

SNOHOMISH CONSERVATION DISTRICT

The NEXUS



District Gears Up For Future Needs

By Lois Ruskell, Information & Education Coordinator

“In every deliberation, we must consider the impact on the seventh generation...”
—Great Law of the Iroquois

Seven generation sustainability is a concept that urges the current generation of humans to preserve our environment so that future generations can also receive its benefits - clean air, clean water, productive soils, and the bounty of nature. It's thought that the concept originated with the Iroquois



Steven Pickering and his big catch.

Indians. The Iroquois and many other native American tribes believe it is important to think far ahead and recognize whether the decisions they make benefit their children seven generations later.

The Future Starts Now

This concept of future impacts to our children and grandchildren is gaining momentum with the new global 'green revolution'. The Snohomish Conservation District is gearing up to help landowners, farmers, and rural residents make sure that they are not impacting natural resources in a way that would be detrimental to future citizens. The Conservation District is now operating with stable sources of funding in both Snohomish County and on Camano Island. This is in the form of an annual fee called an assessment that landowners pay to help protect resources.



Three friends enjoy quiet time on a local beach.

Expanding Services

These assessments allow the District to expand services to more residents. Geographically, residents of areas like Darrington, Oso, and most of Camano Island (historically underserved), will now receive free help with engineering designs, farm planning, sustainable agriculture, and other rural and urban issues. That's good for residents, natural resources (soil, water, fish, wildlife) and future generations.

With this secure funding source, the District also plans to add new programs and enhance current programs including: low impact development (also known as LID), urban forestry, youth education, food/crop production, and public outreach.

Under the leadership of new District Manager Monte Marti, staffing levels will be increased and new partnerships sought. This will help the residents of both Snohomish County and Camano Island as development pressures increase, and the need to care for our natural resources becomes more pressing.

What Does It Mean for You?

If you are concerned about a natural resource issue on your land or are interested in livestock, crop or food production, you have access to



Friends Jack and Joey find a crab sunning on a rock.

expanded free services. This includes issues with culverts and fish passage, pasture and manure management, soil testing, wetland and streambank protection, and water quality concerns. If you need a design or technical assistance that will help you protect the soil, stream or creek on your property, District staff can assist you.

Future Generations Will Benefit

What we do or don't do now will have lasting impacts on future generations. I recently read about a cathedral in England that was built with large old oak timbers. Because the building was a few hundred years old, major repairs were needed, including replacement of the original timbers. Since trees big enough to provide new timbers couldn't be found locally, the project directors began searching in nearby countries.

One day, one of the project directors was talking to a manager of the local Parks maintenance staff. The director mentioned their plans for the cathedral renovation and their extensive search for replacement timbers. The Parks employee told the director to look in a park near the town, as he knew the story of some very large, old oak trees that

had been planted there by the original cathedral architects.

These astute craftsmen had the foresight to plant oak trees specifically to be used as a source of timbers in the cathedral several generations later. Not only had they built a beautiful cathedral, they had also planned ahead so future generations could maintain the structure with the same look, feel and integrity.

What we leave for future generations depends on what we do to protect and enhance the environment today.

Learn more about Conservation District services at www.snohomishcd.org



One-year old Arika loves to play outside.

Summer 2010

Serving Snohomish County and Camano Island

Try a Solar Pump this Summer!

With the dry summer months ahead, you may be thinking about options for watering your livestock. If you have a stream or creek that animals currently have access to, you might want to consider a solar pump.

Snohomish Conservation District, in partnership with the Washington Department of Ecology, has a loan program for landowners who want to try a solar pump before purchasing one. District staff will help you set up the pump and troubleshoot any problems. The system is available to try for up to three months, on a first-come, first-serve basis. Call Tammy or Bobbi at 425-335-5634 for details.

Help for Residents of Fish, March, and Harvey Watersheds

Would you like to improve your pastures, control weeds, stop erosion, and protect or enhance wildlife habitat? The District has a grant to provide free technical assistance to rural homeowners and farmers in the Fish Creek, March Creek and Harvey/Armstrong watersheds. Contact Farm Planner Tammy Edmonds at 425-335-5634, ext. 114 or Habitat Restorationist Ryan Williams at 425-335-5634, ext. 116.

Inside

- ❖ New Talent On Board
- ❖ Stanwood Wins State Conservation Program
- ❖ Raised Bed Gardens
- ❖ Shellfish/Tidelands
- ❖ Rain Gardens & More
- ❖ Funding for Agriculture

“I played around our yard some and talked to the fence posts, sung songs and made the weeds sing...”

Woody Guthrie



New Staff Join the District

New Faces at the District

New staff were recently hired by the Conservation District to help address an increasing workload in natural resource protection. District engineer Kelly Cahill and Engineer-In-Training (EIT) Derek Hann, are on-board and preparing to fill some big shoes (those of former engineers Ryan Bartelheimer and Paul Smidansky). Stacy Smith, a Low-Impact Development Specialist, will be joining us in August. And soon, another farm planner for the Stillaguamish Watershed and Camano Island will be joining our team.



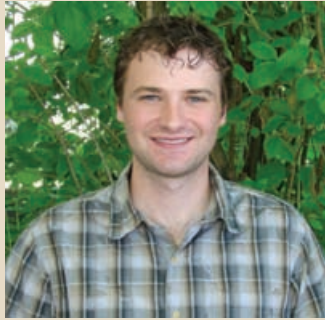
Kelly Cahill

Kelly Cahill is a Civil Engineer and a graduate of the Georgia Institute of Technology. He has worked as an engineering technician and professional engineer with the Forest Service and Natural Resource Conservation Service for the past 30 years. He also had his own engineering company. Kelly appreciates the opportunity to work with landowners, farmers and agencies dedicated to improving and maintaining their

operations while sustaining natural resources. Kelly and his wife, Jane, have two children.

Derek Hann

Derek Hann is a Civil Engineer (EIT) who will be assisting with the Low Impact Development program for the District. He graduated from the University of Idaho in 2006 with a BS in Civil Engineering. Derek has worked in the private development sector for four years, focusing on Low Impact Development projects. He has created multiple plans for rain gardens, pervious pavement roadways, bio-infiltration swales, filter strips, and constructed wetlands. Derek lives in South Everett with his wife, Misha. They are expecting their first child in October and are looking forward to the exhaustion she is sure to provide.



Stacy Smith

Stacy will be our new Low Impact Development Specialist. She holds a BS and MS in Environmental Science from the University of Idaho. She is experienced in stormwater management; erosion and sediment control; and Low Impact Development techniques. Stacy has five years experience working with landowners, local governments, and contractors on stormwater issues in Western Washington, most recently at the Whidbey Island Conservation District. She lives in Mukilteo with her fiancé and two cats.



New engineering staff at Snohomish Conservation District didn't waste any time getting out in the field! Left to right, Derek Hann, Kelly Cahill, and landowner Monica Patterson discuss engineering options.

Winning Team Heads to Fresno



Advisor Ryan Ovenell and students (L to R) Jacob Flake, Thor Pearson, Scott Weisse, Cory Calkins and Alyssa Thompson took first place at the State Envirothon competition held in Randle, WA in May.

Stanwood High School's crack Envirothon team has done it again! For the past two years this team, lead by advisor Ryan Ovenell, has won first place at both the Regional and State Envirothon. In August, the team travels to Fresno, CA to compete in the North American Envirothon against teams from all over Canada and the U.S. They will be tested on their knowledge of soils, aquatic life, forestry, wildlife and more. Good luck Stanwood High School!

Funding Available for Hedgerows, Filter Strips, Wetland Buffers and More

by Ryan Williams, Habitat Restoration Specialist

In April, the USDA Farm Service Agency approved the inclusion of hedgerows, grass filter strips and wetland enhancements into the Conservation Reserve Enhancement Program (CREP). These new conservation practices are eligible if used on streams connected to salmon-bearing rivers in Snohomish and Island counties. Vineyards, orchards and berry farms are now also eligible to be enrolled in the program.

The Conservation Reserve Enhancement Program is a voluntary effort that pays farmers to establish buffers along streams to improve habitat for native salmon and steelhead. Buffers prevent streambank erosion, keep stream temperatures cool so fish have enough oxygen to breathe, and prevent sediment and pollutants from reaching streams so fish can survive. The program pays 100 percent of eligible costs for all approved projects - including hedgerows, wetland and filter strips - as well as annual rental payments, and a signing bonus.

Hedgerows

Of the three new conservation practices added, hedgerows are the most exciting due to their adaptability and diverse benefits. A hedgerow is a fifteen-foot wide, densely planted thicket of native trees and shrubs that protects streams and wetlands from erosion, pollution and animal damage. A hedgerow along small streams provides excellent protection from pollution and erosion, and creates much-needed habitat for native birds, mammals, amphibians, reptiles and insects. Hedgerows are also appropriate to use along small ditches at the edge of fields. Streams eligible for hedgerow planting can be up to ten miles away from a connected salmon-bearing stream. Hedgerows are eligible for a 75 percent rental incentive bonus.



Once fully grown, this stream buffer will provide shade, filter pollutants, feed insects, and shelter wildlife.
Photo by Donna Gleisner

Wetland Enhancements and Grass Filter Strips

Another area where you can receive help is with wetland enhancements. Enhancements, such as native trees and shrubs, can be planted around wet areas in cropland or on marginal pastureland. These areas must be connected to salmon-bearing streams; however, there are no 'minimum size' or 'distance from stream' requirements. Wetland enhancements, like stream buffers, are eligible for a full 100 percent rental incentive bonus.

Grass filter strips are strips of grass, between 20 and 120 feet wide, that are very effective at filtering out pollution. They are eligible for a 50 percent rental incentive bonus. Eligible land includes cropland, marginal pastureland, and now vineyards, orchards and berry farms. This land must have a proven cropping history registered with the Farm Service Agency.

Land enrolled in the Conservation Reserve Enhancement Program is removed from production and grazing under 10- or 15-year contracts. In return, landowners receive annual rental payments and are reimbursed for 100 percent of eligible costs for planting and maintaining their buffer for the first five years. Landowners also receive a bonus when they sign the contract. Livestock exclusion fencing, watering facilities, and in the case of small streams, livestock crossings, may also be eligible for the program.

The Conservation Reserve Enhancement Program is a federal-state partnership administered by the USDA Farm Service Agency and the Washington State Conservation Commission. Sign-ups are accepted year-round. Technical assistance to help design, install, and maintain buffers and hedgerows is provided by the Snohomish Conservation District. For more information, contact Ryan Williams at 425-335-5634, ext. 116 or RWilliams@snohomishcd.org.

Creating Raised Bed Gardens

by Chris Beasley, used with permission from www.backyardgardening.net



Vegetable gardening is becoming more and more popular these days as people want more control over their food and where it comes from, as well as the desire to save money by growing more of their own food.

The key to any garden is the soil. If you do nothing else, using good soil will improve your production. Improving existing soil can sometimes be tough. If you would like to use a section of your yard as a garden, turning that turf into a garden would require significant labor, and possibly even some machinery. All in all, it may not be the best way to do things.

Most home gardeners with relatively small lots build raised beds instead. Raised beds offer a variety of benefits. They're easier because you don't improve existing soil, you merely add soil on top. They warm up faster in the spring and offer excellent drainage. The quality of the soil you can add far exceeds any you would get by trying to improve your existing soil, especially if it was turf.

You can build a raised bed out of almost anything -- an old tire, stones, brick or plastic. Unless you have a free supply of old tractor tires, the cheapest option tends to be wood.

Types of Wood

With wood, you basically have two choices: cedar or treated lumber. Cedar is beautiful, but very expensive and it comes in smaller, weaker cuts. Pressure-treated lumber is considered safe*. It is also stronger, bigger, and significantly cheaper. For more on pressure-treated wood, see the weblink at the end of article.

You can also use synthetic woods, such as those used for decking, but those too are very expensive. These directions use pressure-treated lumber; I recommend you do the same. The material list below allows you to build two 10x4 foot beds. It is not recommended you exceed 4 feet in width for any raised bed as it will become difficult to reach the interior.

Tools & Materials

- 1 - 4x4 8-foot long pressure-treated post
- 4 - 2x12 10-foot long pressure-treated boards (you could also get 2x10s or 2x8s, depending on the depth you want)
- 2 - 2x12 8-foot long pressure-treated boards
- Decking/Pressure-treated lumber screws, 4 inch length
- Tape measure
- Drill
- Shovel



Directions



Lay out your boards.

Step 1: Cut the Wood

Pressure-treated lumber is considered safe to use in the garden, but that doesn't mean you want to inhale it, so work outside and wear a dust mask.

Cut your 8-foot long 2x12s in half (do not cut your 10-foot long 2x12s). Cut your 8-foot long 4x4 into 1-foot lengths.

Step 2: Layout and Assemble

Place the boards on the ground roughly where you want the garden to be. You don't need to dig up any sod, but if you like you can dig up the sod directly under where the boards will be, two to three inches deep.

Assemble the boards by first screwing a 4x4 foot piece to the ends of your 2x12 10-foot long pieces. The 4x4 foot pieces are your corner blocks. Then stand the boards up, (using an assistant if needed) and screw the 2x12 4-foot long pieces (you made these when cutting your 8-foot lengths in half) to the 4x4s. This forms the ends of your box.

Your box is now created. It will be heavy but, with effort you can slide it around to reposition it. If your ground isn't flat and there are gaps along the bottom, use a shovel to dig down the high spots to better situate the box. No need to anchor it, it is heavy enough to stay in place (especially after adding soil). If you like, you can drive short bits of rebar into the ground next to the inside corners.

Step 3: Add Cardboard

You now have a box with a grass floor. Lay down a thick layer (2 - 3") of brown corrugated cardboard (the plain stuff), or newspaper. Either is perfectly

safe to use for a garden and will fully decompose, but not before killing all grass below it. The paper material also provides food for worms and helps create compost.

Step 4: Add Yard Debris

Now you have the perfect opportunity to kill two birds with one stone. If there is any yard debris you want to get rid of, anything you'd normally compost (spent flowers, perennial or shrub clippings, kitchen scraps, grass clippings,) you can dump it all into your raised garden bed. This material will slowly decompose once buried, feeding worms and providing the soil with nutrients deep down in the root zone. [The only caveat is - if you add a lot of woody material, add a bag of blood meal to balance out the nitrogen.]



Add cardboard.

Step 5: Fill with Soil/Compost



Add fresh organic matter.

I recommend using compost. Fill the boxes to the top with any compost you have or buy bagged compost. You could use regular top soil or garden soil, but compost is only slightly more expensive (pennies) and much more nutritious (natural, slow-release fertilizer). It won't burn, harm or infect your plants, so go for it.

You can often get compost delivered by dump truck from a local company. You will need around 100 cubic feet of soil total, so you're looking at a pallet of bags, or one dump truck load.

Benefits

The soil in a raised bed heats up more quickly in the spring and has excellent drainage. A foot of really good soil is enough for most plants whose roots only penetrate the top 12 inches of soil. The soil will also be loose, allowing crops such as carrots or sweet potatoes to grow well. Plus, you have one less foot to stoop down to when working the soil, thus saving your back. Your raised bed provides some protection to your crops from critters. You can also easily run a small wire fence around the bed, stapled to the wood.

You can put raised beds in your backyard, side yard, even your front yard. Sometimes people build many beds and instead of fencing them individually (assuming they have critter problems), they build one big fence around the whole group.



Top off with compost.

Your overall startup cost (mostly wood and soil) will be a couple hundred dollars. That may not seem like a money-saving proposition to you, however, you won't need to buy more soil or wood on a yearly basis. You will also be able to use these beds for many years. The inexpensive food you'll get from your garden will eventually more than cover the cost of creating your garden boxes.

**Editors note: the author considers pressure-treated lumber safe for raised beds. This is under considerable debate. Here is an article addressing this issue: <http://www.finegardening.com/design/articles/pressure-treated-wood-in-beds.aspx>.*

What to plant in mid-summer for a fall crop

Here are some plants you can seed now for a late fall/early winter harvest:

- | | | | |
|----------|-------------|-----------|-------------|
| Beets | Carrots | Kohlrabi | Spinach |
| Broccoli | Cauliflower | Parsnips | Turnips |
| Cabbage | Kale | Scallions | Swiss Chard |



Some vegetables actually fare better with a late summer planting, including arugula, fava beans, radishes, and garlic bulbs.

Help Protect Shellfish and Saltwater Tidelands

by Bobbi Lindemulder, Lead Farm Planner

The Stillaguamish Watershed extends across northern Snohomish County and southern Skagit County, from snowcapped mountains to saltwater bays. Salmon, forage fish, Dungeness crab, clams, shellfish, birds, and orca whales all depend on its marine and nearshore habitats.

But all is not well in this watery world. Salmon runs are no longer plentiful, and one of our resident orca families (southern pod) is on the verge of extinction. Commercial shellfish harvesting was closed in 1987 due to high levels of fecal contamination (animal and/or human waste).

Since then, years of improvements in controlling human and animal wastes by septic system owners, dairies, cities and small farm operations are showing results. Recent water samples passed the shellfish water quality standard and 1,800 acres of shellfish beds were reopened for Tribal harvest in Port Susan Bay.

How Did This Happen?

In 1993, local governments, citizens, and Tribal agencies created the Stillaguamish River Clean Water District (CWD) to more effectively manage and improve water quality in the Stillaguamish River and its tidal areas. The Clean Water District includes most of the Stillaguamish Watershed, including the critically important marine shoreline and tidelands in southeast Skagit Bay and north Port Susan. Decisions are guided by an Advisory Board made up of 13 to 17 members that include agency staff, tribes, citizens and municipalities.

Funding Available

To help the Clean Water District restore water quality, funding was established for private landowners, community groups, and local agencies to improve water quality via small-scale, on-the-ground projects on private or public property. Snohomish County's Surface Water Management Division manages the fund and is currently accepting applications for projects.



For the first time in 20 years, shellfish can be harvested by the Stillaguamish Tribe in Port Susan Bay.

For 2010, Snohomish Conservation District staff will also work with Clean Water District landowners to implement these projects. Up to \$35,000 is available for the 2010 summer construction season. Funds will cover up to 80 percent of project costs. No matching funds are required. Plus, the

Conservation District's engineering services are available free to Clean Water District landowners.

Eligible Projects

Eligible projects need to improve water quality within the Clean Water District and must relate to: reducing or eliminating fecal coliform bacteria, stormwater runoff or groundwater contamination; protecting water bodies (streams, lakes) from livestock by fencing, dry crossings or watering equipment; installing buffer plantings and bioswales; or conducting water quality outreach and education. Funding may not be used to support planning, coordination, studies, assessments, or mitigation projects.

Proposed projects must be in the Stillaguamish Clean Water District. For a map of the district, go to: http://www.co.snohomish.wa.us/documents/Departments/Public_Works/SurfaceWaterManagement/Water_Quality/Clean_Water_District/CWD_WebMap2009.pdf.

To fill out a Discretionary Fund Project Application, go to: http://www.co.snohomish.wa.us/documents/Departments/Public_Works/SurfaceWaterManagement/Water_Quality/Clean_Water_District/CWD_DF_application.pdf.

Summer is a great time to focus on improvements and prepare your land for our wet winters. Take advantage of funding and free services to improve your farm or rural property, reduce water pollution, and help keep shellfish beds open! Contact farm planner Tammy Edmonds at 425-335-5634, ext. 114 to set up your free visit and to see if you qualify for funding.

Dealing with Rainwater

by Stacy Smith, Low Impact Development Specialist

Hopefully we've seen the last of the rain for a few months, but just in case, the Snohomish Conservation District has some innovative, 'low-tech' options for managing rain runoff on your property.



Once rain hits the ground and starts flowing across our roads and parking lots, off our roofs and sidewalks, it picks up pollutants such as oil, fertilizers, pesticides, heavy metals, soil, trash, and animal waste. This moving mass is called 'stormwater runoff'. Most of that runoff is carried directly into our local streams or lakes via roadside ditches, storm drains, and pipes. Eventually it all ends up in Puget Sound, without any treatment to remove the

pollution. Stormwater is considered to be a leading contributor to the degraded water quality of our states' urban streams and lakes.

Low Impact Development is a relatively new approach to managing stormwater. These techniques are designed to mimic natural conditions, such as in a native forest, by collecting, absorbing and filtering runoff. They manage stormwater right where it falls, like Nature does, by increasing water absorption into the soil, refilling underground lakes, and removing pollutants.

One of the most commonly used practices is a rain garden. While rain gardens come in all shapes and sizes, they generally consist of a shallow depression with compost-amended soils, mulch, and native plants or other plants adapted to our wet winter/dry summer climate. There are many other practices that can be applied as a retrofit to existing homes and businesses or new construction, such as permeable pavement, green roofs, and bio-swales.

If you are interested in these techniques, contact Stacy Smith (beginning in August) or one of the District engineers: Kelly at 425-335-5634, ext. 111, or Derek at ext. 119. Visit some public examples at the Evergreen State Fairgrounds in Monroe, the new Mukilteo City Hall, and the Ash Avenue Park-and-Ride in Marysville.



Rain garden at the Evergreen State Fairgrounds.

August 13 Deadline for Environmental Incentives

Agricultural producers have until August 13, 2010 to apply for financial and technical assistance through the Environmental Quality Incentives Program. This is a voluntary program, offering both technical and financial assistance, to help farmers improve their irrigation efficiency; manage nutrient run-off and/or animal waste; improve the health of native plant communities; and reduce soil loss. In most instances, producers pay for roughly half of the costs of the conservation measures or practices.

The August 13 signup deadline is for Washington's general program funding. There will be additional ranking deadlines later in the year for some of the program's special initiatives, such as funding specifically for organic producers, funding for conservation activity plans, and possibly others.

Eligible projects include: fish passage, composting facilities, waste storage, watering facility, hedgerow planting, animal use exclusion and many more. Forest practices such as site preparation, slash treatment, and forest stand improvement are also eligible.

In 2009, Washington producers qualified for more than \$13 million through this program.

Natural Resource Conservation Service programs operate on a year-round sign-up basis and producers can file applications at any time. Periodic ranking deadlines are established so applications on file can be evaluated for the next available funding allocation. To learn more or to sign up, contact Gale Mayer at the local office at 425-335-5634, ext. 3.

Snohomish Conservation District

Board of Supervisors	Phone 425-335-5634, ext 4
Adam Farnham	FAX 425-335-5024
Karl Hereth	Contact: Lois Ruskell
Mark Craven	425-335-5634, ext 108
Steve Van Valkenburg	Editing: Donna Gleisner
One Vacant Position	The Written Edge
Associate Members	425-923-7110
Dick Barr & Duane Weston	
District Manager	www.snohomishcd.org
Monte Marti	

The NEXUS is published quarterly and distributed free of charge to residents of the District. Funding provided by Snohomish County Surface Water Management, Washington Department of Ecology, and the Washington State Conservation Commission.