



**King County**  
 Department of Natural Resources and Parks  
 Water and Land Resources Division  
**Noxious Weed Control Program**



# KING COUNTY NOXIOUS WEED CONTROL PROGRAM

206-477-9333 • [kingcounty.gov/weeds](http://kingcounty.gov/weeds)

## 2014 annual report



### Letter from the Board

On behalf of the King County Noxious Weed Control Board, I am pleased to present you the King County Noxious Weed Control Program's 2014 Annual Report.



As a volunteer citizen-oversight Board, we are charged with ensuring that the citizens of the County are being fairly and effectively served by the Program. This report clearly demonstrates that this is indeed the case.



Left uncontrolled, noxious weeds can significantly impact public and private land use in the County. The Program focuses on ensuring that these impacts to the environment, economy, recreation and public health are minimized. These actions are driven by the Environmental Sustainability goals of the King County Strategic Plan to safeguard and enhance King County's natural resources and environment.

#### OUR MISSION

*Provide benefits to the environment, recreation, public health and economic resources of King County by preventing and minimizing harmful impacts of noxious weeds.*

The key to successful noxious weed control is effective engagement and participation of landowners and communities in the stewardship of their lands. The Program has worked hard to achieve this in 2014.

Detailed in this report is the highly impressive range of activities undertaken in 2014 and the results that have been achieved. The Program's achievements are producing real, tangible and immediate benefits to the environment, economy and quality of life in King County.

Thank you for your interest and support for this important work.

**Scott Moore, Chair**  
 King County Noxious Weed Control Board



*Surveying Rainbow Bend.  
Photo credit Avery Bowron*

## 2014 KING COUNTY NOXIOUS WEED CONTROL PROGRAM STAFF

**Program Manager:** Steven J. Burke

**Education Specialist:** Sasha Shaw

**Administration:** Denise Liguori

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**County Lands:** Roy Brunskill

**State and Federal Lands:** Tricia MacLaren

**Aquatic Weeds:** Ben Peterson

**Knotweed Projects:** Frances Lucero

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**Special thanks to:** *Denise Liguori and Sasha Shaw for data analysis, managing content and editing; Megann Devine for layout and design.*

**For more information:**  
**206-477-9333** or  
**kingcounty.gov/weeds**

## 2014 KING COUNTY NOXIOUS WEED CONTROL BOARD

The King County Noxious Weed Control Board sets county weed control priorities, annually adopts the county weed list, and administers the Noxious Weed Control Program throughout the County according to the requirements of the State Noxious Weed Law, RCW 17.10. The Board was activated by the King County Council on August 7, 1992 in response to a citizen's petition to the Council. The Board produces this Annual Report on the performance and activities of the Noxious Weed Control Program.

The Board is comprised of five volunteer citizens representing five districts within the County. Each member is appointed by the King County Executive and confirmed by the King County Council. Also, one staff person from WSU Extension serves as a non-voting member. The Program thanks the following Board Members for serving on the King County Noxious Weed Control Board in 2014:

**Jennifer Andreas, WSU Extension**

**Clint Bostwick (resigned in 2014)**

**John Browne**

**Becky Chaney**

**Scott Moore, Chair**

**Eldon Murray (appointed in 2014)**

**Grace Stiller**

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# Major Noxious Weeds in King County: 2014 Snapshot

## Top Class A Weeds in King County

**Garlic Mustard**  
479 active sites



6% eradicated  
100% controlled

**Giant Hogweed**  
382 active sites



80% eradicated  
100% controlled

**Milk Thistle**  
65 active sites



24% eradicated  
100% controlled

**Goatsrue**  
30 active sites



30% eradicated  
100% controlled

## Top Class B Weeds in King County

**Tansy Ragwort**  
5,051 active sites



32% eradicated  
97% controlled

**Purple Loosestrife**  
1,191 active sites



20% eradicated  
95% controlled

**Spotted Knapweed**  
670 active sites



40% eradicated  
99% controlled

**Orange Hawkweed**  
482 active sites



18% eradicated  
100% controlled

**Dalmatian Toadflax**  
340 active sites



31% eradicated  
99% controlled

**Yellow Hawkweed**  
336 active sites



15% eradicated  
99% controlled

**Sulfur Cinquefoil**  
323 active sites



29% eradicated  
99% controlled

**Diffuse Knapweed**  
263 active sites



30% eradicated  
99% controlled

**Policeman's Helmet**  
186 active sites



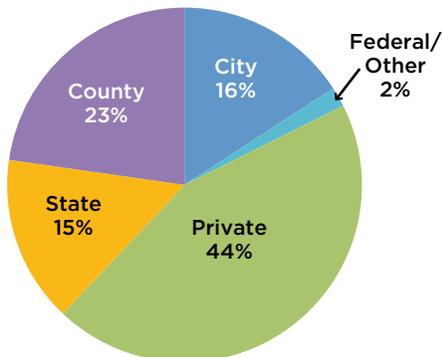
57% eradicated  
97% controlled

**Garden Loosestrife**  
204 active sites



7% eradicated  
93% controlled

### Infestations by Property Type



### Definitions (RCW 17.10, WAC 16-750)

**Eradicate:**

Completely eliminate a noxious weed within an area of infestation.

**Control:**

In a given year, prevent seed production and dispersal of parts capable of forming new plants.

**Class A:**

Eradication required by State Law due to limited distribution in state and potential significant impact to state's economy and environment.

**Regulated Class B:**

Control required by State Law. Class B weeds are regulated in areas of the state where they are limited in distribution to prevent further spread.

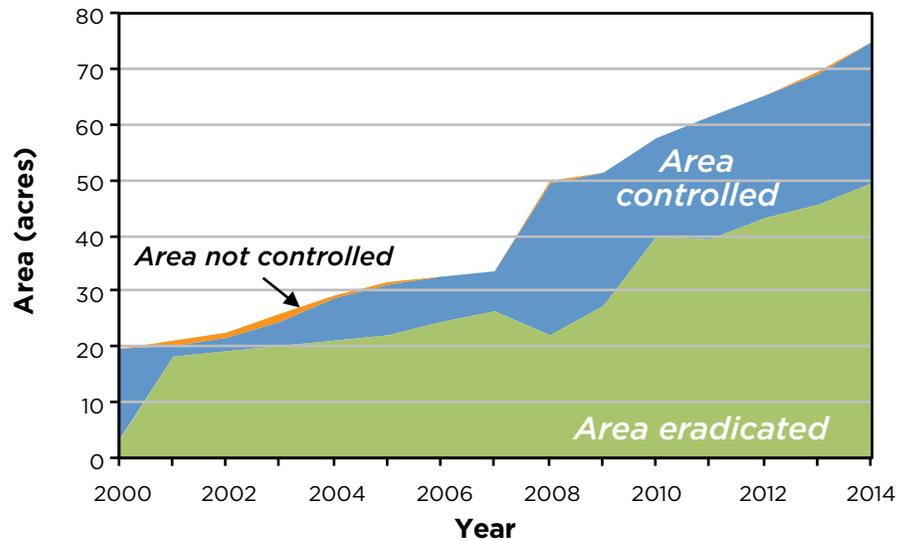
# Major Results Towards Achieving Program Goals

King County enjoys a world-renowned setting of vibrant urban centers in close proximity to unspoiled natural areas, stunning waterways and productive agricultural lands. These are the result of visionary leadership, planning and stewardship over many years by King County citizens, their elected representatives and a range of community groups. These hard won natural assets however can be seriously degraded by noxious weed invasion. The King County Noxious Weed Control Program works with citizens of the County to make sure this does not happen.

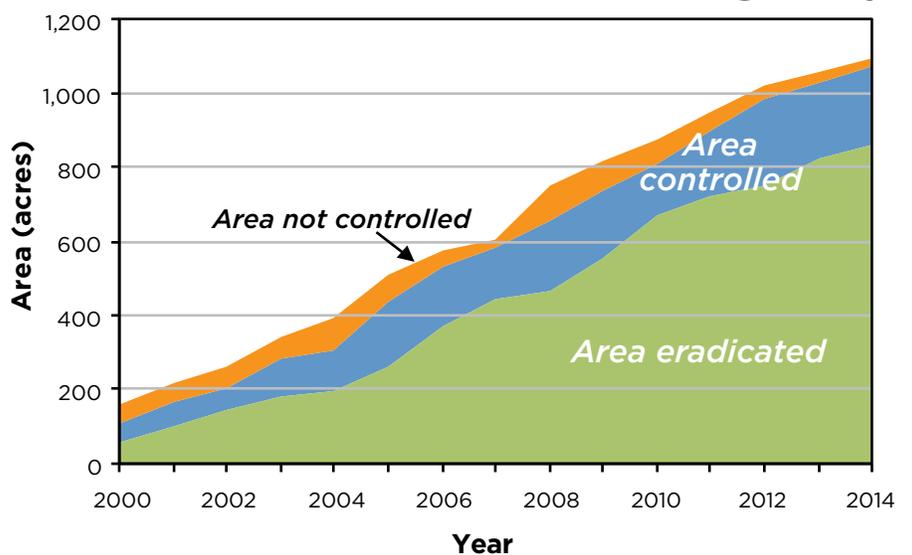
The King County Noxious Weed Control Program uses the following approaches to effectively deal with noxious weeds:

- Work to prevent their introduction in the first place
- Create monitoring systems for detecting new infestations
- Move rapidly to eradicate newly detected invaders
- Manage more widespread weed problems strategically to minimize impacts

**Control of Class A Noxious Weeds in King County**



**Control of Class B Noxious Weeds in King County**



## Program Goals

-  Educate the community about prevention and management of noxious weed infestations and increase participation in noxious weed control activities.
-  Eradicate existing infestations of Class A noxious weeds.
-  Control regulated Class B and Class C noxious weed infestations to below levels of significant impact.
-  Implement early detection and rapid response for infestations of new noxious weeds with limited distribution.
-  Support the management of widespread noxious weeds and facilitation of more effective, coordinated landscape-scale control efforts.

# Major Results Towards Achieving Program Goals *(continued)*

Aware and engaged citizens are the most valuable resource to successfully implement this strategy. In 2014, the Program reached out to King County communities about noxious weeds, increasing property owner and volunteer participation in noxious weed control activities.

In 2014, the Program worked with more than 4,000 landowners and public agencies with noxious weeds on their properties and achieved control on 98 percent of the infestations without need for regulatory actions.

**Class A Weeds:** In 2014, 100 percent of the 1,232 Class A noxious weed infestations in King County were controlled. Class A noxious weeds are the highest priority in Washington due to their potentially serious impacts to the state's economy and environment, as well as their limited distribution in the state, making eradication a feasible goal. To date, 66 percent of the area in the County originally infested by Class A weeds from 1996 to 2014 has been eradicated.

**Class B and C Weeds:** The Program also achieved significant containment and control of regulated Class B and C noxious weeds, with control achieved on 97 percent of the 10,160 sites surveyed. Class B and C noxious weeds are more widespread than Class A weeds, but also pose serious threats to the state's natural and economic resources. These weeds are regulated in areas of the state where they are limited enough for required control to be feasible.

**Special Projects and Programs:** For widespread noxious weeds with a significant impact on public investments such as knotweed and aquatic weeds in lakes and rivers, the Program facilitates coordinated, collaborative landscape-scale projects that integrate control with restoration and often make use of grants and other external resources. Details about these special projects are included later in this report.



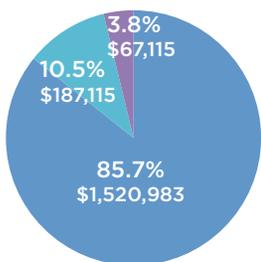
*Controlling garden loosestrife on the Sammamish River.  
Photo credit Ben Peterson*

## 2014 Major Program Activities

- 11,395** infestations surveyed
- 4,010** property owners contacted
- 11,113** infestations controlled
- 362** new infestations found
- 169** acres of weeds controlled by property owners
- 281** acres of weeds controlled by Program
- 73 vs 27** percent of sites controlled by owner vs Program
- 8,158** hours spent in the field by staff
- 1,302** hours spent teaching or doing outreach events

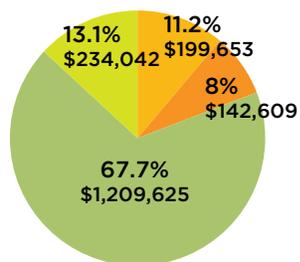
## 2014 Program Financials

Program Revenue:  
\$1,775,213



- Noxious weed parcel assessment
- Grants
- Interest and other

Program Expenditure:  
\$1,785,931\*



- County overhead and rent charges
- Program operational costs (equipment, supplies, services)
- County fixed operational cost (IT, finance, vehicles)
- Salaries and benefits

\*Difference between revenue and expenditure was covered by the Program's fund balance.

# Knotweed Projects Update



Photo credit Frances Lucero

Invasive knotweed is one of the greatest threats to riverine environments in King County. Knotweed significantly reduces riparian habitat, degrades water quality, and impedes attempts to restore endangered and threatened salmon runs. To reduce the impacts of knotweed to natural resources in the County, the Program leads cooperative, comprehensive knotweed control projects.

These projects work systematically from the top of the waterways to be effective in eradicating this plant that spreads so readily in water. Knotweed infestations are extensive and the plant requires many years

of treatment to eradicate. Therefore, the projects are multi-year endeavors.

To ensure the success of the projects, the Program seeks the voluntary participation of all landowners, public and private, as well as the partnership of other stakeholders and public agencies working on the rivers.

In 2014, the Program conducted knotweed projects on four river systems: Upper Snoqualmie, Skykomish/Tye River, Cedar River (in conjunction with Seattle Public Utilities and Forterra), and Middle and Upper Green River.

The knotweed projects have all shared a similar strategy. Staff locate the uppermost infestation, contact landowners for permission, then, starting at the top of the watershed, treat knotweed along the river and within the active floodplain as far as resources and time permit. In the first year, work focuses on getting initial treatment within the 50 feet closest

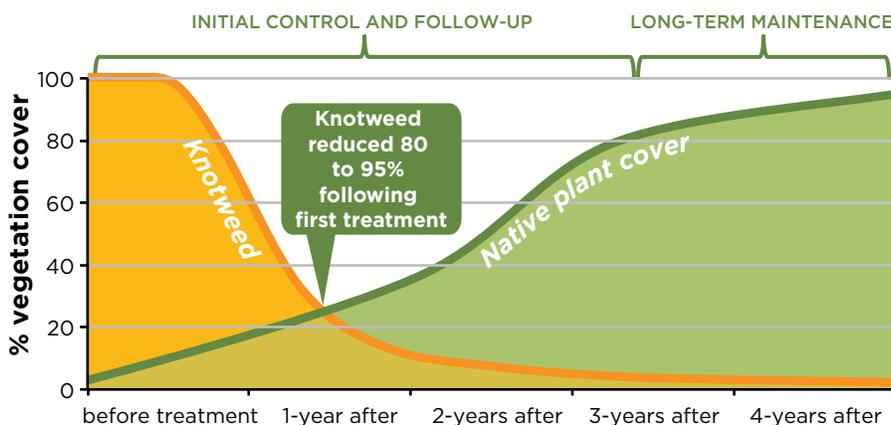
**2014 Knotweed Project Accomplishments**

- 90 river miles** covered in knotweed project area
- 1,900 acres** surveyed for knotweed
- 196 acres** of knotweed controlled
- 176 field days** spent on knotweed survey and control
- 77 crew days** from WCC, EarthCorps, Puget Sound Corps, and Mountains to Sound Greenway
- 1,024** property owners on rivers contacted and assisted

to the water; in the second year, staff treat the infested area from the first year, and add another 50 to 100 feet into the floodplain. By the third year, the goal is to have treated knotweed between the water and the upper extent of the floodplain (or levee if one is present). Each year, crews and staff revisit all previously treated areas, meaning that the project footprint keeps growing, even though the amount of knotweed decreases. Consistent, annual treatment offers the best control of this difficult plant.

The Noxious Weed Program is not alone in tackling knotweed in the County. The King County River and Floodplain Management Section, the Road Services

## Conceptual Model of Transition from Knotweed to Native Riparian Forest



# Knotweed Projects Update *(continued)*

Division and the Parks and Recreation Division also control knotweed on county-managed levees, roads and natural areas. In addition, many local organizations and agencies are also working to control knotweed in King County. The Program provides training classes and technical support to these groups to increase the effectiveness and amount of knotweed control in the County. In 2014, 95 agency and non-profit staff attended the Program's professional knotweed control workshops.

Private landowners also contributed to the knotweed fight in 2014. Over 110 county residents attended the Program's homeowner

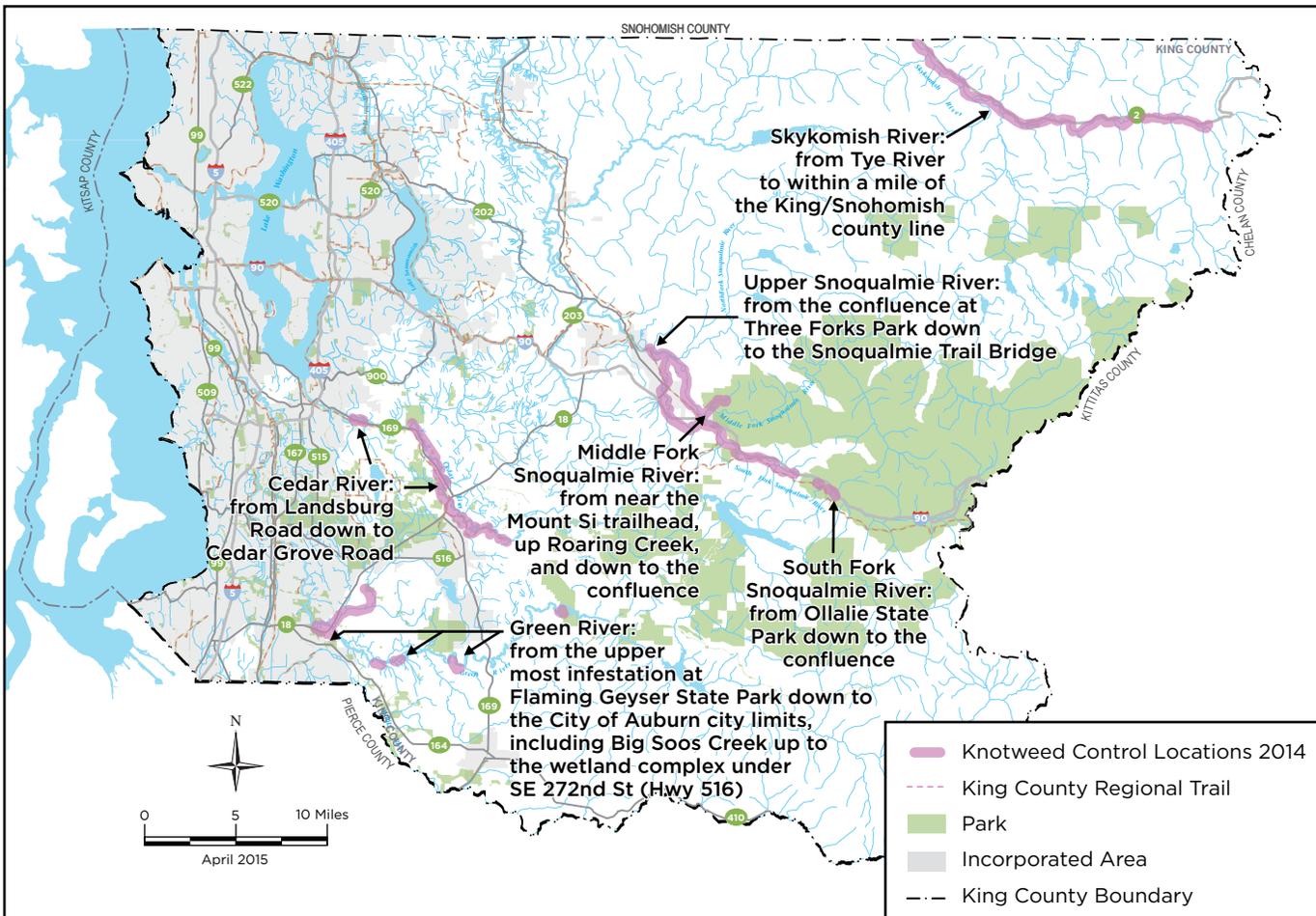
knotweed workshops held in the cities of Enumclaw, Tukwila, Covington, North Bend/Snoqualmie, Seattle and Newcastle. People who attended the knotweed workshops qualified to borrow a knotweed injector from the Program to inject their own plants. Approximately 20 participants borrowed injectors this summer. Because the Program's knotweed projects focus only on the river corridor, the workshops and injector loan program encourage and enable people to treat knotweed that the Program is not able to reach.

Funding for these projects comes from a combination of



*Knotweed treatment.*  
Photo credit WCC

external grants and program funds. Grant sources for 2014 included the Washington State Department of Ecology, Environmental Protection Agency, and United States Fish and Wildlife Service. In addition, the Washington State Department of Natural Resources (WDNR) contributed 23 Puget Sound Corps crew days to the Program's knotweed projects in 2014, significantly increasing the level of knotweed control achieved on King County's rivers.



**Knotweed Projects in King County managed by the King County Noxious Weed Control Program**



King County Road Crew pulling tansy ragwort.  
Photo credit King County Road Crew

## County Lands

King County agencies are responsible for noxious weed control on 43,350 acres of property and 1,500 miles of road right-of-way. Noxious weed control on county-managed properties continued to exceed levels of control achieved on non-county properties.

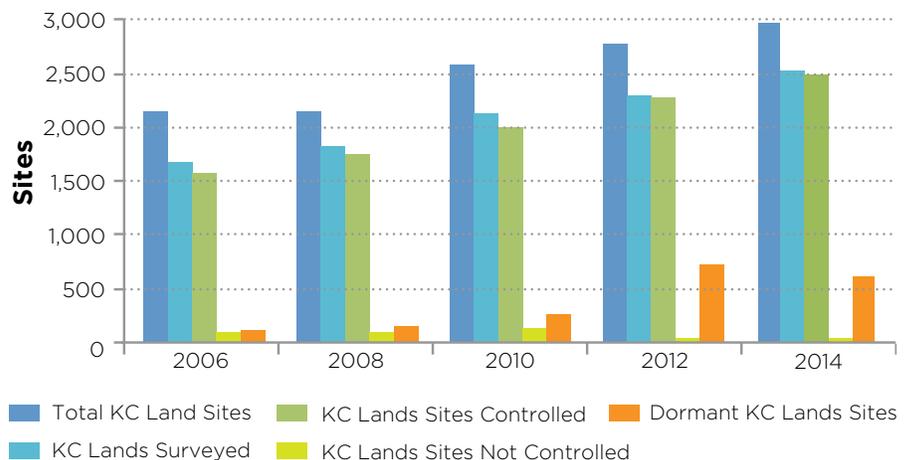
At year end, there were 2,341 known locations of regulated noxious weeds on county-managed properties, including 85 new sites. Noxious weeds were controlled on 98.4 percent of the sites surveyed by Program staff, thereby preventing seed production for that year (see Table 1 for results by agency). In addition, the Program received only three complaints from citizens about noxious weed problems on county-managed properties. In all cases, the Road Services Division responded promptly after being notified and all weeds were controlled before they went to seed.

In addition to controlling regulated noxious weeds, the Parks and Recreation Division also devotes considerable resources to reducing other

invasive plants on county lands (see Table 2). These weeds can have a significant impact on the County's parks and natural areas if left unchecked.

A high priority of the Program for 2014 was to search for garlic mustard on county-managed properties on the Cedar River. The number of county properties known to be infested by garlic mustard increased from 19 to 29 properties. The increase is likely due to spread of seeds by water and wildlife as well as new Cedar River properties being added to the county inventory.

All garlic mustard found in 2014 on county properties was controlled through collaboration between Rivers and Flood Plain Management, Parks and Recreation Division, Road Services Division and the Noxious Weed Control Program. In addition, all sites were surveyed multiple times. Several years of this strategy has had a positive impact. Although there was an increase in the number of sites, there was a decrease in area infested (from 56,675 square feet in 2013 to 55,311 square feet in 2014).



Noxious weed sites on King County lands

Division	Number of Sites Surveyed	Percent Sites Controlled
Wastewater	2	100%
Transit	7	100%
Solid Waste	9	100%
Facilities Management	12	92%
Rivers	40	98%
Stormwater	114	96%
Parks/Open Space	176	96%
Roads	2,130	99%

Table 1. Control of regulated noxious weeds on county-managed lands

Noxious Weed Species (Non-regulated)	Number of Parks Sites	Acres Controlled
	2014	2014
Yellow Flag Iris	4	1
Yellow Archangel	8	2
Scotch Broom	11	1.2
English Ivy	14	11
Butterfly Bush	16	1.3
Common Teasel	16	14
Poison Hemlock	18	9
English Holly	25	36
Thistle	40	25
Blackberry	54	126
Knotweed	65	85

Table 2. Non-regulated noxious weeds controlled by King County Parks and Recreation Division



*Pulling policeman's helmet on Mill Creek.  
Photo credit Tricia MacLaren*

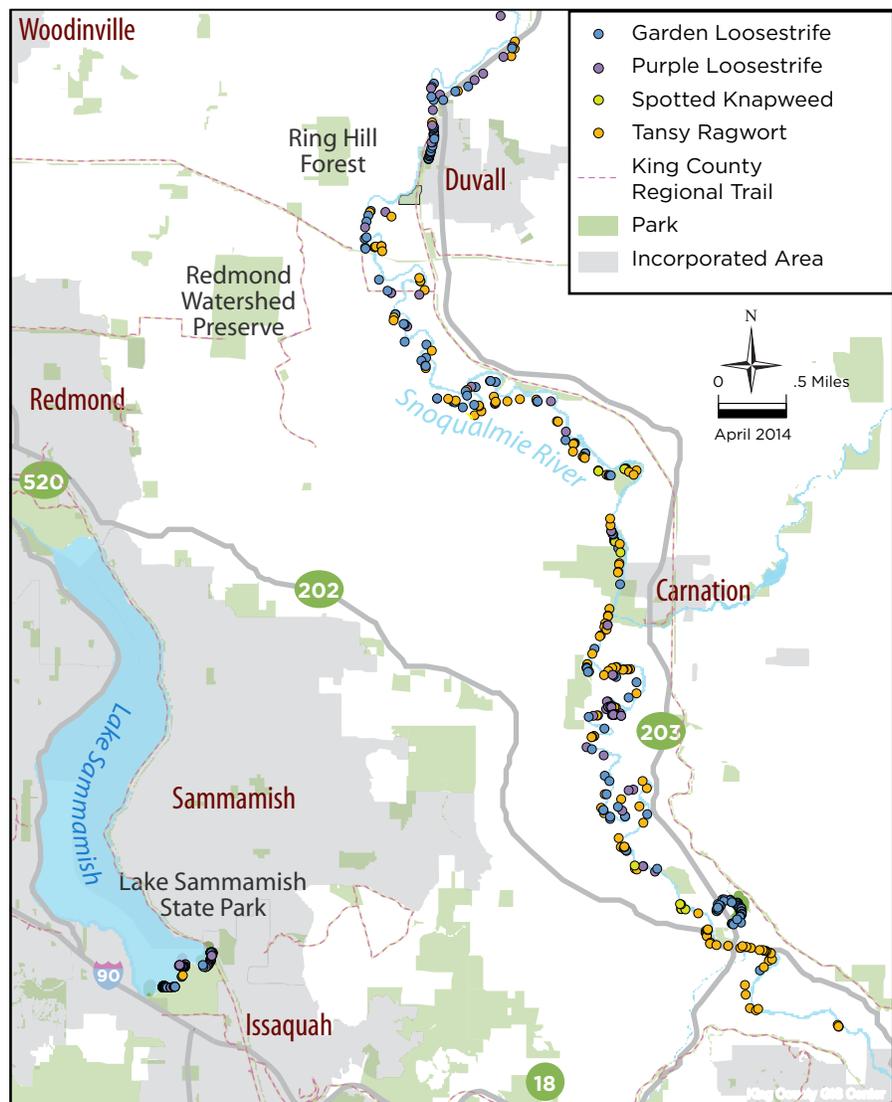
## State and Federal Lands

The state of Washington and the federal government have more than 3,700 parcels within King County, comprising 38 percent of its area. In 2014, there were 315 active regulated noxious weed sites on state and federal properties, 7 of which were new sites. Staff surveyed all of the active sites and control was achieved on 99 percent of the sites and 95 percent of the area infested.

Washington also maintains 18 state highways that travel through King County covering 368 linear miles. In 2014, Program staff surveyed 1,666 regulated noxious weed sites on state highways. Working with the Washington State Department of Transportation (WSDOT), 100 percent of these sites were controlled.

### Highlights of Program's successful working relationships with state and federal land managers in 2014:

- Controlled significant areas of noxious weeds in state-owned riparian areas through an interagency agreement with WDNR (see WDNR map)
- Collaborative working relationship with the federal Department of Commerce for control of loosestrife on Lake Washington and Portage Bay
- Assisted Port of Seattle in maintaining control of common reed on the Duwamish River
- Partnered with U.S. Forest Service in surveying and controlling noxious weeds in the Mt. Baker-Snoqualmie National Forest
- Achieved successful control on state highways of European hawkweed, rush skeletonweed and Dalmatian toadflax
- Collaborative working relationship with Washington Department of Fish and Wildlife (WDFW) for successful control of noxious weeds on state parcels within the County
- Collaborative working relationship with Washington State Parks and Recreation for successful control of noxious weeds within state parks



**Riparian noxious weeds controlled in 2014 funded by WDNR**



*KUOW interview.  
Photo credit Sasha Shaw*

## 2014 Education Activities

**41** information booths and outreach events

**68** workshops, presentations and field trips

**111** people attended knotweed classes in Enumclaw, Tukwila, Covington, North Bend, Seattle and Newcastle

**191** Americorps youth and community steward volunteers trained on invasive plants

**260** attendees at professional noxious weed recertification seminars

**619** public information inquiries and citizen weed reports

**1,968** newsletter subscribers

**4,010** property owners with noxious weeds contacted or assisted

**9,035** contacts at events and workshops

**13,850** brochures and bulletins distributed

**388,688** website visits

## Education and Technical Assistance

The Program carries out a wide range of education and outreach activities in order to build a knowledgeable and engaged community that actively works to reduce noxious weed impacts in the County.

In 2014, Program staff worked directly with over 4,010 property owners and public land managers and responded to over 619 additional public inquiries and reports of noxious weed infestations. Information was provided to the public through the Program’s popular website, weed booklets and fact sheets, and the e-newsletter “KC Weed News,” which highlights issues relevant to weed control in King County.

The Program provided educational presentations, workshops and field trips to a wide range of audiences and had information booths at public events and fairs throughout the County, including 15 farmer’s markets and several large events such as the Maple Valley Days, Enumclaw Street Fair and Vashon Strawberry Festival.



*Knotweed injection training for homeowners.  
Photo credit Sasha Shaw*

# Aquatic Weed Control

During 2014, 95 percent of all Class A and regulated Class B aquatic noxious weed sites surveyed were controlled. The majority of these infestations are purple and garden loosestrife. Measuring by area infested with each loosestrife, 94 percent of the garden loosestrife area and 95 percent of the purple loosestrife area was controlled. One hundred percent of the Class A and remaining regulated Class B aquatic weed sites were controlled in 2014. Control methods used included aquatic herbicide, hand pulling, biocontrol, and a combination of these methods where that was most effective.

Intensive surveying of aquatic areas is an important Program activity. This facilitates early detection of new infestations and a more rapid, effective control response. In 2014, Program staff surveyed 23 small lakes, 35 miles of the Snoqualmie River, four miles of the Sammamish River, and many streams and wetlands. In addition, the Lake Weed Watcher volunteer program continued in 2014, in which residents were trained to survey for high priority aquatic weeds in their lakes. The Program trained 12 volunteers and nine volunteers contributed 21 hours conducting seven surveys on five different lakes: Lake Tuck near Woodinville, Lake Kathleen near Renton, Pine Lake in Sammamish, Angle Lake in SeaTac, and Echo Lake in Shoreline.

Although research is not a primary function of the Program, where possible we support efforts to help us improve our ability to manage difficult species. In 2014, in conjunction with Washington State University Extension Mount Vernon, we began control trials on the Class B noxious weed garden loosestrife. Both potted plant and field trials were set up to determine which products are most effective on this species. Because garden loosestrife has proven to be challenging to eradicate with any of the currently used methods of control, these trials should improve our ability to make the most effective long term choice for managing the species.



*Controlling garden loosestrife. Photo credit Ben Peterson*



*Spraying fragrant water lily at Lake Desire. Photo credit Ben Peterson*

2014 Aquatic Weed Control Activities
<b>5</b> lakes surveyed by Weed Watcher volunteers
<b>23</b> lakes and many streams and wetlands surveyed by Program staff
<b>39</b> miles of the Snoqualmie and Sammamish rivers surveyed for aquatic weeds
<b>4</b> Class A aquatic weed sites controlled
<b>1,285</b> Class B aquatic weed sites controlled

Aquatic Weed Percent of Sites Controlled	
Purple Loosestrife	<b>95%</b>
Garden Loosestrife	<b>93%</b>
Parrotfeather	<b>100%</b>
Reed Sweetgrass	<b>100%</b>
Floating Primrose-willow	<b>100%</b>
Yellow Floating-heart	<b>100%</b>



*Puget Sound Corps crew member controlling purple loosestrife on the Sammamish River. Photo credit Ben Peterson*

# Stewardship Highlights 2014

The Program works in partnership with landowners, volunteers, public agencies and non-profits to achieve improved stewardship of the land, often using grants and other supplemental funding opportunities to accomplish these results. Working together with our partners, we achieve effective weed detection and coordinated weed control over a large number of connected properties.

## Major stewardship projects include:

### 1 Alpine Noxious Weeds

- Control of European, orange and yellow hawkweeds, spotted, diffuse and meadow knapweeds, sulfur cinquefoil, tansy ragwort, Scotch broom and absinth wormwood at approximately 360 locations.
- Project spans the Cascade crest into adjacent Kittitas County and the Okanogan-Wenatchee National Forest.
- Stakeholders include the U.S. Forest Service, Washington State Department of Transportation, Washington State Parks and Recreation, Washington State Department of Agriculture, Washington State University Extension, Kittitas County Noxious Weed Control Board, Bonneville Power Administration, Puget Sound Energy, Mountains to Sound Greenway, The Summit at Snoqualmie, private landowners in the Alpental Village Homeowners Association

and in the towns of Skykomish and Baring.

### 2 Knotweed control on the Green, Cedar, Skykomish and Snoqualmie Rivers

- Controlled 196 acres of invasive knotweed on riparian corridors and wetlands on 90 river miles in King County.
- Worked collaboratively with 1,024 landowners.
- Provided homeowners and public agencies knotweed control workshops, equipment loan, and technical support.
- WDNR's Puget Sound Corps contributed 23 crew days to knotweed control on King County rivers.
- Project partners and funders included U.S. Fish and Wildlife Service, King Conservation District, Environmental Protection Agency, National Fish and Wildlife Foundation, Friends of the Cedar River Watershed, Seattle Public Utilities, Forterra, Mountains to Sound Greenway, Washington State Department of Ecology, WDNR, and private landowners.

### 3 Lake Desire Aquatic Weed Control

- 8 volunteers contributed over 70 volunteer hours to the project in 2014.
- Controlled purple loosestrife covering 10,100 square feet (hand-clipping flowers and spot spray), fragrant water lily covering 72,745 square feet (foliar spray), and Eurasian watermilfoil within the 20 acre littoral zone (in-

water herbicide).

- Purple loosestrife infested area reduced by 47 percent from 2013.
  - Assisted 84 property owners.
  - The work was funded by a combination of Washington State Department of Ecology's Aquatic Weed Management Fund grant program (75 percent) and match provided by Program funds and Lake Desire residents' volunteer time (25 percent).
- ### 4 Miller and Walker Creeks Noxious Weed Control
- Project covers 6.5 miles of an urban creek system that originates near SeaTac and drains directly into Puget Sound.
  - From 2005 to 2014, the Program reduced the area covered by the noxious weeds purple loosestrife, giant hogweed, knotweed and policeman's helmet on Miller and Walker Creeks by 96 percent (from 2.8 acres to 0.1 acre).
  - The area infested with policeman's helmet has been reduced from about 40,000 square feet spread throughout the project area in 2005 to only 125 square feet in a few scattered locations in 2014.
  - Knotweed has been reduced by 99 percent from a high of 55,000 square feet to less than 400 square feet in 2014.
- ### 5 Snoqualmie River Aquatic Weed Control
- 331 infestations of garden loosestrife, purple loosestrife, tansy ragwort and spotted knapweed were controlled along 33 miles of the Snoqualmie

River and adjacent wetlands.

- WDNR is our primary project partner on this and we work with approximately 100 adjacent landowners in the project area.

### 6 Upper Snoqualmie Alpine Lakes Trail Weed Watchers

- 37 participants attended all-day weed watcher training, including 14 new volunteers for the Upper Snoqualmie Weed Watchers, 5 for The Mountaineers' Wilderness Weed Watcher program and 18 returning Weed Watchers.
- 21 volunteers contributed 414 hours over 39 days, surveyed 94 miles on 28 different trails and reported

244 locations of invasive plants.

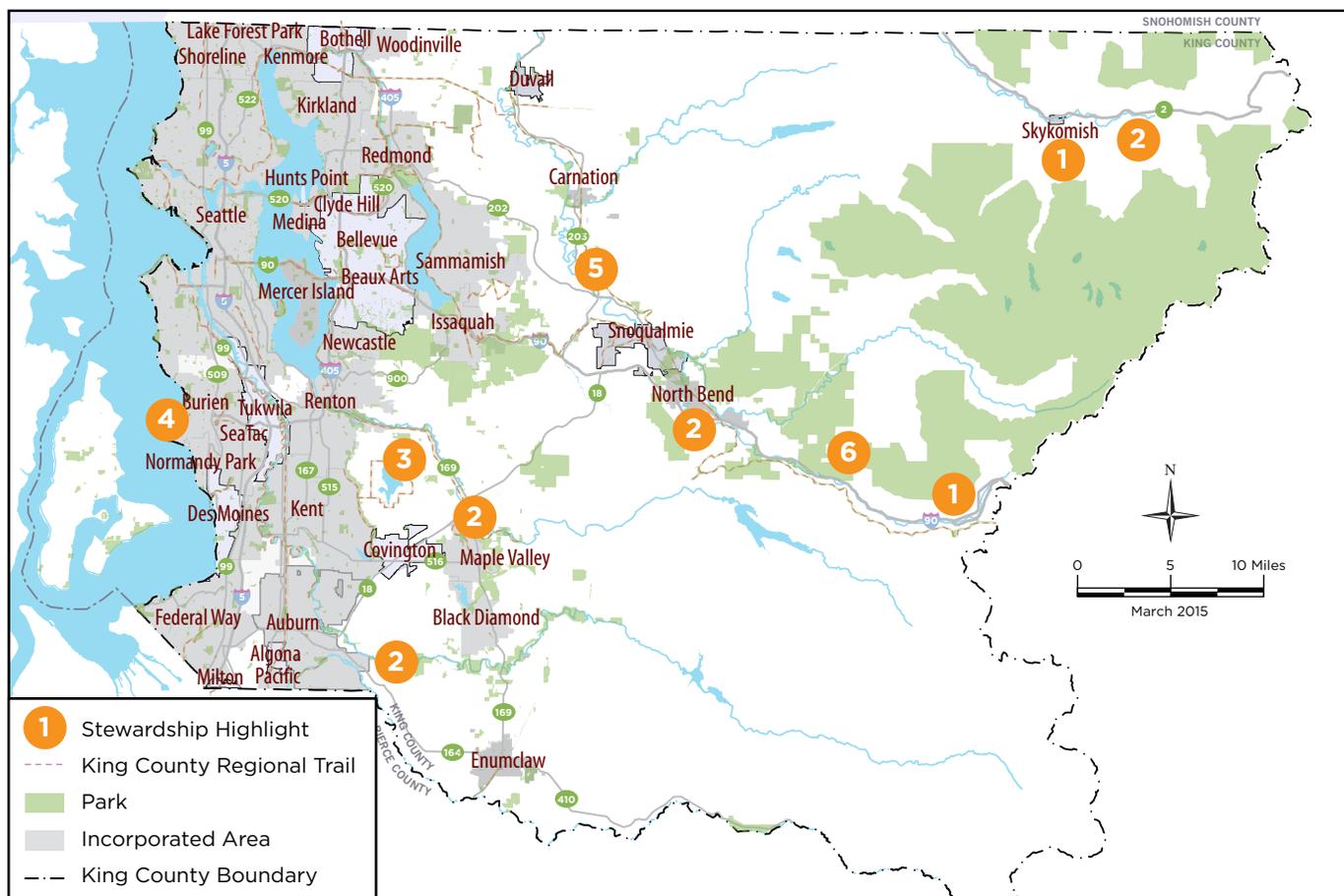
- Primary project partners include the Mountains to Sound Greenway Trust, The Mountaineers, Mt. Baker-Snoqualmie National Forest, WDNR, Okanogan Wenatchee National Forest, King County Parks and Recreation and the many wonderful volunteers who helped with planning, teaching volunteers, mentoring new volunteers, doing multiple surveys, and going above and beyond when it came to removing invasive weeds.
- Program project areas include the Middle Fork Snoqualmie Valley, Mount Si, the Upper South Fork Snoqualmie Watershed and the Alpine Lakes Wilderness.



Clearing tansy ragwort on the Snoqualmie River.  
Photo credit Frances Lucero.



Knotweed on the Skykomish River  
Photo credit Monica Walker



Stewardship Projects Map For 2014

# Puget Sound Corps in King County

In 2014, King County was once again given an opportunity by WDNR to utilize 64 crew days for the survey and control of noxious weeds along riparian corridors in the County. These work crews were part of the Puget Sound Corps Jobs Initiative funded by the State Legislature to protect Puget Sound and to provide training and work experience for young people in Washington.

WDNR designated EarthCorps to provide the field crews for the Program's projects from May through September of 2014. Noxious Weed Program staff directed the six person crews in surveying and controlling ten noxious weed species on 17 projects throughout the County (see map below). These noxious weed infestations were actively degrading the environmental and recreational values of public lands in King County and the contribution from WDNR and the partnership with EarthCorps provided a significant benefit.

Collaborative partners included WDNR, Washington Department of Fish and Wildlife, Washington State Parks, King Conservation District, and the non-profit habitat restoration organizations Mountains to Sound Greenway Trust, Sound Salmon Solutions, and EarthCorps.

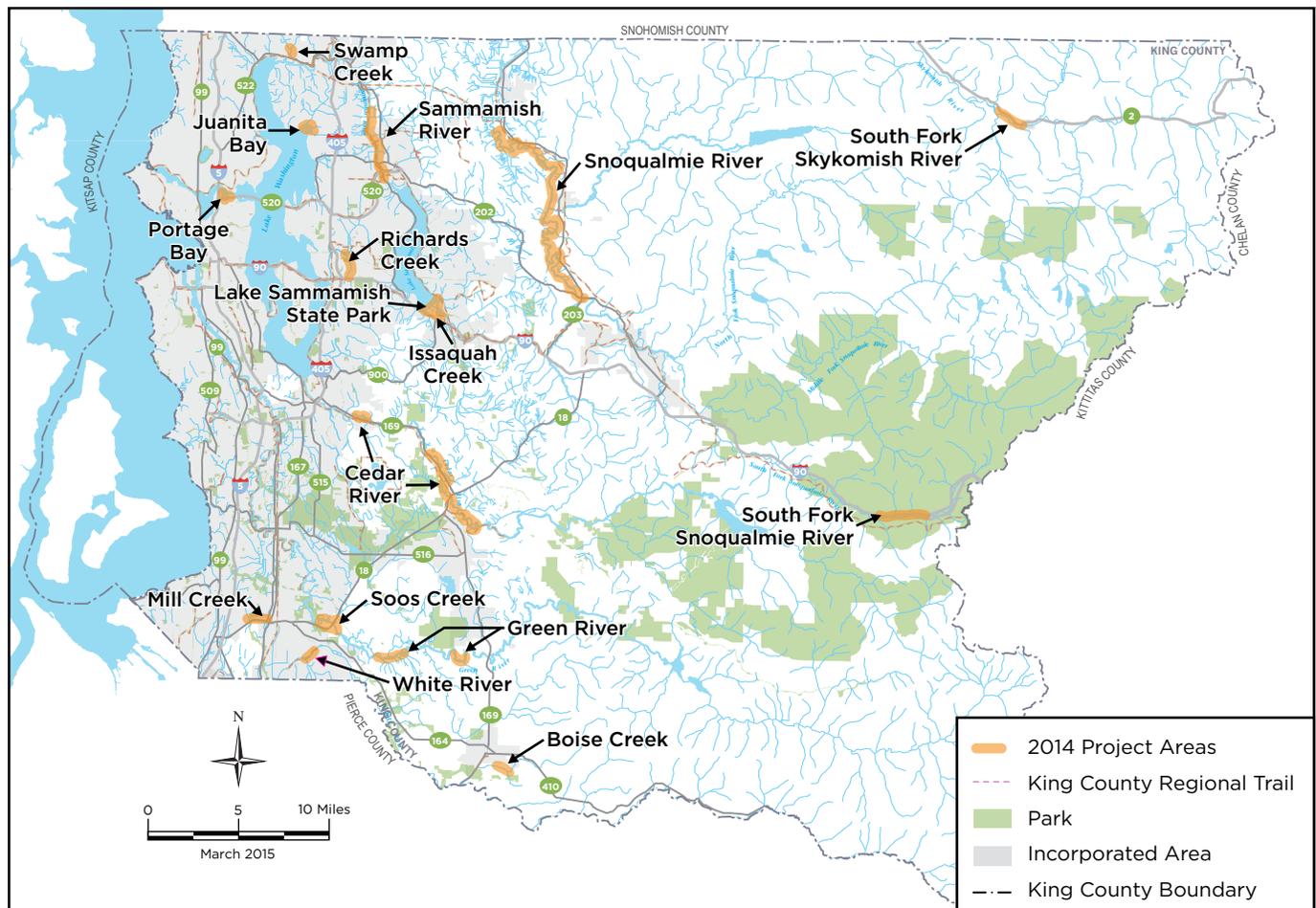
## Puget Sound Corps 2014 Highlights

- 549** acres surveyed and treated
- 64** crew days
- 54** riverbank miles covered
- 17** projects
- 10** noxious weed species

### Weed species controlled

- garlic mustard
- garden loosestrife
- Himalayan blackberry
- knotweed
- orange hawkweed
- policeman's helmet
- purple loosestrife
- spotted knapweed
- tansy ragwort
- yellow flag iris

## Puget Sound Corps Project Locations in King County 2014



# Biological Control Activity Report



Biological control release on spotted knapweed.

Photo credit Tricia MacLaren

The Program partners with Washington State University Extension's Integrated Weed Control Project (IWCP) to identify weed species and infestations that can be effectively addressed through biological control. For noxious weed species that have approved biological control agents available, this method can be a cost-effective way to reduce impacts over the long term, especially when infestations are large and/or remote and where there are insufficient resources available for other more expensive methods.

In 2014, Program staff worked with the IWCP to carry out 24 releases of a total 8,950 biocontrol agents to target six noxious weed species at ten locations. See the table below for details.

Noxious Weed	Biocontrol Agent(s)	Locations
Scotch broom	<i>Bruchidius villosus</i> (seed-feeding beetle)	Former Glacier Pit on Maury Island
Spotted and Diffuse Knapweed	<i>Bangasternus fausti</i> (seedhead weevil) <i>Cyphocleonus achates</i> (root-feeding weevil) <i>Larinus minutus</i> (seed-feeding weevil) <i>Larinus obtusus</i> (seed-feeding weevil)	Highway 2, MP 61 White River, east of Auburn Former Miles Sand and Gravel property in Auburn
Purple loosestrife	<i>Galerucella spp.</i> (foliage-feeding beetle) <i>Hylobius transversovittatus</i> (root-feeding weevil) <i>Nanophyes marmoratus</i> (flower-feeding weevil)	Lake Kathleen (Renton) May Creek (Renton) Panther Lake (Kent) NE 80th St., east of Redmond UW Bothell wetland
Dalmatian and Yellow Toadflax	<i>Mecinus janthiniformis</i> (stem-boring weevil) <i>Mecinus janthinus</i> (stem-boring weevil)	Lester, Tacoma Watershed

## Definitions

### Biological Control

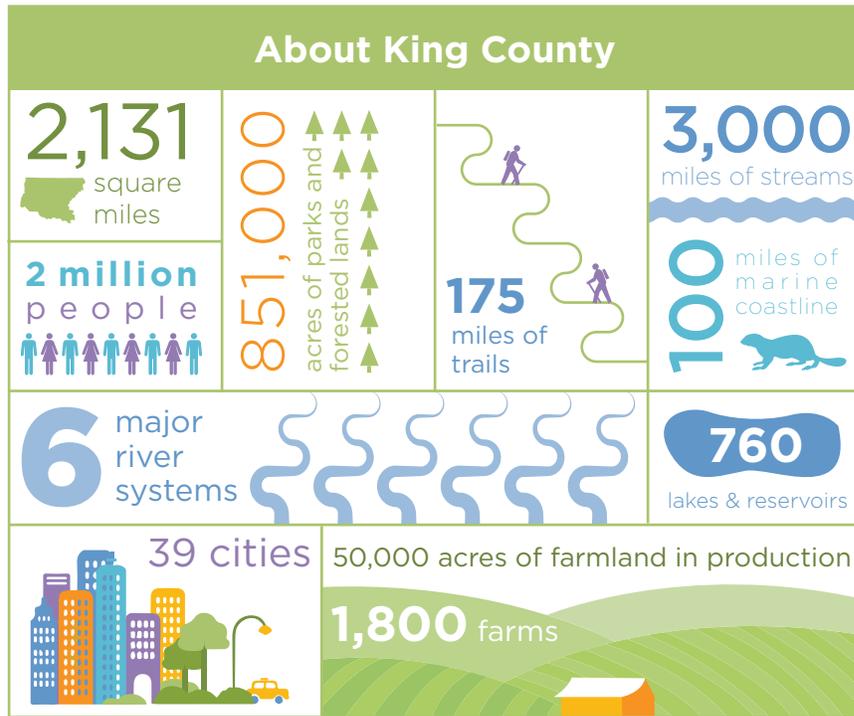
**(or biocontrol):** the control of a pest by the introduction of a natural enemy or predator

### Approved Biocontrol Agent:

an insect or other organism that has been approved for use in the United States by the United States Department of Agriculture - Animal and Plant Health Inspection Service for the control of a particular pest species



Purple loosestrife beetles. Photo credit Patrick Sowers



## King County

Department of Natural Resources and Parks  
 Water and Land Resources Division

### Noxious Weed Control Program

**For more information: 206-477-9333  
 or [kingcounty.gov/weeds](http://kingcounty.gov/weeds)**

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