Rapid Response Plan Following Detection of Dreissenid Mussels in Glendo Reservoir, Wyoming

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SUMMARY

Glendo Reservoir is a 12,000-acre impoundment on the North Platte River located in Platte County. The reservoir is owned and operated by the United States Bureau of Reclamation (BOR). Most lands around the reservoir are owned by the BOR and managed by Wyoming State Parks, Historic Sites and Trails as Glendo State Park. The reservoir is heavily used by boats with an open water season typically beginning in March and ending in December. Peak boat use generally occurs from early May through early September. Use is approximately 40% resident boats and 60% non-resident boats. There are six concrete boat ramps located around the reservoir, three of which are useable the entire boating season in most years, and three that generally become unusable by mid-August due to receding water levels. In 2018 and 2019, 5,308 inspections were conducted on watercraft headed to Glendo Reservoir.

If zebra or quagga mussels were detected in Glendo Reservoir, resources would be directed to minimize the risk of spreading mussels to other waters during the initial 6-week period while follow-up sampling is being conducted. Check stations would be established at Bennett Hill boat ramp and Mule Hill campgound. The Elkhorn and Reno Gulch boat ramps would be closed. In addition, retrieving boats from the water would be restricted to 8 am through sunset. All personnel from the Regional Fisheries Management Crew would be detailed to Glendo and requests for additional help would be levied to other regional personnel. The reservoir should be closed to boating between November 30 and March 15 due to historically low levels of watercraft use.

Following the initial 6-week period, a longer term plan will be put in place. This plan could be in place for up to 3 years of Suspect Status, 5 years of Positive Status or into perpetuity if the reservoir reaches Infested Status. For all of these scenarios, the reservoir will be closed to watercraft between November 30 and March 15. During the boating season, launching will be allowed at any time, but retrieval of boats from the reservoir should be restricted to 8 am until ½ hour after sunset, to ensure all watercraft can be inspected and decontaminated if necessary. Pull-off check stations should be constructed on Lake Shore Drive and Glendo Park Road to reduce the number of check stations needed, while still intercepting boats before they exit the park. Ten technicians and one crew lead would be hired to conduct inspections and decontaminations. Additional equipment would be needed, including five decontamination units, two office trailers and a camp trailer, equipment to haul water to the check stations, signs and additional supplies. Costs for the first year response, which includes equipment purchase and check station construction, is $620,000. Additional year operating budgets would be approximately $230,000 per year. If the reservoir proceeds to Infested Status right away, the cost of the response for the first year would be $830,000, which includes additional equipment and personnel due to the increased number of decontaminations. The cost to operate an Infested

Status response beyond the initial investment in equipment and infrastructure is approximately $330,000 per year.

INTRODUCTION

Zebra (*Dreissena polymorpha)* and quagga (*Dreissena bugensis)* mussels are aquatic invasive species (AIS) that have far-reaching negative impacts on natural resources, water infrastructure, recreation, and can be attributed to significant economic loss. Zebra mussels are native to the Black and Caspian seas and were first discovered in the Great Lakes in 1988. Quagga mussels area native to the Dnieper River Drainage in Ukraine and were first found in the Great Lakes in 1989. Since their initial introductions, these species have spread across most of the United States, and have been detected in Wyoming's neighboring states of Nebraska, South Dakota, Montana, Colorado, and Utah. The close proximity of zebra and quagga mussels to Wyoming elevates the threat of introduction and increases the need for plans to contain them if detected.

Currently, Wyoming's AIS program is focused on outreach, watercraft inspection and monitoring, with the overall goal of keeping invasive species such as zebra and quagga mussels out of the state. Wyoming law requires inspection of all watercraft entering the state and the Wyoming Game and Fish Department (WGFD) currently maintains 14 inspection stations (primarily at Department of Transportation Ports of Entry) that intercept incoming watercraft and inspect them for the presence of AIS. The WGFD AIS program also conducts inspections at various waters by roving personnel and at regional offices. Annual monitoring for a variety of AIS, including zebra and quagga mussels, is conducted on priority waters throughout Wyoming and an outreach program is in place to educate the public about the threats of AIS and what they can do to prevent their spread.

If zebra or quagga mussels are detected in a Wyoming water, immediate action will be necessary to prevent their spread to other waters. This rapid response plan is a water-specific plan that outlines the steps needed to quickly mobilize personnel and equipment to provide exit inspections and, if necessary, decontaminations of all boats leaving the affected water. This plan will be initiated when zebra or quagga mussel veligers (larvae) or adults are detected in a sample from Glendo 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 long term containment and monitoring plan is developed.

CONFIRMATION OF DREISSENID MUSSELS

Sampling of Wyoming waters is conducted annually in accordance with the "Wyoming Game and Fish Department Aquatic Invasive Species Sampling and Monitoring Manual" (WGFD 2019). High priority waters are sampled twice per season (June or July, and September or October), and lower priority waters are sampled once per season in September or October. To determine whether Wyoming waters contain evidence of AIS, specimens of adult or juvenile crayfish, snails, mollusks, plants, etc. are collected during routine sampling and any specimen suspected of being AIS must be positively identified by at least two independent experts. Only samples collected by the WGFD 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 sample.

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*. Currently, all waters in Wyoming are classified as either *Unknown/Not Tested*, or *Negative*.

A water body classified as *Inconclusive* has not met the minimum criteria for detection but evidence of Dreissenids 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 (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 Dreissenids. If a subsequent sample does detect Dreissenids, 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 Dreissenids and mussels 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 Dreissenids 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* status after one year of negative testing results including at least one sample taken in the same month of subsequent year as the initial positive sample (to account for 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*, a *Positive* water body requiring five years of negative testing to re-classify to *Negative*, 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*.

WATER DESCRIPTION

Glendo Reservoir is an impoundment on the North Platte River located in North Central Platte County, Wyoming. The reservoir was built, and is operated by the U.S. Bureau of Reclamation (BOR). The dam is a zoned earthfill structure with a height of 190 feet, a length of 2,096 feet, and was competed in 1958. The primary functions of the reservoir are to supplement irrigation water deliveries to Eastern Wyoming and Western Nebraska, hydroelectric generation, and to serve as a flood control structure. Most land around the reservoir is owned by the BOR and managed by Wyoming State Parks, Historic Sites and Trails, as Glendo State Park (GSP).

Lands around the reservoir are developed for recreational use, including campgrounds, boat launches, fish cleaning stations and an extensive non-motorized trail system, all built and maintained by GSP. A privately operated Marina (Rooch's Marina at Glendo) operates as a concessionaire of GSP on the South shore near the Dam. The marina offers slip rentals, fuel, boat repair, boat rentals, RV hookups, convenience store and Café. The Town of Glendo (population 204) is located west of the reservoir and has many businesses that rely on boating for the majority of their commerce. Bellwood Boats in Glendo offers boat sales, repair, and rental. Howard's General Store is a convenience store selling fuel, food, some camping supplies and has a small motel. Glendo Trading Post sells tackle, bait and assorted recreational supplies. In addition, there are two private campgrounds with RV hookups, and several boat storage facilities.

At full conservation pool (4,635 feet elevation), Glendo Reservoir is 12,365 surface acres with a maximum depth of 145 feet, mean depth of 44 feet and a shoreline length of 75 miles. The lake holds 795,196 acre-feet of water of which approximately 271,000 acre-feet is allotted as flood storage (between 4,635 feet and 4,653 feet) and not typically used. When the conservation pool is full, the reservoir is roughly fourteen miles long. The reservoir averages ½ mile wide in the north and south sections and 2 miles wide in the center section. Water management in this reservoir is relatively consistent from year to year. Over the last decade, the average peak reservoir elevation was 4,635 feet, typically occurring in mid-June. The minimum elevation is slightly more variable with the ten-year mean minimum elevation being 4,588 feet, for an average annual drawdown of 47 feet. The annual minimum reservoir elevation happens in mid-September, at which point outflows from the reservoir are reduced to 25 cfs. The reservoir begins to fill at that point and continues to fill over the winter.

Terrain around the reservoir is varied. At the inflow area on the Platte and Converse county line, lands are flat with cottonwood galleries typical of a river corridor. The reservoir then enters a 2.5-mile long, narrow, deep canyon dominated by tall limestone cliffs and steep slopes of Ponderosa Pine. The reservoir exits this canyon into a broad, approximately 2,000-acre area known as Elkhorn Bay where rolling hills covered in sagebrush and yucca dominate the landscape. The reservoir then transitions back into a canyon stretch for approximately two miles and opens back into the main body of the lake. Terrain here is rolling, sandy hills and the shoreline is ringed with willow thickets and mature cottonwood trees. Progressing south, the reservoir butts up against the Hartville Uplift where the Eastern shoreline is dominated by large, rim-rock bluffs covered in Ponderosa Pine forest while the western shore line is rolling hills ringed with cottonwood and willow.

The boating season begins in earnest as soon as ice cover recedes, typically in early March. Normally, Glendo will be ice-free for approximately nine months. Use varies by season with mostly angling boats early in the season, a mix of angling and recreational boats in June and July, recreational boats in August and early September, and angling boats again through ice-up. In 2018 and 2019, WGFD inspection data for watercraft bound for Glendo Reservoir (n=5,308) indicated use is approximately 42% resident and 58% non-resident. Of non-residents, most are from Colorado (57% of non-resident boats), with boats from Nebraska making up the bulk of remaining non-resident use. The majority of boats launching on Glendo are outboard fishing boats (50% of inspections). Inboard/outboard boats comprise 21% followed by personal watercraft (10%), non-motorized (9%), inboard wake or ski boats (8%) and jet drive boats (2%).

Boating use March through April is dominated by Walleye anglers, mostly utilizing medium to large (16-22 foot) outboard fishing boats. While no inspection data exists for the early boating season, anecdotally (from conducting fishery management activities), the majority of boats hail from Wyoming or Colorado. Also anecdotally, use seems to be driven by the fishing success in a particular year. When fishing is very good early, there will be high use, especially on weekends. In years when the Walleye bite is slow, there will be less use. It should also be noted that Glendo use seems to be inversely related to other proximal Walleye fisheries. If fishing is very good at Grayrocks for instance, use of Glendo by anglers from Cheyenne and Colorado decreases. Similarly, when Pathfinder Reservoir is fishing well in the spring, use by Casper anglers at Glendo decreases. In 2019, inspections at Glendo began on April 13 with 203 boats inspected for that month, or an average of 17 per day. It should be noted that the majority of local boaters avoid the check station by coming in on Highway 319 so a conservative average during the month of April is likely 40 boats per day.

Boat use increases dramatically through May and into June. Much of the use at this time is still Walleye anglers using mostly outboard boats, although recreational boat use increases just before Memorial Day and typically continues to increase through June. Weather and water temperatures obviously influence recreational use with cold rainy periods consisting of mostly angling use. In May 2018 there were 921 boats inspected at Glendo (mean = 46/day), whereas in May 2019 (cool spring with a lot of rain) inspections totaled 647 (mean = 32/day). June is typically the month of highest use as Walleye fishing is always good and recreational use is ramping up. In June 2018, 1,174 boats were inspected at the Glendo check station (mean = 53 boats/day), whereas in June 2019, 1,271 boats were inspected (mean = 58 boats/day).

Boat use remains high through mid-July and begins to taper off in August. Typically, Walleye fishing becomes poor at Glendo after the first week of July due to recruitment of age-0 Gizzard Shad into the forage base. Consequently, there is a sharp decline in the number of

angling boats by mid-July. Use of the reservoir by recreational boats decreases after the July 4th Holiday, but persists through August. In July 2018, 1,174 boats stopped at the Glendo check station with 384 of those occurring prior to July 7th. Numbers at the Glendo check station in July 2019 were lower than in 2018, but that is likely due to reduced hours caused by staffing shortage. In July 2019, 871 boats were inspected at Glendo, with 489 (56%) of those occurring prior to July 6th. In August 2018, 552 boats were inspected at Glendo, whereas in August 2019, 573 boats were inspected.

Labor Day weekend marks the end of the busy boating season at Glendo. The check station is run through mid-September each year. In 2018, 169 boats were inspected at Glendo through September 14 with 125 of those on the holiday weekend. Recreational use perseveres at low levels as long as the weather holds. Beginning in late September or early October, there is a resurgence of angling use as Walleye fishing begins to increase with cooling water temperatures. While we have no hard use numbers for this period, conversations with avid anglers suggest a busy weekend through October will see 20-30 angling boats each day. November and early December see very low boating use with only a handful of highly dedicated anglers venturing out any given week. Ice cover typically forms in mid to late December.

There are six boat ramps that serve Glendo Reservoir, all located on GSP-managed lands (Figure 1). Shore launching of motorized boats is highly uncommon and logistically constrained by terrain and vegetation. Non-motorized craft such as canoes, kayaks and paddleboards are most commonly hand launched from campsites and other access points near the water.

The Elkhorn ramp is accessed via Wyoming Highway 319, either travelling south approximately 10.5 miles from US Highway 20 near Orin Junction, or travelling north approximately four miles from the Town of Glendo. The ramp is located at the end of a short gravel access road. Elkhorn is not useable at reservoir elevations below 4,623 feet. The average date that this ramp becomes useable is March 19 and in the last 10 years has varied from January 22 to April 18. Reservoir levels recede below the minimum launch elevation by late July in most years. The Elkhorn ramp is heavily used by anglers March through June and seems to be the preferred launch point for boaters from Douglas and Casper as they access it from the north, effectively avoiding the inspection station. Use at this ramp declines sharply after the July 4th weekend as angling use tapers off.

The Bennett Hill ramp is accessed via Lake Shore Drive within GSP. Most boaters travel to this ramp from Highway 319, approximately three miles to the west. Lake Shore Drive is paved from Highway 319 to the turnoff to Bennett Hill. The other option is to access from Glendo Park Road five miles to the south, of which more than two miles is gravel road. The minimum lake elevation for launching is 4,610 feet. Bennett Hill is useable at ice off through mid-August in most years. It is a popular ramp with anglers through early July. The ramp is two lanes wide, has ample parking and a fish cleaning station. Similar to Elkhorn, use tapers off after July 4, but recreational boaters continue to launch here into August due to its proximity to several campgrounds.

The Reno Cove boat ramp is accessed from Lake Shore Drive within GSP. Most boaters travel to this ramp from the south as it is 2.5 miles of paved road to Glendo Park Road versus four miles to Highway 319 to the northwest, of which more than two miles is gravel. There are two ramps at this location (high and low water) that allow launching down to lake elevation 4,560 ft. This ramp is not heavily used. It is quite steep, lacks a dock and has limited parking. Most of the use is likely from people camping in the vicinity and from the private cabin area

located immediately to the west. In very low water years, this is the only ramp in use after mid-September.

Whiskey Gulch boat ramp is located off Glendo Park Road, one mile east of the main park entrance. There is a high and a low water ramp at this location. Access to this ramp is via Glendo Park Road from the Town of Glendo. It is a high use ramp with paved road access and asphalt parking lot. The ramp is typically useable throughout the season with a bottom elevation of 4,578 feet. The last time the water receded beyond the bottom of the low water ramp was September 2008. The ramp is located within a large camping area. Whiskey Gulch is not as heavily used by early season anglers as Elkhorn or Bennett Hill, but likely receives more recreational boat use than any of the ramps discussed so far.

The Marina boat ramp is accessed from Glendo Park Road approximately 2.5 miles east of the main park entrance. The ramp is heavily used with easy paved access and a large paved parking lot. Rooch's Marina maintains an extensive dock system with rental slips at this location. The bottom elevation of the ramp is 4,578 feet. The ramp generally becomes unusable at reservoir elevations somewhat higher than the minimum launch elevation as the slips begin to crowd the end of the ramp to the point where it is difficult to get a boat on or off a trailer. This ramp likely receives more recreational than angling boat use.

Indian Point boat ramp is somewhat of an outlier in GSP. It is located on the east side of the reservoir, more than 15 miles from the main park entrance. There are two routes to access the ramp. The most heavily traveled route is to take Glendo Park Road (paved), 13 miles from the park entrance to the Sandy Beach Campground. From Sandy Beach a gravel road leads north 2.7 miles to the ramp. Alternatively, this ramp can be accessed from Wyoming Highway 270, 17 miles south of Manville. The Meadowdale Road (Platte County 146, gravel) heads west 11 miles to the junction with Glendo Park Road. Two miles South on Glendo Park Road leads to the Sandy Beach Campground road. It is unclear how many boats enter or exit the lake through this eastern route but is likely less than 5% of the Indian Point use (Brian Johnson GSP Superintendent, personal communication). This ramp is mostly used by people camping at Sandy Beach. Due to its location on the windward shoreline, west and southwest winds can make launching or retrieving boats difficult. This ramp has a bottom elevation of 4,610 feet but due to a shallowing slope, it is not useable several feet above that elevation. In most years, this ramp will be effectively closed after mid-August.

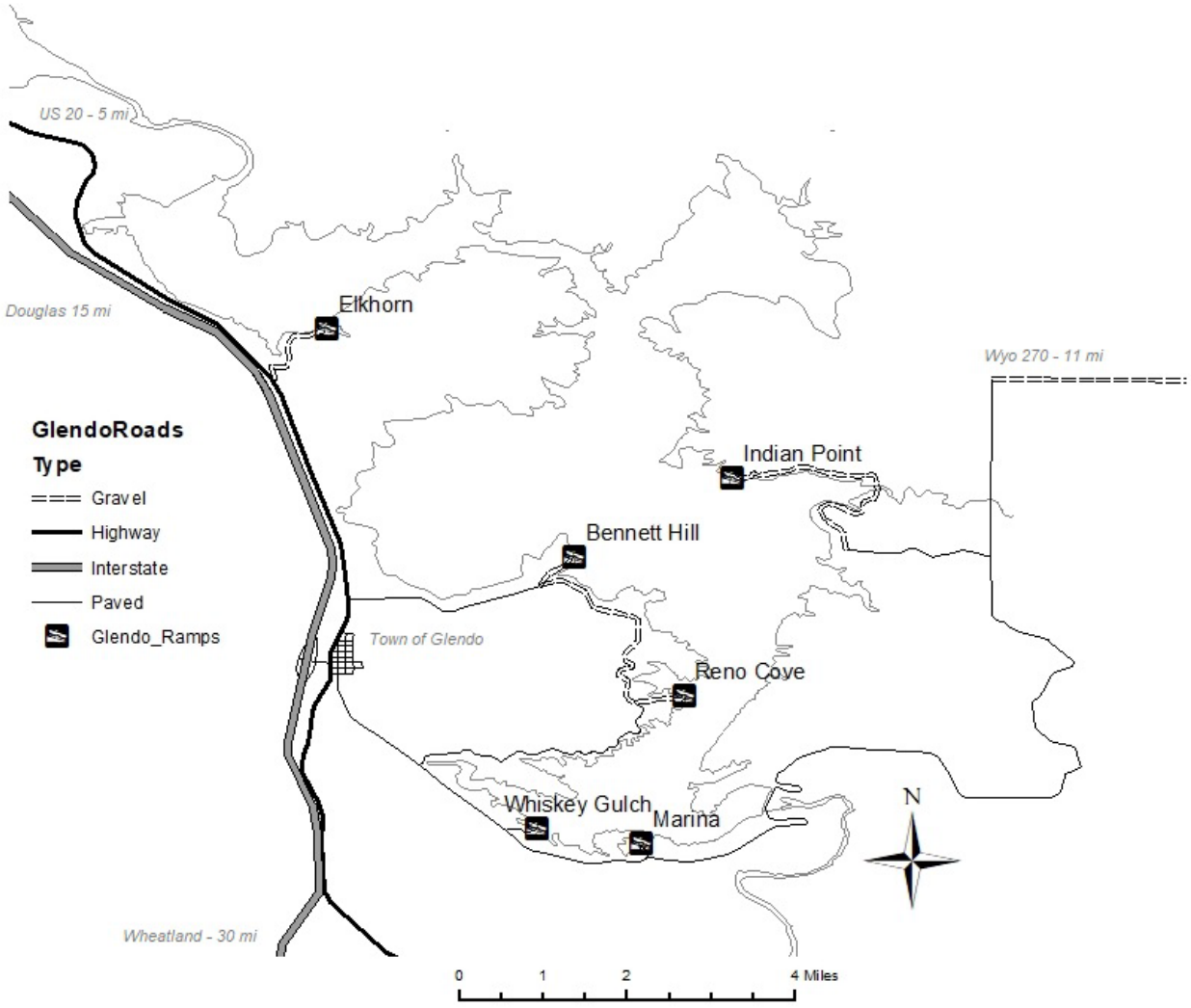

FIGURE 1. Map of Glendo Reservoir, access roads and boat ramps. The current AIS inspection station is located in the Town of Glendo.

RAPID RESPONSE – SHORT-TERM SUSPECT STATUS

In the event that a sample from Glendo Reservoir is confirmed positive for Dreissenid mussels, the reservoir will be considered Short-term Suspect (defined above). After the initial detection, follow-up sampling will occur and results will take approximately six weeks to be reported. During that time, it will be necessary to minimize the risk of spreading mussels to other waters. Within one week, resources will need to be in place to perform required clean, drain, dry exit inspections of all boats leaving the reservoir and decontamination of undrainable areas, such as ballast tanks. All watercraft leaving Glendo 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 after a Wyoming AIS inspection. Quick action will be needed to mobilize the necessary personnel and resources to effectively meet that obligation.

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.

Communication Plan

Upon the initial detection of Dreissenid mussels, WGFD's AIS Coordinator will begin the administrative communication chain outlined in the Administrative Rapid Response Plan (WGFD 2020). Initial contacts in the administrative communication chain include the AIS Coordinator contacting the Communications Director, the Regional Fisheries Supervisor, and the Fish Division Chief, who contacts the WGFD Director. Upon notification by the AIS Coordinator, the Regional Fisheries Supervisor will follow the local and regional communication chain to disseminate information about the detection to internal and external partners and stakeholders (Figure 2). Glendo is unique in that it is wholly contained within the Casper Fisheries Management Region, but encompasses both Casper and Laramie Wildlife regions. The Casper Regional Fisheries Supervisor will contact both Casper and Laramie regional Wildlife and Habitat and Access supervisors to apprise them of the situation. Regional wildlife supervisors will be asked to communicate with the appropriate Senior Game Wardens and other regional wildlife personnel. Habitat and Access supervisors will contact appropriate Habitat and Access biologists. The Regional Fisheries Supervisor will also contact the Casper Regional Information and Education (I&E) Specialist to begin making preparations to inform the public (see Public Outreach, below).

The Casper Regional Fisheries Supervisor will contact the Glendo State Park Superintendent and Bureau of Reclamation Wyoming Area Manager to alert them to the situation and begin coordinating a response. The Regional Fisheries Supervisor and biologists will also contact other key stakeholders, including the Mayor of Glendo, Platte County Commissioners, Rooch's Marina, Bellwood Boats, Howard's General Store and the Glendo Trading Post.

Key information to convey to internal and external partners and stakeholders should include the name of the affected water, which species was collected, who collected the sample, where the sample was collected, which agency/expert analyzed the sample, any relevant information about the sample, who to contact for more information, a brief description of containment protocols that will be put in place, and any critical changes for the public. Every effort should be made to quickly contact all partners and stakeholders prior to beginning public outreach efforts. The regional fisheries supervisor will attempt to make all contacts within 24 hours of detection and will contact the Communications Director once enough contacts have been made to initiate outreach efforts.

Contact information for WGFD Casper and Laramie regional employees, partners, and other key stakeholders can be found in Appendix A.

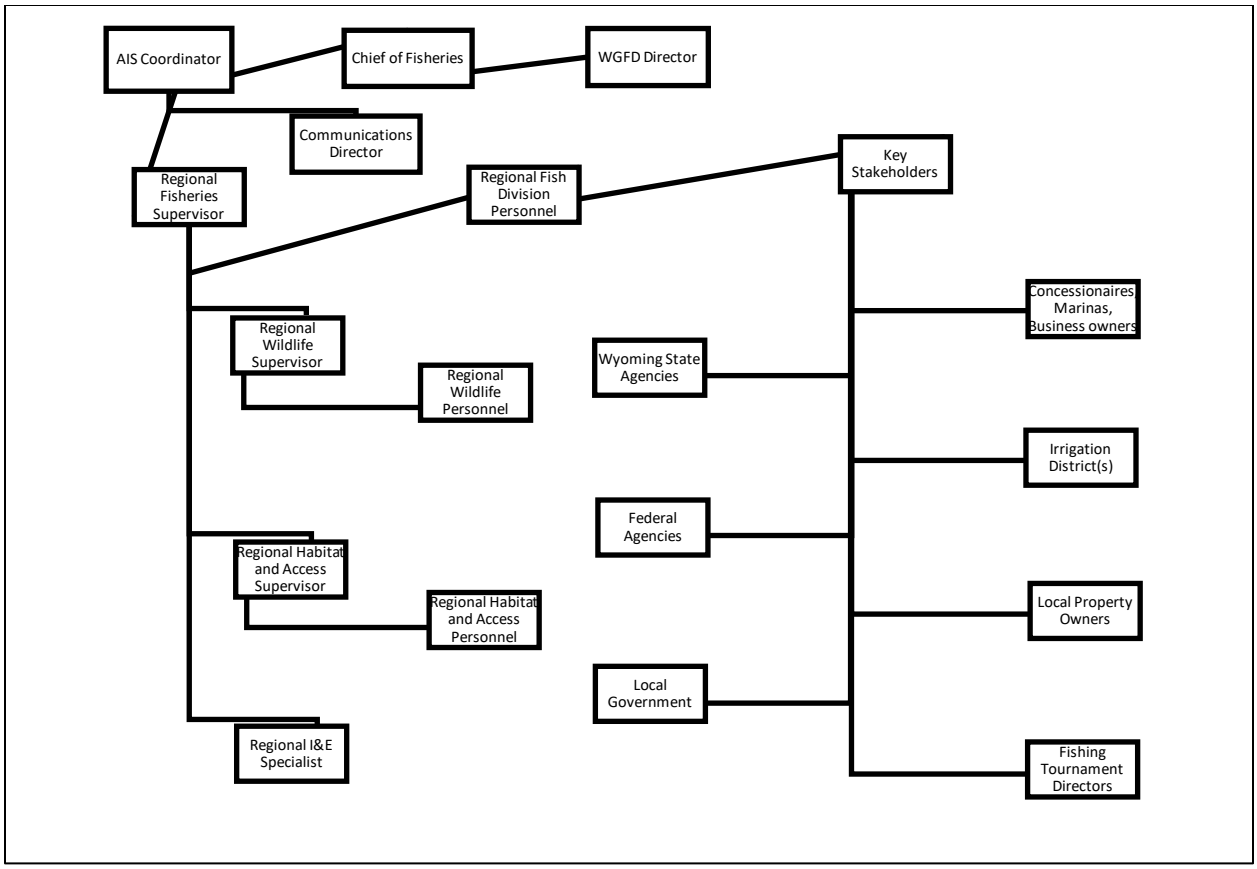

FIGURE 2. Communication chain for dissemination of information on the local and regional level following a Dreissenid mussel detection in a Wyoming water.

The focus of this plan is on containing invasive mussels through inspection and decontamination of exiting watercraft. Consideration should be given to other potential vectors that could spread invasive mussels (e.g., aircraft used to combat wildfires, commercial water hauling equipment) and communication and coordination should occur with these entities to ensure containment. Current information on preventing the spread of aquatic invasive species in firefighting and water hauling equipment can be found on the WGFD website at https://wgfd.wyo.gov/Fishing-and-Boating/Aquatic-Invasive-Species-Prevention/AIS-Construction-and-Fire.

Inspection Stations

Establishing exit inspections on the two main access roads (Glendo Park Road and Lakeshore Drive) would be the simplest approach. However, pull offs of sufficient size to handle expected traffic without blocking roads do not exist at this time. Therefore, exit inspections during this period will have to take place where parking lots have sufficient space. Boats should be allowed to launch at any time, provided they have met existing inspection requirements for incoming watercraft. However, retrievals will need to be limited to specific hours to ensure exit inspection and decontamination requirements can be met.

Exit inspection stations will be established at both the Bennett Hill boat ramp and Mule Hill campground prior to August 15 and at only Mule Hill after August 15 when the Bennett Hill ramp is usually out of the water and overall boating use has tapered off lake-wide. The Bennett ramp has a large parking lot that can facilitate multiple lanes. The Mule Hill campground is the best candidate for temporary inspection as it has a one way traffic flow that could easily accommodate expected exit volume (Brian Johnson, personal communication). Use of the Mule Hill location will necessitate closure of a few campsites by GSP. The Elkhorn and Reno Cove ramps will need to be closed. Signage on Glendo Park Road will direct traffic from the Marina, Indian Point, and Whisky Gulch ramps into Mule Hill for exit inspection. Hours for inspection stations will be 8 am to ½ hour after sunset. Removal of boats between ½ hour after sunset and 8 am the following morning will be prohibited. Given the high volume of traffic, additional inspection stations will be necessary if operating over Memorial Day or Fourth of July holidays. Attempts to open all ramps will be made by establishing exit inspection stations at Elkhorn and Reno Cove boat ramps from Friday through Monday on Memorial Day and for several days before and after the Fourth of July, depending on the day of the week the holiday falls on.

Staffing Plan

Bennett Hill will have two inspectors assigned each day prior to July 15 with overlapping hours such that a single person is working early, two on site mid-day through early evening and a single person to close out. The exception being Tuesdays and Wednesdays where a single person will be on site all day. Mule Hill will have two inspectors on site during weekdays, again with a single person early and late. Weekends at Mule Hill will be staffed with one inspector early, three inspectors mid-day through early evening, and two to close out. Staffing levels can be reduced after July 15 at Bennett Hill to a single inspector on site during weekdays and two on weekend days. Staffing levels at Mule Hill would not be reduced until after Labor Day weekend, at which point a single inspector is sufficient during weekdays, with two on weekends through the end of September. After September, a single person on site at any given time will be adequate. Staffing levels will need to be fluid and will likely be adjusted as patterns in use by day and time become evident.

To get adequate coverage between April and July 15, a minimum of five AIS inspectors at 40 hours per week will be needed. Between July 15 and August 15, four inspectors at 40 hours per week would be needed due to reduced boat use. From August 15 through September 30, three inspectors would be adequate. October and November would require two inspectors with occasional coverage by permanent personnel to keep the lake open seven days a week. The reservoir should be closed after November 30 due to very low boat use. The Casper AIS rover would be pulled and dedicated to Glendo. The entire Casper Fish Management Crew will be assigned to work at Glendo as needed. The Regional Fisheries Supervisor will set up a schedule and request help from all AIS certified regional personnel to achieve adequate staffing.

Supplies and Equipment

The availability of decontamination units may be difficult as to be effective, a minimum of three and preferably four are needed to prevent long wait times by boaters. Additionally, an extra decontamination unit should be staged at the Glendo bunkhouse in the event of breakdown. The CR rover decontamination unit would be put into service at Glendo, meaning at least two more (preferably four more) will be needed from outside the region. Decontamination units can

be rented from Hotsy Equipment in Casper, but is prohibitively expensive ($285 per day). Water is not readily available at any of the exit inspection sites. Pickup truck style water tanks (325 gallon) will be purchased and staged at each inspection location to have spare water on hand. Gasoline powered pumps will be used to transfer water from spare tanks into decontamination units. Two ¾ ton pickups with water tanks will be needed to haul water from the Glendo bunkhouse to replenish the tanks each day. Casper AIS has only ½ ton pickups at this time, and would need to trade those with other regions that have ¾ ton pickups.

The bunk room in the Glendo Bunkhouse can sleep four people. In addition, the CR AIS camper trailer is parked at the Glendo Bunkhouse with capacity to sleep two more. The CR fish management camper is normally at Seminoe for the AIS rover, and would be moved to Glendo in the event this plan is initiated. The Glendo bunkhouse has a full kitchen and multiple refrigerators so inspectors working Glendo will receive camp groceries.

Several items will need to be purchased that will not be in the standard AIS or fish management budget. Five pickup water tanks will need to be purchased to haul and store water. Two, 2-inch gas powered water pumps will be needed to transfer water from storage tanks to decontamination units. Extra signs will be needed to direct boaters on Lake Shore Drive into the check station. Inspectors assigned to the rapid response will receive camp groceries or per diem which is not currently accounted for in existing budgets. Local fish management and AIS budgets can likely absorb a significant amount of the cost, but at least some funds from outside crew budgets will be needed.

Public Outreach

The AIS Administrative Rapid Response Plan outlines the general public outreach plan for suspect, positive or infested determinations for Wyoming waters (WGFD 2020). Following an initial sample testing positive for Dreissenid mussels, the AIS Coordinator will contact the Communication Director at WGFD Cheyenne Headquarters. Prior to initiating the public outreach plan, key partners and stakeholders should be contacted according to the Communication Plan (above). The regional fisheries supervisor will attempt to make all contacts within 24 hours of detection and will contact the Communications Director once enough contacts have been made. The Communications Director will then initiate the Communications Plan. A statewide press release will be sent out and information will be posted on the AIS website and any necessary social media. The AIS Coordinator, Regional Fisheries Supervisor and Regional AIS Specialist will collaborate with the Casper Regional I&E Specialist to relay information about Short-term Suspect Status at Glendo Reservoir through media outlets in Natrona, Converse, Platte, Goshen and Laramie counties, and in the front range of Colorado (newspapers, radio, etc.). The Casper Regional Fisheries Supervisor will schedule a town hall style meeting with the Mayor of Glendo to take place in Glendo prior to roll out to explain what our response will be and answer any questions. The local businesses will be informed of what our plan will entail and will be asked to display signage and offer brochures on what the public can expect going forward. Regional Information and Education personnel will coordinate all communications efforts with the Communications Director.

RAPID RESPONSE – LONG-TERM SUSPECT STATUS

If initial follow-up sampling does not yield a positive result, Glendo Reservoir would enter Long-term Suspect Status (defined above) and remain at this level for up to three years if no additional positive samples are found. The goal during the Long-term Suspect Status period is 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 inspection, motor flush, and decontamination of ballast tanks and other undrainable areas. All watercraft leaving Glendo Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals will designate use on a suspect, positive or infested water versus the brown seal currently used after a Wyoming AIS inspection.

If there is no confirmation of Dreissenid mussel presence after the first full boating season, efforts will switch to a lower level response, with a goal of contacting a significant number of boaters leaving the water, but shifting the onus of getting a required inspection to the boater. 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 outboard 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.

Communication Plan

The Casper Regional Fisheries Supervisor will contact all key stakeholders (internal and external) to apprise them of information to date, that follow-up confirmation has not been achieved, and that this plan is being initiated. All internal and external stakeholders will be notified of sampling results as soon as they have been processed. For additional details, see the Communication Plan for Short-term Suspect Status and Appendix A for a list of internal and external stakeholders.

Inspection Stations

Boating should be restricted to March 15 through November 30. Launching will be allowed at any time, but retrieving boats should be restricted to hours of operation (8 am through ½ hour after sunset).

In order to keep as many ramps open as possible and still intercept boaters for exit inspection and decontamination, roadside check stations will be established. Currently, no pullouts of sufficient size are present. Two exit inspection stations will need to be constructed, one on Glendo Park Road near the main park entrance, and the other on Lake Shore Drive between Bennett Hill and Highway 319 (Figure 3). The pull outs should be large enough to facilitate two lanes and long enough to accept at least six vehicles with trailers. The pullouts can be constructed of road base, however, to keep mud to a minimum, decontamination pads constructed of crushed gravel over an impermeable membrane with drainage away from the pullout should be incorporated into the design. If they can be constructed by the Game and Fish Habitat and Access Maintenance branch, they can be built for around $15,000 per pullout in materials costs. If contracted out, it would likely be significantly more expensive.

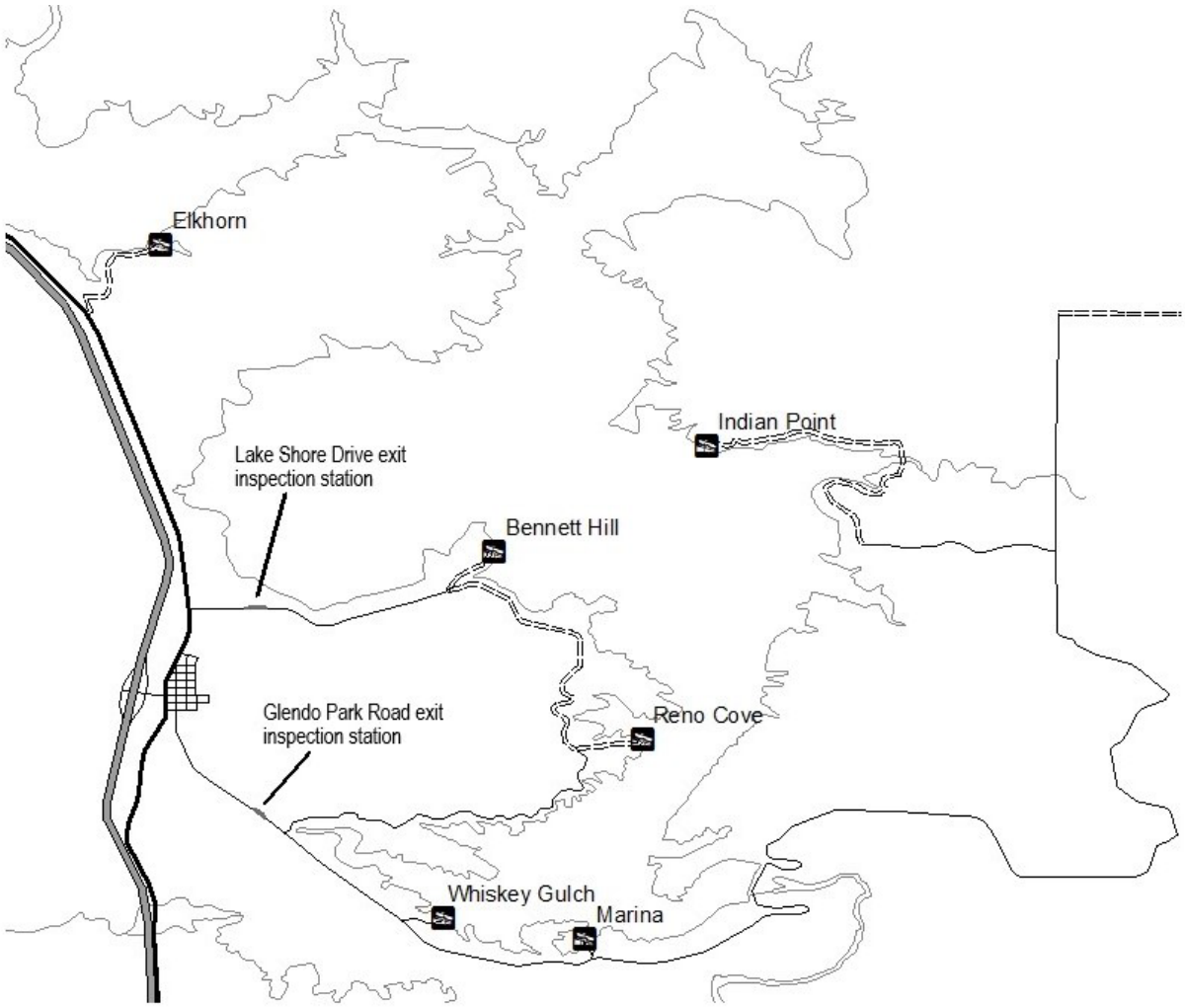

FIGURE 3. Location of proposed exit inspection stations.

Having pullouts at these two locations allows for interception of boats from five of the six ramps at Glendo Reservoir. The Elkhorn ramp is the outlier that cannot be contained at these two locations. This ramp gets high use in the spring and early summer, so it would be desirable to have an inspection station at that location. To minimize staffing costs, hours should be restricted to Thursday through Sunday, 8 am to 6 pm, and will be staffed with a single inspector. Elkhorn would be open from April 15 through July 10. When Elkhorn ramp is closed, signs will be placed to direct boaters to the open check stations.

The exit inspection station on Lake Shore drive would intercept boats leaving the Bennett Hill ramp and approximately half of the boats leaving the Reno Cove ramp. This inspection station would be open from the beginning of the boating season through mid-August, from 8 am until ½ hour past sunset. When Bennett Hill becomes unusable in mid-August, this station will be closed for the remainder of the year. The Reno Cove ramp remains useable beyond mid-

August, so signage will be erected directing boats using this ramp to exit the park via the Glendo Park Road inspection station.

The Glendo Park Road exit station will intercept boats leaving Whiskey Gulch, Marina, Indian Point, and approximately half of the boats using Reno Cove. This inspection station will be staffed from 8 am through ½ hour after sunset and will be open for the entirety of the boating season (March 15 – November 30). This location will likely see the bulk of high risk boats (inboard and boats with ballast tanks). As such, at least four inspectors should be on duty mid-day on weekends from Memorial Day through Labor Day, and during holiday weeks.

Staffing Plan

To adequately staff the inspection stations, 10 inspectors should be hired (six 9-month terms and four 5-month terms). A Biologist I (10-month term) should be hired to oversee day-to-day operations and assist with inspections. This level of staffing will allow both check stations to operate from 8 am through ½ hour after sunset with sufficient inspectors to handle high traffic times. Current WGFD employees will assist during busy periods for a total of approximately one month over the course of the boating season.

Supplies and Equipment

Personnel will be hired with Glendo as their duty station. The WGFD Glendo Bunkhouse has the capacity to house four people. The Casper AIS Crew and the Casper Regional Fisheries Management Crew (FMCR) each have a camper which can be parked at the bunkhouse, housing two per trailer (four total). An additional camper will be needed during the five-month period when staffing is at full levels. Ideally, some inspectors may be hired from the surrounding communities of Glendo, Douglas, Wheatland or Guernsey, cutting down on the amount of sleeping space needed.

The availability of water is currently a limiting factor at Glendo. The water system serving the GSP headquarters, including the WGFD bunkhouse and trailer fill station for the public consists of a well (approximately 40 gpm) with 20,000 gallon cistern capacity. During the peak recreation season, this supply is close to being exhausted (Brian Johnson, personal communication). In order to relieve strain due to increased personnel stationed at the bunkhouse, as well as supply water for decontaminations, a well should be constructed with 10,000 – 20,000 gallon cistern capacity (depending on well flow rate) which can be tied into the existing water infrastructure at GSP headquarters. This system should include a 2-inch hydrant for rapid filling of decontamination units and auxiliary water tanks.

Two ¾ ton pickups will be needed for hauling water to the inspection stations. The Casper AIS Crew currently only has ½ ton pickups. It would be desirable to be able to trade two ½ ton pickups to other regions for two ¾ ton pickups. FMCR has a compact pickup capable of hauling a decontamination unit that would be assigned to Glendo. This vehicle can be used at Elkhorn where the decontamination unit will not be left after hours. In addition, three sedans should be rented from state motor pool to transport technicians between the check stations and bunkhouse.

Each ¾ ton truck will be outfitted with a 14-foot utility trailer with 10,000 lb rating. Two 500 gallon tanks will be mounted to each trailer to haul 1,000 gallons of water for check station re-supply. Each trailer will have a 2-inch water pump to efficiently transfer water from trailer tanks to decontamination units and extra supply tanks. The five tanks purchased under the Short-

term Suspect Status will be used at the check stations, two additional 500-gallon tanks will be purchased to ensure adequate water supply on busy days.

Each check station should have a mobile office trailer on-site. This will allow secure storage of check station materials and shelter during poor weather. There is no electricity at these check stations, so each mobile unit will be provided two 2,000 watt generators with parallel kit to run lights, air conditioning units, heater, etc.

Five decontamination units will be needed at this phase. This will allow two each at Glendo Park Road and Lake Shore Drive, and one at Elkhorn. When Elkhorn is not in use, a third decontamination unit can be positioned at Glendo Park Road. This also allows for flexibility in the event of a decontamination unit breaking down.

Long-term Suspect Status Years 2 and 3

For years two and three of Long-term Suspect Status, staffing levels can be reduced with more responsibility placed on boaters to get an exit inspection. Boating will continue to be restricted to the period of March 15 – November 30, with check station operations running from 8 am to ½ hour after sunset. All boat ramps will remain open, but only the Glendo Park Road check station will be operated seven days a week. The Lake Shore Drive exit inspection station will be operated Thursday through Sunday from March 15 until August 15 and will be closed after that. Signs at Elkhorn, Bennett and Reno will direct boaters to the Glendo Park Road check station for exit inspection Monday through Wednesday until August 15 and seven days a week after August 15. This reduced staffing level will require one Biologist I (10-month term) and eight technicians (four 9-month terms and four 5-month terms). Current WGFD employees will assist during busy periods for a total of approximately one month over the course of the boating season.

Public Outreach

Communications and outreach personnel have developed a draft statewide press release in the Administrative Rapid Response Plan (WGFD 2020), along with a statewide public outreach plan. The Regional Fisheries Supervisor will work with the Casper Regional I&E Specialist to get the information out to local markets. Town hall-style public meetings will be held in Glendo, Douglas, and Wheatland prior to the boating season to inform interested parties of information to date and plans going forward. The Regional I&E Specialist will develop a brochure to give out to Glendo Reservoir boaters at the Glendo, Torrington and I-25 AIS check stations. These brochures will explain the situation and rules pertaining to Long-term Suspect Status. The Regional Fisheries Supervisor will work with Walleye tournament directors to formulate a plan to conduct all necessary exit inspections in an efficient manner considering the number of watercraft involved (> 100 boats for Walleye Stampede tournaments).

RAPID RESPONSE – POSITIVE STATUS

Glendo 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 Glendo Reservoir's status to Infested. All watercraft leaving Glendo Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals will designate use on a suspect, positive or infested water versus the brown seal currently used after a Wyoming AIS inspection.

Communication Plan

The rapid response for Positive Status will be essentially the same as for the first year of Long-term Suspect Status. The Casper Regional Fisheries Supervisor will contact all key stakeholders (internal and external) to apprise them of information to date, that follow-up confirmation has been achieved, and that this plan is being initiated for at least the next five years. For additional details, see the Communication Plan for Short-term Suspect Status and Appendix A for a list of internal and external stakeholders.

Inspection Stations

The response for Positive Status will mirror the response for Year 1 of Long-term Suspect Status. Check stations will be established on Lake Shore Drive and Glendo Park Road. If transitioning from Long term Suspect to Positive Status, these will have already been built. If transitioning straight from Short-term Suspect to Positive Status, these will need to be constructed. A third inspection station at the Elkhorn boat ramp will be operated from April 15 to July 10, four days per week. Boating will be allowed from March 15 – November 30 with hours of operation running from 8 am to ½ hour after sunset.

Staffing Plan

Staffing needs will be the same as Year 1 Long-term Suspect Status. To adequately staff the inspection stations, 10 inspectors should be hired (six 9-month terms and four 5-month terms). A Biologist I (10-month term) should be hired to oversee day-to-day operations and assist with inspections.

Supplies and Equipment

This will be the same as Year 1 Long-term Suspect Status. If transitioning from Long term Suspect Status to Positive Status, most gear will have been procured. If transitioning from Short-term Suspect Status to Positive Status, all gear will need to be purchased. The attached budget table shows multiple scenarios. In order to reduce the strain on decontamination stations, a local boater program should be initiated for this water (see Administrative Rapid Response Plan for more information; WGFD 2020).

Public Outreach

Communications and outreach personnel have developed a draft statewide press release in the Administrative Rapid Response Plan (WGFD 2020), along with a statewide public

outreach plan. The Regional Fisheries Supervisor will work with the Casper Regional I&E Specialist to get the information out to local markets. Town hall-style public meetings will be held in Glendo, Douglas, and Wheatland prior to the boating season to inform interested parties of information to date and plans going forward. The Regional I&E Specialist will develop a brochure to give out to Glendo Reservoir boaters at the Glendo, Torrington and I-25 AIS check stations. These brochures will explain the situation and rules pertaining to Positive Status. The Regional Fisheries Supervisor will work with Walleye tournament directors to formulate a plan to conduct all necessary exit inspections in an efficient manner considering the number of watercraft involved (> 100 boats for Walleye Stampede tournaments).

RAPID RESPONSE – INFESTED STATUS

Glendo 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 Glendo Reservoir will receive a red seal and seal receipt to verify the watercraft received an exit inspection. Red seals will designate use on a suspect, positive or infested water versus the brown seal currently used after a Wyoming AIS inspection.

Communication Plan

The rapid response for Infested Status will be similar to Positive or Long-term Suspect Status, except that all watercraft will receive a full decontamination upon exiting the reservoir. The Casper Regional Fisheries Supervisor will contact all key stakeholders (internal and external) to apprise them of information to date, that a reproducing population of mussels has been confirmed and that this plan will be initiated for the foreseeable future. For additional details, see the Communication Plan for Short-term Suspect Status and Appendix A for a list of internal and external stakeholders.

Inspection Stations

The response for Infested Status will utilize the same two exit inspection points on Glendo Park Road and Lake Shore Drive as recommended under Suspect and Positive status. Boating will be allowed from March 15 – October 31, except those participating in the local boater program may launch at any time. Due to the volume of decontaminations, the check stations should be paved in order to handle the volume of water that will be utilized during the peak boating season. In order to ensure adequate water supply given the large number of full decontaminations, a water well should be drilled proximal to each inspection station. Having an on-site supply of water will decrease the logistical constraints of hauling water, and given the long-term nature of Infested Status, the cost is easily justified. Power will need to be established if possible at the inspection stations to operate the wells. Again, given the long-term commitment at Infested Status, the cost is justified compared to the uncertainty under Suspect or Positive status.

These two inspection stations will intercept boats from five of the six boat ramps at Glendo. Given the isolated nature of the Elkhorn ramp, that ramp will only be open for use by participants in the local boater program.

Staffing Plan

Staffing needs will be higher at Infested Status than under any other status levels, given the need to conduct full decontaminations on all watercraft exiting the reservoir. Based on inspection data from 2018 and 2019, traffic volumes (outside of holiday weekends) may be up to 40 boats per day in April (highly weather dependent) with the highest volumes on weekends. In May through mid-August, boat numbers are typically 40-60 per day, with some weekend days approaching 90 boats. Mid-August through mid-September, 10-20 boats per day is typical. There is no use data beyond mid-September, but use is likely to be less than 20 boats per day. Holiday weekends will demand even higher staffing levels. The amount of outside help over the three main holiday weekends will likely require a doubling of effort compared to the response under Suspect or Positive Status. More than 100 boats per day is typical during the Memorial Day and Fourth of July periods, with lower use around Labor Day (60-80 boats per day). A total of 14 inspectors will be needed (four additional 5-month positions over Suspect or Positive status staffing) to ensure adequate capacity to fully decontaminate all boats.

Supplies and Equipment

Given more inspectors will be hired and more decontaminations will be conducted, there will be additional equipment needs at Infested Status versus Suspect or Positive status. In order to house additional technicians, another camper would need to be purchased. To handle the higher volume of decontaminations, two additional decontamination units would be needed compared to Suspect or Positive Status (seven units total). This would allow stationing four units at Glendo Park Road and three at Lake Shore Drive. All other supplies and equipment would be the same as Suspect or Positive status.

Public Outreach

Communications and outreach personnel have developed a draft statewide press release in the Administrative Rapid Response Plan (WGFD 2020), along with a statewide public outreach plan. The Regional Fisheries Supervisor will work with the Casper Regional I&E Specialist to get the information out to local markets. Town hall-style public meetings will be held in Glendo, Douglas, and Wheatland prior to the boating season to inform interested parties of information to date and plans going forward. The Regional I&E Specialist will develop a brochure to give out to Glendo Reservoir boaters at the Glendo, Torrington and I-25 AIS check stations. These brochures will explain the situation and rules pertaining to Infested Status. The Regional Fisheries Supervisor will work with Walleye tournament directors to formulate a plan to conduct all necessary exit decontaminations in an efficient manner considering the number of watercraft involved (> 100 boats for Walleye Stampede tournaments). The local boater program will be promoted in local media markets to encourage boaters who primarily use Glendo to enroll, thus reducing decontamination demand at check stations.

REFERENCES

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 A: KEY CONTACTS

		Phone	Email
Wyoming Game & Fish Department			
Josh Leonard	AIS Coordinator	307-721-1374	Joshua.leonard@wyo.gov
Matt Hahn	Casper Region Fisheries Supervisor	307-473-3415	Matt.hahn@wyo.gov
Brian Olsen	Casper Region Wildlife Supervisor	307-262-0430	Brian.olsen1@wyo.gov
Matt Withroder	Laramie Region Wildlife Supervisor	307-259-0294	Matt.withroder@wyo.gov
David Ellsworth	Laramie Region Warden Supervisor	307-322-2067	David.ellsworth@wyo.gov
Eric Hansen	Casper Region AIS specialist	307-473-3414	Eric.hansen@wyo.gov
Jessica Dugan	Casper Region Fisheries Biologist	307-473-3418	Jessica.dugan@wyo.gov
Jeff Glaid	Casper Region Fisheries Biologist	307-473-3405	Jeff.glaid1@wyo.gov
Rod Lebert	Douglas Game Warden	307-359-1291	Rod.lebert@wyo.gov
Nate Holst	Wheatland Game Warden	307-322-2067	Nathaniel.Holst@wyo.gov
Janet Milek	Information & Education Specialist	307-233-6404	Janet.milek@wyo.gov
Glendo State Park			
Brian Johnson	Park Superintendent	307-735-4433	Brian.johnson@wyo.gov
Platte County Commission			
Steve Shockley	Commissioner		sshockley@plattecountywyoming.com
Sandy Kontour	Commissioner		skontour@plattecountywyoming.com
Ian Jolovich	Commissioner		ijolovich@plattecountywyoming.com
Converse County Commission			
Robert G. Short	Chairman	307-267-2389	
Jim Willox	Vice-Chairman	307-358-3551	
Mike Colling	Commissioner	307-277-1812	
Rick Grant	Commissioner	307-262-6977	
Tony Lehner	Commissioner	307-436-2208	
U.S. Bureau of Reclamation			
Cordell Perkins	Land Management Branch	307-261-5675	cperkins@usbr.gov
Town of Glendo			
Susan Juska	Mayor	307-735-4242	
Concessionaires			
Rooch's Marina	Dawn and Rick Bodily	307.735.4216	
Stakeholders			
N. Platte Walleyes Unlimited	Kenny Mayer	307-277-0149	Kjack1@outlook.com
Walleye Stampede	Brian Woodward	307-258-8898	walleyestampede@aol.com
Bellwood Boats	Paul Bauder	307-735-4211	
Howard's General Store	Juanita Lira	307-735-4252	
Glendo Trading Post	Anthony Mills	307-735-4099	

APPENDIX B: ANNUAL BUDGETS ASSOCIATED WITH EACH STATUS LEVEL

SHORT-TERM SUSPECT STATUS

Travel	Description	# of Days	Cost/Day	Total Cost
	Camp Groceries (person days)	180	$24	$4,320
	Subtotal			**$4,320**
Supplies	**Description**	**# of units**	**Cost/unit**	**Total Cost**
	Pickup bed water tanks	5	$349	$1,745
	2-inch gas powered water pump	2	$300	$600
	Check station signs	4	$600	$2,400
	Subtotal			**$4,745**
	Total			**$9,065**

LONG-TERM SUSPECT STATUS YEAR 1

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I, 10 months	10	$4,543	$45,430
	Technician 1, 9 months	9	$2,863	$25,767
	Technician 2, 9 months	9	$2,863	$25,767
	Technician 3, 9 months	9	$2,863	$25,767
	Technician 4, 9 months	9	$2,863	$25,767
	Technician 5, 9 months	9	$2,863	$25,767
	Technician 6, 9 months	9	$2,863	$25,767
	Technician 7, 5 months	5	$2,863	$14,315
	Technician 8, 5 months	5	$2,863	$14,315
	Technician 9, 5 months	5	$2,863	$14,315
	Technician 10, 5 months	5	$2,863	$14,315
	Outside help for busy times	1	$4,553	$4,553
	Subtotal			**$261,845**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	State Motor Pool Sedan 1	9	$500	$4,500
	State Motor Pool Sedan 2	5	$500	$2,500
	State Motor Pool Sedan 3	5	$500	$2,500
	Purchase two 3/4 ton pickups	2	$33,000	$66,000
	Subtotal			**$75,500**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Per Diem for outside help	30	$157	$4,710
	Subtotal			**$4,710**
Supplies	**Description**	**# of Units**	**Cost/Unit**	**Total Cost**
	Gravel for pullouts	2	$15,000	$30,000
	Well with cistern and 2-inch hydrant	1	$100,000	$100,000
	16-foot utility trailer, 10,000lb rating	2	$4,000	$8,000
	550 gal plastic ag tank	5	$450	$2,250
	2-inch trash pump	2	$300	$600
	Office Trailer	2	$20,000	$40,000
	Generator 2-pack with parallel	2	$1,900	$3,800
	Decon Unit with attachments	5	$12,500	$62,500
	Camp Trailer	1	$20,000	$20,000
	Misc supplies 231 - 239 series			$5,000
	Check Station signs	6	$650	$3,900
	Subtotal			**$276,050**
	Total			**$618,105**

LONG TERM SUSPECT STATUS YEARS 2-3

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I, 10 months	10	$4,543	$45,430
	Technician 1, 9 months	9	$2,863	$25,767
	Technician 2, 9 months	9	$2,863	$25,767
	Technician 3, 9 months	9	$2,863	$25,767
	Technician 4, 9 months	9	$2,863	$25,767
	Technician 5, 5 months	5	$2,863	$14,315
	Technician 6, 5 months	5	$2,863	$14,315
	Technician 7, 5 months	5	$2,863	$14,315
	Technician 8, 5 months	5	$2,863	$14,315
	Outside help for busy times	1	$4,553	$4,553
	Subtotal			**$210,311**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	State Motor Pool Sedan 1	9	$500.00	$4,500.00
	State Motor Pool Sedan 2	5	$500.00	$2,500.00
	State Motor Pool Sedan 3	5	$500	$2,500
	Subtotal			**$9,500**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Per Diem	30	$157	$4,710
	Subtotal			**$4,710**
Supplies	**Description**	**# of units**	**Cost/unit**	**Total Cost**
	misc supplies 231-239			$2,500
	Subtotal			**$2,500**
	TOTAL			**$227,021**

POSITIVE STATUS

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I, 10 months	10	$4,543	$45,430
	Technician 1, 9 months	9	$2,863	$25,767
	Technician 2, 9 months	9	$2,863	$25,767
	Technician 3, 9 months	9	$2,863	$25,767
	Technician 4, 9 months	9	$2,863	$25,767
	Technician 5, 9 months	9	$2,863	$25,767
	Technician 6, 9 months	9	$2,863	$25,767
	Technician 7, 5 months	5	$2,863	$14,315
	Technician 8, 5 months	5	$2,863	$14,315
	Technician 9, 5 months	5	$2,863	$14,315
	Technician 10, 5 months	5	$2,863	$14,315
	Outside help for busy times	1	$4,553	$4,553
	Subtotal			**$261,845**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	State Motor Pool Sedan 1	9	$500	$4,500
	State Motor Pool Sedan 2	5	$500	$2,500
	State Motor Pool Sedan 3	5	$500	$2,500
	Purchase two 3/4 ton pickups[a]	2	$33,000	$66,000
	Subtotal			**$75,500**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Per Diem for outside help	30	$157	$4,710
	Subtotal			**$4,710**
Supplies	**Description**	**# of Units**	**Cost/Unit**	**Total Cost**
	Gravel for pullouts[a]	2	$15,000	$30,000
	Well with cistern and 2-inch hydrant[a]	1	$100,000	$100,000
	16-foot utility trailer, 10,000lb rating[a]	2	$4,000	$8,000
	550 gal plastic ag tank[a]	5	$450	$2,250
	2-inch trash pump[a]	2	$300	$600
	Office Trailer[a]	2	$20,000	$40,000
	Generator 2-pack with parallel[a]	2	$1,900	$3,800
	Decon unit with attachments[a]	5	$12,500	$62,500
	Camp Trailer[a]	1	$20,000	$20,000
	Misc supplies 231 - 239 series			$5,000
	Check Station signs[a]	6	$650	$3,900
	Subtotal			**$276,050**
	Total			**$618,105**

[a] These items will not need to be purchased if transitioning from Long-term Suspect Status.

INFESTED STATUS

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I, 10 months	10	$4,543	$45,430
	Technician, 8 months x 6	48	$2,863	$137,424
	Technician, 5 months x 8	40	$2,863	$114,520
	Outside help for busy times	2	$4,553	$9,106
	Subtotal			**$306,480**
Vehicle	**Description**	**# of Months**	**Cost/Month**	**Total Cost**
	State Motor Pool Sedan 1	9	$500	$4,500
	State Motor Pool Sedan 2	5	$500	$2,500
	State Motor Pool Sedan 3	5	$500	$2,500
	State Motor Pool Sedan 4	5	$500	$2,500
	Subtotal			**$12,000**
Travel	**Description**	**# of Days**	**Cost/Day**	**Total Cost**
	Per Diem for outside help	60	$157	$9,420
	Subtotal			**$9,420**
Supplies	**Description**	**# of Units**	**Cost/Unit**	**Total Cost**
	Gravel for pullouts[a]	2	$15,000	$30,000
	Paving of pullouts	2	$68,000	$136,000
	Office Trailer[a]	2	$20,000	$40,000
	generator 2-pack with parallel[a]	2	$1,900	$3,800
	Decon Unit with attachments[b]	7	$12,500	$87,500
	Camp Trailer[c]	2	$20,000	$40,000
	Misc supplies 231 - 239 series			$5,000
	Check Station signs[a]	6	$650	$3,900
	Water Well[d]	3	$50,000	$150,000
	Subtotal			**$496,200**
Utilities	**Description**	**# of Units**	**Cost/Unit**	**Total Cost**
	Power Hookup	2	$4,000	$8,000
	Subtotal			**$8,000**
	Total			**$832,100**

[a] Will not need to be purchased if transitioning from Suspect or Positive status.
[b] Only two units will need to be purchased if transitioning from Suspect or Positive status.
[c] Only one camp trailer will need to be purchased if transitioning from Suspect or Positive status.
[d] If transitioning from Suspect or Positive status, only 2 wells would be needed. If proceeding directly to infested, three wells would be needed but the well at GSP headquarters would not need as much cistern capacity or the 2-inch hydrant as it would be for domestic use only.