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WSU Extension Puget Sound Forest Stewardship E-Newsletter

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Forester's Notes

What a summer it has been. Usually summer is a fairly quiet time for the program, but this year it has been packed with field days, forest tours, and other events. We had four summer twilight tours this year (one in each county), and all were well-attended and a lot of fun. We also had a month-long youth forestry immersion program (more on that in a future newsletter) and a huge community outreach event where 150 kids and families from all walks of life spent an evening in the woods with us learning about forestry.

And we're not even done yet. This coming Saturday is the last in a series of forest owner field days that have been held by WSU and DNR all around the state. This last one also

happens to be the one here in our area (and the one I'm responsible for). It's not too late to register, and we're looking for more folks to attend, so I hope you'll get signed up and join us next weekend for a series of great field workshops (more on that below). We also start our next Coached Planning series in Preston in just over two weeks. The class is 75% full, so we still have spaces left but not many so get signed up quick if you're thinking about coming – after three years in a row, we won't be doing a class in that area again for a while.

Even with all the events and activities, I have still managed to find moments for quiet times in the woods. This summer has been excellent for wild berries, and I've made (and am still making) several berry-picking excursions for various treasures such as salmonberries, huckleberries, thimbleberries, and salal berries. This is the first year I have experimented with making wild berry jam, which has been a lot of fun and has filled my freezer with wildcrafted goodies. Who knew salal made such good jam (or would leave my fingers stained purple for so long...)? I have decided that salmonberry jam is my favorite, though, especially atop a Belgian waffle with some whipped cream. Special thanks to all the folks who invited me to come and pick on their property (or at least didn't shoot when I showed up).

Throughout the summer tours, field days, and berry picking, I have had the privilege to observe something over and over again, which is the gracious hospitality of forest owners. Whether sharing your berry patch with the Extension Forester or opening up your home for a whole crowd of strangers and sharing about your land, you folks know how to put out a warm welcome. As always, I couldn't do this without you and my hat's off to you.

Kevin W. Zobrist
WSU Area Extension Educator, Forest Stewardship
Serving Snohomish, Skagit, King, and Island Counties

Whidbey Island Forest Field Day

We're bringing a special forest field day to central Whidbey Island. This field day will feature a suite of our most popular forest stewardship workshops. Join the state's top forestry experts for these hands-on field sessions that will help you to better understand, protect, enhance, and enjoy your forest. The field day will be from **10 AM to 3 PM on Saturday September 10th.**

The field day sessions will be broadly applicable to both island and mainland forests. If you are a Whidbey Island resident, this is your opportunity to enjoy a field day right there on the island. For everyone else, this is a chance to enjoy our best field day sessions in a beautiful setting, so hop on the ferry and come on over.

Sessions will include:

- Understanding forest health
- Root rot identification and management
- Protecting and enhancing wildlife habitat
- Thinning and pruning
- Reforestation and alder management
- Special forest products (edibles, floral greens, etc.)
- Small-scale sawmill and equipment demos
- Tour of house built with wood from the property

It's not too late to register! Registration will be open through Friday night. Visit http://snohomish.wsu.edu/forestry/whidbey_fieldday.htm for complete details, field day schedule, and to register online. You can also call 425-357-6017 for more information.

Forest Stewardship Coached Planning

We have TWO offerings of our flagship and most popular and powerful program coming up. This 10-session practical, hands-on course will guide you through the development of your own stewardship plan with “coaching” from the top natural resource professionals in the state. In the process of creating a forest plan unique to your property and objectives, you’ll go in depth with us both in the classroom and in the field covering a wide range of forestry topics. Things we’ll cover in detail include ecology, silvics, soils, wildlife, forest health, fire, applied silviculture, water resources, aesthetics, regulations, special forest products, working with contractors, and more. The class includes nine evening classroom sessions, a Saturday field trip, a personal site visit to your property from a professional forester and/or wildlife biologist, and a forest stewardship notebook packed with information.

Your completed forest stewardship plan may qualify you for significant property tax reductions, as well as qualify you for a whole range of cost share and other assistance programs. It will also provide you with a road map for maximizing your enjoyment of your land and minimizing the costs of ownership. The class is open to all, regardless of how many acres you own or what your ownership objectives are. Space is limited, and registration is open for both classes:

1. **Fall 2011 in Preston**, on Tuesday nights starting **September 20th**. We still have a few spots left in this class. Details and registration information, including a full syllabus, are available at <http://snohomish.wsu.edu/forestry/CP11Preston.htm> or by calling 425-357-6017. This class is made possible in part by a grant from the King Conservation District in partnership with the Snoqualmie Watershed Forum.
2. **Winter 2012 in Coupeville** (returning to Whidbey after many years!), on Wednesday evenings starting January 18th. Registration is open and the class is already beginning to fill. Details and registration information are available at <http://snohomish.wsu.edu/forestry/CP12Coupeville.htm> or by calling 425-357-

6017. This class is made possible in part by a grant from the Whidbey Island Conservation District.

Trail Building and Maintenance Workshop

Got trails? Here is your chance to learn from the experts how to properly build foot trails (including small bridges) on your property. Good walking trails can greatly increase your enjoyment of your property for you and your family, as well as providing access for maintenance, fire control, etc.

WSU Extension forestry educators and trail experts from EarthCorps will teach you how to build and maintain trails through different types of terrain, and what tools and materials are required. This will be an outdoor, hands-on workshop where you will get to practice working on an actual trail.

The workshop will be held near **Arlington on Saturday October 1, 2011**. Space is limited because of the hands-on nature of the class, and registration is now open. For more details and online registration, visit <http://snohomish.wsu.edu/forestry/trails11.htm>, or call 425-357-6017 for more information.

Shiitake Mushroom Culture Workshop

WSU Extension specialist Jim Freed and the experts from Fungi Perfecti will be offering this hands-on workshop where you will learn how to cultivate your own edible shiitake mushrooms. You will learn proper inoculation techniques and growing conditions, and you will receive a set of plugs to inoculate your own mushroom log. The workshop will be **Saturday November 19th** up at the WSU Northwest Research and Extension Center in Mount Vernon. Registration is open. For more details and online registration, visit <http://snohomish.wsu.edu/forestry/mushroom11.htm>, or call 425-357-6017 for more information.

Fall Potluck Social

Our next social is coming up this fall. Join us from 6:30 – 9:00 PM on **Friday October 28th** at our usual location at the Snohomish County Extension building in south Everett. Come and enjoy great food, see old friends, meet new friends, and enjoy an after-dinner education program (details forthcoming). Details and RSVP at <http://snohomish.wsu.edu/forestry/social2011Oct.htm> or by calling 425-357-6017.

Market Update

Here is the latest news on log prices in the Puget Sound area based on data provided by our friends at DNR in their monthly Timber Sale Query reports.

Log prices have continued to slide since earlier this year, but they are still stronger than anything we saw in 2010. Douglas-fir averaged \$506 in July. Red alder averaged \$515, with highest grade logs fetching over \$700. Western redcedar still commands the highest value at \$965 for camprun sort.

For an updated price graph, please visit

<http://snohomish.wsu.edu/forestry/documents/LogPrices.pdf>

Forestry in the News

- *Washington State Magazine* featured an article and video on Coached Planning alum (and WSU alum) Linda Kast and her Whidbey Island forestland, as well as mention of a certain Extension Forester.
Article: <http://wsm.wsu.edu/s/index.php?id=886>
Video: <http://wsm.wsu.edu/s/we.php?id=294>
- *Seattle Magazine* had an article on special forest products:
<http://www.seattlemag.com/article/lifestyle/outdoors/goods-woods-local-forest-table-movement>
- Speaking of special forest products, *The Daily Herald* reports on Tulalip youth exploring traditional food and medicinal forest plants:
<http://www.heraldnet.com/article/20110729/NEWS01/707299901>
- And speaking of the Tulalip Tribe, *The Daily Herald* also reports on the tribe's work to thin their forests for both timber and wildlife:
<http://www.heraldnet.com/article/20110712/NEWS01/707129937>
- *The Kitsap Sun* reports on the particularly prolific presence of tansy ragwort this summer (watch out for this on your property):
<http://www.kitsapsun.com/news/2011/aug/20/poisonous-weed-thriving-this-summer/>
- Speaking of noxious weeds, *The Daily Herald* lists the ten most wanted noxious weeds in Snohomish County (recognize any of these?):
<http://www.heraldnet.com/article/20110602/BLOG48/110609990>
- And while you're watching out for weeds, *The Daily Herald* also includes an article on watching out for bats:
<http://www.heraldnet.com/article/20110819/NEWS01/708199839>

- *The Daily Herald* reports on a chunk of land in Snohomish County that will be kept as working forest instead of development:
<http://www.heraldnet.com/article/20110824/NEWS01/708249870>
- *The Daily Herald* had a feature article on the ongoing conflict over the use of local national forests:
<http://www.heraldnet.com/article/20110821/NEWS01/708219945>

Focus On: Carbon sequestration and release

This month's Focus On feature is the first in a four-part series that I'll be writing about forestry and carbon. In this first installment I'll talk about the fundamentals—the basic chemistry and biology of carbon sequestration and release. Next month I'll address how these principles relate to forest management, followed by a discussion of carbon credits, and finishing with a look at woody biomass as renewable energy.

I have more than a few misgivings about tackling this topic, as it is big, complex, and subject to a wide variety of emotional responses. I will do my best to unpack key concepts, clarify (though not necessarily resolve) issues, and identify the common themes in areas where different scientists reach seemingly opposite conclusions. Before getting started I need to make the disclaimer that this is a simple newsletter column and not a peer-reviewed article with citations, etc. As such, my comments should not be treated as “science.” Rather, it is one scientist's casual (albeit fairly well-informed) assessment, and that is very different than actual science.

I'm starting with the very basics, keeping in mind that these are very simplified explanations that leave out a lot of detail and nuance. For many of you this will all be review, but I think it is important review nonetheless, as it gets us all on the same page and grounded in basic fundamentals that I've seen easily become lost in passionate discussions of policy and management.

When we talk about carbon, we are usually not referring to the pure, elemental form, but rather carbon dioxide (CO₂). Carbon dioxide is important because of its critical function in our atmosphere of trapping heat. Solar radiation enters through the atmosphere, bounces off the Earth, and reflects back into space. Carbon dioxide traps some of this radiant heat energy, keeping it from all reflecting back into space and thus keeping the planet warm. It is the same function that glass has in a greenhouse, trapping radiant energy from the sun to keep the inside warmer. Hence, carbon dioxide's role in the atmosphere is referred to as the greenhouse effect, and carbon dioxide itself is referred to as a greenhouse gas.

Burning fossil fuels (petroleum, natural gas, coal, etc.) is a combustion reaction that breaks apart carbon-hydrogen bonds in organic compounds (e.g. hydrocarbons), releasing heat (energy that had been chemically stored in those bonds) and combining

with oxygen to form carbon dioxide and water vapor molecules (H₂O) (among other things, depending on the fuel, any impurities, and the combustion environment). Our post industrial revolution history of burning fossil fuels to release energy has resulted in higher concentrations of carbon dioxide in the atmosphere than would have occurred naturally. This results in a stronger greenhouse effect and subsequently warmer temperatures, which has a cascading effect on the natural systems of the world.

Forests play an important role in mitigating climate change due to carbon dioxide emissions, as tree growth is like the combustion process, only in reverse. Where combustion combines organic compounds and oxygen to release energy, water, and carbon dioxide; photosynthesis combines energy (sunlight), carbon dioxide, and water to form oxygen and organic compounds (i.e. the complex sugars used by the tree to form its biomass, including trunk, leaves, branches, roots).

So essentially trees, with their green photosynthesizing leaves, are giant natural solar panels that are taking in radiant energy from the sun and converting it to chemical energy that is then stored in the chemical bonds within the organic compounds that form the substance of the tree. Also stored in these organic compounds are the carbon atoms that had previously been part of carbon dioxide molecules in the atmosphere. In other words, the carbon has been transformed from carbon dioxide into wood (and the sun's energy has been transformed from light energy to chemical energy). We call this process carbon sequestration.

The energy and carbon dioxide remain stored in the substance of the tree until the tree either decays or is burned (i.e. carbon release). If a tree falls over and rots, the decay slowly releases heat and carbon dioxide back into the atmosphere (though it may store it on the ground for a long time). If a tree is harvested and milled into wood products, some of the carbon will be subsequently released from decaying residues like logging slash and sawdust, while the remaining carbon is now stored in wood products (buildings, furniture, etc.) until the wood or paper either decays or is burned.

We refer to these different carbon forms (CO₂ gas, wood, etc.) as carbon pools. So far we've looked at the atmospheric pool (CO₂ gas in the air), the forest pool (carbon stored in trees, logs, soil, etc.), and the wood products pool (lumber, buildings, furniture, paper, etc.). Carbon flows through these pools differently depending on how forests are managed, which will be the subject of next month's column.

Tidbits

- **We have a new website!** After a year and a half of planning and coding, the new site was finally unveiled last weekend. It has an all-new look, with improved navigation and streamlined content, but it is still packed with resources. I also added a special mobile version of the website for all of you folks out there surfing on your smarty-phones. Check out the new site at <http://snohomish.wsu.edu/forestry/>

- The latest edition of **Forest Stewardship Notes**, our free statewide newsletter for small forest landowner, is now available. This newsletter is packed with good stuff. Check out the **August 2011** issue at <http://archive.constantcontact.com/fs009/1103464106731/archive/1106658361009.html>, and be sure to follow the link to subscribe.
- Looking for a job in forestry or natural resources? Whether you're seeking employment as a professional forester or a summer intern, I see a lot of job announcements, so I've created a new **Forestry Jobs List Serve** to pass these along. You can join the list by sending a blank email to join-forestjobs@lyris.cahnrs.wsu.edu
- **Help still needed:** Do you have a pacific yew on your property? If you spot any yew berries on it, please let me know!
- **Changes to the Forest Practices Rules** went into effect on July 22nd due to recently passed state legislation (HB1582). Forest practices applications on parcels platted after 1960 will no longer be automatically treated as Class IV general and counties and cities will no longer have regulatory jurisdiction, so long as the land is outside an urban growth area and the landowner does not intend to convert to a non-forest use.
- The Washington Tree Farm Program will be having their **Fall Forestry Seminar** on Saturday October 8th at the Veterans Memorial Museum in Chehalis. The seminar is open to everyone with an interest in managing their forest land. The morning session will be devoted to "the business of tree farming" - forest land investment strategies, structuring your business, tax considerations, record-keeping, and estate planning. The afternoon session will focus on managing Phellinus root rot. For more information visit <http://www.watreefarm.org/2011RegForm.pdf> or contact Donna Loucks at 360-736-2147.
- The **2011 sign-up deadline for the NRCS Environmental Quality Incentives Program (EQIP)** has been delayed from its original date of August 15th. EQIP offers funding to help non-industrial private forest landowners implement conservation projects on their forest land, such as pre-commercial thinning, stand release, culvert replacements for fish passage, and other practices important to improving and maintaining the health of natural resources in the area. To take advantage of the extended sign-up period, contact your local NRCS office or visit <http://www.wa.nrcs.usda.gov>.

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Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.

Persons with a disability requiring special accommodations while participating in any of the programs described above should call WSU Extension at 425-357-6017 to request accommodation at least two weeks in advance.