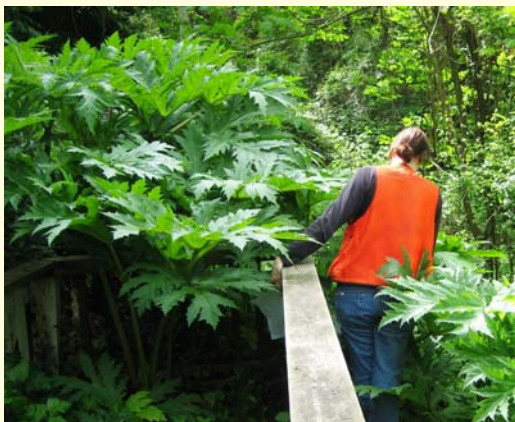


Noxious Weed Control Board

2007 Annual Report



Noxious Weed Control Program
206-296-0290 www.kingcounty.gov/weeds

Mission

To minimize impacts of noxious weeds to the environment, recreation, public health and the economy.

Goals

Eradicate existing infestations and prevent new invasions of Class A noxious weeds.

Control Class B noxious weed infestations to below levels of significant impact.

Educate the community about prevention and management of noxious weed infestations and increase participation in noxious weed control activities.



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Alternate formats of this report are available.

Call 206-296-0290
or
TTY Relay: 711

Letter from the Chair

On behalf of the King County Noxious Weed Control Board, thank you for taking the time to read our annual report. I am pleased to report that the program continues to provide important benefits to King County's economy, environment, recreation and public health.

Last year proved to be very successful for noxious weed control in King County. Working with landowners, we made significant progress in the long-term control and eradication of our highest priority noxious weeds. We also increased our capacity and effectiveness at managing other difficult-to-control, widespread weeds. This annual report documents and quantifies this progress.

The program is largely funded by citizens of the county. This public funding was continued and adjusted for inflation in 2007 by the King County Council. I believe this report demonstrates the significant public value being generated by this investment.

This success is only possible through the cooperation and support we receive from landowners, governments, community groups and other stakeholders. By working together, we are achieving tangible and sustainable land use benefits from noxious weed control. Thank you for this support and we look forward to working with you again in 2008 to continue this important work.

— Scott Moore

2007 Program Staff



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Special thanks for report production:

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Major Results and Progress Towards Achieving Program Goals

Noxious weed specialists extensively surveyed King County to detect new noxious weed infestations and measure changes in the extent of known populations. Citizen reports were quickly verified and referred to the responsible agency or owner. Program staff worked with over 2,900 landowners and public agencies to achieve the weed control requirements mandated by the State Noxious Weed Law, RCW 17.10. Responding to a customer service survey, 77 percent rated the program's performance excellent to very good. Significant progress was made toward achieving the following program goals:

Eradication of Class A Weeds

Class A weeds are the most threatening and potentially damaging. There are 32 designated Class A noxious weeds, 11 of which have been recorded as growing in some part of the county. The goal for these weeds is eradication of existing infestations and the prevention of new invasions.

Significant progress was made toward the eradication of Class A noxious weeds. The program has now eradicated 69 percent of the cumulative weed area identified to date on parcels in King County. Additionally, 51 percent of the known sites have had no occurrence of these weeds for three or more years.

There were 1,145 infestations of Class A weeds found in King County in 2007, of which 111 were new discoveries. The program achieved control (containment and prevention of seed or spread) on 99 percent of all Class A weed infestations found in 2007.

2007 Major Program Activities



Number of infestations surveyed: **7,478**
 Number of property owners contacted: **2,925**
 Number of infestations controlled: **7,072**
 Number of new infestations found: **668**
 Acres of weeds controlled by property owners: **130**
 Acres of weeds controlled by program: **81**
 Hours spent in the field: **5,919**

Giant Hogweed

885 known sites



58% sites eradicated
99% controlled

Garlic Mustard

110 known sites



2% sites eradicated
99% controlled

Milk Thistle

62 known sites



13% sites eradicated
100% controlled

Spanish Broom

63 known sites



48% sites eradicated
93% controlled

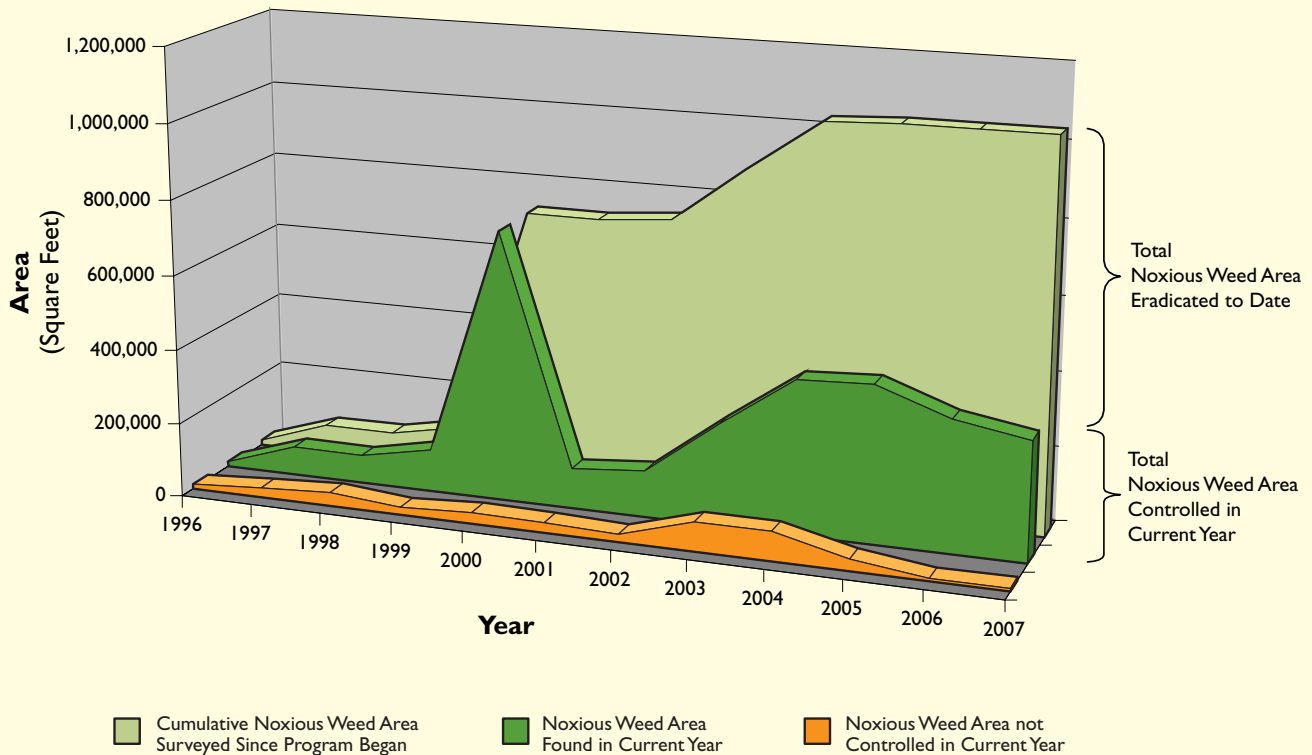
Goatsrue

35 known sites



5% sites eradicated
91% controlled

Eradication of Class A Noxious Weeds in King County 1996-2007*



*Based on surveys of parcels in King County

Control of Class B Weeds

There are 52 designated Class B noxious weeds in King County. The program's goal is to achieve control, bringing them to below the threshold level of significant impact.

In 2007, the program significantly increased its overall containment and control of designated Class B noxious weeds. Continuing the trend from last year, there was a significant decrease in the total area impacted by Class B noxious weeds.

Program staff surveyed 6,224 parcels and roads with Class B noxious weeds, 547 of which were new discoveries. Overall, control (containment and prevention of seeding or spread) was achieved on 94 percent of the Class B weed infestations. From 1999 to 2007 there has been a general increase in both the percentage of sites and area of Class B noxious weeds controlled (see chart opposite). Additionally 18 percent of the cumulative weed area of Class B noxious weeds identified to date has now been eradicated.

Tansy Ragwort
3338 known sites



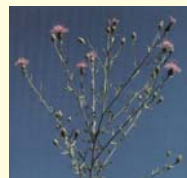
21% sites eradicated
94% controlled

Purple Loosestrife
793 known sites



12% sites eradicated
93% controlled

Spotted Knapweed
525 known sites



25% sites eradicated
97% controlled

Garden Loosestrife
564 known sites



1% sites eradicated
87% controlled**

Dalmatian Toadflax
220 known sites



16% sites eradicated
97% controlled

**Percent controlled of the 135 sites targeted for control

Additional information, graphs and maps available online at www.kingcounty.gov/weeds

Orange Hawkweed
271 known sites



9% sites eradicated
90% controlled

Policeman's Helmet
224 known sites



26% sites eradicated
94% controlled

Sulfur Cinquefoil
203 known sites



15% sites eradicated
96% controlled

Diffuse Knapweed
137 known sites



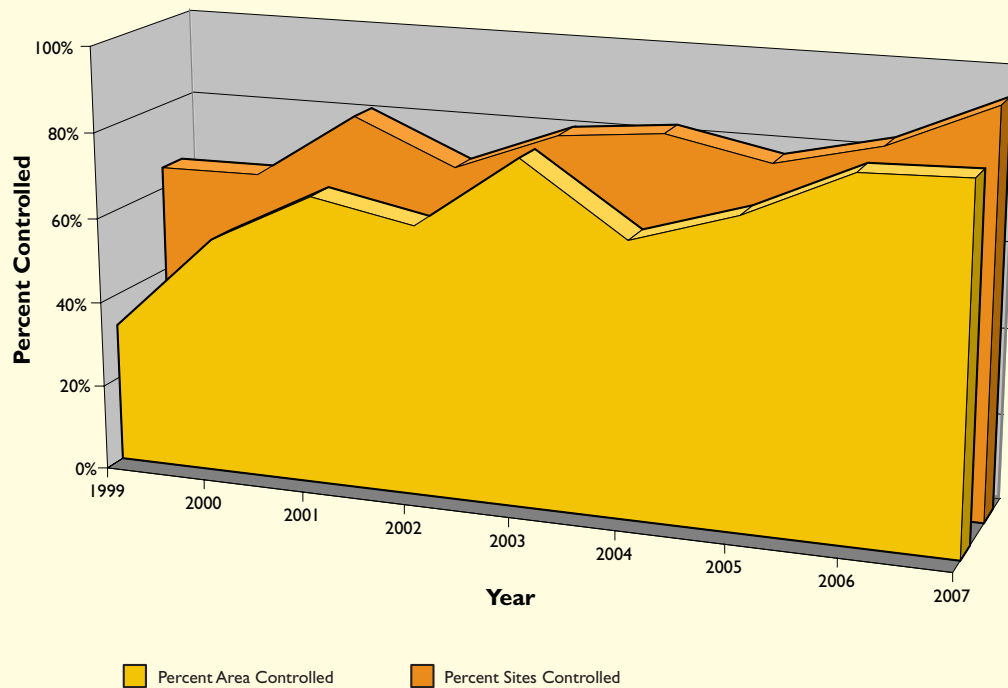
16% sites eradicated
99% controlled

Yellow Hawkweed
125 known sites



5% sites eradicated
97% controlled

Control of Class B Noxious Weeds in King County 1996-2007*



*Based on surveys of parcels in King County

2007 Customer Service Survey

Over 1,200 Customer Service Survey cards were mailed to landowners who were contacted by program staff during the past weed season. Similar to last year's results, a majority of the respondents gave the program an "A" (excellent) or "B" (very good) rating (77 percent).

Grades Given:

A 87
B 30
C 10
D 6
F 10
None 10

Respondents' Top 5 Weeds:

Tansy Ragwort 65
Giant Hogweed 23
Purple Loosestrife 12
Policeman's Helmet 5
Garlic Mustard 4

153 survey cards returned out of 1,233 mailed, a 12 percent return rate.

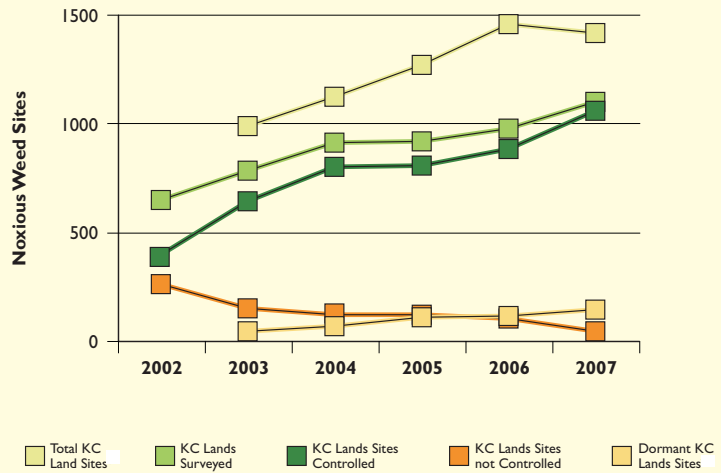
County Land Successes

Staff surveyed many more noxious weed sites in 2007 than in previous years. Additionally, county land managers successfully controlled more sites than in any previous year. Presently there are 301 known regulated noxious weed sites on county-managed parcels. Staff was able to survey 237 of these sites which ultimately resulted in 225 (95 percent) sites being controlled. Staff also spent a large amount of time surveying over 400 county roads, identifying 849 regulated noxious weed sites. Control was achieved on 823 (97 percent) of these sites.

There were seven citizen complaints of noxious weed infestations on county property in 2007, the lowest number registered so far. All confirmed noxious weed infestations were controlled prior to viable seed dispersal. The majority of complaints were on roadsides with one complaint occurring in a storm water pond.

The 2007 King County budget included a proviso directing the King County Noxious Weed Control Program to submit a report on noxious weed control by county land managers. Topics covered in the report included a detailed list of county lands and the responsible land manager, an evaluation of the land manager's effort to control noxious weeds with an emphasis on county lands with multiple infestations; and recommendations on how county land managers might better control noxious weeds. The report identified many achievements by county land managers as well as recommendations for future improvements. Council unanimously approved the report and its recommendations by motion in September.

Number of Noxious Weed Sites on King County Lands 2002-2007



State and Federal Lands Successes

The state of Washington and the federal government are among the largest landowners in King County with over 3,700 parcels comprising 38 percent of the total area of the county. Ongoing noxious weed control coordination with the Port of Seattle, state parks, Washington State Department of Natural Resources and U.S. Fish and Wildlife resulted in control of regulated noxious weeds on 86 parcels. Additionally, coordination with Washington State Department of Transportation (WSDOT) and Port of Seattle brought treatment to two source infestations of common reed (*Phragmites australis*) along the Duwamish River totaling 5.1 acres.

Washington State Department of Transportation (WSDOT) Sites

Year	New Sites	Infested Sites	Controlled Sites	Percent Controlled
2007	46	460	391	85%
2006	58	649	497	77%
2005	118	839	555	67%
2004	87	540	396	74%
2003	88	819	589	72%
2002	100	701	472	67%

Program staff conducted surveys of 18 state highways managed by the WSDOT covering 368 linear miles. In 2007, 460 regulated noxious weed infested sites were recorded and control measures were taken on 391 (85 percent) of these sites. A new approach to Dalmatian toadflax (*Linaria dalmatica*) control along I-5 showed promising results. Knapweed infestations along Highway 18 were well controlled. Fewer new infestations were observed in 2007 than in any previous year, totaling 46 sites.

Aquatic Weed Control

Noxious weeds severely degrade the environmental and recreational value of aquatic areas. Minimizing these impacts is a major program objective. Overall, 73 percent of designated aquatic noxious weed sites were controlled in 2007. Purple loosestrife was the most widespread species with 793 recorded sites, followed by garden loosestrife with 135 designated sites (plus an additional 411 not designated for control), common reed with 31 sites, and parrotfeather with four sites. Brazilian elodea was found in five lakes and the other aquatic weeds at three or fewer sites. Control was achieved on 93 percent of purple loosestrife sites, 87 percent of designated garden loosestrife sites, 84 percent of common reed sites and 100 percent of parrotfeather, floating primrose-willow, hairy willowherb and hydrilla sites. Staff continued monitoring a few dormant common cordgrass and water primrose sites where no weeds have been seen for two to seven years.

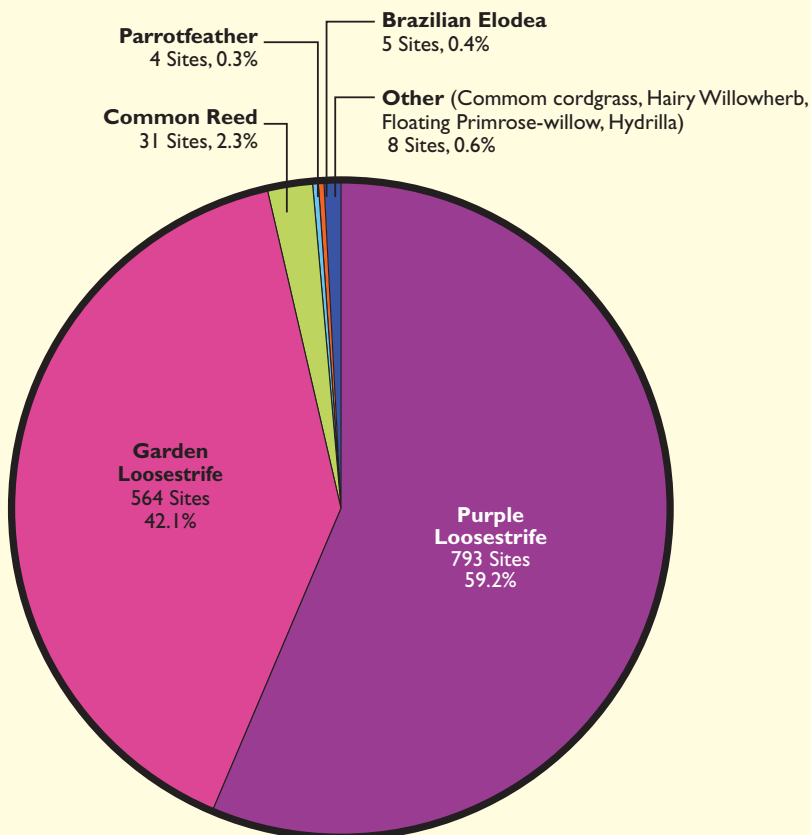


Early detection is vital.

Three high-priority aquatic weeds are on track for eradication. Program staff treated the only floating primrose-willow (Class A) infestation in Washington state and found fewer than a dozen non-flowering plants, a continued decrease from previous years. Of the three existing parrotfeather (Class B) sites, one was free of plants for the first time this year, and the other two, which were newly located in the fall of 2006, showed some initial reduction after two treatments. The only state

infestation of Hydrilla (Class A), in Pipe and Lucerne Lakes in King County, continues to be treated in a long-term project administered by the King County Lake Stewardship Program. In 2007 no plants were found for the first time in 13 years.

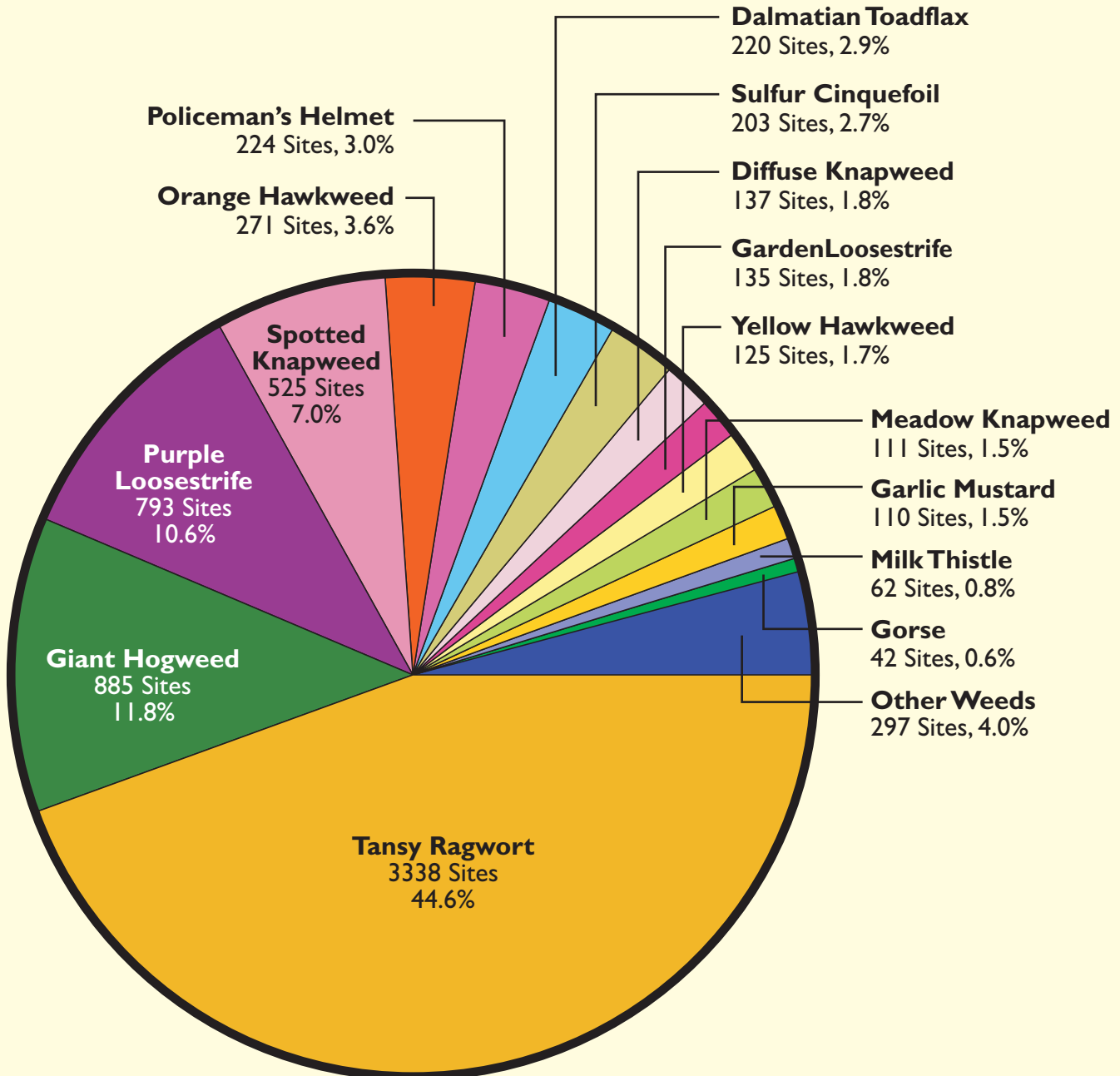
Major Aquatic Noxious Weeds in King County



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Intensive surveying is an important program activity. This facilitates early detection of new infestations and a more rapid, effective control response. The program started two programs in 2007 to address early infestation issues, a garden loosestrife eradication effort on the Snoqualmie River and a volunteer lake weed monitoring program (see the Special Projects section). The program also surveyed nine small lakes with existing or former infestations for aquatic weeds.

Noxious Weeds of King County 2007 Distribution



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Education and Community Programs



Small Farm Expo



On-site weed ID training



Farmer's Market Fair



Volunteer garlic mustard pull

Informed and dedicated citizens are the key to the management of noxious weeds in King County. To achieve a knowledgeable and engaged community, the program carries out a wide range of community education and training activities targeted to reach the key stakeholder groups in the county.

In 2007, the education program successfully met its objectives: to increase the visibility of noxious weed issues and the program to the general public; to foster positive relationships with communities, stewardship groups and agencies; and to improve the noxious weed identification and management skills of vegetation management practitioners in public agencies, community and conservation groups, and the private sector.

Program staff worked individually with over 2,900 private landowners, land managers and government personnel to provide them with the tools needed to locate and manage regulated noxious weeds on their properties. Program staff also answered over 600 general public inquiries on invasive and noxious weeds, including site visits to help property owners identify and manage weeds. The general public also made extensive use of the program website which has brochures and technical bulletins available for download as well as photos and information on the state-listed noxious weeds.

The program's educational and technical materials continue to be very popular. Many weed booklets and fact sheets were distributed at events, by mail and through the website. In total, the program

distributed over 30,000 brochures and handouts on invasive and noxious weeds in 2007. This total includes over 11,000 brochures provided to county agencies, municipal agencies, schools, homeowner associations, garden clubs, and non-profit organizations for their own education efforts on invasive weeds.

In 2007, the program provided 58 public presentations and technical workshops and staffed informational booths at 24 public events. New in 2007, the program staffed weed information tables at several farmer's markets in the county. In addition, presentations were given at five major conferences, including the Western Society of Weed Science and the Western Aquatic Plant Management Society. Many other local presentations were given to groups ranging in size from 4 to 100, reaching age groups from kindergarten to senior citizens.

The workshops and events reached diverse audiences from rural, urban, and suburban King County as well as specific community, volunteer, and professional groups. The information given out covered invasive and noxious weeds in pastures, forests, rural lands, home landscapes, and urban natural areas and aquatic areas.

The program also continued to receive positive media exposure in 2007, appearing in print, radio and TV news 7 times, including a popular gardening show on KUOW radio.

Seven issues of the email newsletter "KC Weed News" were produced and distributed to 750

members of the public and government agencies. Each issue, also available on the program website, features a “Weed of the Month,” updates on invasive weeds in the county, and upcoming workshops and events sponsored by the program. The response to the newsletter continues to be highly positive.

The program teamed up with the Mt. Baker Snoqualmie National Forest to train volunteer weed surveyors for the MidFork Snoqualmie Invasive Weed Project. In addition to the training, the program created a webpage for the project where volunteers can get forms and more information on weeds. The information gathered by the volunteers is assisting the project’s overall goal of reducing the impacts of invasives in the valley and stopping the spread of new weeds into the wilderness areas.

Program staff also worked with the other MidFork Snoqualmie project partners to design an interpretive sign alerting park users to the impacts of invasive weeds on the valley. The sign will be installed at trail heads and other visible locations in the park.

2007 Education Activities

TV, Radio Coverage & Newspaper Articles	7
Workshops and Events	82
Infestation Reports from the Public	191
Information Requests	632
Newsletter Subscribers	750
Contacts at Events and Workshops	11,461
Brochures and Bulletins Distributed	30,070
Website Visitor Sessions	143,000

Special Projects

The program was successful in securing grant funding to implement several large-scale coordinated weed control projects. These projects targeted high priority weed infestations where significant public resources are threatened.



Tracking knotweed infestations on the Middle Fork of the Snoqualmie River.

Knotweed Control

Three invasive knotweed Cooperative Weed Management Area (CWMA) projects, coordinated by King County Noxious Weed Control Program (KCNWCP) achieved high levels of success in 2007. The Green/Duwamish CWMA concluded its fourth year of control work, resulting in 14.47 net acres of knotweed treated in 2007. Control efforts were focused on the riparian corridor of the upper Green River, lower Soos Creek and Crisp Creek. The South Fork Skykomish CWMA concluded its third season of control efforts, resulting in 4.17 net acres of knotweed controlled. The Middle Fork Snoqualmie CWMA project finished its second year of knotweed control in 2007, resulting in 13.02 net acres of knotweed control along the Middle Fork Snoqualmie River and Roaring Creek. In addition, knotweed treatment on the South Fork Snoqualmie River began in 2007, with 4.5 net acres of knotweed treated in Olallie State Park. Infestations were treated using the stem injection method and foliar applications of herbicide. Funding for the projects amounting to \$66,800 was provided by U.S. Department of Agriculture Forest Service, Washington State Department of Agriculture, U.S. Fish and Wildlife Service and the KCNWCP with in-kind contributions.

Goatsrue Eradication Project

Goatsrue control and eradication efforts were successfully continued in 2007. Still the only known infestation in the Northwest, goatsrue eradication in King County remains a high priority to the program. This year there were two new infestations identified. Each infestation was comprised of a single plant that was effectively controlled for 2007. With the conclusion of the National Fish and Wildlife Foundation grant in 2006, all eradication efforts were undertaken by the KCNWCP in 2007. Additionally, the KCNWCP received cooperation from the City of Federal Way which took responsibility for controlling all goatsrue infestations that occurred on city rights-of-way. This year, infestation areas and density were both reduced compared to previous years. In order to achieve maximum control, herbicide applications were applied three times during the growing season. Known infestations were closely monitored. In the final weeks of the growing season, late germinating goatsrue plants were controlled manually to prevent plants from flowering. All sites were controlled with no plants in known infestations producing seeds. The KCNWCP has received a Class A noxious weed control grant for 2008 from the Washington State Department of Agriculture for goatsrue control and eradication. This will help alleviate some of the cost the program has incurred and provide an element of collaboration with Pierce County for surveying across county borders.

Miller/Walker Creek Invasive Removal

The Port of Seattle awarded a \$35,000 Watershed Restoration Grant to the KCNWCP for noxious weed assessment and control on Miller and Walker Creeks. The three year project scope covers the entire length of each creek from Puget Sound to the Port property. Surveys were conducted to determine the location and density of policeman's helmet, purple loosestrife, giant hogweed and invasive knotweed. One hundred percent of found giant hogweed and purple loosestrife plants were controlled, 98 percent of policeman's helmet sites were controlled, and 94 percent of all invasive knotweed sites were controlled. Control was completed by contractors and KCNWCP staff, volunteers, and property owners.

Snoqualmie Garden Loosestrife Eradication Project

The KCNWCP received an early infestation grant from the Washington Department of Ecology to attempt eradication of the Class B noxious weed garden loosestrife on the lower Snoqualmie River over five years, beginning in 2007. Twenty-seven river miles of the Snoqualmie River between Fall City and the King County line were surveyed and all garden loosestrife infestations found (116 sites) were controlled by a contractor and KCNWCP staff. All landowners with garden loosestrife on their property supported the project. A small additional infestation including 17 small patches was located on the Raging River just upstream of the project site which staff manually controlled. This area will be added to the project area for 2008.

Volunteer Weed Watcher Program

In response to the difficulty of surveying for submerged aquatic weeds in a timely manner each year, the KCNWCP instituted a volunteer Weed Watcher pilot project in 2007 with volunteers on 11 lakes. Volunteers were trained in how to identify native and invasive aquatic plants and asked to survey their lakes twice during the growing season. Seven out of the 11 lakes had volunteers complete at least one survey (Lakes Desire, Holm, North, Shadow, Star, Steel, and Wilderness). None of the volunteers found any new invasive plants. The project was beneficial to the KCNWCP and the volunteers and there are plans to expand it to include more lakes in 2008.

Milk Thistle Control Project

An intensive effort is underway to eradicate milk thistle (*Silybum marianum*) from seven square miles of agricultural area near Enumclaw. No plants were allowed to seed on 45 parcels, including seven dairies. Five new small infestations were found and controlled in 2007. The total infested area has been reduced from 139,000 square feet in 2006 to 98,000 square feet in 2007.

Future Directions

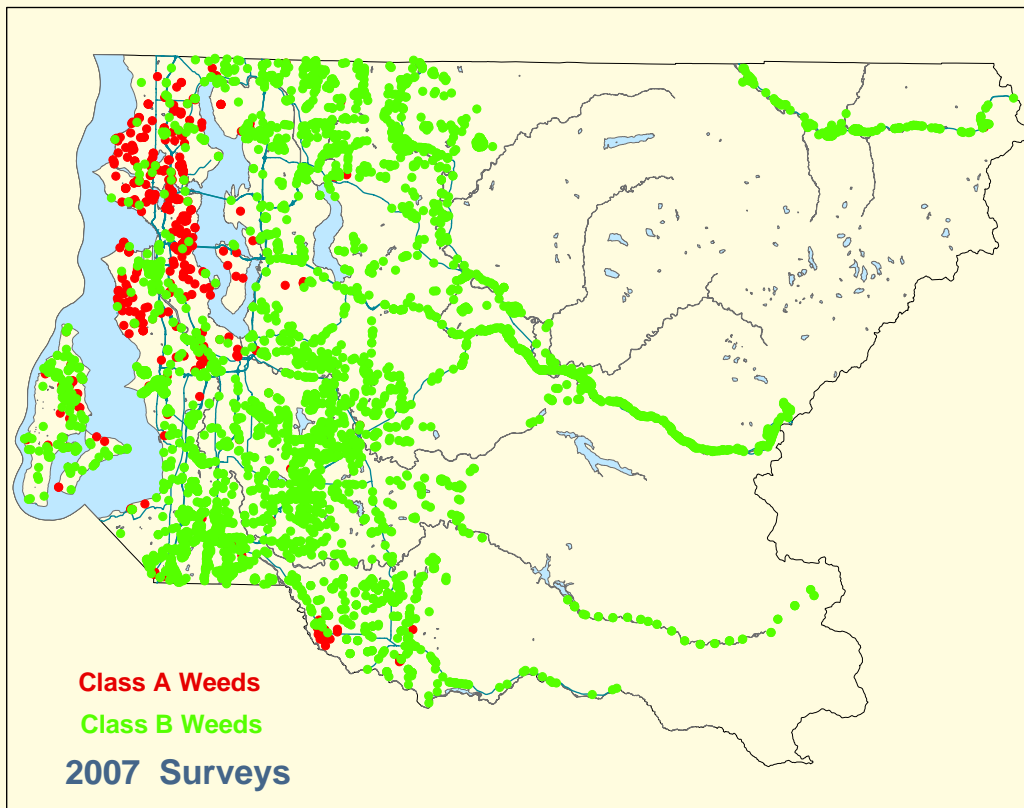
The Noxious Weed Board has identified the following strategic directions and priorities for the program in 2008:

- Increasing the levels of control and eradication being achieved for the high priority regulated noxious weeds.
- Increasing focus and effort on closing pathways of introduction of new noxious weeds into the county.
- Increasing early detection and rapid response capacity for submersed aquatic weeds.
- Building partnerships and alliances with public land managers in the county to increase the level of commitment and resources for long-term reductions in the impacts of noxious weeds on these lands.
- Working with county land managers to implement King County Council Motion 12573, which contains recommendations for the improved management of noxious weeds on county lands and report on this progress as required to Council.
- Working with government agencies and community groups combined with additional education and outreach efforts to increase community stewardship activities on public lands.



The future of weed control is in your hands.

Class A & B Weed Sites Surveyed in 2007 in King County



Map shows 2007 distribution of Class A and B noxious weeds in King County. An interactive version of this map is available in the King County imap system: http://www.metrokc.gov/gis/mappointal/iMAP_main.htm

Additional information, graphs and maps available online at www.kingcounty.gov/weeds