

2014 Report of the Washington State Noxious Weed Control Board

covering July 2011 through June 2013



Controlling Noxious Weeds in Washington State



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Mission Statement

To serve as responsible stewards of Washington by aiding in the protection and preservation of the land, water, and resources from the degrading impacts of noxious weeds.

We believe that the prevention of noxious weeds is the best approach and may be achieved through full implementation of the state noxious weed law. To further this approach, we strive for increased public awareness through improved educational efforts.

As the Board, we do not deal directly with control activities; rather, we work to achieve control through local county weed boards, weed districts. For that reason, we seek to improve communication, gain cooperation, and enhance coordination of the collective efforts of noxious weed control.

Finally, we believe that noxious weed control is best carried out by strong, adequately funded programs at the local level. Thus, we strive to build public support for local programs, and to empower those programs to be more successful.



About the cover and inside cover: Noxious weed control in action throughout Washington State.

Image credits:

Cover: Top left: John Dillion, PNW IPC; Top right: Skamania County NWCB; Lower left: Gretha Davis; Lower right: WSDOT.

Inside cover: Top left: Skamania County NWCB, Center: King County NWCB, top right: WSNWCB; second row, left: WSNWCB, Center: Rod Gilbert, Right: King County NWCB; bottom left and center right: WSNWCB, bottom center: Skamania County NWCB, bottom right: WSNWCB.

Executive Summary

The Washington State Noxious Weed Control Board (WSNWCBC) started the 2011-2013 biennium with a leaner budget than in past years and took this opportunity to refocus its ability to support noxious weed control efforts throughout Washington. It continued its focus on education, ensuring that county weed boards, weed districts, CWMAs, volunteer groups, and private citizens had access to helpful information about noxious weed identification and control. A redesigned website was launched that included a basic search feature to help with noxious weed identification. Publications were printed or reprinted and widely distributed. And the WSNWCBC worked to improve outreach efforts. New logos were developed and a total of ten road signs were produced, to be posted along high visibility roadsides to remind the public of the importance and benefits of controlling noxious weeds. The WSNWCBC continued to provide funding to Class A eradication projects. Although funding amounts may have been relatively modest, the successes on the ground outweighed the monetary amounts.

In house, the WSNWCBC continued to run a tighter, more cost effective program. Rather than hiring a part-time administrative assistant, the two full-time FTEs incorporated administrative duties into their workloads. Efforts went into improving the noxious weed listing process and making the noxious weed list itself more streamlined and easier to understand. And the WSNWCBC gained much experience in participating in online/teleconferenced meetings. Staff hosted many of its bimonthly meetings throughout Washington so that Board members and county weed coordinators had the opportunity to attend one close by.

There appeared to be a higher than usual amount of turnover on the WSNWCBC during this biennium. Many familiar faces that have been synonymous with the WSNWCBC moved onward to new endeavors. It was a time to reflect how much time and effort these Board members - many of whom are unpaid volunteers - dedicate to this program because they believe in the mission statement, the WSNWCBC program, and they believe their efforts can make Washington a better place through effective noxious weed control. It only felt right to showcase current WSNWCBC members and recognize the contributions made by those who left over the biennium in this report.



WSNWCBC executive secretary Alison Halpern (left) and education specialist Wendy DesCamp (right) .

Section 1

A Primer on Noxious Weeds and the Washington State Noxious Weed Control Board



Noxious weeds can have devastating impacts to our agriculture and natural resources. Russian knapweed (above left) can rapidly dominate semi-arid rangeland. It crowds out desirable forage for livestock and wildlife and is very difficult to control. Scotch broom flanking prairie habitat at JBLM (above right). In many places of western Washington, it is an ongoing battle to keep Scotch broom out of natural areas, parks, pastures, harvested timberland, roadsides, and private properties.

Noxious weed impacts

“Noxious weed” is the traditional legal term for invasive plants that are difficult to control and are destructive to Washington’s agriculture and natural resources. Noxious weeds include non-native herbaceous plants, shrubs and trees that are terrestrial or aquatic. Once established, these invasive plants can colonize our cropland, rangeland, forests, parks, wetlands, estuaries, and waterways, causing economic and ecological damage that affects us all in Washington. The various impacts of noxious weeds are almost as numerous as the weeds themselves. Effects of noxious weeds are often separated into economic, environmental, and health categories; however, the three are usually interrelated. While some noxious weed impacts can be measured with a dollar sign, many are too complex to fully calculate, particularly those affecting natural areas.

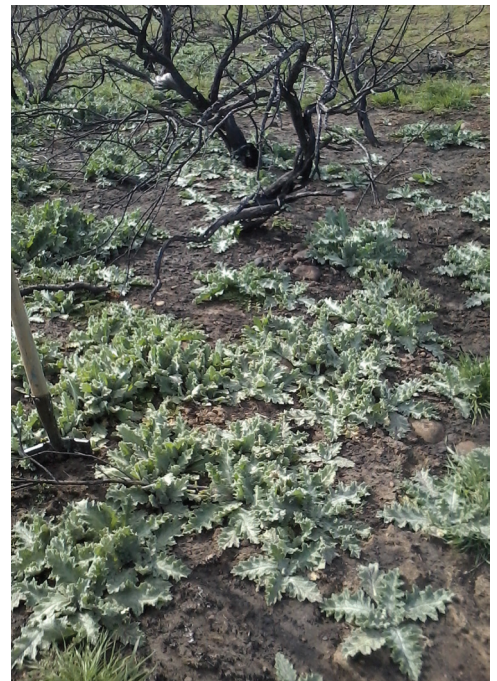
Agriculture is especially vulnerable to the impacts of noxious weeds. From dairy farmers in Whatcom County, to hay producers in the Columbia Basin, to orchardists in the Wenatchee Valley, noxious weeds cost farmers millions of dollars in control efforts and reduced productivity. Noxious weeds infest fields, reducing crop yields and contaminating seed crops. Aquatic noxious weeds clog irrigation canals that farmers in arid areas rely on for water. Unpalatable weeds such as the knapweeds and yellow starthistle outcompete valuable forage species on rangelands, and ranchers must foot the bill for replacement hay for their livestock. Timberland is also susceptible to noxious weed infestations, particularly when aggressive weeds like Scotch broom interfere with the reforestation process.

Noxious weeds also invade natural areas where they outcompete our native plants, including many threatened or endangered species. In addition to reducing biodiversity, they also degrade valuable habitats. Some species such as purple loosestrife and common reed can create monocultures and completely displace valuable wetland habitat. Knotweed species and butterfly bush colonize riverbanks, where they can cause bank erosion, increase sedimentation, displace native willow habitat, and alter the nutrient cycle. Scotch thistle and Himalayan blackberry block wildlife access to water sources. And knapweeds and thistles can eliminate foraging grounds for elk and other wildlife.

Suburban and urban dwellers are not impervious to the impacts of noxious weeds. For example, invasive knotweeds can cause damage to infrastructure by growing through pavement, pipes, and septic tanks. In fact, in 2010 several of the major banks in the United Kingdom began to deny mortgages for properties that have knotweed, due to its known costly impacts on infrastructure that ultimately reduce property values. Several toxic noxious weeds thrive in rural, suburban, and urban areas alike and can pose a serious threat to human health. Giant hogweed can cause painful burning and blistering, and the accidental ingestion of poison hemlock can result in sickness or even death.

Noxious weed laws

Washington has been a national leader in its creation of noxious weed laws and a statewide infrastructure to implement these laws. The primary noxious weed laws are Chapters 17.10 and 17.04 RCW, and its purpose is to limit the economic loss and other negative impacts that noxious weeds cause in agriculture, natural resources, and human health and safety. The noxious weed laws are administered through the Washington State Noxious Weed Control Board (WSNWCB), county noxious weed control boards (NWCBs) and weed districts, and the Washington Department of Agriculture (WSDA).



Numerous Scotch thistle rosettes are among the first plants to emerge following a wildfire on Cowiche Mountain in Yakima County. (Yakima County NWCB)

Historically, the primary focus of Washington's noxious weed laws was the protection of agriculture. While many farmers and ranchers cared deeply about the impacts of noxious weeds on wildlife and native ecosystems, it wasn't until the late 1980's that this concern became integral to the work of both state and county weed boards. Since then, concern about ecosystem impacts has continued to grow, while the deep commitment to protect agricultural lands has remained steady.

Washington's weed laws embody an important principle, which is that all landowners – both public and private – share a civic responsibility for controlling noxious weeds on their land, whether it's a small urban lot, a 1000-acre farm, or a state park. Noxious weeds are oblivious to boundaries of land ownership or political jurisdiction, and their numerous direct and indirect impacts affect everybody. One reason for Washington's success is that the noxious weed law recognizes this reality.

The Washington State Noxious Weed Control Board (WSNWCB)

The WSNWCB serves as the state's noxious weed coordination center, and it is administered within WSDA. The primary roles of the WSNWCB are to adopt the annual state noxious weed list and make other changes deemed necessary to WAC 16.750, disseminate noxious weed information, and to coordinate the educational efforts of the county NWCBS and weed districts. The WSNWCB is also a member of the Washington Invasive Species Council (WISC) and keeps the noxious weed control community apprised about current events and pertinent legislative activity. It often testifies before legislative committees and submits comments regarding draft rule-making and policy changes by state and federal agencies. It is the strong cooperation and open communication between the WSNWCB, WSDA, and the county NWCBS and weed districts that maximize noxious weed management and control efforts statewide.

The WSNWCB is comprised of nine voting members and three non-voting members. Membership is designed to represent the interests of the county weed boards, the public, WSDA, county government, and the scientific community. Four board members are members of, and are elected by, county weed boards, and one member is elected to represent weed districts. A board member is an elected member of a County Commission or Council and is appointed by the Washington Association of Councils (WSAC). A total of six board members are appointed by the WSDA Director. Three are voting members of the WSNWCB. One represents WSDA and two represent the public interests of the eastside and westside of the state. And three are non-voting scientific advisers with expertise in weed identification and control, plant ecology, and aquatic invasive species. Its staff consists of an executive secretary and education specialist. To learn more about the WSNWCB members, please see pages XX-XX.

The Noxious Weed List

The WSNWCB is responsible for creating and updating the state list of noxious weeds that landowners may be required to control. This list is included in WAC 16.750 and determines which plants meet the criteria of a noxious weed, and where in Washington control may be required. The noxious weed list is divided into three categories:

Class A noxious weeds are non-native, invasive species whose distribution in Washington is very limited. Eradication of these plants by all landowners is mandatory. The goal is to eliminate these populations before they gain a strong foothold in the state. There are 39 Class A noxious weeds on the 2013 noxious weed list.



Ground level view of oriental clematis, a new Class A noxious weed. (Sue Bird, Yakima County NWCB)

Class B noxious weeds are non-native, invasive species that are abundant in some areas of the state, but absent or limited in other areas. The statewide goal is to “draw the line” around and contain infested regions, to keep these noxious weeds from spreading into new areas. Class B noxious weeds are designated for control in those areas where they are absent or limited in distribution, or where they pose a specific threat to local agriculture or natural resources. Landowners in these designated areas are required to control and prevent the spread of these noxious weeds. The WSNWCB defines where Class B noxious weeds are designated for control based on the best available distribution information. In those regions where Class B noxious weeds are already widespread, the WSNWCB does not require control, as it might not be economically feasible for landowners. However, county NWCBs have the option of selecting non-designated Class Bs for mandatory control if there is a local concern. Both the WSNWCB and county NWCBs encourage voluntary control and provide information on best management strategies to interested landowners. There are currently 72 Class B noxious weeds on the 2011 weed list.



Rush skeletonweed, a Class B noxious weed, is problematic in parts of eastern Washington and even a few sites in western Washington.



Common teasel was added to the 2013 noxious weed list as a Class C. It is becoming an increasingly familiar site along many roadsides (Ray Willard, WSDOT).

Class C noxious weeds meet the criteria of a noxious weed but are often so widespread that there is no realistic hope of eradicating them from the state. Other times, noxious weeds are added to the Class C list when the distribution is not fully known at the time of listing. The WSNWCB provides educational information about Class C noxious weeds but does not mandate control. County NWCBs may require landowners to control Class C noxious weeds if they pose a problem to local agriculture, natural areas, human health, or cause economic harm to tourism, recreation, or infrastructure. There are currently 32 Class C noxious weeds on the 2011 list.

Once the WSNWCB has adopted the annual

noxious weed list, county NWCBs then adopt their own noxious weed list. By law, they are required to add all Class A noxious weeds and Class B noxious weeds that are designated for control in that county. The county NWCB may then choose to select Class B non-designates and Class C noxious weeds for mandatory control as they deem necessary. It is this flexibility of the state noxious weed list that allows the WSNWCB to prioritize the eradication and control efforts necessary from a statewide perspective while allowing each county NWCB to further customize its weed list to best meet local needs.



Section 2

WSNWCB

Accomplishments of 2011-2013

Washington State Noxious Weed Control Board: Strategic plan for FY11-13

Mission Statement: To serve as responsible stewards of Washington by aiding in the protection and preservation of land and resources from the degrading impacts of noxious weeds.

Goals:

To monitor, document, map, and classify noxious weeds in Washington

Provide statewide noxious weed education and increase public awareness about noxious weeds, laws and regulation, and IPM

Promote and support all county noxious weed control boards and weed districts

Establish and maintain successful working relationships with federal, tribal, state, county, and district land management agencies

Maintain a legal and professional Board and staff

Review, revise, and adopt the state noxious weed list for 2012 and 2013

Redesign of website that is more user-friendly, helpful and content rich

Provide pass-through funding for Class A eradication projects and standardize RFP

Address terrestrial transportation vectors of noxious weeds

Adopt set of ethical guidelines to complement existing policies

Simplify the noxious weed regions and update Class B designations

Produce new brochures about weed disposal, long-term weed management and noxious weed information in Spanish

Help recruit new county weed board members to fill existing vacancies

Address noxious weed control on leased CRP land

Synchronize state weed board election schedule with calendar year rather than fiscal year

Streamline noxious weed list by reclassifying some species from Class B to Class C noxious weeds

Develop new outreach campaign to promote noxious weed awareness

Advise legislators, staff, and local officials about noxious weed impacts, laws, and the beneficial services provided by programs

Improve standardization of listing process.

Report on status of Class A noxious weeds

Update six older written findings

Review Chapter 17.10 RCW and make recommendations

Program Status

The WSNWCB was successful in running a leaner program during the 2011-2013 biennium as its general fund budget was reduced by about 28%. Staff has remained at two FTEs, with the executive secretary and the education specialist, who share administrative duties. Education and outreach and the annual noxious weed list have continued to be top priorities, along with helping to coordinate efforts of county weed boards and weed districts and to be a resource to them for questions about the weed laws and noxious weed identification and control. There were many new county NWCB coordinators and staff joining the noxious weed community over the past two years who were eager to jump right in and get started who had many questions. And as always, the WSNWCB office received many inquiries from the general public, often requesting assistance identifying plants, controlling noxious weeds, or seeking publications. During the biennium, the WSNWCB staff began efforts to reduce paper in the office by archiving rule-making documents and scanning digital copies of important other documents so that hard-copies could be recycled. Without administrative support, this will be a lengthy endeavor that will stretch into the next biennium, but the result will be a more organized office with easier-to-access files, which will benefit the county weed boards and weed districts.

Noxious Weed List and the Listing Process

Changes to the 2012 and 2013 Noxious Weed Lists

The WSNWCB added seven new noxious weeds over the 2011-2013 biennium:

- Oriental clematis, *Clematis orientalis*, was added as a Class A noxious weed in 2012. This climbing vine had recently been discovered in Yakima County, invading riparian areas and densely covering native vegetation.
- French broom, *Genista monspessulana*, was a 2013 Class A addition. This yellow-flowered shrub in the pea family is closely related to Scotch broom; fortunately, its distribution in Washington seems infinitesimal compared to Scotch broom.
- Tall hawkweed, *Hieracium piloselloides*, was added as a Class B noxious weed in 2012. Like other nonnative hawkweeds, tall hawkweed spreads rapidly in pastures and rangelands, displacing native forbs and grasses that livestock and wildlife rely on for food.
- Tree-of-heaven, *Ailanthus altissima*, was added as a Class C noxious weed in 2012. This tree was once used as an ornamental, but it rapidly forms dense thickets that outcompete native vegetation, and its roots can damage infrastructure in more urban areas.
- Common teasel, *Dipsacus fullonum*, was listed as a Class C noxious weed in 2013. Although common teasel is not new to the state, it appears to be spreading more rapidly in recent years. It thrives in disturbed areas but it is becoming increasingly problematic in pastureland and farmland in parts of the state.
- Common barberry, *Berberis vulgaris*, was another 2013 Class C addition. This shrubby species is capable of invading pastureland and disturbed habitat, but it is its role as an alternative host for stem rust that makes it a serious threat to cereal grain growers. Although existing rules require the destruction of common barberry plants in the wheat-producing parts of the state, the noxious weed listing should help with outreach efforts.
- Japanese eelgrass, *Zostera japonica*, has been a complicated listing issue for the WSNWCB over the past few years. Shellfish growers have expressed concern that this nonnative grass-like plant has been invading once-bare mudflats and significantly reducing yield of shellfish, particularly hard-shell clams, and increasing costs to manage and maintain shellfish beds. However, in natural areas, this species also appears to share similar structure and some beneficial functions with the important and protected native eelgrass, *Zostera marina*. In 2012, the WSNWCB listed Japanese eelgrass as a Class C noxious weed on commercially managed shellfish beds only. Then in 2013, the WSNWCB removed the modification to the listing, making Japanese eelgrass a Class C noxious weed everywhere, noting that in spite of any beneficial characteristics, Japanese eelgrass still met the criteria of a noxious weed in that it was a nonnative species that was difficult to control, was causing substantial economic losses to the shellfish industry, and was transforming bare mudflat ecosystems.

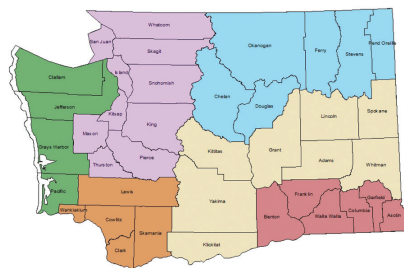
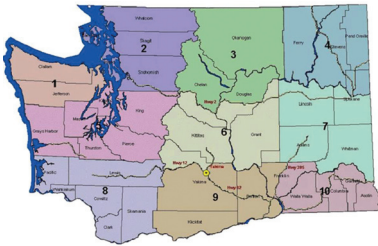


Improving Process

The WSNWCB continued its efforts to simplify and make the noxious weed list easier to understand. As directed by RCW 17.10.080, the WSNWCB incorporated guidelines for the noxious weed listing process as a new section (WAC 16-750-022) for 2012. The codification of the listing process will ensure better consistency in the listing process. The WSNWCB also changed the board member term date to follow the calendar year rather than the fiscal year so that newly elected WSNWCB officers can begin their terms at the start of the noxious weed listing period, rather than starting mid-way through the listing process.

For the 2013 noxious weed list, the WSNWCB simplified the Class B designation regions. The designation regions were originally based on ten eco-regions of the state (below, left). This approach made logical sense from an ecological perspective. However, it resulted in several counties being split into different regions, which could cause confusion to landowners in those counties trying to determine their Class B control obligations. Reducing the number of regions from ten to six and keeping counties intact rather than splitting some between

two regions, made the noxious weed regions simpler and easier to understand (below, right). Recreating the designation regions also provided the opportunity to update all the Class B designations based on current distribution to improve accuracy. WAC 16.750.005 is now streamlined and easier to read.



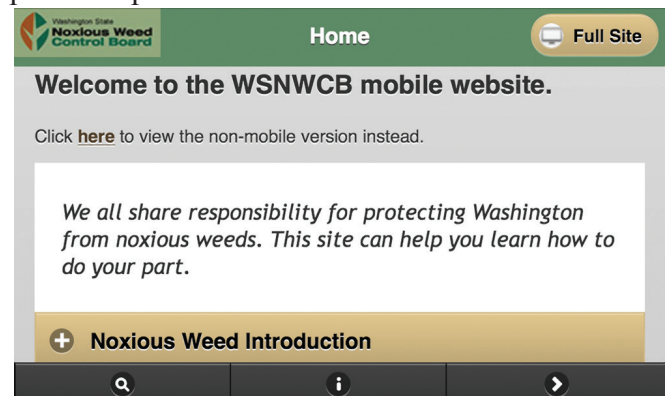
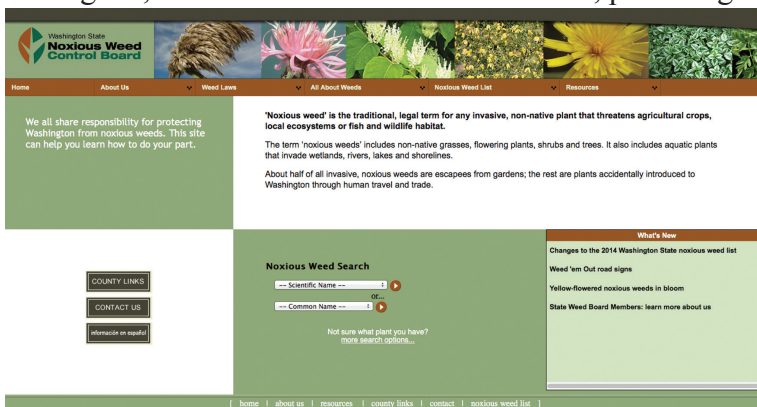
The WSNWCB also reclassified eleven Class B noxious weeds as Class C noxious weeds. Reclassifying these species as Class C noxious weeds does not affect the size of the state noxious weed list but could potentially reduce the size of county weed lists and allows county weed boards to prioritize noxious weeds of local concern.

Education

An informed public is an empowered public, which is why education and outreach is such a high priority for the WSNWCB. More people will voluntarily control noxious weeds on their property and will be alert for new introductions of invasive plants when they understand how devastating noxious weeds can be. The WSNWCB serves as a central hub of information, education, and outreach for county weed boards and weed districts by helping to provide them with the materials they need to educate residents and landowners. The WSNWCB staff also strives to directly educate Washington residents through its own outreach efforts.

Website

One of the most effective and cost-efficient outreach tools is a good website, and this biennium the WSNWCB's redesigned, database-driven website went live, providing the public improved access to information



The homepage of the new WSNWCB website (above left) and the complementary mobile version (above, right).

about noxious weeds, including a page in Spanish. The launching of the new website was followed with a corresponding smart phone version of the site. This version of the website provided users quicker access to key information on noxious weeds from their mobile devices, while still providing access to the full website if preferred.

New outreach campaign

During this biennium the WSNWCB contracted with the marketing company Drake Cooper to develop a suite of outreach logos with slogans to draw awareness about noxious weeds. The positive messaging was targeted for the general public and intended to remind everyone that noxious weed control benefits our agriculture and natural resources in Washington. A total of four logos were developed, along with the slogans “Weed ‘Em Out” and “Weed ‘Em and Reap”, and follow-up phrases “remove noxious weeds, protect our resources”, or “noxious weeds damage our resources”. So far, the logo has been successfully used on a variety of outreach products, including eight road signs, small litter bags, magnets, bumper stickers, and a fun sticker intended for kids. The logos are now used in all WSNWCB publications and have been distributed to all county weed boards for their own use.



Presentations and Outreach

The WSNWCB believes open dialog is an effective means to inform the public about the importance of noxious weed control – whether it’s introducing the problems of aquatic noxious weeds to a cabin full of kids at fly fishing camp, or presenting at the annual Washington State Weed Conference, which has an average of 600 attendees. WSNWCB staff gave many presentations throughout Washington State including several talks at pesticide recertification classes provided by several county weed boards, CWMAs, growers’ associations, forestry meetings, and professional conferences. Many other presentations and trainings on noxious weeds were given to volunteer groups, field crews, and school students. The WSNWCB also continued to provide a presence alongside USDA/WSDA nursery inspectors at the annual Northwest Flower and Garden Show, which is held every February at the Seattle Convention Center. WSNWCB staff also sat on the policy panel at a two-day workshop about Japanese eelgrass that was sponsored by ECY in June 2013.

To further educate themselves and to learn about current noxious weed problems and control efforts, staff attended several tours and events, including tours provided by the Asotin, Cowlitz, Okanogan, and San Juan counties NWCBs, Southeast Washington CWMA, and the Weeds Cross Borders CWMA. Staff also visited false brome eradication efforts in Skamania County, the new garlic mustard infestation in Okanogan County, giant reed (*Arundo donax*) cultivation efforts in southeast Washington and northeast Oregon.

Publications

The WSNWCB serves as a central hub of information, education, and outreach for county weed boards and weed districts, especially those on a limited budget. In fact, almost half of county weed boards and several weed districts rely on the WSNWCB as their primary source of publications. The remaining county weed boards supplement their own program publications with WSNWCB materials. These publications are widely distributed to county weed boards and districts, conservation districts, teachers, state and county agencies, non-profit organizations, private businesses, gardening and outdoor groups, and directly to the general public. This biennium saw the creation of several new publications, including:

- Two full-color brochures in Spanish: one tailored to eastern Washington and one to western Washington, about the noxious weed laws and classifications, and each featuring some high priority noxious weeds. These brochures were a collaborative effort between WSNWCB and WSDA.
- An additional eleven Early Detection/Rapid Response (ED/RR) postcards were created, designed to alert the public to Class A and B noxious weeds. The WSNWCB partnered with WSDA, the USFS, and WSU Extension's Integrated Weed Control Project (IWCP) to produce these popular postcards.
- A door hanger on knotweed species detailing identification, impacts, and control methods. The WSNWCB partnered with WSDA, USFS, and WSU Extension's IWCP to produce this first door hanger.
- A brochure on proper noxious weed disposal methods. This high-demand brochure has already been printed a second time during this biennium.
- The "Full Circle" brochure, which was based on a popular brochure by the Lincoln County NWCB. It encourages landowners to think about long-term management plans after noxious weed control, and stresses the importance of planting and promoting healthy plant communities after control efforts.

Due to high demand, the WSNWCB also reprinted some popular, tried-and-true publications:

- The useful pocket field guide Noxious Weeds that Harm Washington State – for western Washington.
- The wildly popular booklet Garden Wise: Non-invasive Plants for Your Garden – for western Washington that included updated information. This was the fifth printing of the western version.
- Brochures detailing identification, impacts, and control measures for tansy ragwort and poison hemlock.
- Many of our popular Early Detection/Rapid Response (ED/RR) postcards.

I

In the news

Since the 2010 tragic fatality of a woman who accidentally ingested poison hemlock, the WSNWCB has been distributing a press release to Washington newspapers every spring, explaining how to identify and safely control this Class B noxious weed and providing information about the symptoms of poison hemlock exposure and contact information for the Washington Poison Control Center. Tapping into another mode of outreach, we provided pictures of poison hemlock and a link to our poison hemlock brochure on the WSDA Facebook page in 2013, and it received one of the highest number of Facebook shares they had ever had. WSDA also tweeted about poison hemlock, which was frequently retweeted.

The WSNWCB also distributed a press release in 2012 on another toxic, noxious weed in Washington, tansy ragwort. This yellow-flowered Class B noxious weed can be toxic to people, but it is mainly a concern for livestock and other animals. Weather conditions in 2012 allowed tansy ragwort \ to thrive, so a press release seemed timely. This plant can be toxic as live or dead plant material so information was included about identification, impacts and how to control and dispose of it. A number of newspapers, websites and even news stations covered the story, providing a wide distribution of this important information.

During this biennium, Capital Press provided us an amazing outreach opportunity by featuring each of our ED/RR postcards in their western region publication at no cost to us when they had unfilled advertising space. This dramatically increased outreach efforts, which is key when trying to detect noxious weeds early, and provided us an opportunity that would normally costs thousands of dollars as paid advertising.

The 2012 listing of Japanese eelgrass as a Class C noxious weed on commercially managed shellfish beds drew much interest, and WSNWCB staff was interviewed in a radio story that was broadcast on NPR news in 2011.



Tansy ragwort in a King County pasture. It was evident that many of the plants had been eaten by cows (King County NWCB).

Funding of Class A Eradication Projects and Other Special Projects

Due to budgetary reductions this biennium, the WSNWCB was not able to allocate as much pass-through funding towards Class A eradication projects and other special projects to support noxious weed control efforts on the ground as was done in past years. During FY12, \$18.2K was provided as pass-through money to county weed boards and other agencies towards Class A eradication efforts. The WSNWCB simplified its funding process by developing a form for the RFP. This format was quicker and easier to fill out than writing a full proposal and meant that proposals submitted by a part-time program coordinator would be competitive with those submitted by designated grant-writers. WSNWCB members were also better able to make direct comparisons between proposals. Programs that received funding were required to provide a final report as part of the deliverables to track progress of the funded projects.

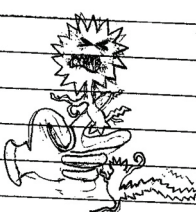

Although funding amounts may appear relatively modest, the WSNWCB feels that supporting these eradication projects is critical in making progress in Washington. Moreover, since the WSNWCB does not fund overhead costs and many applicants are able to provide in-kind matching funds (though not required), each dollar the WSNWCB invests yields greater on-the-ground results. Many programs are able to leverage additional funding from local, state, or federal government or through collaborative partners. The eradication projects that the WSNWCB supported during the FY11-13 biennium, are summarized below.

FY12				
Agency	Eradication Project	Area treated	Amount	In-kind
Chelan County NWCB	common crupina	17 acres (14.5 private)	\$3,000	\$1,800
Clark County NWCB	milk thistle	11 acres	\$2,500	\$2,540
Cowlitz County NWCB	slenderflower thistle	7 acres	\$2,500	\$2,700
Mason County NWCB	giant hogweed	7 sites	\$3,000	n/a
Okanogan County NWCB	wild four o'clock	17.4 acres (3,600 acres surveyed)	\$3,000	\$2,000
Stevens County NWCB	Mediterranean sage	20 acres across two properties	\$1,200	\$30
Thurston County NWCB	shiny geranium	32 parcels treated multiple times	\$3,000	\$2,000

FY13				
Agency	Eradication Project	Area treated	Amount	In-kind
Asotin County NWCB	Mediterranean sage	135 acres treated (1,000 acres surveyed)	\$2,500	\$4,300
Clark County NWCB	milk thistle	927 acres surveyed, 36 parcels infested, all known plants treated	\$2,500	\$2,545
Cowlitz County NWCB	milk + slenderflower thistle	10 properties with 6 total acres treated; 50 adjacent landowners contacted	\$2,500	\$2,100
Okanogan County NWCB.	wild four o'clock	10.5 acres treated, 25 landowners assisted	\$2,500	\$3,865
Skamania County NWCB	garlic mustard, shiny geranium, false brome	44 acres of GM treated, 2.5 acres of SG treated, 0.09 acres of FB treated, plus education to 100 residents and 300 weed warriors	\$2,500	\$3,000
Thurston County NWCB	shiny geranium	95 treatments/retreatments on 41 parcels	\$3,000	\$7,040

Section 3

County Noxious Weed Control Boards

3/28/13
Thank you farm fair!
Dear weed control,
I thank you for your presentation.
I am glad I learned about how harmful weeds can be. Once at my aunts pasture a cow named, lady, ate yellow thistle and started wobbling around. My aunt thought she might have had mad cow disease. When lady died, we found out what she had ate.
I feel much more safe now.
Thank you
Sincerely,  
Mrs. [redacted] class

Education is the foremost priority of many county noxious weed boards. Many noxious weeds are dangerously toxic to humans, such as poison hemlock and giant hogweed, and to livestock as well, including yellow starthistle and tansy ragwort. Thus, county weed boards provide a local safety service when they educate about these plants. Moreover, landowners are far more likely to voluntarily control their noxious weeds when they understand why these plants are a problem and the options they have to control them.

Summary

County NWCBs and Weed Districts have the daunting task of ensuring that landowners in Washington comply with the noxious weed laws. Each county NWCB is responsible for surveying for noxious weeds, educating landowners on how to control them, and, when necessary, enforcing the laws that require landowners to control or eradicate certain noxious weeds. Some programs are well funded and have permanent full-time and seasonal staff to carry out these duties. Others are more modestly funded and can only afford to employ a part-time coordinator to implement that county's NWCB top priorities to the best of his or her abilities. This disparity in funding, along with local political preference, helps explain why county NWCBs vary widely on how closely they follow Chapter 17.10 RCW. Some counties focus exclusively on education and persuasion and rarely or never actually require landowner compliance with the law. Enforcement procedures can be time-consuming and many programs lack the staff to carry out such actions. Unfortunately, it can impede the progress on noxious weed control and eradication at the local, regional, and state levels, and can cause conflict between neighboring landowners.

Most counties follow these basic steps when a noxious weed whose control or eradication is required, whether or not they enforce the noxious weed laws. First, the county NWCB verifies the ownership of the land parcel. Next, the landowner receives a written notice, such as a letter, door hanger, survey notice, and educational material about the presence of the noxious weed or weeds growing on his or her property. Many county NWCB and Weed Districts take the steps to explain: 1) what the noxious weed is; 2) how to identify it; 3) why it poses a problem; and 4) what the control options are. According to a survey conducted in the spring of 2011, every single county NWCB in the state takes these first steps. If the landowner fails to comply within the time given, 25 (64%) of the county NWCB will then send a more formal Notice of Violation (NOV). If the landowner does not attempt to contact the county NWCB to arrange a weed control plan, then 21 (54%) county NWCB may choose to follow-up in one of two ways. First, a county NWCB may, following appropriate procedures, come and perform the noxious weed control or eradication work and then bill the landowner. If the bill is not paid, it becomes a lien on the property that must be settled when the property is sold. Alternatively, County NWCBs may issue a civil infraction with a monetary penalty that is handled through the local court system.

It cannot be emphasized enough that the majority of contacts made to landowners result in voluntary compliance, and further enforcement actions are usually only a last resort. The Thurston County NWCB analyzed its compliance activities in 2010 and found that while enforcement is a very effective tool, it is not used as frequently as people might think. Although these statistics have been noted before, they bear repeating. Of 2,670 noxious weed infestations where control was required, only 128 formal NOV's were sent to landowners who did not control their noxious weeds after initial communication was made. Only 7 of these NOV cases resulted in full enforcement. In other words, 95% of these landowners receiving NOV's voluntarily controlled their noxious weeds after receiving the formal notice, and *99.75% of noxious weed infestations in Thurston County were voluntarily controlled.*

Currently, 38 of the 39 counties have noxious weed control boards. Douglas County still lacks a NWCB. The WSNWCB believes strongly that every county in Washington should have an activated county noxious weed control board.

Review of Budgetary Situations

County weed boards are financed through one of two sources: a county's general fund or through a small assessment on property taxes. The assessments are typically levied on each parcel of land, with an additional few cents per acres for larger landholdings, and exemptions for certain land uses, such as forestry. During the 2011-2013 biennium, twenty-four NWCB were funded through county assessments; the remaining fourteen programs were supported by general funds. All weed districts are funded through assessments.

Two general conclusions can be made about county weed board funding. First, those that rely on county general funding are more vulnerable to reductions than those that are funded through assessment fees. Second, many

counties recognized the value of their weed board programs providing necessary services to their residents, and how an increase in investment now can save both economic and ecological resources in the future.

County Noxious Weed Board Membership

One of the biggest challenges of many county noxious weed control boards is filling vacancies in board membership. This is due to several reasons, some of which can be remedied. One such issue is the board member requirements in 17.10 RCW, which were written to ensure that the majority of county weed board members were engaged in agriculture. Moreover, each county must be divided into geographic regions such that each board member represents a district. As agriculture has, unfortunately, dwindled in several counties (particularly on in western Washington), it's been more difficult to find prospective board members that meet both criteria: engaged in primary agriculture and living in a specific district. Agricultural lands are not equally distributed throughout counties; rather, they are often concentrated where conditions are most amenable to farming. Many county weed boards - both in eastern and western Washington have had chronic vacancies due to these criteria. There may also be a larger problem that is not limited to county weed boards: declining levels of volunteerism over the years. It seems like it is harder and harder for many people to find time to commit to a long-term county weed board position. Many current county weed board members are retired, and so are able to donate their time more easily. Some of these dedicated men and woman have served on their boards for decades. But as they step down, it's been harder to find replacements who meet the criteria and have the time to serve. On the plus side, those who do volunteer usually do so because they deeply care about the fate of agriculture and natural resources and understand the importance of serving on their local county noxious weed control board.

Weed Control Through Regional Cooperation and Collaboration

Just as noxious weed infestations can span across political boundaries, so too do weed control efforts. One popular approach to regional weed problems is the formation of Cooperative Weed Management Areas (CWMAs). These are multi-agency and multi-jurisdictional groupings that may include federal, tribal, state and county government agencies, and non-profit citizen organizations. People create CWMAs to improve the effectiveness of weed control efforts in a region or watershed. Sometimes a CWMA is created to address a specific weed or infestation, and it grows into a broader and more long-lasting cooperative effort. Some CWMAs are formal organizations with bylaws and memoranda of understandings (MOUs) among members, while others are much more informal groupings of people who simply want to share resources, knowledge, and enthusiasm, to improve their effectiveness. The flexibility of the CWMA model allows for customized efforts to make the most of limited resources, and this is what makes them so successful.

In 2008, there were 28 known CWMAs in Washington State, some of which had partners in neighboring states and in British Columbia. Between 2009 and 2011, another six CWMAs were formed: The Southwest Washington CWMA; Lower Columbia River System CWMA; South Central CWMA; Pend Oreille Aquatic Invasives CWMA; International Control of Invasive Aquatic Vegetation for the Upper Columbia River System CWMA; and the Quinault Watershed Knotweed Group. Currently, about 90% of county weed boards belong to at least one CWMA, though their level of participation may vary.

Success Stories: Calling all volunteers!

There were many accomplishments in the noxious weed world throughout the biennium, and this report highlights a few success stories at different stages of weed control: early detection/rapid response and the collaborative efforts to control existing and persistent noxious weed infestations.

The first stage is the most cost-efficient: prevention of new weed infestations. The earlier an invasive species is detected, the easier it is to eradicate or destroy. It takes less effort and fewer resources to control a small infestation. In some cases, all it takes is a vigilant hiker to recognize a few noxious weed plants growing along a trail, pull them out, and stuff them in a bag for disposal. A simple action by a hiker or hunter can stop a new infestation in its tracks. The ability to detect new infestations early pays off immensely in the long run. In late

June of 2012, an Okanogan County NWCB inspector Larry Hudson attending a routine on-site consultation with a landowner located near Lake Palmer when he noticed a plant that looked out of place. Upon closer inspection, he realized it was the Class A noxious weed garlic mustard. This invasive plant is known primarily in western Washington in the Columbia Gorge region and in King County, although new infestations keep popping up in nearby counties. It had never really been thought of as a threat in eastern Washington but in 2011, expansive infestations were discovered in eastern Oregon, which was a big surprise to many. A more thorough survey of the area in Okanogan County showed that there were actually four small sites containing garlic mustard. The concern was that the deer that roamed throughout the area could potentially spread the seeds further out into wilderness areas where plants would be harder to find and more costly to treat. The Okanogan County NWCB contacted all landowners, who understood the seriousness of the problem and allowed them to treat the garlic mustard. During a follow-up herbicide application in 2013, there was only one living plant detected. The Okanogan County NWCB will continue to monitor the area carefully for any new seedlings to emerge.



Education specialist Wendy DesCamp takes notes as Okanogan County NWCB inspector Larry Hudson gathers GPS data about a new garlic mustard infestation that he discovered there.

It was because of training that allows county weed board staff to detect new noxious weed infestations – even recognizing plants that are new to the area. Training field staff, citizen scientists, and outdoor enthusiasts to be alert for the presence of new infestations of known noxious weeds and the presence of new invaders in Washington is a very effective way to expand survey efforts in Washington. Armed with this new technology, these volunteers are now able to

document new discoveries in real-time using GPS coordinates – and the information is instantaneously sent to WSDA (see page 20) which then disseminates the information to the WSNWCB, county weed boards, state agencies and beyond. Many county weed boards and CWMAs provide training to interested volunteers, such as the Clark and King County NWCBs and the Columbia Gorge CWMA.

Pacific Northwest Invasive Plant Council: EDRR Citizen Science Program Accomplishments, Julie Combs

The PNW-IPC (Pacific Northwest Invasive Plant Council) developed and implemented an EDRR (Early Detection Rapid Response) Citizen Science Program in 2012 working in partnership with WSDA and other local, state and federal agencies with funding from the National Fish and Wildlife Foundation. To date our program has trained 140 EDRR citizen scientists to identify 30 target EDRR species and conduct surveys in urban, rural and natural areas on county, state and federal public lands. Of the 140 trained, 81 citizens signed up to be volunteers for the PNW-IPC EDRR Citizen Science Invasive Species Program.

The PNW-IPC EDRR volunteer citizen science program coordinated and partnered with over 35 individuals from eight agencies (e.g., WSNWCB, DNR, USDA Forest Service, NPS, County Parks, etc.) within 15 WA counties (San Juan, Whatcom, Clallam, Jefferson, Mason, Snohomish, Grays Harbor, Thurston, Pierce, Lewis, Cowlitz, Skamania, Kittitas, Yakima and Klickitat) in an effort to reduce invasive species in WA state.



Image courtesy Julie Combs

We conducted seven trainings in the classroom and field in 2012-2013 in eastern and western Washington. Each volunteer was trained to identify 30 EDRR species, conduct survey reports and learn how to eradicate the species if found and if it was appropriate to remove (e.g., if not toxic, if infestation was small enough etc.). We developed training materials which included identification booklets with color images, distribution and identification

information for the 30 target EDRR species. We also provided volunteers with maps of priority search areas and trails identified by partners (e.g., DNR, USDA Forest Service, Nisqually Land Trust) and trained volunteers on how to fill-out survey forms. Additional priority species lists were provided to volunteers who were interested in (and had the botanical expertise) expanding the scope of target EDRR species. For example, the Gifford Pinchot and Olympic National Forest managers provided us with additional lists of site-specific priority species that reached beyond the 30 species covered in the trainings.

In 2012-2013, volunteers conducted 113 surveys covering 1,393 acres within 15 WA counties. The number of acres surveyed from our pilot year in 2012 to 2013 increased by 346% indicating a sharp increase in participation in our program in year two (2012 – 247 acres surveyed; 2013 – 1,146 acres). A large portion of the total surveys (43%) detected EDRR invasive species and in many cases infestations were small enough that volunteers were able to manually remove them in situ before they had a chance to establish and spread. Volunteers invested 1,259 hours of survey time and travelled 13,138 miles to and from survey sites! Both positive (EDRR's found) and negative (no EDRR's found) survey reports that included GPS points of EDRR species found and area surveyed were sent to land managers responsible for eradication. Negative reports were considered just as valuable as positive reports because managers want to know where invasive species do not occur as well as where invasive species occur in order to guide volunteer survey efforts.

Volunteers were extremely effective at finding and helping (directly and indirectly) to eradicate Class A and Class B EDRR species in WA State and helping to identify new priority species. For example, one volunteer documented the occurrence of a Class A noxious weed, shiny geranium in Cowlitz County. The volunteer reported the occurrence and within days the Cowlitz County Noxious Weed Board coordinator was able to treat and eradicate this newly emerging infestation. Many volunteers were able to immediately eradicate the infestation by hand-pulling. For example, several volunteers removed small infestations of the Class B noxious weed tansy ragwort from trails in Wilderness Areas in National Forests. In addition, one volunteer who is an expert botanist identified a new priority species in the Gifford Pinchot National Forest (*Arctium lappa*) and as a result was added to the Gifford Pinchot priority weed list. This particular volunteer commented that..."Finding "new" plant species and researching and learning to recognize them – that's the fun part and payoff of this project."

There were numerous short and long-term benefits of this program to the community and the environment. Immediate benefits to the community were (but not limited to) 1) an increase in public awareness of vital issues related to invasive species impacts, 2) opportunities for meaningful hands-on experiences for community members to be involved in conservation practice, 3) increased communication and collaboration among private landowners, NGO's, and state and federal agencies and 4) monitoring for invasive species on over a thousand acres of public that lead to the decrease in numbers of newly establishing invaders within 15 WA State counties. Key long-term benefits and outcomes included: 1) cultivation of lasting stewardship values related to local and national conservation issues and 2) improved wildlife habitat and 3) protected ecosystem and watershed health within target survey areas. Because our program is volunteer based, it is a cost effective means to maintain biodiversity, promote ecosystem health and ensure safe and memorable recreational opportunities for visitors on public lands.

The tackweed coalition, by Robin Kusske, Franklin County NWCB

Have you ever been coerced into coming up with a project because of a volunteer? One dedicated Weed Warrior, Merry Lowe (who also happens to be the sister of our long time Board Member Dave Beach), decided to volunteer her services to the Franklin County Noxious Weed Control Board. It was left to me to come up with a project worthy of her enthusiasm. Both Merry and her brother are avid bicyclists so it was natural to turn her energy into a project she could really sink her teeth into, Tribulus terrestris (commonly known as Puncturevine, Tackweed and Goatheads). For those of you in eastern Washington, you have already learned to hate this thorny pest that is the nemesis of hikers, pets and bicyclists alike. To that end we conscripted,

um I mean gained the cooperation of, Dan Dotta, Facilities Services Manager of the City of Pasco. Dan was instrumental in forming the Tackweed Coalition and our event, the Great America Tackweed Pull. Dan is our liaison with the U.S. Army Corps of Engineers, idea man, and our supplies coordinator. As agencies working together we have developed a program that benefits our community as well as helping us reach our individual goals.



Tackweed Coalition members Dave Beach, Vic Reeve, and Merry Lowe. Image courtesy Robin Kusske,

The Tackweed Coalition advocates “Pull a weed a day keeps the Tackweed away” with numerous garbage cans placed conveniently on the path along the Columbia River. Our Tackweed Coalition logo can be found nearby. Kiosks and bicycle shops display posters about Tackweeds and the Tackweed Coalition. Our volunteers can adopt sections of the path and have a sign with their name put up in their section. We had six sections adopted our first year! We also host the Great American Tackweed Pull once a year, where numerous volunteers spend a morning pulling tackweed with a gorgeous view of the Columbia River. With this the third year since our inception we can honestly say, we are making a difference. The amount of tackweed along the Sacajawea Heritage Trail in Pasco has reduced dramatically. With the newspaper, television and radio coverage of our event, our goal of education is well met. I love hearing the “thank you’s” from pedestrians and bicyclists as we pull, as well as the heart warming, “I was pulling” or “how can I help?” when they stop to talk. With that in mind, I would like to give a Big Thank You to Merry Lowe, our own Volunteer Weed Warrior.

Pulling together to remove Scotch broom in western Washington

Just as puncturevine is a real pain in eastern Washington, Scotch broom causes real grief on the westside. In springtime, usually starting around mid-May, much of the landscape is ablaze in yellow as Scotch broom shrubs bloom. Because this Class B noxious weed is so widespread throughout most of western Washington, it is not designated for control in these counties. It would be too much of an economic burden to require all landowners to control it, especially given its persistent seed bank. However, the WSNWCB encourages voluntary control of Scotch broom, as do county weed boards, many of whom loan out weed-pulling tools free of charge for



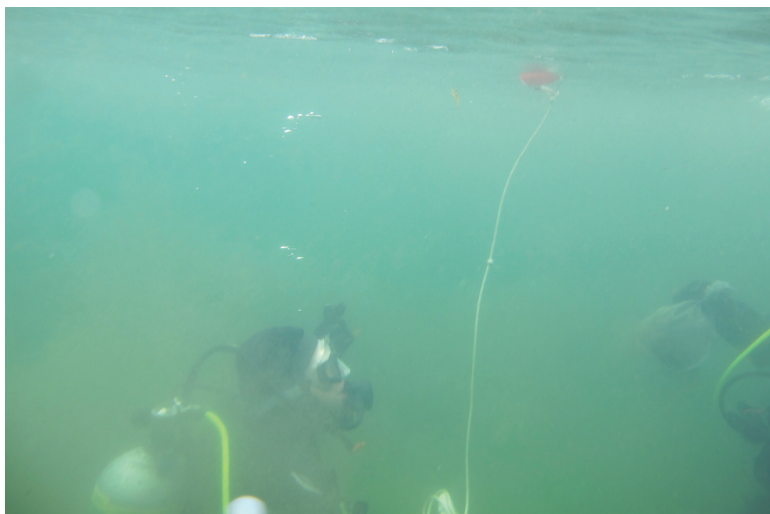
Broom Busters busting broom on the Olympic Trail. Image courtesy Gretha Davis

Scotch broom control. And many land managers make Scotch broom control a priority in susceptible areas, particularly in precious native prairie land. Many volunteer groups make Scotch broom control the focus of their efforts as well, and many county weed boards are active participants. For example, borrowing weed wrenches from the Clallam County NWCB, the Broom Busters worked as a team to pull Scotch broom along the Olympic Discovery Trail. According to Weed Warrior and Broom Buster organizer Gretha Davis, the group started work in Blyn on May 1 and wrapped up on May 29 in Sequim. As a result of their intense labor (137 logged volunteer hours!), Scotch broom was removed from five miles of the Olympic Trail. They plan to continue their efforts new year. Meanwhile, in Island County, the NWC also loaned out weed wrenches. The part-time weed coordinator also released the biocontrol *Bruchidius villosus* at ten sites, participated with Friends of Camano Island Parks to remove 4.43 tons of Scotch broom from the Iverson Preserve, assisted the Whidbey Watershed Stewards to remove Scotch broom from the Robinson Rd. County Park, and signed up a person through the

Adopt-A-Road program to pull Scotch broom along Ault Field Rd. Just because Scotch broom abounds on the westside does not that everyone has given up the fight!

Section 4

Noxious Weed Control throughout Washington: State Agency Updates



Nate Lubliner (above) of the Washington State Dept. of Ecology sets a float marker for divers (below) to collect flowering rush rhizomes (images courtesy Laurel Baldwin and ECY).

Washington Department of Agriculture

This section of the report was authored by WSDA.

The Washington State Department of Agriculture's (WSDA) noxious weed activities include two areas of focus. The Department's general statewide weed program and associated projects led by the Pest Biologist stationed in Yakima and the specialized wetland and marine noxious weed projects led by the Pest Biologist based in Olympia. The Department works very closely with county noxious weed boards, tribes, non-profits, and other agencies at all levels of government to accomplish prevention, containment, control and eradication of noxious weed populations. WSDA staff interact with peers in neighboring states and throughout the nation to share information and data relating to noxious weeds through participation in groups such as the Western Weed Coordinating Committee, the North American Invasive Species Management Association and the State Weed Coordinators Alliance.

The Department is involved in many cooperative projects that benefit the state battle against noxious weeds. WSDA receives grants from the United States Forest Service, Forest Health Protection Invasive Plants Program (USFS) to support and augment the existing Washington State Noxious Weed Management Program. The Pest Biologists work closely with USFS to carry out noxious weed survey and control projects on private and public lands and facilitate Early Detection, Rapid Response programs and projects. A portion of these funds are used to support existing programs including the Washington State University Integrated Weed Control Project and the Washington Invasive Species Council. The remaining funds are made available to local, state, tribal or non-governmental weed control entities through an open competitive grant program with primary consideration given to projects that provide statewide benefit. Proposals are evaluated and ranked based on criteria developed in consultation with USFS.

WSDA administers a National Pollutant Discharge Elimination System (NPDES) permit for use of herbicides to control emergent aquatic noxious weeds in Washington State. The general permit addresses the indirect discharge of herbicides, adjuvants, and marker dyes into estuaries, marine areas, wetlands, along lake shorelines, rivers, streams, and other wet areas to manage *Spartina* and freshwater noxious weeds (such as purple loosestrife) in Washington. WSDA contracts with appropriately licensed entities to conduct local treatments as part of the agency's statewide noxious weed projects covered under the permit. WSDA staff conduct necessary water quality monitoring of treatment sites in support of the permit requirements. In 2013 the Department updated the Integrated Pest Management Plan for Freshwater Emergent Noxious and Quarantine Listed Weeds. <http://agr.wa.gov/PlantsInsects/Weeds/NPDESPermits/docs/IPMFreshwaterEmergentNoxiousQuarantineListedWeeds.pdf>



Purple and garden loosestrife treatment in King County conducted under an NPDES permit.

The Pest Biologists participate as partners in several multi-agency task forces and Cooperative Weed Management Areas (CWMA). Support is provided through funding, technical support and organizational assistance. The Department's participation with the Washington Coordinated Resource Management program also provides facilitation and other resources to coordinated natural resource groups. WSDA plans to expand the CWMA webpage on its website and plans to continue to support CWMA's and other similar groups in the next biennium.

In 2013 WSDA partnered with the Washington State University Integrated Weed Control Project, the Department of Ecology, the states of Montana and Minnesota and the province of British Columbia to initiate a project to develop a biological control agent for the Class A noxious weed flowering rush (*Butomus umbellatus*). Funding was provided by the partners and an agreement with the Centre for Agricultural Bioscience International (CABI) in Switzerland was executed by WSDA. In the first year of the project a number of potential agents were identified and collected in foreign countries. Host specificity testing is set to begin in 2014. Other states and provinces including Oregon, Idaho and Alberta have expressed an interest in providing funding and support for the project as it moves forward.

The Department continues to support the successful, multi-agency purple loosestrife biological control program. WSDA and Ecology continue to cooperate in several projects designed to mitigate the effects of various wetland noxious weed species, including invasive Phragmites and flowering rush. The Department received a grant from the Department of Ecology to develop the Yakima River Integrated Aquatic Plant Management Plan which was completed in 2013. Members of the Yakima River Cooperative Weed Management Area including the Yakama Nation assisted in development of the plan.

WSDA Invasive Knotweed Update

In Washington State, knotweed includes four closely related noxious weeds; Japanese, Giant, Bohemian and Himalayan knotweed. All four species are invasive and aggressively invade high value habitats displacing native vegetation and negatively affecting riparian areas.

WSDA's knotweed control program focuses on these riparian areas where knotweed exhibits the greatest infestation rate through downstream spread of plant fragments and seed during high-water events. This dispersal method creates a challenging control scenario in which high levels of cooperation between landowners and jurisdictions is an ongoing need.

When controlling knotweed, an integrated pest management (IPM) strategy is selected, however, individual site and plant characteristics determine the treatment method utilized. One IPM strategy requires treatment at the upstream extent of the infestation ensuring that untreated knotweed plant materials will not re-infest treatment sites as it moves down stream in high-water events. Examples of treatment methods are foliar herbicide application, herbicide stem injections, mechanical control methods etc. Treatments are conducted when the knotweed plants are actively growing and vigorous to insure herbicide translocation into the root and rhizomes. Since 2004, WSDA has served as a clearinghouse for knotweed control information and assists various groups interested in control. WSDA also maintains a database of knotweed infestations in the state, fulfills state-level environmental review requirements, coordinates Federal Clean Water Act permit compliance, provides public notification and education materials and publishes required notices.

In 2013, WSDA entered into agreement with 20 program cooperators including 10,000 Years Institute, Center for Natural Lands Management, Skagit Fisheries Enhancement Group, Hood Canal Salmon Enhancement Group, Tri-State Steelheaders, Pierce County Conservation District and the noxious weed control boards of Chelan, Clark, Cowlitz, Clallam, Ferry, Lewis,



Knotweed infestation treatment before (above) and after (below).

Mason, Skagit, Skamania, Snohomish, Yakima, and Whitman Counties. WSDA is also collaborating with Oregon State University and Washington State University regarding support of their biological control programs for invasive knotweed.

Three primary program measures are used to describe the activity level of program cooperators; river miles worked, acres of knotweed treated, and number of landowners assisted. At the end of the 2012 knotweed treatment season approximately 1,169 acres of knotweed were treated using IPM strategies and project work took place on 1,174 river miles assisting 1,808 landowners. WSDA expects similar numbers resulting from the 2013 knotweed treatment season.

WSDA supports Oregon State University and Washington State University in their efforts to develop a biological control program for the control of Japanese, giant, and Bohemian knotweed. In biological control, natural enemies from knotweeds native range would be introduced to the infested area to provide long-term suppression of the plant population. Two different strains of sap-sucking psyllids are being considered for this control. Rigorous testing is being carried out using knotweed and other native plant species to ensure that the psyllids will not negatively impact native or economically important non-target plant species.

WSDA Spartina Update

In 2012 WSDA along with state and federal partner agencies, tribal entities, local governments and landowners treated or removed approximately 9 solid acres of Spartina in Puget Sound, Grays Harbor and Willapa Bay.

During the summer of 2012 this coalition and the aquaculture industry cooperatively treated over 7.4 acres in the Puget Sound and approximately 1.4 solid acres of Spartina scattered throughout Willapa Bay.

The combined statewide effort to eradicate Spartina in the marine waters of the state over the past nine years has reduced the overall infestation by over 99%.

With the largest of the state's infestations controlled, the effort has evolved into a 'survey and eradicate' model focused on finding and treating the remaining individual plants and scattered infestations that exist throughout the previously infested area. This requires significant personnel on the ground to give individual attention to the same areas that helicopters or large machines were previously able to cover in a relatively short amount of time. The amount of herbicide needed to treat the infestations has declined, bringing herbicide costs down. However, the number of personnel needed has increased labor costs. As a result, to meet the program's goal of eradicating Spartina, continued funding is imperative over the next three years.



A Spartina anglica clone growing in shoreline cobble in the San Juan Islands.

For more information see WSDA's annual Reports at <http://agr.wa.gov/PlantsInsects/Weeds/Spartina/>

Washington Department of Ecology

Lizbeth Seebacher and Jenifer Parsons

Grant Program:

Ecology has awarded just over \$1,041,000 in grant funding to cities, counties, state agencies, tribes, special purpose districts or universities for a variety of aquatic invasive plant projects.

Ecology's Aquatic Invasive Plant Program funded close to a dozen projects developing Integrated Aquatic Vegetation Management Plans (IAVMP) throughout the state during this biennium.

Several projects focusing on Brazilian elodea (*Egeria densa*) and Parrot-feather (*Myriophyllum aquaticum*) control were completed in this biennium. Both species are found primarily in southwestern Washington and the goal is to hopefully contain this highly invasive species to these counties. Eurasian watermilfoil (*Myriophyllum spicatum*), the most abundant aquatic invasive species in Washington State, accounted for the bulk of Ecology's projects under this program. Up to ten of the projects funded this biennium are for Eurasian watermilfoil projects, and most of the IAVMP's were developed for controlling or eradicating this species from lakes and/or rivers. More information about individual projects and funding levels is available at <http://www.ecy.wa.gov/programs/wq/plants/grants/index.html>

Special Projects:

We continued battling variable leaf milfoil (*Myriophyllum heterophyllum*) on four lakes in Pierce and Thurston Counties, the only water bodies infested with this species in Washington State. Through this program at Ecology and in partnership with the Pierce County Noxious Weed Control Board and the Clear Lake Community Association, we have been able to contain this invasive species to these lakes and almost eradicate it from Josephine and Florence lakes. Continued eradication efforts are taking place in Clear and Blue Lakes and surveys will be maintained for all four lakes as well as the fifth lake where eradication has been achieved.

Ecology has also focused money on flowering rush (*Butomus umbellatus*) control research. We are involved in a partnership with WSDA, WSU, and agencies in Montana to fund and assist with biocontrol research conducted by the international biocontrol research organization CABI to look for a biocontrol agent for flowering rush. In addition, Ecology partnered with the Whatcom County Noxious Weed Control Board to continue herbicide research. Results from that project show promise and research and monitoring will be continued into the future.



A flowering rush infestation dominates emergent vegetation in the Spokane River.

Aquatic Plant Monitoring:

Ecology continues to monitor aquatic plant populations throughout the state, and to survey lakes where we have funded noxious weed control projects to assess the outcome.

Data from those inventories as well as results from past projects undertaken by the aquatic plant monitoring program are here <http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html>

Aquatic Pesticide Permits:

Aquatic pesticide NPDES permits are developed and issued by Ecology in part to support noxious aquatic weed control. Invasive eelgrass (*Zostera japonica*) issues were a large part of Ecology's focus over the biennium as we worked to develop a permit to allow an herbicide to be used on commercial clam beds in Willapa Bay. Information on this is available <http://www.ecy.wa.gov/programs/wq/pesticides/index.html>

Washington Department of Fish and Wildlife

David Heimer, WDFW Noxious Weed Coordinator

Washington Department of Fish and Wildlife's noxious weed program is part of a larger vegetation management approach that strives to enhance habitat, improve the recreational experience, and meet legal requirements. Weed control is conducted at the state and local level by staff with land management responsibilities.

Statewide weed issues, special projects, intra-agency coordination and interagency cooperation are the responsibility of the Wildlife Program's Lands Division Noxious Weed Coordinator. For example, *Spartina* control and coordination is addressed by Olympia staff.

Weed control is also carried out at the local by wildlife area and access area land management staff. Each wildlife area complex plan has a standardized weed appendix that identifies high priority weeds on the area, outlines treatment methods, and sets objectives for control. These plans are updated annually, progress related to weed control is noted, and adaptive management is implemented based on results.

Over 15,463 solid acres of weeds, representing 76 species, were treated on agency managed lands according to the most recent, complete survey. This weed control not only enhances habitat for fish and wildlife, but also protects high quality state land and neighboring property from infestation. WDFW's *Spartina* eradication efforts continue to eliminate hundreds of individual plants scattered across thousands of intertidal acres. WDFW is involved in many other vegetation management activities including: Planning for invasive cattail management, planting native trees and shrubs in reed canary grass meadows, implementing controlled burns to improve forest habitat in the Okanogan, spot-treating Mediterranean sage in Asotin County and participating in research that uses bacteria to control cheatgrass.

These management activities improve habitat for fish and wildlife and, in many cases, reduces the need for future weed control.

Department Of Natural Resources

This section of the report was authored by DNR Staff

The Department of Natural Resources (DNR) manages more than 5 million acres of forest, range, commercial, agricultural, conservation and aquatic lands. These lands are managed to produce income to support state services and activities, and to provide other public benefits. Most of the uplands were given to Washington at statehood by the federal government; these state trust lands, managed by DNR, help support public schools, universities and colleges, State Capitol buildings, prisons and state institutions, local services in many counties, and the state general fund. DNR-managed lands also provide many other public benefits, such as areas for outdoor recreation and environmental education, fish and wildlife habitat, protection for rare and representative ecosystems and species, clean air and water. DNR's land management obligations vary, depending upon the location and use; but, noxious weed control is an important part of any land management plan or land use contract. DNR weed control happens in four major areas, including: agricultural and grazing lands; aquatic lands; forested upland; natural areas.

Agricultural and grazing lands

DNR manages over 1.1 million acres of agriculture, grazing, and conservation uses on behalf of numerous Trust beneficiaries. Some of this land is intensively managed irrigated agriculture; the bulk of the acres vary from dryland agriculture, conservation reserve programs, and wildlife habitat to forest and rangeland used for livestock grazing. DNR works with its lessee's on nearly 1700 leases to control noxious weeds on DNR-managed uplands.

Farmers and ranchers who lease agricultural and grazing lands from DNR are contractually responsible for

control of noxious weeds. All DNR leases and permits have a Resource Management Plan (RMP). The RMP has a mandatory, Weed Management section, which specifies that “the lessee shall use Integrated Pest Management to control weeds.” This section also quotes the meaning and elements of Integrated Pest Management.

During the 2011-2013 biennium control seasons DNR worked cooperatively with our lessees, weed boards and other agencies to control many noxious weeds on Trust managed lands. The Department was also able to utilize Jobs Bill funding to achieve control of noxious weeds on targeted lands. Jobs Bill funding will allow spraying and biological control releases through June 2014.

Weeds targeted include: scotch thistle, musk thistle, plumeless thistle, yellow starthistle, Dalmatian toadflax, leafy spurge, houndstongue, goat weed, knapweeds, skeleton weed, Sulfur cinquefoil, hawkweeds, Scotch broom, St. Johnswort, tansy ragwort, oxeye daisy, kochia, cereal rye and Japanese knotweed.

Ongoing Cooperative Efforts Included:

- Cooperatively notifying several county weed boards of locations of noxious weeds adjacent to or in the vicinity of Trust lands.
- Continuing to participate in several Cooperative Weed Management Areas.
- Working with the Department’s timber program to require logging equipment to be cleaned of mud and debris before beginning harvest operations on Trust Lands. The cleaning is off site and inspected by DNR staff.

Control Methods Included:

- Manual plant collection and destruction
- Herbicide sprays: Back-pack, Truck-mounted units, ATV units, Aerial
- Biological Control included *Jaapiella ivannikovi* for Russian knapweed

Washington State Department of Transportation - Noxious Weed Control and Integrated Vegetation Management

Raymond Willard, Roadside Maintenance Program Manager

WSDOT manages approximately 100,000 acres of highway rights of way statewide. Weed control along these rights of way is a critical part of the state’s overall weed control effort. Infestations tend to spread along transportation corridors, and these corridors abut a variety of land use on neighboring property throughout the state.

Weed Control Expenditures

WSDOT weed control activities include prioritized efforts to manage Class A, B, and C noxious weed species. Funding and expenditures for control of legally mandated Class A and regionally/county designated B and C species are tracked separately from control of all other B and C weeds species.

	<u>Legally Mandated Control</u>	<u>All Other Weed Control</u>	<u>Total Expenditure</u>
FY 12	\$2,438,278	\$2,103,960	\$4,587,237
FY 13	\$2,682,232	\$2,156,255	\$4,838,487

Weed Control Service Levels

WSDOT measures maintenance program delivery through annual statistical field sampling. Targets/goals for maintenance program delivery and funding levels are negotiated and agreed upon through the biennial

legislative budget process. Detailed information on WSDOT's Maintenance Accountability Program (MAP) is available online: www.wsdot.wa.gov/maintenance/accountability.htm. Weed control targets and achievements are reported under maintenance activities 3A2 (legally mandated species control) and 3A3 (all other weed control).

Funding levels for legally mandated species control were set to deliver a B Level of Service which means these weed species are present on approximately 2% of the total right of way acreage. Measured levels of service vary with local conditions and maintenance efforts, but averaged statewide the agency hit this target.

The service level target for control of all other weed species for the 11-13 biennium was set at a B- Level of Service which means that 5% of the total state right of way has non-designated B and C class weeds present. WSDOT's average statewide delivery for this measure was a D Level of Service (15% of the right of way containing these weed species.) For the 13-15 biennium the legislature has acknowledged that a B- Level of Service is not achievable without significant additional funding. The target for this measurement in the current biennium has been reset to a D Level of Service.

Program Development

Integrated Roadside Vegetation Management (IRVM) Plans have been developed and implemented for all highways within the state. These plans are updated annually and include identification of priority weed infestations along with recommended treatments for long-term, site-specific control measures. Area IRVM plans serve as a basis for documenting an annual cycle of coordination with the county weed boards, taking carefully planned control actions, evaluation and refinement of treatments based on changing conditions and observed results, and training of the crews. Area plans are available online: www.wsdot.wa.gov/maintenance/roadside/mgmt_plans.htm

Research Efforts

One of the most challenging roadside situations in terms of vegetation management is along urban limited access freeways and gateway interchanges. Public expectations for roadside maintenance in these areas are higher because their condition and appearance reflects on the local community. These locations also experience greater weed pressures in many cases and are prone to social problems such as litter and transient encampments. During the 09-11 biennium WSDOT contracted the University of Washington to study the relation between planting design and long-term maintenance costs in these types of locations. The final report on this study was published in July of 2011 and is available online: www.wsdot.wa.gov/Research/Reports/700/774.1.htm

Washington State Parks and Recreation

This section of the report was authored by Washington State Parks and Recreation Staff

- Eastern Region continues to use herbicides in most parks for targeted noxious weed control (records are maintained at individual parks). Spraying was done with contractors on the linear trails.
- Toadflax, Knapweed, and purple loosestrife were treated in many locations with biological controls such as *Mecinus*, *Larinus*, *Cyphocleonus* and *Galerucella* with over 10,000 insects released this past summer.
- With money from the Coastal Protection Fund, State Parks was able to remove indigobush from the Columbia River shoreline at Beacon Rock State Park.
- State Parks has worked cooperatively with several entities to control knotweed in western Washington parks.

WSU Extension - Integrated Weed Control Project

Jennifer Andreas, IWCP Director

Insects, mites and pathogens can be used to successfully control noxious weeds, a practice known as biological control (or biocontrol). Biocontrol is an important component of an Integrated Weed Management (IWM) strategy. Washington State landowners and land managers often do not have the time, funds or expertise to implement all the available IWM techniques. The Integrated Weed Control Project (IWCP), a statewide WSU Extension program, addresses this need by providing on-site recommendations and biological control agents free of charge to those with appropriate release sites. Our project further addresses this need by educating and engaging land managers and landowners for a better understanding of invasive weed issues and the importance of prevention, early detection/rapid response and integrated management tools to solve their own weed problems. Funding for this project is primarily provided by the U.S. Forest service with additional funding from King, Pierce, Cowlitz, Yakima, Thurston and Kitsap County Noxious Weed Control Boards.

From July 2011 to June 2012, our program provided 317 biocontrol agent releases to land managers in WA. Over 221,335 insects and mites (17 species) were released to control 13 weed species. From July 2012 to June 2013, 333 releases of 70,335 biocontrol agents (17 species) were used to control 12 weed species. Releases were made in all 39 counties serving private landowners, industry, conservation groups, tribal nations and municipalities, county, state and federal agencies. Oregon has estimated that the average cost of a single release is approximately \$500/release. Using these calculations, WA land managers received an estimated \$325,000 in biocontrol agents releases. These releases have undoubtedly led to a decrease in the amount of herbicide usage and unmanaged weed problems. Presentations and outreach materials were provided at 40 conferences, workshops, and fair events reaching the general public, volunteer groups, private industry, conservation organizations, government agencies and tribal nations. In addition, IWCP partnered with the WSNWCB and WSDA to develop 13 new invader, Class A weed postcards and a knotweed door hanger for distribution across the state. The postcards and door hanger will increase awareness of species that are considered a significant threat to WA. Finally, IWCP personnel regularly interact on a one-on-one basis providing weed control support for land managers.

In 2012, the IWCP partnered with WSDA, WSDOE, University of Montana and CABI-Switzerland to initiate biocontrol research for flowering rush, *Butomus umbellatus*. Although appropriate chemical and mechanical control methods continue to be explored for this highly invasive aquatic Class A weed, they have thus far been relatively ineffective, creating concerns that the flowering rush populations will continue to expand and spread without restriction. In looking for possible control methods, we are taking a proactive approach by pursuing potential biological weed control agents and have formed the Flowering Rush Biocontrol Consortium to coordinate the project. The IWCP is leading this Consortium.

Since our project expanded to all 39 WA counties in 2009, county weed control boards, CWMAs, private landowners, state and federal agencies have been utilizing our services and requesting assistance with education and implementation. Finally, our project objectives include facilitating and promoting relationships among agencies and land owners. We continued to see impacts by developing partnerships and long-term projects with CWMAs, tribes and weed and biocontrol groups in B.C., WA, MT, ID, OR, CA and WY. Partnering with agencies has allowed us to reach a larger audience with quality, comprehensive and relevant educational material. These partnerships have also stretched each agency's dollars further than individual outreach work alone.

Expenditures of State Funds

Everyone in Washington benefits from noxious weed control, whether it's directly, indirectly, or both. Even citizens whose properties are uninfested benefit because effective noxious weed control helps protect their land and the recreational and natural areas they enjoy. Public awareness and education campaigns build diverse support for noxious weed control efforts. Recognizing the importance of noxious weed control, Washington has invested state general funds to support the current state and local noxious weed control programs.

During the first four biennial funding cycles after the creation of Washington's noxious weed program in its current form, the state's investment supported three programs: (1) WSDA (2) the WSNWCB; and (3) the grant program that was administered through the WSNWCB, in which funds were directly invested in noxious weed control projects throughout Washington. Beginning in 1995, the Board shifted the focus of the noxious weed grant program into education and public awareness and special projects of statewide benefit.

Table 6. State General Fund Support for Noxious Weed Program, 1987-2011				
Biennium	WSDA	Board	Grant Program	Total
1987-1989 ¹	\$181,329	\$96,575	\$460,698	\$738,602
1989-1991	\$316,715	\$121,040	\$524,000	\$961,755
1991-1993	\$223,299	\$145,090 ²	\$506,000	\$874,389³
1993-1995	\$110,000	\$153,000	\$202,000	\$465,000⁴
1995-1997	\$123,746 ⁵	\$198,432	\$210,000	\$512,178
1997-1999	\$225,860 ⁵	\$386,277		\$612,137
1999-2001	\$248,450 ⁵	\$395,553		\$644,003
2001-2003	\$253,598 ⁶	\$378,153 ⁷		\$631,751
2003-2005	\$248,598 ⁸	\$390,706		\$639,304
2005-2007	\$301,144 ⁹	\$512,651 ¹⁰		\$813,795
2007-2009	\$275,682 ¹¹	\$623,301		\$898,983
2009-2011	\$285,754 ¹²	\$627,419		\$913,173
2011-2013	283,856 ¹³	\$450,612		\$734,468

¹WSDA (2 FTE) and Board (1 FTE) staff not hired until 1988.

²Clerical support previously paid by a separate account now included in Board budget.

³Includes a 1992 supplemental budget reduction of \$36,000.

⁴Includes a 1994 supplemental budget reduction of \$304,000.

⁵Does not include \$800,000 *Spartina* and purple loosestrife programs for which WSDA is lead agency.

⁶Does not include \$2,268,532 *Spartina* and purple loosestrife programs for which WSDA is lead agency.

⁷Figure reduced by \$21,000 one-time "efficiency savings" and \$6,000 carry forward reductions.

⁸Does not include \$2,768,500 *Spartina*, purple loosestrife, and invasive knotweed programs for which WSDA is lead agency.

⁹Does not include \$2,862,960 *Spartina*, purple loosestrife, and invasive knotweed programs for which WSDA is lead agency.

¹⁰Includes an annual budget increase of \$100,000 effective FY07.

¹¹Does not include \$3,439,345 *Spartina*, purple loosestrife, and invasive knotweed programs for which WSDA is lead agency.

¹²Does not include \$3,442,621 *Spartina*, purple loosestrife, and invasive knotweed programs for which WSDA is lead agency.

¹³Does not include \$ 2,831,047 *Spartina*, purple loosestrife, and invasive knotweed programs for which WSDA is lead agency.

Recommendations and Next Steps

Because of dedicated and effective noxious weed control, many natural areas are still preserved and protected, and continue to harbor invaluable native plants and wildlife, including salmon. It is because of active noxious weed control that farmers are able to produce more abundant crops and healthier livestock. We would see more degraded habitats, and farmers would spend and work more to produce lesser yields if the noxious weed community had not tirelessly invested in decades of noxious weed control and citizen education and participation.

Noxious weed control is a continuous component of a healthy and productive Washington that saves us all money in the long-term. Our law is considered one of the best in the nation. An adequately funded county NWCB can be very effective at helping landowners control their noxious weeds and comply with the law. Unfortunately, the disparity continues between local funding levels of county NWCBs, and many lack the resources to comply with Chapter 17.10 RCW. The WSNWCB will continue to work with all county NWCB programs and weed districts and provide assistance whenever possible. Publications, funding for Class A eradications and other special projects, and logistical support allow the WSNWCB to give on-the-ground support, particularly to those county NWCBs with smaller operational budgets.

Since many county weed board programs and even county governments have contacted the WSNWCB to share their struggles to fill vacancies, the WSNWCB will continue the groundwork to potentially amend RCW 17.10.050 to make recruitment of new county weed board members and the reappointment of existing members easier, while still maintaining strong agricultural representation. A county weed board coordinator suggested that the law allows at least one of the five members serve at-large, with respect to geographic districts. That way, there could be two members serving from a district where agriculture is more abundant if another district lacks any suitable candidates.

In addition to helping county weed board member recruitment, the WSNWCB has several other goals for the upcoming 2013-2015 biennium. Since the serious issue of Colony Collapse Disorder has increased awareness of declining bee populations. As a strong supporter of agriculture, the WSNWCB recognizes how serious the decline of pollinators can be, but also understands the importance of weed control. The WSNWCB will become more involved in this discussion. The WSNWCB will also be more active in pushing for better noxious weed control along right-of-ways, which are a major vector for noxious weed spread, and on federal land.

Throughout struggles and successes, the noxious weed community has continued its mission to help protect Washington's precious resources from the devastating and costly impacts of noxious weeds. Programs have weathered the economic downturn and continue to increase efficacy as fiscal stability steadily returns. As one county weed board coordinator explained it, people in the community deeply care about protecting resources, and feel a strong commitment to persevere despite the economic hardships. Every noxious weed population controlled now will save money in the future, and Washington's citizens, agriculture, and natural resources all benefit from this long-term perspective.

It can be difficult to measure success in the noxious weed world. We often forget about old infestations, and work steadfastly to eliminate current noxious weed problems. Many quiet victories go by unannounced. However, when we see vast and productive agricultural fields or expanses of natural areas untarnished by noxious weeds, we know we are succeeding.

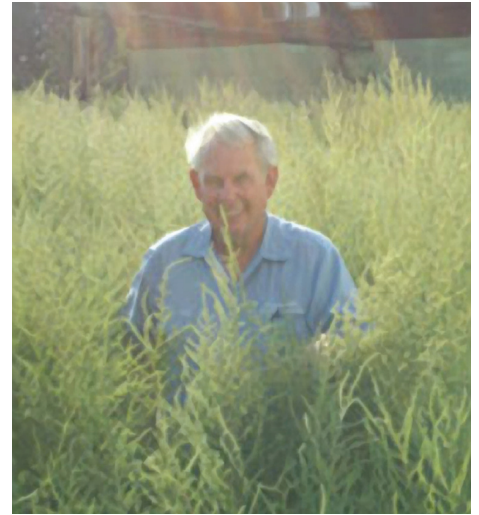
2013 WSNWCB members



Tony Stadelman was raised on a dairy farm in the Hillsboro Oregon area and then purchased a farm near George, WA and moved there with his family in 1978. In 1995, he was hired to be the Supervisor of Grant County Weed District #3. He was elected to the State Noxious Weed Board in 1996 to represent the Weed Districts and is currently the Chair.



Dr. Sarah Spear Cooke comes to the board with 34 years of experience in botanical, ecological, soils, and geological research. She has 26 years of experience in wetlands ecological research and environmental consulting in Washington. She has represented the public interest of western Washington since 2005 and is currently the Vice-Chair.



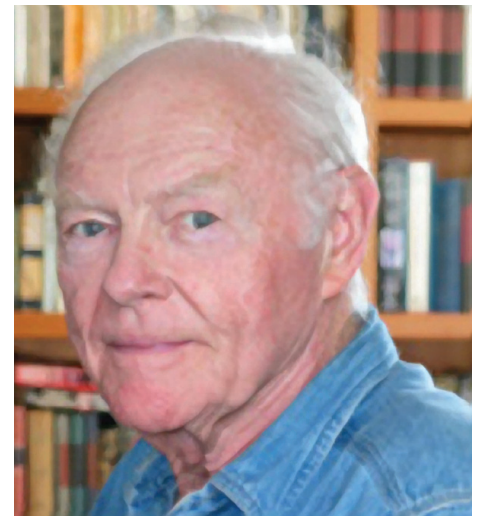
Dirk Veleke grew up on a dairy and raspberry farm near Lynden, Washington. He became a Weed District Supervisor in 1989 and later became the first Coordinator for the Kittitas County NWCB. In 2001 Dirk started his own vegetation management company in Chelan County. He has served on the WSNWCB since January 2013 and is currently the Secretary.



Bob Roth has served on the Cowlitz County NWCB since 2004 and is currently the Chair. He has an M.S. in Forest Management from UW and has worked in consulting and industrial forestry for over 30 years. He has been with the WSNWCB since March 2012 and represents the southwest tier of Washington.



Jerry Hendrickson grew up on a cattle and wheat ranch in Asotin County in southeastern Washington. He became an educator for over 30 years, teaching in Alaska and then in Olympia. He later moved back to Asotin County and joined the county noxious weed board 21 years ago. Jerry represents the southeast tier.



Dr. William Agosta is a research scientist who retired in 1998 as Professor and Head of the Laboratory of Organic Chemistry in The Rockefeller University in New York City. He has lived on San Juan Island since retiring. A member of the San Juan County NWCB, he represents the northwest tier on the WSNWCB.



Butch has been actively raising cattle, wheat, barley and irrigated hay for nearly 50 years. He was on the Garfield county weed board for 20 years and served as a county commissioner for 10 years as well. He has served on the WSNWCB for nearly 12 years and was the previous Chair. He represents public interests on the eastside.



Dr. Brad White is the Acting Assistant Director of the Plant Protection Division at the Washington State Department of Agriculture (WSDA). He earned his Ph.D. from the University of Washington in silviculture and forest protection. Brad has worked in regulatory agriculture for over a decade. Brad was appointed to the WSNWCB in 2013.



Commissioner DeTro grew up in the Omak area, and received his degree at Eastern Washington State College. He has been in wildland firefighting for 45 years. He also has bought and sold heavy equipment for 30. Commissioner DeTro is the Chair of the Okanogan County BOC, and he has served on the WSNWCB for about three years.



Dr. Tim Miller has been working for WSU as an extension weed scientist since 1997. His program includes weed control research in western Washington crops, as well as studying control of non-native vegetation on agricultural, range, and forest lands. Tim has been a scientific advisor to the WSNWCB for 12 years.



Jenifer Parsons has worked as an aquatic plant specialist for the Washington Department of Ecology since 1994. She monitors aquatic plant populations throughout the state and conducts research on the effectiveness of various aquatic weed control methods. Jenifer has been a scientific advisor to the WSNWCB since 2012.



Rod Gilbert has been a field biologist at Joint Base Lewis-McChord for 16 years where his focus has prairie restoration. His work involves both the protection of threatened and endangered native species and the control of invasive plants and noxious weeds. He has been a scientific advisor to the WSNWCB since March 2013.

Farewell and thank-you!



Ray Fann stepped down from the WSNWCB after 35 years of service. His dedication to noxious weed control is legendary. November 22 has been proclaimed Ray Fann Day in Whatcom County. At nearly 83 years young, Ray is still actively farming, saying that he isn't "going to stop for nothin".



Mary Toohey retired as assistant director for the Plant Protection Division after 38 years with WSDA in February 2013. She served on the WSNWCB for fourteen years. Her wisdom, guidance, and wonderful, dry sense of humor are missed.



Joe Coombs represented the northeast tier of WA on the WSNWCB for nine years. Ensuring that county weed boards had as many weed control tools as possible was a high priority for him when he served, and his experience as a consulting agronomist was invaluable. He is a member of the Spokane County NWCB.



Kathy Hamel retired as an Aquatic Plant Specialist from the Department of Ecology in June 2012. She was a valued member of the WSNWCB as one of its scientific advisors for seventeen years. She brought expertise about aquatic plants and herbicides, permitting.



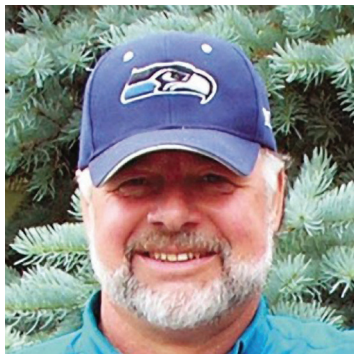
Ken Bajema represented the southwest tier of the WSNWCB for two terms. During those six years, he was active on the budget committee and took the time to visit with many of the county weed boards in his region. Ken raises cattle and is also a holly grower and serves on the Skamania County NWCB.



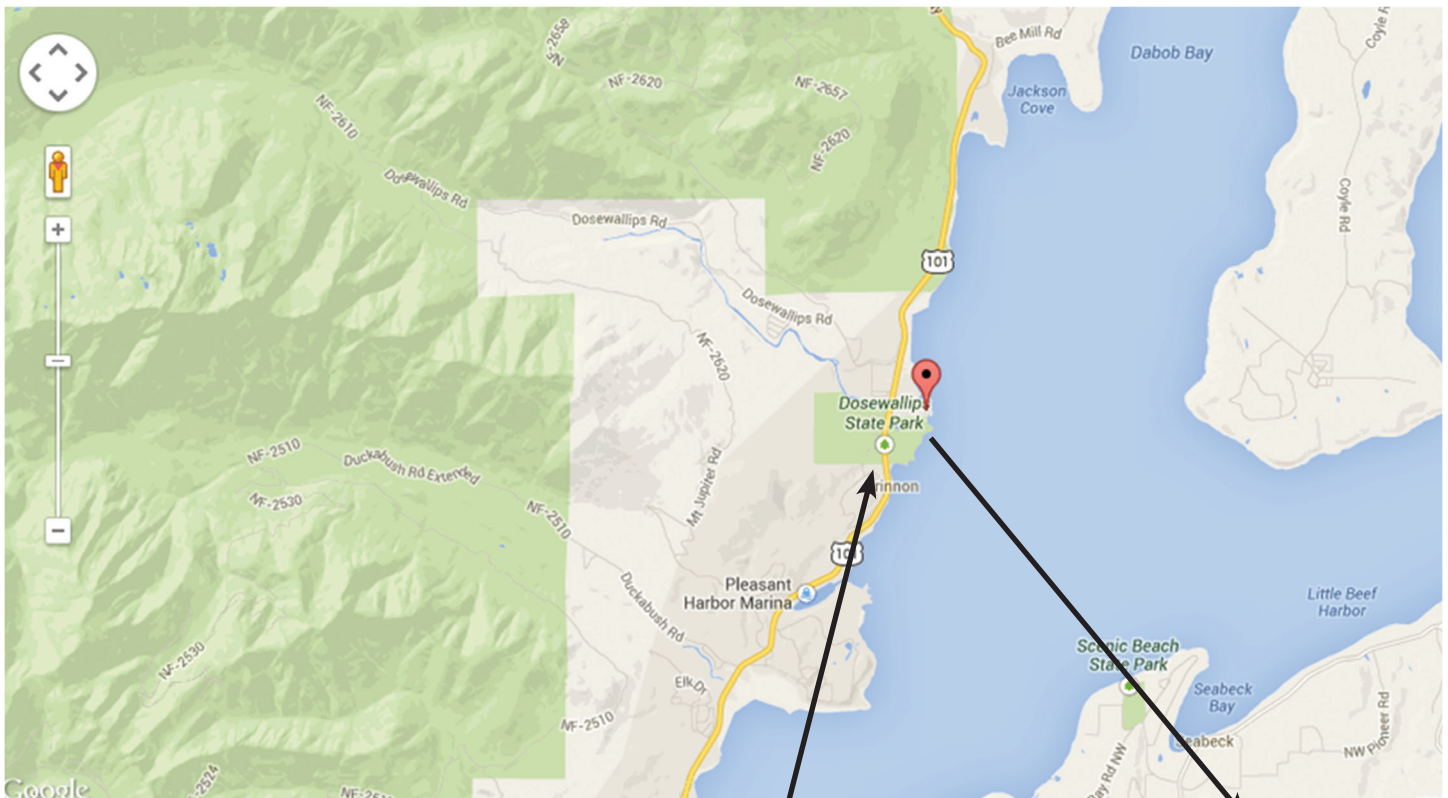
Dr. Steven Link served as a scientific advisor for two terms. His expansive background on native plant propagation and revegetation, along with his impressive local knowledge of native and noxious weed distribution in Washington were much appreciated.

photo by Courtney Flatt, OPB

In Memoriam



Gary Finkas joined the WSNWCB in July of 2011. Sadly, he passed away unexpectedly on December 23, 2011. Although his time with the State Weed Board was limited, he was eager and interested to get involved from the very start. We miss the enthusiasm and curiosity he brought, and the twinkle in his eye.



Verizon LTE 10:03 AM 62%

Cancel State Weed, Com... Save

Common Weed Name: *

cordgrass, salt meadow >

Ownership:

Public >

Total Plants:

120 >

Total Acres:

>

GPS Location: *

Latitude: 46.597121,
Longitude: -120.602724,
Altitude: 377.470474,
Speed: 0.300606, >



WSDA

State Weed, Common...

Common Weed Name: *

cordgrass, salt meadow

Ownership:

Public

Total Plants:

120

Total Acres:

GPS Location: *

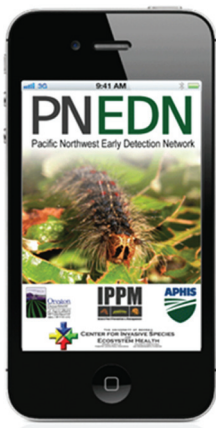
Latitude: 46.597121,
Longitude: -120.602724,
Altitude: 377.470474,
Speed: 0.300606

Photos

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Submit

WSDA's iForm allows someone in the field to collect coordinates and information about a noxious weed. The GPS coordinates can be uploaded into a map, and the information, including optional pictures, is emailed to WSNWCB and WSDA staff for review.



WSDA also provides noxious weed location information on public lands to EDDMapS. Data can be collected by anyone through the Pacific Northwest Early Detection Network (PNEDN) using this smart phone app. Many CWMA's and county programs such as Clark County NWCB provide training on using this helpful app.

Help stop the invasion...

Identify and report noxious weeds when you see them using a new app for your smartphone and help protect Clark County's natural areas.



Non-native invasive species can greatly alter our natural areas, impact wildlife, destroy crops, and even threaten our health and the health of pets and livestock.

Early detection is key to stopping the spread of noxious and invasive species. By reporting sightings of invasive plants we can better assess the extent of infestations and remove them before they spread and become a bigger problem.

You can help.

Simply download the free PNEDN app for your Android, iPhone, or iPad from the web address below.

The app is easy to use. Just a few minutes of your time is all that is needed to report invasive species directly from your favorite fishing spot, trail or even the side of the road.

Download the app today:
<http://apps.bugwood.org/pnedn.html>

Photo left: Shiny geranium, *Geranium lucidum*, is an aggressive invader that spreads quickly and can choke out wildflowers and other natives.



Outreach and Publications: 2011 through 2013



Noxious Weed Disposal



what to do with noxious weed material

Disposal methods of noxious weed material can vary depending on the plant species, growth stage of the plant and quantity of plant material.

Full Circle

Control noxious weeds and grow healthy plant communities



With good planning, you can grow native vegetation that will help keep out noxious weeds and promote wildlife diversity.

After controlling noxious weeds, over-seed and plant desirable species so weeds can't find an opening.

Malezas Nocivas: Leyes y Especies Selectas en la Región del Oeste de Washington



"Maleza Nociva" es el termino legal otorgado a una planta invasora que es altamente destructiva de cosechas agrícolas y del ecosistema nativo y que es difícil de controlar.

Las leyes que aplican a las malezas de Washington delinean estas responsabilidades, y crean la infraestructura gubernamental necesaria para educar a los ciudadanos y asegurar que las leyes sean respetadas.

Todos nosotros compartimos la responsabilidad de proteger a Washington de la Malezas Nocivas y algunas especies selectas que se encuentran en el Oeste de Washington.



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Knotweed Alert!

Knotweeds are aggressive noxious weeds that invade and degrade streams and riverbanks causing erosion, bank collapse and disruption of local ecosystems.



There are four species of knotweed on the noxious weed list in Washington State: Japanese (*Polygonum cuspidatum*), giant (*P. sachalinense*), Bohemian (*P. x bohemicum*) a hybrid of Japanese and giant, and Himalayan (*P. polystachyum*).

Typically found growing along waterways, these perennial plants negatively impact native plants, salmon spawning habitat, birds and other wildlife. Knotweeds are also found in disturbed areas and home landscapes where they can damage foundations, driveways and roads.

How can I recognize it?

Growth: Knotweed is fast-growing, reaching 6-12+ feet tall. It dies back to the ground in winter, leaving reddish-brown dead stems. Thick, aggressive rhizomes spread extensively, allowing plants to form large stands.

Stems and leaves: Stems are bamboo-like, hollow and reddish or green. Leaves are alternate, heart-shaped with a rounded or squared base, or lance-shaped. Leaves have smooth edges.

Flowers: Small, white flowers in clusters, present in late summer.



Knotweed flowers: Himalayan knotweed flowers are small, white, and have a long tube. Bohemian knotweed flowers are small, white, and have a long tube. Japanese knotweed flowers are small, white, and have a long tube.

Turn Over for Control and Contact Information

Have you seen these invasive?

Meadow clary and clary sage invade rangeland forage production and reduce plant diversity.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Houndstongue is a toxic weed that can poison livestock, infest meadows and grasslands.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Milk thistle is an annual or biennial weed that is toxic to livestock.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Butterfly bush is an escaped ornamental shrub that spreads dense thickets along river and stream banks.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Hoary alyssum is an invasive plant that rapidly spreads in pastures and is toxic to livestock.

Learn more at www.nwcb.wa.gov



Have you seen this invasive?

Garden jacobinella is an aggressive, perennial plant quickly spread by roots and seeds in wetlands.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Egglet spurge is an escaped ornamental, perennial plant difficult to control once established.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Spurge flax is a fast spreading herbaceous annual that is very difficult to control.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Spanish broom is an invasive shrub that is a prolific producer and outcompetes native plants.

Learn more at www.nwcb.wa.gov



Have you seen this invasive plant?

Parrotfeather is an escaped ornamental and aquarium plant that can alter aquatic ecosystems by forming dense mats of vegetation.

Learn more at www.nwcb.wa.gov



These and other Washington State Noxious Weed Control Board publications are available in limited supplies and/or available to download. See www.nwcb.wa.gov or call 360-725-5764.