



*“Washington State’s Interagency Committee
Fostering Cooperation on Aquatic Nuisance
Species Issues.”*

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**Early Detection And Rapid Response
Plan For Aquatic Invasive Species
In Washington State**

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draft

**EARLY DETECTION AND RAPID RESPONSE PLAN
FOR AQUATIC INVASIVE SPECIES
IN WASHINGTON STATE**

Prepared by the

Washington State Aquatic Nuisance Species Committee

Table of Contents

	<u>Page</u>
Introduction and Philosophy.....	5
Definitions.....	7
Assumptions Guiding Plan Implementation.....	8
Objectives.....	9
Objective 1: Ensure Early Reporting of New Invasions.....	9
1.1 Design and Implement an Integrated Monitoring Plan	
1.2 Establish a Centralized Reporting System	
1.3 Modify Existing Websites	
1.4 Develop an Outreach and Communication Strategy	
Objective 2: Ensure New Species Identification and Risk Assessment.....	12
2.1 Compile an Unwanted Invader list	
2.2 Compile an On-call Expert list	
2.3 Develop a Risk Assessment Methodology	
Objective 3: Define Decision Making Responsibility and Response Protocol.....	14
3.1 Assign Responsibilities	
3.2 Develop a Rapid Response Action Protocol	
Objective 4: Establish and Maintain Capacity to Act.....	18
4.1 Establish a Rapid Response Fund	
4.2 Develop a Rapid Response Checklist	
4.3 Compile Eradication and Control Libraries	
4.4 Identify Barriers and Constraints to Rapid Response	
4.5 Remove Barriers and Constraints	
4.6 Develop Model Response Plans	
4.7 Develop and Conduct Training for Rapid Responders	
Objective 5: Incorporate Adaptive Management in Plan Implementation.....	21
5.1 Periodically Review Plan Implementation and Associated Procedures	
5.2 Amend Plan and Procedures to Reflect New Technologies and Lessons Learned	
References	
Acronyms	
Appendices	

- Appendix A: State, Tribal, and Federal Policy and Law
- Appendix B: Unwanted Invader List
- Appendix C: On-Call Expert Identification List.
- Appendix D: Washington ANS Committee
- Appendix E: Risk Assessment Methodology
- Appendix F: Relevant Response and Management Plans (regional, national and local)
- Appendix G: Reported Non-Native Species in Washington State

Figures

- Figure 1: Protocol for determining the lead agency for an ANS invasion 16
- Figure 2: Protocol for rapid response actions 17

EARLY DETECTION AND RAPID RESPONSE PLAN FOR AQUATIC INVASIVE SPECIES IN WASHINGTON STATE

2005 - 2006

Introduction and Philosophy

Unwanted biological invasions are a reality in Washington. Invasive species are biological stressors that increasingly impact Washington's economy and quality of life, threatening the very structure and existence of our ecosystems. And although this continuing and complex problem can be managed, the threat will never entirely disappear. Until recently, geographic isolation provided some protection from outside invaders, but today, the dramatic expansion of global commerce and travel and the easy availability of exotic species via the internet, have eroded this historic defense. Global warming and expansion of exotic imports and import mechanisms have also exacerbated the problem.

This plan supplements objective 3 of Washington's Aquatic Nuisance Species (ANS) Management Plan (Meacham 2001). The goal is to prevent, and that failing, to eradicate or at least stop the spread, of deleterious aquatic species once they arrive in Washington. There is normally a "lag period" between the introduction of an organism and its uncontrollable spread, and an early detection and rapid response plan must capitalize on this often short window of opportunity. During this critical time, management focus must shift rapidly from prevention to eradication or control.

The cliché, "an ounce of prevention..." is a dramatic truism with invasive species. If prevention is unsuccessful, and an invasion occurs, managers face an inescapable trade-off: short-term and usually localized costs to contain or eradicate the species, versus long-term, extensive costs to control a species that has spread. It is much more economical in both time and money to invest in prevention, than to initiate control or eradication actions once an unwanted species has become established. In most instances a quick and forceful response is needed if there is to be a hope of eradication, containment, or cost control. Responding to an invasion becomes less feasible as the organism becomes more widespread, because the size and cost of the treatment increase, and the chance for control diminishes.

In order to respond rapidly and effectively to an invasion, actions should be anticipated and consensus reached on as many response details as possible prior to discovery of an unwanted introduction. Then, when a response is needed, it will be rapid, streamlined, and more effective.

The purpose of this plan is to provide general guidance for rapid responses to all types of aquatic invasions. It provides many pre-determined management responses, and establishes a decision-

making infrastructure that will facilitate rapid resolution of remaining issues. The plan contains a number of objectives and related tasks, and identifies remaining institutional and legislative gaps that need to be addressed. Where species-specific plans exist, they will provide additional detail on management of that particular species.

This plan attempts to design tasks that will address a number of basic elements. But it should be recognized that the plan is essentially a framework, and the quality and completeness of the tasks, once completed, will ultimately determine the efficacy of the plan itself. Successful early detection and rapid response (ED&RR) efforts will include:

1. A thorough and efficient detection system combined with immediate implementation of control/eradication measures for known invasive and deleterious species such as zebra mussels;
2. A monitoring system for each species on the list of known invasive and deleterious species so that new introductions can be detected in a timely manner;
3. Connections to existing invasive species control programs so that they can respond rapidly against those known invasive and deleterious species within their usual area of responsibility;
4. Emergency funding in place for a rapid response from the existing control programs;
5. One or two state agencies provided with all of the funding, staff, permits, and other resources needed for immediate response to known invasive and deleterious species which do not fall within an existing control program;
6. A monitoring system which focuses on boat and ship hulls. Boats being transported into the state by road must be inspected at the border. Samples of biofouling from boats and ships hauled onshore for cleaning should be inspected for known invasive and deleterious species and for other potentially harmful species.
7. A monitoring system which focuses on the colonizers of new habitat. The new habitat would include disturbed bottom, new pilings or other structures, and various types of substrate placed into water for the purpose of detecting known invasive and deleterious species or other potentially harmful species. These efforts should focus on likely points of entry such as ports or recreational areas. Recreational divers should be asked to volunteer to place and monitor substrate. Substrate might include hard surfaces, sand, mud or silt, vegetation, or crevices/hiding places depending on the target species.
8. A reporting system for chance encounters by the public with known invasive and deleterious species and other potentially harmful species. Educational outreach efforts would enhance the ability of the public to make good reports. Divers are by far the most frequent observers of Puget Sound biota and should be recruited to assist in early detection efforts.

9. A pool of experts to verify the identification of known invasive and deleterious species and other potentially harmful species. The rapid response to the detection of a known invasive and deleterious species must not be delayed while the species identity is being verified for those species with obvious characteristics such as zebra mussels or Chinese mitten crabs.
10. A pool of experts and risk managers to quickly decide whether a newly discovered potentially harmful species deserves rapid response. In order to facilitate a quick decision, the pool should be as small as possible and consist of some staff from the implementing agencies.
11. A pool of experts and risk managers to quickly decide whether a rapid response to a newly discovered known invasive and deleterious species or other potentially harmful species is practical. Organisms drifting or swimming in the water column may be out of reach of control measures. The environmental harm from a rapid response might be unacceptable in some circumstances. In order to facilitate a quick decision, the pool should be as small as possible and consist of some staff from the implementing agencies. As much as possible, this decision should be made in advance for every known invasive and deleterious species on the state list.
12. A system for smoothly transitioning to ongoing control from rapid response efforts when eradication has failed or when the species is discovered to be wider spread than initially believed.
13. An adaptive management system so that lessons learned from past efforts guide future efforts. New monitoring tools such as those based on DNA may provide more effective and efficient detection. Response techniques may improve as well.

Definitions

For the purposes of this document, terms have the following meanings:

Invasion – establishment of a new invasive species into the state, or the spread of an already-present invasive species into a new geographic area

Invasive species – an alien species whose introduction does, or is likely to cause, economic or environmental harm or harm to human health (per E.O. 13112 and WA ANS Management Plan)

Potentially harmful species – species that currently pose no problem, but that may at some future time become invasive and deleterious

Rapid response – an attempt at eradication, with the understanding that if eradication is not possible, early response might still improve the effectiveness and reduce the cost of ongoing control

Control – efforts to eradicate, suppress, reduce or manage invasive species populations; measures to reduce the effects of invasive species, preventing the spread of invasive species from areas where they are present, and taking further steps to prevent further invasions. (Per WA ANS Management Plan)

Assumptions Guiding Plan Implementation

This plan was developed with a number of assumptions concerning implementation. These include:

- The plan is not intended to restrict the trade or movement of any species unless it is considered a threat.
- Expenditures of time and money are expected to focus on species that present the greatest economic or environmental risks.
- Existing local, state, tribal, and federal authorities, responsibilities, and cooperative agreements (Meacham, 2001, Appendix A) will be incorporated into response activities whenever possible.
- Because invasive species do not recognize state boundaries, state rapid response capabilities created will also contribute to regional containment.
- Response actions will encourage cooperation and partnership across government and private sector programs.
- Eradication, not continual control, is the objective. Integrated Pest Management (IPM) practices, as defined in RCW 17.15, will be implemented in management ANS response planning.
- Because eradication without restoration may leave an area vulnerable to re-infestation or infestations of other types, restoration of the invaded habitats will be an integral consideration in response planning.

Objectives

Objective 1: Ensure Early Reporting of New Invasions

Early detection is critical to eradication and control, because as an organism becomes more widespread, the size and cost of the treatment increase, and the chance for control diminishes. Once a new organism is found, this information also needs to be disseminated rapidly to those who have the capability to respond.

1.1 Design and Implement an Integrated Monitoring Plan. The Washington department of Fish and Wildlife (WDFW) and the ANS Executive Committee will work with existing monitoring programs such as the Puget Sound Ambient Monitoring Program, the Columbia River Aquatic Nuisance Species Inventory, Ecology's state wide freshwater monitoring program, tribal programs, and the Governor's Forum on Monitoring Salmon and Watershed Health to develop and implement an integrated monitoring program for invasive species. State and local noxious weed programs should also be included.

One approach may be to develop an integrated monitoring program consisting of four components: Puget Sound and shared marine waters with British Columbia; freshwater lakes and streams; coastal marine and estuarine waters; and the Columbia River and shared waters with Oregon.

A monitoring system should focus heavily on boat and ship hulls, and inspect boats being transported into the state by road at the border. Samples of biofouling organisms from boats hauled onshore for cleaning should be inspected for known invasive and deleterious species and for other potentially harmful species. The monitoring system should also focus on the colonizers of new habitat, such as disturbed bottoms, new pilings or other structures, and various types of substrate placed into water for the purpose of attracting new colonizers. These efforts should focus on likely points of entry such as ports or recreational areas. An effective monitoring program will also utilize the eyes of the public to capitalize on chance encounters by the public. Educational outreach efforts will enhance the ability of the public to make informed reports. Recreational divers are by far the most frequent observers of Puget Sound biota, and they should be recruited to assist in early detection efforts; they can be asked to volunteer to place and monitor substrate of all types, including hard surfaces, sand, mud or silt, vegetation, and crevices/hiding places, depending on the target species.

Current structure/existing resources: A variety of different monitoring plans already exist, but they are piecemeal and not integrated. For example, these include a lake monitoring program for aquatic weeds (Ecology); a zebra mussel monitoring program (WDFW/volunteers); 100th

meridian boater education and surveys; some mitten crab monitoring in the Columbia River Portland State University (PSU); and a volunteer monitoring program for green crab. PSU is now doing some work in Willapa Bay as well. The Puget Sound Action Team (PSAT) has developed exotic species monitoring programs for Puget Sound and the lower Columbia River, which, if implemented, can eventually feed information to this process. The Environmental protection Agency (EPA) laboratory in Newport, OR, has also developed a West Coast Estuarine Database (under a Western Regional Panel grant) which is intended to be a repository for all West Coast estuarine data, and Ecology has a database for aquatic plants at <http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html>. The universities, NGOs and industry all also have a great deal of interest and expertise that can/should be tapped as well.

Additional Needs: WDFW will integrate existing plans, identify/fill gaps

Estimated time required: 8 months to develop, then ongoing staff support to implement

- 1.2 Establish a Centralized Reporting System.** WDFW, in cooperation with the Washington Departments of Agriculture and Natural Resources (WDA, WDNR), WA Noxious Weed Control Board, PSAT, Ecology and other agencies, will develop a centralized reporting system and set of procedures for reporting suspicious species and getting confirmed species sightings into the system. It will also identify an appropriate network of local, state, tribal, and federal partners, to be notified once a sighting is confirmed, and the network will include contacts from Washington, surrounding states, and Canada. This should include establishment of an around-the-clock 24/7 response line.

Current structure /existing resources: There is currently no formal reporting system established for noxious weeds or aquatic weeds. Weeds are generally reported to the Weed Board or to Ecology. We should consider establishing an organized system to send out formalized alerts for new sightings, similar to that of the US Geological Survey (USGS). Bonneville Power's hotline is also currently used to report invasive species.

Additional needs: Staff or contract assistance is needed to implement this task

Estimated time required: 6 months

- 1.3 Modify Existing Websites.** WDFW, WDNR, WDA, Washington Department of Health (DOH), PSAT and other state agencies dealing with aquatic nuisance species will modify their existing websites to include separate hot links for early detection and rapid response reporting that link to the system in Task 1.1. Federal agencies (NOAA, EPA, USFS,

DOD, USDOJ) and other state, local, and tribal environmental and special interest groups will be encouraged to do likewise.

Current structure /existing resources: This task is currently underway by agencies on the ANS Executive Committee, but it will need coordination with task 1.1 before it can be completed.

Additional needs: Other members of the ANS Committee, key environmental organizations, and other stakeholders should also be encouraged to modify their websites.

Estimated time required: 2-3 months

- 1.4 Develop an Outreach and Communication Strategy.** WDFW, in consultation with the ANS Committee, will develop and implement an education and public outreach strategy aimed toward agencies, state and local noxious weed groups, special interest groups, other stakeholders, and the general public, to educate them on notification and general emergency response reporting procedures

Current structure /existing resources: WDFW has provided a small grant to the University of Washington (UW) for tunicate identification and to train a few interested parties in tunicate survey work. A number of other potential partners such as Sea Grant also have the ability and interest in conducting outreach and training activities.

Additional needs: Additional staff or contract assistance is needed to implement this task.

Estimated time required: 1 month to develop, 8 months to initially implement, but additional periodic training will be necessary.

Objective 2: Ensure New Species are Identified and Their Risks Assessed

A key component of rapid response is ensuring the organism is properly identified, so that its risk to local industry and environment can be correctly assessed, and eradication measures are targeted toward the appropriate species.

- 2.1 Compile an Unwanted Invader Lists.** WDFW, in consultation with the ANS Committee, will develop and maintain a list of species and taxonomic groups likely to cause the most damage in Washington, updating as additional information becomes available. Two lists will be established: a list of invaders already currently known to occur in Washington, and another list of species not yet known to be here, and not wanted here. Each list should also identify a few “hot species” of the greatest priority or concern on each list. Because they are merely lists, additions will not require RCW or WAC action. The lists should be posted on agency websites and it is recommended that agencies such as WDFW and WDOA add these into their own prohibited species lists.

Current structure / existing resources: Several lists of unwanted organisms already exist in Washington, as well as in neighboring states. The State Noxious Weed Board, and UW already have some developed lists, and regional listings are also available from areas such as Oregon and San Francisco Bay. WDFW has a list of prohibited species. A number of experts exist within various agencies and universities as well. All of these may provide substantial starting points.

Additional needs: Additional staff or contract assistance is needed to implement this task.

Estimated time required: 1 month to develop, ongoing updates

- 2.2 Compile an On-Call Expert List.** WDFW, in consultation with other agencies having jurisdiction (Ecology, WDA, DNR etc.) will develop and maintain a list of ‘on-call’ taxonomy experts willing to make positive identifications inside their area of expertise. The list should also contain names of taxonomic “generalists” as well as specialized experts, and there should be rapid access to expertise when needed.

Current structure /existing resources: WDFW has compiled a list of experts, but it probably needs to be updated and expanded and it should be made easily available to the various agencies. The list should be re-verified and expanded, and be updated at least annually. USGS is considering an expert database, and it would be wise to coordinate with and local colleges/universities have experts within our region as well.

Additional needs: Additional staff or contract assistance for initial task implementation

Estimated time required: 1 month

2.3 Develop a Risk Assessment Methodology. WDFW will develop a set of general guidelines and protocols to be used in assessing potential invasion risks.

Current structure /existing resources: WDFW already has a law and rule putting in place a screening and classification process that has established protocols and criteria, and the Noxious Weed Board already has a risk methodology developed that could be built upon.

http://www.nwcb.wa.gov/weed_list/weedlisting.html There is also a generic template for generic risk analysis on the Aquatic Nuisance Species Taskforce website.

Additional needs: Additional staff or contract assistance is needed to implement this task

Estimated time required: 6 months

Objective 3: Define Decision-making Responsibility and Response Protocol

Clearly defined responsibility and action paths are critical to a timely response. Establishing a set of agreed-upon actions prior to an invasion also assures all regulatory requirements will be met and necessary precautions will be taken. A number of agency responsibilities are already established under state law, although a few “grey areas” and gaps require additional consideration. A generic response protocol is somewhat more ambiguous, simply because there are such a variety of potential invaders and environments.

3.1. Develop Process to Assign Responsibilities. WDFW will develop a memorandum of understanding (MOU) with agencies to obtain agreement on the process by which lead agencies are determined to lead a rapid response action.

Current structure /existing resources: A draft protocol consistent with existing authorities and responsibilities is presented in Figure 1. Where responsibility is unclear, it is assumed the agency with the most affect interest will become the lead. Where responsibility is unclear or disputed, the ultimate decision will lie with the Governor’s Office.

Additional needs: Staff or contract support to develop MOUs.

Estimated time required: 3 -4 months to develop and obtain agency support/agreement

3.2. Develop a Rapid Response Action Protocol. WDFW will develop an MOU with agencies to obtain agreement on the process by which lead agencies establish a rapid response protocol that provides clear direction, accountability, and proper chain of command. It is understood that tribes will be consulted in any situation where tribal lands may be affected. As the draft protocol is implemented, it will be evaluated and changed as needed for more effective future responses (i.e., adaptive management). The protocol must address the following requirements from WAC 232-12-01701 for monitoring and control programs:

- (a) a WDFW mandatory training program for persons working in aquatic nuisance species monitoring and control to be certified to capture, possess, or destroy aquatic nuisance species;
- (b) a WDFW permit for persons involved in monitoring and control actions to have in their possession during such actions;
- (c) guidelines for proper disposal of aquatic nuisance species; and

(d) the format for a report required to be submitted to WDFW within thirty days of any monitoring or control activity.

Current structure /existing resources: A draft protocol for Lead Agency rapid response responsibilities is proposed in Figure 2. Steps include risk assessment, control options assessment, response team assembly, designing and conducting the response, and monitoring response effectiveness. In any instances where this would involve the federal incident command system, their procedures will be included..

Additional needs: Staff or contract support to develop MOUs

Estimated time required: 3 months

Figure 1.
Lead Agency Determination for Rapid response

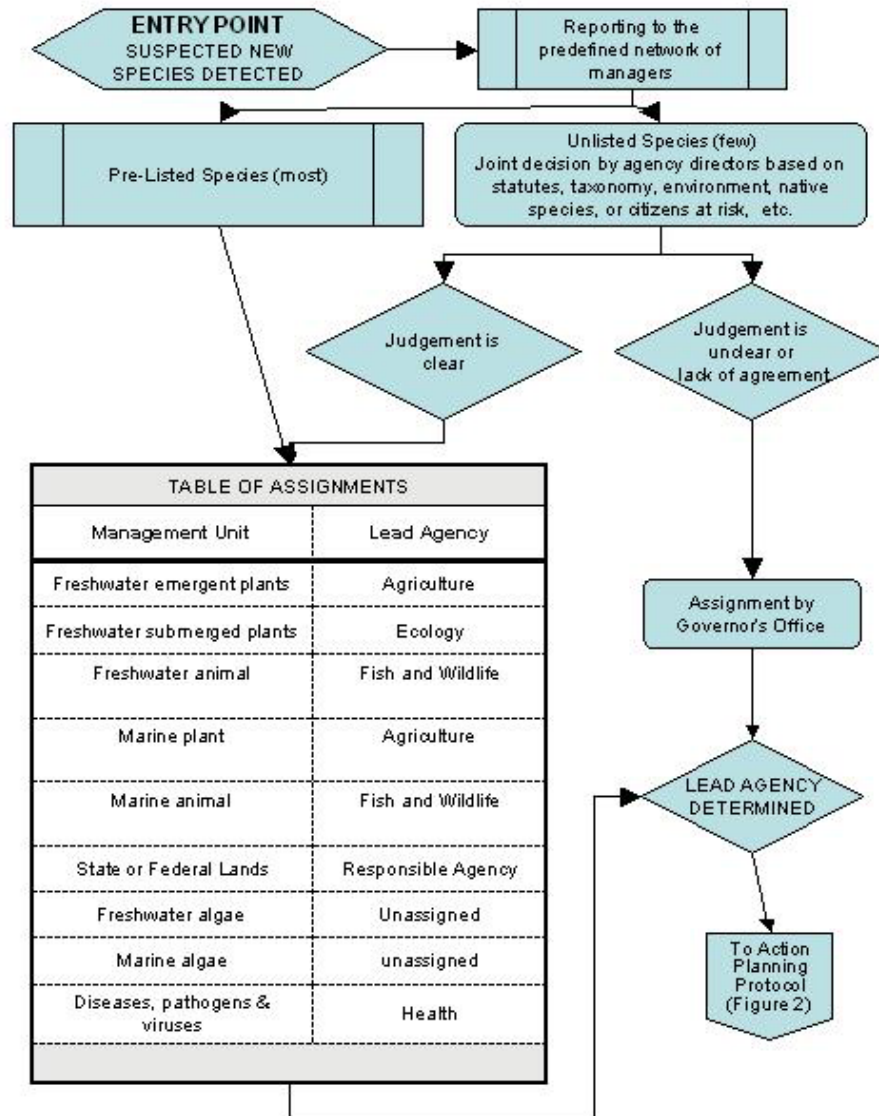


Figure 1: Lead Agency Determination for Rapid Response

RAPID RESPONSE Action Planning Protocol

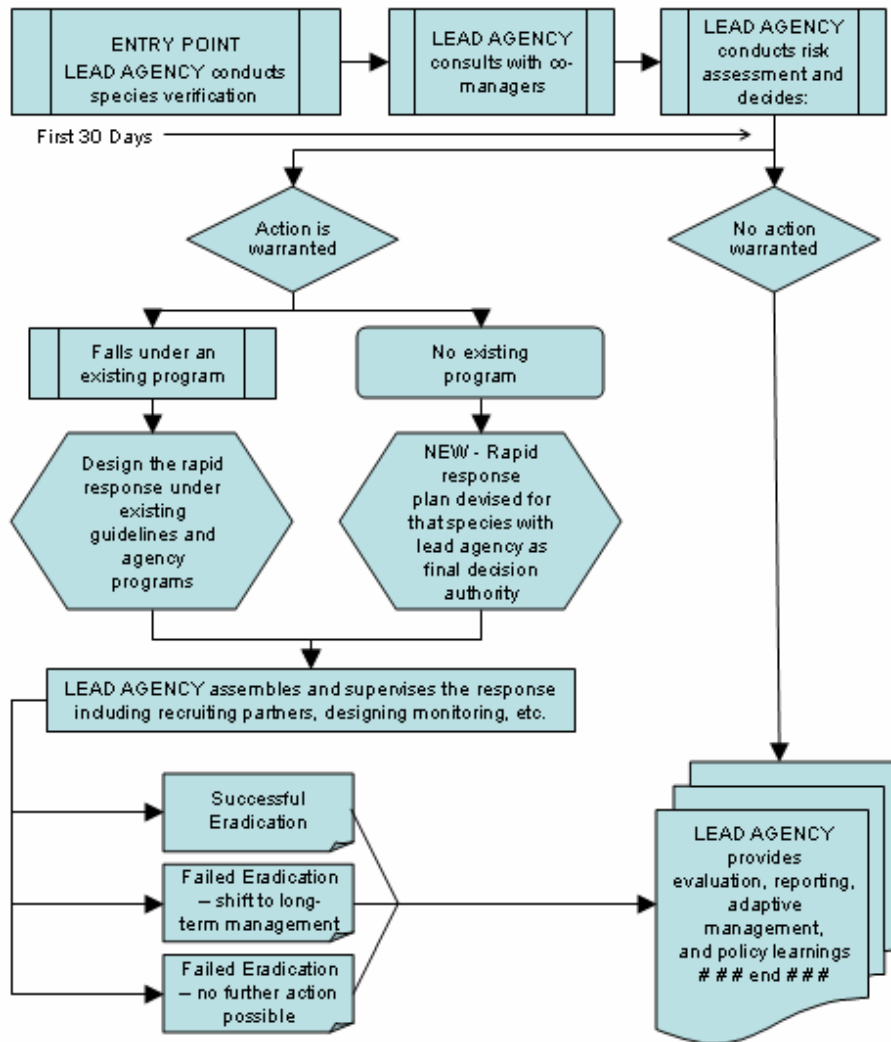


Figure 2. Protocol for Rapid Response Actions.

Objective 4: Establish and Maintain Capacity to Act

4.1. Establish a Rapid Response Fund. The WDFW, in cooperation with the ANS Committee, will sponsor legislation to create a stand-alone, inter-agency funding pool to support annual rapid response efforts.

Current structure /existing resources: The Department of Ecology currently has an Early Infestation Grant Fund, which provides funds to state and local governments to take early action against pioneering colonies of freshwater, non-native invasive plants, which is similar in nature.

Additional needs: Additional staff or contract assistance to develop the legislation, and legislative support for passage

Estimated time required: 2 months to develop legislation. (Note: New legislation could not be put before the legislature until Dec 05 – Jan -06.)

4.2 Develop a Rapid Response Checklist. WDFW will create a consultation list to use in designing an eradication and control response (i.e., a checklist of regulatory constraints, permitting obligations, preferred management implementation tasks, etc.). It may be appropriate to establish several rapid response scenarios with various jurisdictions and species to insure it is comprehensive, and this would feed into Task 4.4 as well.

Current status /existing resources: None

Additional needs: Additional staff or contract assistance is needed to implement this task.

Estimated time required: 1 month

4.3 Compile Eradication and Control Libraries. WDFW will conduct a survey to identify materials that are available and will share this information with all agencies. Each agency with jurisdiction for invasive species will establish and maintain a library collection of materials relating to eradication and control projects and methods relevant to its own type of organisms and responsibilities.

Current structure /existing resources: Some information is already collected by various individuals, but this has not been done in any organized or meaningful way. The national Aquatic Nuisance Species Task Force (ANSTF) is also working on developing an on-line library of species information, surveys, management and control and eradication plans, etc.

The Ecology integrated Pest Management (IPM) plan for noxious emergent plants is also available (under section IV) at: <http://www.ecy.wa.gov/programs/wq/links/plants.html>

Additional needs: Additional staff or contract assistance is possibly needed to implement this task.

Estimated time required: 2 months

- 4.4 Identify Barriers and Constraints to Rapid Response.** The WDFW in cooperation with WDNR, WSDA, WA Noxious Weed Board, Ecology, local weed boards, and others, will identify potential control methods and any regulatory, environmental, or other constraints or barriers that may slow the response process for various groups of organisms. These may include state, federal, tribal, local government policies, rules, regulations, or laws that authorize or impede control measures for invasive species on public and private lands). Prescribe predetermined management responses for groups of similar species identified in 2.1.

Current structure /existing resources: EPA headquarters is developing a concept paper on this issue that may be helpful, and a draft will be available in February. The need for NPDES permit coverage is already identified as a big barrier to pesticide usage. Plants have been taken care of but animals are not, and it takes at least a year to develop these permits.

Additional needs: Additional staff or contract assistance will be needed to implement this task.

Estimated time required: 3 months

- 4.5 Remove Barriers and Constraints.** WDFW will work with the appropriate agencies to remove or reduce any barriers to a rapid response (e.g., obtain NPDES permits, waivers, etc. ahead of time) so the process can be streamlined, and secure pre-approval of eradication and control methods for as many high-risk species or groups as possible. Ecology will facilitate acquiring a general NPDES permit for early animal infestations, and based upon known management plans that have been successful elsewhere

Current structure /existing resources: none

Additional needs: Additional staff or contract assistance will be needed to implement this task.

Estimated time required: Ongoing. 1 year (initially)

- 4.6 Develop Model Response Plans.** WDFW, Ecology and WDA will develop a model response plans for specific invasive species responses for animals, aquatic plants and weeds, respectively. These will define protocols, response procedures, long-term action planning, and generic monitoring and assessment requirements to be incorporated in the eradication or control project.

Current structure /existing resources: WDA and the Noxious Weed Board have response plans and Ecology has developed a Milfoil plan that may serve as a starting point for a good aquatic plant model plan. There currently appear to be no state plans for marine or freshwater animals, or for marine algae and seaweed. Regional response plans are also available for some other species such as green crab and the Western regional panel is also developing a zebra mussel response plan. Some national plans, such as the national *Caulerpa* plan here also available. It is assumed state response plans will be compatible with, and build upon any existing national and regional plans.

Additional needs: Additional staff or contract assistance is needed to implement this task.

Estimated time required: 4 months

- 4.7 Develop and Conduct Training for Rapid Responders.** The WDFW will develop a training strategy that identifies needs and, as necessary, conducts periodic training for government and private-sector rapid response cooperators, to insure they understand reporting procedures and are familiar with the most current threats.

Current structure /existing resources: NOAA is proposing some diver training, but this is relatively specific to the tunicate response.

Additional needs: Additional staff or contractor assistance will be needed to complete this task.

Estimated time required: 3 months

Objective 5: Incorporate Adaptive Management In Plan Implementation

This plan should be considered merely the beginning of a continuous improvement process. It is important that the various plan elements and the implementation of the various response elements change over time as experience is gained and new information becomes available. As invasion biology evolves, new information from both the literature and actual experience with eradication and control projects throughout the state and elsewhere should be used to amend and improve both the plan and the procedural implementation. Both positive and negative experiences and lessons learned in the field should provide feedback that is incorporated into various plan elements.

- 5.1. Review Plan Implementation and Associated Procedures.** On at least a biennial basis, to improve both policy and on-the-ground management activity, the ANS Committee will review past response activity and new information available against existing procedures to incorporate lessons learned and change procedures as needed to reflect the new process. They will then make recommendations for improvement to be incorporated into the Plan and procedures.

Current structure /existing resources: This is responsibility of the ANS Committee, and can be considered as part of their work

Additional needs: None

Estimated time required: Ongoing

- 5.2 Amend Plan and Procedures to Reflect New Technology and Lessons Learned.** WDFW will amend the Response Plan, based on recommendations of the ANS Committee

REFERENCES

FICMNEW. 2003. A National early detection and rapid response system for invasive plants in the United States – conceptual design. Federal Interagency Committee for the Management of Noxious and Exotic Weeds, Washington, D.C.

Meacham, P. 2001. Washington State Aquatic Nuisance Species Management Plan. Coordinated by Pam Meacham of the Washington Department of Fish and Wildlife for the Washington Aquatic Nuisance Species Committee. October 2001. Copies available from the Department of Fish and Wildlife, 600 Capitol Way North, Olympia, WA or from their website: <http://wdfw.wa.gov/fish/ans/2001ansplan.pdf>.

Acronyms

ANS – aquatic nuisance species

ANSTF - Aquatic Nuisance species Task Force. A task force established by the National Invasive Species Council.

DOD – US Department of Defense

Ecology – The Washington State Department of Ecology

ED&RR – early detection and rapid response

EPA - U.S. Environmental Protection Agency

FICMNEW - Federal Interagency Committee for the Management of Noxious and Exotic Weeds, based in Washington, D.C.

IPM – integrated pest management

MOU – memorandum of understanding

NGO – non-governmental organization

NOAA – U.S. National Oceanic and Atmospheric Administration

NPDES – National Pollutant Discharge Elimination System, administered by the Department of Ecology

PSU – Portland State University

PSAT – Puget Sound Action Team

RCW – Revised Code of Washington

USDOI – U.S. Department of Interior

USGS – U.S. Geological Survey

USFS – U.S. Forest Service

UW – University of Washington

WAC – Washington Administrative Code

WDA – Washington Department of Agriculture

WDFW – Washington Department of Fish and Wildlife

WDNR – Washington Department of Natural Resources

WDOH – Washington Department of Health

APPENDIX A

State, Tribal, and Federal Policy and Law

~~WAS SUGGESTED WE COULD POSSIBLY REPLACE THIS DESCRIPTION WITH SOME OF THE LANGUAGE FROM THE STATE NOX WEED PLAN~~

WDFW is authorized to develop this plan under Chapter 77 of the Revised Code of Washington .

Chapter 77.12.875 RCW:

(1) The commission may designate by rule state waters as infested if the director determines that these waters contain a prohibited aquatic animal species.

(2) The commission, in consultation with the department of ecology, may designate state waters as infested if it is determined that these waters contain an invasive aquatic plant species.

(3) The department shall work with the aquatic nuisance species committee and its member agencies to create educational materials informing the public of state waters that are infested with invasive species, and advise them of applicable rules and practices designed to reduce the spread of the invasive species infesting the waters.

Chapter 77.12.878 RCW:

(1) The director shall create a rapid response plan in cooperation with the aquatic nuisance species committee and its member agencies that describes actions to be taken when a prohibited aquatic animal species is found to be infesting a water body. These actions include eradication or control programs where feasible and containment of infestation where practical through notification, public education, and the enforcement of regulatory programs.

(2) The commission may adopt rules to implement the rapid response plan.

(3) The director, the department of ecology, and the Washington state parks and recreation commission may post signs at water bodies that are infested with aquatic animal species that are classified as prohibited aquatic animal species under RCW 77.12.020 or with invasive species of the plant kingdom. The signs should identify the prohibited plant and animal species present and warn users of the water body of the hazards and penalties for possessing and transporting these species. Educational signs may be placed at uninfested sites.

A variety of existing State policies and authorities are incorporated into this Plan, and the intent is to ‘funnel’ new invasions into existing management systems where possible. If responsibility for managing an invasive species is unclear, this plan will help create expeditious decision making. This Plan implements Objective 3 of the Washington State Aquatic Nuisance Species Management Plan.

The Puget Sound Action Team’s Water Quality Management Plan (WQMP) authorized by Chapter 90.71 RCW includes a chapter on the ‘Aquatic Nuisance Species Program’. Element

ANS-3 of the Puget Sound Plan seeks to improve management of aquatic nuisance species, and calls on the Department of Fish and Wildlife to work with the Aquatic Nuisance Species Coordinating Committee to develop a model response plan. The WQMP calls for a plan that defines how agencies respond to new aquatic nuisance species threats; identifies permit and regulatory issues and solutions; defines agency responsibilities; ensures that adequate funding is available to respond to these threats; and determines if interagency agreements are necessary. This Rapid Response Plan was developed to address that Element of the WQMP. The Puget Sound Action Team has also developed exotic species detection programs for Puget Sound and the lower Columbia River. There will be a need to integrate rapid response planning with the results emerging from the Action Team's work.

The Noxious Weed Control Board lists noxious weeds that adversely affect agricultural and natural areas, and coordinates the work of county noxious weed control boards. Local noxious weed control boards work with landowners to manage noxious weeds on their properties. This Plan takes advantage of this infrastructure, and is not meant to replace the work and authorities of the weed boards.

The Department of Agriculture maintains a plant quarantine list of species that may not be transported, bought or sold in the state. The Department also coordinates and administers a program to eradicate and control the spread of *Spartina spp.*, knotweed, and purple loosestrife. The Department of Agriculture's management system is a critical component of this Plan, and we envision most plant invasions being addressed under this existing system. A statewide plan for noxious weeds is also nearing completion.

The Department of Ecology issues a general NPDES permit for control of nuisance aquatic plants and algae in lakes, rivers and wetlands, irrigation ditches and canals. The Department of Agriculture extends NPDES coverage through contracts with entities that meet the criteria outlined in the permit for noxious aquatic weeds in lakes, rivers, wetlands, and marine areas. Ecology now issues coverage under a general NPDES permit for nuisance aquatic plants and algae in lakes, rivers, and wetlands; weeds and algae in irrigation ditches and canals; noxious emergent and aquatic weeds in lakes, rivers, wetlands and tidelands; and fish management (under an individual permit to WDFW).

All of the weed permits require integrated pest management (IPM) plans for noxious and nuisance weed permits, after two seasons of coverage; monitoring of the herbicide used under certain circumstances; annual reporting of monitoring results; and spray reports to the Department of Agriculture.

State agencies with land ownership or management responsibilities are required to control and eradicate noxious weeds on State-owned lands (RCW 17.10). The larger State land managers are the Departments of Natural Resources, Fish and Wildlife, Parks and Recreation Commission, and Transportation. On State lands the responsible Departments will remain the lead in

organizing responses to invasions covered under this plan. The State noxious weed law requires property owners or managers to control designated noxious weed problems on their lands at their own expense. A similar situation is expected for Federal and Tribal land.

The Department of Ecology administers a financial and technical assistance program to help state and local governments to eliminate noxious, non-native freshwater aquatic plants in Washington's lakes and rivers. Ecology provides technical assistance, education and funding so that people can do their own weed management.

All State agencies with pest management responsibilities must use an integrated pest management approach, as defined in Chapter 17.15 RCW. This Plan is intended to implement the RCW while taking strong and positive action in response to new invasions.

At the Federal level, §1204 of the National Invasive Species Act of 1996 encourages States to prepare comprehensive management plans to eliminate or reduce the risks of invasive species, and to develop programs to make this happen. This Plan meets this intent by increasing institutional capacity to reduce the risks of aquatic invasive species in Washington. In addition, it follows the principles and guidelines articulated in the Federal Government's 'National Early Detection and Rapid Response System for Invasive Plants in the United States'. (FICMNEW 2003).

The Western Regional Panel (WRP), an offshoot of the national Aquatic Nuisance Species Taskforce, has also provided guidance on developing rapid response plans (WRP, undated). The plan presented here is modeled on this, and is intended to begin fulfilling the WRP articulated aspirations for regional coordination of rapid response efforts.

A large percentage of Washington land falls under Federal and Tribal jurisdiction. Federal land managers (the Bureau of Land Management, U.S. Forest Service, National Park Service, Department of Defense, etc.). These land managers are responsible for noxious weed eradication and control on their respective lands, and there are already a variety of federal laws, policies, and plans for dealing with invasive species. There are also forty recognized Native American tribes in Washington with jurisdiction over reservations of varying size. However, since invasive organisms do not respect jurisdictional boundaries, in order to deal effectively with an entire population of organisms, State, Federal and Tribal coordination will be necessary for eradication and control program success.

APPENDIX B

Unwanted Invader List

(currently being generated)

APPENDIX C

On-Call Expert Identification List

(Insert from Aquatic Nuisance Species Management Plan, and update as needed)

APPENDIX D

Washington ANS Committee

APPENDIX E

Risk Assessment Methodology

APPENDIX F

Relevant Response and Management Plans

(Insert relevant plans here...Milfoil, Caulerpa, etc)

Appendix G

Reported Non-Native Species in Washington State

(currently being generated- insert list here)