

Early Detection and Rapid Response (EDRR)

Goal D: Facilitate and implement EDRR for invasive weeds and agricultural pests that are beginning to arrive to Alaska or regions within Alaska.

Early Detection and Rapid Response (EDRR) involves finding species that are new invaders to an area and responding rapidly to prevent their establishment and spread. After prevention, EDRR is considered the least costly and most effective way to manage invasive species. Once a species is well established and spreading it can cost a substantial amount of money to manage and remove from areas of concern, and chances for successful eradication diminish.

The Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) has developed a National Early Detection and Rapid Response System (EDRR) for Invasive Plants in the United States (http://www.fws.gov/ficmnew/FICMNEW_EDRR_FINAL.pdf). The plan identifies several action strategies, and outlines the major elements of an EDRR system. These major elements include:

1. Detection and Reporting
2. Identification and Vouchering
3. Rapid Assessment
4. Planning
5. Rapid Response

The state plan incorporates elements of the National EDRR system where items were not previously accomplished.

Model EDRR programs involve coordinated state, federal, and local efforts. In a state as large as Alaska one region may not have a species that is ubiquitous in another making

that species a priority for early detection in the region it is not known. Engaging local groups such as an SWCD is imperative to identify these priorities and efficiently coordinate early detection and rapid response activities.

Currently EDRR in Alaska is accomplished at the federal, state and local levels where infrastructure and support are available. State employees trap bugs and conduct surveys for invasive species in partnership with the APHIS Cooperative Agricultural Pest Survey (CAPS) program and Forest Health Protection. Local Cooperative Weed Management Areas (CWMA) coordinate EDRR in partnership with state and federal agencies.

The Alaska Association of Conservation Districts (AACD) working with several partners in an EDRR subcommittee of the CNIPM worked to establish a citizen reporting system that consists of a pamphlet explaining EDRR, how to report a sighting and which species to look out for. The reporting system involves a simple online report served through the Early Detection and Distribution Mapping System, EDDMapS (<http://www.eddmaps.org/alaska/report/report.cfm>). Such reporting systems can be expanded with trainings for citizen scientist groups with established volunteers accustomed to environmental monitoring and reporting.

Public Identified Priorities

The majority of survey respondents had participated in some EDRR activities including survey, control or education

Figure 5. Examples of Early Detection & Rapid Response in Alaska



Purple loosestrife (left) and spotted knapweed (right) are both species worthy of EDRR in Alaska because of the threat they pose, and their limited distribution in the state. Knapweed photo courtesy of Michael Rasy, University of Alaska, Bugwood.org

activities. A variety of issues were identified as a challenge to detecting an EDRR species in a given area including identification of species, funding, and knowing where to look. Those that had found EDRR species in the past identified a variety of methods as leading to discovery of an infestation. Survey participants felt almost equally that knowing a control strategy, needing to get a permit, or gaining landowner permission are barriers to management. Further comments on this question followed a similar theme identifying time, landowner and land management issues as barriers.

Survey participants felt the state should focus EDRR efforts on directed surveys of areas with high potential for invasion. The public expressed the need for the state to be involved in training the public and other staff working in the field to conduct passive surveys. Modeling tools were identified as an important aspect of EDRR to determine where to look for new invaders.

Objective 1:

Increase efforts for early detection of invasive weeds and agricultural pests.

Action Strategies

1. Develop predictive modeling abilities to facilitate detection and deliver model reports to land managers and CWMAs.
Suggested participants: AKNHP, DOA, USDA, DOI, NMFS, DOF, UAF
Timeline: June 2016
2. Establish one new monitoring program each year for identified pathways, vectors and/or associated areas.
Suggested participants: DOA, DOF, APHIS, USDA, DOI, NMFS and local CWMA groups
Timeline: annual increase starting June 2012
3. Encourage and support research to determine risk of introducing invasive weeds and agricultural pests through vectors and pathways such as gravel, contaminated seed, commercial vehicles, automobiles, boats and other vehicles, plant products, bird seed and landscape products.
Suggested participants: USDA, DOI, CES, DOA, NMFS, DOF
Timeline: June 2016
4. Assess risk for introduction of invasive insects through interstate movement of commodities such as firewood, and wood packing material.
Suggested participants: USDA, DOI, CES, DOA, DOF
Timeline: June 2016
5. Complete directed surveys for five EDRR species and initiate eradication of those species if they are found.
Suggested participants: USDA, DOA, NMFS, CWMA groups, SWCD, DOF
Timeline: June 2016
6. Identify additional ports that are a priority for exotic insect trapping, and add at least 5 of those priority ports to the trapping program.
Suggested participants: USDA, DOI, DOF, DOA, CES
Timeline: June 2013
7. Engage citizen science monitoring programs that are likely to participate in early detection and reporting invasive weeds and agricultural pests. For each CWMA or SWCD gain participation of at least one citizen science group in monitoring for and reporting of early detection species.
Suggested participants: CES, CWMA groups, SWCDs, AKNHP, DOA, DOF, USDA, DOI, NMFS, Native Corporations and Associations
Timeline: June 2012
8. Host workshops in 2012 to provide information and training to land managers that may happen on EDRR species (e.g. field crews) during regular field work so that they will identify and report infestations.
Suggested participants: CES, ADFG, DNR and divisions, DOT, SWCD, USDA, DOI, NMFS, Native Corporations, Associations
Timeline: March 2012
9. Develop an invasive weeds and agricultural pest identification confirmation network.
Suggested participants: CES, DOF, DOA, AKNHP, USDA, NMFS, DOI
Timeline: May 2011, and update network annually

Objective 2:

Speed the rapid response to invasive weeds and agricultural pests.

Action Strategies

1. Develop strategies to gain landowner or land manager cooperation in management of priority species.
Suggested participants: DOA, SWCD and CWMA
Timeline: June 2012
2. Analyze the pesticide use permit process to determine if changes are necessary to facilitate treatment of EDRR species.
Suggested participants: DEC, DOA, EPA
Timeline: June 2016
3. Establish a rapid assessment team for unranked species that are new invaders to Alaska.
Suggested participants: DOA, DOF, USDA, DOI, AKNHP, CES, NMFS
Timeline: June 2012
4. Establish rapid response teams and/or partnerships working with CWMA groups or SWCDs for example, to ensure that a confirmed species report is responded to quickly with the most effective method of management.
Suggested participants: DOA, DOF, CES, SWCD, CWMA, Federal Agencies, State land management agencies, Native Corporations and Associations
Timeline: June 2012
5. Develop eradication strategies for high priority invasive insects that are likely to be detected at monitored ports.
Suggested participants: DOA, DOF, CES, USDA, DOI, Native Corporations and Associations
Timeline: June 2013



Objective 3:

Coordinate state and local groups to effectively address EDRR priorities.

Action Strategies

1. Encourage development of local EDRR priority lists by CWMA groups, SWCDs and/or other relevant groups.
Suggested participants: DNR, DOA, CWMA groups, SWCD, Native Corporations and Associations
Timeline: May 2012
2. Develop a flowchart identifying the roles of different entities in rapid response to new invaders to Alaska.
Suggested participants: DOA, DOF, ADFG, DOT, DEC, USDA, DOI, CBP, SWCD, NMFS, Native Corporations and Associations
Timeline: May 2012
3. Increase information sharing between agencies and local entities regarding early detection reporting and pest interceptions.
Suggested participants: DOA, DOF, USDA, DOI, CBP, SWCD, ADFG, CWMA groups, NMFS, Native Corporations and Associations
Timeline: April 2012