

2012 Field Season Projects

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Introduction



- Invasive Plant management in Anchorage is guided by the draft Anchorage Invasive Plants management plan¹ and input from CWMA members. Management is prioritized by invasiveness rank² and distribution.
- Invasive plants that are rare in the Municipality of Anchorage are placed on the A list and are the highest priority for control with the goal being to eradicate these species.
- B-list plants are highly invasive, yet widespread. Priority B list species: *Prunus padus* (European bird cherry or EBC), *Phalaris arundinacea* (Reed Canarygrass or RCG), *Hieracium aurantiacum* (orange hawkweed), *Cirsium arvense* (Canada thistle), and others, receive strategic management with the goal of containment.
- For management of priority B-list species, outlier populations, infestations along natural (streams) and human (roads) vectors, and possibility of containment are considered.²
- Priority infestations were identified from AKEPIC data, recent Alaska Natural Heritage Program surveys, and Masters research surveys by David Roon.^{3, 4, 5}
- Nearly 300 white spruce seedlings were planted in forested riparian areas where EBC was removed.
- Surveys of Anchorage area lakes for *Elodea* continued with no additional infestations identified.

Accomplishments — 54.7 Acres controlled

- A-list species and invasiveness rank
 - 0.1 acres of *Lepidium latifolium* (Broadleafed pepperweed) – R 71
 - 0.5 acres of *Coronilla varia* (Crownvetch) – R 68
 - 0.5 acres of *Medicago sativa* L. spp. *Falcata* (yellow alfalfa) – R 64
 - 2 acres of *Cirsium vulgare* (Bull thistle) – Rank 61
 - 0.01 acres of *Clematis tangutica tangutica* (Golden virginsbower) – Not ranked
- B-list species and invasiveness rank
 - 2.1 acres of *Phalaris arundinacea* (Reed canarygrass) – R 83
 - 1 acre of *Hieracium aurantiacum* (Orange hawkweed) – R 79
 - 7.9 acres of *Cirsium arvense* (Canada thistle) – R 76
 - 40 acres of *Prunus padus* (European bird cherry) – R 74
 - 0.5 acres of *Tanacetum vulgare* (Common tansy) – R 60

2012 Season IPM Methods in Anchorage



1. Outreach and prevention: including the 2012 Anchorage Weed Smackdown, 238 adult volunteers and 364 youth volunteers contributed more than 1,500 hours to invasive species removal in Anchorage in 2012. As part of outreach efforts, these volunteers were briefed on the importance of prevention to successful invasive weed management.

4. Solarization / tarping: has been used to control RCG at Westchester Lagoon for two growing seasons. Cost to date for installation and maintenance is greater than \$1/ft². RCG rhizome kill beneath the tarps appeared to be complete late in the 2012 growing season; however, RCG rhizomes continue to creep out from the tarp edges (despite expanding the tarps in June 2011 and attempts to dig out these creeping rhizomes from tarp edges). Part of the cost of the project was wind damage from three 2012 storms.



Tarps installed in partnership with the Anchorage Waterways Council along upper Chester Creek also attempt to control Canada thistle – the first time this control method has been tried on thistle in Anchorage.



2. Manual Control: hand pulling or digging of invasive weeds is labor intensive and this was the principal activity of our 2012 volunteers. Most of this effort was directed at European bird cherry removal (16 acres controlled by volunteers) with a few additional projects on crown vetch and yellow alfalfa.

3. Mechanical control (mowing or weed whip): 2012 mechanical efforts consisted of weed whipping Canada thistle and Reed canarygrass. The thistle was treated to prepare it for a fall spray treatment or to prevent seed set in sites that we did not spray this season. RCG was mowed to prepare for tarp treatment. The Municipality of Anchorage and Alaska DOT need to begin mowing efforts to manage invasive weeds along Anchorage road corridors.



5. Chemical: herbicide use on Municipality of Anchorage owned lands does not require an Alaska DEC permit – facilitating this essential weed management tool. UAF Cooperative Extension was consulted on appropriate herbicides for various sites and species. Orange Hawkweed was treated at two sites and Canada thistle was treated at three sites using Milestone (aminopyralid). European Bird Cherry trees were cut and their stumps painted with Aquamaster (glyphosate) at two high priority sites.



Looking ahead to the 2013 field season and beyond

- Volunteers enjoy manual removal of EBC and the Anchorage Invasive Plant Program should continue its robust and successful volunteer efforts. Outreach efforts can and should be expanded – in particular retailers who still sell EBC need to be approached and encouraged to stop selling this and other invasive species.
- Mowing to manage invasive weeds along roadways needs to begin in Anchorage by both the city and Alaska DOT.
- Tarping is expensive, labor-intensive, requires maintenance, and can be effective and/or problematic. We plan to remove the Westchester tarps and re-vegetate the site in 2013 and plan to begin a few more smaller tarping projects.
- As part of a comprehensive IPM program, strategic herbicide control efforts present the most promising chance to effectively manage Anchorage's most troublesome invasive plant species.

Literature Cited

- ¹ Gary G. 2010. "Anchorage Invasive Plants Management Plan"
- ² Carlson et. al. 2008. "Invasiveness Ranking System for Non-Native Plants of Alaska"
- ³ AKEPIC Online Data Portal. "Invasive Plants of Alaska"
- ⁴ Flagstad et. Al. 2012. "Municipality of Anchorage Non-native plant survey"
- ⁵ Roon D. 2011. "Ecological effects of invasive European Bird Cherry on salmonid food webs in Anchorage, Alaska"

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