

Kitsap's Healthy Waterways

Manchester / Long Lake Watershed



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What is a watershed?

Wherever we live, work, play or go to school, we are in a watershed. This is an area of land that drains down to the same body of water, such as a stream or bay.

There are 11 major watersheds in Kitsap County. The Manchester watershed is identified by the green area on the map.

Manchester Watershed



Clip and save!

For More Information

The Kitsap County Surface and Stormwater Management (SSWM) Program protects people, property and natural resources by addressing water quality and quantity. Four agencies carry out SSWM program activities:

Farm Management,
Rain Gardens, Backyard Habitat Grants
Kitsap Conservation District
www.kitsapcd.org
360-337-7172

Water Quality Monitoring Report, Stream and Beach Advisories,
Shellfish Closures, Testing Well Water, Septic System Information
Kitsap County Health District
www.kitsapcountyhealth.com
360-337-5235

Stormwater Infrastructure, Watershed Health Monitoring,
Green Infrastructure, Puget Sound Starts Here
Kitsap County Public Works
www.kitsapgov.com/sswm
360-337-5777

Beach Watchers, Stream Stewards,
Rain Garden Mentors
Washington State University Kitsap County Extension
www.kitsap.wsu.edu
360-337-7157

New Stormwater Solutions for Manchester

Manchester will be one of unincorporated Kitsap County's first areas to use "green" stormwater infrastructure to manage stormwater. This project will identify locations to integrate stormwater retrofits into the built environment, emphasizing "green" solutions such as rain gardens and pervious pavement. The locations could be on public property, road right-of-way, and private property. Three areas will be studied: Main Street, Duncan Creek, and the Alaska and California Avenues residential area. Watch for opportunities to be involved this year.



Main Street in Manchester

Yukon Harbor Resident Builds Rain Garden

Lisa Sabatka built a rain garden on her property last year with the cost-share program. Lisa redirected her downspout runoff into a rain garden, which soaked up the runoff and prevented it from causing flooding and erosion on her downhill neighbor. In slowing water down and returning it to the Yukon Aquifer, Lisa's rain garden turns polluted runoff into clean drinking water. To ask about installing a rain garden on your property, call Teresa Brooks at the Conservation District at (360) 337-7171.



Lisa Sabatka's beautiful garden

When the tide is out, the table is set....



Safe handling and preparation of shellfish

Washington's waters offer a variety of clams, oysters, mussels and scallops readily available to be gathered and enjoyed. There are a few important steps to take before you harvest shellfish. Be sure to buy a license from the WA State Department of Fish and Wildlife. Information about licenses can be obtained at <http://wdfw.wa.gov/fishing/shellfish>. This website will also provide information regarding seasons, size limits and harvest limits.

The Washington Department of Health and the local Kitsap County Health District will post advisories throughout the year regarding shellfish harvesting. Be sure to check these signs and heed any warnings when posted. After you've harvested be sure to fill your holes. Then follow these safe handling practices to enjoy your harvest.

Safe Cooking Practices for Shellfish

To ensure proper food safety, shellfish must be cooked to an internal temperature of at least 145°F. Since it is often impractical to use a food thermometer to check the temperature of cooked shellfish, here are some tips and recommended ways to cook shellfish safely:

- Shucked shellfish (clams, mussels and oysters without shells) become plump and opaque when cooked thoroughly and the edges of the oysters start to curl. The Food and Drug Administration (FDA) suggests boiling shucked oysters for 3 minutes, frying them in oil at 375° F for 10 minutes, or baking them at 450° F for 10 minutes.

- Clams, mussels and oysters in the shell will open when cooked. The FDA suggests steaming oysters for 4 to 9 minutes or boiling them for 3 to 5 minutes after they open.
- Scallops turn milky white or opaque and firm. Depending on size, scallops take 3 to 4 minutes to cook thoroughly.
- Shrimp turn pink and firm. Depending on the size, it takes from 3 to 5 minutes to boil or steam 1 pound of medium size shrimp in the shell.

For more information about shellfish handling and preparation, contact the Health District at (360) 337-5235.





Puget Sound Starts Here

“Here” is our homes, backyards and neighborhoods. But what we do here has a serious impact. Although it looks pristine, Puget Sound is in trouble. When rain runs off hard surfaces such as roads, driveways, rooftops and other developed land, it picks up pollutants. This stormwater runoff flows untreated into our streams and Puget Sound.

The solution starts here as well... with you.

- Choose compost over yard chemicals
- Wash your car on grass or gravel or go to a commercial car wash.
- Pick up after your dog, bag it and place in the trash.

Learn how you can help Puget Sound at:



Become a Beach Watcher

Volunteers learn about the marine environment, their watersheds and the natural environment from the mountains to the sea. They volunteer in a myriad of ways throughout the Kitsap Peninsula.

WSU Kitsap Extension and Washington Sea Grant coordinate the Beach Watcher program. This program consists of three independent training modules each six weeks long:

- Fall/Winter: Beach Watcher Basics
- Spring: Beach Naturalists
- Summer: Native Plant Advisor

Volunteers who take all three modules will have completed more than 100 hours of education and on site training.

To become a volunteer or for more information contact: Peg Tillery ptillery@co.kitsap.wa.us 360-337-7224.

Join Stream Stewards

The fifteen volunteers who completed the recent Stream Stewards Training learned about stream and riparian habitat, salmon habitat, native plants, and forest management.

Banner Forest. Recently, Stream Stewards noted that some tree stands in Banner Forest are nearly 200 years old and considered “old growth.”

Stream Stewards assess park habitats and water quality issues in Kitsap County Parks and open spaces. The group inventories the forests and writes stewardship plans for riparian restoration and enhancement.

Contact Arno Bergstrom at awbergstrom@wsu.edu to form a Stream Stewards group in your area.

When is the next training?

Training will start Tuesday evenings in mid-September 2011. For information, please contact lillie@co.kitsap.wa.us or 360-337-7157.

Improve Your Backyard Habitat with \$2500 Grant

Grab a shovel and restore your stream or shoreline in the Manchester Watershed! You can receive up to \$2,500 for stream and shoreline restoration projects through the Backyard Habitat Grant Program. Eligible projects are located on private property in Kitsap County, and may include stream side or shoreline plantings, noxious weed removal, and stream enhancement projects such as large woody debris and stream gravel placement and fish barrier removal.

In its first year, the Backyard Habitat Grant program received 11 applications for a total request of \$31,000. Look for the next round of grant applications in late 2011. If you would like assistance in evaluating your stream or shoreline area to find out if you are eligible for a grant, please contact Carin Anderson at (360) 337-7171 Ext. 22 or carin-anderson@conservewa.net.



Testing your well drinking water supply

If your drinking water comes from a household well, you are responsible for assuring that it is safe.

Routine testing for a few of the most common contaminants is highly recommended. Testing your drinking water is simple, but must be done by a certified laboratory. The lab can provide you with instructions regarding how to collect a water sample, the type of bottle to use and the cost for the test.

How frequently should I test?

Every year for bacteria: Test water every year for total coliform bacteria. Also test for bacteria following any repairs, loss of water pressure, flooding, or change in taste, color, odor or clarity.

At least every three years for nitrates: Protect your well from sources of nitrates by keeping fertilizers, manure, livestock and poultry at least 50 feet away, or further if your well is shallow or vulnerable.

My well water has a funny smell/taste; could I get sick?

Any time you notice a significant change in your water quality, you should have it tested. A change in your water's taste, color, or smell is not necessarily a health concern. However, a change could be a sign of a serious contamination problem. It is recommended to test the water for total coliform bacteria, nitrates, total dissolved solids and pH levels. Additional tests may be needed based on the type of smell or taste.

Who can test my water?

A certified laboratory can test your water. Contact the Kitsap County Health District (337-5235) for a list of regional certified laboratories, or visit the Health District website.

If you are on a public drinking water system, you should receive an annual consumer report about the quality of your drinking water. If you have any questions about this report either contact your water purveyor or the Health District.



Get Involved!

Summertime Beach Walks – June through September at local beaches

Manchester Stormwater Solutions Public Workshops – summer

Salmon Watch Training – late July to prepare for the fall salmon return and public outreach.

Stream Stewards Training – Starts Tuesday evenings in mid-September.

Beach Watchers Native Plant Training -- Tuesdays, August 30 - October 11; 9:30 am to 4 pm. Norm Dicks Govt. Center, Room 406

Beach Watchers Basic Training -- Fridays, October 14 - November 4; 9:30 am to 4 pm. Norm Dicks Govt. Center, Room 406

Water Courses – Connecting West Sound – October 14 & 15: 9 a.m. to 4 p.m. Keyport Museum on Friday, Keyport Bible Church on Saturday. Learn about West Puget Sound, Hood Canal and more water topics! Contact Peg Tillery at 360-337-7224.



Septic System: Top Two Questions

How often should I have my septic tank pumped?

Every 3 to 5 years. The frequency will depend upon several factors, such as the number of people living in the house and their water usage, the use of household cleaners, the use of garbage grinders, and the type and age of the system.

Why do I need a monitoring and maintenance contract?

Alternative septic systems require a monitoring and maintenance contract which includes an inspection of the entire system each year. This protects your investment and keeps your septic system working properly.

To learn more about what septic systems are, how they work, and how to take care of them, visit the Health District's web site or call (360) 337-5235 and ask for the Homeowner's Guide to Onsite Sewage Systems.

A Healthy Long Lake

Long Lake's water quality was good for swimming during most of 2010. However, the beach was closed for one week last summer because of high levels of E.coli bacteria. You can find out about beach closures by signs posted at the lake, the Health District's web site, and by calling (360) 337-5285.

What about the large amount of plants and algae blooms in the lake? Long Lake now is undergoing chemical treatment to trap nutrients and slow down the growth of plants in the water. Swimming is still safe during this treatment period. Treatment should improve Long Lake's water quality over the next few years.



The Health District monitors Long Lake to ensure that it is safe for swimming and to check on nutrient levels



KCD can help farms improve productivity and water quality

Sustaining Our Farms

Kitsap Conservation District can provide free technical assistance and site specific recommendations to help farms improve productivity and protect soil and water quality. Some techniques to manage water, mud, pastures and waste may include:

- Storing manure in a covered structure
- Fencing streambanks to exclude livestock
- Replanting streambank areas
- Constructing cross fencing to improve pasture productivity
- Capturing and reusing roof runoff with cisterns

Cost share programs are periodically available for farmers and homeowners to implement these projects on their properties. Contact the Conservation District at 360-337-7171 for more information.

Measuring the Health of the Manchester Watershed

Just as a doctor measures your blood pressure and temperature to assess your health, scientists use indicators to measure the health of our streams and bays. SSWM uses three indicators to assess the health of Kitsap watersheds:

- fecal coliform bacteria (indicating the presence of human or animal sewage)
- stream bugs (called benthic invertebrates)
- stream flow (the amount of water moving through a stream).

For more information about watershed health monitoring, contact Kitsap 1 at 360-337-5777.

Yukon Harbor Watershed Restoration Project

Thanks to the efforts of Yukon Harbor property owners, the Health District and Conservation District, most of the Yukon Harbor area was opened for shellfish harvesting in 2008 after being closed for years because of severe fecal coliform bacteria contamination. An intensive survey of the watershed identified and corrected over 50 failing septic systems as well as animal waste management practices. Now shellfish in most of Yukon Harbor is safe to eat.



Stream bug sampling



Plant a Rain Garden and Protect Puget Sound

A rain garden is a beautifully landscaped depression that can collect, soak up and filter stormwater runoff from roofs, driveways, parking lots and other hard surfaces.

Rain gardens absorb and clean up polluted runoff effectively in Kitsap County because of our short rain storms, soil conditions, and native plants that thrive in wet weather and dry summers.

Receive up to \$500 to Install a Rain Garden

You can receive up to \$500 to install a rain garden in your yard. Residents in unincorporated Kitsap County can obtain this incentive and technical assistance visits from Kitsap Conservation District trained staff. To learn more, contact Teresa Brooks at the Conservation District: (360) 337-7171 and t-brooks@conservewa.net

What Kitsap Residents Say about their Rain Gardens

"I'm happy to say the rain garden completely soaked up the 1.16" of rain we had on Saturday night...I never thought I would look forward to it raining again."

-- Marilyn Johnson, Hansville

"My rain garden is working extremely well. All this rain and no outfall. By morning it is completely dry. [I am]... excited about how well it is functioning."

-- Shawn Huston, Silverdale

"It is working GREAT..., I love it! The very first night we had a downpour, I actually got up at 1 AM to check it out."

-- Kristine Strand, Poulsbo

Soak Up Runoff, Naturally

New stormwater solutions use natural features to keep stormwater runoff close to its source. Some practices include rain gardens, pavers, and rain barrels.

- **Pavers** - Water flows through spaces in between pavers, is held in a recharge bed, and slowly soaks into the ground. Used in driveways, sidewalks, patios, roads, parking lots, and other surfaces.
- **Rain barrels** capture runoff from rooftops so it can be reused. To hold more water, connect multiple rain barrels or use a cistern.

Benefits of keeping water on the site:

- Reduce flooding
- Remove pollutants
- Replenish ground water

You can make a difference at home:

- Plant native plants and trees in your yard
- Install a rain garden or rain barrel
- Reduce paved areas or use pavers
- Improve soil with compost



For more information, call Kitsap 1 at (360) 337-5777.

Kitsap County Public Works
Surface and Stormwater Management
614 Division St., M.S. 26-A
Port Orchard, WA 98366



Welcome to Your Manchester Watershed

This newsletter provides information about Manchester's water quality, drinking water, streams, stormwater runoff and ways to keep our waterways clean. Our daily actions affect the health of the watershed and your quality of life.

Join us in working toward a healthy watershed for fish, wildlife and people now and for future generations.

SSWM is:

