KC Weed News – August 2008

King County, Washington
(http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-news.aspx)

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Weed of the Month: Purple Loosestrife (*Lythrum salicaria*), Class B Noxious Weed

(http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-identification/purple-loosestrife.aspx)

Summer in Seattle used to mean a stunning sea of purple in the wetlands under 520 and around many lakes. If you look around this month, you will probably see some of that purple still, but not the same spectacular show. King County lakes are no longer circled by solid purple bands, but rather have patches here and there of purple mixed in with other colors. The reason for this is the overall reduction in purple loosestrife county-wide. We still have close to 800 sites of this noxious weed county-wide, but we no longer see the kind of solid purple stretches we used to. This is in part due to the diligent work of many property owners and county and city crews. But, perhaps even more, this reduction in purple is due to the busy work of thousands of tiny leaf-eating beetles. Where we used to have large, dense populations of purple loosestrife, we now have patchy, stunted, beetle-damaged plants that allow native vegetation to move in and restore the habitat functions of the wetlands. Granted, there are a few exceptions where the purple loosestrife beetles (Galerucella species) are not keeping up with the weeds, but in almost all cases, we are much better off as a result of this little bug. There are pictures of a Galerucella beetle and what it does to purple loosestrife on our purple loosestrife web page. A recent news article from the east coast also sums up the story well: http://www.andovertownsman.com/local/local_story_206154832.html.

Although it is arguably one of the prettiest noxious weeds, purple loosestrife is widely recognized throughout North America as a highly invasive and damaging weed in wetlands and along shorelines. Vigorous perennial roots and rhizomes combined with incredibly prolific seed production result in one of the most successful invasive plants we have on this continent. Individual plants are very difficult to control due to purple loosestrife's ability to regenerate from very small fragments of roots or stems left on moist soil. And, if you are able to control the existing plants, you will continue to fight the plants coming from the seed bank for many years. Combine this with the fact that purple loosestrife invades highly sensitive and often inaccessible wetlands and you can see how challenging this plant is to keep in check. Unfortunately, dense populations of purple loosestrife significantly reduce the habitat quality of wetlands and shorelines for waterfowl, amphibians and other critters. Purple loosestrife does not play well with other plants and can completely dominate the areas it invades.

In King County, purple loosestrife is our most abundant regulated aquatic noxious weed. Purple loosestrife is found on 27 lakes, including all three of the big lakes, four of the large rivers, many small creeks, ponds, ditches, and numerous other sites. A total of 793 sites were surveyed in

2007. Most of the populations are very persistent, but purple loosestrife is no longer found at 12% of the sites we've found since 1997 and we continue to try to eliminate more populations. Although we do find new sites each year, we are finding fewer new sites now, and more and more sites get controlled every year. Each year we survey more of the county's lakes and wetlands, trying to find where this plant is hiding out. For the first time this year, we are systematically surveying Lake Washington from the water, starting with the southeast end and Mercer Island this year, and continuing with the rest in the next two years. We know where purple loosestrife is present in the public parks along the lake, but we need to know how much is present on private property as well. We are also surveying more of the small lakes and wetlands and generally trying to find this plant wherever it is growing in our county.

Our overall goal is to continue hammering away at purple loosestrife with a combination of tools (see the IPM section below), focusing our efforts where they can do the most good and working to reduce the impact of this weed on our county's lakes and wetlands. Although we are aware of many sites, if you see purple loosestrife growing in an out-of-the-way place or if you are worried that no one is doing anything, please report the location or contact our office at 206-296-0290. If you are unsure that you are seeing purple loosestrife and not one of its many purple look-alikes, please feel free to email us a photo at noxious.weeds@kingcounty.gov.

Weed Tips for August

Remove tansy ragwort before it seeds – save yourself another 16 years of work. Time is running out to remove tansy ragwort before the seeds start forming. It is well worth the time if you think of the work you will save in future years by keeping the seeds from spreading any more. If the soil is too hard to pull the roots out, cut as close to the base as you can and check back in a few weeks to see if the plant has re-flowered. Mowing tansy ragwort can spread it more if it's starting to go to seed, so that is a last resort. It might seem more time consuming to hand cut and remove the stems, but it will save you plenty of time in the long run. If you see tansy ragwort that isn't being controlled, especially where there are animals or hayfields nearby, report the location to our program (206-296-0290) and we will work to see that it is controlled,.

Watch for summer-flowering noxious weeds. When weeds are flowering, it means there's no time to lose. Preventing seeding means saving time and money and it's also the easiest time to spot hard-to-find weeds. Some noxious weeds that flower in July and August are: bighead knapweed, spotted knapweed, meadow knapweed, diffuse knapweed, tansy ragwort, goatsrue, phragmites (common reed), garden loosestrife, purple loosestrife, policeman's helmet, knotweed, perennial pepperweed, Spanish broom, and viper's bugloss (blueweed).

Bag your flowering noxious weeds. Tansy ragwort, purple loosestrife and other noxious weeds can spread even after they are pulled, by forming seeds or spreading from stems and roots. If you remove Class A or B noxious weeds, please bag them up and throw them in the garbage or take them to a transfer station. Call our office at **206-296-0290** for a free voucher to cover the cost of noxious weed disposal at a county transfer station.

Mow pastures to keep weeds in check. If pasture weeds are getting you down, consider mowing more often. Although it is important to completely remove poisonous weeds like tansy ragwort and poison-hemlock, mowing can really help reduce problems with non-toxic pasture weeds. Regular cutting, especially following grazing, reduces the competitive advantage of the plants the animals avoid and depletes the energy reserves in their roots. And, of course, cutting weeds before they seed will help stop them from spreading further. Mowing some weeds even makes them more palatable to livestock (just don't try this with poisonous weeds of course!).

Perennial weeds like Canada thistle can be suppressed by mowing three or four times a season. Also, it is a good practice to mow along fences and borders to help prevent the introduction of new weed seeds.

Get busy with your knotweed control. August is a great month for controlling knotweed. It is an effective time to control plants with foliar spray and stem-injection, it's a good time to cut it down one more time and install your heavy duty fabric or plastic, or, if digging is your only option, it is a good time for that too. It also helps that the rivers are lower and the weather is generally pleasant and sunny. If you need advice on what works and what doesn't, just check out our website or contact our office at 206-296-0290.

Unless you're making blackberry jam, now is a good time to control invasive blackberry bushes. The massive thickets of Himalayan and evergreen blackberry can be intimidating, but this is a good time of year to start tackling them. Blackberry roots are weakest after they flower, so cutting them down now will help deplete their root reserves. Cutting blackberry bushes to the ground is easiest with a steel-bladed brush cutter or long-handled loppers, just make sure to wear tough gloves and long sleeves and pants. Many people have also had great success with using specially trained goat herds to do the work, especially in hard to cut areas like steep hills. If you follow up the cutting by digging up the root balls, you will have much less re-growth. Also, if herbicides are an option for you and the site, treating blackberry with a systemic product like Roundup is most effective from now through fall, while energy is being transferred back down to the roots. To reduce the overall amount of spray, cut the plants down and either wipe herbicide on the fresh cut stems or spray the re-growth after a few weeks. Call us for more detailed advice or read our Blackberry Best Management Practices and other resources on control on our blackberry page. If you are in unincorporated King County and would like to remove more than 7000 square feet of blackberry, please see the King County blackberry permit page for information about the free blackberry permit. For cities in King County, please contact your local permitting agency for information on removing blackberry along streams and other sensitive areas before getting started.

Stepping up the Fight Against Goatsrue in Federal Way

As far as we know, the goatsrue (*Galega officinalis*) infestations in Federal Way are the only known sites of this federally listed noxious weed in the northwestern United States. In order to keep it that way, the King County Noxious Weed Program plan of action continues to be diligent and aggressive control combined with careful surveys of the area. In 2008, our management efforts have been kicked up to the next level with help from a Class A WSDA grant that is supplementing our ongoing integrated control strategies.

We have definitely learned to respect the toughness of this weed. Goatsrue was first discovered in King County late in 1999. Since then, some of those first populations we found have been controlled every year for the last nine years and some are still surviving. Small patches have been eliminated, but larger populations are extremely persistent, mostly due to the very long-lived seeds. Overall, we are monitoring 22 locations in King County, 12 of which had goatsrue present last year and only about 5 of which have sizable infestations. We are working with twelve land owners and managers, all of whom are cooperative, appreciative and helpful.

Initial site surveys this spring revealed excellent seedling control and no adults following our 2007 treatment that included a pre-emergent as well as a post-emergent product. We have only found one new infestation this year and this location was a newly disturbed home construction site that is adjacent to the majority of the goatsrue infestations. In addition, one site is gone this

year due to a complete land use change involving development of a former quarry site. The area will be closely monitored throughout the coming years in case any plants survived or escaped from the site.

Changes in our strategy this year have included site mowing and raking prior to herbicide application. Heavy rains and cool temperatures in the spring contributed to a delay in herbicide application as well as a burst in other vegetation at goatsrue sites. So, in order to improve the treatment efficacy, four major areas, collectively 3 acres in size, were mowed with a brush hog and then clippings were raked. All the clippings were left on site to prevent any risk of spread. Three weeks later, herbicide was sprayed for the first application of the year. Goatsrue will continue to germinate and grow throughout the growing season, so there will be a second late summer herbicide application ensuring no plants will go to seed.

Overall, the footprint of goatsrue in the county has remained relatively the same with a steady decline in plant density at all sites and the successful eradication of several small populations. To achieve long-term control and eradication, we will need to keep up our work with consistent monitoring and diligent control work. We are optimistic about our eventual success, but it is obvious that this is one of the toughest noxious weeds that we have faced and we can only hope that no more goatsrue is introduced to the northwest.

Weed Education in August

The Noxious Weed Program will be giving out information and advice at a few events in August. In addition to useful handouts and weed control advice, we will have live weed specimens on hand because seeing the real thing is the best way to identify these pesky weeds. Come visit us at these locations in August:

- **August 6, 6:30 – 9 pm**, **Understanding Forage, Hay & Equine Nutrition**, sponsored by Horses for Clean Water and King Conservation District. This workshop is packed with great information for horse owners. Also, weed specialist Trish MacLaren will be on hand to answer pasture weed questions. To register and receive directions contact the King Conservation District at 425-277-5581x122 or e-mail Paul Borne at paul.borne@kingcd.org.
- **August 10,** Shadow Lake Bog Frog Frolic, 21818 – 184th Avenue S.E., Renton, WA 98058-9719
- **August 12, 3-7pm,** Carnation Farmers Market, in downtown Carnation on Bird St. one block east of Main St.
- **August 13, 4-8pm,** Sammamish Farmers Market**,** Sammamish Commons, at City Hall 801 228th Ave SE
- **August 16, 11-12pm, Invasive Weeds Interpretive Talk,** Kanaskat-Palmer State Park, 11 miles northeast of Enumclaw (see park website for directions)

IPM – What Is It and Why Do We Do It?

The term IPM is often used in the media and in weed discussions, but many people are unclear on exactly what it means. Integrated Pest Management (IPM) is the fundamental guiding principal we use at the King County Noxious Weed Program to make weed control choices and recommendations. In fact, most weed management decisions these days are based at least in part on IPM principles.

IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive

information on the life cycles of weeds and their interaction with the environment. This in combination with information available on weed control methods, is used to manage weeds by the most economical means, and with the least possible hazard to people, property, and the environment. In simpler terms, IPM is a way of out-smarting the pest using the best timing and tools and keeping the costs below the benefits.

Under an IPM approach, all options are considered when making a weed control choice, including biological, chemical, mechanical and cultural techniques. Generally an array of complementary techniques are used in the way that most effectively targets the weed and reduces it to a tolerable level of impact. The benefits and costs of each method are carefully assessed and balanced before making a weed control recommendation. Sometimes we need to make difficult trade-offs between the environmental risks of the weed control methods, the varying effectiveness of the different weed control options, and the impacts and costs of not controlling the weed. The IPM framework helps us analyze these issues and make better weed control choices and recommendations. When weed control is planned based on IPM principles, we benefit by the reduction of the cost of weed control over time and the reduction of total herbicide use.

All of the program's brochures and Best Management Practices are built upon on this IPM philosophy. The noxious weed program's IPM approach is part of the county-wide IPM policy and guidelines that resulted from a 1999 Executive Order from County Executive Ron Sims. This approach has been effective at reducing the costs and environmental risks of the weed control practices used while maintaining or improving their effectiveness. For more information about the County IPM Policy go to:
http://www.govlink.org/hazwaste/interagency/ipm/aboutipm.html