

2012 Report of the Washington State Noxious Weed Control Board

covering July 2009 through June 2011



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.

Executive Summary

The 2009-2011 biennium has been an exciting and productive time for the noxious weed control community throughout Washington State. The economic downturn that began during the last biennium has continued, often resulting in challenges amid uncertainty. Many county weed board programs have had to grapple with a reduced operational budget while continuing to serve residents seeking assistance for their noxious weed concerns. And many landowners – federal, state, county, and private individuals alike – have faced the similar problem of having to control noxious weeds with fewer resources. Meanwhile, the cool, wet springs of 2010 and 2011 provided fantastic growing opportunities for many noxious weeds, including tansy ragwort and poison hemlock. To complicate things further, long stretches of windy and rainy days and colder than usual temperatures effectively reduced the window of opportunity for weed control.

The Washington State Noxious Weed Control Board (WSNWCBC) prepared itself for projected budget reductions by reducing staff to two full-time employees: an executive secretary and a communication and outreach specialist. It also increased its efforts to support and assist county noxious weed control boards (NWCBCs) and weed districts by printing as many publications as possible for local programs to use. The WSNWCBC also looked at ways to further strengthen itself by refocusing on its long-term goals and priorities and by improving its administrative processes and bylaws.

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 adapted to the current economic climate and are in a better position to increase efficacy as fiscal stability 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.



WSNWCBC executive secretary Alison Halpern (left) and communication and outreach specialist Wendy DesCamp (right) learned about eradication efforts of the Class A noxious weed common crupina in the Sawtooth Wilderness Area along the shores of Lake Chelan in May, 2011.

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. Yellow starthistle (above left) aggressively colonizes semi-arid rangeland. It crowds out desirable forage for livestock and wildlife and causes chewing disease in horses, which can be fatal. This pond (above right) used to be open water, but it has been completely smothered by the aquatic noxious weed parrotfeather. It forms dense mats that grow above and below the water line, which reduces water flow, dissolved oxygen, and habitat for many animals.

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 flower bulb producers in the Skagit Valley, to wheat growers in the Columbia Basin, to cattle ranchers in the Palouse Hills, 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.



The banks of the North Fork Stillaguamish River infested with dense knotweed growth.

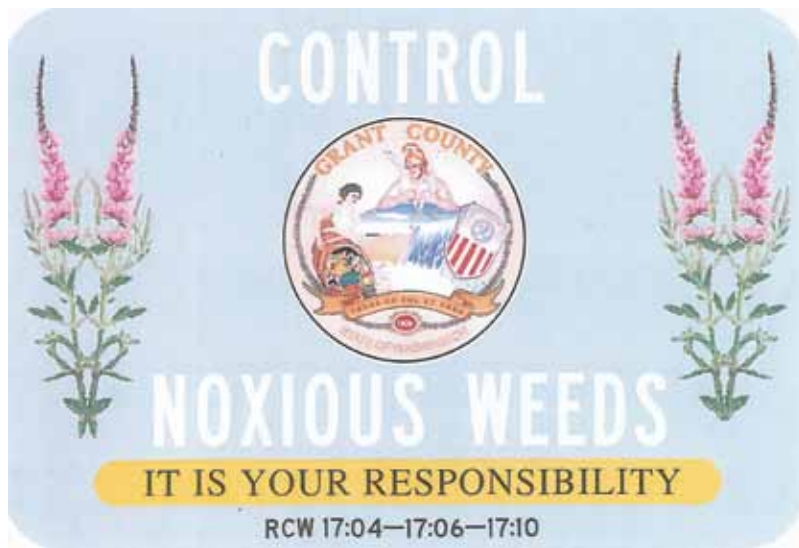
Suburban and urban dwellers are not impervious to the impacts of noxious weeds. For example, invasive knotweeds can cause damage to infrastructure by growing through pavement, pipes, and septic tanks. In fact, in 2010 several of the major banks in the United Kingdom began to deny mortgages for properties 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 (see page 14).

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 law is Chapter 17.10 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).

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.



A new road sign overlooking I-90 near George, WA reminds thousands of drivers about Washington's noxious weed laws. To learn more, please see page 21.

The Washington State Noxious Weed Control Board (WSNWCB)

The WSNWCB serves as the state's noxious weed coordination center and 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, and the scientific community:

- Four board members are members of, and are elected by, county weed boards.
- One board member is elected to represent weed districts.
- One 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:
 - o Three are voting members of the WSNWCB. One represents WSDA and two represent the public interests of the eastside and westside of the state.
 - o Three are non-voting scientific advisers with expertise in weed identification and control, plant ecology, and aquatic invasive species.

The WSNWCB is administered within WSDA. Its staff currently consists of an executive secretary and a public education specialist. 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 to 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. And it is this synergy that has allowed progress to continue, despite the economic downturn.

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 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 2011 noxious weed list.

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 these noxious weeds. “Control” means that the landowners must prevent these noxious weeds from going to seed



Yellow floating heart is a Class B noxious weed that forms mats of vegetation on water bodies.

and prevent the dispersal of propagative parts, such as roots, rhizomes, bulbs, fragments, or other parts capable of forming new plants. 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.

Class C noxious weeds meet the criteria of a noxious weed but are usually 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 these 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 property.

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



Garlic mustard is a Class A noxious weed that infests woodland and forest understories.



Himalayan blackberry is a Class C noxious weed that forms dense monocultures of thorny vegetation.

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. There are currently 32 Class C noxious weeds on the 2011 list.



Section 2

WSNWCB

Accomplishments of 2009-2011



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.

Program Status

The 2009-2011 biennium brought new challenges, and WSNWCB members worked together to find lasting solutions. Its continuation through two rounds of board and commission evaluations reminded board members of the importance of the WSNWCB's roles and responsibilities. The successful weed-free forage program continued to grow in popularity in 2010, and when the WSNWCB realized it would not have the operational capacity to sustain it, the program was transitioned over to WSDA the following year. In January 2010, staff was reduced to two full-time employees. This consolidation in staffing was one of the strategies the WSNWCB employed in preparation for a budgetary reduction in the FY11-13 biennium. It also allowed a renewed emphasis on education and public outreach. Like most everyone else, the WSNWCB learned to run a leaner program that focused on its top priorities.

Noxious Weed List and the Listing Process

Changes to the 2010 and 2011 Noxious Weed List

The state noxious weed list did not have any new species added in 2010 or 2011, but changes were made to improve WAC 16-750. In response to the uncertainty of the state's economy, the WSNWCB put a moratorium on additions to the 2010 noxious weed list. Instead of increasing any regulation, the WSNWCB decided to amend the definition of "control" in WAC 16-750-003 (2a). Previously, control was defined as: "to prevent all seed production and to prevent the dispersal of the following propagules of aquatic noxious weeds – turions, fragments, tubers, and nutlets". The simplified definition now means "to prevent all seed production and to prevent the dispersal of all propagative parts capable of forming new plants." This language change is better aligned with RCW 34.05.220(5), which instructs that rules "be clearly and simply stated, so that it can be understood by those required to comply" and by Executive Order 05-03, which requires all agencies to adopt Plain Talk Principles. The revised definition of control uses less botanical terminology and is easier to understand.

For the 2011 noxious weed list, two class C noxious weeds were changed to Class B noxious weeds – yellow archangel (*Lamiastrum galeobdolon*) and hairy willow-herb (*Epilobium hirsutum*). The designations of three Class B noxious weeds were also updated. A proposal to list English holly (*Ilex aquifolium*) as a Class C noxious weed (except where commercially grown) sparked an impassioned discussion about the listing of commercially cultivated species, which reached all the way up to the state legislature. After a public hearing, during which a great deal of testimony from both sides was received, the WSNWCB did not adopt the proposal to add English holly. In January 2011, House Bill 1169 was introduced into committee, and would have prohibited the WSNWCB from listing any commercially cultivated crop. There was an outpouring of communication and outreach – from the local level to the state level – by WSNWCB members, county weed boards and staff, farmers, and other interested parties. As a result, Substitute House Bill 1169 (SHB 1169) was signed into law by the Governor on April 20, 2011, and two sections of Chapter 17.10 RCW were amended to include new language. RCW 17.10.080 instructed the WSNWCB to adopt a new section in WAC 16-750 that explained the noxious weed listing process, including criteria to allow the reconsideration of proposals that had previously rejected. RCW 17.10.090 was amended to explicitly acknowledge the ability of county weed boards and other local government to educate and conduct outreach about unlisted plants of local concern.



Yellow archangel, changed from a Class C to a Class B noxious weed, forms a dense groundcover layer that outcompetes native plant species.

Improving Process

In addition to codifying the noxious weeds listing guidelines, the WSNWCB also improved other components of its listing process as well as ways of conducting formal business. Washington State has often been lauded for its open and transparent noxious weed listing process. Anyone in Washington – from state agency to private individual – can propose changes to the annual noxious weed list, attend WSNWCB and NWC meetings, and can provide comments at public hearings. The NWC strives to make the best recommendations to the WSNWCB regarding proposed changes to the noxious weed list, based on their expertise, scientific information in the form of written findings, known distribution of species, and local knowledge from people in the field.

For many years, the NWC has worked to develop a risk analysis template that would ensure consistency of their deliberations of noxious weed additions without limiting them to a subjective, quantitative listing process. By compiling valuable pieces of other risk analysis models and by working with the Washington Invasive Species Council's Species Prioritization Work Group, the NWC customized its own risk analysis template in August of 2009. Called the Comparative Analytical Tool (CAT), this template allows the WSNWCB to:

1. Compare noxious weed species by categories, such as impact, invasiveness, management, and distribution, which make it a valuable tool for prioritization.
2. Consider the same criteria when discussing species during the listing process or evaluating current noxious weeds.
3. Complement the more technical written findings in a more abridged document that is easier for the public to review.
4. Provide a depository for basic noxious weed information that can be efficiently summarized in a tabular or database format that can be posted online.

The goal of the NWC is to run all current noxious weeds through the CAT and then use it for upcoming proposals to the noxious weed list.

In November 2010 the WSNWCB contracted a facilitator with the Washington State Conservation Commission (WSCC) to conduct a work session with board members to discuss future directions and priorities for the WSNWCB, including ways to strengthen administrative procedures and the weed listing process. In May 2011 the WSNWCB adopted and signed a code of ethics that will be re-evaluated and adopted every January. This document specifically addresses conflicts of interest (COI) and how the WSNWCB can address potential COI through a clear and deliberate process. The Board also began discussions about simplifying Class B designations by reducing the number of noxious weed regions from ten to six.

The WSNWCB also used technology to save money by conducting board meetings remotely, first through the online platform WebEx, and then via GoToWebinar. The online format allows participants to attend the meeting by telephone or through their computer microphone and speakers and to view meeting material online in real time. The WSNWCB was able to substantially reduce the cost to conduct meetings by eliminating the need to travel. It also increased participation by county weed board coordinators and the general public, who could easily attend meetings from the comfort of their work offices or from home. Despite the suspension of travel reimbursement to board members that began in FY11, WSNWCB members voluntarily chose to pay out-of-pocket to attend the 2010 public hearing and board meeting in Yakima and again to attend the 2011 January board meeting in Olympia. The WSNWCB felt very strongly that it was worth their own personal investment to engage with the public at these well-attended, important meetings.

Washington Wilderness Hay and Mulch (WWHAM)

In 2008, a closure was implemented by U.S. Forest Service (USFS) Region 6 (Washington and Oregon) that mandated the use of North American Weed Management Association (NAWMA) certified weed-free hay and mulch on trailheads in all public forests in these two states. The closure was expanded to include all USFS lands in Washington and Oregon, effective in January 2009. However, Washington did not yet have a certification program in place, and this was a concern for equestrian groups such as the Back Country Horsemen of Washington (BCHW) wanting to ride on USFS lands. In 2008 the WSNWCB began a voluntary pilot certification program that was recognized by NAWMA called Washington Wilderness Hay and Mulch (WWHAM). Staff worked closely with many hay growers and the BCHW to mitigate any concerns during the early planning stages.

That first year, interested staff from 28 county NWCBS was trained as WWHAM inspectors and fields of 27 hay growers and straw producers were certified in 13 counties. In 2009, participation increased to 55 growers in 22 counties. In addition to regular hay bales, a few hay growers began to produce certified compressed bales in addition to regular-sized bales. In 2010, 72 producers had their fields WWHAM-inspected in 24 counties. It was about this time that the WSNWCB and the participating county NWCBS realized that the successful WWHAM program was outgrowing them. Interest by growers – especially straw producers – was steadily increasing, while the ability to maintain the program by the limited staff of the WSNWCB and several county weed boards was decreasing. Fortunately, WSDA's Plant Protection Division agreed to manage the program in 2011. WSNWCB staff worked with WSDA in the spring of 2011 in its early preparations to carry out the certification program, with the goal of making the transition as seamless as possible for growers and for the county weed boards that still wanted to participate.

It also helps reduce the spread of noxious weeds through hay brought into wilderness areas and straw used for erosion control, especially in post-wildfire restoration. The recognition of weed-free straw as a preventative measure has increased over the years. The Washington Department of Transportation (WSDOT) vegetation manual has required the use of weed-free straw when available for many years, and in April 2010, a standard specification was added that required weed-free straw on all construction projects. The Bureau of Land Management (BLM) required the use of certified weed-free hay and forage in Washington and Oregon, starting in August 2010.

The WSNWCB is proud of its accomplishments in bringing a pilot weed-free forage certification program to Washington and is grateful for WSDA for continuing WWHAM in 2011 and beyond. This voluntary program has created a niche for many hay growers – particularly small farms in western Washington – and straw producers across the state, while helping to prevent the spread of noxious weeds.



Dr. Tim Miller, a scientific adviser for the WSNWCB joined with the executive secretary to inspect fields in Snohomish County for the WWHAM program. This program created a niche for many of Washington's small-scale hay growers and straw producers.

Survey Standards

Efforts continued this biennium to implement state survey standards and to gather more distribution data of noxious weeds. In the fall of 2009, a weed inspector from the Kittitas County NWCB began the creation of a data dictionary based on the WSNWCB survey standards. By March, 2010, it was available for download on GPS units with ArcPad. The WSNWCB increased its arsenal of GPS units in 2010 by purchasing an additional four Pharos 565 units, along with four licenses for ArcPad, which was installed on the units. Having multiple models of GPS units has helped to build a more diverse capacity for supporting county weed boards that do not own their own equipment improved mapping of noxious weeds. Several county weed boards borrowed the GPS units in 2010 and 2011. As a result, WSDA has received more distribution data for its statewide noxious weed mapping efforts, and these counties have benefited at the local level. For example, Ferry County NWCB was able to successfully secure funding to control knotweed after they borrowed one of the GPS units to map and inventory all known knotweed infestations.

Education

In addition to adopting the annual noxious weed list, education is one of the foremost priorities of the WSNWCB. It 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 inform Washingtonians. One of the most effective and cost-efficient outreach tools is its website, and this biennium, the WSNWCB contracted with South Puget Sound Community College (SPSCC) to develop a new, more advanced website that would allow the public improved access to information about noxious weeds, laws, prevention and control methods, and direct links to their county weed boards. Despite a temporary, 8-month vacancy of the communication and outreach specialist position in 2010, the WSNWCB was still successful with its outreach efforts, and made great progress once the position was filled and returned to full-time status.



Noxious weed field guides are a popular resource.

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 40% of county weed boards and several weed districts rely on the WSNWCB as their primary source of publications. The remaining 60% of county weed boards supplement their own program publications with WSNWCB materials. WSNWCB 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:

- A full-color brochure about knotweed control in Spanish, which was a collaborative effort between the WSNWCB and WSDA.
- A new series of Early Detection/Rapid Response (ED/RR) postcards, designed to alert the public to Class A and B noxious weeds. The WSNWCB partnered with WSDA, the U.S. Forest Service, and WSU Extension to produce these popular postcards. So far, 20 different postcards have been created this biennium, and there are more on the way.
- Tri-fold brochures detailing identification, impacts, and control measures for tansy ragwort, poison

hemlock, puncturevine, giant hogweed.

The WSNWCB also reallocated unspent resources (resulting from staff vacancies) to stock up on reprints of popular, tried-and-true publications such as:

- The brochure Noxious Weeds in Washington: Everybody's Problem, Everybody's Solution that included updated information.
- The useful pocket field guides Noxious Weeds that Harm Washington State – for both eastern and western Washington.
- The wildly popular booklet GardenWise: Non-invasive Plants for Your Garden – for both eastern and western Washington. This was the fourth printing of the western version and the third printing of the eastern version. This highly successful publication was the result of collaboration between the WSNWCB, the Washington State Nursery and Landscape Association (WSNLA), the Washington Invasive Species Coalition, the University of Washington, and the King and Whatcom County NWCBs. It exemplifies the positive outcome conflicting groups can achieve when they address a shared problem together.
- The brochures Do You Have Knotweed on Your Property? and Selected Knapweeds of Washington.

Presentations and Outreach

WSNWCB staff gave many presentations throughout Washington State including talks at pesticide recertification classes for the Grant and Okanogan County NWCBs, the Roza and Sunnyside Valley Irrigation Districts, and the Olympic Peninsula Knotweed Working Group. In April 2010 the WSNWCB staff partnered with a restoration botanist for the Yakama Nation to teach an all-day workshop on noxious weed identification and control for over 30 tribal members involved with vegetation management. WSNWCB staff also gave talks and provided publications, to the vegetation management crew at Mt. Rainier National Park in June 2010 and 2011. Staff from the WSNWCB and the Thurston County NWCB gave a similar talk at a regional WDFW training session in Olympia. Regardless of the audience size, the WSNWCB believes open dialog is an effective means to inform the public about the importance of noxious weed control – whether it's introducing six classes Ilwaco High School students to noxious weeds or speaking at the general session of the annual Yakima Weed Conference with an average attendance of 600.



Land managers, weed board staff, and members of the press learned about the identification and impacts of garlic mustard at a field trip in Clark County. One of the main themes was "plant hygiene" and the importance of preventing further noxious weed dispersal by carefully cleaning boots and gear after walking through infested areas.

Every February the Northwest Flower and Garden Show is held in Seattle and it is a tradition for WSNWCB staff to share the USDA/WSDA plant inspection booth. This is the largest garden show in the area drawing in tens of thousands of gardening enthusiasts. With the help of staff from surrounding county NWCBS, the noxious weed booth draws multitudes of eager gardeners interested in weed identification and control. The setting is also ideal to educate gardeners about ornamental plants that have become noxious weeds, and more importantly, provide information on the non-invasive alternatives that can be reliably planted instead. Staff also manned a booth at the 2010 annual meeting of the Back County Horsemen of Washington to answer questions about the weed-free forage program.

To further educate themselves and to learn about on-the-ground noxious weed problems and control efforts, WSNWCB staff attended several tours around Washington State, including the Coordinated Resource Management (CRM) tour in the Cheney area, a Southeast Washington CWMA tour, a tour of the crupina eradication efforts at Lake Chelan, a tour of the garlic mustard at the Woodland Park Zoo, and a tour of Japanese eelgrass infestations in Willapa Bay.

Press Releases

In April 2010, the WSNWCB received a call from the Washington Poison Center about a fatality in Pierce County that had resulted from the accidental ingestion of the toxic noxious weed poison hemlock. Shortly after this tragedy, there was another case of misidentification and ingestion of this species, which resembles many edible plants such as parsley, wild carrot, and parsnip. Fortunately, this person recovered, after a trip to the emergency room. In response to these cases, a press release was written and distributed to newspapers across Washington explaining the dangers of misidentifying edible plants, correct/proper identification of poison hemlock, proper control and disposal methods, and symptoms of poison hemlock exposure. The story and accompanying pictures were published in several papers, including the Chinook Observer and the Stanwood/Camano News. To provide additional outreach, a poison hemlock postcard was developed and widely distributed. In early summer of 2011, when poison hemlock plants were starting to bolt, the press release was updated and redistributed. It was picked up by the Bellingham Herald and the San Juan Islander. The WSNWCB also created a new tri-fold brochure about this incredibly toxic noxious weed in FY11.

CHINOOK OBSERVER
The News Source for Washington's Long Beach Peninsula since 1988

Tuesday, May 04, 2010

Know how to identify and control poison hemlock

By Alison Halpern
Washington State Noxious Weed Control Board

Tuesday, May 04, 2010

WASHINGTON - There have already been four cases of human ingestion of, or exposure to poison hemlock, in 2010 with one resulting in the recent death of an adult in Pierce County, according to the Washington Poison Center. This is the first human poison hemlock caused fatality in Washington state since 1999.

Poison hemlock can be mistaken for many edible and ornamental members of the carrot family such as parsley, sweet cicely, parsnip, wild carrot, and anise that have similar-looking flowers, leaves and seeds. It is imperative to be able to identify poison hemlock to prevent accidental ingestion. The biennial plant can grow very tall, reaching heights of eight feet. The hollow stem is smooth and hairless and has very distinctive purple blotches all over it. It has large, glossy green, finely divided, fern-like leaves that are smooth and hairless. Like many members of the carrot family, poison hemlock produces flat-topped flower arrangements consisting of small clusters of tiny, white, five-petaled flowers.

Compounds in poison hemlock give the entire plant - especially the leaves when crushed - an unpleasant odor that has been described as musky or resembling the smell of mouse urine. An aggressive invasive species, poison hemlock rapidly colonizes streambanks, vacant lots, roadsides, pastures and meadows, especially where the soil is moist, outcompeting native plants and desirable forage species.

Poison hemlock contains toxic alkaloids, including coniine and g-coniceine, which are found in all plant parts but is most concentrated in unripe seeds. These poisonous compounds affect the nervous system. Initial symptoms may include a burning sensation in the mouth, nausea, vomiting, confusion, respiratory depression, and muscle paralysis. Death, when it occurs, is usually rapid and due to respiratory

The WSNWCB organized a garlic mustard tour in Clark County in April 2010, with an accompanying press release to educate about this Class A noxious weed and to invite the public, land managers, the press, and local officials to the tour. The theme of the tour was not only to learn about garlic mustard, but also “plant hygiene” and the importance of simple steps to prevent spreading weeds, such as using a stiff bristle brush to remove dirt and potential seeds from boots after walking through noxious weed patches. A follow-up story highlighting the tour appeared in the Skamania County Pioneer.

Funding of Class A Eradication Projects and Other Special Projects

Due to staff vacancies and unspent travel funds, the WSNWCB reallocated as much money as possible towards Class A eradication projects and other special projects to support noxious weed control efforts on the ground. During FY10, almost \$34K was provided as pass-through money to county weed boards and other agencies towards Class A eradication efforts and to a Class A noxious weed survey. For FY11, a total of \$38K was allocated towards Class A eradication. There was more interest in surveying this fiscal year, and the WSNWCB provided \$30.6K in pass-through funding for surveys that took place in six counties. Class A eradication efforts and other special projects the WSNWCB supported during the FY09-11 biennium, are summarized below.

FY10		
Agency	Project	Amount
Chelan Range District (USFS)	crupina eradication	\$3,000
Mason County NWCB	giant hogweed eradication	\$6,000
Okanogan County NWCB	wild four o'clock eradication	\$6,000
Skamania County NWCB	garlic mustard eradication	\$6,775
Skamania County NWCB	shiny geranium survey	\$1,914
Snohomish County NWCB	giant hogweed eradication	\$5,000
Whatcom County NWCB	flowering rush eradication	\$5,000
WSU-USDA APHIS Quarantine Facility	Biocontrol Quarantine Facility Improvement	\$3,200

FY11		
Agency	Project	Amount
Asotin County NWCB	Mediterranean sage eradication	\$1,500
Chelan County NWCB	crupina eradication	\$10,000
Chelan Range District (USFS)	crupina eradication	\$3,000
City of Bellevue Parks & Rec.	garlic mustard eradication	\$3,000
Clallam & Jefferson County NWCBs	European hawkweed, giant hogweed, and milk thistle eradication	\$3,000
Ferry County NWCB	noxious weed survey	\$1,000
Island County NWCB	noxious weed survey	\$3,000
Lewis County NWCB	Class A noxious weed survey	\$3,670
Lower Columbia CWMA	noxious weed survey	\$5,000
Mason County NWCB	giant hogweed eradication	\$4,000
Mason County NWCB	knapweed survey	\$3,670
Okanogan County NWCB	wild four o'clock eradication	\$4,819
Pierce County Conservation District	knotweed survey	\$10,000
Pierce County NWCB	noxious weed survey	\$4,225
Skamania & Clark County NWCBs	garlic mustard eradication	\$6,000
Snohomish County NWCB	giant hogweed eradication	\$3,000

Section 3

County Noxious Weed Control Boards



"We were driving down this road in the south end of the county after spraying some kochia when we looked out into this field and saw a few Scotch thistle plants. We were looking at them and were trying to figure out who the property belonged to when the gentleman in the photo stopped alongside us and chatted and fessed up to "owning" the weeds. He walked out with us, asked a lot of great questions, helped us spot some rosettes and told us he'd be keeping an eye out in the future for more. We cut, bagged and sprayed that day and made a friend."

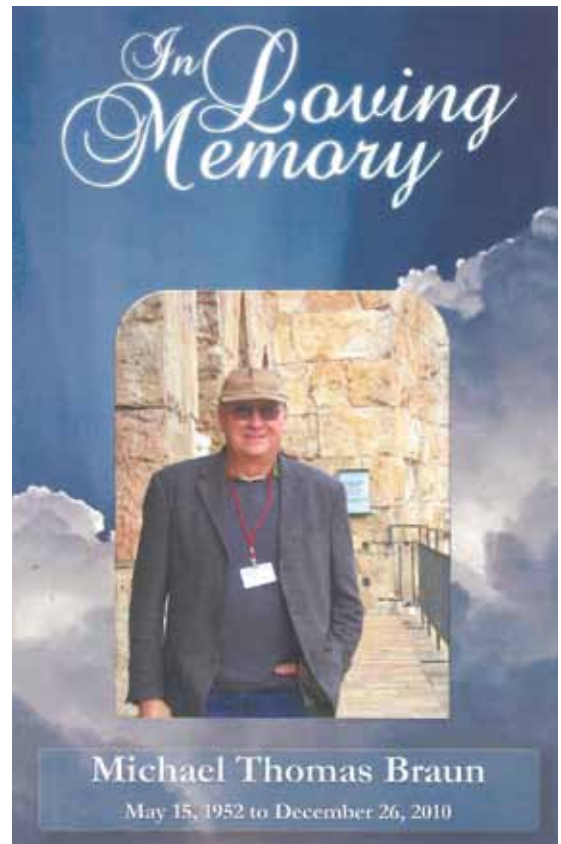
Sue Winterowd, Stevens County NWCB

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 are 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 regional and state level, and sometimes causes conflicts between neighboring counties.

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 not necessary. 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. 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. Looked at another way, **99.75% of noxious weed infestations in Thurston County were voluntarily controlled; only 0.25% – one quarter of a percentage – of cases was resolved through enforcement.** The noxious weed laws provide a very effective tool; however, in most cases, landowners voluntarily comply when they understand the importance of noxious weed control.



The noxious weed community was stunned and saddened by the death of the Franklin County NWCB coordinator and President of the WA State Weed Coordinators Association. Mike Braun was a true weed warrior and a good friend, who will be deeply missed.

Currently, 38 of the 39 counties have noxious weed control boards. Douglas County lacks a NWCB; however, the WSNWCB recognizes the strides the Douglas County Noxious Weed Task Force has made in adopting the state noxious weed list and working to educate its residents about noxious weed control. The WSNWCB will continue the process of working with Douglas County towards the creation of a state-recognized county weed board.



Grays Harbor NWCB members tour a forested area to assess local noxious weed problems.

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. The continuation of the economic downturn had a disparate effect on county weed board programs, depending on their funding source. Of the fifteen county weed boards that rely on general funds, nine (60%) experienced a budget reduction during this biennium, five (33%) county weed board budgets did not change and one (7%) received a general fund increase. Of the 24 counties whose programs are funded through assessments, six (25%) successfully increased their assessment rates and 18 (75%) experienced no change. Two general conclusions can be made about county weed board funding this biennium. 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.

Impact of Economic Downturn

The continuing economic downturn has had many direct and indirect impacts on county weed boards and noxious weed control in general. The most obvious direct impact has been the reduction of general funding to county weed board programs, resulting in reduced operational budgets. Many county weed boards have had to reduce staff and/or hours, which has led to fewer noxious weed inspections, office hours, and enforcements. Noxious Weed control in general has suffered, as many landowners – from federal and state agencies, to county roadside programs, to the individual private landowner – have not had the resources to fully comply with the noxious weed laws. One of the biggest challenges has been addressing noxious weed control on foreclosed properties. Many county weed boards have had a difficult time identifying and notifying the responsible party of foreclosing and foreclosed properties when there are noxious weed that must be controlled. Still, noxious weed control continues, and county weed boards continue to find ways to help landowners with their noxious weed problems. One county weed board coordinator in southeast Washington has seen a silver lining, noting that “the economic situation, if anything, has increased our value to the landowners who are extremely concerned about the future of the economy. We are still doing projects and are here to lend a hand.” In tough economic times, many learn to adapt to be more efficient on a tighter budget, and county weed boards are no exception.

Learning To Get By With Less

Many county weed boards were fortunate to be unaffected by decreasing budgets; Thurston County NWCB's assessment increase allowed them to accomplish even more this biennium. Other county weed boards found ways to get by with less. Some reduced operational costs by scaling back: closing storage units, selling extra vehicles, reducing print jobs, combining purchases or sharing resources with WSU Extension offices, carpooling, and holding meetings online. Several county weed boards acquired external funding for their noxious weed

control projects through grants. Many county weed boards had to adjust to budget reductions by reducing field staff and staff hours; however, some counties found ways to increase program support/assistance through volunteers. For example, Cowlitz County NWCB partnered with Lower Columbia College, taking on an intern to help with projects. They also joined with Goodwill Industries to train in-office personnel, which filled a gap in office staff and provided valuable work experience to the trainees. Kitsap County NWCB developed a volunteer program to assist with surveying and removing noxious weeds from publicly owned properties. Volunteers in San Juan County NWCB also diligently worked to remove noxious weeds from both public and private lands. With the help of ALEA funding, Mason County NWCB worked with a volunteer group to control invasive knotweed. Several county weed boards worked with WSU's Master Gardeners to help with plant identification.

In addition to all of these cost saving measure, many county weed boards also partnered with other county programs to lend them a hand with weed control on county land. Pierce County NWCB field inspectors have always assisted municipal road crews by pulling small noxious weed infestations in the right-of-ways (ROWs). Documenting the noxious weed pulls took more time than actually pulling the weeds, what with the paperwork and the computer mapping (CVWeb) necessary to accurately record the location and weed type, leaving inspectors less time in the field. For 2011, they created a very simple form for field inspectors to record hand-pulls and office staff handled the paperwork and CVWeb mapping. This resulted in a 33% increase in ROW reporting and clean-up.

Several county weed boards found ways to improve strategic spending of limited resources to help in the prevention and control of noxious weeds. To help protect agricultural land, Columbia County NWCB contributed \$4K to the Rocky Mt. Elk Foundation (RMEF) and WDFW towards a project to spray yellow starthistle and add more palatable feed higher in the mountains. Not only does this project improve habitat by controlling the noxious weed, but it also helps prevent elk from venturing down onto private landowners' crops and destroying them. Moreover, RMEF matched those funds contributed to the project, thereby doubling the Columbia County NWCB's initial investment. Ferry County NWCB restructured its noxious weed control cost-share assistance program to be more evenly spread across the different classes of land ownership. As a result, the number of participants in the program increased from 67 in 2010 to 98 in 2011.

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.



A multi-county noxious weed tour organized by the SEWA CWMA has a large turnout.

As of 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:

County NWCBS and weed districts work tirelessly to reach out to local residents, promoting as much voluntary control as possible and to help landowners with noxious weed concerns. Through these efforts, these programs can stretch their resources to increase noxious weed eradication, containment and control. Successes occur in a variety of ways, from posting signage in a high traffic area to maximize outreach, to building local partnerships to address a common problem, to teaching individual landowners how to control noxious weeds on their own property, and more. Here is a sample of some of the great work and partnerships that these county NWCBS and weed districts accomplished during this past biennium throughout Washington.

Cowlitz County Noxious Weed Board: *Fostering community communication and participation to control a Class B noxious weed*

In the summer of 2010, the Cowlitz County NWCB began receiving phone calls about a large infestation of



Tansy ragwort, a Class B noxious weed, is toxic to horses and cattle.

tansy ragwort (*Senecio jacobaea*) on a property in Kelso. Neighbor after neighbor called to complain about the large amount of this toxic, class B noxious weed in the pasture, where horses were living. When the Cowlitz County NWCB coordinator visited the landowner, she found that there was indeed a serious problem with tansy ragwort but the bigger issue was why. The husband was a disabled vet with health issues, and he was unable to help control the noxious weeds. His wife was working two jobs to pay the family bills while caring for her mother and husband. When this information was shared with the concerned neighbors, the most wonderful thing happened: they came over and worked together to control the tansy ragwort. It was a great show of community support in solving this noxious weed problem.

Franklin County Noxious Weed Board: *Growing partnerships to control noxious weeds along the Snake River corridor*

For years the Franklin County NWCB has waged in the battle against noxious weeds that threaten range, pasture and farmland along its eastern county border, such as yellow starthistle (*Centaurea solstitialis*) and rush skeletonweed (*Chondrilla juncea*). The Southeast Washington Coordinated Weed Management Area (SEWA CWMA) enables private land owners and public agencies to combine weed control efforts along the Snake River corridor. This coordinated approach brings visible results to everyone involved, and recent efforts demonstrate that they are holding the line against new invasions of noxious weeds. The group of cooperators continues to grow each year, as more landowners see the evidence of efficient and effective noxious weed control. Improved herbicides that suppress noxious weeds over multiple years have increased the area being controlled while reducing overall cost to the landowners. This collaborative effort between neighbors has helped to control noxious weed populations that could easily devastate valuable rangeland, recreational areas, and farmland.

Grant County Weed District #3: *Spreading awareness about noxious weed control in Grant County and beyond*

Traveling eastbound across Interstate 90, just before George, WA, drivers now see a prominently displayed 6 ft. by 10 ft. sign that reminds them that noxious weed control is their responsibility. This posted sign is the result of a partnership between Grant County Weed District #3, WSDOT, and Grant County. The weed district supplied the sign, WSDOT provided the labor and installation materials, and the County granted permission for the sign to be installed next to a county road adjacent to the Interstate. This cost-effective outreach tool is helping to make thousands of travelers aware of Washington's noxious weed laws. The sign can be seen in this report on page 5.

King County NWCB: *Protecting urban, salmon-spawning creeks from noxious weeds*



King County's noxious weed control program partners with many groups to control noxious weeds and restore precious riparian and wetland habitat.

With help from grants from the Port of Seattle and the Community Salmon Fund, the King County Noxious Weed Control Program has been able to significantly reduce noxious weeds on an urban creek system that feeds directly into Puget Sound from the headwaters at SeaTac Airport. Miller and Walker creeks offer some of the only intact habitat corridors and spawning areas for fish such as coho salmon and rainbow trout in an otherwise developed urban area that borders Puget Sound. Unfortunately, the surrounding development of Miller and Walker creeks has resulted in significant degradation, including invasion by noxious weeds. In 2009 and 2010, the program significantly reduced the presence of policeman's helmet (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), purple loosestrife (*Lythrum salicaria*) and Bohemian knotweed (*Polygonum x bohemicum*) on the two creeks. The program works

collaboratively with other organizations including the WRIA 9 basin steward, members of the Normandy Park Stewards of the Cove group, and the local cities Burien, Normandy Park and SeaTac, as well as the Port of Seattle.

Mason County NWCB: *Building a better program to educate and help residents with knotweed control*

Mason County NWCB may be a small program, but its dedicated coordinator has been steadily building resources to develop a knotweed control program. When this coordinator began working for the program in 2007, the NWCB knotweed control efforts were limited to sharing information to interested Mason County residents and an occasional nearby site visit. Then in 2009 and 2010, the coordinator applied for and received external funding to support the treatment of knotweed in salmonid habitats, forming strong partnerships between property owners and the county weed board. In 2011, Mason County NWCB kicked off its first training session for residents with terrestrial infestations of knotweed on their property, under the mentorship of the Clallam County NWCB. The first participant in this training just happened to be a landowner who had called the county weed board for assistance back in 2007. Even with a modest budget, Mason County NWCB has been very successful at empowering its citizenry with knowledge and tools to accomplish their goal of controlling knotweed and other noxious weeds.

Okanogan County NWCB: *Working together to successfully face a daunting task*

In late August 2010, a local commercial applicator reported a new site of spurge flax (*Thymelaea passerina*), a Class A noxious weed that is only known to occur in Okanogan County. With the strained economy and a



reduced workforce, the county NWCB lacked the resources to effectively survey for additional sites. However, members of the Okanogan County Coordinated Weed Management Area (CWMA) partnered with the county weed board in a thorough 2-week survey. Thanks to this combined effort, they were able to successfully survey over 15,000 acres in 2010 and an additional 26,000 acres in 2011. It was this pulling together of dedicated CWMA members that made this daunting task possible.

Pierce County NWCB: Increasing public service through an increased budget

Pierce County NWCB's greatest success this biennium was its successful assessment increase. Many long hours and hard work paid off in the

The Okanogan NWCB staff combined efforts with other weed warriors to survey for spurge flax.

fall of 2010 when the Pierce County Council granted the request for an increase, during a time when nearly every other department saw reductions in their budgets. Part of Pierce County NWCB's successful strategy was demonstrating the program's responsible handling of its current funds, as well as the staff's many successes, despite limited funding.

The objective for the assessment adjustment has been to increase productivity and efficiency throughout Pierce County. The NWCB has reworked numerous established procedures within the board in order to enhance the program and allow weed board employees to perform at their best. Total parcel notifications (identified as having weed infestations) in 2010 were 2,515. Total notifications in 2011 were 3,542. This was a 29% increase in productivity, notwithstanding the overall staff reduction. In 2010 the Pierce County NWCB cleaned up one property that did not comply. With the efficiency measures mentioned above, plus prudent financial management, they were able to clean up fifteen properties which remained in noncompliance of RCW 17.10 and still maintain a healthy financial program in 2011. The Pierce County NWCB also saw improved cooperation from landowners (both municipal and private) due to the increased supervision of identified weed infestations, as inspectors had more time in the field to oversee and ensure compliance.

San Juan County NWCB: Finding an effective eradication strategy for two Class A noxious weeds

Hard work is paying off for the San Juan County NWCB in their efforts to control the Class A noxious weeds giant hogweed (*Heracleum mantegazzianum*) and slenderflower thistle (*Carduus tenuiflorus*). Extensive public outreach and education about giant hogweed, combined with thorough land surveys, have led to almost total eradication in the county. In 2011, only two seedlings of giant hogweed were reported. Efforts to eliminate slenderflower thistle are also showing similar signs of success. Survey work facilitated the removal of all known mature plants and the once-infested area is now closely monitored for seedlings. Any seedlings found are promptly dug out by the County Land Bank staff. Persistent vigilance and the rapid response to remove seedlings mean that successful eradication of these two noxious weeds in San Juan County is likely within the next couple of years.

Section 4

Noxious Weed Control throughout Washington: State Agency Updates



Maintenance of the state highway system is divided between six regions and 24 maintenance areas. WSDOT's Integrated Roadside Vegetation Management Plans have been in place and annually updated for all areas over the last five years.

Washington Department of Agriculture

This section of the report was authored by the WSDA.

The Washington State Department of Agriculture's 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, non-profits, and other agencies at all levels of government to accomplish prevention, containment, control and eradication of noxious weed populations..

The Department is involved in many cooperative projects that benefit the state battle against noxious weeds. Each year since 2008, WSDA has received 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 Weed Specialist works 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 the funds are used to support existing programs including the Washington State University Integrated Weed Control Project, the Washington Invasive Species Council, and the Washington Wilderness Hay and Mulch Program. The rest of the 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. For FY10 and 11 the grants from USFS totaled \$435,000..

The Department participates 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 recently added a CWMA webpage to its website and plans to increase its support of CWMA's and other cooperative groups via the web.

WSDA administers an 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.

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 Ecology to develop a Yakima River Integrated Aquatic Plant Management Plan. Members of the Yakima River Cooperative Weed Management Area including the Yakama Nation are working on the plan.

WSDA has developed and implemented a pest tracking database known as the State Weed and Pest (SWAP) database. Collecting and entering noxious weed and noxious weed biological control agent distribution data is the first phase of the database implementation. Information is collected from many different cooperators in Washington State, including county weed boards, state and federal agencies, tribes, universities and non-governmental sources. General distribution maps have been completed and posted on the Washington State Noxious Weed Control Board website. The data collected is also being used to develop models that indicate what the potential is for the expansion of weed populations if control efforts are not implemented. The modeling software uses current and historic weed locations and multiple environmental/anthropogenic variables to model potential distribution across the state. One example of such a model shows the current cost of

conducting knotweed control on limited sites in the Toutle River Watershed as opposed to the cost of control if the knotweed is allowed to expand to its potential range within the watershed (see inside back cover)

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 all known 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 2011, WSDA entered into agreement with 14 program cooperators including 10,000 Years Institute, Center for Natural Lands Management, Skagit Fisheries Enhancement Group, Stilly-Snohomish Fisheries Enhancement Group, Hood Canal Salmon Enhancement Group, and the noxious weed control boards of Chelan, Clark, Cowlitz, Clallam, Lewis, Snohomish, Skagit, Pierce and Yakima Counties. WSDA is also collaborating with Oregon State University regarding support of their biological control program for invasive knotweed.

WSDA Spartina Update

In 2011 WSDA along with state and federal partner agencies, tribal entities, local governments and landowners treated or removed approximately 19 solid acres of Spartina in Puget Sound, Grays Harbor and Willapa Bay.

During the summer of 2011 this coalition and the aquaculture industry cooperatively treated over 15 acres in the Puget Sound and approximately 2.5 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



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

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 plant blends in with native species.

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

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, and Kitsap County Noxious Weed Control Boards.

From July 2009 to June 2010, our program provided 320 biocontrol agent releases to land managers in WA. Over 93,800 insects and mites (17 species) were released to control 12 weed species. From July 2010 to June 2011, 348 releases of 230,300 biocontrol agents (17 species) were used to control 13 weed species. Releases were made in 36 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 \$334,000 in biocontrol agents releases. These releases have undoubtedly led to a decrease in the amount of herbicide usage and unmanaged weed problems.



*The root weevil, (*Cyphocleonus achates*), is distributed across Washington State to control spotted and diffuse knapweed.*

Presentations and outreach materials were provided at 28 conferences, workshops, and fair events reaching the general public, volunteer groups, private industry, conservation organizations, government agencies and tribal nations. Our project website (<http://invasives.wsu.edu/index.htm>) was developed to provide biocontrol information to a broader audience. In addition, IWCP partnered with the WSNWCB and WSDA to develop new invader, Class A weed postcards for distribution across the state. The postcards 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.

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.

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, they include:

Agricultural and Grazing Lands

DNR manages 1.1 million acres of agriculture, grazing and range land (which includes over 400,000 acres of forest land used secondarily for grazing) on behalf of numerous trust beneficiaries. Some of this land is in intensive irrigated agriculture; the rest varies from dryland agriculture to forest and rangeland used for livestock grazing. DNR works with lessee's on over 1600 leases to control 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). Each RMP has a mandatory section, Weed Management, 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 2009-2011 biennium spray seasons DNR worked cooperatively with our lessees, weed boards and other agencies to control many noxious weeds on trust managed lands including: scotch thistle, musk thistle, plumeless thistle, yellow starthistle, Dalmatian toadflax, leafy spurge, houndstongue, goat weed, common bugloss, 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 the Snake River Cooperative Weed Management Area.
- Becoming an active member of the newly formed South Central Washington Cooperative Weed Management Area
- Continuing to be an active member of the Okanogan Cooperative Weed Management Area

- Proactively working with the Department's timber sale foresters during presales preparations to identify future spray sites and needs

Control Methods Included:

- Manual plant collection and destruction
- Herbicide sprays
 - o Back-pack
 - o Truck-mounted units
 - o ATV units
 - o Aerial
- Biological controls included:
 - o *Larinus minutus* (weevil) for knapweeds
 - o *Mecinus janthinus* (weevil) for Dalmatian toadflax
 - o *Aphthona flava* and *A. nigriscutis* (root-mining flea beetle) for leafy spurge
 - o *Puccinia chondrillina* (rust fungus) for rush skeletonweed
 - o *Chrysolina hyperici* and *C. quadrigemina* (foliage-feeding beetles) for St. Johnswort with varying degrees of success

Aquatic Lands

DNR manages 2.4 million acres of aquatic lands. The control of noxious and invasive weeds on state-owned tidelands, shore lands and bed lands is of great concern and importance to the Department. DNR has strengthened its commitment to establish cooperative partnerships and agreements to address control of priority invasive species.

Recent Projects include:

- Spartina – DNR treated just over 6 solid acres of Spartina spread over 8,000 total acres in the 2009 field season. In 2010 DNR treated 2 solid acres of Spartina spread over 7000 total acres in Willapa Bay. Strong strides towards Spartina eradication in Willapa Bay continue to be made.
- Utilizing \$54,000 Aquatic Invasive Species Program dollars DNR had the upper lake chain and associated waterways from Dry Falls Dam to Moses Lake surveyed. This information was then used by DNR, WDFW, the Grant County Weed Board and MLIRD to complete an Integrated Aquatic Vegetation Management Plan (IAVMP) for the Moses Lake Watershed and the Grand Coulee Waterway. Working collaboratively DNR and the Moses Lake Irrigation and Rehabilitation District (MLIRD) each received a \$75,000 Aquatic Weeds Management Fund Grant from the Department of Ecology to treat Eurasian watermilfoil in Moses Lake and treat the riparian areas of Moses Lake and the Grand Coulee Waterway in the 2011-2013 biennia.
- In September 2010 the Aquatic Resources Invasive Species Program co-sponsored a two-day workshop at the University of Washington's Friday Harbor labs (\$8,000). The focus of the workshop was to discuss what is known about *Zostera japonica* a non-native eelgrass found in intertidal habitats and outer coastal bays throughout Washington State. The Workshop convened seagrass experts to discuss what is known about *Zostera japonica* and to identify data gaps. The report summary can be downloaded at http://www.dnr.wa.gov/Publications/aqr_zostera_study.pdf. In November 2011 the Washington State noxious Weed Board voted to list *Zostera japonica* as a Class C Weed where it impacts commercial shellfish beds.
- The DNR Invasive Species Program has begun taking on a more active role controlling weeds on State Owned Aquatic Lands (SOALs). The table below gives a brief description of our involvement statewide

in the 2009-2011 biennium.

- Aquatic weeds controlled by DNR during the 2009-11 biennium.

Location	Weeds focused on	County in WA	Monetary Contribution	State Listed
Willapa Bay, Gray's Harbor	<i>Spartina</i> species	Pacific, Gray's Harbor	\$680,000	Class A
Snoqualmie River	garden loosestrife	King	\$5,000	Class B
	spotted knapweed			Class B
Black Lake	Eurasian watermilfoil	Thurston	\$10,000	Class B
Chehalis River	English ivy	Gray's Harbor	\$5,000	Class C
	holly			not listed
Nisqually	knotweed species	Thurston, Pierce	In-Kind	Class B
Union Bay (Lake Washington) side of	Eurasian watermilfoil	King	In-Kind	Class B
	white water lily			Class C
Queets/Clearwater	knotweed species	Jefferson, Gray's Harbor	In-Kind	Class B
Pend Oreille River	flowering rush	Pend Oreille	In-Kind	Class A
	yellow flag iris			Class C
	Eurasian watermilfoil			Class B
Moses Lake	phragmites	Grant	In-Kind	Class B
	yellow flag iris			Class C
	Eurasian watermilfoil			Class B

Forested Uplands

The Department of Natural Resources (DNR) controls noxious weeds and undesirable plant species on trust managed forested uplands. Roadsides are sprayed with herbicide to primarily control broadleaf vegetation. Statewide data (DNR managed trust lands only) recorded in the Forest Management Planning & Tracking system between 7/1/09 - 6/30/11, shows the following "pest management" activities on state forested uplands:

- Spread grass seed on 338 acres to mitigate noxious weed encroachment following timber harvests.
- Used herbicides for "site preparation", prior to replanting forest units. Treated 6,555 acres by aerial application and 4,159 acres by ground.
- Used herbicides for "vegetation management", to "release" conifer seedlings from competitive vegetation. Treated 1,030 acres by aerial application, and 6,084 acres by ground.
- Sprayed herbicide on approximately 1000 miles of forest roadsides, by ground application.
- Pulled or sprayed concentrations of noxious weeds in coordination with county weed control boards and conservation districts.
- On a case by case basis, the timber sales program required incoming equipment to be power washed to remove soils that potentially contained noxious weed seed.

Natural Areas*

*DNR-managed Natural Area Preserves (NAPs) and Natural Resources Conservation Areas (NRCAs)

DNR manages more than 145,000 acres in 85 Natural Areas across the state. These sites are managed by the

department's Natural Areas Program. DNR conducts invasive and noxious plant control on Natural Areas, both as part of routine site management and in the process of implementing specific restoration projects. Most sites have individual weed management plans or weed management plans incorporated into a comprehensive site management plan. These plans emphasize Integrated Pest Management, incorporating a variety of management techniques. Plans also stress monitoring the effectiveness of treatments and using adaptive management to help ensure long-term success. In order to protect the native species and communities at natural areas, regular surveys are conducted to identify new infestations that require immediate treatment, as well as to track the distribution of existing infestations. During the 2009-2011 biennium:

- Invasive and noxious plant control treatments were conducted on 570 acres at 28 NAPs and NRCAs, targeting more than 25 invasive species.
- Volunteers were an integral part of the management at 13 of these sites.

The Natural Areas Program is also part of a cooperative agreement for weed management for the tributaries and main stem of the Chehalis River. The MOU is an agreement between state, federal, tribal and private entities. The agreement will be in effect until December 2017.

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 level 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 16,500 solid acres of weeds, representing 55+ species, are treated annually on agency managed lands. 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 efforts have been instrumental in the statewide Spartina program's ability to reduce the infestation by 99%, an unprecedented accomplishment. In addition WDFW has successfully competed for several grants to restore old agriculture fields by removing weeds and seeding locally adapted, native plants. This will reduce the need for future weed control while providing more habitat for fish and wildlife.

Washington State Parks and Recreation

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

The Washington State Parks and Recreation Commission fosters outdoor recreation and education statewide to provide enjoyment and enrichment for all and a valued legacy to future generations. The Commission acquires, operates, enhances and protects a diverse system of recreational, cultural, historical and natural sites. During the past two years, Washington State Parks has accomplished many activities related to the control of noxious weeds.

For example, Washington State Parks & Recreation Commission parks all have integrated weed management

plans that help guide the control and eradication of invasive/noxious plants. For example, in our Eastern Region (all parks east of the Cascade Mountains) continue 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. For 2010, herbicides were applied to 15,984,362 square feet of land. In addition to the use of herbicides State Parks uses biological controls. Toadflax, knapweed, and purple loosestrife were treated in many locations with biological controls such as *Mecinus janthinus*, *Larinus minutus*, *Cyphocleonus achates*, *Galerucella californiensis*, and *G. pusilla* with over 10,000 insects released this past summer.

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 overall state effort because weed infestations tend to spread along transportation corridors, and these corridors abut such a variety of land use on neighboring property throughout the state.

Weed Control Expenditures

WSDOT weed control activities include efforts to manage all Class A, B, and C noxious weed species. Expenditures for control of Class A weeds along with county designated priority B and C weeds are tracked separately from control of all other weeds species.

	<u>Priority Species Control</u>	<u>All Other Weed Control</u>	<u>Total Expenditure</u>
FY 10	\$2,716,425	\$2,474,362	\$4,966,937
FY 11	\$2,474,362	2,072,694	\$4,547,056

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 goals and achievements are reported under maintenance activities 3A2 (priority species control) and 3A3 (all other weed control). Measured levels of service vary with local conditions and maintenance efforts, but averaged statewide weed control achievements scored below target service levels for both years of the biennium.

Program Development

Integrated Roadside Vegetation Management (IRVM) Plans have been developed and implemented for all highways within the state. These plans include an inventory of 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 Department of Ecology

Kathy Hamel, Aquatic Plant Specialist

The focus of Ecology's Aquatic Weed Program (established 20 years ago by the state legislature) has been the management of freshwater noxious weeds. The Program contains elements for education, technical assistance, and a grants program. A program botanist surveys Washington lakes and rivers each year to discover and document the presence of noxious weeds and to record all native freshwater species. Over 500 lakes and rivers have been surveyed and the plant species and density data documented for each water body in Ecology's on-line database at www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html#annualsurvey.

The Aquatic Weeds grants project manager works with affected lake groups and local governments to provide funding and technical assistance to help them develop programs to eradicate/manage noxious freshwater weeds. Over the past 20 years, the program has awarded hundreds of grants to state and local governments, tribes, and special purpose districts for these projects (www.ecy.wa.gov/programs/wq/plants/grants/index.html). About 6 million dollars of state funding has been spent for these activities, with about 1.2 million of state



Melanie Tyler and Jenifer Parsons of Washington State Department of Ecology identify plant samples taken from Silver Lake.

dollars directed towards these activities in the last biennium. Successes include the eradication of a Class A noxious weed, hydrilla, known as one of the worst aquatic weeds in the world, from the state. Dozens of lakes, once choked with noxious weeds like Eurasian watermilfoil and Brazilian elodea, are now virtually free of these damaging weeds. Using these funds, progress has been made in controlling and containing infestations of shoreline noxious weeds such as garden and purple loosestrife, yellow flag iris, and Phragmites.

Ecology develops active partnerships with local governments, particularly local weed boards, to eradicate Class A noxious weeds. Ecology partnered with King County and the cities of Maple Valley and Covington to eradicate hydrilla.

Recently Ecology started working with Pierce and Thurston Noxious Weed Control Boards to eradicate the Class A noxious weed - variable-leaf milfoil from Washington. Variable-leaf milfoil is only known from five lakes in western Washington. So far, variable-leaf milfoil has been eradicated from one lake, is at low levels in three lakes, and good progress has been made on the remaining lake. Other initiatives include eradication/containment of Class A noxious weed flowering rush and funding the eradication of Brazilian elodea from the Chehalis River.

Ecology also maintains educational materials about aquatic plant management, a comprehensive website that is used world-wide, and provides speakers to lake groups and local governments about freshwater noxious weeds and their management.

In addition, Ecology regulates the application of aquatic herbicides to lakes, ponds, shorelines, riparian area, wetlands, and wet areas. Recently Ecology developed and reissued the Aquatic Plant and Algae Management permit and updated its Environmental Impact Statement for Aquatic Plant Management to include new herbicides; providing new tools for the management of noxious weeds in wet areas.

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

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.

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.

These are economically uncertain times, and we all hope to see better days soon. The reality is that we are still grappling with an economic downturn that is requiring many difficult decisions to be made regarding federal, state, county, and individual budgets. In many circumstances, noxious weed control budgets have reluctantly been reduced; however, for every year that weed control is neglected, several years of progress are lost. The WSNWCB recommends that the State continues to maximize and enhance local noxious weed control programs, including the WSNWCB, as it is able.

The WSNWCB has three primary goals for the upcoming 2011-2013 biennium. First, the Board plans to improve the noxious weed list by simplifying the Class B designation regions and potentially restructuring the classification of many noxious weeds in order to provide more flexibility at the county level, while still maintaining strong and effective noxious weed laws. Second, the WSNWCB will continue to support the county weed boards and weed districts to the best of its ability. Finally, the WSNWCB will increase its efforts to work ever more closely with the farmers of Washington. Both WSNWCB members and staff are looking forward to what they can achieve this biennium.



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.

Ongoing noxious weed control efforts continue to protect native wild hyacinth in Lyons Ferry from encroaching yellow starthistle.

County Noxious Weed Contacts

County	Coordinator	Phone	Email Address
Adams	Susan Sackmann	(509) 659-1806	acnwcb@ritzcom.net
Adams - District #1	Reed Carlson	(509) 488-9023	adcweedreed@yahoo.com
Asotin	Nelle Murray	(509) 243-2098	nmurray@co.asotin.wa.us
Benton	Marc Stairet	(509) 786-6988	weeddude@clearwire.net
Benton - District #1	Sharlene Vowels	(509) 786-6988	bcweed1@charter.net
Chelan	Mike Mackey	(509) 667-6550	Mike.Mackey@co.chelan.wa.us
Clallam	Cathy Lucero	(360) 417-2442	clucero@co.clallam.wa.us
Clark	Karen Streeter	(360) 397-6140	Karen.Streeter@clark.wa.gov
Columbia	Lindsay Cox	(509) 382-9760	ccweedboard@columbiainet.com
Cowlitz	Angelica Velazquez	(360) 577-3117	velazqueza@co.cowlitz.wa.us
Douglas	Dale Whaley - WSU Steve Jenkins	(509) 745-8531 (509) 745-8537	dwhaley@wsu.edu
Ferry	Mary Fee	(509) 775-5225 1111	wbcoord@co.ferry.wa.us
Franklin	Victor Reeve	(509) 545-3847	fcwb@co.franklin.wa.us
Garfield	Jim McKeirnan	(509) 843-1913	jmckeirnan@pomeroy-wa.com
Grant		(509) 754-2011 375	grantco@televar.com
Grant - District #1	Randy Weitzel	(509) 750-8948	
Grant - District #3	Anthony Stadelman	(509) 785-3621	tstad@aspeedynet.net
Grays Harbor	Nancy Ness	(360) 482-2265	nessn@cahnrs.wsu.edu
Intercounty District #51	John A. Hooley (Jack)	(509) 349-2251	weeddistrict51@ccser.net
Intercounty District #52	Dean F. Alverson	(509) 346-9592	royalconsulting@hotmail.com
Island		(360) 240-5597 211	
Jefferson	Eve Dixon	(360) 379-5610 205	edixon@co.jefferson.wa.us
King	Steve Burke	(206) 205-6927	steven-j.burke@kingcounty.gov
Kitsap	Dana Coggon	(360) 307-4242	dcoggon@co.kitsap.wa.us
Kittitas	Todd Davis	(509) 962-7007	todd.davis@co.kittitas.wa.us
Kittitas - District #1	Dave Rinehart	(509) 925-3591	
Kittitas - District #2	Tom Brunson	(509) 925-1977	
Kittitas - District #3	Harvey Dodge	(509) 962-2681	
Kittitas - District #4	Steve Burris	(509) 992-6997	
Kittitas - District #5	James Hanson, Chair.	(509) 925-3412	
Klickitat	Marty Hudson	(509) 773-5810	martyh@co.klickitat.wa.us
Lewis	Bill Wamsley	(360) 740-1215	wamsleyb@wsu.edu
Lincoln	Kevin Hupp	(509) 725-3646	klhupp@co.lincoln.wa.us
Mason	Pat Grover	(360) 427-9670 592	PatriciaG@co.mason.wa.us
Okanogan	Anna Lyon	(509) 422-7165	alyon@co.okanogan.wa.us
Pacific	Mike Nordin	(360) 875-9425	mnordin@co.pacific.wa.us
Pend Oreille	Sharon L. Sorby	(509) 447-2402	ssorby@pendoreille.org
Pierce	Beki Shoemaker	(253) 798-6800	bshoema@co.pierce.wa.us
San Juan	Richard Lee	(360) 376-3499	rich@sanjuanweeds.org
Skagit	William Rogers	(360) 336-9430	williamr@co.skagit.wa.us
Skamania	Justin Bush	(509) 427-3941	bush@skamania.wa.us
Snohomish	Sonny Gohrman	(360) 435-7830	sonny.gohrman@snoco.org
Spokane	David J. Mundt	(509) 477-5777	dmundt@spokanecounty.org
Stevens	Sue Winterowd	(509) 684-7590	weedboard@co.stevens.wa.us
Thurston	Rick Johnson	(360) 786-5576	Johnsor@co.thurston.wa.us
Wahkiakum	Laurel Heathen	(360) 795-3852	heathenl@co.wahkiakum.wa.us
Walla Walla	Dave Maiden	(509) 524-2688	weedswv@bmi.net
Whatcom	Laurel Baldwin	(360) 715-7470	lbaldwin@co.whatcom.wa.us
Whitman	Peggy Wright	(509) 397-6261	noxious@co.whitman.wa.us
Yakima	Dick Jacobson	(509) 574-2180	effie.shinn@co.yakima.wa.us
WSDA	Greg Haubrich	(509) 249-6973	ghaubrich@agr.wa.gov

The Washington State Noxious Weed Control Board

Members elected by County and District Noxious Weed Control Boards:

- Ken Bajema, representing southern tier west of the Cascades
- Jerry Hendrickson, representing southern tier east of the Cascades
- Ray Fann, representing northern tier west of the Cascades
- Joe Coombs, representing northern tier east of the Cascades
- Anthony Stadelman, representing Weed Districts

Members appointed by the Director of the Washington State Department of Agriculture (WSDA):

- Virgil (Butch) Klaveano, Jr., Board Chair, representing east side public interests
- Sarah Spear Cooke, Ph.D., representing west side public interests
- Mary A. Martin Toohey, representing WSDA

Member appointed by the Washington State Association of Counties:

- Mary Lou Peterson, Okanogan County Commissioner, through December 2010
- Jim DeTro, Okanogan County Commissioner, from February 2011

Non-voting scientific advisers appointed by the Director of WSDA:

- Timothy W. Miller, Ph.D., NW Washington Research and Education Center, Washington State University
- Kathy Hamel, Washington State Department of Ecology Water Quality Program
- Steven Link, Confederated Tribes of the Umatilla Indian Reservation

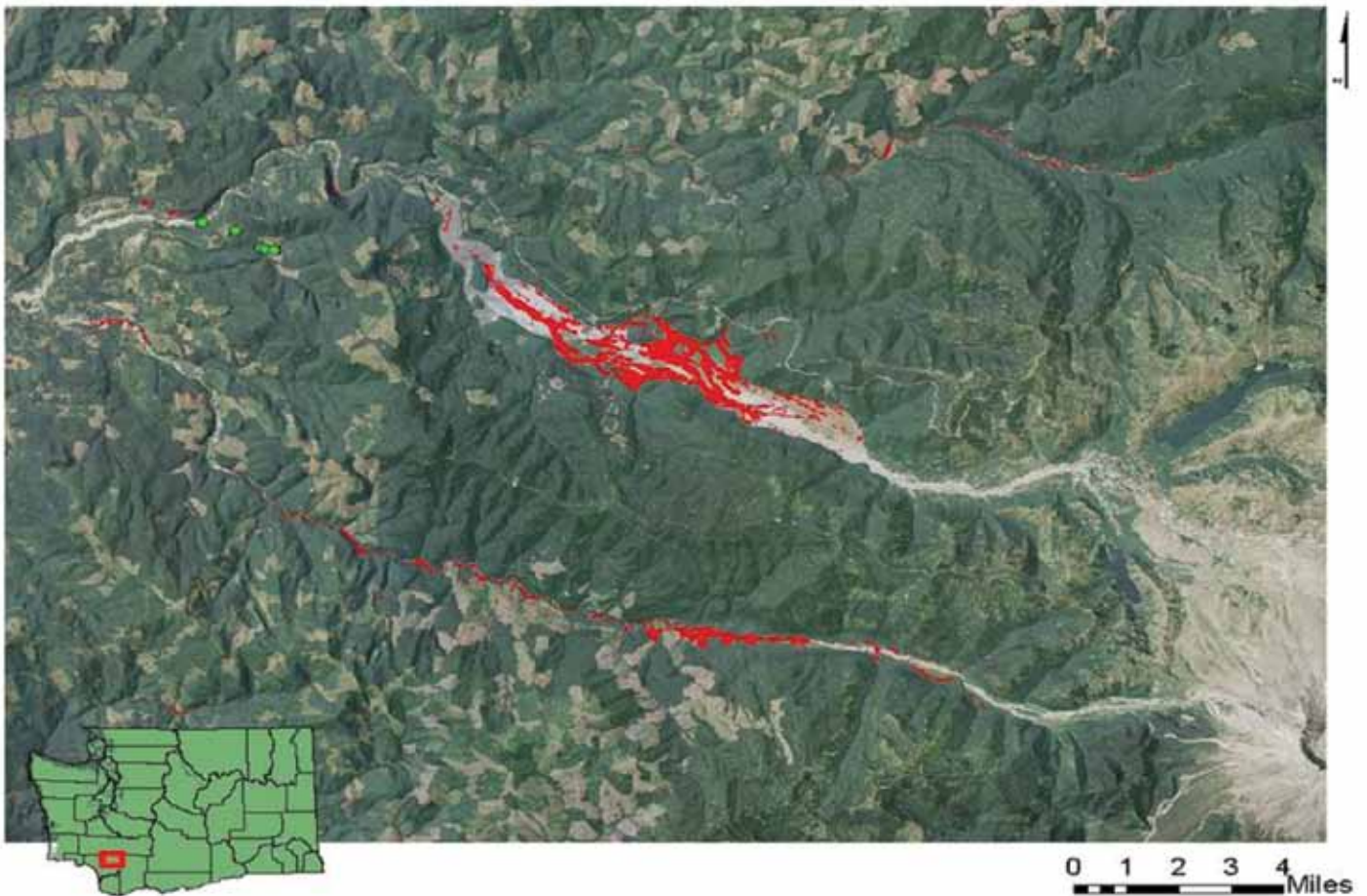


About the cover:

The noxious weed kochia emerges from hay and manure at the Mt. Adams Horse Camp in the Gifford Pinchot National Forest. Its presence underscores the importance of weed-free hay and mulch in wilderness areas. Photo by Marty Hudson, Klickitat County NWCB.

Image Credits

- Inside front cover: first and second row: WSNWCB; third row, left: Nelle Murray, Asotin County NWCB; third row, right: Thurston County NWCB; Bottom row, left: Sue Winterowd, Stevens County NWCB; Bottom row, center: Skamania County NWCB; Bottom row, right: Nelle Murray, Asotin County NWCB
- Page 3: Left, yellow starthistle: WSNWCB; Right, parrotfeather control: King County NWCB
- Page 4: WSDA Knotweed Control Program
- Page 5: Grant County Weed District #3
- Page 6: Garlic mustard: WSNWCB; Yellow floating heart: Yakima County NWCB; Himalayan blackberry WSNWCB
- Page 8: Flower and Garden Show: WSNWCB
- Page 9: Yellow archangel: WSNWCB
- Page 11: Hay inspection: WSNWCB
- Page 12: Education booklets: Grant County NWCB
- Page 13: Tour and boot cleaning: WSNWCB
- Page 16: Sue Winterowd, Stevens County NWCB
- Page 18: Gray's Harbor board members: Nancy Ness, Grays Harbor NWCB
- Page 19: SEWA CWMA Tour: WSNWCB
- Page 20: Tansy ragwort: WSNWCB
- Page 21: Planting natives: King County NWCB
- Page 22: Spurge flax survey: Okanogan County NWCB
- Page 23: Report covers: Ray Willard WSDOT
- Page 25: Knotweed treatment before and after: WSDA Knotweed Control Program
- Page 26: Spartina: WSDA Spartina Control Program
- Page 26: Biocontrol: Jenn Andreas, WSU Extension
- Inside back cover: Knotweed model: WSDA Knotweed Control Program; SWAP distribution map, WSDA
- Page 34: Lyons Ferry: Robin Kusske, Franklin County NWCB



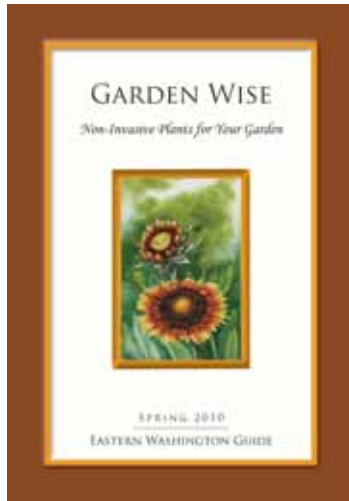
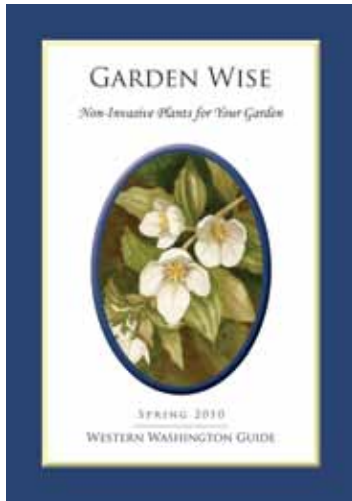
This model created by WSDA shows the current cost of conducting knotweed control on limited sites in the Toutle River Watershed as opposed to the cost of control if the knotweed is allowed to expand to its potential range within the watershed



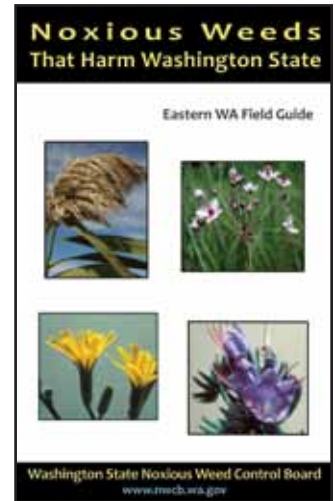
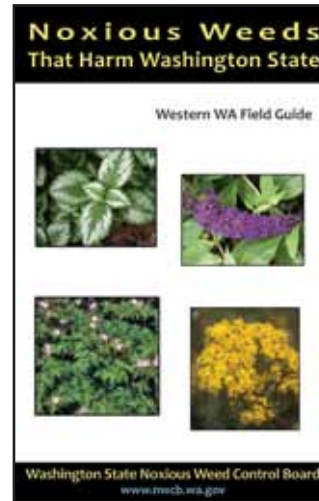
WSDA has developed and implemented a pest tracking database known as the State Weed and Pest (SWAP). Distribution data is used to create statewide maps of noxious weed species.

Publications 2009 through 2011

Garden Wise Booklets



Noxious weed field guides



Brochures



Early Detection and Rapid Response Postcards



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.