. He has observed many native species on the property, including Coho salmon, black-tailed deer, bobcat, black bear, coyote, frogs, owls, and bald eagles.



Skagit County's Natural Resource Stewardship Program (NRSP) reached out to Mr. Walden to assess his interest in reforesting an unproductive, rocky, weedy field adjacent to the pond's headwaters. As Jeff and the county began to make plans for the planting, they reached out to the Skagit Conservation District (SCD) for assistance with this large planting. In the spring of 2019, Mr. Walden, NRSP, SCD, and a planting crew worked together to install nearly 1,200 trees and shrubs. Once established, this project will enhance valuable habitat resources on the property, improve soil health and hydrology, increase carbon Sequestration, and reduce invasive weed populations. Since portions of the planting are adjacent to the stream, the trees and shrubs will help filter water and keep the stream cool and clean for salmon and other aquatic life.

How the Conservation District Builds a Successful Resource Management Plan From the Soils Up



A quality resource management plan all starts with the Soil Survey completed for Skagit County by the Soil Conservation Service. The old school planners all had a soil survey on their desk, but now this information is on the Internet at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. A landowner will have their best success in trying to manage in harmony with the naturally occurring conditions their lands provide. That is why it is so important to search for land that will support a business or lifestyle goals. A quick review of the soil surveys inventory of your soils can reduce costly and potentially ineffective practices being considered that may never work, due to the sites naturally occurring processes such as shallow water table or need for irrigation in the summer months.

The soil survey is actually fun to read and teaches a landowner much more about the Skagit Valley than they may have ever considered. Information includes when to expect freezing temperatures, length of growing season, crop yields, forest species productivity, recreational potential,

building site conditions and sanitation limitations. This information, along with water management considerations, construction material potential, engineering challenges, and the physical and chemical properties of the soil, provide a solid foundation for considering balance between land-use goals and the long-term stewardship of the land.

The Soil Survey maps provide landowners good information on what soils are located on their property. The soil types normally align with observations made by the landowner in regards to the need for drainage or erosion. The ability to manage drainage is dependent on the soils and geology beneath the soils. A key to good drainage management within a sites capability must consider workability in the

winter, while at the same time retention of important water availability needed during the drought periods of summer and early fall.



Managing ones land to the capabilities of the long term health of the soils is the first step towards being a good steward of the land. Retaining the soils health, and in some cases simply retaining the soil itself, is foundational to keeping resource lands in production for centuries to come.

If you have any questions on how to read or use the soil survey, the staff at the Skagit Conservation District are here to help—360-428-4313.

Dog Poop is a Problem in Skagit County!

Submitted by: Skagit County Public Works

Got a dog? When your dog poops in your yard, what do you do? If your answer is leave it be or toss it over the fence where nobody can see it, we'd like you to consider changing that plan. If there is a ditch, stream or wetland over the fence, the poop is on its way downstream to the shellfish beds.

Dog poop is raw sewage. It is NOT fertilizer. Like human poop, it's full of pathogens that can transmit disease to your family, your dog, other animals, and even the clams and oysters destined for your dinner table. Some of those pathogens remain infectious for YEARS; long after the poop has dissolved into the lawn.



Even if the poop is on dry land, rainwater picks it up and carries it to our local creeks and beaches. Even if you're not near a creek, rainwater runoff carries poop through drainage systems that end up in groundwater, streams, and Puget Sound. We've tracked high levels of bacteria in surface water due to mismanagement of dog poop in yards more than once.

Kids play in creeks. Pets play in creeks. And everyone loves a trip to the beach. So if you're not cleaning up that poop, you're exposing yourself and your whole community to pathogens.

Please do your part to be PoopSmart and scoop the poop. Find out more at www.poopsmart.org.



Did you know that both dogs and humans can carry Giardia but not have any symptoms? It is estimated that nearly half of people infected with Giardia show no symptoms, and the same may be true for dogs. So you or your dog could be spreading disease without even knowing it!

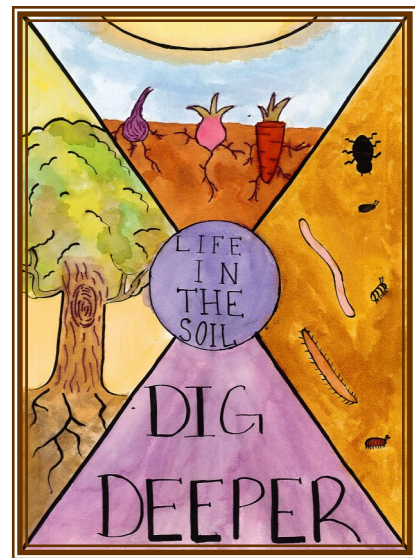


ENVIRONMENTAL EDUCATION

Natural Resources Poster Contest

Our annual Natural Resources Poster Contest was held this past April in honor of Soil and Water Stewardship Week, April 28 through May 5, 2019. Each year, the National Association of Conservation Districts designs a theme based on a rotation of natural resource topics. The theme for 2019 is "Life in the Soil: Dig Deeper". The contest was open to Skagit County students, grades K-12, and 119 posters were submitted for judging this year.

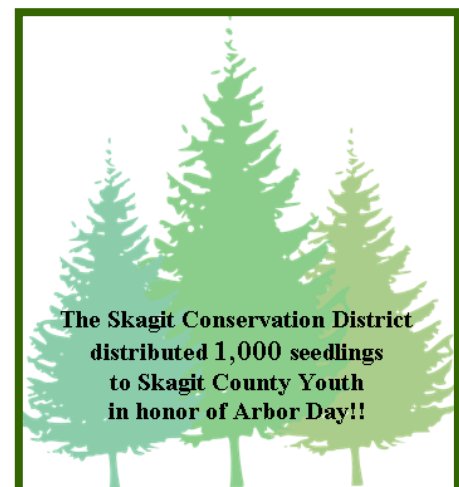
This year's overall winner was tenth grader **Ellee Carpenter**. Ellee was also the Category 10-12th Grade Winner. She was awarded a \$50 Tri Dee Arts gift card, a plaque and professional framing of her winning poster. The Runner-up Winner was ninth grader **Tate Atchley**. Tate was also the Category 7-9th Grade Winner. She was awarded a plaque and a \$25 Tri Dee Arts gift card. Both of these winning students were from Suzanne McLelland's art class at Burlington-Edison High School.



Additional category winners were: K-1—**Maddie Stewart**, Summersun Montessori kindergartener; 2-3—**Mia Rogers**, Island View Elementary third grader; 4-6—**Eyowyn Sams-Gustafson**, La Conner Middle School sixth grader. Each Category winner received a root viewer and category award certificate. Laminated bookmarks were created featuring their poster artwork. All contest participants received participation certificates, as well as activity booklets and bookmarks related to this year's theme.

The award winning students and their families were recognized during a televised presentation with the Commissioners and Blossom the Treeture™ at the annual Soil and Water Stewardship Proclamation that was held at the Skagit County Commissioners Hearing Room this past April.

We want to give a special thanks to our poster contest judges: **Cassandra Redden**, Loan Specialist, USDA Rural Development; **Tammy Karcher**, Program Technician, USDA Farm Service Agency; and **Gabriela Fajardo**, Resource Soil Scientist, USDA Natural Resources Conservation Service.



ENVIRONMENTAL EDUCATION

Classroom Presentations



During the 2018-19 school year, the Skagit Conservation District visited 42 Skagit County classrooms educating over 930 students about stormwater pollution. Using the EnviroScape® watershed model, which is a scaled-down, tabletop version of the “Skagit Watershed”, participants learn about the important relationship they share with their local water bodies and the impact that human actions have on them. The hands-on model gives a visual example of what a watershed may look like and accompanying demonstrations show how various land uses and their associated non-point source pollution can affect water quality, especially after a rain storm.

These presentations provide a unique, interactive learning experience, enabling children, as well as adults, to make the connection between the way we live and the health of our local waterways. The students take turns putting different types of pollution on the model, such as cocoa powder to represent soil and erosion, coffee to represent animal waste, chocolate syrup to represent cars leaking oil, oatmeal to represent trash, etc. The students then spray “rain” on the model and watch as the pollution goes down rivers and streams and out to the bay. They are then able to see how the combined affects of non-point source pollution from many small sources can have a large impact on the quality of our shared water resources. Students discover how they can protect the environment by taking small, local actions and gain knowledge about stormwater runoff, water pollution, water quality, watersheds, and stewardship.

2019 SCD Annual Youth Tour

This past May, 32 Skagit County classes consisting of 800 fifth and sixth grade students attended the Skagit Conservation Youth Tour at Pomona Grange Park on Friday Creek. The weather was perfect for the event, as students participated in outdoor, hand-on activities offered by local resource professionals at stations provided along the trail system of the forested park.

Stations included forest protection, the salmon life cycle, macroinvertebrate identification, soils, “Leave No Trace” camping practices, and forest regeneration. Once again, this was a “Zero Waste” event and classes who chose to have lunch at the park participated in sorting their leftover items between composting, recycling and garbage as a last resort. Out of the 48 pounds of leftovers collected, 13 pounds were taken to the Skagit County Transfer Station as garbage. That is a 73% reduction of what would have simply been thrown away in the park’s garbage cans.



Sierra Pacific Foundation
Growing Healthy Communities...

A special thank you to Sierra Pacific Foundation for providing transportation funding for the schools.

We want to extend a huge thank you to the following organizations:

- **Department of Natural Resources**
- **Natural Resources Conservation Service**
- **Sierra Pacific Industries**
- **Skagit County Compost/Recyclers Program**
- **Skagit Fisheries Enhancement Group**
- **Skagit Land Trust**
- **USDA Forest Service**



8th ANNUAL SUSTAINABLE SAMISH GARDEN TOUR

“Where local economy and conservation meet”

The Skagit Conservation District, Chuckanut Transition, and the Friday Creek Habitat Stewards would like to give special thanks to the Samish Watershed residents who opened their gardens for the 8th Annual Sustainable Samish Garden Tour, which was held on Sunday, July 14th! This year’s event featured seven garden vistas and farms that demonstrate features of sustainability, healthy living, and environmental and community responsibility - all brimming with inspiration!

It was a perfect day for a garden tour...



Sustainable Samish Garden Tour visitors had the opportunity to learn about the salmon resources of Silver Creek and the Samish Watershed thanks to WDFW staff, Wendy Cole and Kurt Perry and volunteer Brady Green.



SCD volunteer and Entomologist, Bob Gillespie, was on hand at the Alger Hall's Demonstration Pollinator Garden to share his expertise and amazing pollinator collection.



Left - Will and CJ Hawley's beautiful permaculture garden and homestead featured an organic vegetable garden, mini pigs, ducks used for eggs and breeding, quail and chickens, rabbits, a rain water collection system, an orchard, 2 bee hives, soap and candle making and so much more!

Pictured below, Southern Exposure Farm, is an 11 acre scenic family farm, operated by Jimmy and Kara Kintzele. The property features a 2 acre juvenile salmon restoration project along Thomas Creek, a hoop house and hillside terraces planted with organic vegetable crops. The couple uses regenerative organic farming methods.





Thank you to everyone who attended and to this year's featured gardeners: **Alger Community Hall, Southern Exposure Farm (Jimmy and Kara Kintzele), Fellowship Farm (Wayne Watne), Will and CJ Hawley, Sarah Bishop and John Mailhiot, Gothberg Farms (Rhonda Gothberg) and Samish Island Acres Community Garden.** We would also like to give special thanks to all the volunteers who helped at each of the gardens and also to the staff from the WA Dept. of Fish & Wildlife, Skagit Fisheries Enhancement Group, Skagit County Master Gardeners, Skagit Conservation District, Chuckanut Transition, and Friday Creek Habitat Stewards for being on hand and sharing their time and expertise.

The garden is not the end, it is the beginning, the place where you preserve the wild spirit that will save the world. – John Hanson Mitchell, from "The Wildest Place on Earth."



Nestled amongst the trees, Sarah Bishop and John Mailhiot's Colony Mountain garden oasis overlooking Samish Bay and the San Juans could be featured in Sunset Magazine! The ornamental and vegetable gardens blend with the native surroundings providing blooms and food sources enjoyed by pollinators, wildlife, and people!



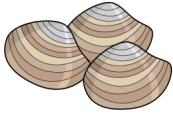
One of the many highlights at Wayne Watne's garden was his new aquaponics system. This innovative farming technique involves the growing of plants without soil (hydroponic).



Located at the east end of Blue Heron Road, this beautiful garden's main purpose is growing produce for food banks. Volunteers work together to prepare, plant, tend, and harvest vegetables and fruit which are delivered to the Skagit County Food Distribution Center. Pictured: Samish Island Acres Community Garden volunteers, Charlene Day and Linda Larson.



Volunteer Ruth Richmond and SCD Farm Technician, Emmett Wild, greet visitors to Gothberg Farms during the Garden Tour. Rhonda Gothberg, the mastermind behind the goat farm, cheese making, and cooperative produce garden, focuses on producing "really good foods" while using best management practices and organic growing methods.



Thank you 2019 Marine Biotoxin Volunteers!



*“O oysters come and walk with us...
A pleasant walk, a pleasant talk along the briny beach...”*
- The Walrus and the Carpenter, Lewis Carroll

The Skagit Conservation District, Skagit County Public Health, and the Washington State Dept. of Health would like to give special thanks to the 32 community volunteers participating in the Marine Biotoxin Volunteer program this year:

Denise Antrim, Mike Antrim, Barbara Baker, Darrel Baker, Dan Ballard, Barb Cameron, Phyllis Chennault, Ann Childs, Andrea Doll, Claudia Ebsworth, Jim Fukuyama, Kirk Hale, Donna Helgeson, Alannah Johansen, Alex Johnson, Debra Merrill, Virginia Naef, Janet Nevitt, Gil Ormbrek, John Patton, Sally Peyou, Darla Gay Smith, Jon Stables, Marcus Stables, Vicky Stables, Rachel Stafford, Michelle Taylor, Steve Thornton, Barry Unema, Colene Unema, Pat Wedul and Strand Wedul.



New volunteers learning to identify shellfish species with Jeanne King, Skagit County Health Department.



It was a cold and blustery day for our annual training on the beach at March Point.

It is through their active participation that we are able to protect the health of community residents and visitors. The goal of the Marine Biotoxin Volunteer Program is to provide an early public health warning of shellfish toxicity by routinely assessing our local recreational shellfish harvesting beaches for the presence of Paralytic Shellfish Poison (PSP) and Diarrhetic Shellfish Poison (DSP).

How can I protect my family from paralytic shellfish poisoning?

Before harvesting any kind of shellfish, call the **Marine Biotoxin Hotline at 1-800-562-5632** or visit the web page at: www.doh.wa.gov/ehp/sf/biotoxin.htm to find out what recreational areas are closed due to PSP or DSP. Do not expect beaches to be marked with a sign.

For information about the Marine Biotoxin Volunteer Monitoring Program, contact Kristi Carpenter, Skagit Conservation District @ 428-4313 ext. 1018 or email kristi@skagitcd.org



Are You Ready For Fall?



It is time to prepare for the wet season

Picture that old, dry sponge that has been stored under your sink for a few months. It doesn't want to soak up water right away, does it? After months of dry summer weather our **soils act in a similar way during the fall**. After a long, dry period much of the rain can't soak into the soil. It runs over top of the land into ditches and creeks. During that dry period, pollutants (such as fecal bacteria from livestock, dogs, or wildlife), will build up on the land. When fall rains come, water picks up the pollutants and carries them into our ditches and creeks. From these ditches and creeks, bacteria is carried downstream into our bays and harbors. Too much bacteria closes beaches to swimming and shellfish harvest. **With your help, our community is working to change that!** Many of your neighbors are already taking steps to reduce compaction and mud, improve animal health, and/or avoid high costs of replacing a septic system- all the while, protecting our community's creeks and beaches. If you are one of those neighbors, thank you! If you are looking for some ideas, we've got you covered below.



* Note: Poop may also enter the water from direct discharging or dumping.

Tips for Farms

September is the time to prepare for the rainy season. Consider places on your farm, where pastures stay wet or flood, where gutters overflow (or just don't exist), and where you plan to have your animals overwinter.

Pastures

- Avoid overgrazing.
- Make plans to move animals from pastures that become saturated in the fall and winter.
- Follow appropriate seasonal manure application setback guidelines for pasturing animals.

Barn Gutters

- Check and repair roof panels, gutters, and downspouts or install barn gutters if you don't have them.

Heavy Use Areas

- Make sure your sacrifice, or heavy use, areas are ready for animals.
- Consider where your heavy use area drains.

Nutrient Applications

- Get your manure out on the fields early.
- Follow seasonal manure application setback guidelines.
- Apply at agronomic rates.
- Cover manure storage or compost systems.

Tips for pet waste

Besides being gross to step in, bacteria from pet waste left on trails, lawns, and even the woods can wash into stormdrains, ditches, and creeks when the rain comes. Like human poop, pet poop is raw sewage that contains pathogens such as bacteria, viruses, and parasites which can transmit disease to people. Some of these pathogens can last for years in the environment or your backyard.

- Scoop, Bag, and Trash it!

Tips for Septic Systems

Regular evaluations and maintenance of your septic system can help you find problems early on and avoid large costs associated with repairs. Each septic system is designed to process a specific amount of wastewater each day. When too much water goes through your system in a short period of time the solids in the wastewater don't have enough time to settle in the tank. The solids make their way into the drainfield and cause you expensive problems. Here are some specific tips that will help keep excess water out of your septic system and protect your property.

- Repair leaking toilet flappers.
- Divert runoff/downspouts.
- Spread out the timing of your laundry loads.
- Learn more about septic system maintenance: www.skagitcounty.net/departments/healthenvironmental/onsitesewer.htm

This information is an excerpt from the Whatcom Clean Water Program partners "Are You Ready For Fall" tip sheet.



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Please call 360-428-4313, ext. 1000 to verify dates.

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