

**Flaming Gorge Reservoir, Flaming Gorge Unit of the Colorado River
Storage Project Interagency Rapid Response and Control Plan
for *Dreissena* Mussels**



Signature Page

The signatory parties agree to implement this plan as appropriate and consistent with each agency's laws, regulations, policies, and authorities in the event that the presence of *Dreissena* mussels are confirmed in Flaming Gorge Reservoir.

John Erickson, Ashley Regional Director
U.S. Forest Service

Date

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Date

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Wyoming Game and Fish Department

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Date

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Executive Summary

This “Rapid Response Plan” (RRP) and “Control Plan” for two species of *Dreissena* mussels, the quagga mussel (*Dreissena rostriformis bugensis*) and the zebra mussel (*Dreissena polymorpha*), at Flaming Gorge Reservoir (FGR), located in southwest Wyoming and northeast Utah (see Map, Appendix C), was developed as a collaborative effort by federal and state agencies: the U.S. Forest Service, Ashley National Forest Office (USFS), U.S. Bureau of Reclamation, Provo Area Office (USBR), the Wyoming Game and Fish Department, Green River Regional Office (WGFD), and the Utah Division of Wildlife Resources, Northeastern Region (UDWR). A RRP provides an overview of the management actions required if there is a confirmed presence of *Dreissena* mussels in FGR. Currently, aquatic invasive species (AIS) activities at FGR focus on the prevention of inoculation and establishment of all AIS with a particular focus on *Dreissena* mussels. The Control Plan, in the event of Dreissenid presence, shifts AIS management to contain any invasive mussels in the reservoir while maintaining some focus on preventing further inoculation of AIS. Containment activities will focus on preventing the further spread of *Dreissena* mussels through coordination, education, monitoring, inspections, and decontaminations. The RRP is intended to be implemented quickly and act as the guiding document for initial decision making when Dreissenids have been confirmed. The RRP may be used as a tool to quickly communicate with FGR stakeholders to implement the Control Plan. In the event of confirmed *Dreissena* in FGR, the organizations (USFS, USBR, WGFD, and UDWR) should work in conjunction to implement the Control Plan for containing and controlling the spread of *Dreissena* mussels.

Background

Flaming Gorge Reservoir is impounded by Flaming Gorge Dam on the Green River, a major tributary of the Colorado River, in southwest Wyoming and northeast Utah. The Green River’s headwaters are in the Wind River Mountains of Wyoming. Sixty miles below Green River, Wyoming, the river enters the deep canyons of FGR. The reservoir is located 10 miles south of Green River, Wyoming, and 43 miles north of Vernal, Utah. FGR extends 91 miles with a capacity of more than 3.7 million acre feet. The dam is a major component of the Colorado River Storage Project, which stores and distributes upper Colorado River Basin water. FGR is operated to provide long-term storage for downstream water-rights commitments. The dam is also a major source of hydroelectricity and is the main flood-control facility for the Green River system.

Quagga mussels were confirmed in reservoirs on the lower Colorado River in January 2007 and in 2013, quagga mussels were confirmed in Lake Powell, a reservoir on the upper Colorado River located predominantly in Utah with the lowest most portion in Arizona.

Introduction

Prevention remains the first priority for addressing the risk of zebra and quagga mussels in FGR and throughout the upper Colorado River basin. The provisions of the RRP and Control Plan are intended to enhance interagency coordination beginning with the report of a confirmed presence of Dreissenids, through containment, and initial control efforts. This RRP is intended to make implementation of the Control Plan more rapid in the event of a confirmed finding.

The RRP and Control Plan for *Dreissena* mussels in FGR will fall into the following 10 objectives that support the goals to delineate and manage these invasive mussels if they are detected. Note that these actions are not necessarily sequential; many may be implemented simultaneously. See Appendix I for the Objectives Flow Chart.

1. Verify reported *Dreissena* mussel(s), and make initial personnel notification.
2. Verify positive identification of *Dreissena* mussel(s).
3. Activate interagency “Response Team” and the RRP.
4. Establish external communication systems.
5. Obtain and organize resources including compliance with laws and permits.
6. Activate the Control Plan – prevent further spread via quarantine and pathway management.
7. Define extent of colonization.
8. Launch relevant control actions.
9. Institute long-term monitoring.
10. Adaptive management of the issue including evaluating the RRP and Control Plan and making modifications as necessary.

These actions and tasks are described in detail in the following sections after summarizing the legal authorities under which the signatory agencies may take action.

Legal Authorities and Responsibilities

The FGR was authorized by Congress under the Flaming Gorge Unit of the Colorado River Storage Project in 1956 (70 Stat. 105). Construction of Flaming Gorge Dam began in 1958 and was completed in 1964. The Flaming Gorge Dam is owned and operated by the USBR while FGR is operated by the USFS under contract with the USBR.

For the USBR and USFS, the primary legal authority to control *Dreissena* in FGR is Executive Order 13112, which calls on all executive branch agencies to work to prevent and control the introduction and spread of invasive species.

For the U.S. Fish and Wildlife Service, the Nonindigenous Aquatic Nuisance Prevention and Control Act assigns them responsibilities to develop a program of prevention, monitoring, control, and study to prevent introduction of and to control the spread of introduced aquatic nuisance species, including membership on an Aquatic Nuisance Species Task force.

Furthermore, the authority for the state agencies is the Utah Aquatic Invasive Species Act, codified as Chapter 27 of Section 23 in the Utah Code (Appendix D), and The Wyoming Aquatic Invasive Species Act, W.S. 23-4-201 through 23-4-206 (Appendix E). Further specified in Utah Administrative Rule R657-60-8, provides authority to UDWR in the event of a water body being affected by a *Dreissena* species in part as follows:

1. To close ingress and/or egress at a water body, facility or water supply system to terrestrial or aquatic vehicles and equipment capable of moving Dreissenid species to protect other Utah waters from their spread; and
2. To maintain the closure until an acceptable plan for containment and/or control of the Dreissenid species is developed and implemented.

The Wyoming Aquatic Invasive Species Act states that the Wyoming Game and Fish Commission may restrict watercraft usage on a specific body of water upon finding that introduction of an invasive species is imminent or has already occurred.

This RRP and Control Plan are consistent with the provisions of Utah and Wyoming law regarding allowable restrictions at FGR in response to the confirmed presence of Dreissenid mussels.

UDWR and WGFD state agencies will be the lead entities in the implementation and organization of the RRP and Control Plan.

Should a chemical control of Dreissenids at FGR be used, the application of a pesticide would require a National Pollutant Discharge Elimination System (NPDES) permit under section 402 of the Clean Water Act. The U.S. Environmental Protection Agency has delegated its section 402 regulatory responsibilities to the State of Utah and the Utah Division of Water Quality (UDWQ), and the State of Wyoming and the Wyoming Department of Environmental Quality (WDQ). The agency applying the pesticide would be the "operator" and would be required to develop a treatment plan and obtain a permit from the UDWQ or WDQ.

Objective 1: Verify reported introduction of a *Dreissena* mussel(s), and make initial personnel notification.

- Purpose: Ensure that all parties with jurisdiction at FGR can provide technical support and are quickly engaged and rapidly informed.
- 1) Notification. Utah Code 23-27-203 requires the first agency to discover or receive a report of a *Dreissena* mussel will contact the UDWR and WGFD AIS Coordinators,

UDWR northeastern region AIS Biologist, and the WGFD Green River AIS Specialist. They will begin confirming the report's validity, and initiate implementation of the RRP if necessary. If a visible *Dreissena* mussel is found on a watercraft, depending on the state, law enforcement for UDWR Clay Basin or Manila districts Conservation Officers, or WGFD Green River region Game Warden should be contacted for possible law violations. The importation or interstate transport of zebra mussels is prohibited by the federal Lacey Act, 16 U.S.C. §§ 3371-3378. The importation or interstate transport of quagga mussels is prohibited by state statutes for both Wyoming (§ 23-4-201) and Utah (§ statute (27-23-201)). Only law enforcement officers should impound or seize personal property.

- 2) Interview the source and gather information of reported *Dreissena* mussel. The initial recipient of information should collect as much of the following information as possible – pictures and specimen sample for visible *Dreissena* mussels (if attached to a substrate do not detach until evidenced has been collected by law enforcement), and precise coordinates for location of sighting. Collect contact information from report's source (name, address, telephone, and email) if applicable.
- 3) Record details of the *Dreissena* mussel find location. Use GPS delineation, prominent landmarks, or other information about where the mussel(s) (adult and veligers) were found. Document the date and time of finding.
- 4) Visually validate adult *Dreissena* mussel identification within 48 hours. For visible *Dreissena*, UDWR northeastern region AIS Biologist and/or WGFD Green River AIS Specialist will obtain a digital photograph (with scale indicator), secure and preserve dead samples, and arrange an immediate site visit.

Objective 2: Verify positive identification of *Dreissena* mussel(s).

- Purpose: Confirm positive identification of the mussel(s) as species within the family *Dreissenidae*. Confirmation shall include both microscopic and DNA analysis laboratory methods.
- Lead entity. The agency that receives and accepts responsibility for handling the initial report is the primary responsible agency for visual and laboratory confirmation.
- Laboratory analysis. Both veligers and adult *Dreissena* will be examined via microscopy and DNA polymerase chain reaction (PCR) tests for verification.
- Corroborate laboratory evidence. Following a positive microscopy laboratory analysis, UDWR/WGFD AIS Coordinator will request that the lab forward a portion of the original sample to a second, separate lab so that two independent molecular DNA PCR tests for the presence of *Dreissena* mussels can be confirmed.
- Levels of *Dreissena* detection definitions: see Appendix D, R657-60, and Appendix B.
 - Inconclusive: *Dreissena* mussel confirmed by only microscopy or PCR, but not both, and only indicated in a single sampling event.

- Suspect: *Dreissena* mussel indicated in a single sampling event and confirmed by both microscopy and PCR.
- Detected/Positive: *Dreissena* mussel indicated in two consecutive sampling events and confirmed by both microscopy and PCR.
- Infested: Multiple age classes of attached *Dreissena* mussels indicated in two or more consecutive sampling events and an established (recruiting or reproducing) population of mussels and confirmed by both microscopy and PCR.

Objective 3: Upon verification for the presence of *Dreissena* mussel(s) activate the “Response Team” comprised of relevant local natural resource personnel, and activate the RRP.

- Purpose: Activate a response management system that expedites interagency decision-making, promotes information sharing, ensures efficient resource management, and supports on-scene management of Dreissenids.
- RRP and Control Plan leaders. UDWR and WGFD AIS Coordinators will be the RRP and Control Plan leaders. They will be the voice to represent the Response Team. The UDWR and WGFD AIS Coordinators will convene the meetings of the Response Team and facilitate the decision making process.
- Personnel notification. Once a *Dreissena* mussel has been confirmed, UDWR and WGFD AIS Coordinators will notify all members of the Response Team, who will then notify all impacted federal and local agencies and organization personnel on the Notification List (see Appendix A). The state agency’s AIS Coordinator that receives the initial *Dreissena* verification will be responsible for ensuring that all members of the Response Team are notified. A media response will be led by UDWR and WGFD Outreach personnel with input and consensus on the message from the partner agencies. The time between the confirmed positive identification and the media response should be less than two weeks.
 - When just a PCR *or* microscopy test is confirmed positive for *Dreissena* mussels, only the Response Team will be notified. Both microscopy and PCR (two independent lab PCR tests and one microscopy analyses) need to be completed and confirmed positive to issue a media response (see Appendix B), and only after Director’s Office and partner agency approval.
 - The notification call list comprised of FGR stakeholders will be maintained by UDWR northeastern region AIS Biologist and updated annually (see Appendix A). The Notification List will be housed in Google Docs and shared with all relevant personnel.
 - If a preliminary report suggests that Dreissenid mussels have been found in FGR (and we are still investigating the veracity of the report), we encourage everyone

to treat this location as an elevated risk. To expedite the response, we request this information is kept internal.

- UDWR Director and Utah Wildlife Board Approval. Action by the Director of the UDWR is needed to list a water body as affected (suspect, detected/positive, or infested; see Appendix B for classification definitions). Action by the Utah Wildlife Board is required in order to list any water in Rule R657-60 as “infested” with *Dreissena* mussels.
 - Director’s Office informed. Once the presence of Dreissenids has been confirmed, UDWR AIS Coordinator will then take the information to the Director’s Office and under the direction of the Director’s Office the information will be disseminated.
- Wyoming Game and Fish action. WGFD may enact an emergency rule as necessary to list a water as positive with AIS (Appendix E).
- Response Team personnel. The Response Team is comprised of technical personnel from WGFD (AIS Coordinator, Green River AIS Specialist, Green River Fisheries Biologist), UDWR (AIS Coordinator, northeast Aquatics Assistant Manager, northeastern AIS Biologist, Flaming Gorge Project Leader), USFS (Intermountain Region Aquatic Ecologist, Ashley National Forest Fish and Wildlife Manager), and USBR (Regional AIS Coordinator, Area AIS Coordinator).
- Response Team roles and responsibilities. The Response Team will be the on-the-ground personnel that perform and oversee all fieldwork associated with the RRP and Control Plan. Their duties include:
 - Surveys to define the extent of the Dreissenid colonization (this not only refers to the initial surveys, but also all future surveys that will be performed while the water is considered affected (suspect, detected/positive, infested);
 - Minimize vectors and pathways for Dreissenid movement;
 - Hazard Analysis Critical Control Point Plan implementation (see Appendix F);
 - Signage installation;
 - Implementation of Dreissenid control/containment actions;
 - Decontamination station implementation and operations;
 - Assist in determining the cost of implementation of the control and/or containment efforts;
 - Collect and document data for long-term monitoring of Dreissenid infestation;
 - Evaluate the effectiveness, and find areas for improvement of the RRP and Control Plan for adaptive management on future Dreissenid introductions; and
 - Initiate statewide media response.
- Additional Response Team personnel. Additional agency personnel will be brought in as needed to assist in the Control Plan efforts.

Objective 4: Establish external communication systems.

- Purpose: Ensure consistent and effective communication to interested external parties, including the media and public.
- Circulation of information. The WGFD and UDWR AIS Coordinators in conjunction with Regional and Statewide Outreach personnel, federal public affairs staff, and Response Team will develop an information dissemination process to ensure consistent and effective communication to interested stakeholders, including the media and public.
- Outreach. Develop and disseminate general public education and outreach material that is agreed upon between state and federal agencies.
 - Brochures, signage, media stories, and web material
 - Agency emblems on signs (USFS, USBR, BLM, WGFD, UDWR)

Objective 5: Obtain and organize resources (personnel, equipment, funds, etc.), including compliance with laws and permitting requirements.

- Purpose: Provide sufficient resources to implement objectives.
- Resource commitment. UDWR and WGFD AIS Coordinators will secure commitment from the Response Team's home agencies and others for needed staff, facilities, equipment and funds. The UDWR and WGFD AIS Coordinators and the Response Team will identify and secure sufficient resources for the Dreissenid control and/or containment, or eradication actions, and ensure a mechanism for dispersal of funds is in place.
 - Develop Memoranda of Agreement for transferring money between agencies
 - Develop Memoranda of Understanding with Counties and other agencies as needed for use of employees and donation of in-kind services.
- Laws and permits. A broad array of local, state and federal laws and permitting processes will need to be recognized and complied with. A representative list of permitting requirements can be found in Appendix G. In an effort to streamline the process, where feasible, existing agency permits will be modified as opposed to securing new ones.

Objective 6: Activate the Control Plan – prevent further spread using quarantine and pathway management via coordination, education, monitoring, inspection and decontaminations.

- Purpose: Minimize vectors and pathways. The WGFD and UDWR AIS Coordinators and the Response Team will evaluate risks for dispersal, and minimize all vectors and pathways to avoid further spreading the Dreissenids.

- Monitor movement of human activity. Special care should be taken so human activity does not further spread Dreissenids in the form of boating, construction, firefighting, water-hauling, recreational equipment, movement of fish and wildlife, and other physical processes.
 - Hazard Analysis Critical Control Point plan (HACCP). UDWR has developed a HACCP plan (Appendix F) to reduce the risk of private and local, state, and federal personnel further spreading the Dreissenids. Each agency will have a copy of this plan. Signatories will have representatives on the Response Team. They will have authority to bind their respective organizations.
- Temporary closure order. Under authority of Utah Rule R657-60-8 (see Appendix H), the Response Team will pursue the closure of the reservoir until the Control Plan has been implemented. During a closure order, boat access to the reservoir will temporarily be restricted. Only authorized personnel will be allowed to launch watercraft until the threat can be assessed, and the Control Plan can be implemented.
- Partial closure of reservoir. Once the Control Plan has been implemented and the threat assessed, the temporary closure order will be lifted, and a partial closure of the reservoir may then ensue via reduction in the boating season, closing of any ramp that does not have an inspection station, closing of ramps outside of inspection hours, and prohibiting of shoreline launching from non-developed launch points.
 - Only selected high use developed ramps will remain open, for example in Wyoming, Firehole Canyon, Anvil Draw, Buckboard Marina, and/or Brinegar Ferry Crossing would likely remain open, depending on available personnel. In Utah, Lucerne Valley Marina, Sheep Creek Bay, Cedar Springs Marina, and Mustang Ridge would be the most likely ramps to remain open (see Maps, Appendix C).
 - A partial closure will require closures during the dates and times with the least amount of usage and the greatest staffing shortages, meaning weekdays, winter months, and/or selected times of day. Other options may be considered depending on staffing levels. UDWR will provide updates to the Response Team and continue to provide updated information on their webpage and Facebook page.
 - Estimated timeline for a partial closure to be implemented can take up to five weeks. Events that must be completed in order to lift the partial closure can be found in Appendix H of this document.
- Inspection and decontamination stations. Establish inspection and decontamination stations. We expect that highway checkpoints will eventually be established. However, if inspection stations prove to be most functional at boat ramps, we will not redirect resources to highway checkpoints. See Appendix I for a list of potential locations and infrastructure needs at these locations.

- Unified state agency (WGFD and UDWR) inspection and decontamination protocols prior to the implementation of the Control Plan. Establish inspection requirements and decontamination protocols for watercrafts and equipment leaving the reservoir.
 - MOU between agencies. Agreed upon protocols will be followed and will be reviewed annually.

Objective 7: The Response Team should immediately begin surveys to define the extent of a *Dreissena* mussel presence (this will happen concurrently with closure activities).

- Purpose: Establish physical range of *Dreissena*, and identify life-cycle phase of mussels to inform policy and tactical response.
- Rapidly determine the extent of colonization. Survey reservoir to determine the geographic extent of the *Dreissena* population. Starting first with and focusing efforts on the immediate area around the detection site, and expand outward as necessary.
- Survey methods. The kind of sampling method performed will vary depending on whether the Dreissenids are visible juvenile/adult mussels, or veligers. For visible *Dreissena*, shorelines and natural and artificial substrates will be surveyed. SCUBA dive teams will be used to survey substrates located in greater water depths (docks, buoys, canyon walls, etc.). Veligers will be surveyed using plankton nets. See Appendix J for detailed sampling methods.
- Veliger sampling frequency. For affected (suspect, detected/positive, and infested) status waters, veliger sampling will increase to at least once per month during the main boating season (May – September).
- Survey immediacy. Ensure surveys are completed as soon as possible and the results are reported to the AIS Coordinators for both state agencies. The AIS Coordinators will provide updates to the entire Response Team.

Objective 8: Apply available, relevant and appropriate control measures.

- Purpose: Evaluate management options, initiate environmental compliance, and then proceed with either eradication efforts or containment and control actions.
- Determine appropriate method. The UDWR and WGFD AIS Coordinators and the Response Team will decide what control measures to use. Whether to use a federally approved chemical eradication via the use of a molluscicide, or containment based on the rapid analysis of population dynamics, Dreissenid life stage to be treated, extent of distribution and analysis of vectors and pathways for *Dreissena* mussel spread, and available management options.

- Determine cost of implementation. The UDWR and WGFD AIS Coordinators, with assistance from the Response Team, will estimate the cost of eradication, control and/or containment efforts, including follow up monitoring, relative to available funding.
- Environmental regulations. Consult with USBR and USFS regarding necessary environmental compliance to implement proposed control.
 - Prepare environmental assessment and/or environmental impact statement as needed, post for public comment and notification.
 - Obtain approval of responsible agency officials.
 - Obtain permits from EPA or state as required by law or regulation.

Objective 9: Institute long-term monitoring.

- Purpose: Establish long-term evaluation efforts as funding allows.
- Long-term monitoring. The UDWR and WGFD AIS Coordinators and the Response Team will develop and implement a long-term monitoring plan.
- Real-time dataset. The UDWR AIS Coordinator will disseminate findings through an easily accessible, consolidated, coordinated real-time dataset

Objective 10: Evaluate response effectiveness, modify the RRP and Control Plan as needed, and pursue long-term funding for *Dreissena* management.

- Purpose: Implement long-term monitoring, using data collected to revise the RRP and Control Plan and make adjustments to management strategies. Document lessons learned to enhance preparedness and response elsewhere.
- Evaluate effectiveness. The UDWR and WGFD AIS Coordinators and the Response Team can enhance long-term preparedness for responses to other *Dreissena* mussel introductions by evaluating the efficacy of the rapid response and incorporating evaluation results into future management efforts.
- Find areas for improvement. Conduct a follow-up evaluation by Response Team to identify opportunities for improving the RRP and Control Plan.
- Living document. As circumstances dictate, the RRP and Control Plan will be revised at least every five years to improve on its efficiency and effectiveness.

Literature Cited

California Fish and Wildlife. 2014. Quagga/zebra mussel plankton tow sampling protocol.

Utah Division of Wildlife Resources. 2010. Utah aquatic invasive species management plan.

Utah Division of Wildlife Resources. 2010. Wildlife administrative rule R657-60 aquatic invasive species interdiction. R657-60-9.

Western Regional Panel on Aquatic Nuisance Species. 2010. Mussel action plan for western U.S. waters.

Wyoming Game and Fish Department, 2012. Wyoming Game and Fish Commission, Chapter 62, Regulations for Aquatic Invasive Species.

Appendix A--Notification List

Wyoming Game & Fish Dept.

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Utah Division of Wildlife Res.

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U.S. Bureau of Reclamation

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Robert Radtke	*Regional AIS Coordinator	801.524.3719	rradtke@usbr.gov
Jane Blair	Power Office Manager	801.524.3628	jblair@usbr.gov

Daggett County Reps.

Jack Lytle	Daggett County Commissioner	435.784.3218	jlytle@daggettcountry.org
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Sweetwater County Reps.

Wally Johnson	Sweetwater County Board Chairman	307.872.3899	johnsonw@sweet.wy.us
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Concessionaires

Jerry and Jill Taylor	Lucerne Valley Marina	435.784.3483	
Les and Loretta Tanner	Buckboard Marina	307.875.6927	less@buckboardmarina.com
Stacy and John Rauch	Cedar Springs Marina	435.889.3795	sportfishingadventures@hotmail.com

****Response Team personnel***

Appendix B--Levels of *Dreissena* Detection Definitions, and Personnel Notification Based on the Levels

Inconclusive: *Dreissena* mussel confirmed by only microscopy or PCR, but not both, and only indicated in a single sampling event

- Notification:
 - UDWR and WGFD AIS Coordinators
 - Director's Office
 - Response Team

Suspect: *Dreissena* mussel indicated in a single sampling event and confirmed by both microscopy and PCR.

- Notification:
 - UDWR and WGFD AIS Coordinators
 - Director's Office
 - Response Team
 - Notification list
 - Media Response

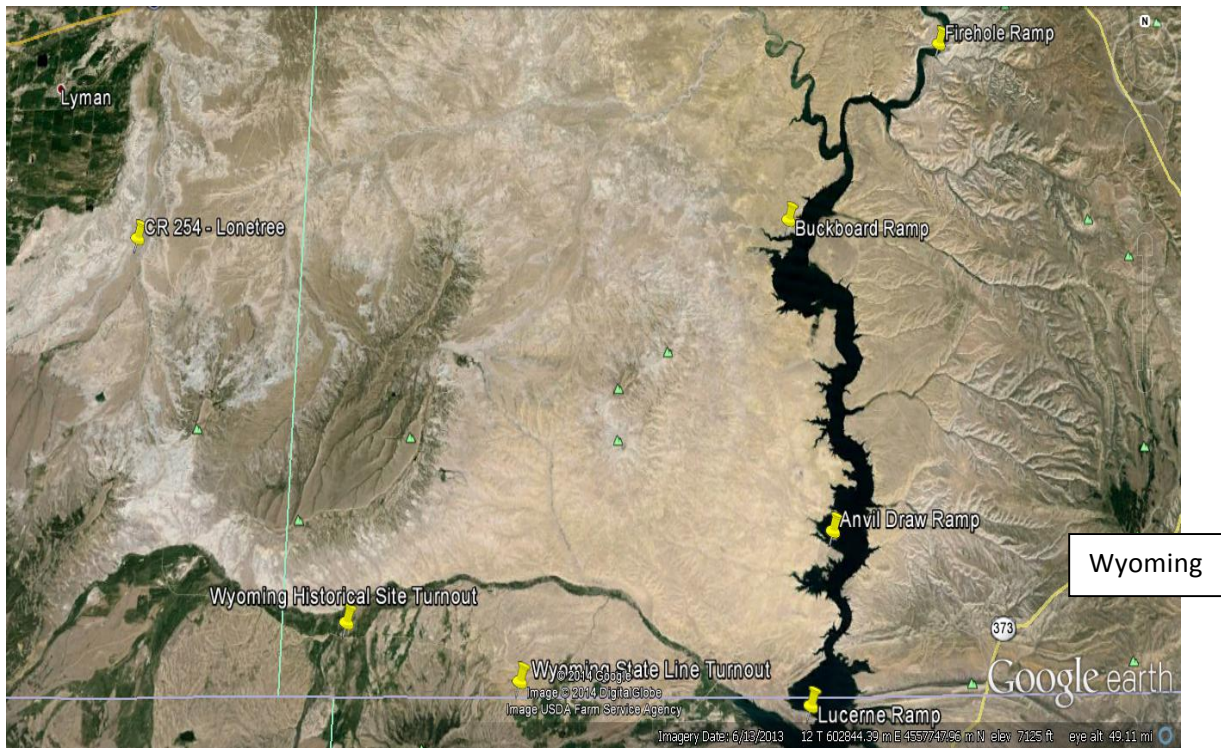
Detected/Positive: *Dreissena* mussel indicated in two consecutive sampling events and confirmed by both microscopy and PCR.

- Notification:
 - UDWR and WGFD AIS Coordinators
 - Director's Office
 - Response Team
 - Notification list
 - Media Response

Infested: Multiple age classes of attached *Dreissena* mussels indicated in two or more consecutive sampling events and an established (recruiting or reproducing) population of mussels and confirmed by both microscopy and PCR.

- Notification:
 - UDWR and WGFD AIS Coordinators
 - Director's Office
 - Response Team
 - Notification list
 - Media Response

Appendix C--Google Earth image of Flaming Gorge





Appendix D--State of Utah, R657. Natural Resources, Wildlife Resources. R657-60. Aquatic Invasive Species Interdiction.

R657-60-1. Purpose and Authority.

(1) The purpose of this rule is to define procedures and regulations designed to prevent and control the spread of aquatic invasive species within the State of Utah.

(2) This rule is promulgated pursuant to authority granted to the Wildlife Board in Sections 23-27-401, 23-14-18, and 23-14-19.

R657-60-2. Definitions.

(1) Terms used in this rule are defined in Section 23-13-2 and 23-27-101.

(2) In addition:

(a) "Conveyance" means a terrestrial or aquatic vehicle, including a vessel, or a vehicle part that may carry or contain a *Dreissena* mussel.

(b) "Decontaminate" means to:

(i) Self-decontaminate equipment or a conveyance that has been in an infested water in the previous 30 days by:

(A) removing all plants, fish, mussels and mud from the equipment or conveyance;

(B) draining all water from the equipment or conveyance, including water held in ballast tanks, bilges, livewells, and motors; and

(C) drying the equipment or conveyance for no less than 7 days in June, July and August; 18 days in September, October, November, March, April and May; 30 days in December, January and February; or expose the equipment or conveyance to sub-freezing temperatures for 72 consecutive hours; or

(ii) Professionally decontaminate equipment or a conveyance that has been in an infested water in the previous 30 days by:

(A) Using a professional decontamination service approved by the division to apply scalding water (140 degrees Fahrenheit) to completely wash the equipment or conveyance and flush any areas where water is held, including ballast tanks, bilges, livewells, and motors.

(c) "Detected Water" or "Detected" means a water body, facility, or water supply system where the presence of a *Dreissena* mussel is indicated in two consecutive sampling events using visual identification or microscopy and the results of each sampling event is confirmed in two polymerase chain reaction tests, each conducted at independent laboratories.

(d) "Dreissena mussel" means a mussel of the genus *Dreissena* at any life stage, including a zebra mussel, a quagga mussel and a Conrad's false mussel.

(e) "Controlling entity" means the owner, operator, or manager of a water body, facility, or a water supply system.

(f) "Equipment" means an article, tool, implement, or device capable of carrying or containing water or *Dreissena* mussel.

(g) "Facility" means a structure that is located within or adjacent to a water body.

(h) "Infested Water" or "Infested" means a water body, facility, water supply system, or geographic region where the presence of multiple age classes of attached *Dreissena* mussels is

indicated in two or more consecutive sampling events using visual detection or microscopy and the result of each sampling event is confirmed in two polymerase chain reaction tests, each conducted at independent laboratories.

(i) "Juvenile or adult Dreissena mussel" means a macroscopic Dreissena mussel that is not a veliger.

(j) "Suspected Water" or "Suspected" means a water body, facility, or water supply system where the presence of a Dreissena mussel is indicated through a single sampling event using visual identification or microscopy and the result of that sampling event is confirmed in two independent polymerase chain reaction tests, each conducted at independent laboratories.

(k) "Veliger" means a microscopic, planktonic larva of Dreissena mussel.

(l) "Vessel" means every type of watercraft used or capable of being used as a means of transportation on water.

(m) "Water body" means natural or impounded surface water, including a stream, river, spring, lake, reservoir, pond, wetland, tank, and fountain.

(n) "Water supply system" means a system that treats, conveys, or distributes water for irrigation, industrial, wastewater treatment, or culinary use, including a pump, canal, ditch or, pipeline.

(o) "Water supply system" does not include a water body.

R657-60-3. Possession of Dreissena Mussels.

(1) Except as provided in Subsections R657-60-3(2) and R657-60-5(2), a person may not possess, import, ship, or transport any Dreissena mussel.

(2) Dreissena mussels may be imported into and possessed within the state of Utah with prior written approval of the Director of the Division of Wildlife Resources or a designee.

R657-60-4. Reporting of invasive species required.

(1) A person who discovers a Dreissena mussel within this state or has reason to believe a Dreissena mussel may exist at a specific location shall immediately report the discovery to the division.

(2) The report shall include the following information: (a) location of the Dreissena mussels;

(b) date of discovery;

(c) identification of any conveyance or equipment in which mussels may be held or attached; and

(d) identification of the reporting party with their contact information. (3) The report shall be made in person or in writing:

(a) at any division regional or headquarters office or;

(b) to the division's toll free hotline at 1-800-662-3337; or

(c) on the division's website at www.wildlife.utah.gov/law/hsp/pf.php.

R657-60-5. Transportation of equipment and conveyances that have been in waters containing Dreissena mussels.

(1) The owner, operator, or possessor of any equipment or conveyance that has been in an infested water or in any other water subject to a closure order under R657-60-8 or control

plan under R657-60-9 that requires decontamination of conveyances and equipment upon leaving the water shall:

(a) immediately drain all water from the equipment or conveyance at the take out site, including water held in ballast tanks, bilges, livewells, motors, and other areas of containment; and

(b) immediately inspect the interior and exterior of the equipment or conveyance at the take out site for the presence of *Dreissena* mussels.

(2) If all water in the equipment or conveyance is drained and the inspection undertaken pursuant to Subsection (1)(b) reveals the equipment and conveyance are free from mussels or shelled organisms, fish, plants and mud, the equipment and conveyance may be transported in or through the state directly from the take out site to the location where it will be:

(a)(i) professionally decontaminated; or

(ii) stored and self-decontaminated; or

(b) temporarily stored and subsequently returned to the same water body and take out site as provided in Subsection (5).

(3) If all the water in the equipment or conveyance is not drained or the inspection undertaken pursuant to Subsection (1)(b) reveals the equipment or conveyance has attached mussels or shelled organisms, fish, plants, or mud, the equipment and conveyance shall not be moved from the take out site until the division is contacted and written or electronic authorization received to move the equipment or conveyance to a designated location for professional decontamination.

(4) Except as provided in Subsection (5), a person shall not place any equipment or conveyance into a water body or water supply system in the state without first decontaminating the equipment and conveyance when the equipment or conveyance in the previous 30 days has been in:

(a) an infested water; or

(b) other water body or water supply system subject to a closure order under R657-60-8 or control plan under R657-60-9 that requires decontamination of conveyances and equipment upon leaving the water.

(5) Decontamination is not required when a conveyance or equipment is removed from an infested water or other water body subject to decontamination requirements, provided the conveyance and equipment is:

(a) inspected and drained at the take out site, and is free from attached mussels, shelled organisms, fish, plants, and mud as required in Subsections (1) and (2);

(b) returned to the same water body and launched at the same take out site; and

(c) not placed in or on any other Utah water body in the interim without first being decontaminated.

R657-60-6. Certification of Decontamination

(1) The owner, operator or possessor of a vessel desiring to launch on a water body in Utah must:

(a) verify the vessel and any launching device, in the previous 30 days, have not been in an infested water or in any other water subject to closure order under R657-60-8 or control

plan under R656-60-9 that requires decontamination of conveyances and equipment upon leaving the water; or

(b) certify the vessel and launching device have been decontaminated.

(2) Certification of decontamination is satisfied by:

(a) previously completing self-decontamination since the vessel and launching device were last in a water described in Subsection (1)(a) and completely filling out and dating a decontamination certification form which can be obtained from the division; or

(b) providing a signed and dated certificate by a division approved professional decontamination service verifying the vessel and launching device were professionally decontaminated since the vessel and launching device were last in a water described in Subsection (1)(a).

(3) Both the decontamination certification form and the professional decontamination certificate, where applicable, must be signed and placed in

open view in the window of the launching vehicle prior to launching or placing the vessel in a body of water.

(4) It is unlawful under Section 76-8-504 to knowingly falsify a decontamination certification form.

R657-60-7. Wildlife Board designations of Infested Waters.

(1) The Wildlife Board may designate a geographic area, water body, facility, or water supply system as Infested with Dreissena mussels pursuant to Section 23-27-102 and 23-27-401 without taking the proposal to or receiving recommendations from the regional advisory councils.

(2) The Wildlife Board may designate a particular water body, facility, or water supply system within the state as Infested with Dreissena mussels when sampling indicates the water body, facility, or water supply system meets the minimum criteria for an Infested Water as defined in this rule.

(3) The Wildlife Board may designate a particular water body, facility, or water supply system outside the state as Infested with Dreissena mussels when it has credible evidence suggesting the presence of a Dreissena mussel in that water body, facility, or water supply system.

(4) Where the number of Infested Waters in a particular area is numerous or growing, or where surveillance activities or infestation containment actions are deficient, the Wildlife Board may designate geographic areas as Infested with Dreissena mussels.

(5) The following water bodies and geographic areas are classified as infested:

(a) all coastal and inland waters in:

(i) Colorado;

(ii) California;

(iii) Nevada;

(iv) Arizona;

(v) all states east of Montana, Wyoming, Colorado, and New Mexico;

(vi) the provinces of Ontario and Quebec Canada; and

(vii) Mexico;

(b) Lake Powell and that portion of the:

- (i) Colorado River between Lake Powell and Spanish Bottoms in Canyonlands National Park;
- (ii) Escalante River between Lake Powell and the Coyote Creek confluence;
- (iii) Dirty Devil River between Lake Powell and the Highway 95 bridge; and
- (iv) San Juan River between Lake Powell and Clay Hills Crossing; and
- (c) other waters established by the Wildlife Board and published on the DWR website.
- (6) The Wildlife Board may remove an infested classification if:
 - (a) the division samples the affected water body for seven (7) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a “suspected” classification, as defined in this rule; or
 - (b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies in writing that Dreissena mussels are no longer present.

R657-60-8. Closure Order for a Water Body, Facility, or Water Supply System.

- (1)(a) The division may classify a water body, facility, or water supply system as suspected or detected if it meets the minimum criteria for suspected or detected, as defined in this rule.
- (b) If the division classifies a water body, facility, or water supply system as either suspected or detected, the division director or designee may, with the concurrence of the executive director, issue an order closing the water body, facility, or water supply system to the introduction or removal of conveyances or equipment.
- (c) The director shall consult with the controlling entity of the water body, facility, or water supply system when determining the scope, duration, level and type of closure that will be imposed in order to avoid or minimize disruption of economic and recreational activities.
- (d) A closure order may;
 - (i) close the water entirely to conveyances and equipment;
 - (ii) authorize the introduction and removal of conveyances and equipment subject to the decontamination requirements in R657-60-2(2)(b) and R657-60-5; or
 - (iii) impose any other condition or restriction necessary to prevent the movement of Dreissena mussels into or out of the subject water.
 - (iv) a closure order may not restrict the flow of water without the approval of the controlling entity.
- (2)(a) A closure order issued pursuant to Subsection (1) shall be in writing and identify the:
 - (i) water body, facility, or water supply system subject to the closure order;
 - (ii) nature and scope of the closure or restrictions;
 - (iii) reasons for the closure or restrictions;
 - (iv) conditions upon which the order may be terminated or modified; and
 - (v) sources for receiving updated information on the presence of Dreissena mussels and closure order.
- (b) The closure order shall be mailed, electronically transmitted, or hand delivered to:
 - (i) the controlling entity of the water body, facility, or water supply system;

and

(ii) any governmental agency or private entity known to have economic, political, or recreational interests significantly impacted by the closure order; and

(iii) any person or entity requesting a copy of the order.

(c) The closure order or its substance shall further be:

(i) posted on the division's web page; and

(ii) published in a newspaper of general circulation in the state of Utah or the affected area.

(3)(a) If a closure order lasts longer than seven days, the division shall provide the controlling entity and post on its web page a written update every 10 days on its efforts to address the Dreissena mussel infestation.

(b) The 10 day update notice cycle will continue for the duration of the closure order.

(4)(a) Notwithstanding the closure authority in Subsection (1), the division may not unilaterally close or restrict a suspected or detected water supply system where the controlling entity has prepared and implemented a control plan in cooperation with the division that effectively controls the spread of Dreissena mussels from the water supply system.

(b) The control plan shall comply with the requirements in R657-60-9.

(5) Except as authorized by the Division in writing, a person may not violate any provision of a closure order.

(6) A closure order or control plan shall remain effective so long as the water body, water supply system, or facility remains classified as suspected or detected.

(7) The director or his designee may remove a Suspected classification if:

(a) the division samples the affected water body for three (3) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a "suspected" classification, as defined in this rule; or

(b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies that Dreissena mussels are no longer present.

; or

(8) The director or his designee may remove a detected classification if:

(a) the division samples the affected water body for five (5) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a "suspected" classification, as defined in this rule; or

(b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies that Dreissena mussels are no longer present.

R657-60-9. Control plan required.

(1) The controlling entity of a water body, facility, or water supply system may develop and implement a control plan in cooperation with the division prior to infestation designed to:

(a) avoid the infestation of Dreissena mussels; and

(b) control or eradicate an infestation of Dreissena mussels that might occur in the future.

(2) A pre-infestation control plan developed consistent with the requirements in Subsection (3) and approved by the division will eliminate or minimize the duration and impact of a closure order issued pursuant to Section 23-27-303 and R657-60-8.

(3) If a water body, facility, or water supply system within the state is classified as infested, detected, or suspected, and it does not have an approved control plan, the controlling entity shall cooperate with the division in developing and implementing a control plan to address the:

- (a) scope and extent of the presence of Dreissena mussels;
- (b) actions proposed to control the pathways of spread of Dreissena mussels;
- (c) actions proposed to control the spread or eradicate the presence of Dreissena mussels;
- (d) methods to decontaminate the water body, facility, or water supply system, if possible;
- (e) actions required to systematically monitor the presence of Dreissena mussels; and
- (f) requirements and methods to update and revise the plan with scientific advances.

(4) All control plans prepared pursuant to Subsection (3) shall be approved by the Division before implementation.

(5) A control plan prepared pursuant to this Section may require that all conveyances and equipment entering or leaving the subject water to comply with the decontamination requirements in R657-60-2(2)(b) and R657-60-5.

(6) Except as authorized by the Division and the controlling entity in writing, a person may not violate any provision of a control plan.

R657-60-10. Procedure for Establishing a Memorandum of Understanding with the Utah Department of Transportation.

(1) The division director or designee shall negotiate an agreement with the Utah Department of Transportation for use of ports of entry for detection and interdiction of Dreissena Mussels illegally transported into and within the state. Both the Division of Wildlife Resources and the Department of Transportation must agree upon all aspects of Dreissena Mussel interdiction at ports of entry.

- (2) The Memorandum shall include the following:
- (a) methods and protocols for reimbursing the department for costs associated with Dreissena Mussel interdiction;
 - (b) identification of ports of entry suitable for interdiction operations;
 - (c) identification of locations at a specific port of entry suitable for interdiction operations;
 - (d) methods and protocols for disposing of wastewater associated with decontamination of equipment and conveyances;
 - (e) dates and time periods suitable for interdiction efforts at specific ports of entry;
 - (f) signage notifying motorists of the vehicles that must stop at the port of entry for inspection;
 - (g) priorities of use during congested periods between the department's port responsibilities and the division's interdiction activities;
 - (h) methods for determining the length, location and dates of interdiction;

(i) training responsibilities for personnel involved in interdiction activities; and
(j) methods for division regional personnel to establish interdiction efforts at ports within each region.

R657-60-11. Conveyance or Equipment Detainment.

1) To eradicate and prevent the infestation of a Dreissena mussel, the division may:
(a) temporary stop, detain, inspect, and impound a conveyance or equipment that the division reasonably believes is in violation of Section 23-27-201 or R657-60-5;

(b) order a person to decontaminate a conveyance or equipment that the division reasonably believes is in violation of Section 23-227-201 or R657-60-5.

(2) The division, a port-of-entry agent or a peace officer may detain or impound a conveyance or equipment if:

(a) the division, agent, or peace officer reasonably believes that the person transporting the conveyance or equipment is in violation of Section 23-27-201 or R657-60-5.

(3) The detainment or impoundment authorized by Subsection (2) may continue for:

(a) up to five days; or

(b) the period of time necessary to:

(i) decontaminate the conveyance or equipment; and

(ii) ensure that a Dreissena mussel is not living on or in the conveyance or equipment.

R657-60-12. Penalty for Violation.

(1) A violation of any provision of this rule is punishable as provided in Section 23-13-11.

(2) A violation of any provision of a closure order issued under R657-60-8 or a control plan created under R657-60-9 is punishable as a criminal infraction as provided in Section 23-13-11.

KEY: fish, wildlife, wildlife law

Date of Enactment or Last Substantive Amendment: August 9, 2010

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Authorizing, and Implemented or Interpreted Law: 23-27-401; 23-14-18; 23-14-19

Appendix E--WYOMING GAME AND FISH COMMISSION, CHAPTER 62, REGULATION FOR AQUATIC INVASIVE SPECIES

Section 1. Authority. These regulations are promulgated by authority of W.S. §23-1-102, W.S. §23-4-201 through W.S. §23-4-205.

Section 2. Regulation. The Wyoming Game and Fish Commission (Commission) hereby adopts the following regulations governing Aquatic Invasive Species. This regulation shall remain in effect until modified or rescinded by the Commission.

Section 3. Purpose. The purpose of this regulation is to provide for the prevention, management, and control of aquatic invasive species.

Section 4. Definitions. For the purpose of this regulation, definitions shall be as set forth in Title 23, Wyoming Statutes, and the Commission also adopts the following definitions:

(a) "Aquatic invasive species" means exotic or non-native aquatic organisms that have been determined by the Commission to pose a significant threat to the aquatic resources, water supplies, or water infrastructure of the state. Aquatic invasive species include some species known to be present in Wyoming and species with a high potential to invade, survive and reproduce.

(i) Aquatic invasive species include:

(A) All members of the genus *Dreissena*, including, but not limited to, zebra mussel *D. polymorpha* and quagga mussel *D. rostriformis*;

(B) New Zealand mudsnail - *Potamopyrgus antipodarum*;

(C) Asian clam - *Corbicula fluminea*;

(D) Rusty crayfish - *Orconectes rusticus*;

(E) Brook stickleback - *Culaea inconstans*;

(F) All members of the genus *Hypophthalmichthys*, including, but not limited to, bighead carp *H. nobilis*, silver carp *H. molitrix*, and largescale silver carp *H. harmandi*;

(G) Black carp - *Mylopharyngodon piceus*;

(H) All members of the genera *Channa* and *Parachanna* in the family Channidae (snakeheads);

(I) Hydrilla - *Hydrilla verticillata*;

(J) Eurasian watermilfoil - *Myriophyllum spicatum*; and,

(K) Curly pondweed – *Potamogeton crispus*.

(b) “Authorized inspector” means an authorized aquatic invasive species inspector who has a valid certification from an aquatic invasive species inspection training course that meets the requirements 62-2 established by the Wyoming Game and Fish Department (Department) to certify inspectors for aquatic invasive species inspections and decontaminations.

(c) “Certified inspection location” means a location or an address where a Department authorized inspector may be available to conduct an inspection.

(d) “Conveyance” means a motor vehicle, boat, watercraft, raft, vessel, trailer, or any associated equipment or containers, including but not limited to live wells, ballast tanks, bilge areas, and water hauling equipment that may contain or carry aquatic invasive species.

(e) “Decontaminate” means to wash, drain, dry, or chemically, thermally or otherwise treat a conveyance in order to remove or destroy aquatic invasive species.

(f) “Equipment” means an article, tool, implement, or device capable of containing or transporting water or aquatic invasive species.

(g) “High risk infested water” means a water in any state or province known or suspected to contain *Dreissena* mussels. A list of all high risk infested waters will be available on the Department website.

(h) “Inspect” means to examine a conveyance in order to determine whether an aquatic invasive species may be present, and includes examining and draining water in the conveyance.

(i) “Interstate water” means Big Horn Lake downstream from the causeway (Highway 14A) in Bighorn County, Flaming Gorge Reservoir in Sweetwater County, and Palisades Reservoir and the Snake River (South Fork Snake River) between the Greys River in Lincoln County and the Heise Bridge crossing in Bonneville County, Idaho.

(j) “Mandatory aquatic invasive species check station” means a location established by the Department at ports of entry, other department of transportation facilities located near the borders of this state that meet established state and national safety and commerce requirements for the traveling public or other appropriate facilities where stopping is mandatory and an authorized inspector may conduct an inspection.

(k) “Seal” means a locking device affixed to a conveyance that has been inspected or decontaminated.

(l) “Valid seal receipt” means a written document issued by an authorized inspector in conjunction with a seal that contains a number matching the number on the seal and information regarding the conveyance.

(m) “Watercraft” for the purpose of this regulation means any contrivance used or designed primarily for navigation on the water that is designed to be propelled by paddles, oars, sails or motors, except for sailboards, float tubes, kite boards or any aid to swimming or fishing that is not designed primarily for navigation. Amphibious vehicles designed for travel over land and water with propeller or jet propulsion systems shall be considered watercraft for the purpose of this regulation.

(n) “Water of the state” means all waters under the jurisdiction of the state of Wyoming.

Section 5. Inspection.

(a) Compliance with aquatic invasive species inspection requirements is an express condition of allowing a conveyance to contact or enter any water of the state.

(i) Any person who refuses to permit inspection of their conveyance or refuses to complete any required removal and disposal of aquatic invasive species shall be prohibited from allowing the conveyance to contact or enter any water of the state.

(ii) If a person refuses to allow inspection of a conveyance or to complete any required removal and disposal of aquatic invasive species prior to departure from any water of the state known to contain an aquatic invasive species, the conveyance is subject to impoundment until an aquatic invasive species inspection and decontamination is completed.

(b) Authorized inspectors may inspect any conveyance. Authorized inspectors shall perform decontaminations at the direction of a peace officer or with the voluntary consent of the person transporting the conveyance.

(c) Inspections shall be conducted by:

(i) any peace officer; or,

(ii) any authorized inspector.

(d) Inspections shall be conducted in accordance with Department procedures at:

(i) a mandatory aquatic invasive species check station; or,

(ii) a certified inspection location; or,

(iii) another location where an authorized inspector is available to conduct an inspection.

(e) Any person transporting a conveyance that within the past thirty (30) days HAS BEEN in contact with a high risk infested water in any state or province, shall have the conveyance inspected by an authorized inspector prior to contacting or entering any water of the state.

(f) Any person transporting a conveyance into the state by land from March 1 through November 30, that HAS NOT BEEN in contact with a high risk infested water within the past thirty (30) days, shall have the conveyance inspected by an authorized inspector prior to contacting or entering any water of the state, unless exempted by (i) below.

(i) Any person transporting a watercraft who did not encounter a mandatory aquatic invasive species check station prior to reaching a water of the state may launch without inspection if the watercraft bears a properly affixed seal applied by an authorized inspector and is accompanied by a valid seal receipt during transit. The person transporting the watercraft may remove the seal immediately prior to launching on the destination water and must retain the seal and valid seal receipt while on the water.

(g) Any person transporting a conveyance into the state by land from December 1 through the last day of February that has not been in contact with a high risk infested water within the past thirty (30) days and did not encounter a mandatory aquatic invasive species check station prior to reaching a water of the state, is exempted from mandatory inspection.

(h) All conveyances are subject to inspection in accordance with Department procedures upon encountering a mandatory aquatic invasive species check station.

(i) Authorized inspectors shall determine if there is reason to believe that aquatic invasive species are present by interviewing the person transporting the conveyance or using visual and tactile inspection methods. As part of all inspections, all compartments, equipment, and containers that may hold water, including, but not limited to, live wells, ballast and bilge areas shall be completely drained as directed by authorized inspectors.

(j) A conveyance suspected to contain an aquatic invasive species shall be decontaminated using Department approved procedures before said conveyance shall be allowed to contact or enter any water of the state.

(k) Any person operating a conveyance may be ordered to remove the conveyance from any water of the state or any conveyance staging area by any peace officer if there is reason to believe the conveyance may contain aquatic invasive species or was not properly inspected prior to contacting or entering the water. Once removed from the water, the conveyance shall be subject to inspection and decontamination for the removal and disposal of aquatic invasive species.

(l) Any authorized inspector who, through the course of an inspection, determines that aquatic invasive species are present shall document the inspection, including but not limited to the type and number of aquatic invasive species suspected or detected and identification of the conveyance, including license plate numbers and watercraft registration number, if available. The authorized inspector shall advise the operator that the conveyance shall be required to be decontaminated according to Department procedures as soon as possible. Only peace officers have the authority to order decontamination, impoundment, or quarantine of a conveyance.

(m) Once a conveyance is inspected or decontaminated, a seal may be affixed to the conveyance by a peace officer or authorized inspector. A copy of the completed valid seal receipt shall accompany all seals. Seals shall be affixed to a conveyance in accordance with Department procedures. A seal, once properly affixed to a conveyance and when accompanied by the valid seal receipt, certifies a proper inspection or decontamination procedure. The person transporting a conveyance sealed by an authorized inspector may remove the seal at their discretion. The Department may recognize a properly affixed seal applied by an authorized inspector from a state or province with a Department approved aquatic invasive species program if the seal is accompanied by a valid seal receipt. It shall be a violation of this regulation for any person to attempt to reattach any seal once it is removed from a conveyance.

Section 6. Decontamination.

(a) The Department shall only recognize decontamination methods described in this Section as proper Department procedures. All decontaminations shall be completed following all applicable laws, disposal methods, recommended safety precautions, safety equipment, and Department approved procedures.

(b) Decontamination shall be achieved by removal of the conveyance from any water body and eliminating the water from all compartments, equipment, and containers that may hold water, including but not limited to live wells, ballast tanks and bilges for a length of time as determined by the Department not to exceed thirty (30) days.

(c) If decontamination is not achieved by removal of the conveyance from any water body for at least thirty (30) days, the following requirements apply:

(i) Decontamination of water compartments, equipment or containers in a conveyance to address the potential presence of an aquatic invasive species shall be accomplished by rinsing and flushing with water of at least 120 degrees Fahrenheit.

(ii) Decontamination of the exterior of a conveyance shall be accomplished by removing or destroying all aquatic invasive species, mud, plants, and organisms. The entire exterior of the conveyance and all intakes shall be thoroughly washed with water of at least 140 degrees Fahrenheit. A high pressure (minimum of 2500 psi) water wash or scrubbing will be used as necessary.

(iii) All compartments, equipment and containers that hold water including, but not limited to live wells, ballast and bilge areas, shall be flushed with water of at least 120 degrees Fahrenheit but not at high pressure. If a bilge pump is present, it shall be operated until the bilge appears to be empty. The lower unit of the engine shall be thoroughly flushed with water of at least 140 degrees Fahrenheit.

(iv) After decontamination an authorized inspector or peace officer shall re-inspect the conveyance to ensure complete decontamination has occurred prior to the release of the conveyance.

(v) Proof of decontamination shall consist of a properly affixed seal and valid seal receipt or a copy of the Department decontamination form if no seal was applied.

Section 7. Impoundment and Quarantine.

(a) All conveyances are subject to impoundment and quarantine by a peace officer if:

(i) the person transporting the conveyance refuses to allow an inspection of the conveyance to be conducted by an authorized inspector or peace officer;

(ii) a peace officer or an authorized inspector finds that an aquatic invasive species is present after conducting an inspection;

(iii) the person transporting the conveyance refuses to allow a decontamination of the conveyance when decontamination is ordered by a peace officer; or,

(iv) a peace officer determines a quarantine is necessary following decontamination.

(b) If the person in charge of the conveyance is not the registered owner, the registered owner shall be notified by mail, return receipt requested, within ten days of the location of the impounded conveyance. Such notification shall also include contact information for the peace officer ordering the impoundment. If the registered owner is present when the conveyance is ordered impounded, then the same information shall be provided to the registered owner at the time the impound order is issued.

(c) All impounded conveyances shall be held at the risk and expense of the owner. A conveyance held under impound for non-compliance with this regulation shall only be released after a peace officer is satisfied by inspection or quarantine that the conveyance is no longer a threat to the aquatic resources, water supplies, and water infrastructure of the state.

(d) Duration of conveyance quarantine shall be determined by the Department, shall be sufficient to allow decontamination, and shall not exceed thirty (30) days.

(e) An impounded conveyance shall not be released until a Department impound release form is signed and executed by a peace officer. It is the responsibility of the owner to coordinate with the Department for the release of the conveyance.

Section 8. Mandatory Reporting of Aquatic Invasive Species.

(a) Identification of an aquatic invasive species through sampling and monitoring procedures at a location where that species has not been known to exist shall be reported immediately to the Department.

(b) Any person who knows that an unreported aquatic invasive species is present at a specific location in Wyoming shall report the aquatic invasive species presence within forty-eight (48) hours to the Commission, the Department, or any peace officer. An aquatic invasive species report shall include the date and time of the detection of the aquatic invasive species, the exact location of sighting (water body and specific location on the water body), the suspected species, and the name and contact information of the reporter. Samples collected of suspected aquatic invasive species shall be submitted to the Department within forty-eight (48) hours.

Section 9. Aquatic Invasive Species Check Stations.

(a) All persons transporting a conveyance shall stop at mandatory aquatic invasive species check stations that are established on their route of travel.

(b) All mandatory aquatic invasive species check stations shall be signed.

(c) Check stations shall be operated in accordance with Department procedures.

(d) Lists of mandatory aquatic invasive species check stations and certified inspection locations shall be provided on the Department website.

Section 10. Aquatic Invasive Species Program Decal.

(a) An aquatic invasive species program fee may be assessed as part of the Department's motorized watercraft registration fee. A current, properly affixed motorized watercraft registration decal shall be proof of payment of this fee.

(b) All owners or operators of motorized watercraft registered outside of Wyoming, any owners or operators of Wyoming registered watercraft that have not paid the aquatic invasive species program fee as part of their watercraft registration fee and all owners or operators of non-motorized watercraft shall purchase and display an Aquatic Invasive Species Program Decal valid for the current calendar year on their watercraft prior to contacting or entering any water of the state. For the purpose of this Section, all non-motorized inflatable watercraft ten (10) feet in length or less are exempt from this decal provision.

(c) Aquatic Invasive Species Program Decals shall not be limited in number and shall be sold through the Electronic Licensing System (ELS), designated license selling agents, and authorized personnel. The price of the decal shall be ten dollars (\$10) for motorized watercraft registered in Wyoming and thirty dollars (\$30) for motorized watercraft registered outside of Wyoming. The price of the decal shall be five dollars (\$5) for non-motorized watercraft owned by a Wyoming resident and fifteen dollars (\$15) for non-motorized watercraft owned by a nonresident.

(i) Owners or operators of motorized watercraft required to purchase an Aquatic Invasive Species Program Decal shall display the decal on the starboard (right) side of the bow six (6) inches left of and directly in line with the watercraft registration decal. Non-motorized watercraft owners or operators shall display the decal on the bow in such a manner that the decal shall be visible when the watercraft is underway. Only the Aquatic Invasive Species Program Decal which is currently valid shall be displayed.

(ii) In the case of rental watercraft, it shall be the responsibility of the rental watercraft owner to ensure that a valid Aquatic Invasive Species Program Decal is properly displayed on the watercraft.

Section 11. Violation of Commission Regulations. Failure to abide by the provisions this regulation shall be punishable as provided by Wyoming statutes for violation of Commission regulations.

Section 12. Savings Clause. If any provision of this regulation shall be held to be illegal or unconstitutional, such a ruling shall not affect other provisions of this regulation which can be given effect without the illegal or unconstitutional provision; and, to this end, the provisions of this regulation are severable.

WYOMING GAME AND FISH COMMISSION

By: _____
Aaron Clark, President

Dated: November 15, 2012

Appendix F--Flaming Gorge Reservoir Hazard Analysis Critical Control Point (HACCP) Plan

Management Objective: Prevent the inadvertent spread of Dreissenids from FGR to other waters.

Activity Description: *Dreissena* sampling and surveys, along with other management activities conducted on FGR. The timing and frequency of these activities will occur repeatedly. The locations of where activities will be conducted will be reservoir wide, with a concentration of activity at the site of inoculation (where *Dreissena* sampling has proven positive).

Activity Flow Chart

- Task 1: Load gear and drive to site – Arrive at home base and load appropriate gear for activity. Drive to FGR.
- Task 2: Unload gear and conduct activity – Unload gear from vehicle. Load gear into boat. Prepare gear to conduct activity. Conduct activity by entering FGR and perform survey, and/or take samples.
- Task 3: Reload gear – Return to vehicle, decontaminate and pack up gear.
- Task 4: Return to home base and unload gear – Return to home base. Unload gear from vehicles. Decontaminate any remaining gear.

Potential Non-Targets Species

- Vertebrates: Burbot, other fish species found in the reservoir
- Invertebrates: NZMS, other invertebrates found in drainage
- Plants: Tamarisk, Curly-leaf Pondweed, and other plants found in drainage

Control Measures

- Summary
 - To contain an infestation, the reservoir will be split East/West and North/South. Movement between un-infested quadrants can continue unimpeded.
 - Clean and disinfect all equipment before moving from an infested quadrant to another quadrant on FGR, or other location. Movement to and from the boat ramp is still allowed regardless of quadrant, although if the boat ramp is not in a quadrant considered infested, all care should be given to minimize inoculation (e.g., trailer the boat as quickly as possible, not allowing it to idle very long;

- Clean, Drain, and Dry the boat AWAY from the water's edge once out of the water, etc.)
- Clean all applicable equipment before returning to home base (waders, watercrafts, etc.).
 - Clean and disinfect all equipment that was not done on location at home base, before the equipment is used again (nets, sampling equipment, etc.).
- Methods for Disinfecting Equipment
 - In the field (carried in vehicles)
 - Heavy brush for mud
 - Two portable hand-pump sprayers: one with disinfecting solution to decontaminate equipment (see below), and one with culinary water to rinse equipment after the proper soaking time has been met
 - Home base
 - Heavy brush for mud
 - Plastic tub or tank for submersion of boots and other equipment
 - High pressure decontamination spraying unit for vehicles, watercrafts, and other equipment
 - 140°F to 160°F scalding water temperatures needed to properly decontaminate
 - DNR personnel will provide the decontamination unit, and perform the decontamination on watercrafts and other equipment. All FGR stakeholders should schedule a decontamination after completing their sampling or other activities on the reservoir.
- Disinfection Protocol
 - In the field
 - All equipment in contact with water must be cleaned with a brush to remove debris, and disinfect with a field sprayer prior to leaving sample site
 - Maintain effective disinfecting solution in sprayers and record mixing dates
 - Quat 128: 6.4 ounces per gallon of water. Equipment needs to be repeatedly sprayed, keeping damp for 10 minutes, and then spray rinsed with culinary water, followed by drying in the sun for one hour before reuse.
 - Home base
 - All equipment must be dry before it leaves home base
 - All watercrafts, along with vehicles that come in contact with affected water must be fully decontaminated prior to leaving home base (e.g.,

professional decontamination or cleaned, drained, and dried for appropriate time).

- Maintain effective disinfecting solutions in plastic tub or tank and keep mixture dates updated
 - Quat 128: 6.4 ounces per gallon of water. Equipment needs to be immersed for 10 minutes, then spray rinsed with culinary water, followed by drying in the sun for one hour before reuse
- In addition to field disinfection, it is recommended to re-dip waders, probes, and other equipment before reuse

Appendix G--Permitting Requirements for Implementation of the Control Plan

Federal permits. BLM or USFS permits for short-term decontaminating/inspection site development.

USFS Special Use permits. Permits needed for containment facilities on USFS land.

Encroachment permits. Permits needed for decontamination stations along the roadside; identifies activities and safety precautions.

Department of Environmental Quality discharge permits. Permits needed for an increase in discharge water due to boat decontaminations.

Utah magistrate approval. Needed if considered an administrative checkpoint rather than an inspection station.

USBR FIFRA license. License needed for some chemical applications.

- Good for only five years – will need to be renewed regularly
- Develop a Pesticide Management Plan when further details are available

UPDES and WYPDES. Pollutant Discharge Elimination Systems are for controlling water pollution by regulating point sources of pollution

- Add Flaming Gorge to State of Utah and State of Wyoming pesticide permits for EPA approved molluscicides
- When further details are available, a Treatment Plan will be developed

NEPA. NEPA will likely require some level of NEPA for all potential treatments resulting in major impacts (e.g., chemical treatments for containing or eradicating mussels, construction, etc.). NEPA will not be required for changes to management.

USFS closure order. Needs developed prior to a possible confirmed *Dreissena* finding.

Appendix H--Closure Order Tasks and Their Estimated Time for Completion

Threat assessment and extent of colonization: Determining the threat and the extent of the colonization will take approximately three to four weeks to complete.

Signage installation: Installation of all signs warning of the Dreissenid threat will take up to two weeks to complete. Design of signage should occur in advance of a positive confirmation.

Boat ramp closures: Closure of ramps that do not have inspection stations, and closure of all shoreline launching will take one to four weeks; depending on acquisition timer for temporary or permanent Jersey barriers at developed ramps. This includes their enforcement (personnel and funding).

Inspection and decontamination stations: Getting inspection and decontamination stations up and running at designated boat ramps will take approximately two to five weeks. Highway inspection and decontamination stations can take six months to a year to be completed and functional.

Note: these processes are not cumulative. They will take place independent of one another and at the same time.

Appendix I--Inspection and Decontamination Station Locations and Requirements

Boat ramp inspection and decontamination stations: Buckboard Marina, Anvil Draw, Firehole Canyon, Brinegar Crossing, Lucerne Valley Marina, Sheep Creek Bay, Cedar Springs Marina, and Mustang Ridge (see Map, Appendix B).

Highway inspection and decontamination station away from reservoir: UT-191 South, WY-414 North, WY- 530 North, and WY- 373 North (see Map, Appendix B).

- UT-191 South: Red Cloud Loop turnaround
- WY-414 North: Wyoming state line turnout – on south side of road; north side will need developed, or Wyoming historical site turnout – on south side of road; north side will need developed, or between Lonetree and CR 254
- WY- 530 North: between Lost Dog Road and CR 37; will need developed
- WY-373 North: above Firehole, between CR 9 and CR 64, and south of interstate 80; will need developed
- Infrastructures. All locations will need restrooms (vault toilets or port-a-potties), shelter from the elements, secure enclosure for decontamination units and signs, and water for decontamination units. Exact locations will be finalized by December 2015. Permitting and surveys should be completed in advance, as feasible (e.g., arch surveys, NEPA).
- Footprint. Minimum footprint for inspection/decontamination locations is 180' x 160'

Appendix J--Sampling Methods for *Dreissena Veligers*

Purpose of Sampling

Plankton tow sampling is a form of early detection monitoring *Dreissena veligers*, the planktonic larval life stage, whereby small organisms (plankton) are collected by pulling a fine-mesh net through the water column (referred to as a “tow”). The plankton collected is then analyzed in a laboratory for the presence of veligers using cross-polarized light microscopy (CLPM) and/or DNA using PCR analysis. To optimize the potential for detecting veligers if present, plankton tows should follow a standardized sampling method, sample a large volume of water, and target the times and locations where veligers are most likely to occur. Of equal importance, samples must be preserved and handled properly in order to maintain their integrity so analysis yields accurate results. To enhance early detection, monitoring for adult mussels should be conducted along with plankton tow sampling. Monitoring for adult mussels can be achieved by conducting monthly inspections of artificial substrate samplers and by surveying surfaces of shoreline, multiple habitat types and structures located in high use areas.

Water Temperature

Plankton monitoring is typically conducted when water temperatures are between 9°C - 18°C (48°F - 64°F), when spawning is occurring. In warmer regions, where water temperatures remain within this range throughout the year, mussels can spawn year round. It is recommended tows be conducted monthly when temperatures are conducive to spawning.

Locations

Veliger distribution can be highly localized, therefore sampling should occur throughout the waterbody at multiple sites to increase the potential for detection. Sampling sites should include areas of high use and likely sites of mussel introductions such as around docks, boat launch ramps, floating restrooms, marinas, at inlets and outlets of the waterbody (mouth of tributaries; dams).

Depth

To increase the probability of capturing veligers if they are present, tow depths of 15 meters are recommended.

Number of Sites and Number of Tows

The number of sites within a waterbody should be based on the size of the waterbody. A minimum of three sites in small waterbodies, and up to 15 sites in larger water bodies are recommended. The number of tows at each site should be based on the net diameter and the depth of each tow. A minimum total volume of 1000 liters per site should be filtered through the net.

Plankton Tow Nets

Plankton tow nets should be 64-micron mesh size, and 12-inch diameter

Appendix I--Objectives Flow Chart

Objective 1: Verify a reported *Dreissena* mussel(s) detection, and make initial personnel notification.

- 1) Purpose: Ensure all parties with jurisdiction can provide support and are quickly engaged and rapidly informed.
- 2) Contact UDWR/WGFD AIS Biologist/Specialist if mussel(s) is/are detected
- 3) Interview source and gather information
- 4) Record details of mussel location
- 5) Visually validate adult mussels within 48 hours by UDWR/WGFD AIS Biologist/Specialist



Objective 2: Verify positive identification of *Dreissena* mussel(s).

- Purpose: Confirm positive identification of mussel(s) via laboratory microscopy and DNA analysis
- The agency that receives the initial reports is the primary responsible agency for visual and laboratory confirmation
- Both veligers and adult mussels will be examined via Laboratory analysis – microscopy and DNA PCR
- For mussels to be confirmed, a second, separate lab has to corroborate initial lab's laboratory analysis



Objective 3: Upon verification for the presence of *Dreissena* mussels form a “Response Team” comprised of relevant local natural resources personnel, and activate the RRP.

- Purpose: Activate a response management system that expedites interagency decision-making, information sharing, efficient resource management, and management of Dreissenids
- Response Team determines the extent of the mussel colonization, minimizes vectors and pathways, implements HACCP plan, sets up signage, implements eradication/containment actions, and sets up inspection/ decontamination stations
- UDWR AIS Coordinator notifies all members of the Response Team and UDWR Director's Office
- Response Team meets via conference call and initiates a media response led by UDWR Outreach personnel



Objective 4: Establish external communication systems.

- Purpose: Ensure consistent and effective communication to interested parties, including the media and public
- The process of disseminating information to internal and external stakeholders, including the media and public, will be developed by the UDWR/WGFD AIS Coordinators in conjunction with Regional and Statewide Outreach personnel, federal public affairs staff, and Response Team
- Develop and disseminate general public education and outreach material



Objective 5: Obtain and organize resources (personnel, equipment, funds, etc.), including compliance with laws and permitting requirements.

- Purpose: Provide sufficient resources to implement objectives
- Secure resource commitment from Response Team's home agencies and others for needed staff, facilities, equipment and funds by the UDWR/WGFD AIS Coordinators
- Ensure compliance with the broad array of applicable local, state and federal laws and permitting processes



Objective 6: Activate the Control Plan – prevent further spread using quarantine and pathway management via coordination, education, monitoring, inspection and decontaminations.

- Purpose: Minimize vectors and pathways
- Monitor movement of human activity –HACCP plan
- Temporary closure of reservoir to boaters until the Control Plan is implemented
- Partial closure of reservoir once containment plan is initiated
- Inspection and decontamination stations procedures
- Signage installation



Objective 7: The Response Team should immediately begin surveys to define the extent of a Dreissenid infestation (this will happen concurrently with closure activities).

- Purpose: Establish physical range of Mussels, and identify life-cycle phase



Objective 8: Apply available, relevant and legally defensible control measures.

- Purpose: Evaluate management options, initiate environmental compliance, then proceed with control actions
- Method for mussel eradication, control and/or containment to be determined by the UDWR/WGFD AIS Coordinators and Response Team
- Cost of mussel eradication, control and/or containment to be determined by the UDWR/WGFD AIS Coordinators with assistance from the Response Team
- Consult with USBR and DOI regarding environmental compliance



Objective 9: Institute long-term monitoring.

- Purpose: Establish long-term evaluation efforts
- UDWR/WGFD AIS Coordinators and Response Team need to collect and document data from long-term monitoring of mussels, including the post treatment period
- Real-time dataset will be used for disseminating information, subject to state and federal law



Objective 10: Evaluate response effectiveness, modify RRP and Control Plan as needed, and pursue long-term funding for *Dreissena* management.

- Purpose: Implement long-term monitoring, using data collected to revise RRP and Control Plan and make adjustments
- Conduct a follow-up evaluation by Response Team to identify opportunities to improve the RRP and Control Plan
- The RRP and Control Plan will be revised at least every five years to improve efficiency and effectiveness