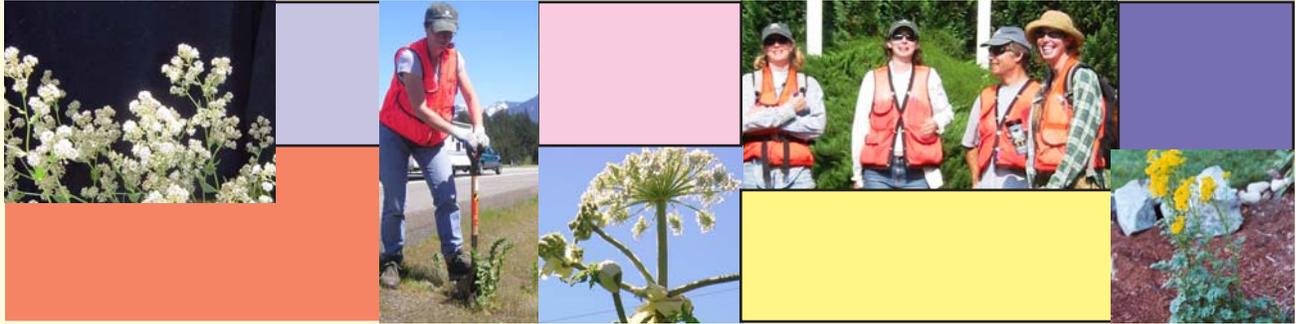


King County

Noxious Weed Control Board

2006 Annual Report



Noxious Weed Control Program
206-296-0290 <http://dnr.metrokc.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 the threshold levels of significant impact.

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



King County

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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 your interest in noxious weed control and for taking the time to read our annual report. The program is largely funded by citizens of the county and I think this report demonstrates the significant public value generated by this investment in noxious weed control.

We are focused on achieving our mission of minimizing the impacts of noxious weeds to the economy, environment, recreation and public health. This report documents and quantifies progress towards this mission that has been made in 2006.

Only through a coordinated, community-wide effort can we be successful at controlling noxious weeds in the long run. Thank you for your interest and active participation in this important work.

— Scott Moore



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Data Analysis

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 2,500 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, 87% rated the program's performance excellent to very good. Significant progress toward achieving program goals are as follows:

2006 Major Program Activities
Number of infestations surveyed: 8,176
Number of property owners contacted: 2,540
Number of new infestations found: 726
Number of infestations controlled: 6,962
Acres of weeds controlled by property owners contacted: 183
Acres of weeds controlled by program: 54
Hours spent in the field: 6,317

Eradication of Class A Weeds

Class A weeds are the most threatening and potentially damaging. There are 32 designated Class A noxious weeds, 10 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 66% of the cumulative weed area identified to date on parcels in King County. Additionally, 48% of the known sites have had no occurrence of these weeds for three or more years.

There were 1,347 infestations of Class A weeds found in King County in 2006, of which 138 were new discoveries. The program achieved control (containment and prevention of seed or spread) on 98% of all Class A weed infestations found in 2006.

Giant Hogweed
1084 known sites



54% sites eradicated
98% controlled

Garlic Mustard
102 known sites



2% sites eradicated
99% controlled

Milk Thistle
59 known sites



15% sites eradicated
98% controlled

Spanish Broom
46 known sites



44% sites eradicated
91% controlled

Goatsrue
28 known sites

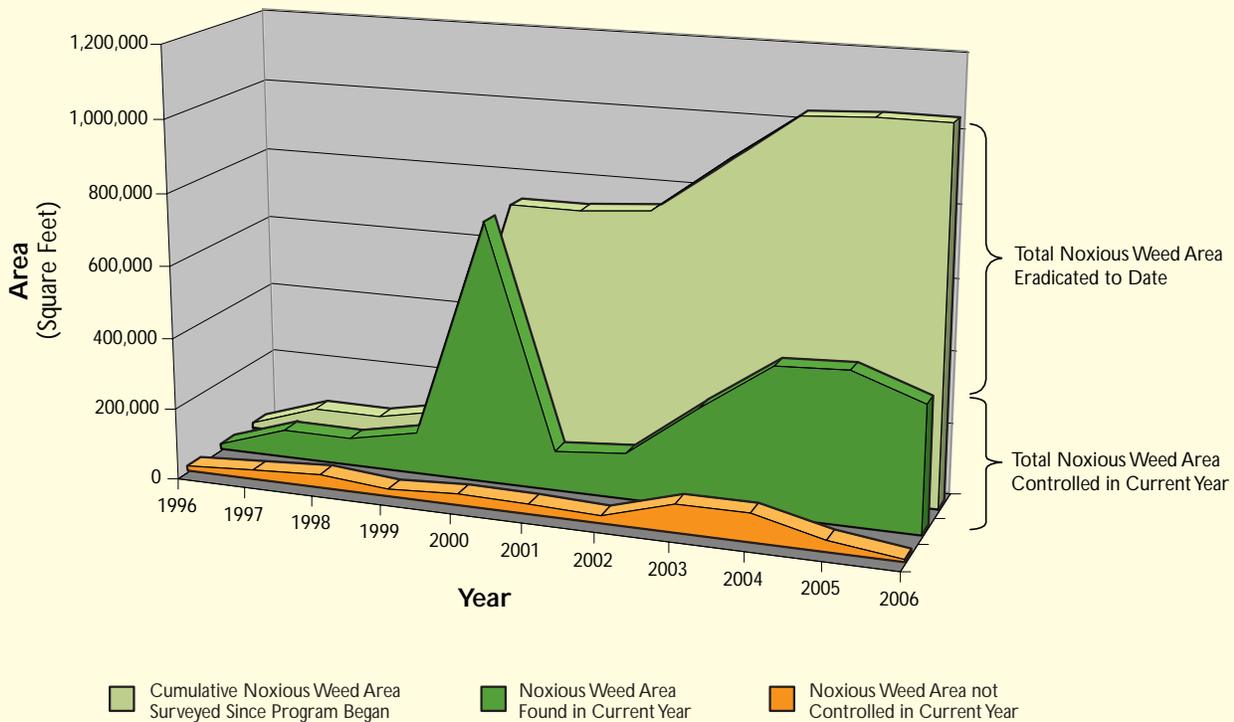


6% sites eradicated
93% controlled



Noxious weed control requires coordination and teamwork

Eradication of Class A Noxious Weeds in King County 1996-2006*



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*Based on surveys of parcels in King County

Control of Designated 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 2006, the program significantly increased its overall containment and control of designated Class B noxious weeds. For the first year since the program began, there was a significant decrease in the total area impacted by Class B noxious weeds.

The program surveyed 6,705 parcels and roads with Class B noxious weeds, 561 of which were new discoveries. Overall, the program achieved control (containment and prevention of seeding or spread) on 84% of the Class B weed infestations. From 1999 to 2006 there has been a general increase in both the percentage of sites and area of Class B noxious weed control (see chart opposite). Additionally 17% of the cumulative weed area of Class B noxious weeds identified to date has now been eradicated.

Top 10 Class B Weeds Profile

Tansy Ragwort
3334 known sites



19% sites eradicated
91% controlled

Purple Loosestrife
783 known sites



8% sites eradicated
77% controlled

Spotted Knapweed
607 known sites



22% sites eradicated
96% controlled

Garden Loosestrife
503 known sites



1% sites eradicated
71% controlled**

Dalmation Toadflax
272 known sites



14% sites eradicated
93% controlled

**Percent controlled of the 92 sites targeted for control

Additional information, graphs and maps available online at <http://dnr.metrokc.gov/weeds>

Top 10 Class B Weeds Profile (continued)

Orange Hawkweed
216 known sites



12% sites eradicated
94% controlled

Policeman's Helmet
209 known sites



25% sites eradicated
88% controlled

Sulfur Cinquefoil
207 known sites



15% sites eradicated
97% controlled

Diffuse Knapweed
169 known sites



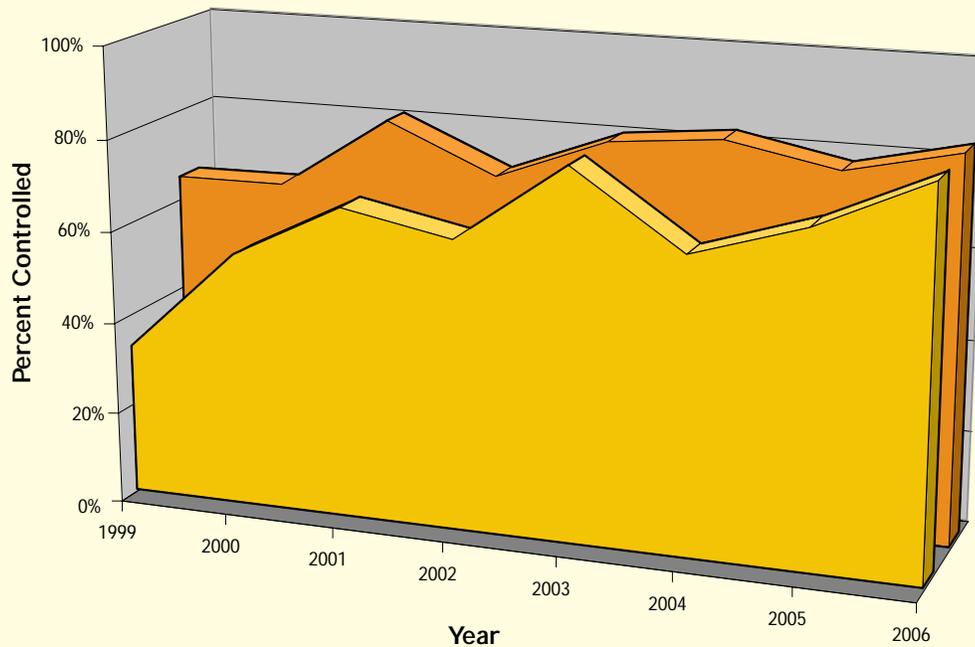
13% sites eradicated
93% controlled

Yellow Hawkweed
130 known sites



5% sites eradicated
93% controlled

Control of Class B Noxious Weeds in King County 1996-2006*



■ Percent Area Controlled

■ Percent Sites Controlled

*Based on surveys of parcels in King County

2006 Customer Service Survey

Over 1,500 Customer Service Survey cards were mailed to landowners who were contacted by program staff during the past weed season. Similar to the 2005 results, an overwhelming majority of the respondents gave the program an "A" (excellent) or "B" (very good) rating (87%).

Grades Given:

A	129
B	37
C	11
D	6
F	8
None	8

Respondents' Top 5 Weeds:

Tansy Ragwort	72
Giant Hogweed	46
Purple/Garden loosestrife	14
Garlic Mustard	11
Policeman's Helmet	9

199 survey cards returned out of 1,555 mailed, a 13% return rate.

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% of the total area of the county. Ongoing noxious weed control projects on state, federal, and Port of Seattle managed parcels resulted in control of 143 (90%) of 159 known infestations.

Program staff conducted surveys of 18 state highways managed by the Washington Department of Transportation (WSDOT) covering 368 linear miles. In 2006, 649 noxious weed infested sites were recorded and control was achieved on 497 (77%) of these sites. Fewer new infestations were observed in 2006 than in any previous year, totaling 58 sites. Several major riparian and wetland weed control projects were coordinated with WSDOT

WSDOT Sites 2002-2006

Year	New Sites	Infested Sites	Controlled Sites	Percent Controlled
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%

and Port of Seattle including the initial treatment of the two source infestations of common reed (*Phragmites australis*) along the Duwamish River totaling 5.1 acres.

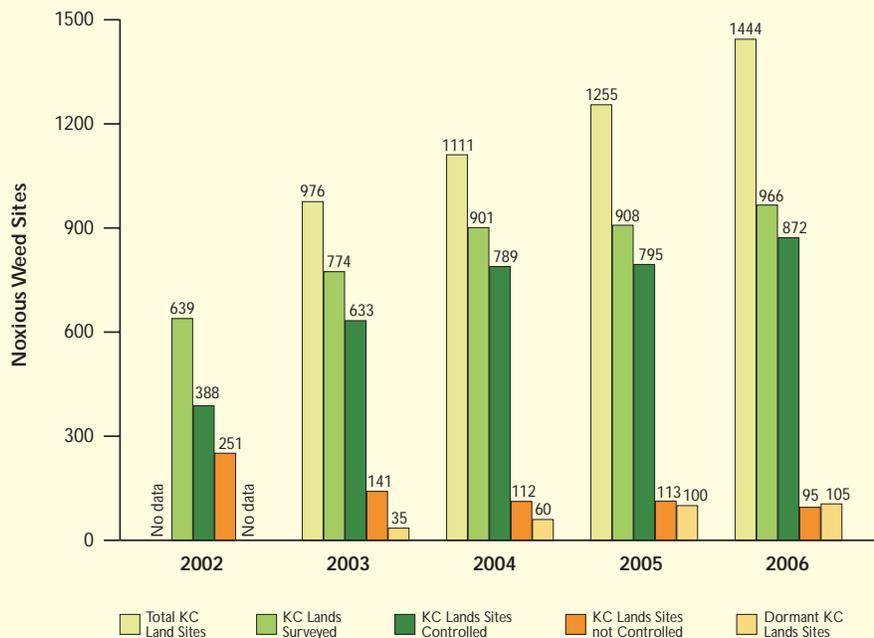
County Land Successes

King County owns approximately 48.7 square miles of property in King County. The county also owns and manages approximately 1,800 linear miles of roads and rights-of-way. Noxious weed control efforts on all county-managed roads and parcels led to 90% of the sites controlled.

There were 228 known noxious weed sites on county-managed parcels. Control efforts resulted in 189 (83%) sites being controlled. Uncontrolled sites were due to discoveries late in the year or were large, difficult-to-control noxious weed infestations requiring permits. Staff surveyed 426 county roads and documented 738 noxious weed sites on roads. Control was achieved on 683 (92%) of these sites. Sites not controlled were due to being identified late in the season after seed production.

There were 17 citizen complaints of noxious weed infestations on county property in 2006. All confirmed noxious weed infestations were controlled prior to viable seed dispersal. The majority of complaints were on roadsides; several others involved park-managed areas.

Number of Noxious Weed Sites on King County Lands 2002-2006



Aquatic Weed Control

Noxious weeds severely degrade the environmental and recreational value of sensitive aquatic areas. Minimizing these impacts is a major program objective. Overall, 73% of designated aquatic noxious weed sites were controlled in 2006. Purple loosestrife was the most widespread species with 783 recorded sites, followed by garden loosestrife with 503 recorded sites (92 of which are designated for control), common reed with 36 sites, and parrotfeather with seven sites. Brazilian elodea was found in five lakes and hairy willow-herb and floating primrose-willow each were found at two or fewer sites. The program obtained control on 75% of purple loosestrife sites, 71% of designated garden loosestrife sites, 51% of common reed sites, 86% of parrotfeather sites, and 100% of the floating primrose-willow, hairy willowherb, common cordgrass and hydrilla sites.



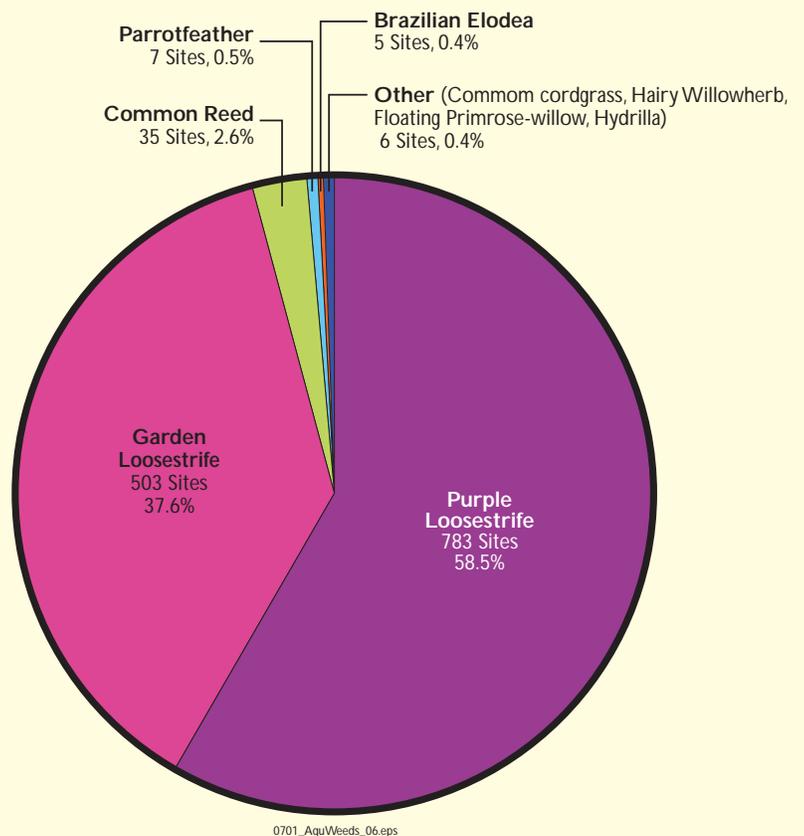
Intensive surveying is important as it facilitates early detection of new infestations

population has been significantly reduced from previous years. Program staff continued treatment of the known county parrotfeather (Class B) infestations, also noting significant reduction from previous years. Two additional parrotfeather infestations were found late in the season, and one of these was treated. The only infestation of hydrilla in Washington state occurs in Pipe and Lucerne Lakes in King County; it continues to be treated as a long-term project administered by the King County Lake Stewardship Program. In 2006 no hydrilla plants were found for the first time in 12 years.

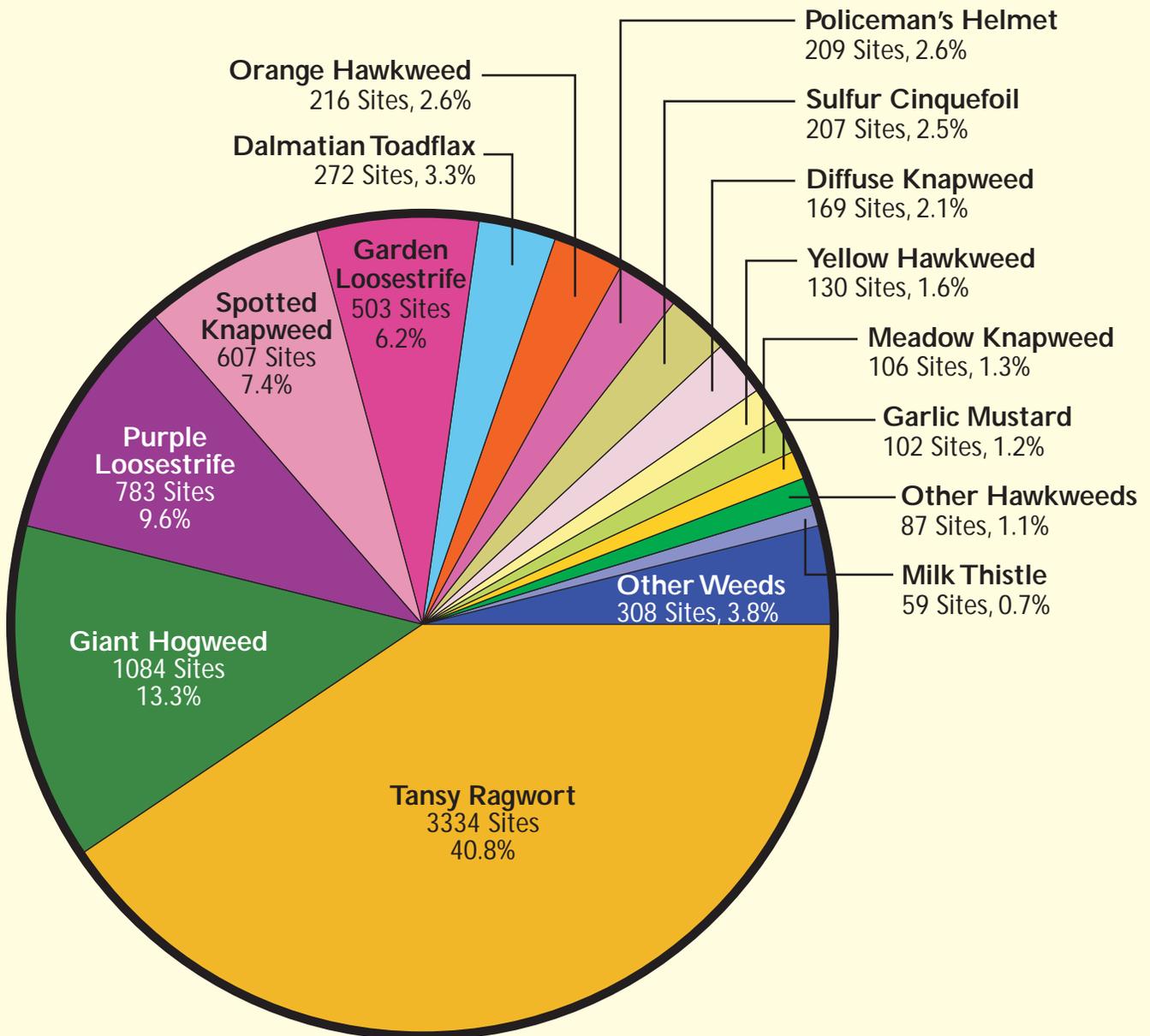
Intensive surveying is an important program activity. This facilitates early detection of new infestations and a more rapid, effective control response. The program surveyed 14 small lakes for aquatic weeds. All of Lake Sammamish was surveyed for garden loosestrife and Brazilian elodea. The lower Sammamish River and 15 miles of the lower Snoqualmie River were also surveyed for garden loosestrife. Based on the data collected this year, targeted programs to improve control of these weeds will be developed.

Three high-priority aquatic weeds are on track for eradication. The only floating primrose-willow (Class A) infestation in the county (and Washington state) was treated twice and the

Major Aquatic Noxious Weeds in King County



Noxious Weeds of King County



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Education and Community Programs



Volunteer Weed Pull



Shoreline Garden Fair



Pasture Weed Workshop



King County Fair



On-site Weed ID Training

Informed and committed 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 2006, the education program successfully met its objectives: to increase the visibility of noxious weed issues and the program to the general public; to enhance the services for rural landowners; to continue 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 **2,540** 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, provided technical handouts on weeds and performed site visits to help property owners identify and manage weeds. The general public also made great use of the program website where all of the brochures and

technical bulletins are available for download as well as photos and information on the state-listed noxious weeds.

In 2006, the program provided 56 public presentations and technical workshops and staffed informational booths at 17 public events. 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. The public response at all events was very positive. Particularly in rural areas, the public appreciated program staff coming to them with information and advice on managing invasive weeds in a positive, informative approach.

The program also achieved significant positive media exposure in 2006, appearing in print, radio and TV news 13 times, including one local TV news story that was picked up nationally by CNN. Program staff were interviewed by the media at least five times. The program generated five official press releases through King County Public Affairs.

Nine issues of the email newsletter "KC Weed News" were produced and distributed to 630 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 and the subscriber list grows every month.

A new full-color, pocket-sized, noxious weed booklet titled “Citizens Guide to Noxious Weeds in King County” was produced and distributed widely at county and community events in 2006. The booklet describes the state noxious weed law, the goals and activities of the county noxious weed program and provides details and photos of the noxious weeds that are required for control in King County. In addition, many new practical, easy to read

Fact Sheets on noxious weeds were distributed at events, by mail and through the website. The practical information and

color photos in these materials greatly improves the program’s ability to provide technical information on noxious weeds to the general public.

In total, the program distributed over 28,000 brochures and handouts on invasive and noxious weeds in 2006. This total includes over 14,000 brochures and handouts that the program provided to county agencies,

municipal agencies, schools, and non-profit organizations for their own education efforts on invasive weeds.

Education Activities	
TV, Radio and Newspaper Coverage	13
Workshops and Events	73
Infestation Reports from the Public	236
Newsletter Subscribers	630
Information Requests	667
Contacts at Events and Workshops	8,584
Brochures and Bulletins Distributed	28,171
Website Visitor Sessions	129,626

Special Grant-funded 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 were threatened.



Staff survey knotweed infestations on Soos Creek along the Green River

Knotweed Control

Three invasive knotweed Cooperative Weed Management Area (CWMA) projects, with KCNWCP as the lead entity, achieved high levels of success in 2006. The Green/Duwamish CWMA concluded its third year of control work resulting in 6.68 net acres of knotweed treated in 2006. 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 second season of control efforts, resulting in 2.42 net acres of knotweed controlled. The Middle Fork Snoqualmie

CWMA, which began its first year of knotweed control in 2006, resulted in 11.54 net acres of knotweed control along the Middle Fork Snoqualmie River and Roaring Creek. In total, \$104,500 was spent on invasive knotweed control projects in King County. Infestations were treated using the stem injection method and foliar applications of herbicide. Funding for the projects was provided by USDA-Forest Service, Washington State Department of Agriculture, U.S. Fish and Wildlife Service and the KCNWCP with in-kind contributions.

Miller/Walker Creek Invasive Removal

The Port of Seattle awarded a \$35,000 Watershed Restoration Grant to KCNWCP for noxious weed assessment and control on Miller and Walker Creeks. The two-year project scope covers the entire length of each stream 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. Giant hogweed and isolated policeman's helmet and purple loosestrife plants were dug out or pulled during the initial surveys. Each noxious weed species was controlled on over 92% of infested parcels by contracted and KCNWCP crews, volunteers, and property owners.



Goatsrue infestation

Goatsrue Eradication Project

This project aims to eradicate the only known infestations of goatsrue on the West Coast. The 2006 season was the second and final year of funding for goatsrue control from the National Fish and Wildlife Foundation. Vacant parcels were mowed in the spring of 2004 to encourage seedling recruitment, and herbicide treatment followed in the summers of 2004 through 2006. The mowing successfully revealed previously undetected areas of infestation with patches of solid seedling masses. One patch on a residential parcel was sheet mulched; only one plant grew through a hole in the fabric this year. Sites with seven years of annual treatment had significantly reduced recruitment, often with individual plants growing in patches historically similar to the seedling mats seen on other sites.

Brazilian Elodea in Lake Dolloff

This marks the last year of the Department of Ecology funded project to control Brazilian elodea in Lake Dolloff. Staff conducted an exit survey to determine the extent of elodea present after two years of control work. Staff also pulled the remaining pieces of bottom barrier that had been installed near the boat launch. In December, the KCNWCP met with the lake community to discuss the impacts of elodea on Lake Dolloff, and to offer suggestions for future approaches to reducing those impacts.



Brazilian elodea found while conducting the exit survey

Vision for the Future

We strive for a clean and healthy environment, free from significant degrading impacts of noxious weeds. Achieving this will require the consistent implementation of a robust strategy over time.

Prevention and minimization of potential impacts is one of the most important components of this strategy. Overall, the program acts effectively as a cheap insurance policy against the huge potential environmental, economic and social costs of new and emerging invasive weed species.

A planned approach is needed when dealing with the large areas of established infestations of noxious weeds and other invasive plants. Many of these have developed over a long period of time when the seriousness of this issue was less well recognized. We have inherited a significant environmental debt; however, ignorance is no longer an acceptable excuse. Through greater awareness of this problem and participation in the necessary control work, we can begin the restoration of the extensive areas of land degraded by noxious weed infestations.

Only a well coordinated long-term approach will have an effect on a landscape-scale problem of this nature. The King County Noxious Weed Program is the cornerstone of this process. To be successful, this work must engage all stakeholders—governments, landowners, community groups and industry.

