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

May 2021

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.

Susan Eickhoff
Susan Eickhoff (May 28, 2021 11:32 MDT)

Susan Eickhoff, Ashley National Forest, Forest Supervisor
U.S. Forest Service

May 28, 2021
Date

Wayne G. Pullan
Wayne G. Pullan (Jun 3, 2021 17:42 MDT)

Wayne Pullan, Upper Colorado Basin Regional Director
Bureau of Reclamation

Jun 3, 2021
Date

BKN
Brian Nesvik (May 24, 2021 15:01 MDT)

Brian Nesvik, Director
Wyoming Game and Fish Department

May 24, 2021
Date

Rory Reynolds
Rory Reynolds (May 26, 2021 10:11 MDT)

Rory Reynolds, Acting Director
Utah Division of Wildlife Resources

May 26, 2021
Date

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Executive Summary

In the event that quagga mussels (*Dreissena rostriformis bugensis*) or zebra mussels (*Dreissena polymorpha*) are detected in Flaming Gorge Reservoir (FGR), quick action will be necessary to contain them and prevent their spread to other water bodies. This Rapid Response Plan (RRP) and Control Plans are intended to guide containment efforts after an initial detection of dreissenid mussels and were developed collaboratively by federal and state agencies, including the U.S. Forest Service Ashley National Forest (USFS), U.S. Bureau of Reclamation (USBR), the Wyoming Game and Fish Department (WGFD) and the Utah Division of Wildlife Resources (UDWR).

Currently, aquatic invasive species (AIS) activities at FGR focus on the prevention of introduction and establishment of all AIS with a particular focus on dreissenid mussels. The Control Plans, in the event of dreissenid mussel presence, shift AIS management to contain any invasive mussels in the reservoir while maintaining focus on preventing further introductions of AIS. Containment activities will focus on preventing the further spread of dreissenid mussels through coordination, education, monitoring, inspections, and decontaminations. During the first year after an initial detection, launching of watercraft will be allowed at a limited number of ramps, and shore launching of watercraft will be prohibited. Upon leaving the reservoir, all exiting watercraft will be inspected and decontaminated (if necessary and when feasible) to ensure that they are drained, cleaned, and dried to prevent the transport of dreissenid mussels or their larvae. Coincident with first-year control efforts, highway pinch point check/inspection stations will be constructed at strategic locations to intercept all watercraft traveling to and from the reservoir. Once these exit check/inspection stations are operational, closed ramps will be re-opened, and shore launching will once again be allowed. The Control Plans for each state document the steps that will be needed to construct and staff both the short-term and long-term exit inspection stations.

A response to a dreissenid mussel detection on an interstate water such as FGR will require a high level of coordination and collaboration between state and federal agencies. This RRP is intended to be implemented quickly and act as the guiding document for initial decision making when dreissenid mussels have been confirmed. The plan is developed around the following eight objectives:

1. Activate interagency “Response Team” and the RRP.
2. Define the extent of colonization.
3. Establish external communication systems.
4. Obtain and organize resources, including compliance with laws and permits.
5. Activate the Control Plans
6. Apply appropriate control actions.
7. Institute long-term monitoring.
8. Adaptive management – evaluate the RRP and Control Plans and modify as necessary.

These objectives serve as a road map to navigating the complexities of a concerted response to a dreissenid mussel detection and will lead to faster and more efficient implementation of each state's Control Plan. In the event of confirmed dreissenid mussels in FGR, the organizations (USFS, USBR, WGFD, and UDWR) will work in conjunction to implement the Control Plans for containing and controlling the spread of dreissenid mussels while allowing for continued use of this recreational resource. This RRP and associated Control Plans are intended as "living documents." They will be adapted as our understanding of dreissenid mussels and the technologies used to combat them evolve over time.

Background

Flaming Gorge Dam impounds Flaming Gorge Reservoir on the Green and Blacks Fork rivers, major tributaries of the Colorado River, in southwest Wyoming and northeast Utah. The Green River headwaters are in the Wind River and Wyoming ranges, and the Blacks Fork headwaters are in the Uinta Range of Utah and Wyoming. The reservoir begins a few miles south of Green River, Wyoming, and its dam is two miles southwest of Dutch John, Utah, and 43 miles north of Vernal, Utah.

Flaming Gorge Reservoir extends 91 miles from inflow to dam and has 375 miles of shoreline. When the reservoir is full at elevation 6,040 feet above sea level, it has a capacity of 3,788,900 acre-feet and a surface area of 42,020 acres. The maximum depth of FGR is 436 feet near the dam. 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 significant source of hydroelectricity and is the central flood-control facility for the Green River system.

The landscape surrounding FGR consists of two distinct types of land: a desert area in Wyoming composed of low hills, shale badlands, and desert shrubs and a mountainous area in Utah composed of benches, canyons, and forest. These diverse areas provide habitat for a variety of birds and animals such as deer, elk, bighorn sheep, pronghorn antelope, prairie dogs, Steller's jays, Clark's nutcrackers, and eagles.

Flaming Gorge Reservoir is a world-class kokanee salmon and lake trout fishery. From a fisheries perspective, FGR has a combined Utah and Wyoming estimated value of $26,999,420 per year (based on FGR 1993, 2003, and 2013 creel surveys and angler day values – Utah 2012 and 2013 Blue Ribbon Economic Report, and Wyoming 2005 report). This value does not reflect the costs associated with "big-ticket" items like boats. The presence of dreissenid mussels would have devastating effects on FGR's fishery, and in particular on the kokanee salmon. Kokanee salmon's diet consists primarily of zooplankton. Like kokanee, dreissenids are filter feeders whose diets are also composed primarily of plankton (zooplankton and phytoplankton). Like all food sources, zooplankton is finite. With less food for the kokanee, their quantity and quality would be impacted significantly.

FGR was the third most frequented Utah waterbody in 2016, with a reported combined Utah and Wyoming total of 17,172 inspected watercraft visiting the reservoir from May through the first week of September. A large portion of the watercraft that visit FGR are non-angling, recreating watercraft. The estimated value for these non-angling boaters have not been determined but would add to the almost $27 million reservoir estimated yearly value. All of which would have a substantial negative impact on the local economies of Sweetwater and Daggett counties should the reservoir become infested with dreissenid mussels.

Stakeholders

The U.S. Bureau of Reclamation (USBR), maintains and operates Flaming Gorge Dam. The dam is a major component of the Colorado River Storage Project, which stores and distributes upper Colorado River Basin water. The USBR operates Flaming Gorge Dam to provide long-term storage for downstream water-right commitments. The dam also generates a significant amount of hydroelectricity and is the central flood-control facility for the Green River system. The U.S. Forest Service (USFS), Ashley National Forest Office administers the Flaming Gorge National Recreation area that surrounds Flaming Gorge Reservoir. The Wyoming Game and Fish Department (WGFD), Green River Regional Office, manages the fishery in the Wyoming portion of Flaming Gorge Reservoir. The Utah Division of Wildlife Resources (UDWR), Northeast Region, manages the fishery in the Utah portion of Flaming Gorge Reservoir. Contact information for individuals within these federal and state agencies can be found in Appendix A.

There are several other key stakeholders at FGR in addition to the federal and state agencies with management responsibilities (Appendix A). These include county and municipal government, chambers of commerce, concessionaires (marinas), irrigators, fishing guides, and fishing tournament directors.

Boating Community

Boating is very popular on Flaming Gorge Reservoir. Table 1 represents a simple extrapolation of 2003 program creel flight data during which pilots counted, among other things, boats (Mosley et al. 2013). Pilots lumped all boats into two categories: boats fishing and boats not fishing. Boats not fishing include both recreational boats (wakeboard boats, jet skis, etc.) and fishing boats traveling somewhere at the time of the count. Although a bit dated, the patterns observed in this data set hold true today.

People boat on FGR year-round, ice permitting, with anglers being the dominant boater type (Table 1). Peak boating season on FGR is May through September. Recreational boaters are most common during June, July, and August. On the Wyoming side of FGR, non-resident boaters outnumber resident boaters 74% to 26%, according to an analysis of inspection data from January 1, 2018 through August 11, 2019. The vast majority of the boaters are from Utah (62%). This same pattern was observed in the 2003 and 2013 Flaming Gorge Creel data (Mosley et al. 2013).

TABLE 1. Simple extrapolation of 2003 program creel flight data during which pilots counted, among other things, boats. Pilots lumped all boats into two categories: boats fishing and boats not fishing. Therefore boats not fishing include both recreational boats and fishing boats traveling somewhere at the time of the count.

	Boats Fishing	Boats Not Fishing	Total All Boats	Percent Boats Fishing
January	171	31	182	94
February	56	7	63	89
March	128	11	139	92
April	369	83	423	87
May	2,159	460	2,618	82
June	1,931	807	2,738	71
July	1,909	1,074	2,983	64
August	1,614	779	2,383	68
September	1,040	633	1,673	82
October	382	102	451	85
November	220	102	229	96
December	117	46	122	96
Total	10,095	4,134	14,003	

Flaming Gorge Reservoir rarely freezes all the way to the dam. The majority of the winter boating activity is anglers pursuing Lake Trout. Each year, Firehole boat ramp freezes in November. Buckboard ramp typically freezes in late December, but on warm winters has stayed open until mid-January. Brinegar's Ferry and Anvil Draw Ramps become icebound most years by mid-January, but during warm winters, they may stay open into February. In Utah, it is not uncommon for Lucerne Marina and Antelope Flat ramps to stay open through January and only freeze up for a short time in February. The Sheep Creek ramp typically locks in with ice by mid-January but can remain open during warm winters. It takes a very cold winter for the Cedar Springs and Mustang ramps near Flaming Gorge Dam to freeze in.

An analysis of AIS inspection data between January 1, 2018 and November 11, 2019 (n=18,425) suggests 89% of boats headed to FGR are motorized boats. Motorized boat types consisted of 47% outboard motors, 35% inboard/outboard motors, 8% inboard motors, 2% jet motors, and 8% personal watercraft. Most boats with inboard engines have ballast tanks and sea strainers, and a portion of the boats with inboard/outboard engines have sea strainers and other complex plumbing. Therefore, it is likely that between 10% and 20% of the boats on FGR have difficult to drain compartments.

Access

Forty-five roads provide access to FGR (Table 2). The U.S. Government owns and the USFS administers all of the land surrounding the reservoir. Ten of the roads provide access to improved concrete public boat ramps (Figure 1). Shore launching is likely to occur from 30 of the remaining 35 access roads (Table 2). FGR has 10 developed public boat ramps and no privately-owned boat ramps, five ramps each in Wyoming and Utah. The majority of the shore launching on the Wyoming side of FGR occurs from the west shore downstream of the Green River and Blacks Fork confluence and predominantly occurs at undeveloped camp sites. Shore launching on the east side of FGR is limited to the area just south of Firehole and Sage Creek bays. Shore launching is rare on the Utah side of FGR, but some shore launching occurs at Stateline and Linwood bays.

TABLE 2. Number of roads departing from the primary highways and county roads that encircle Flaming Gorge Reservoir. Roads are classified as paved, ditch and berm, and two track. Within these classifications, roads are enumerated as either "trailered boat can launch" (improved or shore) or "trailered boat cannot launch."

State	Road Type	Trailered boat can launch	Trailered boat cannot launch
Wyoming	Paved	2	0
	Ditch and Berm	15	0
	Two Track	13	3
Utah	Paved	4	0
	Ditch and Berm	6	0
	Two Track	0	2
Total		40	5

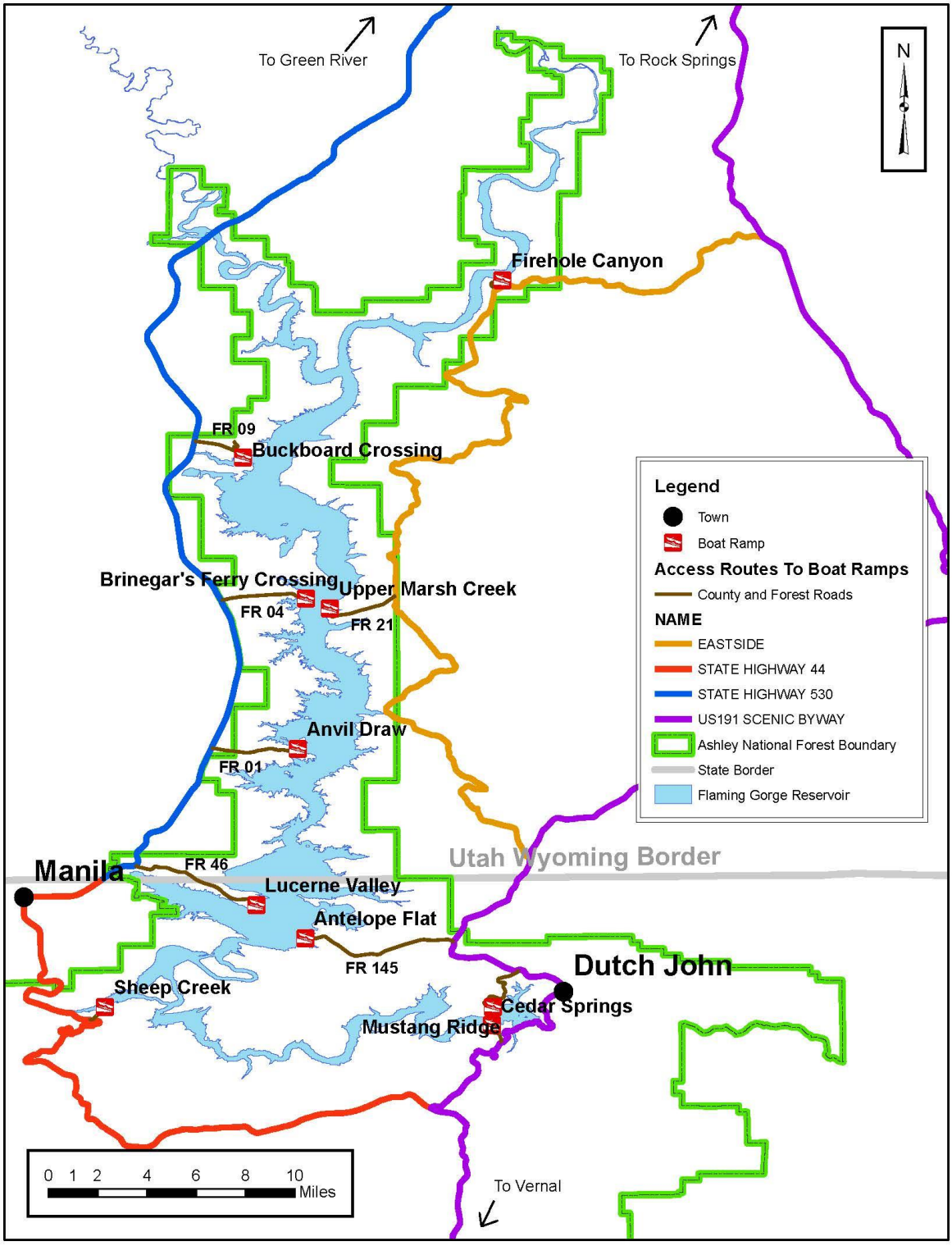

FIGURE 1. Map of Flaming Gorge Reservoir, Wyoming-Utah, denoting the 10 developed boat ramps on the reservoir. Holmes Crossing boat ramp is referred to as the Brinegar's Ferry boat ramp in this document.

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. Flaming Gorge Dam is administered, maintained and operated by USBR, while the USFS manages recreation on Flaming Gorge Reservoir and the associated National Recreation Area.

For the USBR, the U.S. Fish and Wildlife Service, and USFS there are many legal authorities that promote collaboration among state and federal partners to manage and control invasive species. All Acts, Executive Orders, and Department of Interior legal authorities pertaining to invasive species are summarized in the United States Department of Interior Invasive Species Strategic Plan, 2021-2025 (U.S. Department of Interior 2021; see Appendix E of https://www.doi.gov/sites/doi.gov/files/doi-invasive-species-strategic-plan-2021-2025-508.pdf).

Furthermore, the authority for the State of Utah is the Utah Aquatic Invasive Species Act, codified as Chapter 27 of Title 23 in the Utah Code (https://le.utah.gov/xcode/Title23/Chapter27/23-27.html?v=C23-27_1800010118000101. Utah Administrative Rule R657-60-8 (https://wildlife.utah.gov/r657-60.html) provides additional authority to UDWR in the event of a water body being affected by a dreissenid mussel 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 mussel 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 mussel species is developed and implemented.

Authority for the State of Wyoming is the Wyoming Aquatic Invasive Species Act, W.S. 23-4-201 through 23-4-206 (https://wyoleg.gov/statutes/compress/title23.pdf). The Wyoming Aquatic Invasive Species Act states that the Wyoming Game and Fish Commission, in consultation with the department of state parks and cultural resources, may restrict watercraft usage on a specific body of water upon a finding that introduction of an invasive species is imminent or has already occurred. Wyoming's authority pertaining to aquatic invasive species is further defined in Chapter 62, Regulation for Aquatic Invasive Species (https://wgfd.wyo.gov/Regulations/Regulation-PDFs/REGULATIONS_CH62.pdf).

The importation or interstate transport of zebra and quagga mussels is prohibited by the federal Lacey Act, 16 U.S.C. §§ 3371-3378 (for current list of injurious wildlife, see: https://www.fws.gov/injuriouswildlife/pdf_files/Current_Listed_IW.pdf). State statutes prohibit the importation or interstate transportation of dreissenid mussels for both Wyoming (§ 23-4-201) and Utah (§ statute (27-23-201).

This RRP and Control Plans 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 will be the lead entities in the implementation and organization of the RRP and Control Plan.

Should a chemical control of dreissenid mussels 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 (WDEQ). 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 WDEQ.

Detection and Confirmation of Dreissenid Mussels

Any detection of dreissenid mussels in Flaming Gorge Reservoir will begin either through an incidental observation by an individual or by detection through regular monitoring conducted by WGFD or UDWR. Mandatory reporting laws in each state require that any person who discovers or knows of unreported dreissenid mussels shall report them to the appropriate agency. Only samples collected by the WGFD or UDWR may be used to change the classification of a water. Samples collected by a third party will be used as a notification of a possible detection, which must be confirmed by a WGFD or UDWR sample.

Dreissenid mussel monitoring of Flaming Gorge Reservoir in Wyoming is conducted annually in accordance with the “Wyoming Game and Fish Department Aquatic Invasive Species Sampling and Monitoring Manual” (WGFD 2019). Monitoring of Flaming Gorge Reservoir in Utah is conducted annually in accordance with Utah Division of Wildlife Resources Aquatic Invasive Species Dreissenid Sampling Protocols. The reservoir is sampled twice per season (June or July, and September or October) in Wyoming and four to six times per season (May through October; dependent on surface water temperature) in Utah.

Dreissenid mussel classification is based on criteria outlined by the Western Regional Panel on Aquatic Nuisance Species (WRP 2018). To meet the minimum criteria for detection of dreissenid mussels, an adult or juvenile specimen must be verified by two independent experts and confirmed by DNA, or a veliger (larval form) must be identified and verified using cross-polarized light microscopy by two independent experts and confirmed by DNA analysis (PCR and gene sequencing).

Based on sampling results, waters are given certain classifications related to their dreissenid mussel status:

A water body that has not been sampled for aquatic invasive species is classified as *Unknown/Not Tested*. A water body at which sampling is ongoing and nothing has been detected (or nothing has been detected within the time frames for de-listing) is classified as *Negative/Undetected*. Currently, all waters in Wyoming and Utah (with the exception of Lake Powell) are classified as either *Unknown/Not Tested* or *Negative/Undetected*.

A water body classified as *Inconclusive* has not met the minimum criteria for detection, but evidence of dreissenid mussels has been documented. For example, evidence of a mussel veliger is detected via microscopy but cannot be confirmed by DNA analysis. This is a temporary classification, and additional sampling of this water will be conducted to determine whether the water body is classified as *Negative/Undetected* (no detections in subsequent sample) or *Suspect* (verified detection in subsequent sample).

A water body classified as *Suspect* indicates a water at which one sample has been verified by visual confirmation (visual identification of adult or microscopy identification of veliger), and this sample was confirmed as dreissenid by DNA analysis (PCR and gene sequencing). In this scenario, additional sampling will be conducted to determine whether another sample taken within 12 months detects evidence of dreissenid mussels. If a subsequent sample does detect dreissenid mussels, this water will then be classified as *Positive*.

A water body classified as *Positive* indicates a water at which two or more sampling events within a 12-month period meet the minimum criteria for detection. For example, samples from two different sampling events are verified by both visual identification (including microscopy) and DNA confirmation (PCR and gene sequencing).

In many cases, a water classified as *Positive* will ultimately become *Infested*, which is a water body with an established (recruiting and reproducing) population of dreissenid mussels. For example, lakes Mead and Powell are considered *Infested* waters as they have large populations of reproducing dreissenid mussels, and they are readily evident on the shoreline and submerged materials such as docks, buoys, etc.

In some instances, the classification of a water body can be downgraded over time. The exact reasons why dreissenid mussels are detected at a water once, then not again in subsequent sampling, or are detected in a water classified as *Positive* but never establish a population, remains largely unknown.

A water body initially classified as *Inconclusive* can be de-listed to *Negative/Undetected* status after one year of negative testing results, including at least one sample taken in the same month of subsequent year as the initial sample from which evidence of mussels was detected (to minimize seasonal environment variability). The time frame for de-listing a water body extends

from there with a water body initially classified as *Suspect* requiring three years of negative testing to re-classify to *Negative/Undetected*, a *Positive* water body requiring five years of negative testing to re-classify to *Negative/Undetected*, and an *Infested* water body requiring a successful eradication or extirpation event and a minimum of five years of negative testing results post-eradication event to re-classify to *Negative/Undetected*.

This rapid response plan will be initiated when a sample collected from FGR by either UDWR or WGFD meets the minimum criteria for detection, thus making the reservoir status *Suspect*. If a preliminary report suggests that dreissenid mussels have been found in FGR (and we are still investigating the veracity of the report), the location will be treated as an elevated risk, and this information will be kept internal (not released to media). Each agency will immediately contact the other agency if sampling results in a status of *Inconclusive* or higher (see Appendix B). In addition, the response team members from the USFS and USBR will be notified of an *Inconclusive* sample.

If a plankton sample is determined to be *Inconclusive*, UDWR and WGFD will initiate additional sampling in an attempt to verify the detection further. At a minimum, plankton sampling will be conducted one time per month in the months of May through October. At least three samples will be collected each month; one sample from the location where the initial *Inconclusive* sample was collected, and two additional samples taken from within one mile of the initial location.

Rapid Response Plan Implementation

Prevention remains the primary activity 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 Plans are intended to enhance interagency coordination beginning with the report of a confirmed presence of dreissenid mussels through containment and initial control efforts. This RRP is designed to implement the Control Plans more rapidly in the event of a confirmed finding.

The RRP and Control Plans for dreissenid mussels in FGR will fall into the following eight objectives that support the goals to delineate and contain these invasive mussels if they are detected. Note that these actions are not necessarily sequential; many may be implemented simultaneously. See Appendix C for the Objectives Flow Chart and description.

1. Activate interagency "Response Team" and the RRP.
2. Define the extent of colonization.
3. Establish external communication systems.
4. Obtain and organize resources, including compliance with laws and permits.
5. Activate the Control Plans
6. Apply appropriate control actions.
7. Institute long-term monitoring.
8. Adaptive management – evaluating the RRP and Control Plans and making modifications as necessary.

These actions and tasks are described in detail in the following sections.

Objective 1: Upon laboratory confirmation of the presence of dreissenid mussel(s) at a *Suspect* level of detection or greater, activate the RRP and "Response Team" comprised of relevant local natural resource personnel.

- Purpose: Activate a response management system that expedites interagency decision-making, promotes information sharing, ensures efficient resource management, and supports on-scene management of dreissenid mussels.
- 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.
- Response Team personnel: The Response Team is comprised of technical personnel:
    - WGFD - AIS Coordinator, Green River AIS Specialist, Green River Fisheries Supervisor, Green River Fisheries Biologist
    - UDWR - AIS Coordinator, Statewide AIS Operations Lieutenant, Northeastern Region AIS Biologist, Northeastern Region AIS Interdiction Specialist.

    - USFS - Intermountain Region TES Coordinator, Ashley National Forest Fish and Wildlife Manager
    - USBR - Regional AIS Coordinator, Area AIS Coordinator
- Personnel notification: Personnel to be notified for each status level are listed in Appendix B. Media response is outlined in Objective 3 and will not occur until after personnel notification. Once a dreissenid mussel has been confirmed at a *Suspect* level of detection or greater, UDWR and WGFD AIS Coordinators will notify all members of the Response Team, who will then inform status-specific contacts listed in Appendix B. The state agency's AIS Coordinator that receives the initial dreissenid mussel verification will be responsible for ensuring that all members of the Response Team are notified.
    - UDWR Northeastern Region AIS Biologist will maintain the notification call list comprised of FGR stakeholders (Appendix A) and update it and all web links in this document two times per year (April and October). The Notification List will be housed in Google Docs and shared with all relevant personnel.
- UDWR Director and Utah Wildlife Board Approval: Action by the Director of the UDWR is needed to list a Utah water body as affected (*Suspect*, *Positive*, or *Infested*; see Appendix B for classification definitions). Action by the Utah Wildlife Board is required to list any Utah water as *Infested* with dreissenid mussels under Rule R657-60.
    - Director's Office informed. Once the presence of dreissenid mussels has been confirmed at a *Suspect* level of detection or greater, UDWR AIS Coordinator will inform the Director's Office, and under the direction of the Director's Office, the information will be disseminated.
- Wyoming Game and Fish actions: See the Wyoming Game and Fish Department Administrative Rapid Response Plan (WGFD 2020) for applicable rules, regulations and communication chains to be followed if a water body is found to be *Suspect*, *Positive* or *Infested* with dreissenid mussels.
- Response Team roles and responsibilities: The Response Team will be the on-the-ground personnel that perform and oversee all aspects of the RRP and Control Plan.
- Additional Response Team personnel: Agencies represented on the Response Team can add individuals to the Response Team as needed but must notify the RRP and Control Plan leaders of any changes to the Response Team.

Objective 2: The Response Team should immediately begin surveys to determine reservoir status (*Suspect, Positive, Infested)*.

- Purpose: Conduct follow-up sampling to determine reservoir status (i.e., *Suspect*, *Positive*, or *Infested*).
- Survey methods: Focus initial surveys in area of initial detection. The kind of sampling method performed will vary depending on whether the dreissenid mussels are visible adult/juvenile mussels or veligers. For visible dreissenid mussels, shorelines, and natural

and artificial substrates will be surveyed. 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. Sampling protocols will comply with standards agreed upon by the Western Regional Panel (WRP 2018 or most current version). Detailed sampling protocols can be found in the dreissenid mussel sampling manuals for each state (UDWR 2020 and WGFD 2019).

- Survey immediacy: Ensure initial surveys begin as soon as possible, and results are reported to the AIS Coordinators for both state agencies. The AIS Coordinators will provide updates to the entire Response Team. Results of initial surveys will determine the status level that will be addressed in the Control Plans.

Objective 3: Establish external communication systems.

- Purpose: Ensure consistent and effective communication to interested external parties, including the media and the 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.
    - The initial release of information to the media will not occur until all agency partners are notified (UDWR, WGFD, USFS, USBR).
    - The initial release of information to the media will not occur until all contacts listed in the Notification List (Internal and External Contacts, Appendix A) are emailed.
    - The initial media response should be initiated within 48 hours of meeting the minimum criteria for detection (designation of *Suspect* Status).
- Outreach: Develop and disseminate general public education and outreach material that is agreed upon between state and federal agencies.
    - An overview of expected public outreach responses, by status level, can be found in Appendix D.
    - Agency emblems shall be included on all signs (USFS, USBR, WGFD, UDWR). Include emblem for Bureau of Land Management (BLM), if appropriate.

Objective 4: Obtain and organize resources (personnel, equipment, funds, etc.), including compliance with laws and permitting requirements.

- Purpose: Provide sufficient resources to implement the Control Plans.
- Resource commitment: UDWR and WGFD AIS Coordinators will work with agency leadership to secure commitment from the Response Teams' 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 mussel control/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 entities as needed for the 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 agreements and permitting requirements can be found in Appendix E. To streamline the process, where possible, existing agency permits will be modified as opposed to securing new ones.
- Whenever possible, efforts should be made to obtain and organize resources referenced in this objective prior to detection of dreissenid mussels in FGR.

Objective 5: Activate the Control Plans – prevent further spread via coordination, education, monitoring, inspections, 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 the further spread of dreissenid mussels.
- Follow each state's status-specific Control Plans outlined in Appendices F and G.
- Closures and Restrictions
    - Short-term closures. Following an initial detection of dreissenid mussels in Flaming Gorge Reservoir, various closures will be necessary to ensure interception of all watercraft leaving the reservoir. In Wyoming, there will be an immediate prohibition on all shore launching, and the Marsh Creek and Brinegar's Ferry ramps will be closed. The Firehole Canyon, Buckboard Crossing, and Anvil Draw ramps will remain open, and exit inspection stations will be established at each. In Utah, there will also be an immediate prohibition on all shore launching. Mustang Ridge and Antelope boat ramps will be closed. The Lucerne, Sheep Creek, and Cedar Springs Marina boat ramps will remain open, and exit inspection stations will be established at each. Agencies will work together to provide personnel (or use the best available technology) to document boaters leaving FGR within 1-2 days of initial detection, with a focus on daylight hours. Records will be recorded in the regional Watercraft Inspection and Decontamination database.
    - Long-term closures. In the first year after an initial detection of dreissenid mussels, highway pinch point check or inspection stations will be established in strategic locations to intercept all watercraft leaving the reservoir (see Appendices

F and G for details). Once these check or inspection stations are operational, shore launching prohibitions and ramp closures can be lifted.

- Potential closures at *Infested* status. Detection of adult, reproducing dreissenid mussels would indicate a higher risk for transmitting mussels to other waters than detection of veligers. If adult, reproducing mussels are detected in Flaming Gorge Reservoir, consideration should be given to additional closures to reduce risk of transmission. For instance, the ramp or ramps nearest to the detection location of adult mussels may be closed until Control Plans are in place.
- Boats moored at the various marinas on FGR will be allowed to operate on the reservoir during closure orders or initiation of the control plans. However, if a detection is isolated to a specific marina and the Response Team has decided to attempt an eradication effort, boats in that marina may be required to stay in place for the duration of the eradication effort or be retrieved from the water, trailered, and decontaminated.

Objective 6: Determine distribution and abundance of mussels.

- Purpose: Conduct additional sampling to determine distribution and abundance of dreissenid mussels and establish long-term evaluation efforts as funding allows. If detectable, establish the physical range of dreissenid mussels, and identify the life-cycle phase of mussels to inform policy and tactical response.
- Determine the extent of colonization: If detectable numbers of veligers and/or adult/juvenile mussels exist, survey reservoir to determine the geographic extent of the dreissenid mussel population. Focus initial efforts on the immediate area around the detection site, and expand outward as necessary.
- Veliger sampling frequency: For *Suspect* or *Positive* status waters, veliger sampling will increase to at least once per month by each agency on their respective portions of the reservoir during the primary boating season (May – October). For *Infested* status waters, veliger sampling will occur on an as-needed basis.
- 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 7: 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(s): 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 mussel life stage to be treated, extent of distribution and analysis of vectors and pathways for dreissenid mussel spread, and available management options. As of the last revision of this document, we are not aware of any tools currently available to eradicate dreissenid mussels from a water body. If such tools become available, efforts should be made to obtain approvals for their use prior to initial detection.
- Determine cost of implementation: The UDWR and WGFD AIS Coordinators, with assistance from the Response Team, will estimate the cost of eradication, control/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 8: Evaluate response effectiveness, modify the RRP and Control Plan as needed, and pursue long-term funding for dreissenid mussel management.

- Purpose: Based on long-term monitoring, use data collected to revise the RRP and Control Plans 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 dreissenid 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 Plans.
- Living document: As circumstances dictate, the RRP and Control Plans will be revised at least every five years to improve its efficiency and effectiveness.

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Appendix A--Notification List
Last Updated January 15, 2021

Internal Contacts

Wyoming Game & Fish Dept.

Josh Leonard	*AIS Coordinator	307.721.1374	joshua.leonard@wyo.gov
Eric Hansen	*Green River AIS Specialist	307.708.0561	eric.hansen@wyo.gov
Robert Keith	*Green River Fisheries Supervisor	307.870.8846	robert.keith@wyo.gov
Gary Boyd	Green River Game Warden	307.870.8816	gary.boyd@wyo.gov
John Walrath	*Green River Fisheries Biologist	308.750.1898	john.walrath@wyo.gov
Todd Graham	Green River Wildlife Supervisor	307.870.8088	todd.graham@wyo.gov
Robin Kepple	Regional Information Specialist	307.777.4523	robin.kepple@wyo.gov
Miles Anderson	Habitat and Access Supervisor	307.367.2147	miles.anderson@wyo.gov

Utah Division of Wildlife Res.

Nathan Owens	*AIS Coordinator	385.239.0861	nathanowens@utah.gov
Richard Gibbs	*AIS Biologist	435.790.8938	richardgibbs@utah.gov
Jordan Dimick	*AIS Interdiction Specialist	435.790.5357	dimickj@utah.gov
Trina Hedrick	Aquatics Manager	435.790.2283	trinahedrick@utah.gov
Ryan Mosley	Flaming Gorge Project Leader	435.621.2546	ryanmosley@utah.gov
Jack Lytle	Conservation Officer, North Slope	435.790.0129	jacklytle@utah.gov
Tonya Kieffer	Outreach Manager	435.790.0207	tonyakieffer@utah.gov
Miles Hanberg	Regional Supervisor	435.781.9453	mileshanberg@utah.gov
Eric Miller	Regional AIS Corporal	435.790.2205	ericmiller@utah.gov
Bruce Johnson	*AIS Operations Lieutenant	385.228.3066	brucejohnson@utah.gov
Torrey Christophersen	Regional Lieutenant	435.790.2291	torreychristophersen@utah.gov

U.S. Forest Service

Susan Eickhoff	Forest Supervisor	435.781.5101	susan.eickhoff@usda.gov
Lee Jacobson	Regional TES Coordinator	801.625.5662	lee.jacobson@usda.gov
Curt Booher	Flaming Gorge District Ranger	385.278.5825	curtis.booher@usda.gov
Dan Abeyta	*Fish & Wildlife Manager	435.828.1679	daniel.abeyta@usda.gov
Logan Linnan	Law Enforcement	435.630.5598	logan.linnan@usda.gov
Louis Haynes	Public Affairs Officer	435.781.5105	louis.haynes@usda.gov

U.S. Bureau of Reclamation

Rick Baxter	Program Administrator	801.379.1078	rbaxter@usbr.gov
Robert Radtke	*Regional AIS Coordinator	801.524.3719	rradtke@usbr.gov
Nick Williams	Power Office Manager	801.524.3745	nwilliams@usbr.gov
John Morton	Flaming Gorge Facility Manager	435.885.3231	jmorton@usbr.gov
Brittany White	*Area AIS Coordinator	801.379.1052	blwhite@usbr.gov
Amee Andreason	Public Affairs Specialist	801.524.3769	aandreason@usbr.gov

Response Team personnel

Appendix A, continued

External Contacts

County Commission Representatives			
Jack Lytle	Daggett County Commissioner	435.784.3218	jlytle@daggettcounty.org
Wally Johnson	Sweetwater County Board Chairman	307.872.3899	johnsonw@sweet.wy.us
Municipalities			
Town of Manila	Clerk	435.784.3143	marlenac@manilautah.com
Town of Dutch John	Clerk	435.880.8042	clerk@dutchjohn.org
City of Vernal	City Manager	435.781.7110	qbennion@vernalcity.org
City of Rock Springs	Administrative Asst. to Mayor	307.352.1510	kristyn_muniz@rswy.net
City of Green River, WY	City Administrator	307.872.0554	rclevenger@cityofgreenriver.org
Chambers of Commerce.			
Vernal	Sidney Smith, President	435.622.5007	vchambermgr@easilink.com
Green River	Lisa Herrera, CEO	307.875.5711	office@grchamber.com
Rock Springs	Rick Lee, CEO	307.362.3771	ceo@rockspringschamber.com
Flaming Gorge	Mark Wilson, President	801.506.9415	markw@redcanyonlodge.com
Concessionaires			
Jerry and Jill Taylor	Lucerne Valley Marina, UT	435.784.3483	lucernemarina@live.com
Tony and Jennifer Valdez	Buckboard Marina, WY	307.875.6927	valdez.tony@gmail.com
Stacy and John Rauch	Cedar Springs Marina, UT	435.889.3795	sportfishingadventures@hotmail.com
Irrigation Companies			
Sheep Creek Irrigation Company	Boyd Palleson	435.784.3574	No Email
Greendale Water Company	Craig Collett	435.889.3769	craig.fgresort@yahoo.com
Interstate Irrigation and Reservoir Co.	Allen Young	307.780.7282	No Email
Dutch John Water	Trevor Brooksby	435.823.5579	tbrooksby@daggettcounty.org
Joint Powers Water Board			
Bryan Seppie	General Manager	307.875.4317	bSeppie@jpwb.org
Green River users			
Dinosaur River Expeditions	Tyler and Jen Callantine	800.345.7238	jencallantine@gmail.com
Holiday River Expeditions	Tim Gaylord	800.624.6323	tim@bikeraft.com
GROGA	Darren Bowcutt (President)	435.720.0486	dbowwrf@gmail.com
Reservoir Fishing Guides			
Creative Fishing Adventures	Jim Williams	435.784.3301	fishforlakers@gmail.com
Conquest Expeditions	Kyle Edwards	801.244.9948	No Email
Flaming Gorge Fishing Co	Terry Collier	801.652.4231	gwerning@union-tel.com
Sportfishing Adventures (Cedar Spr.)	John & Staci Rauch	435.889.3795	sportfishingadventures@hotmail.com
Flaming Gorge Corp (Lucerne)	Jerry Taylor	435.784.3483	lucernemarina@live.com
Buckboard Marina	Tony & Jen Valdez	307.875.6927	admin@buckboardmarina.net
Tournament Directors			
Flaming Gorge Derby	Jerry Taylor	435.784.3483	Lucernemarina@live.com
Ducks Unlimited FG Fishing Derby	Jordynn Hewitt	435.880.7002	dufgfishderby@gmail.com
Sovay Fishing Derby	Elda Reyes	307.872.6504	Elda.Reyes@Solvay.com
Burbot Bash	Ryan Kelly	801.367.0862	flaminggorgetourism@gmail.com
Other users			
American Land and Leisure	Roger Hunt	801.226.3564	rm.ut@americanll.com
Wild West Paddle Company		801.362.7238	wildwestpaddleco@gmail.com

Appendix B--Levels of Dreissenid Mussel Detection Definitions, and Personnel Notification Based on Status Levels

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

- Notification for *Inconclusive*:
  - UDWR and WGFD AIS Coordinators
  - U.S. Forest Service response team members
  - U.S. Bureau of Reclamation response team members

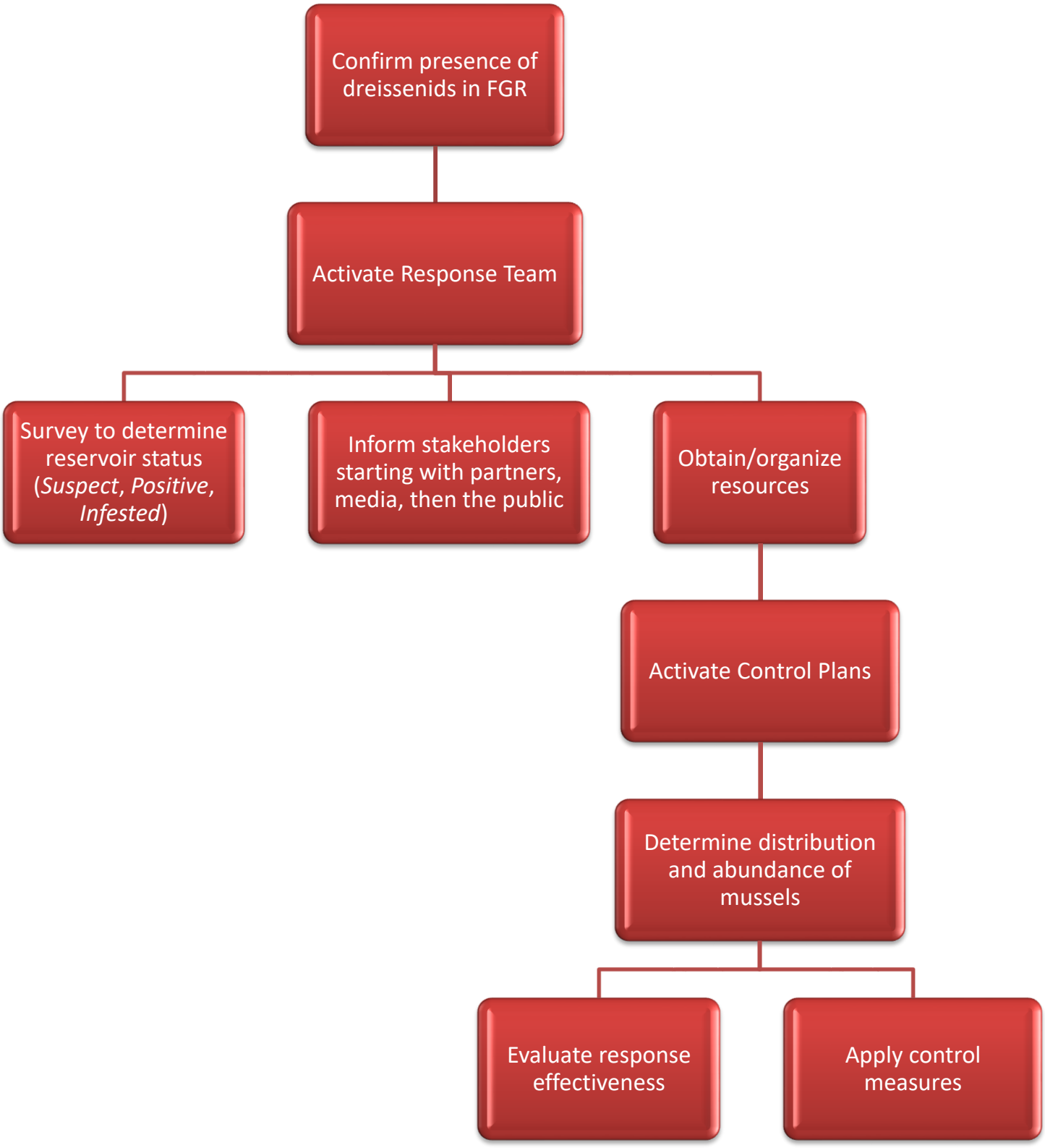
Suspect: Dreissenid mussel indicated in a single sampling event and confirmed by both microscopy and PCR.

Positive: Dreissenid mussel indicated in two consecutive sampling events and confirmed by both microscopy and PCR.

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

- Notification for *Suspect*, *Positive*, or *Infested*:
  - UDWR and WGFD AIS Coordinators
  - UDWR and WGFD Director's Office
  - Response Team
  - Notification list
  - Media Response

Appendix C--Objectives Flow Chart



Objective 1: Upon laboratory confirmation of the presence of dreissenid mussel(s) at a *Suspect* level of detection or greater, activate the RRP and "Response Team" comprised of relevant local natural resource personnel.

- Purpose: Activate a response management system that expedites interagency decision-making, promotes information sharing, ensures efficient resource management, and supports on-scene management of dreissenid mussels.
- Response Team personnel: Technical personnel from WGFD, UDWR, USFS and USBR.
- Response Team roles and responsibilities: The Response Team will be the on-the-ground personnel that perform and oversee all aspects of the RRP and Control Plans.

Objective 2: The Response Team should immediately begin surveys to determine reservoir status (Suspect, Positive, Infested).

- Purpose: Conduct follow-up sampling to determine reservoir status (i.e., *Suspect, Positive,* or *Infested*).
- Immediately collect samples to attempt to verify the initial detection and determine reservoir status.
- Focus surveys in area of initial detection and use methods appropriate for life stage initially detected.
- AIS Coordinators will update entire Response Team when results are available.

Objective 3: Establish external communication systems.

- Purpose: Ensure consistent and effective communication to interested external parties, including the media and the 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.

Objective 4: 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 Teams' home agencies and others for needed staff, facilities, equipment, and funds. And they will identify and secure sufficient resources for the dreissenid mussel control/containment, or eradication actions, and ensure a mechanism for dispersal of funds is in place.
- 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 agreements and permitting requirements can be found in Appendix E.

Objective 5: Activate the Control Plans – prevent further spread via coordination, education, monitoring, inspections 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 the further spread of dreissenid mussels.
- Follow each state's status-specific control plans outlined in Appendices F and G.
- Closures and Restrictions: short-term closures, long-term closures, and potential closures at *infested* status.

Objective 6: Institute long-term monitoring.

- Purpose: Establish long-term evaluation efforts as funding allows.
- Determine extent of colonization. Focus initial efforts on immediate area around detection site and expand outward as necessary.
- Veliger sampling frequency: at least once per month for *Suspect* or *Positive* during primary boating season (May-October).
- 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 7: Apply available, relevant and legally defensible control measures.

- Purpose: Evaluate management options, initiate environmental compliance, then proceed with control actions.
- Determine appropriate method(s): The UDWR and WGFD AIS Coordinators and the Response Team will decide what control measures to use.
- Determine cost of implementation: The UDWR and WGFD AIS Coordinators, with assistance from the Response Team, will estimate the cost of eradication, control/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.

Objective 8: Evaluate response effectiveness, modify RRP and Control Plan as needed, and pursue long-term funding for dreissenid mussel management.

- Purpose: Based on long-term monitoring, use data collected to revise the RRP and Control Plans 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 dreissenid 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 Plans will be revised at least every five years to improve on its efficiency and effectiveness.

Appendix D—Public outreach plans based on dreissenid mussel status levels.

Communications and outreach personnel from WGFD, UDWR, Ashley National Forest and the Bureau of Reclamation will work cooperatively to draft press releases, frequently asked questions and other informational resources deemed appropriate to alerting the public to a detection of dreissenid mussels in Flaming Gorge Reservoir. If available prior to a detection of dreissenid mussels, these materials will be used in lieu of more generalized statewide materials referred to below.

Short-term *Suspect* Status

WGFD Communications and outreach personnel have developed a draft statewide press release, which can be found in the WGFD Administrative Rapid Response Plan (WGFD 2020), and a statewide public outreach plan. The AIS Coordinator and Green River Regional Fisheries Supervisor will collaborate with the Green River Regional I&E Specialist to relay information about short-term *Suspect* status at Flaming Gorge Reservoir through local and regional media outlets (newspapers, web-based news outlets, radio stations, etc.), social media (e.g., Facebook), and through the WGFD website. The Green River Fisheries Supervisor and I&E Specialist will also draft articles for the monthly Green River wildlife newsletter and the FMGR annual angler newsletter. The articles, among other things, will direct readers to the WGFD Rapid Response Plan website for additional information.

Likewise, the Utah Division of Wildlife Resources (UDWR) outreach staff will provide information to the public through social media, the UDWR website, Utah Department of Natural Resources newsletters, and local newspaper, television and radio news outlets. Outreach products will also be distributed to regional AIS management groups (i.e., Western Regional Panel on Aquatic Nuisance Species, Western Invasive Species Coordinating Group, Colorado Fish and Wildlife Council, Western Association of Fish and Wildlife Agencies, etc.) for widespread dissemination. In addition, the administrator of the U.S. Geological Survey's Non-Indigenous Species Database (found at https://nas.er.usgs.gov/) will be notified of the detection by the AIS Coordinator of the state in which the detection occurred.

UDWR,WGFD, and the USDA Forest Service will work together to ensure that signs stating the *Suspect* status of the reservoir are placed at appropriate access points around the reservoir.

Flyers will be prepared that announce the short-term *Suspect* status and explain the steps boaters need to take to prevent the spread of invasive mussels. The flyers will explain the

mandatory inspection requirements for boats departing Flaming Gorge Reservoir. When practical, flyers will be double-sided to explain inspection and decontamination requirements for each state. Flyers will be posted at local businesses and will be distributed throughout the short-term *Suspect* Status period. They will also be distributed to Flaming Gorge Reservoir boaters stopping at the Evanston Port of Entry check station and the UDWR mandatory inspection station near Vernal.

Long-term *Suspect*

At long-term *Suspect* status, Wyoming statewide public outreach efforts will continue to follow the process outlined in the Administrative Rapid Response Plan (WGFD 2020). The Regional Fisheries Supervisor and Regional AIS Specialist will continue to collaborate with the Green River Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with a long-term *Suspect* Status on Flaming Gorge Reservoir. UDWR will also continue outreach efforts outlined within the Conservation Outreach section of short-term *Suspect* status. UDWR, WGFD, and the USDA Forest Service will work together to ensure that signs stating the *Suspect* status of the reservoir are placed at appropriate access points around the reservoir.

Positive Status

At *Positive* status, Wyoming statewide public outreach efforts will continue to follow the process outlined in the Administrative Rapid Response Plan (WGFD 2020). The Regional Fisheries Supervisor and Regional AIS Specialist will continue to collaborate with the Green River Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with a *Positive* status on Flaming Gorge Reservoir. UDWR will also continue outreach efforts outlined within the Conservation Outreach section of short-term *Suspect* status, with all messaging revised to account for the *Positive* status. UDWR, WGFD, and the USDA Forest Service will work together to ensure that signs stating the *Positive* status of the reservoir are placed at appropriate access points around the reservoir.

Infested Status

At *Infested* status, WGFD statewide public outreach efforts will continue to follow the process outlined in the Administrative Rapid Response Plan (WGFD 2020). Both UDWR and WGFD messaging should note the presence of reproducing and recruiting adult mussels and explain that containment efforts will likely be in place indefinitely. The WGFD Regional Fisheries Supervisor and Regional AIS Specialist will continue to collaborate with the Green River Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with an *Infested* status on Flaming Gorge Reservoir. UDWR will also continue outreach efforts outlined within the Public Outreach section of short-term *Suspect* status, with all messaging revised to account for the *Infested* status. UDWR, WGFD, and the USDA Forest Service will work together to

ensure that signs stating the *Infested* status of the reservoir are placed at appropriate access points around the reservoir.

Appendix E—Agreements and Permitting Requirements Necessary for Implementation of the Control Plan

Memorandas of Agreement or Understanding

- Develop Memoranda of Agreement (MOA) for transferring money between agencies.
    - MOAs currently exist between UDWR and USFS and between WGFD and USFS. May need to amend these agreements to facilitate transfer of funds between all three agencies.
- Develop Memoranda of Understanding (MOU) with Counties and other agencies as needed for the use of employees and donation of in-kind services.
- Check or inspection station construction-establish MOA or MOU with landowners to facilitate construction of the check or inspection stations should they be needed (e.g., agreement with Orion Mine Finance for Hwy 191 and 530 check stations in Wyoming).
- MOA and/or MOU between UDWR, WGFD and USFS-agreement to cover Rapid Response Plan and Control Plan actions, including:
    - USFS Closure Orders (e.g., shore launching, and boat ramp closures). Agreement should outline actions need to implement closures and ensure that enforcement personnel will be made available to enforce these closures. If possible, complete a draft USFS Closure Order prior to detection of dreissenid mussels.
    - Temporary check or inspection station and decontamination station establishment. In Wyoming, this includes the public parking lots at the Buckboard Marina and Firehole boat ramp (if Hwy 191 check station is not built in time). In Utah, this includes public parking lots at the Lucerne Valley Marina, Sheep Creek, and Cedar Springs Marina.
    - Installation of signs on USFS lands (e.g., exit inspection required, shore launching prohibited, ramp closed to launching).
    - Waive 16-day camping limit for work campers housing inspectors at check stations. In Wyoming, this includes Buckboard Marina, Anvil Draw, Highway 191, and County Road 70.
    - If possible, MOA should be established prior to initial dreissenid mussel detection.

Federal permits. BLM or USFS permits for short-term and long-term decontamination and inspection site development.

- National Environmental Policy Act (NEPA). Ground disturbance on federal lands for construction of check or inspection stations will require NEPA review.
    - In Wyoming, this applies to the Hwy 414 and CO Road 70 check stations, which will be constructed on BLM lands.
    - In Utah, this applies to the Hwy 191 exit inspection station, which will be constructed on BLM land.
    - If chemical treatments are pursued, a Categorical Exclusion will need to be completed.

- Update BLM Right of Way Grant/Temporary Use Permit for Anvil Draw check station (S/N WYW167916). Review and update the April 8, 2013 plan of development to include additional operations and infrastructure needed to implement the control plan.
- Determine permits needed for sign installation (e.g., exit inspection required, shore launching prohibited, ramp closed to launching) on BLM lands.

UDOT/WYDOT encroachment permits. Permits needed for decontamination stations along the roadside; identifies activities and safety precautions.

- In Wyoming, the Hwy 191, 414, and 530 check stations will be located along state highways, and coordination will be necessary with WYDOT.
- In Wyoming, the County Road 70 check station will require coordination with Sweetwater County.
- In Utah, the HWY 191 exit inspection station will be located along the state highway, and coordination will be necessary with UDOT.

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

Chemical application permitting. Pollutant Discharge Elimination Systems (UPDES and WYPDES) are permits managed by the states, which control water pollution by regulating point sources of pollution, including pesticide application.

- If chemical pesticide application is pursued, obtain PDES permits from Utah and/or Wyoming departments of environmental quality (i.e., Utah DEQ and Wyoming DEQ).
- Add Flaming Gorge to State of Utah and State of Wyoming general permit for the application of pesticides.
    - The pesticide added would be an EPA approved molluscicide.
    - When further details are available, a Treatment Plan will be developed.
- As long as decontamination water runs off into an upland environment, a PDES permit is not required, regardless of the quantity. If a chemical decontaminant is ever used instead of hot water, a groundwater permit may be required.

Local Boater Program. Update laws/regulations in Wyoming and Utah so a local boater program in each state will recognize boaters from the other state.

Fishing Contests. If necessary, develop agreement between WGFD and UDWR on how to handle fishing contests following a dreissenid mussel detection. Determine if existing permitting procedures are satisfactory or if agreement is necessary to deal with concerns (e.g., tournament traffic overwhelming inspection stations).

Appendix F—Control Plan for Containment of Dreissenid Mussels on Wyoming portion of Flaming Gorge Reservoir

This control plan for the Wyoming portion of Flaming Gorge Reservoir will be initiated when zebra or quagga mussel veligers (larvae) or adults are detected in a sample from the reservoir and are verified by independent experts and genetic analysis. At that point, the reservoir will enter Short-term Suspect Status. This coincides with the period of time necessary to conduct additional sampling and testing necessary to verify whether zebra or quagga mussels are present (up to six weeks). If follow-up sampling does not detect zebra or quagga mussels, the water will enter Long-term Suspect Status and monthly monitoring will be initiated. If zebra or quagga mussels are not detected for three years, the water will once again be considered negative. Conversely, if two sampling events within a 12-month period detect zebra or quagga mussels, the water will enter *Positive* Status and will not be considered negative again unless mussels are not detected in monthly monitoring for five years. Finally, a water will enter Infested Status when evidence shows a recruiting and reproducing population of zebra or quagga mussels is established. At this point, eradication of mussels is highly unlikely and containment efforts will be necessary for the foreseeable future.

This plan provides guidance for the initial response to detection of dreissenid mussels at each of these four status levels and is intended to be implemented quickly and act as the guiding document for initial decision making following detection. It is not intended as a long-term containment plan, but will outline the action necessary to provide short-term containment while a longer term containment and monitoring plan is developed.

RAPID RESPONSE – SHORT-TERM *SUSPECT* STATUS

In the event that dreissenid mussels are detected in a sample from Flaming Gorge Reservoir, the reservoir will be consider Short-term *Suspect* (defined above). After the initial detection, follow-up sampling will occur and results may take up to six weeks to be reported. The goal for rapid response at this status level is to minimize the risk of spreading mussels to other waters while waiting on follow-up test results. Within one week, we will provide a capacity to contact all boaters coming off the water, conduct clean, drain, dry exit contacts, decontaminate all ballast tanks and other undrainable areas and flush all motors, if feasible. All watercraft leaving Flaming Gorge Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals designate use on a *Suspect*, *Positive* or *Infested* water versus the brown seal currently used at all Wyoming check stations.

At Short-term *Suspect* Status, there will not be time to hire personnel or purchase equipment. Therefore, the initial response will rely on existing personnel and equipment. Immediately after initial detection, job announcements and requisitions should be prepared so personnel can be hired and equipment can be purchased as quickly as possible once follow-up results are available.

Closures

Launching will be consolidated by 1) closing shore launching to all trailered and motorized watercraft and 2) closing boat ramps with the least amount of use. Closing shore launching is essential because of the large number of roads that access FGR (Table F1). The closure of shore launching and boat ramps would be under the authority of the United States Forest Service. In Wyoming, boat ramps at Firehole Canyon, Anvil Draw, and Buckboard

Marina will remain open. The Brinegar's Ferry Crossing and Marsh Creek boat ramps would be closed (Figure F1).

TABLE F1. Number of roads departing from the primary highways and county roads that encircle Flaming Gorge Reservoir. Roads are classified as paved, ditch and berm, and two track. Within these classifications, roads are enumerated as: either trailered boat can launch (improved or shore) or trailered boat cannot launch.

State	Road Type	Trailered boat can launch	Trailered boat cannot launch
Wyoming	Paved	2	0
	Ditch and Berm	15	0
	Two Track	13	3
Utah	Paved	4	0
	Ditch and Berm	6	0
	Two Track	0	2
Total		40	5

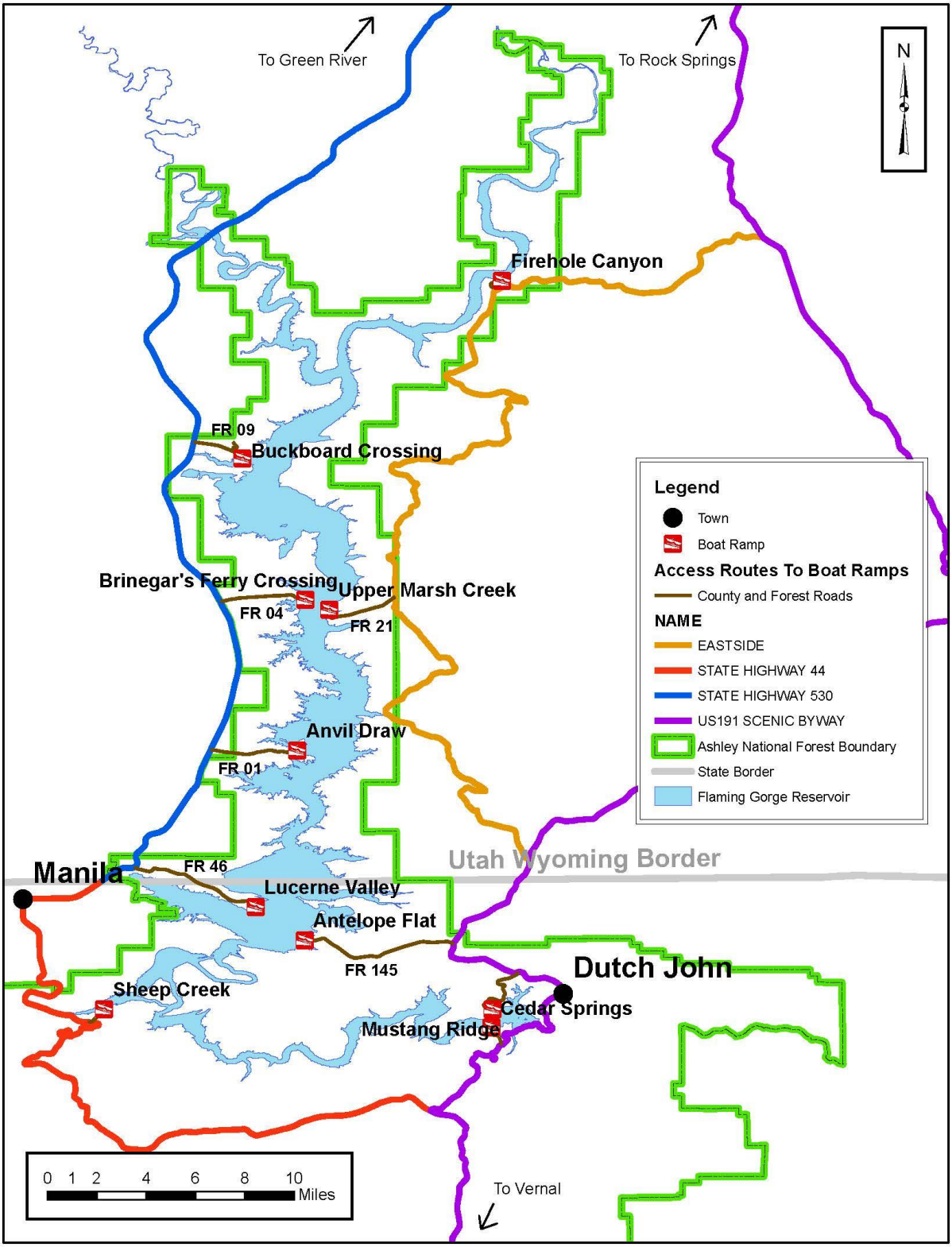


FIGURE F1. Location of the 10 developed boat ramps on Flaming Gorge Reservoir.

Check Stations

Initially, watercraft departing FGR will be inspected at ramps and existing AIS check points. There are no existing highway pull outs that are large enough to accommodate anticipated traffic or that are in the correct location. The exception to this will be the highway check station at the intersection of Highway 191 and County Road 33 east of the Firehole Canyon boat ramps (Figure F2) which will be built in 2020. The development of adequately sized check stations to accommodate anticipated watercraft traffic at highway "pinch points" departing Flaming Gorge Reservoir will take a year or more to locate, negotiate, comply with NEPA and construct. Furthermore, current experience suggests watercraft owners driving by check stations will be a significant problem. This issue will need to be addressed prior to moving to highway "pinch point" check station.

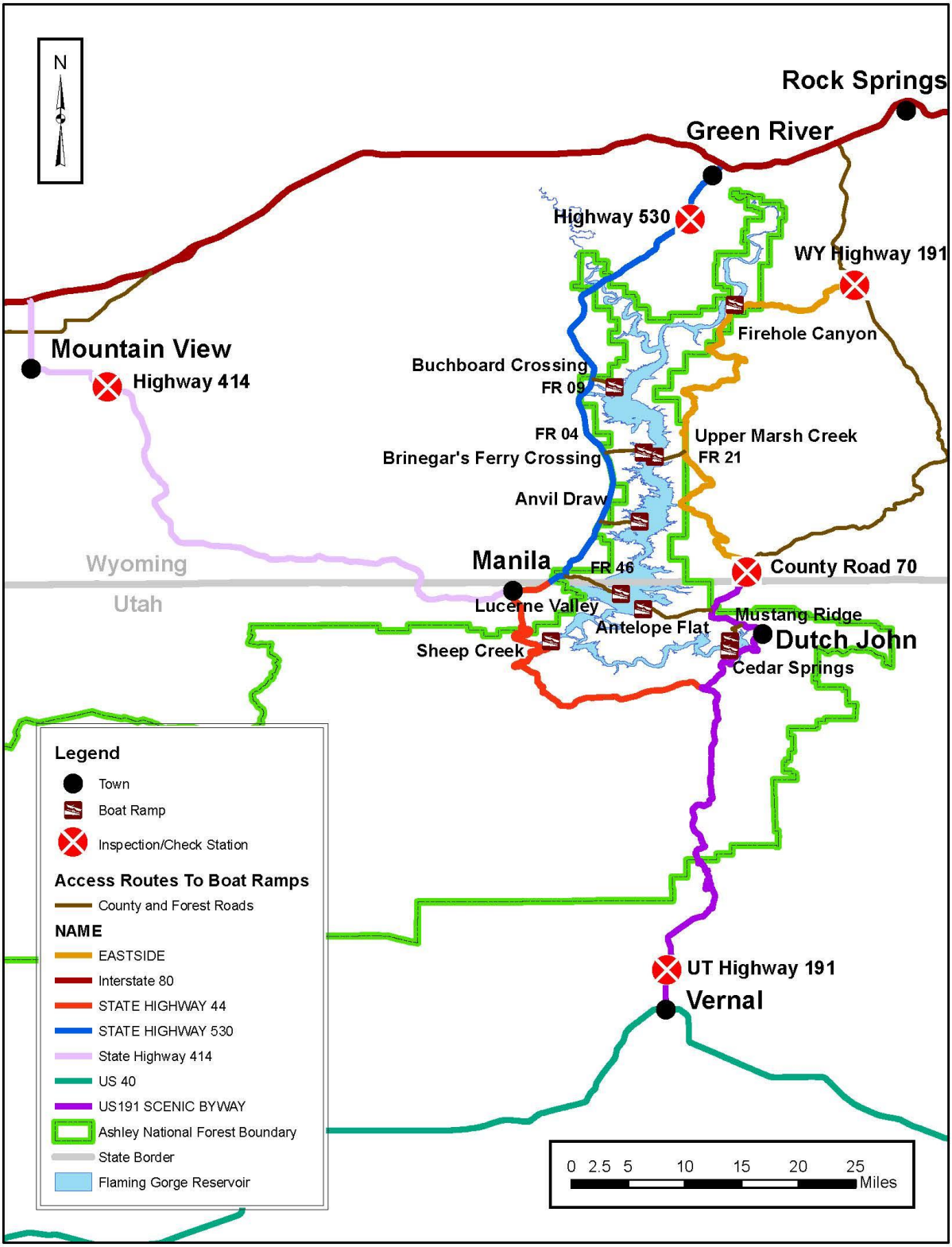


FIGURE F2. Locations of pinch point check stations for conducting exit inspections on watercraft departing FGR.

Priority will be given to contacting watercraft departing Flaming Gorge Reservoir at the developed ramps that remain open (Buckboard Crossing, Anvil Draw and Firehole Canyon). Required exit inspections will be completed in tie down zones away from ramp but prior to watercraft departing the area. During contacts watercraft owners will be educated regarding the issue and taught how to Clean, Drain and Dry their watercraft. As time permits inspectors will also contact boaters prior to launch to educate them about the issue and explain steps boaters can take to facilitate exit inspections.

Staffing Plan

Inspectors will be stationed at check stations from one hour before sunrise to one hour after sunset. During the summer solstice this will be from approximately 4:30 AM to 10:00 PM. The number of inspectors needed will be highest during peak boating season (Memorial Day Weekend through Labor Day Weekend; Appendix F1). These numbers will be adjusted depending on watercraft traffic expected during the Short-term *Suspect* period. The volume of boats departing Flaming Gorge Reservoir will be greatest between 10 am and 3 pm. As such, inspector shifts will be structured so the number of inspectors at each ramp are maximized from mid-morning to mid-afternoon (Appendix F1). Inspectors will each work four days on, ten hour shifts (excluding travel). Inspectors will stay in campers provided near each boat ramp to reduce travel.

During Short-term *Suspect* Status, Wyoming check stations will be staffed by regional personnel including wardens (8), warden trainees (2 maybe), fish management (3), wildlife management (5), associated management technicians (2-4 seasonally) and AIS inspectors (4) for a total of 24-26 personnel. Additional staff from outside the region will be needed. The 4-6 AIS "roving" personnel will be requested first. After that, assistance requests will go out to other regional and staff level personnel.

Supplies and Equipment

The budget for Short-term *Suspect* Status can be found in Appendix F2. Aluminum signs be installed on all access roads (Table F1) letting boaters know that: 1) exit inspection is required, 2) shore launching is prohibited and 3) some ramps are closed to launching (Appendix F2). A request will be submitted for the signs to be installed by one or more of the WGFD Habitat and Access crews. We will need to seek permission from the USFS and BLM for installation on land managed by these agencies. Three digital messaging signs (DMS) will be rented (one sign for each check station) to ensure boaters understand that exit inspections are required after removing a watercraft from FGR (Appendix F2).

Check stations will need equipment and supplies to complete exit inspections and decontaminations of standing water that cannot be drained, including motors and ballast tanks. Six mobile decontamination units will be needed; two at each of the three check stations. Two decontamination units are necessary at each station to handle high watercraft volume periods and to ensure there is at least one functional unit at all times. The AIS program currently has one decontamination unit each at Firehole and Anvil Draw check stations. Four additional units will be rented to provide the minimum coverage needed at exit inspection check stations.

Water for decontamination units will be hauled by Zueck Transportation and stored in 21,000 gallon Frac-Tanks rented from Rain for Rent (Appendix F3). The cost of water hauled from Rock Springs to the check stations includes: $13 per 1,000 gallons of water and $140 an

hour transportation cost. Costs for Frac-Tanks are listed as setup costs, delivery costs, and weekly rental costs (Appendix F2). The Frac-Tanks will be located as identified in Appendix F4. Zueck Transportation can haul 6,000 gallons of water per trip. During the Short-term *Suspect* period we estimate a need for 6,000 gallons of water at the Firehole check station, 12,000 gallons of water at the Buckboard Ramp location and 6,000 gallons of water at the Anvil Draw location (Appendix F2). Water from the Frac-Tanks will fill the decontamination units either by head pressure or existing FMGR water pumps.

A camper would be placed at or near each check station to provide housing to accommodate personnel during Short-term *Suspect* Status. FMGR has two campers that could be used during this time period. Other accommodations would have to be made for longer periods. A third camper would be borrowed either from Wildlife Division in Green River or another crew in the Department. Camp Groceries would be purchased for 26 employees during this six-week period while they are camping (Appendix F2).

To close boat ramps, barriers will need to be erected to prohibit launching while allowing the public access to the area around the ramp for other uses. One option is water-filled Jersey barriers or water barriers, which are 5-6 feet long and interlocking. They can be purchased from Wasatch Barricade (Appendix F3).

RAPID RESPONSE – LONG-TERM *SUSPECT* STATUS

If initial follow-up sampling does not detect dreissenid mussels, Flaming Gorge Reservoir would enter Long-term *Suspect* Status and remain at this level for up to three years if no additional dreissenid mussels are detected. The goal during this period is still to minimize the risk of spreading mussels to other waters. During the first year (from initial detection through the following boating season), we will need to provide capacity for all boaters coming off the water to efficiently obtain a required clean, drain, dry exit inspection, motor flush, and decontamination of ballast tanks and other undrainable areas. All watercraft leaving Flaming Gorge Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals designate use on a *Suspect*, *Positive* or *Infested* water, versus the brown seal currently used at all Wyoming check stations.

If there is no confirmation of dreissenid mussel presence after the first full boating season, efforts will switch in years two and three to a lower level response, with a goal of contacting a significant number of boaters, but placing more responsibility on boaters to get an exit inspection. Inspectors will still conduct clean, drain, dry exit inspections on boats leaving the water and decontaminate ballast tanks and other undrainable areas. If feasible, they will continue to flush all motors. If not, they will drain outboards motors and only flush inboard/outboard and inboard motors. Public outreach will increase via multiple outlets to highlight the potential threat at the *Suspect* water.

YEAR 1 LONG-TERM *SUSPECT* STATUS

Year 1 is defined as the time of initial detection through the next full boating season. All budgeting is based on a full calendar year. If detection occurs early in the boating season, full implementation of Year 1 Long-term *Suspect* Status will begin in that season and carry through the next boating season. If that occurs, the budget for that initial season will be a portion of the full calendar year budget. On the other hand, if detection occurs late in the boating season, implementation of Year 1 Long-term *Suspect* Status may not begin until the following boating

season. Regardless of when detection occurs, exit inspections will be suspended on December 1 and will commence on March 1. In addition, planning and construction will begin on AIS check stations at highway pinch points leaving Flaming Gorge Reservoir, recognizing that they may not be completed until the end of the following boating season (Figure F2). The WGFD will also be developing and implementing a Local Boater Program during Year 1 Long-term *Suspect* Status (see Administrative Rapid Response Plan for details; WGFD 2020).

Closures

The closures instituted during Short-term *Suspect* Status will remain in effect during the duration of Year 1 Long-term *Suspect* Status. These include a reservoir-wide shore launching closure and closure of the Brinegar's Ferry and Marsh Creek ramps in Wyoming. These closures will remain in effect until highway check stations are fully operational and will likely not to occur until March 1 of Year 2 Long-term *Suspect* Status.

Check Stations

Watercraft departing FGR during Year 1 Long-term *Suspect* Status will continue to be inspected at Buckboard Ramp, Anvil Draw check station and Highway 191 check station (Figures G1 and G2). The Highway 191 and Anvil Draw check stations will serve as both entrance and exit check stations (Figures G1 and G2).

Check stations will be open March 1 through November 30 and will be closed December 1 through February 28. It will be the responsibility of the watercraft owner to get the required inspection prior to launching again during the winter months. For planning purposes, the time period between March 1 and November 30 has been broken into three sub-periods: 1) pre-watercraft season (March 1 – April 30), 2) peak watercraft season (May 1 – September 30), and 3) post-watercraft season (October 1 – November 30). Pre-watercraft season will be predominately anglers pursuing Kokanee, Lake Trout and Rainbow Trout. Peak watercraft season users will be both anglers and recreational boaters, with the majority of anglers pursuing Kokanee. Post-watercraft season will be predominately anglers pursuing Lake Trout, Burbot and Rainbow Trout. Off season (December 1 – February 28) boaters are generally Lake Trout anglers launching at ramps that are not ice bound. Watercraft use on Flaming Gorge Reservoir during pre- and post-watercraft seasons is low relative to peak watercraft season and is composed mainly of local boaters.

Staffing Plan

Inspectors will be stationed at check stations from approximately one hour before sunrise to one hour after sunset. In general, the number of boats departing Flaming Gorge Reservoir will be greatest between 10 am and 3 pm. As such, inspector shifts will be structured so the number of inspectors at each check station will be maximized from mid-morning to mid-afternoon. Inspectors will each work ten-hour shifts, 4 days a week. Inspectors' duty station will be the Green River Regional Office, while on duty they will stay in camper(s) provided near the check station to reduce travel.

The number of inspectors and hours of operation for each of the three check stations can be found in Appendices F5-F7. Personnel costs can be found in Appendix F8. The Buckboard Crossing and Anvil Draw check stations will open on March 1. Ice persists longest at the

Firehole boat ramp area, so the Highway 191 check station will not open until between April 15 and April 30 in most years. During the post-watercraft season, the Firehole check station will close later than the other two stations (12 am) to ensure an inspector is available to check boaters targeting Burbot at night (Appendix F7).

Three contract biologists (crew leads) will be hired from January 1 (or as soon as possible if detection happens early in the boating season) through December 31 to oversee operations of the check stations (Appendix F8). The crew leads will be hired so they can complete hiring paperwork, receive AIS training, and be prepared to help train the inspectors as they arrive later in the month. The crew leads will ensure equipment and supplies are ready for the check stations to open March 1. The Green River AIS Specialist will train and supervise the crew leads. If this day comes the Department should take the steps necessary to convert the Green River AIS Specialist position into a permanent position in line with the responsibilities and duties being assigned.

The first group of inspectors will be hired from February 22 through December 7 to work the Buckboard and Anvil Draw check stations (Figure F1, Appendix F8). They will be hired five working days prior to March 1 so they have time to complete hiring paper work and AIS training. They will work one week into December so they can help the crew lead dismantle check stations, move equipment and return vehicles. Highway 191 inspectors will be hired from April 1 through December 7 (Appendix F8). After completing paper work and training they will gain experience assisting other AIS crews while waiting for the ice to melt at Firehole boat ramp.

The second group of inspectors will be hired from May 1 through September 30 (Appendix F8). This group of inspectors will start May 1 so they can complete hiring paper work, be trained, and gain experience inspecting boats before watercraft traffic increases in mid-May with the Flaming Gorge Derby and at the end of May with Memorial Day weekend.

In Year 1 Long-term *Suspect* Status, the identified personnel should be able to keep up with inspections of watercraft on a normal day. Additional assistance will likely be needed during fishing contests and holiday periods (Memorial Day, Independence Day, Pioneer Day and Labor Day). The data and records collected during Year 1 will help refine staffing levels in later years.

Supplies and Equipment

Exit check stations will need to be fully equipped to conduct watercraft inspections and decontaminations and provide transportation and shelter for employees. The Highway 191 exit check station should be built in 2020 and will function as both an entrance and exit check station for the duration of the Long-Term *Suspect* Status. Buckboard exit check station will be a temporary check station that will be in service until a check station can be built on Highway 530 south of the Town of Green River (Figure F2). The Anvil Draw check station will be temporarily located at the current entrance check station until a check station can be built on Highway 414 southeast of Mountain View (Figure F2). Budgets for Year 1 Long-term *Suspect* Status assume that most items rented during Short-term *Suspect* Status (e.g., DMS signs, decontamination units, Frac Tanks) will be purchased in time to use for Long-term *Suspect* Status. If items cannot be procured in time, additional costs associated with rental will be incurred.

Several relatively expensive items will need to be purchased prior to check stations opening on March 1 (Appendix F8). These items will vary depending on the check station, but will include dynamic messaging signs, office trailers, decontamination units, light towers for

night inspections, generators, water pumps, and laptop computers. Check station budgets also include fuel for vehicles and generators, miscellaneous supplies and repairs, and replacement signs. Inspectors will need inspection books, seals and wire for inspecting and sealing boats.

A 7,800-gallon vertical storage tank will be purchased from Pro Tank or similar vendor for each check station (Appendices F3 and F8). The tanks will store water for refilling decontamination units. The 7,800 gallon tank will have enough capacity to fill decontamination units while awaiting 6,000 gallon refills of water from Zueck Transportation (Appendices F3 and F8).

Two campers, each, will be purchased to house inspectors at Buckboard and Anvil Draw check stations to reduce daily travel time. One camper will be purchase to house inspectors at Highway 191 that travel from distant communities for their four-day shift and then return home. Camp groceries will be provided to those that are camping. Highway 191 check station inspectors that live in the communities of Green River and Rock Springs will be expected to commute daily and will not receive camp groceries.

A few items be rented annually. These include outhouses for each check station, sedans from motor pool for use by the inspectors as needed and during the months when check stations are closed, and storage space for equipment that the Green River office does not have capacity to store.

Building Highway Pinch Point Check Stations

During the first year of *Suspect*, *Positive* or *Infested* status, highway pinch point check stations for long-term containment efforts would need to be built (Figure F2). Four of the five check stations identified are in Wyoming. The Highway 530 and Highway 414 stations would be built during the first full year of Long-term *Suspect* Status so they are operational for years 2 and 3. Highway 191 check station is planned to be built in 2020. At this point, it is unknown if County Road (CR) 70 Check Station is warranted. The majority of traffic on that road has historically been drift boats headed to the Green River below Flaming Gorge Dam. However, recent improvements to that road may be allowing high risk watercraft from Colorado an alternative route to the reservoir. A trail camera was deployed in September 2019 to evaluate the type and volume of watercraft traffic using CR 70. The trail camera will be deployed again in spring 2020 to provide information over a full boating season.

Utilizing pinch point check stations means boat ramp and shore launching closures implemented in Year 1 can be lifted. The secondary advantage is moving the check stations away from the congestion of Buckboard boat ramp. The disadvantage will be non-compliance, since watercraft owners driving by the existing Anvil Draw AIS check station on Highway 530 is a chronic problem.

It is recommended that WGFD personnel start negotiating a Memorandum of Agreement (MOA) with the landowners of the proposed check stations as soon as this plan is approved. The MOA would set forth the terms and conditions, scope of work and responsibilities of the parties associated with their collaboration on the construction of AIS check stations on the identified properties.

Check stations will need to be built large enough to accommodate the watercraft traffic exiting Flaming Gorge Reservoir after busy weekends. The total lengths of most vehicles towing watercraft that frequent Flaming Gorge Reservoir range from 45 to 75 feet. Based on our experience at the Evanston Port of Entry check station, watercraft can be expected to show up in packs and many times there are two or more vehicles traveling together with some towing

campers or ATVs. Therefore, check stations should be built to accommodate all vehicles and watercraft expected without them being backed up onto the highway.

Highway 530 Check Station would be on the southeast side of Highway 530 between County Road 37 and Forest Service Road 12 (Section 19, R107W, T17N) and will intercept boats heading north on Highway 530 towards Green River, WY and Interstate 80 (Figure F2). It would likely have to be built just southwest of the existing highway pullout on property owned by Anadarko Land Corporation (PO Box 1330, Houston, TX 77251-1330). The check station would need to be 500 feet long and 60 feet wide and would be divided into five lanes with the inner three lanes being used for inspections and the outer two lanes being used for decontaminations. To put the Highway 530 Check Station into perspective, it would accommodate 33 vehicles towing watercraft with a combined length of 45 feet or 20 vehicles towing watercraft with a combined length of 75 feet. It would be surfaced with either gravel or rotomill. The entrance and exit ramps, where they cross highway right of way, would be surfaced with asphalt.

Highway 414 Check Station would be on the northeast side of Highway 414 just over 5 miles southeast of the Town of Mountain View, WY (Section 27, R114W, T15N; Figure F2). This check station intercepts boats heading west from FGR towards Mountain View (mostly to Utah). The check station would likely be built on property owned by Bureau of Land Management. The check station would need to be 600 feet long and 60 feet wide. It would be surfaced with either gravel or rotomill. The entrance and exit ramps, where they cross highway right of way, would be surfaced with asphalt.

Highway 191 Check Station would be on the west side of Highway 191 where County Road 33 intersects Highway 191 (14 miles south of I-80; Section 19, R107W, T17N; Figure F2). It would be 14 miles south of the intersection of Highway 191 and I-80 at Purple Sage. The check station is to be built on property owned by Anadarko Land Corporation. The inspection part of the check station would need to 500 feet long and 60 feet wide. It would be surfaced with either gravel or rotomill and would have one entrance onto County Road 33.

County Road 70 Check Station would be on the north side of County Road 70 where it intersects Highway 191, 0.6 miles north of the Wyoming/ Utah border (Section 24, R107W, T12N; Figure F2). This check station intercepts boats heading south-east from FGR towards Browns Park and Maybell, Colorado. The check station would be built on Bureau of Land Management property and would need to be 150 feet long and 40 feet wide. It would be surfaced with either gravel or rotomill.

The only Utah Check Station would be on the west side of Highway 191 somewhere south of Greendale, Utah and north of the switch backs descending into Vernal, UT (Figure F2). This check station intercepts boats heading south from FGR towards Vernal Utah. The check station would be built on property owned by the United States Forest Service and would need to be 300 feet long and 60 feet wide. It would be surfaced with either gravel or rotomill. The entrance and exit ramps, where they cross highway right of way, would be surfaced with asphalt.

Construction cost of each highway check station is estimated between $250,000 and $300,000 (Appendix F8). This cost includes blading, leveling and graveling the 500 by 60 foot check station, asphalt paving of entrance and exit ramps that cross state highway right of ways and construction of deceleration and acceleration lanes on the highways. Depending on the landowner, there will likely be an easement or lease with an estimated cost of $2,000 per year. There would also be annual maintenance costs estimated at $2,000 per year.

Local Boater Program

A local boater program is designed to allow boaters who only boat on a particular water to launch and trailer their boat on that water without having to undergo entrance and exit inspections. This would provide a convenience to the boater and would also reduce the number of inspections and decontaminations that would need to be conducted at check stations. Local boater program details can be found in the WGFD Administrative Rapid Response Plan (WGFD 2020).

A local boater program on FGR is justified, based on the large volume of boaters during the peak watercraft season. Analysis of inspection data from the Green River region shows a significant portion of these watercraft are large and complex. Due to the geography of FGR, with multiple launch and take out points spread out over a large area, limitations of agency personnel and decontamination equipment, and access to a municipal water source, a local boater program would allow us to maximize available decontamination resources to high risk watercraft. Laws or regulations would need to be updated to allow the Wyoming local boater program to recognize local boaters from Utah. Similarly, laws or regulations in Utah would need to be updated for the Utah local boater program to recognize local boaters from Wyoming.

The local boater program will be implemented as soon as possible, hopefully early in Year 1 of Long-term *Suspect* Status. The program will continue in subsequent years and depending on how the local boater program is implemented, it could continue if Flaming Gorge Reservoir returns to *Negative/Undetected* status

State agencies will coordinate with each other in development of local boater programs.

Fishing Contests

March 1 through November 30

Fishing contests attract a large number of anglers to FGR and subsequently a large number of watercraft. As such, steps should be taken to facilitate entrance and exit inspections. For two-day contests, "contest passes" will be issued to contestants returning to FGR the next morning. The pass would work similar to the Local Boater Program but will only be valid for the duration of the contest. On the final day of the contest, participants will receive a required exit inspection and an inspection receipt will be necessary to claim any prizes. Contest sponsors will be required to update rules to reflect these requirements and they will be responsible for issuing dated "contest passes." It will be recommended that derby sponsors stop fishing one hour earlier than usual on the last day to give participants extra time to reach weigh-in stations before they close. The responsible agency (WGFD or UDWR) will increase the number of inspectors at affected ramps to facilitate inspection of watercraft departing the reservoir.

December 1 through February 28

Although the risk is lower, plan to conduct exit inspections on all boats participating in contests during this time period. The processes described for March through November will also apply to this time period.

YEAR 2 AND 3 LONG TERM *SUSPECT* STATUS

Closures

Once the AIS check stations on Highway 530 and Highway 414 are open, closures to launching initiated during the Short-term *Suspect* Plan will be lifted. It will once again be legal to launch from shore and at Brinegar's Ferry and Marsh Creek ramps in Wyoming.

Check Stations

Years 2 and 3 Long-term *Suspect* Status will be similar to Year 1 Long-term *Suspect* Status, except exit inspections will be conducted at check stations on Highway 530, Highway 414 and Highway 191 (Figure F2). The Anvil Draw check station will revert back to an entrance check station. The Highway 191 check station will continue to operate as both an entrance and exit check station. In years 2 and 3 of Long-term *Suspect* Status, inspections will begin March 1 and end November 30. If the highway check stations are not constructed and operational prior to March 1 of Year 2 Long-term *Suspect* Status, inspections will be conducted as described in the Year 1 Long-term *Suspect* Status plan.

Staffing Plan

During Years 2 and 3 Long-term *Suspect* Status, the staffing plan will be similar to Year 1, except hours will be reduced, with inspectors stationed at exit check stations from sunrise to sunset. In addition, the total number of inspectors needed will be reduced (Appendices F9-F11).

If the pool of qualified local applicants is not sufficient to fill all positions, one incentive will be to provide housing (campers) and camp groceries during four day shifts. This issue will not be as critical once exit inspections are moved to highway check points closer to communities. The Highway 191 check station will be the furthest from a substantial community but still only 18 miles from either Rock Springs or Green River. The Highway 530 check station will be approximately eight miles from Green River and the Highway 414 check station will be six miles from Mountain View. Housing and camp groceries will not be provided to inspectors who can commute from their residences daily.

Supplies and Equipment

Anticipated budget for vehicles, travel, supplies, and utilities to operate the check stations on highways 191, 530, and 414 during Years 2-3 Long-term *Suspect* Status can be found in Appendix F12. Most of the equipment purchases will have been completed during Year 1 Long-term *Suspect* Status (Appendix F8). The exception is Highway 414, as equipment previously shared at the Anvil check station that will need to be purchased to make this check station fully operational (Appendix F12). Many of the supplies and utilities identified in prior years will need to be replenished in years 2 and 3. Budgets for Years 2 and 3 will be adjusted after operating the check stations during Short-term *Suspect* Status and Year 1 Long-term *Suspect* Status.

RAPID RESPONSE – *POSITIVE* STATUS

Flaming Gorge Reservoir will be considered *Positive* for dreissenid mussels if two or more sampling events within a 12-month period meet the minimum criteria for detection (defined above). The goal during the *Positive* Status period is still to minimize the risk of spreading mussels to other waters. We will need to provide capacity for all boaters coming off the water to efficiently obtain a required clean, drain, dry inspection, motor flush, and decontamination of ballast tanks and other undrainable areas. If live mussels are found on any boats during exit inspections, they will be fully decontaminated and consideration will be given to upgrading Flaming Gorge Reservoir's status to *Infested*. All watercraft leaving Flaming Gorge Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals designate use on a *Suspect*, *Positive* or *Infested* water versus the brown seal currently used at all Wyoming check stations.

YEAR 1 *POSITIVE* STATUS

The Year 1 *Positive* Status response would be similar to the Year 1 Long-term *Suspect* Status response. Responders should refer to the Year 1 Long-term *Suspect* Status section of this plan, keeping in mind exceptions noted below.

Closures

Any closures previously put in place will remain in effect until the highway check stations are fully operational.

Check Stations

Year 1 *Positive* Status could start anytime during the three years following the initial detection of dreissenid mussels. If Year 1 *Positive* Status occurs prior to highway check stations being built, watercraft departing FGR will be inspected at Buckboard Ramp, Anvil Draw check station and Highway 191 check station as previously described (Figures G12 and G2). If the highway pinch point check stations (see Year 1 *Suspect* Status) are built and operational, inspections will be conducted at those check stations.

Staffing Plan

During Year 1 *Positive* Status, the staffing plan will be similar to Year 1 Long-term *Suspect* Status. Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed to operate check stations can be found in Appendices F13-F15. The budget for personnel to staff check stations during Year 1 *Positive* Status can be found in Appendix F16. Hours of operation for the three check stations will be the same as Year 1 Long-term *Suspect* Status, but total numbers of inspectors needed will increase from 16 to 28 during per-watercraft (Appendices F5 and F13) and post-watercraft (Appendices F7 and F15) seasons and from 24 to 37 during peak watercraft season (Appendices F6 and F14).

Supplies and Equipment

The anticipated budgets for vehicle, travel, supplies, and utilities to operate the Highway 191, Buckboard, and Anvil Draw exit check stations during Year 1 of *Positive* Status can be found in Appendix F16. This budget is very similar to the budget for Year 1 Long-term *Suspect* Status (Appendix F8), but includes six additional decontamination units, one additional camper (to house additional inspectors), longer term Frac-Tank rental, additional storage costs, replacement signs and more water hauling. Budgets for Year 1 *Positive* Status assume that most items rented during Short-term *Suspect* Status (e.g., DMS signs, decontamination units, Frac Tanks) will be purchased in time to use for *Positive* Status. If items cannot be procured in time, additional costs associated with rental will be incurred.

Public Outreach

At *Positive* Status, statewide public outreach efforts will continue to follow the process outlined in the Administrative Rapid Response Plan (WGFD 2020). The Regional Fisheries Supervisor and Regional AIS Specialist will continue to collaborate with the Green River Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with a *Positive* Status on Flaming Gorge Reservoir. Refer to the Public Outreach section of Short-term *Suspect* Status for more information on regional outreach efforts.

Local Boater Program

Similar to Long-term *Suspect* Status, a local boater program is recommended at *Positive* Status as well. See the Local Boater Program portion of the Year 1 Long-term *Suspect* Status section for more information.

Fishing Contests

See the Fishing Contests portion of the Year 1 Long-term *Suspect* section.

YEARS 2 - 5 *POSITIVE* STATUS

Closures

Once the AIS check stations on Highway 530, Highway 414 and Highway 191 are operational, closures to launching initiated during the Short-term *Suspect* Plan will be lifted.

Check Stations

Years 2 through 5 of *Positive* Status will be similar to Year 1 of *Positive* Status, except exit inspections will be conducted at the check stations on highways 530, 414 and 191 (Figure F2). The Anvil Draw check station will revert to an entrance check station. The Highway 191 check station will continue to operate as both an entrance and exit inspection check station. If the highway check stations are not constructed and operational prior to March 1 of Year 2 *Positive* Status, exit inspections will continue to be conducted as described in the Year 1 *Positive* Status plan.

Staffing Plan

The staffing plan for Years 2-5 *Positive* Status will be similar to Years 2-3 Long-term *Suspect* Status (see Staffing Plan portion of Years 2-3 Long-term *Suspect* Status section). Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed are the same as Year 1 *Positive* Status, but check station locations reflect the shift to highway check stations (Appendices F17-F19). The annual budget for personnel to staff check stations during Years 2-5 *Positive* Status can be found in Appendix F20.

Supplies and Equipment

Anticipated budgets for vehicles, travel, supplies, and utilities to operate the check stations on highways 191, 530, and 414 during Years 2-5 of *Positive* Status can be found in Appendix F20. Most equipment will have been purchased during Year 1 *Positive* Status. All the equipment and supplies from the check station operated at Buckboard will move to the Highway 530 check station and equipment and supplies purchased for Highway 191 will remain. Highway 414 items previously shared at the Anvil check station will need to be purchased to make this check station fully operational. This would include a DMS sign, office trailer, generator, decontamination unit, water pump, three laptop computers, and rental of three outhouses (Appendix F20).

RAPID RESPONSE – *Infested* Status

Flaming Gorge Reservoir will be considered *Infested* if an established (recruiting and reproducing) population of adult dreissenid mussels is found. The goal during *Infested* Status is still to minimize the risk of spreading mussels to other waters. We will need to provide the capacity to contact all boaters coming off the water, conduct exit inspections, and ensure all boats leaving have undergone a full decontamination. All watercraft leaving Flaming Gorge Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals designate use on a *Suspect*, *Positive* or *Infested* water versus the brown seal currently used at all Wyoming check stations.

YEAR 1 *INFESTED* STATUS

The Year 1 *Infested* Status response will be similar to the Year 1 Long-term *Suspect* Status response. Responders should refer to the Year 1 Long-term *Suspect* Status section of this plan, keeping in mind exceptions noted below.

Closures

The closures instituted during Short-term *Suspect* status will remain in effect until highway pinch point check stations are fully operational. These include a reservoir-wide shore launching closure and closure of the Brinegar's Ferry and Marsh Creek ramps in Wyoming. In addition, the Firehole boat ramp will be closed during Year 1 *Infested* Status, concentrating boaters at the Buckboard and Anvil Draw ramps in Wyoming. Due to the higher threat associated with an *Infested* Status, consideration may be given to additional closures. These could range from closure of the ramp in closest proximity to the location where adult mussels

were detected to a full temporary closure of the reservoir while resources are put in place for containment.

Check Stations

If Year 1 *Infested* Status occurs prior to highway check stations being built, watercraft departing FGR will be inspected and decontaminated at Buckboard Marina and Anvil Draw check stations (Figures G1 and G2). If the highway pinch point check stations (see Year 1 *Suspect* Status) are built and operational, inspections will be conducted at those check stations.

Staffing Plan

The Year 1 *Infested* Status staffing plan will be similar to the Year 1 Long-term *Suspect* Status staffing plan. Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed to operate check stations can be found in Appendices F21-F23. The budget for personnel to staff check stations during Year 1 *Infested* Status can be found in Appendix F24. Hours of operation for the three check stations will be the same as Year 1 Long-term *Suspect* Status, but total numbers of inspectors needed will increase from 16 to 20 during per-watercraft (Appendices F5 and F21) and post-watercraft (Appendices F7 and F23) seasons and from 24 to 32 during peak watercraft season (Appendices F6 and F22). These staffing levels are slightly lower than Year 1 *Positive* Status, but are for only two check stations versus three at Long-term *Suspect* and *Positive* statuses. On a per-check station basis, staffing levels are higher in order to conduct full decontaminations of all watercraft.

Supplies and Equipment

The anticipated budget for vehicles, travel, supplies, and utilities to operate the Buckboard and Anvil Draw exit check stations during Year 1 *Infested* Status can be found in Appendix F24. This budget is similar to the budget for Year 1 Long-term *Suspect* Status (Appendix F8), but does not include items to outfit the Highway 191 check station. Costs are generally higher overall due to increased costs of fully decontaminating all watercraft. During Year 1 *Suspect* and *Positive* statuses, many supplies and equipment at Anvil Draw were shared with the existing entrance check station. Due to increased workloads associated with full decontaminations at *Infested* Status, funds are included to fully outfit the exit check station at Anvil Draw and will ease potential conflicts with the entrance check station. Budgets for Year 1 *Infested* Status assume that most items rented during Short-term *Suspect* Status (e.g., DMS signs, decontamination units, Frac Tanks) will be purchased in time to use for *Infested* Status. If items cannot be procured in time, additional costs associated with rental will be incurred.

Twelve mobile decontamination units will be purchased to equip the two open check stations with six decontamination units each. This will give the check stations the capacity to decontaminate 12 watercraft per hour. Three, instead of two office trailers and campers will be purchased per check station to accommodate high number of inspectors (sometimes 16 on station at one time).

Public Outreach

At *Infested* Status, statewide public outreach efforts will continue to follow the process outlined in the Administrative Rapid Response Plan (WGFD 2020). Messaging should note that reproducing and recruiting adult mussels are present and containment efforts will likely be in place into perpetuity. The Regional Fisheries Supervisor and Regional AIS Specialist will continue to collaborate with the Green River Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with an *Infested* Status on Flaming Gorge Reservoir. Refer to the Public Outreach section of Short-term *Suspect* Status for more information on regional outreach efforts.

Local Boater Program

Similar to Long-term *Suspect* Status, a local boater program is recommended at *Infested* Status as well. See the Local Boater Program portion of the Year 1 Long-term *Suspect* Status section for more information.

Fishing Contests

See the Fishing Contests portion of the Year 1 Long-term *Suspect* section.

YEARS 2+ – *INFESTED*

Once *Infested* Status is declared on Flaming Gorge Reservoir, it is unlikely the status will revert to *Negative/Undetected*. As such, implementation of this Year 2+ *Infested* Status plan will be the beginning of a long-term control plan with the goal of minimizing the risk of spreading mussels to other waters. We will need to provide the capacity to conduct exit inspections and ensure all boats leaving have undergone a full decontamination. This plan will need to be updated and modified over time as the pattern of watercraft owners departing Flaming Gorge Reservoir and the resources needed to implement this plan are better understood.

Closures

Once all the highway pinch point AIS check stations (Highways 530, 414 and191) are open, all closures during Short-term *Suspect* and Year 1 *Infested* statuses will be lifted. It will once again be legal to launch from shore and all previously closed ramps will be reopened.

Check Stations

Years 2+ *Infested* Status will be a continuation of Year 1, except exit inspections will be conducted at the check stations on Highways 530, 414 and 191 (Figure 2). The Anvil Draw check station will revert back to an entrance check station. The Highway 191 check station will operate as both an entrance and exit inspection check station. If the highway check stations are not constructed and operational prior to March 1 of Year 2+ *Infested* Status, exit inspections will be conducted as described in the Year 1 *Infested* Status plan.

Staffing Plan

During Year 2+ *Infested* Status, the staffing plan will be similar to Year 1 *Infested* Status, with the addition of technicians to work a third check station. Hours of operation (one hour before sunrise – one hour after sunset) are the same as Year 1 *Infested* Status, but check station locations reflect the shift to highway check stations (Appendices F25-F27). The annual budget for personnel to staff check stations during Year 2+ *Infested* Status can be found in Appendix F28.

Supplies and Equipment

Anticipated budgets for vehicles, travel, supplies, and utilities to operate the check stations on highways 191, 530, and 414 during Year 2+ *Infested* Status can be found in Appendix F28. Most equipment will have been purchased during Year 1 *Infested* Status. All equipment and supplies from the Buckboard check station will move to the Highway 530 check station. Similarly, all equipment and supplies added to the Anvil Draw check station will move to the Highway 414 check station. Since Highway 191 was not in operation during Year 1 *Infested* Status, additional supplies and equipment will need to be purchased, including an office trailer, generator, three decontamination units, two water pumps, a 7,800 gallon vertical tank, two light towers and three laptops.

REFERENCES

Mosley, R., T Hedrick, C. Amadio, and R. Keith. 2013. 2013 Flaming Gorge Creel Survey. Technical Publication 16-24. Utah Division of Wildlife Resources, Salt Lake City, UT.

WGFD. 2019. Wyoming Game and Fish Department Aquatic Invasive Species Sampling and Monitoring Manual. Wyoming Game and Fish Department, Cheyenne, WY.

WGFD. 2020. Wyoming Game and Fish Department Administrative Dreissenid Mussel Rapid Response Plan. Wyoming Game and Fish Department, Cheyenne, WY.

APPENDIX F1. Short-term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at exit check inspections during peak watercraft season (May 1 – September 30) on Flaming Gorge Reservoir. Hours worked each shift are based on the longest day during this season: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm) and closing (12:00 am to 10:00 pm).

Check Station Locations	Monday thru Wednesday, Sunday Number inspectors per shift per day			Thursday thru Sunday Number inspectors per shift per day			Number Inspectors Per Week
	Opening shift	Mid-day shift	Closing shift	Opening shift	Mid-day shift	Closing shift	
Highway 191	1	1	1	1	2	1	**7***
Buckboard Crossing Ramp	1	1	2	2	2	2	**10**
Anvil Draw Check station	1	1	1	1	2	1	**7***
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**3**	**4**	**4**	**6**	**4**	**24**

* If this plan is implemented between April 15 and September 15, one shift per week at Highway 121 AIS Check Station and 3 shifts per week at Anvil Draw Check Station would be filled by AIS inspectors assigned to work those check stations.

APPENDIX F2. Short-term *Suspect* Status. Anticipated equipment and supply needs at Flaming Gorge Reservoir check stations. Sign #1 – Exit inspection required, Sign #2 – Shore launching prohibited, Sign #3 Ramp closed to launching. Water Hauling #1 – 1 trip (6,000 gallons) hauled to Firehole Check station, Water Hauling #2 – 1 trip (6,000 gallons) hauled to Buckboard Ramp, Water Hauling #3 – 1 trip (6,000 gallons) hauled to Anvil Boat Ramp.

Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (people = 26)	646	$25	$16,150
	Per Diem	420	$157	$65,940
	Subtotal			**$82,090**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Sign #1	6	$100	$600
	Sign #2	30	$100	$3,000
	Sign #3	4	$100	$400
	Post & Hardware for Signs	40	$18	$700
	DMS sign rental per week	6	$800	$4,800
	Decon Unit rental per week	6	$1,400	$8,400
	Decon Unit rental per week	6	$1,400	$8,400
	Decon Unit rental per week	6	$1,400	$8,400
	Decon Unit rental per week	6	$1,400	$8,400
	Frac-Tank Setup	3	$837	$2,510
	Frac-Tank Delivery	3	$4,115	$12,345
	Frac-Tanks (N=3) rental per week	6	$597	$3,582
	Gas (generator, etc./ month)	6	$150	$900
	Traffic cones	10	$20	$200
	Water barriers	25	$291	$7,275
	Misc supplies and repairs-cost/week	6	$50	$300
	Inspection books	400	$2	$912
	Seals	10,000	$0	$260
	Wire for seals	10,000	$0	$850
	Subtotal			**$72,234**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	6k gal water haul Hwy 191 stn/trip	1	$ 778.00	$778
	6k gal water haul Buckboard stn/trip	2	$ 918.00	$1,836
	6k gal water haul Anvil stn/trip	1	$ 1,058.00	$1,058
	Subtotal			**$ 3,672.00**
	Total			**$ 157,996.01**

APPENDIX F3. Contact information for rental locations and water hauling company.

Aluminum signs:

Bar-D Sings
https://www.bardsign.com
2425 Yellowstone Hwy, Casper, WY 82609
307-234-6100

Unique signs and Design
https://www.uniquesd.biz
2455 Cascade Drive, Rock Springs, WY 82901
307-381-0701

DMS signs:

Hercrentals
https://www.hercrentals.com/us/rentals/procontractor/traffic-crowd-control/message-boards.html
2120 S 3600 W, West Valley City, UT 84119
801-977-9944

Wasatch Barricade
http://www.wasatchbarricade.com/message-boards/
4185 W. 8370 South, West Jordan, Utah 84088
801-282-0000

Decontamination Units:

Hotsy of Wyoming
http://www.hotsywashers.com/
7424 W 6 WN Road, Casper, WY 82604
307-234-6403

Water Hauling:

Zueck Transportation Co.
240 Production Drive, Rock Springs, WY 82901
307-362-3622

Frac Tank:

Rain for Rent
http://www.rainforrent.com
3411 Almy Road 105, Evanston, WY 82930
307-789-3858

ProTank
http://www.protank.com
8971 Yahweh Dr., Olive Branch, MS 38654
662-895-4337

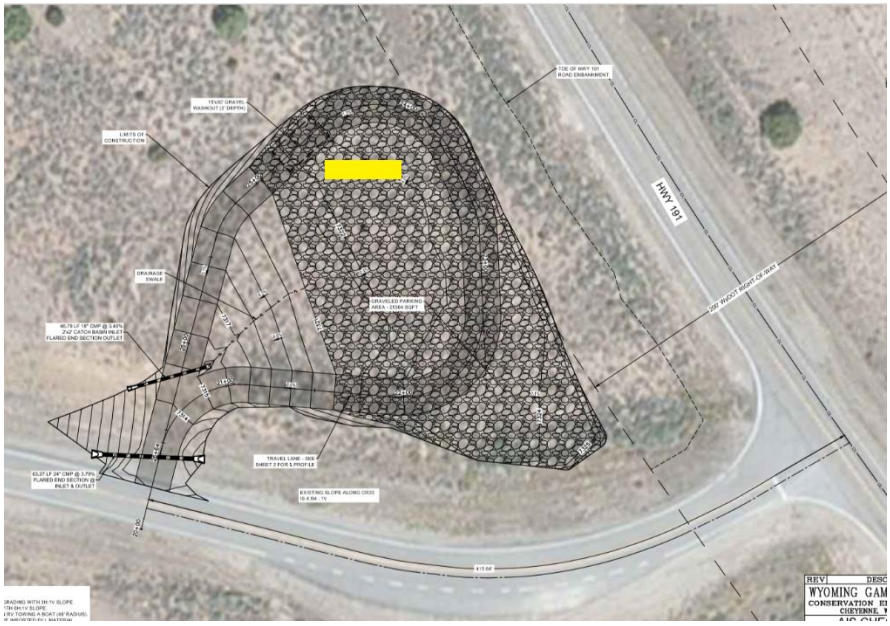
Water Barriers:

Traffic Safety Warehouse
http://trafficsafetywarehouse.com
P.O Box 1125, Deerfield, IL 60015
877-966-1018

Wasatch Barricade
http://www.wasatchbarricade.com/message-boards/
4185 W. 8370 South, West Jordan, Utah 84088
801-282-0000

APPENDIX F4.—Proposed location of the 21,000 gallon Frac Tanks rented from Rain at each of the exit interview check stations during the Short-term *Suspect* Status.

Firehole check station at intersection of Hwy 191 and County Road 33. Yellow rectangle is the location of the 21,000 gallon Frac-tank.



Buckboard Ramp check station. Yellow rectangle is the location of the 21,000 gallon Frac-tank.

APPENDIX F4. Continued.

Anvil Draw check station. Yellow rectangle is the location of the 21,000 gallon Frac-tank.

APPENDIX F5. Year 1 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season: opening (5:30 am to 3:30 pm), mid-day (9:00 am to 7:00 pm) and closing (11:00 am to 9:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	0	1	1	0	1	**4**
Buckboard Crossing Ramp	1	1	1	1	1	1	**6**
Anvil Draw Check station	1	1	1	1	1	1	**6**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**2**	**3**	**3**	**2**	**3**	**16**

APPENDIX F6. Year 1 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm) and closing (12:00 am to 10:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	1	1	1	2	1	**7**
Buckboard Crossing Ramp	1	1	2	2	2	2	**10**
Anvil Draw Check station	1	1	1	1	2	1	**7**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**3**	**4**	**4**	**6**	**4**	**24**

APPENDIX F7. Year 1 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season: opening (6:30 am to 4:30 pm), mid-day (8:30 am to 6:30 pm) and closing (9:30 pm to 7:30 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	0	1^^	1	0	1^^	**4**
Buckboard Crossing Ramp	1	1	1	1	1	1	**6**
Anvil Draw Check station	1	1	1	1	1	1	**6**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**2**	**3**	**3**	**2**	**3**	**16**

^^ The closing shift at Firehole will start at 2 pm and end at 12 am (midnight) in order to collect anglers exploiting the pre-spawn burbot that stage in the Green River Arm near the Firehole Ramp. From a management perspective this is obviously something we want people to continue doing.

APPENDIX F8. Year 1 Long-Term *Suspect* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three Flaming Gorge Reservoir check stations.

Personnel	Description	# of Months	Cost/Month	Total Cost
	3 Biologist I, Jan 1 - Dec 31	36	$4,543	$163,548
	8 Technicians, Feb 22 - Dec 7	76	$2,863	$217,588
	3 Technicians, Feb 22 - Aug 31[a]	18.75	$0	$0
	3 Technicians, Sep 1 - Dec 7	9.75	$2,863	$27,914
	3 Technicians, Apr 1 - Dec 7	24.75	$2,863	$70,859
	1 Technician, Apr 1 - Sep 30[a]	6	$0	$0
	1 Technician, Oct 1 - Dec 7	2.25	$2,863	$6,442
	9 Technicians, May 1 - Sep 30	45	$2,863	$128,835
	Extra help - holidays, etc	3	$2,863	$8,589
	Subtotal			**$623,775**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	7 State Motor Pool Sedans (8-9 mo ea.)	62	$500	$31,000
	Purchase 3/4 Ton Extended Cab Pickup	3	$33,000	$99,000
	Subtotal			**$130,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (21 people - 9 mo.)	2,864	$25	$71,600
	Per Diem	30	$157	$4,710
	Subtotal			**$76,310**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Dynamic Message Signs - large	3	$17,000	$51,000
	Office Trailer	2	$20,000	$40,000
	Generator	2	$1,000	$2,000
	Decontamination Unit	4	$12,500	$50,000
	98 GPM Water Pump	6	$700	$4,200
	Gas - generator, decon units/ month	26	$400	$10,400
	Six person camper	5	$20,000	$100,000
	7,800 gallon vertical tank	3	$8,000	$24,000
	Light Tower	6	$10,000	$60,000
	Misc supplies and repairs - cost/month	26	$200	$5,200
	2 Outhouse rental per month (Hwy 191)	8	$350	$2,800
	3 Outhouse rental per month (Anvil Dr)	9	$500	$4,500
	7 laptops for data entry	7	$750	$5,250
	Storage (Dec-Feb; cost/month)	75	$24	$1,800
	Inspection books	1,240	$2	$2,827
	Seals	31,000	$0	$806
	Wire for seals	31,000	$0	$2,635
	Subtotal			**$367,418**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Frac-Tank Pick-up	3	$4,114	$12,342
	6000 gal water hauled to Hwy 191	1	$778	$778
	6000 gal water hauled to Buckboard	3	$918	$2,754
	6000 gal water hauled to Anvil Draw	2	$1,058	$2,116
	Subtotal			**$17,990**
Construction	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Hwy 530 check station design	1	$25,000	$25,000
	Hwy 530 check station construction	1	$250,000	$250,000
	Hwy 414 check station design	1	$25,000	$25,000
	Hwy 414 check station construction	1	$250,000	$250,000
	Subtotal			**$550,000**
	Total			**$1,765,493**

[a] One inspector at Firehole and three inspectors at Anvil Draw are existing positions in the AIS program that run from April 1 through the end of September.

APPENDIX F9. Year 2 & 3 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm) and closing (10:15 am to 8:15 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191^	1	0	1	1	0	1	**4**
Highway 530	1	0	2	1	1	1	**6**
Highway 414	1	1	2	1	1	2	**8**
Total Wyoming	**3**	**1**	**5**	**3**	**2**	**4**	**18**

^Highway 191 crew will start April 1. Firehole boat ramp is sometimes icebound until mid-April.

APPENDIX F10. Year 2 & 3 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm) and closing (11:00 am to 9:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	1	1	1	2	1	**7**
Highway 530	1	1	2	2	2	2	**10**
Highway 414	1	1	2	2	3	3	**12**
Total Wyoming	**3**	**3**	**5**	**5**	**7**	**6**	**29**

APPENDIX F11. Year 2 & 3 Long-Term *Suspect* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm) and closing (9:00 am to 7:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	0	1^^	1	0	1^^	**4**
Highway 530	1	0	2	1	1	1	**6**
Highway 414	1	1	1	1	1	2	**7**
Total Wyoming	**3**	**1**	**4**	**3**	**2**	**4**	**17**

^^ The closing shift at Firehole will start at 2 pm and end at 12 am (midnight) in order to collect anglers exploiting the pre-spawn burbot that stage in the Green River Arm near the Firehole Ramp. From a management perspective this is obviously something we want people to continue doing.

APPENDIX F12. Year 2-3 Long-Term *Suspect* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three Flaming Gorge Reservoir check stations.

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist 1, Jan 1 - Dec 31 (3)	36	$4,543	$163,548
	Technicians, Feb 22 - Dec 7 (14)	133	$2,863	$380,779
	Technicians, Apr 1 - Dec 7 (3)	24.75	$2,863	$70,859
	Technician, April 1 - Sep 30[a] (1)	0	$2,863	$0
	Technicians, May 1 - Sep 30 (11)	55	$2,863	$157,465
	Technician, Oct 1 - Dec 7	2.25	$2,863	$6,442
	Extra help - holidays, etc	3	$2,863	$8,589
	Subtotal			**$787,682**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	State Motor Pool Sedans (3; 8-9 mo. each)	26	$500	$13,000
	Subtotal			**$13,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (6 people for 9 mo.)	704	$25	$17,600
	Per Diem	30	$157	$4,710
	Subtotal			**$22,310**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Light Towers (Hwy 530)	2	$10,000	$20,000
	Dynamic Message Signs (Hwy 414)	1	$17,000	$17,000
	Office trailer (Hwy 414)	1	$20,000	$20,000
	Generator (Hwy 414)	1	$12,000	$12,000
	Decontamination Unit (Hwy 414)	1	$12,000	$12,000
	98 GPM Water Pump (Hwy 414)	2	$700	$1,400
	Gas - generator, decon units/ mo.	26	$400	$10,400
	Misc supplies and repairs - cost/mo.	26	$200	$5,200
	2 Outhouses rental per month (Hwy 191)	8	$350	$2,800
	2 Outhouses rental per month (Hwy 530)	9	$350	$3,150
	3 Outhouses rental per month (Hwy 414)	9	$500	$4,500
	Storage (Dec-Feb; cost/mo.)	72	$24	$1,728
	Replacement signs	15	$100	$1,500
	Posts & hardware	15	$18	$263
	Laptops for data entry (Hwy 414)	3	$750	$2,250
	Inspection books	1,640	$2.28	$3,739
	Seals	41,000	$0.03	$1,066
	Wire for seals	41,000	$0.09	$3,485
	Subtotal			**$122,481**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	6K gal water hauled to Highway 191	1	$778	$778
	6K gal water hauled to Hwy 530 station	3	$918	$2,754
	6K gal water hauled to Hwy 414 station	3	$1,058	$3,174
	Subtotal			**$6,706**
	Total			**$952,179**

[a] One inspector at Firehole is existing positions in the AIS program that run from April 1 through the end of September.

APPENDIX F13. Year 1 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season: opening (5:30 am to 3:30 pm), mid-day (9:00 am to 7:00 pm) and closing (11:00 am to 9:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	1	2	1	1	2	**8**
Buckboard Crossing Ramp	1	2	2	1	2	2	**10**
Anvil Draw Check station	1	2	2	1	2	2	**10**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**5**	**6**	**3**	**5**	**6**	**28**

APPENDIX F14. Year 1 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm) and closing (12:00 am to 10:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	2	2	1	2	2	**10**
Buckboard Crossing Ramp	1	3	2	2	4	3	**15**
Anvil Draw Check station	1	2	2	2	3	2	**12**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**7**	**6**	**5**	**9**	**7**	**37**

APPENDIX F15. Year 1 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season: opening (6:30 am to 4:30 pm), mid-day (8:30 am to 6:30 pm) and closing (9:30 pm to 7:30 pm).

Check Station Locations	Monday thru Wednesday, Sunday Number inspectors per shift per day			Thursday thru Sunday Number inspectors per shift per day			Number Inspectors Per Week
	Opening shift	Mid-day shift	Closing shift	Opening shift	Mid-day shift	Closing shift	
Highway 191	1	1	2^^	1	1	2^^	**8**
Buckboard Crossing Ramp	1	2	2	1	2	2	**10**
Anvil Draw Check station	1	2	2	1	2	2	**10**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**5**	**6**	**3**	**5**	**6**	**28**

^^ The closing shift at Firehole will start at 2 pm and end at 12 am (midnight) in order to collect anglers exploiting the pre-spawn burbot that stage in the Green River Arm near the Firehole Ramp. From a management perspective this is obviously something we want people to continue doing.

APPENDIX F16. Year 1 *Positive* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three Flaming Gorge Reservoir check stations. If *Positive* Status was preceded by Long-term *Suspect* Status, many items will not need to be purchased.

Personnel	Description	# of Months	Cost/Month	Total Cost
	3 Biologist I, January 1 - December 31	36	$4,543	$163,548
	3 Technicians, Feb 22 - Aug 31[a]	18.75	$0	$0
	10 Technicians, Feb 22 - Dec 7	161.5	$2,863	$462,375
	1 Technician, Apr 22 - Sep 30[a]	5.25	$0	$0
	8 Technicians, Apr 22 - Dec 7	57.75	$2,863	$165,338
	9 Technicians, May 1 - Sep 30	45	$2,863	$128,835
	3 Technicians, Sep 1 - Dec 7	9.75	$2,863	$27,914
	1 Technician, Oct 1 - Dec 7	2.25	$2,863	$6,442
	Extra help - holidays, etc	3	$2,863	$8,589
	Subtotal			**$963,041**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	7 State Motor Pool Sedans (8-9 mo ea.)	62	$500	$31,000
	Purchase 3/4 Ton Ext Cab Pickup	3	$33,000	$99,000
	Subtotal			**$130,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (37 people for 9 mo.)	5168	$25	$129,200
	Per Diem	30	$157	$4,710
	Subtotal			**$133,910**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Dynamic Message Signs	3	$17,000	$51,000
	Office Trailers	2	$20,000	$40,000
	Generator	2	$1,000	$2,000
	Decontamination Unit	10	$12,500	$125,000
	98 GPM Water Pump	6	$700	$4,200
	Gas - generator, decon units/ month	26	$700	$18,200
	Six person camper	6	$20,000	$120,000
	7,800 gallon vertical tank	3	$8,000	$24,000
	Light Tower	6	$10,000	$60,000
	Misc supplies and repairs - cost/mo.	26	$200	$5,200
	3 Outhouse rentals per month (Anvil)	9	$500	$4,500
	2 outhouse rentals per month (Hwy 191)	8	$350	$2,800
	Laptop for data entry	7	$750	$5,250
	Replacement signs	15	$100	$1,500
	Posts and Hardware	15	$18	$263
	Storage (Dec-Feb; cost/mo.)	81	$24	$1,944
	Inspection books	1,240	$2.28	$2,827
	Seals	31,000	$0.03	$806
	Wire for seals	31,000	$0.09	$2,635
	Subtotal			**$472,125**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Frac-Tank Pick-up	3	$4,114	$12,342
	6K gal water hauled to Buckboard	4	$918	$3,672
	6K gal water hauled to Anvil	3	$1,058	$3,174
	6K gal water hauled to Hwy 191	2	$778	$1,556
	Subtotal			**$20,744**
Constructio	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Highway 530 Check Station design	1	$25,000	$25,000
	Highway 530 check station construction	1	$250,000	$250,000
	Highway 414 Check Station design	1	$25,000	$25,000
	Highway 414 check station construction	1	$250,000	$250,000
	Subtotal			**$550,000**
	Total			**$ 2,269,819**

[a] Three inspectors at Anvil Draw and one inspector at Firehole (Hwy 191) are existing positions in the AIS program that run from April 1 through the end of September.

APPENDIX F17. Year 2 through 5 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm) and closing (10:15 am to 8:15 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	1	2	1	1	2	**8**
Highway 530	1	2	2	1	2	2	**10**
Highway 414	1	2	2	1	2	2	**10**
Total Wyoming	**3**	**5**	**6**	**3**	**5**	**6**	**28**

APPENDIX F18. Year 2 through 5 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm) and closing (11:00 am to 9:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	2	2	1	2	2	**10**
Highway 530	1	3	2	2	4	3	**15**
Highway 414	1	2	2	2	3	2	**12**
Total Wyoming	**3**	**7**	**6**	**5**	**9**	**7**	**37**

APPENDIX F19. Year 2 through 5 *Positive* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm) and closing (9:00 am to 7:00 pm).

Check Station Locations	Monday thru Wednesday, Sunday Number inspectors per shift per day			Thursday thru Sunday Number inspectors per shift per day			Number Inspectors Per Week
	Opening shift	Mid-day shift	Closing shift	Opening shift	Mid-day shift	Closing shift	
Highway 191	1	1	2^^	1	1	2^^	**8**
Highway 530	1	2	2	1	2	2	**10**
Highway 414	1	2	2	1	2	2	**10**
Total Wyoming	**3**	**5**	**6**	**3**	**5**	**6**	**28**

^^ The closing shift at Firehole will start at 2 pm and end at 12 am (midnight) in order to collect anglers exploiting the pre-spawn Burbot that stage in the Green River Arm near the Firehole Ramp. From a management perspective this is obviously something we want people to continue doing.

APPENDIX F20. Year 2 through 5 *Positive* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three Flaming Gorge Reservoir check station. If *Positive* Status was preceded by Long-term *Suspect* Status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 Biologist I, Jan 1 - Dec 31	36	$4,543	$163,548
	20 Technicians, Feb 22 - Dec 7	190	$2,863	$543,970
	7 Technicians, Apr 1 - Dec 7	57.75	$2,863	$165,338
	1 Technician, Apr 1 -September 30[a]	6	$0	$0
	1 Technician, Oct 1 - Dec 7	2.25	$2,864	$6,444
	2 Technicians, May 1 - Sep 7	10	$2,863	$28,630
	7 Technicians, May 1 - Sep 30	35	$2,863	$100,205
	Extra help - holidays, etc	3	$2,863	$8,589
	Subtotal			**$1,016,724**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 State Motor Pool Sedans (8-9 mo ea.)	26	$500	$13,000
	Subtotal			**$13,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (6 people for 8-9 mo.)	832	$25	$20,800
	Per Diem	30	$157	$4,710
	Subtotal			**$25,510**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Gas - generator, decon units/mo.	26	$700	$18,200
	Misc supplies and repairs - cost/mo.	26	$200	$5,200
	Dynamic Message Signs (Hwy 414)	1	$17,000	$17,000
	Office trailer (Hwy 414)	1	$20,000	$20,000
	Generator (Hwy 414)	1	$12,000	$12,000
	Decontamination Unit (Hwy 414)	1	$12,000	$12,000
	98 GPM Water Pump (Hwy 414)	2	$700	$1,400
	3 Outhouse rental per month (Hwy 530)	9	$500	$4,500
	3 Outhouse rental per month (Hwy 414)	9	$500	$4,500
	2 Outhouse rental per month (Hwy 191)	8	$350	$2,800
	Laptop for data entry (Hwy 414)	3	$750	$2,250
	Replacement signs	15	$100	$1,500
	Posts & hardware	15	$18	$263
	Storage (Dec-Feb; cost/mo.)	64	$24	$1,536
	Inspection books	1,240	$2.28	$2,827
	Seals	31,000	$0.03	$806
	Wire for seals	31,000	$0.09	$2,635
	Subtotal			**$109,417**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	6000 gal water hauled to Highway 530	3	$918	$2,754
	6000 gal water hauled to Highway 414	4	$1,058	$4,232
	6000 gal water hauled to Highway 191	2	$778	$1,556
	Subtotal			**$8,542**
	Total			**$ 1,173,193**

[a] One inspector at Firehole is existing positions in the AIS program that run from April 1 through the end of September.

APPENDIX F21. Year 1 *Infested* Status. The following represents the number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at Flaming Gorge Reservoir exit check stations during pre-watercraft season. Inspectors will be stationed at check stations from approximately one hour before sunrise to 1 hour after sunset. Hours worked each shift are based on the longest day during this season: opening (5:15 am to 3:15 pm), mid-day (9:00 am to 7:00 pm) and closing (11:15 am to 9:15 pm).

Check Station Locations	**Monday thru Wednesday, Sunday Number inspectors per shift per day**			**Thursday thru Sunday Number inspectors per shift per day**			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Buckboard Crossing Ramp	2	1	2	2	1	2	**10**
Anvil Draw Check station	2	1	2	2	1	2	**10**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**5**	**3**	**6**	**5**	**3**	**6**	**20**

APPENDIX F22. Year 1 *Infested* Status. The following represents the number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at Flaming Gorge Reservoir exit check stations during peak-watercraft season. Inspectors will be stationed at check stations from approximately one hour before sunrise to 1 hour after sunset. Hours worked each shift are based on the longest day during this season: opening (4:45 am to 2:45 pm), mid-day (9:00 am to 7:00 pm) and closing (12:00 am to 10:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Buckboard Crossing Ramp	2	3	2	2	4	3	**16**
Anvil Draw Check station	2	3	2	2	4	3	**16**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**4**	**6**	**4**	**4**	**8**	**6**	**32**

APPENDIX F23. Year 1 *Infested* Status. The following represents the number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at Flaming Gorge Reservoir exit check stations during post-watercraft season. Inspectors will be stationed at check stations from sunrise to sunset. Hours worked each shift are based on the longest day during this season: opening (7:00 am to 5:00 pm), mid-day (8:00 am to 6:00 pm) and closing (9:00 pm to 7:00 pm).

Check Station Locations	**Monday thru Wednesday, Sunday Number inspectors per shift per day**			**Thursday thru Sunday Number inspectors per shift per day**			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Buckboard Crossing Ramp	2	1	2	2	1	2	**10**
Anvil Draw Check station	1	1	3	1	1	3	**10**
Marsh Creek Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Brinegar's Ferry Ramp	Closed	Closed	Closed	Closed	Closed	Closed	**0**
Total Wyoming	**3**	**2**	**5**	**3**	**2**	**5**	**20**

APPENDIX F24. Year 1 *Infested* Status. Anticipated personnel, equipment and supply needs for operating two check stations on Flaming Gorge Reservoir. If *Infested* Status was preceded by Long-term *Suspect* or *Positive* status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	Biologist I, Jan 1 - Dec 31	12	$4,543	$54,516
	Biologist I, Jan 1 - Dec 31	12	$4,543	$54,516
	20 Technicians, Feb 22 - Dec 7	190	$2,863	$543,970
	12 Technicians, May 1 - Sep 30	60	$2,863	$171,780
	Subtotal			**$824,782**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	8 Motor Pool Sedans for 6 mo.	48	$500	$24,000
	4 Motor Pool Sedans for 4 mo.	16	$500	$8,000
	Purchase 3/4 Ton Ext Cab Pickup	3	$33,000	$99,000
	Subtotal			**$131,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (20 people for 9 mo.)	2880	$25	$72,000
	Camp Groceries (12 people for 4 mo.)	768	$25	$19,200
	Per Diem (people = 10)	20	$157	$3,140
	Subtotal			**$94,340**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Replacement Signs	14	$100	$1,400
	Post & Hardware for Signs - replacement	15	$18	$263
	Dynamic Message Sign	2	$17,000	$34,000
	Large Office Trailers (3 per station)	6	$20,000	$120,000
	Purchase 12 Decontamination units	12	$12,500	$150,000
	Six person campers	6	$20,000	$120,000
	Generators (3 per station)	6	$1,000	$6,000
	98 GPM Water pump	4	$700	$2,800
	Fuel (generator, etc./mo.)	6	$750	$4,500
	7,800 gallon vertical tank	2	$8,000	$16,000
	Light Towers (2 per check station)	4	$10,000	$40,000
	3 Outhouse rental per month (Anvil)	6	$350	$2,100
	Laptop-data entry	8	$750	$6,000
	Misc supplies and repairs-cost/stn/mo.	6	$200	$1,200
	Equip Storage-off-season ($24/equip/mo	42	$25	$1,050
	Subtotal			**$505,313**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Frac-Tank Pick-up	3	$4,114	$12,342
	Water hauling #1 - 6k gal/ stn/ trip	7	$1,058	$7,406
	Water hauling #2 - 6k gal/ stn/ trip	27	$1,058	$28,566
	Water hauling #2 - 6k gal/ stn/ trip	3	$1,058	$3,174
	Subtotal			**$51,488**
Constructio	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Highway 530 Check Station design	1	$ 25,000	$ 25,000
	Highway 530 check station construction	1	$300,000	$ 300,000
	Highway 414 Check Station design	1	$ 25,000	$ 25,000
	Highway 414 check station construction	1	$300,000	$ 300,000
	Subtotal			**$ 650,000**
	Total			**$2,256,923**

APPENDIX F25. Year 2+ *Infested* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during pre-watercraft season. Inspectors will be stationed at exit check stations from sunrise to sunset. Hours worked each shift are based on the longest day during this season: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm) and closing (10:15 am to 8:15 pm).

Check Station Locations	**Monday thru Wednesday, Sunday** Number inspectors per shift per day			**Thursday thru Sunday** Number inspectors per shift per day			**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Mid-day shift**	**Closing shift**	
Highway 191	1	1	2	1	1	2	**8**
Highway 530	2	1	2	2	1	2	**10**
Highway 414	2	1	2	2	1	2	**10**
Total Wyoming	**5**	**3**	**6**	**5**	**3**	**6**	**28**

APPENDIX F26. Year 2+ *Infested* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm) and closing (11:00 am to 9:00 pm).

Check Station Locations	Monday thru Wednesday, Sunday Number inspectors per shift per day			Thursday thru Sunday Number inspectors per shift per day			Number Inspectors Per Week
	Opening shift	Mid-day shift	Closing shift	Opening shift	Mid-day shift	Closing shift	
Highway 191	2	2	2	2	3	3	**14**
Highway 530	2	3	2	2	4	3	**16**
Highway 414	2	3	2	2	4	3	**16**
Total Wyoming	**6**	**8**	**6**	**6**	**11**	**9**	**42**

APPENDIX F27. Year 2+ *Infested* Status. The following represents the number of inspectors conducting boat inspections and educating watercraft owners at Flaming Gorge Reservoir exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm) and closing (9:00 am to 7:00 pm).

Check Station Locations	Monday thru Wednesday, Sunday Number inspectors per shift per day			Thursday thru Sunday Number inspectors per shift per day			Number Inspectors Per Week
	Opening shift	Mid-day shift	Closing shift	Opening shift	Mid-day shift	Closing shift	
Highway 191	2	0	2^^	2	0	2^^	**8**
Highway 530	2	1	2	2	1	2	**10**
Highway 414	2	1	3	2	1	3	**12**
Total Wyoming	**6**	**2**	**7**	**6**	**2**	**7**	**30**

^^ The closing shift at Firehole will start at 2 pm and end at 12 am (midnight) in order to collect anglers exploiting the pre-spawn Burbot that stage in the Green River Arm near the Firehole Ramp. From a management perspective this is obviously something we want people to continue doing.

APPENDIX F28. Year 2+ *Infested* Status. Anticipated personnel, vehicle, travel, supplies, and utilities three Flaming Gorge Reservoir check stations. If *Infested* Status was preceded by Long-term *Suspect* or *Positive* status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 Biologist l, Jan 1 - Dec 31	36	$4,543	$163,548
	20 Technicians, Feb 22 - Dec 7	190	$2,863	$543,970
	7 Technicians, Apr 1 - Dec 7	66.5	$2,863	$190,390
	1 Technician, Apr 1 - Sep 30[a]	6	$0	$0
	1 Technician, Oct 1 - Dec 7	2.25	$2,863	$6,442
	18 Technicians, May 1 - Sep 30	90	$2,863	$257,670
	Extra help - holidays, etc	3	$2,863	$8,589
	Subtotal			**$1,170,608**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	8 State Motor Pool Sedans (8-9 mo ea.)	70	$500	$35,000
	Subtotal			**$35,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Camp Groceries (8 people for 8-9 mo.)	960	$25	$24,000
	Per Diem	30	$157	$4,710
	Subtotal			**$28,710**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Dynamic Message Sign	3	$17,000	$51,000
	Gas - generator, decon units/mo.	26	$600	$15,600
	Misc supplies and repairs - cost/mo.	26	$200	$5,200
	Large Office Trailer (Hwy 191)	2	$20,000	$40,000
	Generator (Hwy 191)	2	$1,000	$2,000
	Decontamination Units (Hwy 191)	3	$12,500	$37,500
	98 GPM Water Pump (Hwy 191)	2	$700	$1,400
	7,800 gal vertical tank (Hwy 191)	1	$8,000	$8,000
	Light towers (Hwy 191)	2	$10,000	$20,000
	Laptop for data entry (Hwy 191)	3	$750	$2,250
	4 Outhouse rental per month (Hwy 530)	9	$700	$6,300
	4 Outhouse rental per month (Hwy 414)	9	$700	$6,300
	3 Outhouse rental per month (Hwy 191)	8	$525	$4,200
	Replacement signs	15	$100	$1,500
	Posts & Hardware	15	$18	$263
	Storage (Dec-Feb; cost/mo.)	123	$24	$2,952
	Inspection books	1,800	$2.28	$4,104
	Seals	36,000	$0.03	$936
	Wire for seals	36,000	$0.09	$3,060
	Subtotal			**$212,565**
Utilities	**Description**	**Quantity**	**Cost each**	**Total Cost**
	6K gal water hauled to Highway 530	14	$1,058	$14,812
	6K gal water hauled to Highway 414	26	$1,058	$27,508
	6K gal water hauled to Highway 191	7	$778	$5,446
	Subtotal			**$47,766**
	Total			**$1,494,649**

[a] One inspector at Firehole is existing positions in the AIS program that run from April 1 through the end of September.

Appendix G—Control Plan for Containment of Dreissenid mussels on Utah portion of the Flaming Gorge Reservoir

This control plan for the Utah portion of Flaming Gorge Reservoir (FGR) will be initiated to prevent the further spread of dreissenid mussels via coordination, education, monitoring, inspections, and decontaminations (see main document Objective 5). If dreissenid mussels are detected in the reservoir and are verified by independent experts and genetic analysis, the reservoir will enter Short-term *Suspect* Status. This coincides with the period of time necessary to conduct additional sampling and testing necessary to verify whether dreissenid mussels are present (up to six weeks). If follow-up sampling does not detect dreissenid mussels, the water will enter Long-term *Suspect* Status, and monthly monitoring will be initiated. If dreissenid mussels are not detected for three years, the water will once again be considered *Negative/Undetected*. Conversely, if two sampling events within a 12-month period detect dreissenid mussels, the water will enter *Positive* Status and will not be considered *Negative/Undetected* again unless mussels are not detected in monthly monitoring for five years. Finally, a water will enter *Infested* Status when evidence shows a recruiting and reproducing population of dreissenid mussels is established. At the time of this control plan's writing, eradication of mussels is unlikely, and containment efforts will be necessary for the foreseeable future.

This plan provides guidance for the initial response to the detection of dreissenid mussels at each of these four status levels and is intended to be implemented quickly and act as the guiding document for initial decision-making following detection.

A hazard analysis critical control plan (HACCP) has been developed (Appendix G27) to prevent the inadvertent spread of dreissenid mussels from FGR to other waters.

RAPID RESPONSE – SHORT-TERM *SUSPECT* STATUS

In the event that a single sample from FGR is verified positive for dreissenid mussels, the reservoir will be considered Short-term *Suspect* (Appendix B). After the initial detection, follow-up sampling will occur, and results will take up to five days to be reported. The goal for rapid response at this status level is to minimize the risk of spreading mussels to other waters while waiting on follow-up test results. Within two days, we will provide a capacity to contact all boaters coming off the water, conduct clean, drain, dry exit contacts, decontaminate ballast tanks and other undrainable areas and flush all motors, if feasible. All watercraft leaving FGR will receive an orange or blue seal and receipt to verify the watercraft received an exit inspection or decontamination. Orange seals designate use on a *Suspect*, *Positive*, or *Infested* water. Blue seals are used to confirm that the watercraft has been professionally decontaminated.

At Short-term *Suspect* Status, there will not be time to hire personnel or purchase equipment. Therefore, the initial response will rely on existing personnel and equipment. Immediately after initial detection, job announcements and requisitions should be prepared so personnel can be hired, and equipment can be purchased as quickly as possible once follow-up results are available.

Closures

Launching will be consolidated by 1) closing shore launching to all trailered and motorized watercraft and 2) closing boat ramps with the least amount of use. Closing shore launching is essential because of the large number of roads that access FGR (Table 2). The closure of shore launching and boat ramps would be under the authority of the United States Forest Service. In Utah, boat ramps at Lucerne and Cedar Springs will remain open. Sheep Creek boat ramp may temporarily close depending on the time of detection and the other two open ramps' ability to accommodate additional traffic. The Mustang Ridge and Antelope Flats boat ramps would be closed (Figure 1).

Inspection Stations

Initially, watercraft departing FGR will be inspected at ramps and existing AIS checkpoints. There are no existing highway pull-outs that are large enough to accommodate anticipated traffic or in the correct location. The exception to this will be the highway inspection station at the intersection of Highway 191 and County Road 33 east of the Firehole Canyon boat ramps (Figure G1), which will be built in 2020. In Utah, there is one highway entrance inspection station in Vernal on Highway 191 in development that will be operational in spring 2021 that will interdict northbound watercraft traffic. In the event of a confirmed positive, this highway inspection station will need to expand to the west side of Highway 191 for exit inspections that will intercept watercraft traffic heading south on Highway 191.

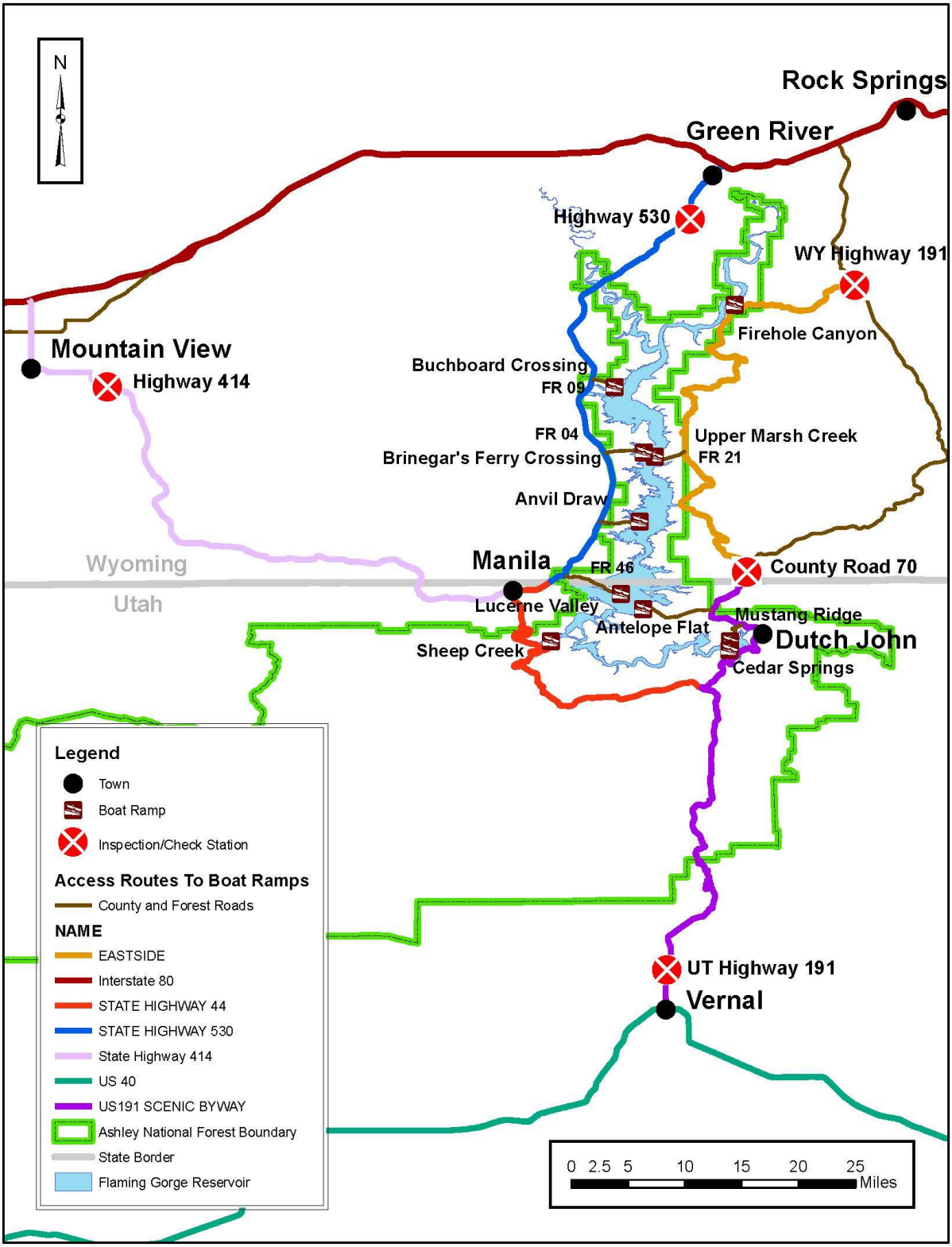


FIGURE G1. Highway inspection stations for conducting exit inspections on watercraft departing FGR.

Priority will be given to contacting watercraft departing FGR at the developed ramps that remain open (Lucerne, Sheep Creek, and Cedar Springs). During contacts, watercraft owners will be educated regarding the issue and taught how to Clean, Drain, and Dry their watercraft. As time permits, inspectors will also contact boaters prior to launch to educate them about the issue, perform an entrance inspection of the watercraft to prevent additional introductions of dreissenids, when practical, and explain steps boaters can take to facilitate exit inspections.

Staffing Plan

Inspectors will be stationed at inspection stations from one hour before sunrise to one hour after sunset. During the summer solstice, this will be from approximately 4:30 AM to 10:00 PM. The number of inspectors needed will be highest during peak boating season (Memorial Day Weekend through Labor Day Weekend; Appendix G1). These numbers will be adjusted depending on watercraft traffic expected during the short-term *Suspect* period. The volume of boats departing FGR will be greatest between 10:00 AM and 3:00 PM. As such, inspector shifts will be structured, so the number of inspectors at each ramp is maximized from mid-morning to mid-afternoon (Appendix G1).

During Short-term *Suspect* Status, Utah inspection stations may need to be staffed temporarily by UDWR regional personnel until additional seasonal technicians can be hired. This will include LE and Aquatics Section employees for a total of up to 24 personnel. Any additional assistance needed will be provided by other regional staff and staff from other regions.

Supplies and Equipment

The budget for Short-term *Suspect* Status can be found in Appendix G2. Aluminum signs will be installed on all access roads (Table 2), letting boaters know that: 1) exit inspection is required, 2) shore launching is prohibited, and 3) some ramps are closed to launching (Appendix G2). We will need to seek permission from the USFS and UDOT (where applicable) for the installation of these signs. Three digital messaging signs (DMS) will be rented (one sign for each inspection station) to ensure boaters understand that exit inspections are required after removing a watercraft from FGR (Appendix G2).

Inspection stations will need equipment and supplies to complete exit inspections and decontaminations of standing water that cannot be drained, including motors and ballast tanks. Six mobile decontamination units will be needed, two at each of the three inspection stations. Two decontamination units are necessary at each station to handle high watercraft volume periods and to ensure there is at least one functional unit at all times. The Northeastern AIS program has four portable decontamination units. Two additional units will be provided so that each interdiction location has two units.

Lodging will be provided in part at UDWR housing in Dutch John and campers located at various locations. Seasonal technicians in Vernal will be responsible for their housing.

Boat ramp closures will require barriers to be erected to prohibit launching. One option is water-filled Jersey barriers or water barriers.

RAPID RESPONSE – LONG-TERM *SUSPECT* STATUS

If initial follow-up sampling does not yield a positive result, FGR would enter Long-term *Suspect* Status (Appendix B) and remain at this level for up to three years if no additional

positive samples are found. The goal during this period is still to minimize the risk of spreading mussels to other waters. During the first year (from initial detection through the following boating season), we will need to provide capacity for all boaters coming off the water to efficiently obtain a required clean, drain, dry exit inspection. Motor flushes and decontamination of ballast tanks and other undrainable areas will be done when feasible. All watercraft leaving FGR will receive an orange or blue seal and receipt to verify the watercraft received an exit inspection or decontamination. Orange seals designate use on a *Suspect*, *Positive*, or *Infested* water. Blue seals are used to confirm that the watercraft has been professionally decontaminated.

If there is no confirmation of dreissenid mussel presence after the first full boating season, efforts will switch in years two and three to a lower level response, with a goal of contacting a significant number of boaters but placing more responsibility on boaters to get an exit inspection. Inspectors will still conduct clean, drain, dry exit inspections on boats leaving the water and decontaminate ballast tanks and other undrainable areas when feasible. Public outreach will increase via multiple outlets to highlight the potential threat at the *suspect* water.

YEAR 1 LONG-TERM *SUSPECT* STATUS

Year 1 is defined as the time of initial detection through the next full boating season. All budgeting is based on a full calendar year. If detection occurs early in the boating season, full implementation of Year 1 Long-term *Suspect* Status will begin in that season and carry through the next boating season. If that occurs, the budget for that initial season will be a portion of the full calendar year budget. On the other hand, if detection occurs late in the boating season, implementation of Year 1 Long-term *Suspect* Status may not begin until the following boating season. Regardless of when detection occurs, exit inspections will be suspended on December 1 and commence on March 1 in their regular operations. Whenever launching is still feasible (ice off) at Lucerne and Cedar Springs ramps, we will attempt to provide one technician during daylight hours to conduct exit interviews or use any available automated technology to document boats coming and going at these ramps. In addition, planning and construction will begin on AIS highway inspection stations at pinch points leaving FGR, recognizing that they may not be completed until the end of the following boating season (Figure G1). A Local Boater Program will be developed during Year 1 Long-term *Suspect* Status.

Closures

The closures instituted during Short-Term *Suspect* Status will remain in effect during the duration of Year 1 Long-term *Suspect* Status. These include a reservoir-wide shore launching closure and closure of Mustang Ridge and Antelope Flats ramps in Utah. These closures will remain in effect until highway inspection stations are fully operational, which will likely not occur until March 1 of Year 2 Long-term *Suspect* Status.

Inspection Stations

Watercraft departing FGR during Year 1 Long-term *Suspect* Status will continue to be inspected at Lucerne Ramp, Sheep Creek Ramp, and Cedar Springs Ramp (Figures H1).

Inspection stations will be open from March 1 through November 30 and closed from December 1 through February 28. It will be the watercraft owner's responsibility to get the

required inspection before launching again during the winter months. For planning purposes, the time period between March 1 and November 30 has been broken into three sub-periods: 1) pre-watercraft season (March 1 – April 30), 2) peak watercraft season (May 1 – September 30), and 3) post-watercraft season (October 1 – November 30). Pre-watercraft season will be predominately anglers pursuing Kokanee Salmon, Lake Trout, and Rainbow Trout. Peak watercraft season users will be both anglers and recreational boaters, with the majority of anglers pursuing Kokanee. Post-watercraft season will be predominately anglers pursuing Lake Trout, Burbot, and Rainbow Trout. Off-season (December 1 – February 28) boaters are generally Lake Trout anglers launching at ramps that are not icebound. Watercraft use on FGR during pre- and post-watercraft seasons is low relative to peak watercraft season and is composed mainly of local boaters.

Staffing Plan

Inspectors will be stationed at inspection stations from approximately one hour before sunrise to one hour after sunset. In general, the number of boats departing FGR will be greatest between 10 am and 3 pm. As such, inspector shifts will be structured so the number of inspectors at each inspection station will be maximized from mid-morning to mid-afternoon.

The number of inspectors and hours of operation for each of the three inspection stations can be found in Appendices G3-G5. Personnel costs can be found in Appendix G6. Lucerne, Sheep Creek, and Cedar Springs inspection stations will open March 1.

Three temporary crew leads will be hired from January 1 (or as soon as possible if detection happens early in the boating season) through December 31 to oversee operations of the inspection stations (Appendix G3). The crew leads will be hired so they can complete hiring paperwork, receive AIS training, and be prepared to help train the inspectors as they arrive later in the month. The crew leads will ensure equipment and supplies are ready for the inspection stations to open March 1. The UDWR AIS Interdiction Specialist will train and supervise the crew leads.

The first group of inspectors will be hired from February 22 through December 7 to work Lucerne, Sheep Creek, and Cedar Springs inspection stations (Figure 1, Appendix G3). They will be hired five working days prior to March 1, so they have time to complete hiring paperwork and AIS training. They will work one week into December so they can help the crew lead dismantle inspection stations, move equipment and return vehicles.

The second group of inspectors will be hired from May 1 through September 30 (Appendix G4). This group of inspectors will start May 1 so they can complete hiring paperwork, be trained, and gain experience inspecting boats before watercraft traffic increases in mid-May with the Flaming Gorge Derby and at the end of May with Memorial Day weekend.

In Year 1 Long-term *Suspect* Status, the identified personnel should be able to keep up with inspections of watercraft on a normal day. Additional assistance will likely be needed during fishing contests and holiday periods (Memorial Day, Independence Day, Pioneer Day, and Labor Day). The data and records collected during Year 1 will help refine staffing levels in later years.

Supplies and Equipment

Exit inspection stations will be fully equipped to conduct watercraft inspections and decontaminations and provide transportation and shelter for employees. Lucerne, Sheep Creek,

and Cedar Springs inspection stations will be temporarily located at the current entrance inspection stations until exit inspection stations can be built on Highway 414 southeast of Mountain View and Utah Highway 191 north of Vernal (Figure G1). Budgets for Year 1 Long-term *Suspect* Status assume that most items rented during Short-term *Suspect* Status (e.g., DMS signs, decontamination units) will be purchased in time to use for Long-term *Suspect* Status. If items cannot be procured in time, additional costs associated with rental will be incurred.

Several relatively expensive items will need to be purchased prior to inspection stations opening on March 1 (Appendix G6). These items will vary depending on the inspection station but will include dynamic messaging signs, decontamination units, light towers for night inspections, and generators. Inspection station budgets also include fuel for vehicles and generators, miscellaneous supplies and repairs, and replacement signs. Inspectors will need inspection books, seals, and wire for inspecting and sealing boats.

A few items will be rented annually. These include outhouses for each inspection station where needed and vehicles from motor pool for use by the inspectors as needed and during the months when inspection stations are closed.

Building Highway Inspection Stations

During the first year of *Suspect*, *Positive,* or *Infested* Status, highway pinch point inspection stations for long-term containment efforts would need to be built (Figure G1). Four of the five inspection stations identified are in Wyoming. The Highway 530 and Highway 414, and Utah Highway 191 exit inspection stations would be built during the first full year of Long-term *Suspect* Status, so they are operational for years 2 and 3. Wyoming Highway 191 inspection station is planned to be built in 2020. Utah Highway 191 entrance inspection station will be operational in spring 2021. At this point, it is unknown if a County Road (CR) 70 inspection station is warranted. The majority of traffic on that road has historically been drift boats headed to the Green River below Flaming Gorge Dam. However, recent improvements to that road may allow high-risk watercraft from Colorado an alternative route to the reservoir. A trail camera was deployed in September 2019 to evaluate the type and volume of watercraft traffic using CR 70. The trail camera was deployed again in spring 2020 to provide information over a full boating season.

Utilizing pinch point inspection stations means boat ramp and shore launching closures implemented in Year 1 can be lifted. The secondary advantage is moving the inspection stations away from the congestion of boat ramps. The disadvantage will be non-compliance since watercraft owners driving by the existing AIS inspection station on highways is a chronic problem.

It is recommended that WGFD and UDWR personnel start negotiating a Memorandum of Agreement (MOA) with the landowners of the proposed inspection stations as soon as this plan is approved. The MOA would set forth the terms and conditions, scope of work, and responsibilities of the parties associated with their collaboration on the construction of AIS inspection stations on the identified properties.

Inspection stations will need to be built large enough to accommodate the watercraft traffic exiting FGR after busy weekends. The total lengths of most vehicles towing watercraft that frequent Flaming Gorge Reservoir range from 45 to 75 feet. Watercraft can be expected to show up in groups, and many times there are two or more vehicles traveling together with some towing campers or ATVs. Therefore, inspection stations should be built to accommodate all vehicles and watercraft expected without them being backed up onto the highway.

Utah Highway 191 Exit inspection station would be on the west side of Highway 191 at the north end of Vernal (Figure G1). This inspection station will intercept boats heading south from FGR towards Vernal, Utah. The inspection station would be built on Bureau of Land Management property and would need to be 300 feet long and 60 feet wide. It would be surfaced with gravel. Construction cost is estimated at $250,000 (Appendix G6). This cost includes blading, leveling, and graveling the 500 by 60-foot inspection station, asphalt paving of entrance and exit ramps that cross state highway right of ways, and construction of deceleration and acceleration lanes on the highways.

A *Suspect* Status level may not warrant the cost of permanent infrastructures that may be needed for only a few years. At that status level, exit inspection operations would either remain at the launch ramps or be concentrated at highway inspection stations with minimal site improvements made until FGR is reclassified as either *Positive, Infested,* or *Negative/Undetected* through additional sampling.

Local Boater Program

A local boater program is designed to allow boaters who only boat on a particular water to launch and trailer their boat on that water without having to undergo entrance and exit inspections. This would provide a convenience to the boater and would also reduce the number of inspections and decontaminations that would need to be conducted at inspection stations.

A local boater program on FGR is justified, based on the large volume of boaters during the peak watercraft season. Due to the geography of FGR, with multiple launch and take out points spread out over a large area, limitations of agency personnel and decontamination equipment, and access to a municipal water source, a local boater program would allow us to maximize available decontamination resources to high-risk watercraft.

The local boater program will be implemented as soon as possible, hopefully early in Year 1 of Long-term *Suspect* Status. The program will continue in subsequent years, and depending on how the local boater program is implemented, it could continue if FGR returns to negative status.

State agencies will coordinate with each other in development of local boater programs.

Fishing Contests

March 1 through November 30

Fishing contests attract a large number of anglers to FGR and subsequently a large number of watercraft. As such, steps should be taken to facilitate entrance and exit inspections. For two-day contests, “contest passes” will be issued to contestants returning to FGR the next morning. The pass would work similar to the Local Boater Program but will only be valid for the duration of the contest. On the final day of the contest, participants will receive a required exit inspection, and an inspection receipt will be necessary to claim any prizes. Contest sponsors will be required to update rules to reflect these requirements, and they will be responsible for issuing dated “contest passes.” It will be recommended that derby sponsors stop fishing one hour earlier than usual on the last day to give participants extra time to reach weigh-in stations before they close. Consideration could be given to requiring this in permits. The responsible agency (WGFD or UDWR) will increase the number of inspectors at affected ramps to facilitate inspections of watercraft departing the reservoir.

December 1 through February 28

Although the risk is lower, UDWR will conduct exit inspections on all boats participating in contests during this time period. The processes described for March through November will also apply to this time period.

YEAR 2 AND 3 LONG TERM *SUSPECT* STATUS

Closures

Once the AIS exit inspection stations on Highway 530, Highway 414, and Utah Highway 191 are open, closures to launching initiated during the Short-Term *Suspect* Plan will be lifted. It will once again be legal to launch from shore and at Mustang Ridge and Antelope Flats ramps.

Inspection Stations

Years 2 and 3 Long-term *Suspect* Status will be similar to Year 1 Long-term *Suspect* Status, except exit inspections will be conducted at inspection stations on Highway 530, Highway 414, and both Wyoming and Utah Highway 191 (Figure G1). Both Highway 191 inspection stations will continue to operate as both entrance and exit inspection station. In years 2 and 3 of Long-term *Suspect* Status, inspections will begin March 1 and end November 30. If the highway inspection stations are not constructed and operational prior to March 1 of Year 2 Long-term *Suspect* Status, inspections will be conducted as described in the Year 1 Long-term *Suspect* Status plan.

Staffing Plan

During Years 2 and 3 Long-term *Suspect* Status, the staffing plan will be similar to Year 1, except hours will be reduced, with inspectors stationed at exit inspection stations from sunrise to sunset. In addition, the total number of inspectors needed will be reduced (Appendices G7-G9).

Supplies and Equipment

Anticipated budget for vehicles, travel, supplies, and utilities to operate the Vernal inspection station on Highway 191 during Years 2-3 Long-term *Suspect* Status can be found in Appendix G10. Most of the equipment purchases will have been completed during Year 1 Long-term *Suspect* Status (Appendix G6). Many of the supplies and utilities identified in prior years will need to be replenished in years 2 and 3. Budgets for years 2 and 3 will be adjusted after operating the inspection stations during Short-term *Suspect* Status and Year 1 Long-term *Suspect* Status.

RAPID RESPONSE – *POSITIVE* STATUS

Flaming Gorge Reservoir will be considered *Positive* for dreissenid mussels if two or more sampling events within a 12-month period meet the minimum criteria for detection (defined above). The goal during the *Positive* Status period is still to minimize the risk of spreading mussels to other waters. We will need to provide the capacity to contact all boaters

coming off the water, conduct "clean, drain, dry" exit contacts, decontaminate ballast tanks and other undrainable areas and flush all motors, as feasible. If live mussels are found on any boats during exit inspections, they will be fully decontaminated, and consideration will be given to upgrading FGR's status to *Infested*. All watercraft leaving FGR will receive an orange or blue seal and receipt to verify the watercraft received an exit inspection or decontamination. Orange seals designate use on a *Suspect, Positive,* or *Infested* water. Blue seals are used to confirm that the watercraft has been professionally decontaminated.

YEAR 1 *POSITIVE* STATUS

The Year 1 *Positive* Status response would be similar to the Year 1 Long-term *Suspect* Status response. Responders should refer to the Year 1 Long-term *Suspect* Status section of this plan, keeping in mind exceptions noted below.

Closures

Any closures previously put in place will remain in effect until the highway exit inspection stations are fully operational.

Inspection Stations

Year 1 *Positive* Status could start anytime during the three years following the initial detection of dreissenid mussels. If Year 1 *Positive* Status occurs prior to highway inspection stations being built, watercraft departing FGR will be inspected at Lucerne, Sheep Creek, and Cedar Springs ramps as previously described (Figure 1). If the highway pinch point inspection stations (see Year 1 *Suspect* Status) are built and operational, inspections will be conducted at those inspection stations (Figure G1).

Staffing Plan

During Year 1 *Positive* Status, the staffing plan will be similar to Year 1 Long-term *Suspect* Status. Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed to operate inspection stations can be found in Appendices G11-G13. The budget for personnel to staff inspection stations during Year 1 *Positive* Status can be found in Appendix G14. Hours of operation for the Utah three inspection stations will be the same as Year 1 Long-term *Suspect* Status, but the total number of inspectors needed will increase.

Supplies and Equipment

The anticipated budgets for vehicle, travel, supplies, and utilities to operate Lucerne Sheep Creek, and Cedar Springs exit inspection stations during Year 1 of *Positive* Status can be found in Appendix G14. This budget is very similar to the budget for Year 1 Long-term *Suspect* Status (Appendix G6). Budgets for Year 1 *Positive* Status assume that most items rented during Short-term *Suspect* Status (e.g., DMS signs, decontamination units) will be purchased in time to

use for *Positive* Status. If items cannot be procured in time, additional costs associated with rental will be incurred.

Public Outreach

Public outreach efforts will align with those previously listed in Appendix D.

Local Boater Program

Similar to Long-term *Suspect* Status, a local boater program is recommended at *Positive* Status as well. See the Local Boater Program portion of the Year 1 Long-term *Suspect* Status section for more information.

Fishing Contests

See the Fishing Contests portion of the Year 1 Long-term *Suspect* section.

YEARS 2 - 5 *POSITIVE* STATUS

Closures

Once the AIS inspection stations on Highway 530, Highway 414, and both Wyoming and Utah Highway 191 are operational, closures to launching initiated during the Short-Term *Suspect* Plan will be lifted.

Inspection Stations

Years 2 through 5 of *Positive* Status will be similar to Year 1 of *Positive* Status, except exit inspections will be conducted at the inspection stations on Highways 530, 414, and both Wyoming and Utah 191 (Figure G1). The Wyoming Highway 191 inspection station will continue to operate as both an entrance and exit inspection station. The Utah Highway 191 inspection station will begin to operate as both an entrance and exit inspection station. If the highway inspection stations are not constructed and operational prior to March 1 of Year 2 *Positive* Status, exit inspections will continue to be conducted as described in the Year 1 Status plan.

Staffing Plan

The staffing plan for Years 2-5 *Positive* Status will be similar to Years 2-3 Long-term *Suspect* Status (see Staffing Plan portion of Years 2-3 Long-term *Suspect* Status section). Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed are the same as Year 1 *Positive* Status, but inspection station locations reflect the shift to highway inspection stations (Appendices G15-G17). The annual budget for personnel to staff inspection stations during Years 2-5 *Positive* Status can be found in Appendix G18.

Supplies and Equipment

Anticipated budgets for vehicles, travel, supplies, and utilities to operate the Vernal inspection station on Highways 191 during Years 2-5 of *Positive* Status can be found in Appendix G18. Most equipment will have been purchased during Year 1 *Positive* Status. All the equipment and supplies from the Lucerne, Sheep Creek and Cedar Springs inspection station will move to the Vernal Highway 191 exit inspection station. This would include a DMS sign, generator, decontamination unit, and two light towers.

RAPID RESPONSE – *Infested* Status

FGR will be considered *Infested* if an established (recruiting and reproducing) population of adult dreissenid mussels is found. The goal during *Infested* Status is still to minimize the risk of spreading mussels to other waters. We will need to provide capacity for all boaters coming off the water to efficiently obtain a required clean, drain, dry exit inspection. Motor flushes and decontamination of ballast tanks and other undrainable areas will be done when feasible. Watercraft leaving FGR during daylight hours will be inspected upon exit and receive an orange or blue seal and receipt to verify the watercraft received an exit inspection or decontamination. Orange seals designate use on a *Suspect*, *Positive*, or *Infested* water. Blue seals are used to confirm that the watercraft has been professionally decontaminated. Inspection and decontamination records will be entered into the regional database. The use of other technology to automate this process will also be explored.

YEAR 1 *INFESTED* STATUS

The Year 1 *Infested* Status response will be similar to the Year 1 Long-term *Suspect* Status response. Responders should refer to the Year 1 Long-term *Suspect* Status section of this plan, keeping in mind exceptions noted below.

Closures

The closures instituted during Short-Term *Suspect* Status will remain in effect until highway pinch point inspection stations are fully operational. These include a reservoir-wide shore launching closure and closure of Mustang Ridge and Antelope Flats ramps. In addition, the Sheep Creek boat ramps will be closed during Year 1 *Infested* Status, concentrating boaters at the Lucerne and Cedar Springs ramp.

Inspection Stations

If Year 1 *Infested* Status occurs prior to highway inspection stations being built, watercraft departing FGR will be inspected and decontaminated at Lucerne and Cedar Springs inspection stations (Figure 1). If the highway pinch point inspection stations (see Year 1 *Suspect* Status) are built and operational, inspections will be conducted at those inspection stations (Figure G1).

Staffing Plan

The Year 1 *Infested* Status staffing plan will be similar to the Year 1 Long-term *Suspect* Status staffing plan. Hours of operation (one hour before sunrise – one hour after sunset) and numbers of inspectors needed to operate inspection stations can be found in Appendices G19-G21. The budget for personnel to staff inspection stations during Year 1 *Infested* Status can be found in Appendix G22. Hours of operation for the Vernal Highway 191 inspection station will be the same as Year 1 Long-term *Suspect* Status, but the total number of inspectors needed will increase. These staffing levels are lower than Year 1 *Positive* Status but are for only one inspection station versus three at Long-term *Suspect* and *Positive* statuses. On a per-inspection station basis, staffing levels are higher.

Supplies and Equipment

The anticipated budget for vehicles, travel, supplies, and utilities to operate the Vernal Highway 191 exit inspection station during Year 1 *Infested* Status can be found in Appendix G22. Costs are generally higher overall due to increased costs of fully decontaminating more watercraft.

Public Outreach

Public outreach efforts will align with those previously listed in Appendix D.

Local Boater Program

Similar to Long-term *Suspect* Status, a local boater program is recommended at *Infested* Status as well. See the Local Boater Program portion of the Year 1 Long-term *Suspect* Status section for more information.

Fishing Contests

See the Fishing Contests portion of the Year 1 Long-term *Suspect* section.

YEARS 2+ – *INFESTED*

Once *Infested* Status is declared on FGR, it is unlikely the status will revert to Negative. As such, implementation of this Year 2+ *Infested* Status plan will be the beginning of a long-term control plan with the goal of minimizing the risk of spreading mussels to other waters. We will need to provide the capacity to conduct exit inspections and ensure a greater number of boats leaving have undergone a full decontamination. This plan will need to be updated and modified over time as the pattern of watercraft owners departing FGR and the resources needed to implement this plan are better understood.

Closures

Once all the highway pinch point AIS inspection stations (Highways 530, 414, and both Wyoming and Utah 191) are open, all closures during Short-Term *Suspect* and Year 1 *Infested*

statuses will be lifted. It will once again be legal to launch from shore, and all previously closed ramps will be reopened.

Inspection Stations

Years 2+ *Infested* Status will be a continuation of Year 1, except exit inspections will be conducted at the inspection stations on Highways 530, 414, and both Wyoming and Utah 191 (Figure G1). The Highway 191 inspection station will operate as both an entrance and exit inspection station. If the highway inspection stations are not constructed and operational prior to March 1 of Year 2+ *Infested* Status, exit inspections will be conducted as described in the Year 1 *Infested* Status plan.

Staffing Plan

During Year 2+ *Infested* Status, the staffing plan will be similar to Year 1 *Infested* Status. Hours of operation (one hour before sunrise – one hour after sunset) are the same as Year 1 *Infested* Status, but inspection station locations reflect the shift to highway inspection stations (Appendices G23-G25). The annual budget for personnel to staff inspection stations during Year 2+ *Infested* Status can be found in Appendix G26.

Supplies and Equipment

Anticipated budgets for vehicles, travel, supplies, and utilities to operate the inspection stations on Utah Highway 191 during Year 2+ *Infested* Status can be found in Appendix G26. Most equipment will have been purchased during Year 1 *Infested* Status. All equipment and supplies from Lucerne and Cedar Springs inspection stations will move to the Utah Highway 191 exit inspection station.

REFERENCES

Mosley, R., T Hedrick, C. Amadio, and R. Keith. 2013. 2013 Flaming Gorge Creel Survey. Technical Publication 16-24. Utah Division of Wildlife Resources, Salt Lake City, UT.

UDWR. 2020. Utah Department of Natural Resources, Division of Wildlife Resource Plankton Sampling for Dreissenids Protocol. Utah Division of Wildlife Resources, Salt Lake City, UT.

WGFD. 2020. Wyoming Game and Fish Department Administrative Dreissenid Mussel Rapid Response Plan. Wyoming Game and Fish Department, Cheyenne, WY.

APPENDIX G1. Short-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at exit check inspections during peak watercraft season (May 1 – September 30) on FGR. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm), and closing (12:00 am to 10:00 pm). 12 hour shifts: opening (4:30 am to 4:30) and closing (10 am to 10 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Lucerne Ramp	1	1	2	2	2	**8**
Sheep Creek Ramp	1	1	1	2	2	**7**
Cedar Springs Ramp	1	1	1	2	2	**7**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total Utah	**3**	**3**	**4**	**6**	**6**	**22**

APPENDIX G2. Short-Term *Suspect* Status. Anticipated equipment and supply needs at FGR inspection stations. Sign #1 – Exit inspection required, Sign #2 – Shore launching prohibited, Sign #3 Ramp closed to launching.

Supplies	Description	Quantity	Cost each	Total Cost
	Sign #1	6	$100	$600
	Sign #2	30	$100	$3,000
	Sign #3	4	$100	$400
	Post & Hardware for Signs	40	$18	$700
	DMS sign rental per week	6	$800	$4,800
	Gas (generator, etc./ month)	6	$150	$900
	Traffic cones	10	$20	$200
	Water barriers	25	$291	$7,275
	Misc. supplies and repairs-cost/week	6	$50	$300
	Seals	10,000	$0	$260
	Wire for seals	10,000	$0	$850
	Total			**$19,285**

APPENDIX G3. Year 1 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:30 am to 3:30 pm), mid-day (9:00 am to 7:00 pm), and closing (11:00 am to 9:00 pm). 12 hour shifts: opening (5:30 am to 5:30 pm) and closing (9 am to 9 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts** Number inspectors per shift per day			**Friday thru Sunday 12 hr shifts** Number inspectors per shift per day		**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	1	1	1	1	2	**6**
Sheep Creek Ramp	1	1	1	1	1	**5**
Cedar Springs Ramp	1	1	1	1	1	**5**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**3**	**3**	**4**	**16**

APPENDIX G4. Year 1 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm), and closing (12:00 am to 10:00 pm). 12 hour shifts: opening (4:30 am to 4:30 pm) and closing (10 am to 10 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Lucerne Ramp	1	1	2	2	2	**8**
Sheep Creek Ramp	1	1	1	2	2	**7**
Cedar Springs Ramp	1	1	1	2	2	**7**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**4**	**6**	**6**	**22**

APPENDIX G5. Year 1 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hours shifts: opening (6:30 am to 4:30 pm), mid-day (8:30 am to 6:30 pm), and closing (9:30 pm to 7:30 pm). 12 hour shifts: opening (6:30 am to 6:30 pm) and closing (7:30 am to 7:30 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts Number inspectors per shift per day**			**Friday thru Sunday 12 hr shifts Number inspectors per shift per day**		**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	1	1	1	1	2	**6**
Sheep Creek Ramp	1	1	1	1	1	**5**
Cedar Springs Ramp	1	1	1	1	1	**5**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**3**	**3**	**4**	**16**

APPENDIX G6. Year 1 Long-Term *Suspect* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three FGR inspection stations.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	16 Technicians, Feb 22 - Dec 7	152	$2,160	$328,320
	6 Technicians, May 1 - Sep 30	30	$2,160	$64,800
	Extra help - holidays, etc.	1	$2,160	$2,160
	Subtotal			**$395,280**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	7 State Motor Pool Vehicles (8-9 mo. ea.)	62	$700	$43,400
	Subtotal			**$43,400**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Dynamic Message Signs - large	3	$17,000	$51,000
	Generator	2	$1,000	$2,000
	Water Pump for Sheep Creek	1	$500	$500
	Gas - generator, decontamination units/ month	26	$400	$10,400
	Light Tower (2 per station)	6	$10,000	$60,000
	Misc. supplies and repairs - cost/month	26	$200	$5,200
	Storage (Dec-Feb; cost/month)	75	$24	$1,800
	Seals	31,000	$0	$806
	Tablets	5	$250	$1,250
	Wire for seals	31,000	$0	$2,635
	Subtotal			**$135,591**
Construction	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Hwy 191 exit inspection station site improvements	1	$50,000	$50,000
	Subtotal			**$50,000**
	Total			**$624,271**

APPENDIX G7. Year 2 & 3 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season 10 hour shifts: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm), and closing (10:15 am to 8:15 pm). 12 hour shifts: opening (6:15 am to 6:15 pm) and closing (8:15 am to 8:15 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	1	1	2	2	2	**8**
Total	**1**	**1**	**2**	**2**	**2**	**8**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G8. Year 2 & 3 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm), and closing (11:00 am to 9:00 pm). 12 hour shifts: opening (5:00 am to 5:00 pm) and closing (10:00 am to 10:00 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Highway 191^	1	1	2	2	3	**9**
Total	**1**	**1**	**2**	**2**	**3**	**9**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G9. Year 2 & 3 Long-Term *Suspect* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm), and closing (9:00 am to 7:00 pm). 12 hour shifts: opening (7:15 am to 7:15 pm) and closing (7:00 am to 7:00 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	1	1	2	2	2	**8**
Total	**1**	**1**	**2**	**2**	**2**	**8**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G10. Year 2-3 Long-Term *Suspect* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three FGR inspection stations.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	8 Technicians, Feb 22 - Dec 7	76	$2,160	$164,160
	1 Technician, May 1 - Sep 30	5	$2,160	$10,800
	Extra help - holidays, etc.	1	$2,160	$2,160
	Subtotal			**$177,120**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 State Motor Pool Vehicles (8-9 mo. each)	26	$700	$18,200
	Subtotal			**$18,200**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	On Demand Water Decon Unit (Hwy 191)	1	$5,000	$5,000
	Misc. supplies and repairs - cost/mo.	26	$200	$5,200
	Outhouses rental per month (Hwy 191)	1	$350	$350
	Storage (Dec-Feb; cost/mo.)	72	$24	$1,728
	Replacement signs	15	$100	$1,500
	Posts & hardware	15	$18	$263
	Seals	41,000	$0.03	$1,066
	Wire for seals	41,000	$0.09	$3,485
	Subtotal			**$18,592**
	Total			**$213,912**

APPENDIX G11. Year 1 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:30 am to 3:30 pm), mid-day (9:00 am to 7:00 pm), and closing (11:00 am to 9:00 pm). 12 hour shifts: opening (5:30 am to 5:30 pm) and closing (9 am to 9 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Lucerne Ramp	1	1	2	1	2	**7**
Sheep Creek Ramp	1	1	2	1	2	**7**
Cedar Springs Ramp	1	1	2	1	2	**7**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**6**	**3**	**6**	**21**

APPENDIX G12. Year 1 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season10 hour shifts: opening (4:30 am to 2:30 pm), mid-day (9:30 am to 7:30 pm), and closing (12:00 am to 10:00 pm). 12 hour shifts: opening (4:30 am to 4:30 pm) and closing (10 am to 10 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts Number inspectors per shift per day**			**Friday thru Sunday 12 hr shifts Number inspectors per shift per day**		**Number Inspectors Per Week**
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	1	1	2	2	2	**8**
Sheep Creek Ramp	1	1	2	2	2	**8**
Cedar Springs Ramp	1	1	2	2	2	**8**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**6**	**6**	**6**	**24**

APPENDIX G13. Year 1 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hours shifts: opening (6:30 am to 4:30 pm), mid-day (8:30 am to 6:30 pm), and closing (9:30 pm to 7:30 pm). 12 hour shifts: opening (6:30 am to 6:30 pm) and closing (7:30 am to 7:30 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	1	1	2	1	2	**7**
Sheep Creek Ramp	1	1	2	1	2	**7**
Cedar Springs Ramp	1	1	2	1	2	**7**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**3**	**3**	**6**	**3**	**6**	**21**

APPENDIX G14. Year 1 *Positive* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three FGR inspection stations. If *Positive* Status was preceded by Long-term *Suspect* Status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	21 Technicians, Feb 22 - Dec 7	339.15	$2,160	$732,564
	3 Technicians, May 1 - Sep 30	15	$2,160	$32,400
	Extra help - holidays, etc.	1	$2,160	$2,160
	Subtotal			**$767,124**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	7 State Motor Pool Vehicles (8-9 mo. ea.)	62	$700	$43,400
	Subtotal			**$43,400**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Dynamic Message Signs	3	$17,000	$51,000
	Generator	2	$1,000	$2,000
	Water Pump for Sheep Creek	1	$500	$500
	Gas - generator, decon. units/ month	26	$700	$18,200
	Light Tower (2 per station)	6	$10,000	$60,000
	Misc. supplies and repairs - cost/mo.	26	$200	$5,200
	Tablets	5	$250	$1,250
	Replacement signs	15	$100	$1,500
	Posts and Hardware	15	$18	$263
	Storage (Dec-Feb; cost/mo.)	81	$24	$1,944
	Seals	31,000	$0.03	$806
	Wire for seals	31,000	$0.09	$2,635
	Subtotal			**$145,298**
Construction	**Description**	**Quantity**	**Cost each**	**Total Cost**
	HWY 191 exit inspection station construction	1	$250,000	$250,000
	Subtotal			**$250,000**
	Total			**$1,205,822**

APPENDIX G15. Year 2 through 5 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during pre-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm), and closing (10:15 am to 8:15 pm). 12 hour shifts: opening (6:00 am to 6:00 pm) and closing (7:000 am to 7:00 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	1	2	2	2	2	**9**
Total	**1**	**2**	**2**	**2**	**2**	**9**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G16. Year 2 through 5 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm), and closing (11:00 am to 9:00 pm). 12 hour shifts: opening (5:00 am to 5:00 pm) and closing (10:00 am to 10:00 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Highway 191^	1	2	2	2	3	**10**
Total	**1**	**2**	**2**	**2**	**3**	**10**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G17. Year 2 through 5 *Positive* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm), and closing (9:00 am to 7:00 pm). 12 hour shifts: opening and closing (7:00 am to 7:00 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	1	2	2	2	2	**9**
Total	**1**	**2**	**2**	**2**	**2**	**9**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G18. Year 2 through 5 *Positive* Status. Anticipated personnel, vehicle, travel, supplies, and utilities at three FGR inspection station. If *Positive* Status was preceded by Long-term *Suspect* Status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	9 Technicians, Feb 22 - Dec 7	85.5	$2,160	$184,680
	1 Technician, May 1 - Sep 30	5	$2,160	$10,800
	Extra help - holidays, etc.	1	$2,160	$2,160
	Subtotal			**$197,640**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 State Motor Pool Vehicles (8-9 mo. ea.)	26	$700	$18,200
	Subtotal			**$18,200**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	On Demand Water Decon Unit (Hwy 191)	1	$5,000	$5,000
	Misc. supplies and repairs - cost/mo.	26	$200	$5,200
	Outhouses rental per month (Hwy 191)	1	$350	$350
	Storage (Dec-Feb; cost/mo.)	72	$24	$1,728
	Replacement signs	15	$100	$1,500
	Posts & hardware	15	$18	$263
	Seals	41,000	$0.03	$1,066
	Wire for seals	41,000	$0.09	$3,485
	Subtotal			**$18,592**
	Total			**$234,432**

APPENDIX G19. Year 1 *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at FGR exit inspection stations during pre-watercraft season. Inspectors will be stationed at inspection stations from approximately one hour before sunrise to 1 hour after sunset. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:15 am to 3:15 pm), mid-day (9:00 am to 7:00 pm), and closing (11:15 am to 9:15 pm). 12 hour shifts: opening (5:15 am to 5:15 pm) and closing (9:15 am to 9:15 pm).

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	2	1	2	2	2	**9**
Sheep Creek Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Cedar Springs Ramp	2	1	2	1	2	**8**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**4**	**2**	**4**	**3**	**4**	**17**

APPENDIX G20. Year 1 *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at FGR exit inspection stations during peak-watercraft season. Inspectors will be stationed at inspection stations from approximately one hour before sunrise to 1 hour after sunset. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (4:45 am to 2:45 pm), mid-day (9:00 am to 7:00 pm), and closing (12:00 am to 10:00 pm). 12 hour shifts: opening (4:45 am to 4:45 pm) and closing (10:00 am to 10:00 pm)

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	2	3	2	3	3	**13**
Sheep Creek Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Cedar Springs Ramp	2	2	2	2	3	**11**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**4**	**5**	**4**	**5**	**6**	**24**

APPENDIX G21. Year 1 *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections, decontaminating watercraft, and educating watercraft owners at FGR exit inspection stations during post-watercraft season. Inspectors will be stationed at inspection stations from sunrise to sunset. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (7:00 am to 5:00 pm), mid-day (8:00 am to 6:00 pm), and closing (9:00 pm to 7:00 pm). 12 hour shifts: opening and closing (7:00 am to 7:00 pm)

Check Station Locations	**Monday thru Thursday 10 hr shifts**			**Friday thru Sunday 12 hr shifts**		**Number Inspectors Per Week**
	Number inspectors per shift per day			**Number inspectors per shift per day**		
	Opening shift	**Mid-day shift**	**Closing shift**	**Opening shift**	**Closing shift**	
Lucerne Ramp	2	1	2	2	2	**9**
Sheep Creek Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Cedar Springs Ramp	2	1	2	1	2	**8**
Mustang Ridge Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Antelope Ramp	Closed	Closed	Closed	Closed	Closed	**0**
Total	**4**	**2**	**4**	**3**	**4**	**17**

APPENDIX G22. Year 1 *Infested* Status. Anticipated personnel, equipment, and supply needs for operating two inspection stations on FGR. If *Infested* Status was preceded by Long-term *Suspect* or *Positive* status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	17 Technicians, Feb 22 - Dec 7	146.8	$2,160	$317,088
	7 Technicians, May 1 - Sep 30	35	$2,160	$75,600
	Extra help - holidays, etc.	1	$2,863	$2,863
	Subtotal			**$392,688**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	6 Motor Pool vehicles for 6 mo.	36	$700	$25,200
	3 Motor Pool vehicles for 4 mo.	12	$700	$8,400
	Subtotal			**$33,600**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	Replacement Signs	14	$100	$1,400
	Post & Hardware for Signs - replacements	15	$18	$263
	Dynamic Message Sign	3	$17,000	$51,000
	Generators (3 per station)	6	$1,000	$6,000
	Water pump for Sheep Creek	1	$500	$500
	Fuel (generator, etc./mo.)	2	$750	$1,500
	Light Towers (2 per inspection station)	4	$10,000	$40,000
	Tablets	6	$250	$1,500
	Misc. supplies and repairs-cost/stn./mo.	6	$200	$1,200
	Equip Storage off-season ($24/equip/mo.)	42	$25	$1,050
	Subtotal			**$104,413**
Construction	**Description**	**Quantity**	**Cost each**	**Total Cost**
	HWY 191 inspection station construction	1	$250,000	$ 250,000
	Subtotal			**$ 250,000**
	Total			**$780,701**

APPENDIX G23. Year 2+ *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during pre-watercraft season. Inspectors will be stationed at exit inspection stations from sunrise to sunset. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (6:15 am to 4:15 pm), mid-day (9:00 am to 7:00 pm), and closing (10:15 am to 8:15 pm). 12 hour shifts: opening (6:15 am to 6:15 pm) and closing (8:15 am to 8:15 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	2	1	2	2	2	**9**
Total	**2**	**1**	**2**	**2**	**2**	**9**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G24. Year 2+ *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during peak-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (5:45 am to 3:45 pm), mid-day (9:30 am to 7:30 pm), and closing (11:00 am to 9:00 pm). 12 hour shifts: opening (5:45 am to 5:45 pm) and closing (9:00 am to 9:00 pm).

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	2	3	2	3	3	**13**
Total	**2**	**3**	**2**	**3**	**3**	**13**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G25. Year 2+ *Infested* Status. The following represents the anticipated number of inspectors conducting boat inspections and educating watercraft owners at FGR exit check inspections during post-watercraft season. Hours worked each shift are based on the longest day during this season. 10 hour shifts: opening (7:15 am to 5:15 pm), mid-day (8:30 am to 6:30 pm), and closing (9:00 am to 7:00 pm). 12 hour shifts: opening and closing (7:15 am to 7:15 pm)

	Monday thru Thursday 10 hr shifts			**Friday thru Sunday 12 hr shifts**		
Check	**Number inspectors per shift per day**			**Number inspectors per shift per day**		**Number**
Station	**Opening**	**Mid-day**	**Closing**	**Opening**	**Closing**	**Inspectors**
Locations	**shift**	**shift**	**shift**	**shift**	**shift**	**Per Week**
Highway 191^	2	1	2	2	2	**9**
Total	**2**	**1**	**2**	**2**	**2**	**9**

^Combine Highway 191 entrance and exit inspection stations

APPENDIX G26. Year 2+ *Infested* Status. Anticipated personnel, vehicle, travel, supplies, and utilities three FGR inspection stations. If *Infested* Status was preceded by Long-term *Suspect* or *Positive* status, many items will not need to be purchased.

Personnel	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	9 Technicians, Feb 22 - Dec 7	85.5	$2,863	$244,787
	4 Technicians, May 1 - Sep 30	20	$2,160	$43,200
	Extra help - holidays, etc.	1	$2,863	$2,863
	Subtotal			**$290,850**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	3 State Motor Pool vehicles (8-9 mo. ea.)	26	$700	$18,200
	Subtotal			**$18,200**
Supplies	**Description**	**Quantity**	**Cost each**	**Total Cost**
	On Demand Water Decon Unit (Hwy 191)	1	$5,000	$5,000
	Gas - generator, decon. units/mo.	26	$600	$15,600
	Misc. supplies and repairs - cost/mo.	26	$200	$5,200
	Outhouses rental per month (Hwy 191)	1	$350	$350
	Replacement signs	15	$100	$1,500
	Posts & Hardware	15	$18	$263
	Storage (Dec-Feb; cost/mo.)	123	$24	$2,952
	Seals	36,000	$0.03	$936
	Wire for seals	36,000	$0.09	$3,060
	Subtotal			**$29,861**
	Total			**$338,910**

Appendix G27—Flaming Gorge Reservoir Hazard Analysis Critical Control Point (HACCP) Plan

Management objective: Prevent the inadvertent spread of dreissenid mussels from FGR to other waters.

Activity description: Dreissenid mussel sampling and surveys, along with other management activities conducted on FGR. The timing and frequency of these activities will occur at variable times. The locations of where activities will be conducted will be reservoir wide.

Activity flow chart

- Task 1: Load equipment and drive to site – Arrive at home base and load appropriate equipment for activity. Drive to FGR.
- Task 2: Unload equipment and conduct activity – Unload equipment from vehicle. Load equipment into boat if applicable. Prepare equipment. Enter FGR and conduct activity.
- Task 3: Reload equipment and return to home base – Return to vehicle, decontaminate, and pack up equipment. Drive to home base.
- Task 4: Unload equipment at home base – Unload equipment from vehicles. Decontaminate any remaining equipment.

Potential non-targets species

- Vertebrates: Burbot, other fish species found in reservoir.
- Invertebrates: NZMS, other invertebrates found in reservoir.
- Plants: Curly-leaf pondweed and other plants found in reservoir.

Control measures

- Summary
    - Verify all equipment was cleaned and disinfected before arriving at FGR. If equipment cannot be verified, decontaminate properly before leaving.
    - Care should be given to minimize the movement of dreissenid mussels (don't leave watercraft or equipment in FGR for extended periods of time. Clean, Drain, and Dry watercraft and equipment away from FGR).
    - Clean all equipment before returning to home base (waders, watercraft, etc.).
    - Clean and disinfect any equipment that was not done on location at home base (nets, sampling equipment, etc.).
- Methods for disinfecting equipment
    - In the field (carried in vehicles)
        - Heavy brush to remove any mud or debris.

        - Portable hand-pump sprayer: Filled with QUAT-128 to disinfect equipment.
        - Dry all equipment in direct sunlight. Dry any equipment that could not be or was not properly dried on location at home base.
        -
    - Home base
        - Heavy brush for mud and debris.
        - Tub or tank for submersion of boots, waders, and other equipment.
        - High-heat decontamination spraying unit for vehicles, watercraft, and other equipment.
            - DNR personnel will provide and operate the decontamination units. All FGR stakeholders should schedule a decontamination of any watercraft after completing their sampling or other activities on FGR.
        - Dry all equipment in direct sunlight.
- Disinfection protocol
    - In the field
        - All equipment in contact with water must be cleaned with a brush to remove debris and disinfected properly prior to leaving sample site.
        - Maintain effective disinfecting solution in sprayers and record mixing dates.
        - QUAT-128 disinfectant: 6.4 ounces per gallon of water. Equipment needs to be sprayed thoroughly so that all areas have been saturated with disinfectant solution.
        - After sprayed with disinfectant, equipment must dry for at least 10 minutes in direct sunlight. Longer dry times are required if not dried in direct sunlight.
    - Home base
        - All watercraft and vehicles that come in contact with affected water, must be thoroughly decontaminated before leaving home base (professional decontamination or cleaned, drained, and dried for appropriate time).
        - Decontamination units require 140°F to 160°F scalding water to decontaminate properly.
        - 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 then dried for at least 10 minutes in the sun before reuse.
        - All equipment must dry for at least 10 minutes in direct sunlight. Longer dry times are required if not dried in direct sunlight.

- All equipment must be decontaminated and dry before it leaves home base.