



LESSONS LEARNED

State Dreissenid Rapid Response Exercises



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Background



Montana RR exercise. Photo credit: Montana Invasive Species Council.

- Since 2007, CRB entities have been hosting dreissenid RR exercises to prepare for an eventual introduction of dreissenids.
- Maturation of exercises, from theoretical and tabletop, to multi-day exercises using Incident Management Structure.
- Purpose of this review: Compile lessons learned from past exercises to inform future exercises.



2007 Tabletop Exercise Vancouver, WA

- 40 individuals representing 20 agencies and organizations
- Responded to a detection of dreissenids on a vessel at a county boat access facility at mouth of Wind River in WA upstream of Bonneville Dam on Columbia River



Lessons Learned

- Obtain full buy-in of all entities involved in response.
- Develop needed supporting documentation to fully implement a response.
- Share resources across state lines.
- Clarify the role of tribal governments in a response.
- Develop procedures to complete applicable permitting and environmental analyses in advance of an infestation.
- Develop media briefing packages (e.g., press releases, talking points) throughout the response.
- Identify legal authorities likely to be required.
- Conduct additional training and exercises for all organizational elements of the plans.
- Develop a situational analysis tool that focuses on biological issues, resources at risk, likelihood of successful intervention, and political, social, and economic ramifications.



2008 Tabletop Exercise Portland, OR

- October of 2008
 - Focused on the pathway management components of the CRB Plan with an emphasis on actions needed to prevent secondary spread of an incipient mussel introduction via commercial and recreational vehicle traffic.
 - Two-part exercise (one for the Multi-agency Coordination [MAC] group and the other for coordination and support staff) familiarized participants with the CRB Plan and its
 - Highlighted the value of using an actual scenario to illustrate plan implementation.



Lessons Learned

- Participating agencies need to develop lists of resources that would likely be needed during a response (e.g., barriers, chemicals, applicators, etc.).
- Logistics need more planning, and reciprocity agreements need to be developed.
- Legal issues need to be clarified in advance, and MOUs that establish authorities for activities that would occur throughout a dreissenid response need to be developed.
- Samples of forms and mutual aid agreements are needed, and rapid response plans need to be presented in a more user-friendly format.
- Decontamination protocols need to be added to appendices.



2009 Tabletop Exercise Boise, Idaho

- One-day tabletop exercise to determine the effectiveness, adequacy, and applicability of existing plans, policies, and procedures by analyzing state code, agency guidelines and regulations, and Mutual Aid agreements to improve overall command and control procedures and enhance unified command response.
 - Define proper notification protocols.
 - Coordinate local and state agency response tactics.
 - Identify current shortfalls in local resources.
 - Define roles and responsibilities of state agency leadership.
 - Identify current shortfalls, conflicts, or gaps in existing policies, plans, regulations.



Lessons Learned

- Annex the CRB Plan to the state rapid response plan.
- Temporary rules may be needed for any actions currently not listed in state statute (e.g., quarantine, water body closure) .
- Establish delegation authorities via MOUs.
- Obtain local support.
- Train agency staff to respond to an emergency.



2010 Tabletop Exercise Spokane, WA

- 2-day tabletop exercise with 28 individuals.
- Confirmed finding of dreissenids in Lake Roosevelt Reservoir near Davenport, WA.
- Review of CRB Plan and Incident Command System (ICS) planning process, followed by the development of an Incident Action Plan for the first operational period of response.
- Goal: Test and further refine the rapid response protocol and mechanism(s) specific to reviewing and approving an eradication strategy under the CRB Plan and clarify the process for identifying and obtaining permits and completing environmental documentation.



Lessons Learned

- Clarify path to membership and participation in the CRB Plan, such as a three-tiered approach to a) standing membership, b) membership by concurrence, and c) ad hoc membership.
- Facilitate more ICS training for individuals expected to provide on-scene incident management.
- Identify a pool of individuals trained to assume ICS roles.
- Facilitate permitting by streamlining applications for emergency exemptions.



2011 Tabletop Exercise Lake Koocanusa, Libby, MT

- International, 2-day tabletop exercise with 27 participants
- Focused on confirmed finding of dreissenid larvae in Lake Koocanusa to test and further refine the rapid response protocol and mechanisms that advance coordination between the United States and Canada under the CRB Plan, and to further develop a containment strategy for watercraft moving in and out of an infested water body.
 - Roles and responsibilities.
 - Engage British Columbia and other Canadian authorities.
 - Increase coordination with US Army Corps of Engineers (USACOE) and other agencies.
 - Develop containment strategy for watercraft entering and leaving an infested waterbody in Montana and British Columbia.
 - Exercise Joint Information Center (JIC).
 - Provide ICS training.
 - Refine the CRB Plan and stimulate further planning specific to Montana and British Columbia.

Lessons Learned

General Preparedness

- Evaluate opportunities to tap into FEMA for money and resources.
- Discuss with State Department and/or International Joint Commission how to expedite flow of money between the United States and Canada.
- Establish a system (and provide associated “launch” criteria) to convene Type 3 ICS teams to help fill roles where ICS knowledge is more important than aquatic invasive species (AIS) knowledge (e.g., Finance and Logistics).
- Work with the Federal Aviation Administration and Canadian counterpart to develop processes for restricting float plane operations.
- Create a dedicated internet and/or Facebook page during a real event as a way to provide information to stakeholders.
- Better define process and criteria for considering alterations to lock and dam operations to contain spread.

Plan Changes

- Better reflect realities of how contacts are made/routed, and add Canadian counterparts.
- Update notification lists, including a new column that briefly notes the individual’s ICS experience.
- Include a provision about appropriately providing information on the response action using social media.
- Create a new plan appendix that provides Lake Koocanusa exercise forms 202–206 as examples.

Future Exercise

- Conduct less training and implement more problem solving.
- Host additional regional rapid response exercises in Montana.
- British Columbia
 - Initiate a discussion in BC about the current limitations the Province would face.
 - Establish boat washing stations and staff trained in watercraft decontamination.
 - Establish closer collaboration with the Federal Government, in particular the Department of Fisheries and Oceans and the First Nations.
 - Establish regulations prohibiting the movement of zebra and quagga mussels into BC and other provinces.
 - Determine if a BC Environmental Emergency Declaration Regulation could be applied to mussel infestations.
 - Develop a BC zebra and quagga mussel rapid response plan.
 - Hold a BC-specific rapid response exercise.



2013 Field Exercise Prineville Reservoir, OR

- 2-day field exercise with 22 individuals
- Focused on a confirmed finding of dreissenid veligers and an adult mussel shell in Prineville Reservoir.
- Included review of CRB Plan and ICS planning process.
- Goals:
 - Test and further refine the rapid response protocols described in the OR Dreissenid RR Plan.
 - Demonstrate the ability to implement the concepts and provisions of the Oregon Plan, including the ability to:
 - Use ICS to organize and staff the response to a simulated infestation.
 - Identify stakeholder agencies and user groups, and develop strategies to incorporate their resources, issues, and concerns.
 - Use ICS planning to develop an Incident Action Plan for the first operational period.
 - Develop strategies to ensure consistent, timely release of public information.

Training

Develop workshop on water body-specific deliverables to incorporate into RR plans.

Include local emergency managers in exercises.

Develop a presentation on Delegation of Authority.

Consider longer (e.g., 3-day) exercises with more emphasis on political issues.

Develop a list of trained ICS Team members.

Identify and train people in support functions.

Resources

Develop lists of resources.

Incorporate local community Emergency Response Teams.

Seek partner agencies with similar challenges and skillsets.

Planning

Develop a template for Delegation of Authority.

Develop a decision-making tool for closure of water bodies.

Public Education

Develop public education initiative with Bass Foundation.

Lessons Learned



2016 Field Exercise Jackson Lake, WY

- 2-day exercise with 25 Greater Yellowstone area managers
- Address a discovery of dreissenid veligers (confirmed dreissenid veliger sample by microscopy followed by molecular Polymerase chain reaction (PCR) confirmation) in Jackson Lake, Wyoming.
 - Establish an ICS team when there is discovery of a dreissenid mussel in the Greater Yellowstone Area of Wyoming by defining the roles and responsibilities of federal and state management entities.
 - Determine the strategy for confirmation and/or monitoring.
 - Determine appropriate management actions.
 - Develop a communication strategy.
 - Inform the WY Game and Fish Department RR Plan.

This exercise was the first to complete an Incident Action Plan as part of the overall exercise.



Lessons Learned

- Make better use of staff in sections that do not have active tasks.
- Ensure the that everyone understands role and potential actions..
- Provide handouts of terms, other ICS background information, and an outline of appropriate forms for each section.
- Use fewer ICS acronyms.
- Build in more time for long-term strategic planning.
- Focus on a longer-term plan versus a 24-hour operating period.
- Clarify jurisdictional authorities.
- Ensure on-site mussel expertise and more background on mussels.
- Provide sample reports from previous RR exercises.
- Provide more scenarios to keep participants busy.
- Add a skilled IC-trained individual to each group.



2017 Field Exercise Lincoln Rock State Park, Wenatchee, WA

- 2-day exercise with 33 participants
- Address detection of dreissenid veligers in the Columbia River near Wenatchee. Optional 4-hour ICS training:
- Test application of rapid response statutes.
- Test application of CRB Plan.
- Test application of WA Dreissenid Mussel RR Plan (WARR Plan).
- Test application of DRAFT Responding to an Introduction of Dreissenids in Oregon and Washington: Best Management Practices (BMPs), Effects Analysis.
- Demonstrate the ability to implement state authorities and response plans.

This exercise was the second to complete an Incident Action Plan as part of the exercise.



Lessons Learned

- Provide more preparatory materials prior to exercise.
- Provide more training on use of ICS forms.
- Separate training for CRB MAC members.
- Pre-assemble documents for chemical emergency labeling to reduce process time in an actual incident.
- Spend more time on the “planning P”.
- Develop and maintain as much response information (e.g., response team, control resources) in preparation for an actual incident.
- Distinguish between role play knowledge and actual situation knowledge.
- Verify that IC declarations are heard by all participants during the exercise.
- Address the process of de-mobilization of the exercise.
- Provide wall posters of ICS forms, basic acronyms, and organizational charts.
- Establish a better communication network for on-site information.
- Provide a pre-prepared set of ICS forms for participants.



2018 Field Exercise Flathead Lake, MT

- 3-day field exercise with 32 people (and an additional seven people remotely)
- Use the Montana *Dreissenid Mussel Rapid Response Guidelines* and ICS to address a detection of adult mussels on a boat purchased from the Midwest and moored at Flathead Lake in Somers Bay. Included the Confederated Salish and Kootenai Tribes (CDKT) and Montana.
 - Improve the *Montana Dreissenid Mussel Rapid Response Guidelines*, improve communication guidance, and continue to enhance ICS familiarity.
 - A. Command and Control
 - B. Communication
 - C. Resource Management



Lessons Learned

- A better background or rationale on why ICS is used for AIS.
- Better address and resolve the scenarios received during the exercise.
- Reduce the amount of paper; find a way to use digital forms.
- Reduce inconsistencies in filling out forms.
- Establish clarity on when and how a critical review would be completed on tactics selected.
- Fill the Finance Chief position with an actual finance professional.
- Discuss actual public access determinations during the exercise rather than assumptions.
- Provide US Coast Guard ICS booklets to all participants.
- Enhance training materials provided.
- Pare down the ICS products work..
- Promote more engagement with leadership to improve comfort in decision making.
- Establish an MOU between Montana Fish, Wildlife & Parks and CSKT to clarify AIS communication/data sharing.
- Complete a statewide environmental assessment for a possible EarthTec QZ® eradication treatment.
- Ensure there is a person present within IC with more knowledge/experience related to aquatic pesticides and treatment.

Conclusions and Recommendations

- Since 2007, 9 dreissenid rapid response exercises Washington (3), Oregon (2), Montana (2), Idaho (1), and Wyoming (1). Exercises evolved from basic one-day table-top exercises to establish processes and protocols, to multi-day on-site events implementing ICS. Host states have expanded complexity of the exercises
- After-action report recommendations made are not being addressed prior to the next dreissenid rapid response exercise.
- In 2020, plan for a CRB dreissenid rapid response summit to share the new online CRB Dreissenid Rapid Response Toolkit (CRB DIRT) and host multi-jurisdictional work sessions to draft products that address shortcomings and needs identified in this report from after-action reports. Goal: Advance understanding of the new tool and its effective use, while convening the multi-jurisdictional entities to address much-needed actions relating to general preparedness, the components of the CRB plan, training, resources, planning, and issues that should be advanced relative to tribal sovereign nations and Canadian provinces. State-specific issues could be addressed during the summit as well as those issues that span all states and jurisdictions.
- Ensure all future state-sponsored dreissenid rapid response exercises include a team of people from a previous and recent exercise to help plan for and implement the exercise to avoid repetition of common mistakes.