10 Years of Combating Non-Native Plants on the Kenai Peninsula

John Morton
Kenai National Wildlife Refuge
KP-CWMA Mission

- Prevent the introduction, reproduction and spread of designated noxious weeds and other invasive plants into and within the Kenai Peninsula

- Reduce the extent and density of newly established invasive plants to minimize spread and damage to natural resources

- Implement the most economic, effective and safe control methods for priority species

- Facilitate cooperation among those working to manage invasive plants on the Kenai Peninsula
- 1,800+ miles of seismic lines
- 3,016 miles of road, crossing anadromous streams at 381 locales
- 1.4 million vehicles per year on the Sterling Highway
- 238,800 acres of private lands divided into 55,000 parcels
- 2.2% human population growth = 1,000 new residents/year = 1.5 housing units/day
- 175 miles wildland-urban interface
22,174 AKEPIC records representing ~110 exotic vascular plant species
18 AKNHP ranking >60
9 AK noxious weeds
4 species (3 genera) of exotic earthworms
14+ lakes have introduced northern pike
2 lakes have Elodea
2 slugs
several insects
2003: USFS helps fund CWMA coordinator
2003: 1st Weed Workshop
2005: Begin CWMA MOU
2006: KP-wide RCG inventory
2007-08: Orange hawkweed control demonstration
2007-10: Melilotus eradication on Anchor River and head of Kachemak Bay, perennial sowthistle, Canada thistle on southern peninsula
2007: EPA funds Sue Galatowitsch/Tim Miller on RCG
2007: CWMA Strategic Plan
2009: CWMA website
2011: District volunteers trained to conduct Certified Weed-Free Forage field inspections

2012: Certified Weed-Free Forage program launched with 4 KP hay growers getting 216 acres certified

2012: Central Kenai Peninsula Road Projects follow-up. Student intern Olivia Pfeifer monitored 11 miles of ROWs reseeded during 2010 or 2011
2010-12: ~2700 volunteers, 261 acres, 1243 bags (vetch, hawkweed, oxeye daisy, B&E, RCG, Melilotus, foxglove, sheep sorrel)

2011: chemical control of creeping buttercup on Resurrection Trail

2011: chemical control of RCG

2011: Caines Head SRA: chemical control of orange hawkweed
2006: 1st Dandelion Sundae
2007: KPB Borough Invasive Weeds Proclamation
2007: outreach at Kenai Peninsula Fair
2007: DEC-certified herbicide applicator program
Kenai Peninsula Borough
Alaska
Proclamation

WHEREAS, Alaska Weed Awareness Week is June 24th through June 30th 2007 and in recognition of the importance of promoting education of our natural environment; and

WHEREAS, to officially recognize Alaska Weed Awareness Week and encourage the importance of education on Invasive Plant Species and their detrimental habits; and

WHEREAS, education increases awareness for not introducing invasive plants, and helps to promote removal of these plant species and to keep healthy native plant diversity; and

WHEREAS, spreading the word and not the weed, keeps our Borough economically healthy for business, recreation, fisheries, tourism, and future stewards of our lands; and

WHEREAS, the Kenai Peninsula Borough wants to inspire more participation in education and recognition of invasive species through activities that foster growth in the local community and through Alaska; and

WHEREAS, cultivating and supporting northern growers, landscapers, farmers and land stewards is of importance to everyone in Alaska.

NOW THEREFORE, I, John J. Williams, Mayor of the Kenai Peninsula Borough, do hereby proclaim the week of June 24th through June 30th 2007 as

Weed Awareness Week

on the Kenai Peninsula, and encourage our citizens to pay special attention during these days to inform ourselves and others about the importance of keeping invasive plants off the Kenai Peninsula and promote weed pulls, prevention of introduction of invasive species and recognition of the importance of keeping the Kenai Peninsula the magnificent place it is.

John J. Williams
Kenai Peninsula Borough Mayor
2009: Pulling and tarping RCG on Slikok, Beaver Creeks
2010: RCG weedpull at Bing’s Landing
2003: Duffy et al 1997-98 surveys
2003: 1st public weedpull
2003/05: trail inventory
2007: road inventory
2007: native plant garden
2010: Spencer Lake area control
2011: Russian River (RCG)
2011: fund Jen Kain (AACD)
2011: forestwide road/trail resampling
2012: Weed Smackdown in Seward
2004: joins NPS AK Regional Exotic Plant Management Team
2006: 1st annual Exit Glacier Weedpull with USFS & RBCA
2006: dandelion, timothy found in Nuka Bay
2007: survey all walkable beaches
2011: 1st herbicide use to control dandelions
2011: Installed bootbrush and interpretive signs at Exit Glacier
2012: Weed Smackdown in Seward
2005: Caleb Slemmons surveys human-disturbed areas
2006: CSU establishes 74 permanent monitoring plots
2007: Hansen Horse Trail, Glacier Crk Fire
2007: Begin herbiciding hangar
2008: Begin treating all access points
2009: Begin treating Swanson oil and gas field
Cumulative acres reported in AKEPIC for Kenai Peninsula
THE GOOD NEWS:
We are the heavy hitters statewide

Infested
1806/yr (208)

Treated
59/yr (48)

~50% of exotic species in AK occur on KP
THE BAD NEWS:
We’ve only eradicated 4 exotic species from the Kenai Peninsula

Species Identified

- Spotted knapweed
- Scotch broom
- Columbia ragwort
- German madwort
Wind-dispersed plants will overrun the refuge in the next 2 years

The answer is blowing in the wind
Birds vetch in Cooper Landing
Birdsfoot trefoil
Alsike clover
Common timothy
Birdsfoot trefoil
Oxeye daisy
Alsike clover
Orange hawkweed
Oxeye daisy
Butter and eggs
White sweetclover
Buckets of acceptability

Past
- clovers
- narrowleaf hawksbeard
- narrowleaf hawkweed
- orange hawkweed
- common dandelion
- pineapple weed
- common plantain
- timothy

Present
- reed canarygrass
- bird vetch
- field sowthistle
- birdsfoot trefoil
- sweetclover
- Elodea
- hempnettle

Future
- Spartina
- Hydrilla
- spotted knapweed
- western cheatgrass
- Japanese knotweed
- scotch broom
- ???

Lost cause
- waited too long
- paperwork
- wind dispersed
- personnel turnover

Cost

Accept containment
# KP-CWMA Management Goals - 2007

<table>
<thead>
<tr>
<th>Common name</th>
<th><strong>CHUGACH NF</strong></th>
<th><strong>KENAI NWR</strong></th>
<th><strong>KENAI FJORDS NP</strong></th>
<th><strong>HOMER SWCD</strong></th>
<th><strong>KENAI SWCD</strong></th>
<th><strong>ALASKA SWCD</strong></th>
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<tbody>
<tr>
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<td>cheat grass</td>
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<td>meadow hawkweed (H. caespitosum)</td>
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<td>mouseear hawkweed (H. pilosella)</td>
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<td>scentless false mayweed</td>
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<td>scotchbroom</td>
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<td>eradicate</td>
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<tr>
<td>spotted knapweed</td>
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<tr>
<td>white sweetclover</td>
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<td>eradicate</td>
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<tr>
<td>yellow sweetclover</td>
<td>control</td>
<td>eradicate</td>
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**KP-CWMA Management Goals - 2013**

Default management goal for any exotic plants new (or newly re-introduced) to the Kenai Peninsula is eradication by the most appropriate method.

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>ERADICATE</th>
<th>CONTAIN</th>
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</thead>
<tbody>
<tr>
<td>Bird Vetch</td>
<td><em>Vicia cracca</em></td>
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<tr>
<td>Bull Thistle</td>
<td><em>Cirsium vulgare</em></td>
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<td>Butter and Eggs</td>
<td><em>Linaria vulgaris</em></td>
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<td>Cattail</td>
<td><em>Typha latifolia</em></td>
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<td>Creeping thistle</td>
<td><em>Cirsium arvense</em></td>
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<td>Cheatgrass</td>
<td><em>Bromus tectorum</em></td>
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<tr>
<td>Common Tansy</td>
<td><em>Tanacetum vulgare</em></td>
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<td>Meadow hawkweed</td>
<td><em>Hieracium caespitosum</em></td>
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<td>Ornamental jewelweed</td>
<td><em>Impatiens glandulifora</em></td>
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<td>Oxeye daisy</td>
<td><em>Leucanthemum vulgare</em></td>
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<td>Perennial Sowthistle</td>
<td><em>Sonchus arvensis</em></td>
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<td>Quackgrass</td>
<td><em>Elymus repens</em></td>
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<tr>
<td>Reed canarygrass</td>
<td><em>Phalaris arundinacea</em></td>
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<tr>
<td>Scentless false mayweed</td>
<td><em>Tripleurospermum inodorum</em></td>
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<td>Scotchbroom</td>
<td><em>Cytisus scoparius</em></td>
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<td>Spotted knapweed</td>
<td><em>Centaurea stoebe</em></td>
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<tr>
<td>Waterweed</td>
<td><em>Elodea canadensis &amp; nuttallii</em></td>
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<tr>
<td>Yellow/White sweetclover</td>
<td><em>Melilotus officinalis</em></td>
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</tbody>
</table>
New yardstick to measure success

- Rather than acres or number of infestations treated
- 97 of 127 watersheds are free of reed canarygrass
  OR
- 4 species were eradicated from the Kenai Peninsula

AND WE NEED TO KEEP IT THAT WAY!
Questions???