

Inventory and Monitoring

Goal F: Record the location and movement of invasive weeds and agricultural pests across the landscape.

Inventory and monitoring are two related activities that provide different types of information about invasive weeds and agricultural pests. Inventory involves determining what is present in a particular area and the extent of the infestation/s. Monitoring involves recording how the invasive weeds or agricultural pests respond to the Alaska environment, affect natural and agricultural resources, respond to various land use activities, and respond to treatments. It is essential to understand where and what is present in the state and how it responds to various external factors in order to begin effective prevention, detection, education, management, and regulation. Furthermore, species once thought to not be a threat in the state, with changing climate or exiting the lag phase, may become highly problematic at later dates. Monitoring will help to detect problems as they begin to occur.

Extensive inventory efforts are recorded for invasive plants in Alaska. The Alaska Natural Heritage Program hosts the Alaska Exotic Plant Information Clearinghouse (AKEPIC) an online dataset with locations of invasive plants (<http://ak-weeds.uaa.alaska.edu/>). Various participating agencies, non-profits, contract organizations and individuals have contributed to this dataset which is one of the largest of its kind with over 95,000 records. The AKEPIC dataset is available free to the public and should be one of the primary tools that a person or organization interested in invasive plant management visits prior to beginning development of management, inventory and education activities in their area.

Figure 7.

Purple loosestrife infestation in Westchester Lagoon, Anchorage



Purple loosestrife was long thought to not set viable seed during the short growing season in Alaska. This infestation of loosestrife found growing in Westchester Lagoon, Anchorage exemplifies the need to monitor non-native species with potential invasive characteristics. Photo courtesy Michael Shephard, USDA Forest Service.

Figure 8. Funnel trap used to monitor for exotic insect pests



The Division of Forestry and partners lead efforts to trap exotic insects in an effort to monitor for pest species of concern.

Inventory and monitoring information for agricultural pests other than plants is not as readily available in comparison to the AKEPIC dataset. Significant aerial pest and disease inventory and insect pest trapping efforts for forest pests and diseases are conducted annually by the Forest Service, the Division of Forestry, and the Division of Agriculture. Other agricultural pests such as potato blight are checked for in annual harvests. Information for these non-plant taxa inventory and monitoring efforts are available in reports, but not in any simple publicly accessible database as they are with weeds.

Public Identified Priorities

Scoping participants identified training and funding as the most important challenges to inventory and monitoring efforts. Respondents felt the Division of Agriculture should use inventory data for species prioritization, geographic prioritization, and to provide reports to local land managers. Passive reporting by volunteers and citizen scientists is considered important. Participants overwhelmingly agreed that state efforts to monitor for invasive weeds should increase, and the state should support local efforts.

Objective 1:

Increase the capability of staff, partners and volunteers to accurately identify, inventory and monitor invasive weeds and agricultural pests.

Action Strategies

1. Increase training opportunities for partners in learning GIS and GPS technologies providing one training annually.
Suggested participants: CES, DNR, DOA, NPS, AKNHP, USFS, AACD, BLM
Timeline: March 2012
2. Provide more invasive weed and agricultural pest identification training opportunities with an annual training in South-east, Southcentral and Interior regions of Alaska.
Suggested participants: CES, AKNHP, DOA, CWMA, SWCD, NMFS, USDA, DOI
Timeline: March 2012

Objective 2:

Identify and fill gaps in inventory and monitoring knowledge.

Action Strategies

1. Prioritize inventory efforts by species and geography, identifying five priority species and five priority geographic areas.
Suggested participants: DNR, DOA, DOF, AKNHP, CWMA, SWCD, USDA, DOI, NMFS, Native Corporations & Associations
Timeline: June 2012
2. Increase citizen scientist monitoring through education of five new groups and update existing outreach materials.
Suggested participants: SWCD, DNR, DOA, AKNHP, CWMA, CES, APHIS, USFS, DOI, NMFS
Timeline: June 2012
3. Facilitate acquisition of funds for local weed managers to regularly inventory and monitor invasive weeds and agricultural pests.
Suggested participants: DNR, DOA, USFS, APHIS, DOI, NMFS, DOF, SWCD, CWMA, Native Corporations and Associations
Timeline: June 2013

Objective 3:

Set up systems to ensure that all inventory and monitoring data is shared, and easily accessible for use by interested persons.

Action Strategies

1. Develop agricultural pest inventory database.
Suggested participants: DNR, DOA, SWCD, CES, AKNHP, USFS, ADFG, DOF, CBP, APHIS
Timeline: March 2012
2. Work with agencies collecting agricultural pest inventory data to encourage submission of data to the database identified in action strategy 1 of this objective.
Suggested participants: DNR, DOA, SWCD, CES, AKNHP, USFS, ADFG, DOF, CBP, APHIS
Timeline: March 2012