

Shore Stewards News

GUIDELINES AND RESOURCES FOR LIVING NEAR WATER | ESTABLISHED 2003



A huge and heartfelt thank you to Scott Chase, the Shore Stewards Coordinator in Island County, for his many years of service to shoreline residents through the Shore Steward Program and other programs at WSU Extension. Scott has been our most frequent contributor to the newsletter over the years. His dedication and enthusiasm has been a shining light for all of us working to improve our shorelines in the Salish Sea. Scott, we wish you all the best in retirement. We'll miss you!

Winter Edition 2017

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Shoreline Property Winter Checklist

Fall has arrived and not far behind are several months of wind and rain. Those who live on shoreline property often look at this change in weather with a bit of apprehension, knowing that heavy rains can bring about erosion and landslides. There are several steps that you can do to “winterize” your property, minimizing the chances of such problems.

Make sure all gutters and drains are cleared of leaves and other debris before the storm season, and that they are functioning properly. If buildings do not have gutters and drains, consider having them installed so that you may channel the water away from your house and the face of your bluff. Storm water runoff from impermeable surfaces (roofs, driveways, and patios) should be directed away from the bluff to avoid soil saturation, whenever possible.

On the beach, visually inspect all seawalls, bulkheads, soft shore armoring, etc. for signs of distress, material loss, exposed reinforcing steel, or obstructions in drainage. You should inspect these structures before the storm season and following every storm. If you detect significant problems, you may want to contact an engineer for maintenance suggestions. On your bluff top, visually inspect any retaining walls, surface drains, wall drains, culverts, ditches and other drainage channels for obstructions or other signs of malfunction. You should do this before the storm season and after every storm event.

Check your sloped areas for signs of surface cracks, slumping, and new gullies. Inspect your patios, driveways, sidewalks, and other such surfaces for signs of rotation or cracking. These signs may indicate slope movement, and if you have these problems you may wish to have them inspected by a geotechnical engineer.

If undeveloped or non-landscaped areas of your property include large bare areas, these could be sources for mudflows during a storm event. Slides are often triggered by uncontrolled runoff from home sites. One preventative measure is to leave much of your land natural and to use native plants and trees whenever possible.

Another consideration is the amount of concrete, asphalt, and other impervious surfaces you have on your property. Many bluff homes are located below the main road level, between the road and the bluff. If you are considering building a driveway, and your home is below road level, you might consider the driveway material. If concrete or asphalt, you might be channeling a large amount of rainwater downward towards the bluff. Consider using pervious paving, or other porous surfaces such as turf grids. Same with patios, walkways and paths: if the surface is not porous, are you diverting rainwater toward the bluff? If so, you may want to seek alternatives. To see a simple comparison of pervious concrete, porous asphalt, and permeable pavers, see the information at this link: [http://www.co.thurston.wa.us/planning/climate/docs/yI.Permeable-Pavement-Comparison-\(Seattle\).pdf](http://www.co.thurston.wa.us/planning/climate/docs/yI.Permeable-Pavement-Comparison-(Seattle).pdf)



Photo at left: porous asphalt used for parking stalls on sloped entry road at Breazeale Interpretive Center, Padilla Bay National Estuarine Research Reserve, Skagit County:

<http://www.ecy.wa.gov/programs/sea/padillabay/index.html>

Photo by Scott Chase

Maintain and Check Your Tightlines Regularly

You may have read about “tightlines” in the Shore Stewards book, “Guide for Shoreline Living”. Many have commented that they don’t really know what tightlines are. Basically, tightlines are any closed pipe, usually made of plastic, which is used to divert water from gutters and downspouts over the face of a bluff and down to the beach below. A properly engineered tightline system can prove quite effective in diverting the water away from your roof and onto the beach,

channeling the water away from the bluff face and avoiding the damage from uncontrolled runoff. Washington Department of Ecology publishes a book, “Surface Water and Groundwater on Coastal Bluffs: A Guide for Puget Sound Property Owners”, which can be seen on this Department of Ecology webpage, <http://www.ecy.wa.gov/programs/sea/pubs/95-107/intro.html>

A normal engineered tightline will typically use lengths of a straight pipe of proper thickness, joined at the ends with appropriate connections and anchored into the ground. Though the corrugated flexible thin-wall plastic pipe might be inexpensive, its use is discouraged. This type of pipe comes in long rolls, and is available from most home centers. Too often homeowners seek the “easy” approach, attaching one end of this pipe to their downspout, and throwing the roll over their bank, without proper anchoring and diffusing at the bottom.

If you’ve walked along the beach, you’ve seen this pipe on bluff faces. In certain instances, this approach can prove much more damaging to your bluff than the natural runoff. Too often we’ve seen minor slides cause a break in this line, particularly if a tree falls and pulls the line apart. With a heavy or continuous rain, the line then acts like a fire hose, causing gullies and increased erosion. Since most homeowners do not often walk along their beach during the rainy season, this break and subsequent damage might go undetected until a substantial amount of damage has occurred. We highly recommend use of an engineered system rather than the cheaper method, and use of pipe recommended by your local Planning Department. Whenever you walk on the beach, take along a pair of binoculars. Visually check your tightline on a regular basis, and correct any problems right away.

Another way to check your tightline is to have someone pour a few gallons of water into the tightline near the house while you check to see if it drains properly at the beach end of the pipe. This should be done during a dry period, not on a rainy day. Check it again throughout the winter after any heavy storm. Make sure that the bottom end of the pipe does not just pour onto the beach like a fire hose; this can cause significant erosion in a short time. The water should flow through a diverter or onto gravel, rip-rap, or other such materials to disperse the energy of the water before it reaches the beach. This will also protect fragile marine life. Never have the water channeled behind your bulkhead or other armoring, as it will undermine the structure and shorten its life significantly.



Avoid use of flexible drainage line (tightlines) whenever possible. Photo at right shows broken line at bottom of slide on Camano Island.



Slide photo: Scott Chase

Get Rid of Your Fall Leaves and Protect Your Plants

In the past, one of the rites of fall was to gather all the leaves, branches and downed limbs into a big pile and burn them. It was common to smell the smoke of burning leaves on a sunny fall weekend. Some people still do this in areas it's allowed, and there isn't a burn ban in effect, but this option can be hazardous to your health and the environment. Each ton of vegetation that is burned emits 180 pounds of fine particles, carbon dioxide, sulfur dioxide, nitrogen oxide, and volatile organic compounds into the air. This can be bothersome to some people, and can be physically debilitating to folks with respiratory ailments. And if you accidentally burn the leaves over your septic system's drain field, the plastic pipes are not too far below the surface, and are subject to melting, which can be hazardous to the health of your septic system.

Another common disposal method that we now recognize as being hazardous is the dumping of leaves over your bluff or onto your beach. As described in the April 2009 issue of the Shore Stewards News, this discarded waste does not decompose quickly, and can pile up, suffocating plants and the organisms underneath. Fall and winter rains soak the leaves, adding weight to the slope that can cause erosion and slides. Dumping of any yard waste over the bluff or onto the beach is a dangerous practice you should avoid at all times.

A better idea is to turn the leaves into mulch, which can be used to suppress weeds and help your plants through the winter. One option in disposing of a thin layer of leaves on your lawn is to mow them with your mulching mower, lowering your blade height to about 2". You may need to make a few passes to shred the leaves, and you may need to remove some of the leaf layer to avoid

smothering the lawn, which can cause die-back and make the lawn more susceptible to diseases. A light amount of these shredded leaves will decompose, adding nutrients to your soil.

Many people confuse the terms mulch and compost. When mulch decomposes, it eventually becomes compost. But mulch and compost have two distinct functions. Compost is thoroughly decomposed organic matter, and provides your plants with nutrients to help them grow. Any seeds that are covered by compost sprout quickly in this ideal environment. Mulch on the other hand is not thoroughly decomposed. Mulch helps to suppress weeds, and protects plants from cold, heat and wind. It also holds moisture in the soil, so watering is not needed as frequently. Mulch also reduces compaction from the impact of heavy rains, lessening the problems of water runoff and its erosion.

Leaves used for mulch should be shredded; un-shredded leaves pack down, preventing air and moisture from reaching the soil. Shredded leaves have less of a tendency to pack down, and do not blow away in the wind as easily as whole leaves. It is best to shred your leaves when they are dry. A leaf shredder is ideal, but a lawn mower will do the job just fine. Spread the leaves in rows about two feet wide and one foot high. Set the lawn mower wheels at their highest setting and run over the leaves a time or two. Use a mower bag if you have one, and you'll have a bag of ready-to-use mulch. You can also spread it on a tarp, pulling the edges together so you can gather the leaves. Use your shredded leaf mulch under trees, shrubs, annuals and perennials to help them overwinter. If the mulch has decomposed and has turned into compost over time, work the compost into the soil and apply another layer of shredded leaf mulch that fall.

Are you thinking about getting rid of some of your lawn so that you can plant more native species, but don't want to spend a lot of time cutting and removing the sod? Try this: Cut the grass you want to remove at your mower's lowest setting. Cover with newspaper 10-16 sheets thick, overlapped about 6 inches at the seams. This will smother the grass. Apply 4-6 inches of mulch. The leaf mulch will eventually turn into an organic soil layer, and the newspaper will also break down over time and turn into an organic layer. A thick layer of mulch, 6 - 8" or more, can often do the same thing without the newspaper. A good rain will wet the mulch and paper and help hold it in place.

Another recommended option for disposing of leaves is to compost them, as they are a good addition to your compost pile. You do not need to shred them, but it may help speed up the rate of decomposition. Since leaves are difficult to compost alone, you should add materials high in nitrogen, such as grass clippings.

If you have room to save some of your leaves, you can use these to mix along with your green materials next spring and summer. For more information on composting, there are many gardening books in the library that cover this subject, as well as online sites.



Compost bins at left;
leaf shredder at right.

*Photos Courtesy of
Norm Kosky*



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