Plan Ahead to Prevent the Spread of Invasive Species

2023 Trails Conference – Anchorage, Alaska

Mike Redwine/Shutterstock

Presenters

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Trails are an integral part of Alaska’s physical and cultural landscape.

All Alaska Outdoors Lodge

Invasive species threaten Alaska’s environment and economy.

Invasive plants can be introduced and spread through trail construction, maintenance and use.

T. Stallard, Adobe Stock

There are simple ways to prevent the introduction and spread of invasive species on Alaska's trails!

Part 1 Preview

Alaska Trails, UAA, Wikihow.com, UAF CES, Kosciusko Water & Woodland Invasive Partnership

Invasive species: What are they?
Why are they a problem?
Examples in Alaska

How can trail construction, maintenance and use spread invasives?

Common trailhead invasive species

Best management practices for:
Planning and design, construction and maintenance, stewardship

Alaska Trails, UAA, Wikihow.com, UAF CES, Kosciusko Water & Woodland Invasive Partnership

Part 2 Preview

KENAI PENINSULA COOPERATIVE
INVASIVE SPECIES
MANAGEMENT AREA

Certified
Weed-Free

KP-CISMA, Alaska Division of Agriculture, NAISMA, UAF CES

What is Integrated Pest Management (IPM)?

Where to find more information on invasive plants?

Tools for prevention: Weed-free products and certification program

Increasing public awareness

Boot-brush stations

Introduction to IPM control methods

Consultation resources, collaborative opportunities

How to report invasive species

National outreach campaigns

KENAI PENINSULA COOPERATIVE
INVASIVE SPECIES
MANAGEMENT AREA

KP-CISMA, Alaska Division of Agriculture, NAISMA, UAF CES

Invasive Species

"An invasive species is an organism that causes ecological or economic harm in a new environment where it is not native." (National Oceanic and Atmospheric Administration)

Shutterstock, S. Cherrug, J. F. Orth, Washington Sea Grant, Ken White

How Can Invasive Species Spread via Trails?

1. Construction

2. Maintenance

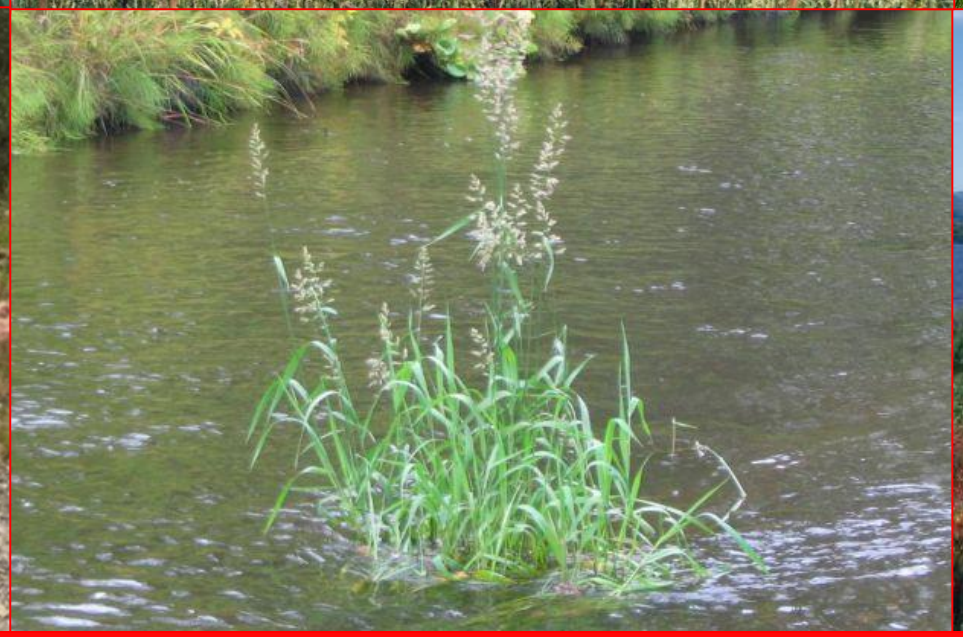
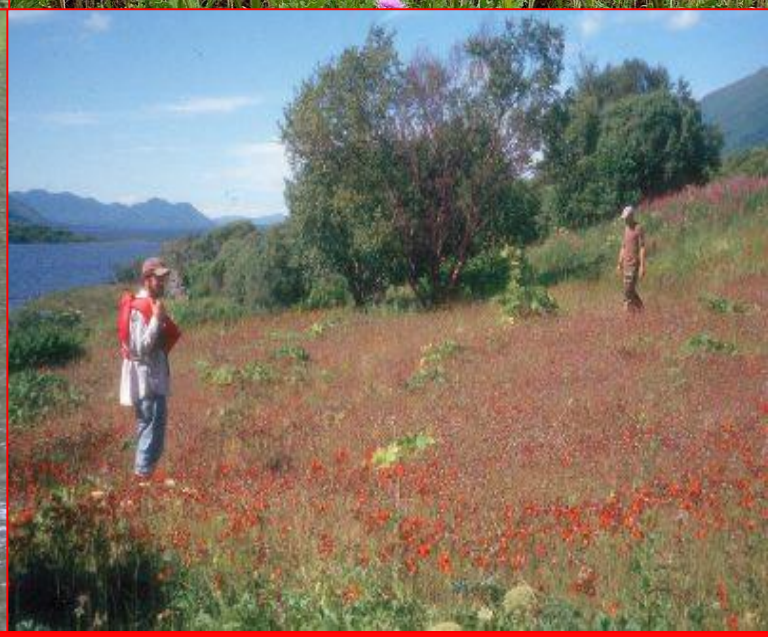
3. Use

NYSDEC, J. Chauvet. Pine Hill Partnership, AKISP, G. Graziano

Common Trailhead Invasive Species





S. Nay, HSWCD, Leslie Kerr/USFWS, Maine DACF, M. Shephard/Bugwood.org

Best Management Practices

Planning and Design:

1. Know where the weeds are
   Avoid, pre-treat, mitigate?

2. Hygiene
   Protocols, wash station locations?

3. Sourcing
   Native plant materials
   Weed-free straw, gravel, mulch

M. Hutten, Getty Images

Best Management Practices

Construction and Maintenance:

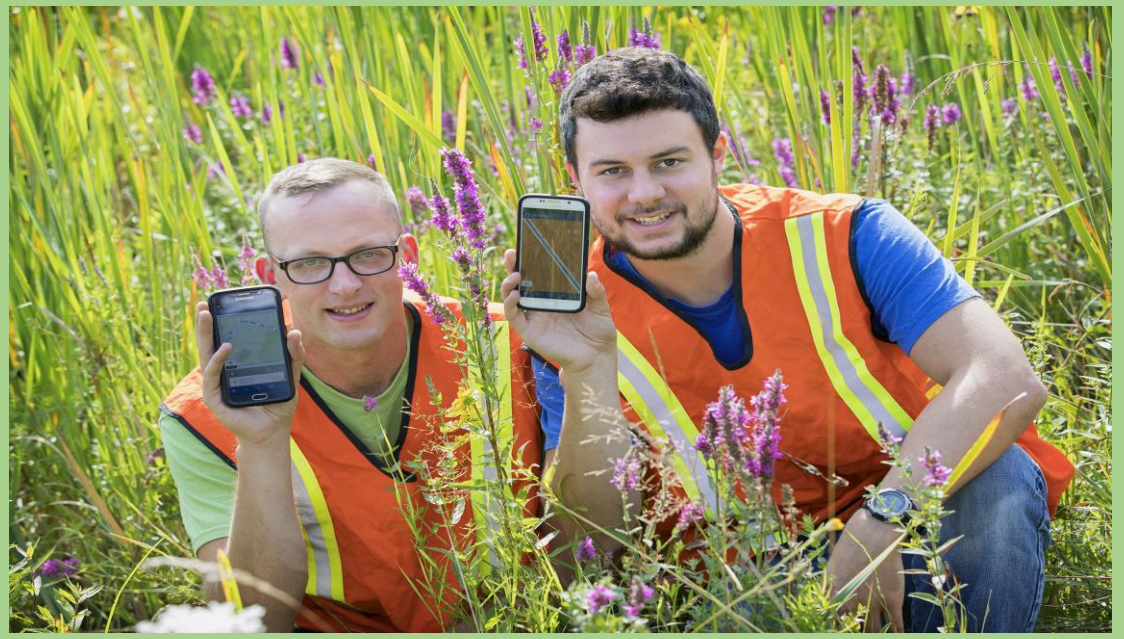
1. Minimize disturbance
2. Revegetate promptly
3. Work from non-infested towards infested areas
4. Time operations to avoid seed
5. Wash equipment, tools, boots
6. Train crews, contractors
7. Keep an eye out, give a shout

City of Mount Gambier, Shutterstock

Best Management Practices

Stewardship:

Early Detection (Monitoring)



Sentiers Chelsea Trails, SUNY Potsdam, Alaska Division of Agriculture

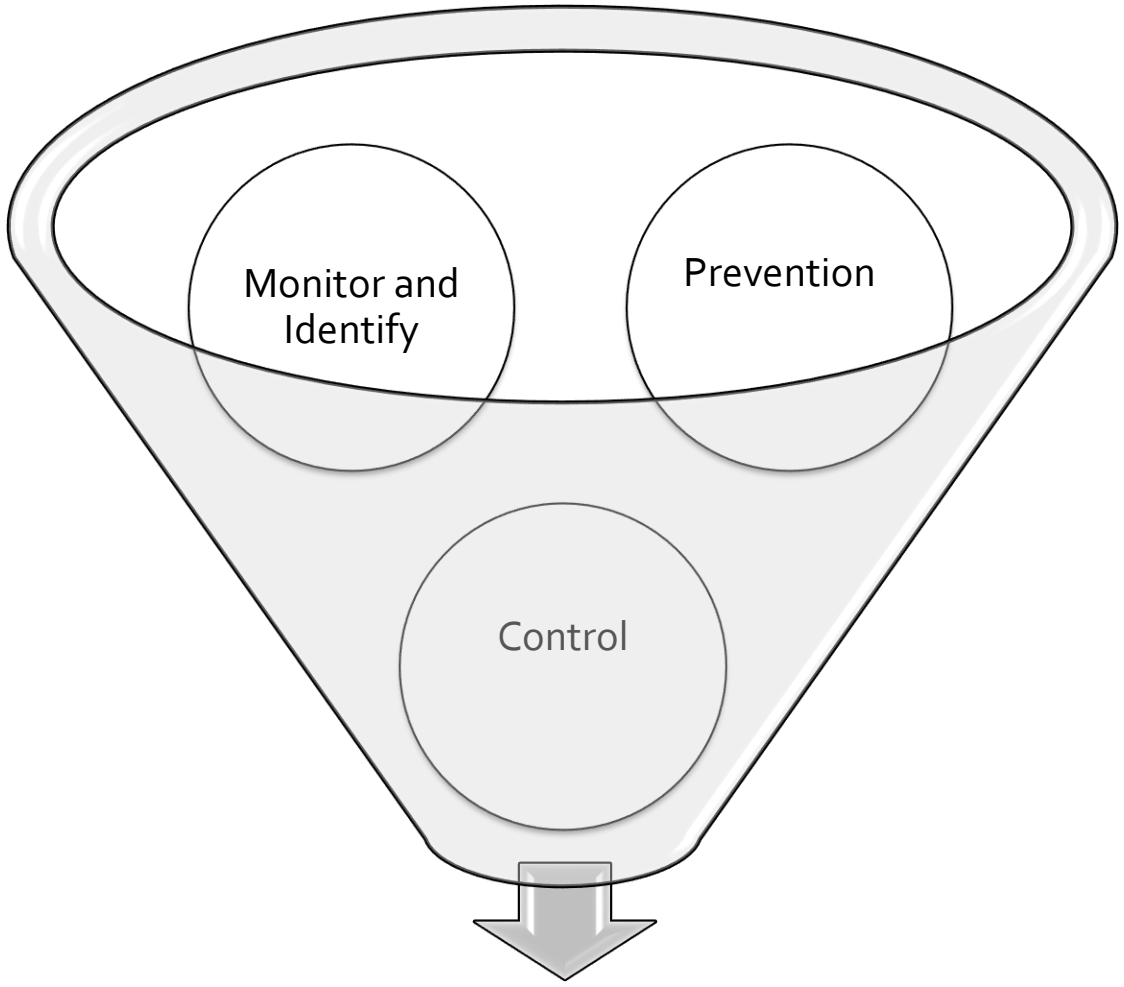
Best Management Practices

Stewardship:

Rapid Response (Report & Control)

NPS, Polatin Ecological Services, AKISP, KP-CISMA

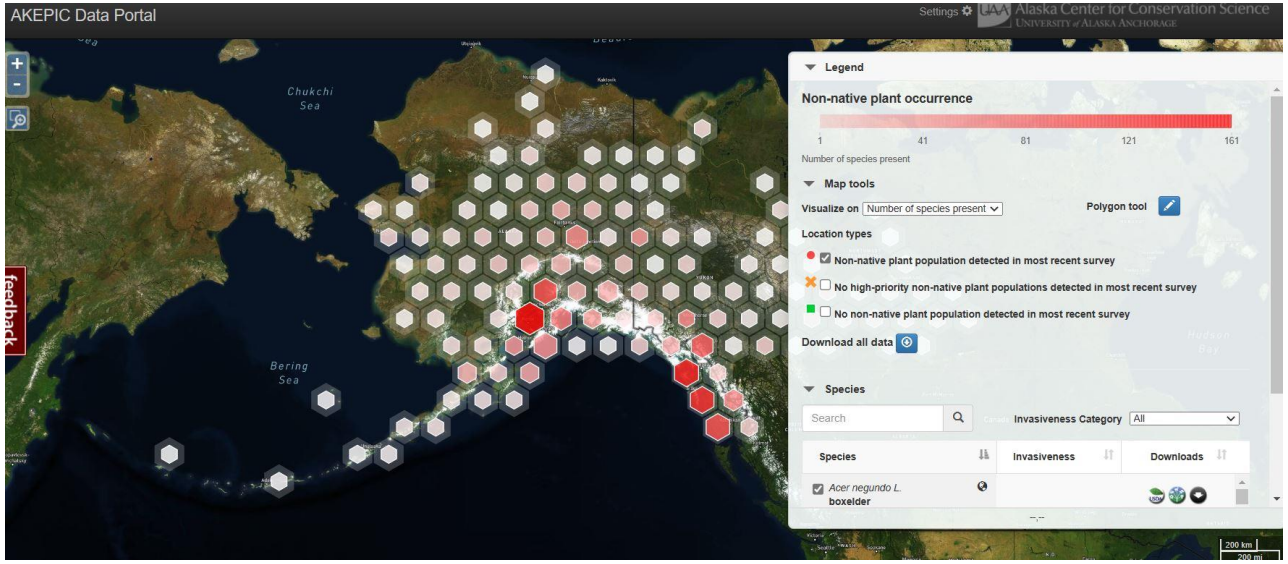
Integrated Pest Management (IPM)



Identify- Alaska Invasive Species Information

Alaska Exotic Plants Information Clearinghouse (AKEPIC)

- Invasive Plant Mapping Application

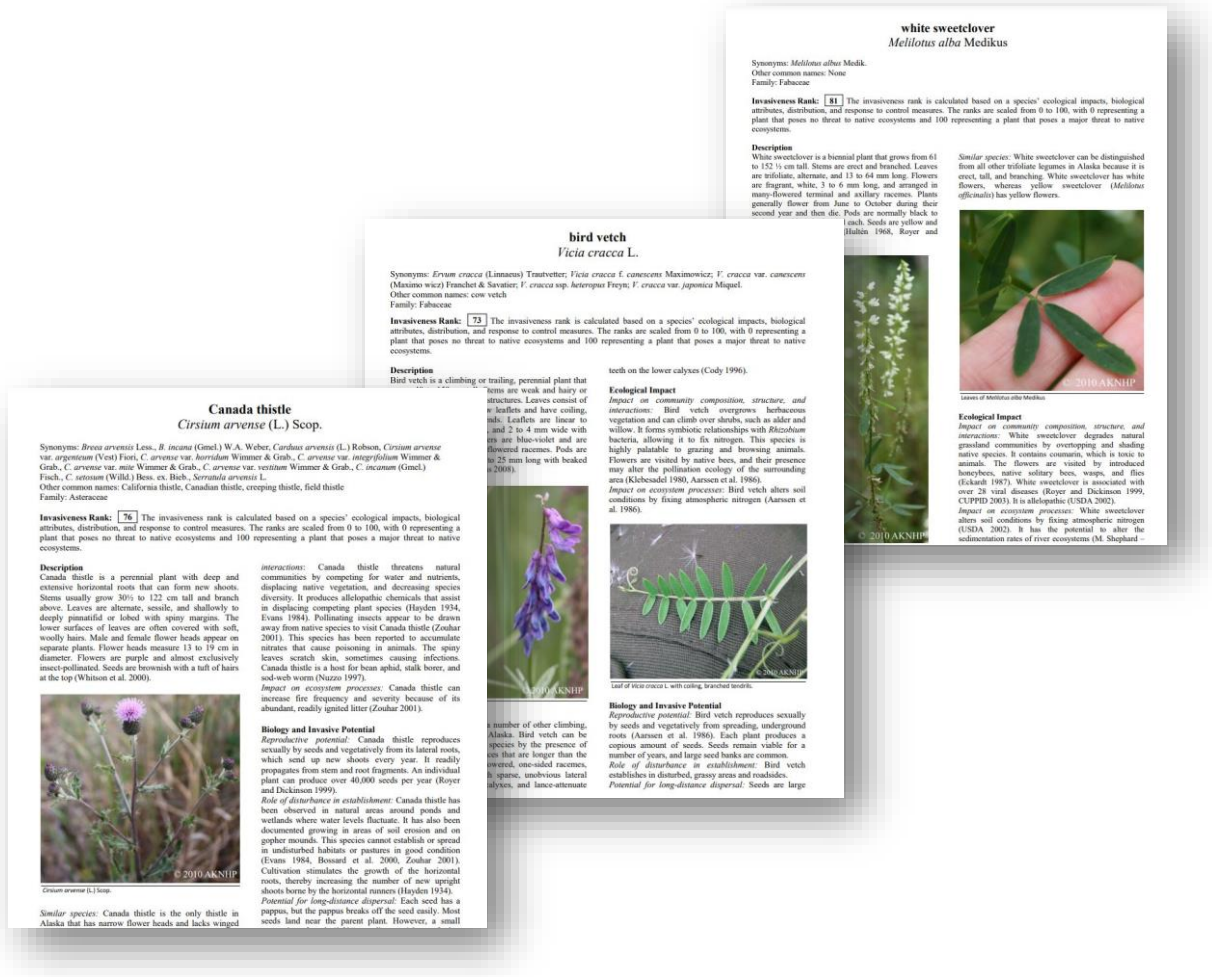


Alaska Center for Conservation Science
University of Alaska Anchorage

Identify- Alaska Invasive Species Information

Alaska Exotic Plants Information Clearinghouse (AKEPIC)

- Non-native plant species biographies



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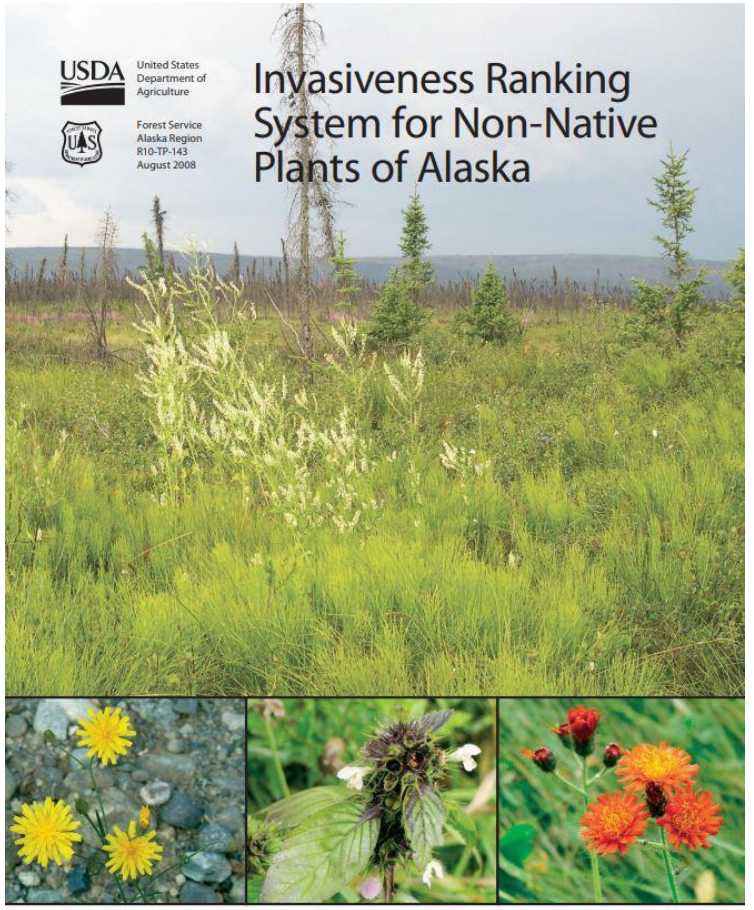
University of Alaska Anchorage

Identify- Alaska Invasive Species Information

Alaska Exotic Plants Information Clearinghouse (AKEPIC)

- Invasive plant ranking system – scale 0-100
  - 80+ Extremely invasive
  - 70-79 Highly invasive
  - 60-69 Moderately invasive
  - 50-59 Modestly invasive
  - 40-49 Weakly invasive
  - 39 or lower very weakly invasive



Alaska Center for Conservation Science
University of Alaska Anchorage

Prevention- Use Alaska Certified Weed Free Products

North American Invasive Species Management Association Weed Free Products Program

Alaska Department of Natural Resources
Division of Agriculture
Plant Materials Center
5310 S. Bodenburg Spur
Palmer, AK 99645
907-745-8721 | Fax: 907-746-1568

ALASKA WEED FREE FORAGE CERTIFICATION PROGRAM

Alaska's weed free forage certification is a voluntary program aimed at providing a weed free product to the public and land managers working in sensitive areas and a value-added product for producers to sell. The objective of this program is to help prevent and slow the potential for transport and dispersal of listed weed species following the North American Invasive Species Management Association (NAISMA) and Alaska Certification Standards.

Forage minimum standards

Forage shall be free of those noxious weeds or undesirable plant species identified in the following list and those weeds declared noxious within the state of origin.

1. Forage shall be inspected in the State/Province of origin by proper officials or authority.
2. Forage shall also be inspected in the field of origin (field shall include surrounding ditches, fence rows, roads, easement, rights-of-way, or a buffer zone surrounding the field).
3. Field shall be inspected prior to cutting or harvesting by the proper officials or authority.
4. Forage which contains any noxious weeds, or undesirable plant species, as identified in the following list, may be certified if the following requirements are met:
    a. Field upon which the forage was produced was treated to prevent seed formation or seed ripening to the degree that there is no danger of dissemination of the seed, or any injurious portion thereof from such noxious weeds, or undesirable plant species, or the propagating parts of the plant are not capable of producing a new plant.
    b. Noxious weed(s) or undesirable plant species was treated not later than rosette to bud stage, or boot stage for grass species classified as weeds, prior to cutting or harvesting.
    c. Treatment method can include but is not limited to; 1) burning, 2) mowing, cutting or rouging, 3) mechanical methods, or 4) chemicals.

Alaska Department of Natural Resources
Division of Agriculture
Plant Materials Center
5310 S. Bodenburg Spur
Palmer, AK 99645
907-745-8721 | Fax: 907-746-1568

ALASKA WEED FREE GRAVEL CERTIFICATION PROGRAM

Alaska's weed free gravel certification is a voluntary program aimed at providing a weed free product to land managers working in sensitive areas and a value-added product for gravel producers to sell. The objective of this program is to help prevent and slow the potential for transport and dispersal of listed weed species following the North American Invasive Species Management Association (NAISMA) and Alaska Certification Standards.

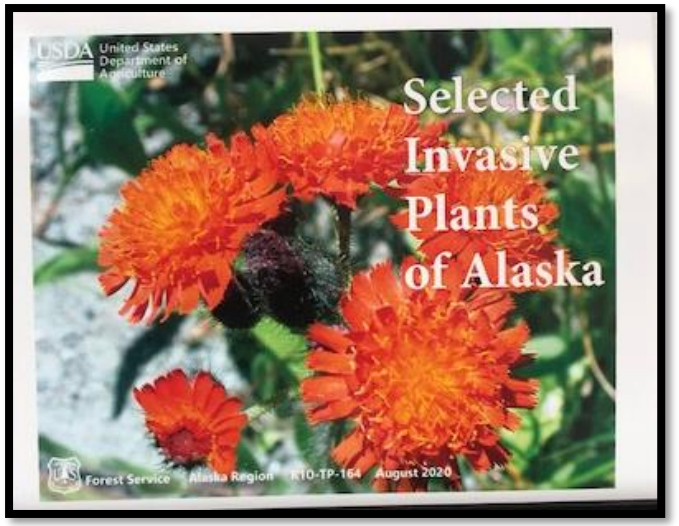
Gravel pit minimum standards

Gravel/borrow area shall be free of those noxious weeds or undesirable plant species identified in the following list and those weeds declared noxious within the state of origin.

1. Gravel/borrow material shall be inspected in the State/Province of origin by proper officials or authority.
2. Gravel/borrow material shall also be inspected in the area of origin (area shall include, but not limited to, surrounding ditches, top soil piles, gravel/sand piles, fence rows, roads, easement, rights-of-way, working areas, storage areas, and a buffer zone surrounding the area.)
3. Gravel/borrow material shall be inspected prior to movement by the proper officials or authority.
4. Gravel/borrow area which contains any noxious weeds, or undesirable plant species, as identified in the following list, may be certified if the following requirements are met:
    a. Area upon which the gravel/borrow material was mined was treated to prevent seed formation or seed ripening to the degree that there is no danger of dissemination of the seed, or any injurious portion thereof from such noxious weeds, or undesirable plant species, or the propagating parts of the plant are not capable of producing a new plant.
    b. Noxious weed(s) or undesirable plant species was treated not later than rosette to bud stage, or boot stage for grass species.
    c. Treatment method can include but is not limited to; 1) burning, 2) mowing,

Prevention- Increase Public Awareness

Photo credit: Homer SWCD



Pocket guide. *Selected Invasive Plants of Alaska*, 2020 edition

Prevention- Boot brush stations

Photo credit: Homer SWCD


Photo credit: NPS


pointing out every invasive plant
my friends wanting to enjoy a peaceful hike
me

Control Methods – Manual Removal

- Organized community weed pulls can offer outreach and awareness opportunities.
- Effective in small infestations
- Reduces seed production

Photo credit: UAF Cooperative Extension Services

Control Methods – Mechanical

- Certain invasive plants can be suppressed with well-timed, regular mowing
- Reduces seed production
- Clean mowers and equipment after working in weed-infested areas
- For some species, mowing/cutting is counterproductive – stimulating additional growth
  - Orange hawkweed
  - European bird cherry

Control Methods – Mechanical

- Certain invasive plants can be controlled with flame weeding
- Ruptures the cell walls
- Reduces seed production
- May require a permit
- Will likely require retreatment
- Likely need to acquire a permit
- Risk is high during dry seasons

Control Methods – Herbicide

- Can be a very effective and may be the only effective option for species that are difficult to kill (systemic herbicide, kills the roots)
- Follow up treatments are typically required due to persistent seedbed
- Applications that target specific species allows for native species to recover

Photo Credit: Tim Stallard, Alien Species Control, LLC

Control Methods – Herbicide

- Alaska Department of Environmental Conservation regulates pesticide use
- Herbicides used by land managers are used responsibly and in very small quantities
- Different herbicides have legal restrictions on where they can be used

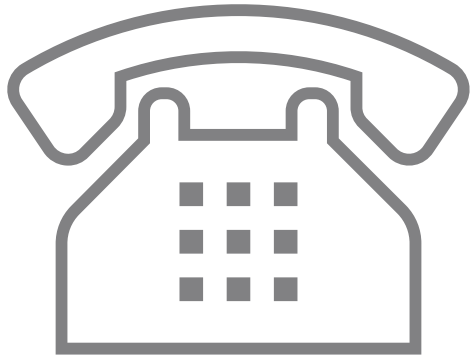
Photo credit: Kenai Watershed Forum

Local assistance

Species identification

Printed resources

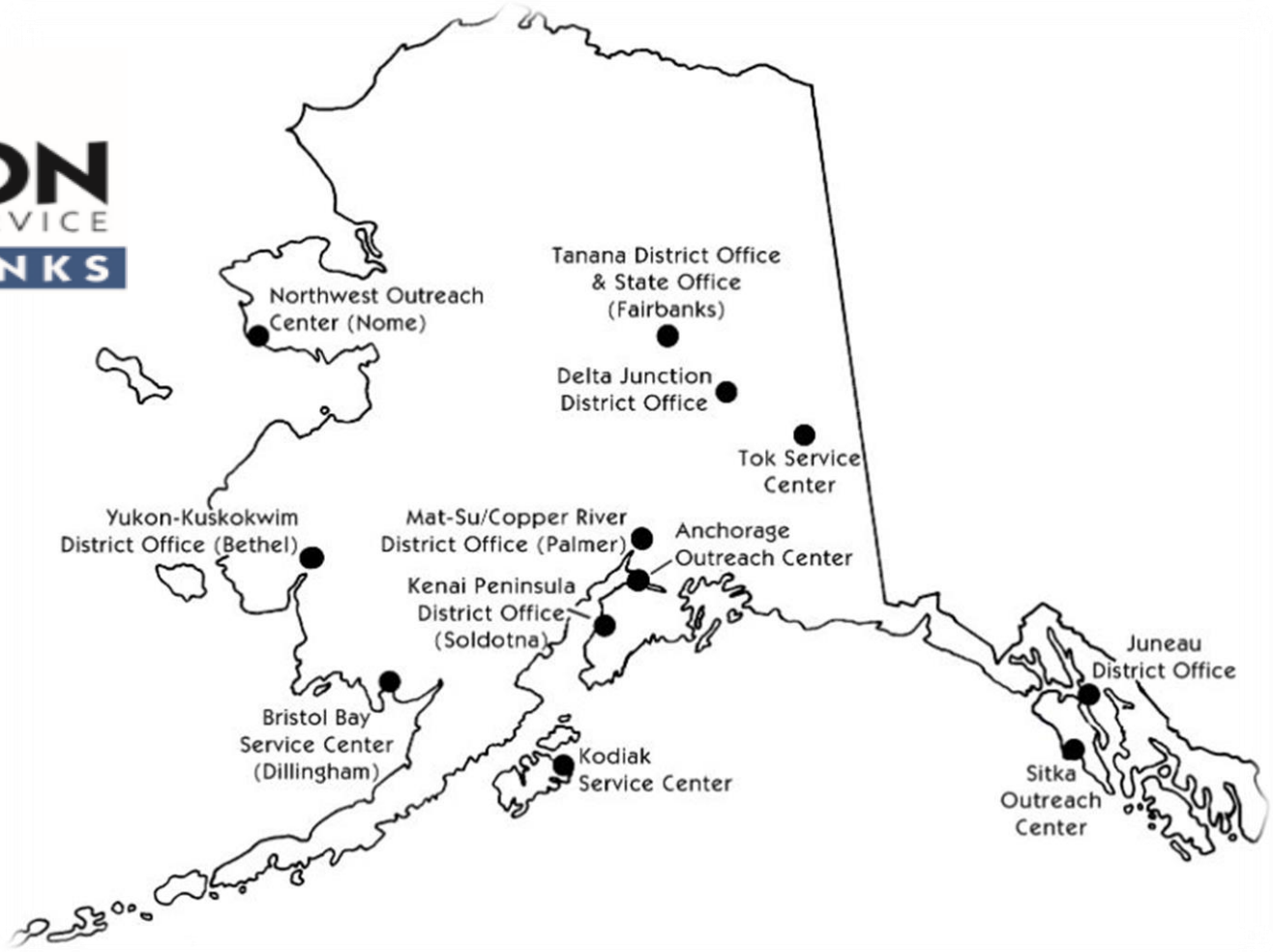
Invasive species and natural resource professionals



Reporting

Consultation Resources - Cooperative Extension Service

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF ALASKA FAIRBANKS



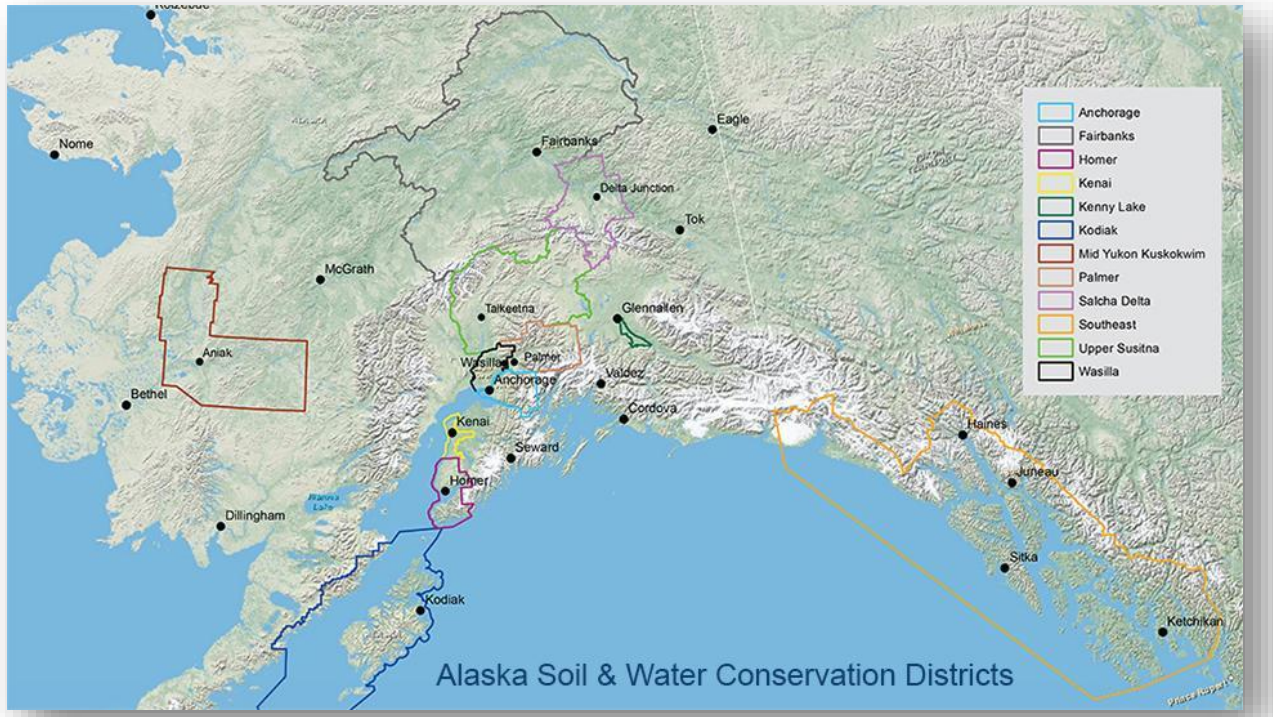
Consultation Resources- Cooperative Invasive Species/Weed Management Areas

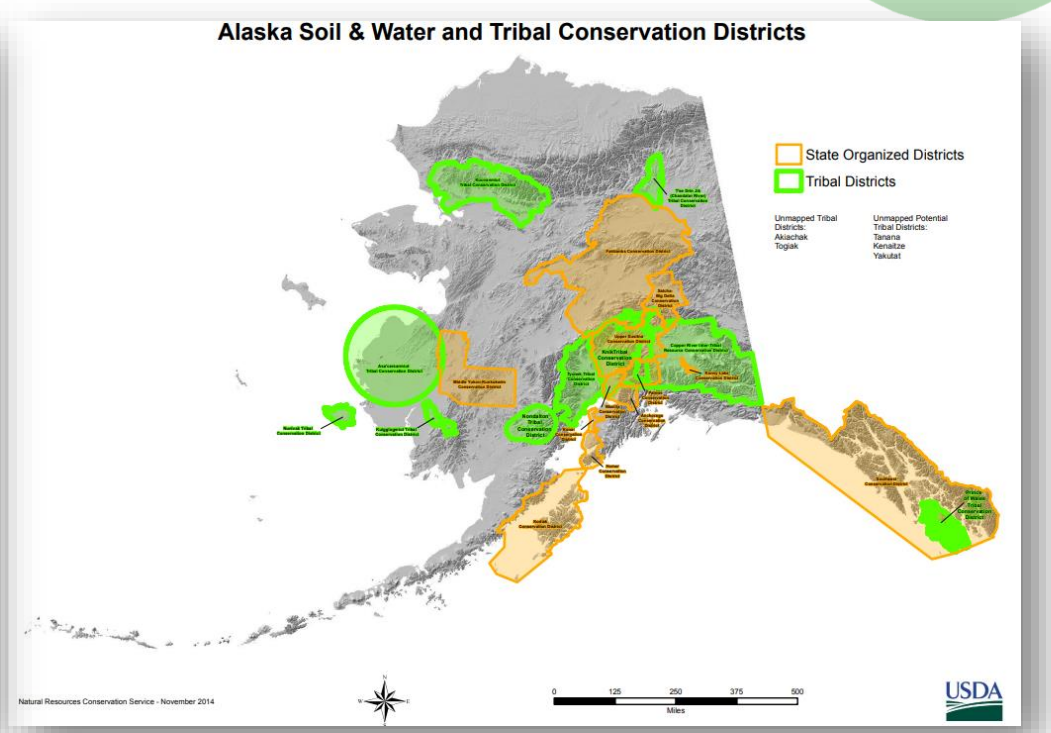
KENAI PENINSULA COOPERATIVE
INVASIVE SPECIES
MANAGEMENT AREA

Anchorage
CISMA
Keeping Invasives OUT of the Picture

Fairbanks Cooperative
Weed Management Area

Consultation Resources- State and Tribal Soil and Water Conservation Districts





Alaska Weed- Free Product Resources

Department of Natural Resources
DIVISION OF AGRICULTURE

Certified Weed-Free

Photo credit: Alaska Department of Natural Resources, Division of Agriculture

Statewide Collaboration-
The Alaska Invasive Species Partnership

- Newsletters – To receive biannual newsletters, join the email list.
- Monthly Meetings – Meetings are held the first Wednesday of each month. To receive invites, join the email list.

Reporting

- UAF Cooperative Extension Service, Alaska Invasives ID app for identification
  - Plants, diseases, insects

- Eddmaps.org for reporting observations

EDDMapS
find · map · track

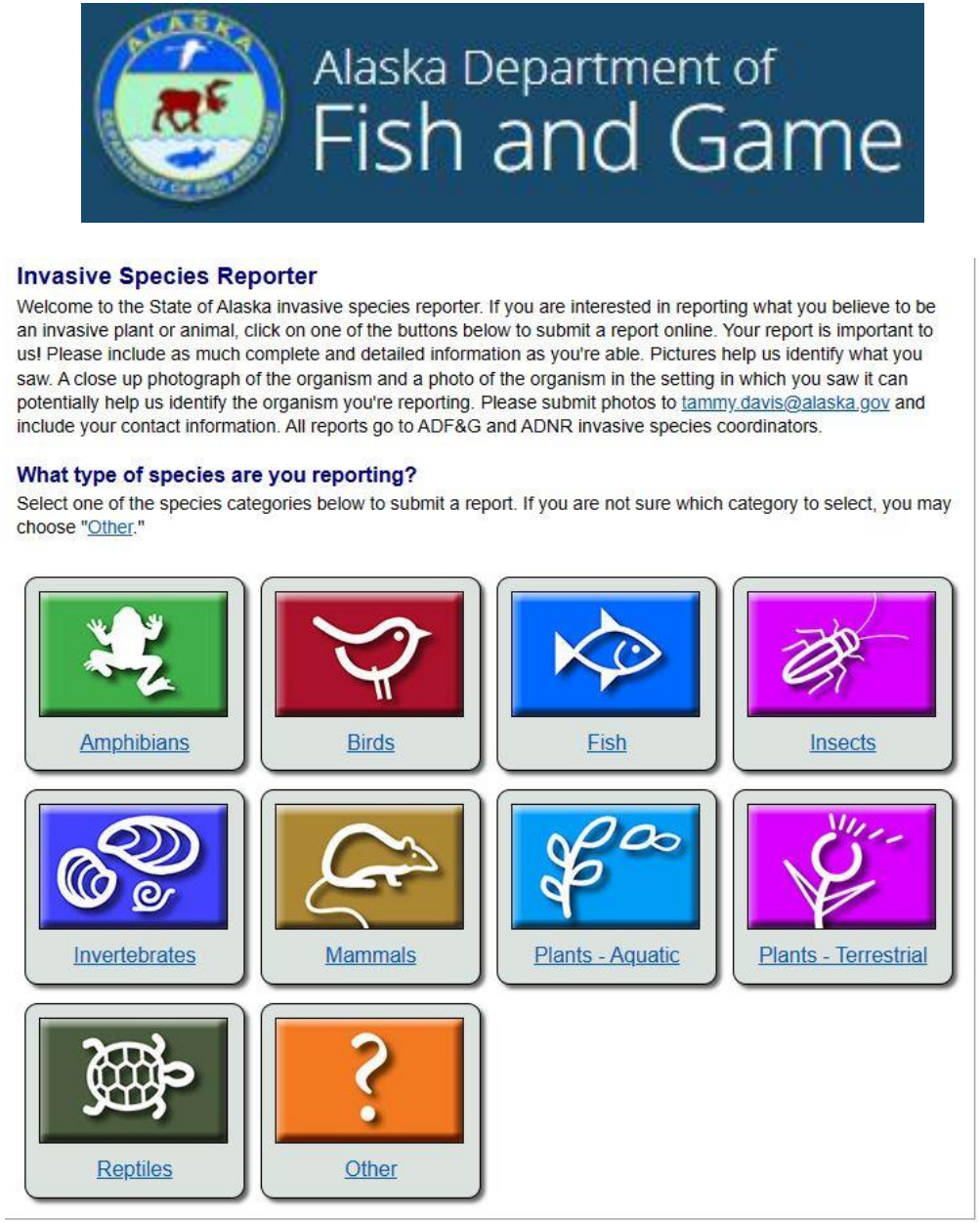
Reporting

Alaska Department of Fish and Game

Invasive Species Hotline
1-877-INVASIV (468-2748)

Online reporting

Take clear, closeup photographs of the organism in the setting that you saw it



National Outreach Campaigns

Play Clean Go

STOP AQUATIC HITCHHIKERS!™
Be A Good Steward. Clean. Drain. Dry.

DONTMOVEFIREWOOD.org

Thank you!

Gooseberry Peter
(907) 474-6829
gpeter3@alaska.edu

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summernay@salchadeltaswcd.org