

Rapid Response Plan Following Detection of Dreissenid Mussels in Granite and Crystal Reservoirs, Wyoming

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SUMMARY

This Rapid Response Plan provides a guide for how to minimize and contain a potential dreissenid mussel infestation at Granite Reservoir. The high level of downstream connectivity from Granite Reservoir to Crystal Reservoir is why Crystal Reservoir is included in the containment plan for Granite Reservoir. If dreissenid mussels are detected in a sample from Crystal Reservoir prior to Granite Reservoir, then a different response that focuses more heavily on containment at Crystal Reservoir should be initiated.

Granite and Crystal reservoirs are located in Curt Gowdy State Park, 24 miles west of Cheyenne, Wyoming and 24 miles east of Laramie, Wyoming. Curt Gowdy State Park is managed for diverse recreational opportunities and Cheyenne Board of Public Utilities stores water in both reservoirs for municipal water supply. Both reservoirs are located on Middle Crow Creek within the South Platte sub-basin, but most of the water originates in the Douglas Creek drainage and is delivered to each reservoir via a gravity fed pipeline from Rob Roy Reservoir. Based on 2018 and 2019 AIS inspections, most boaters bound for Granite Reservoir (92%) or Crystal Reservoir (96%) were from Wyoming or Colorado. Many boats bound for Granite Reservoir were low risk (88%). High risk boats were most frequently non-motorized watercraft that were simple to drain, clean, and dry and last used in Colorado or Nebraska.

If a sample from Granite Reservoir is confirmed as dreissenid mussels, Granite and Crystal reservoirs will enter Short-term Suspect Status, with a goal to minimize the risk of spreading mussels to other waters while awaiting follow-up sampling results. During this approximately 6-week period, all watercraft exiting both reservoirs will be funneled to a single inspection and decontamination station near the Granite Reservoir boat ramp. A seasonal closure will be implemented from November 1 through March 31 and shore launching by motorized watercraft will be prohibited. Current regional personnel will operate this check station, and staffing needs will be highest from May 16 through August 15 when the check station will be open 16 hours a day (5 AM-9 PM), seven days a week. At a minimum, seven inspectors working 40 hour work weeks will be required.

Depending on follow up sampling results, the reservoir could remain Suspect, or be elevated to Positive or Infested status. All three possibilities would entail a longer-term response to minimize the risk of spreading mussels to other waters, which requires hiring a contract biologist and several seasonal technicians. If the reservoirs enter Positive or Infested Status, a second AIS check station will be opened near the Crystal Reservoir boat ramp. The implementation of a Local Boater Program at Granite and Crystal reservoirs is recommended.

Start-up costs of exit inspections following initial detection will be assimilated through regional personnel and equipment. As the program progresses, costs increase dramatically with personnel needs and purchases of supplies and equipment. Depending on status level and the associated response, initial (first year) budgets that require equipment and supply purchases will

range from \$364,000 to \$798,000, while annual operating budgets of AIS check stations will range from \$121,000 to \$215,000 (Appendix B).

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 are 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 Granite Reservoir and are verified by independent experts and genetic analysis. At that point, Granite Reservoir and Crystal 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, these waters will enter Long-term Suspect Status and monthly monitoring will be initiated. If zebra or quagga mussels are not detected for three years, these waters will once again be considered negative. Conversely, if two sampling events within a 12-month period detect zebra or quagga mussels, these waters 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. The high level of downstream connectivity from Granite Reservoir to Crystal Reservoir is why Crystal Reservoir is included in the containment plan following detection in Granite Reservoir. It is important to note that if zebra or quagga mussel veligers (larvae) or adults are detected in a

sample from Crystal Reservoir prior to Granite Reservoir, then a different response that focuses more heavily on containment at Crystal Reservoir should be initiated

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 DREISSEID 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

Granite Reservoir (i.e., Granite Springs Reservoir) and Crystal Reservoir (i.e., Crystal Lake Reservoir) are located in Curt Gowdy State Park, 24 miles west of Cheyenne, Wyoming and 24 miles east of Laramie, Wyoming. Construction was completed on Granite Dam in 1904 and Crystal Dam in 1910, and both dams were rehabilitated in 1986. Granite Reservoir is located about 1.5 miles upstream of Crystal Reservoir and both reservoirs are located on Middle Crow Creek within the South Platte sub-basin of the Platte River basin.

A lease agreement with the City of Cheyenne allows Wyoming State Parks management authority over Curt Gowdy State Park. They currently manage Curt Gowdy State Park for diverse recreational opportunities, including fishing, boating, and camping. In addition, the City of Cheyenne Board of Public Utilities stores water in both reservoirs for municipal water supply as a part of Cheyenne's Stage I/II Water System. While some of the water stored in Granite and Crystal reservoirs is contributed by the Middle Crow Creek drainage, most of the water originates in the Douglas Creek drainage and is delivered to each reservoir via a gravity fed pipeline from Rob Roy Reservoir on the west slope of the Snowy Range. Aside from Curt Gowdy State Park and Cheyenne Board of Public Utilities, other key stakeholders include City of Cheyenne, City of Laramie, Laramie County, Albany County, Medicine Bow-Routt National Forest, Laramie County Weed and Pest, and Colorado Parks and Wildlife Aquatic Nuisance Species Program.

The topography of the Crow Creek drainage transitions from large rock outcrops and rolling hills on the Pole Mountain Area of the Medicine Bow-Routt National Forest to flat floodplains and short grass prairie near the Wyoming-Colorado border. Both reservoirs lie on the eastern flank of the Laramie Mountains with the full pool surface elevation of Granite Reservoir at 7,220 ft and Crystal Reservoir at 6,980 ft. Rolling hills and gullies are characteristic of the landscape surrounding each reservoir.

At full pool, Granite Reservoir is about 1.30 miles long and 0.53 miles wide. It is 190 surface acres, has a storage capacity of 5,320 acre-feet, and has 5.25 miles of shoreline. Outflow

from Granite Reservoir travels down Middle Crow Creek for a short distance (1.5 miles) before entering Crystal Reservoir. The high level of downstream connectivity from Granite Reservoir to Crystal Reservoir is why Crystal Reservoir is included in the containment plan for Granite Reservoir. Smaller Crystal Reservoir is about 0.90 miles long and 0.47 miles wide. It is 138 surface acres, has a storage capacity of 3,410 acre-feet, and has 3.35 miles of shoreline. Crystal Reservoir outflow enters Middle Crow Creek and flows into Crow Creek, which then flows through the City of Cheyenne and into Colorado.

Access and Boating Season

Granite Springs Road provides access to Curt Gowdy State Park, including Granite and Crystal reservoirs. This road is accessible from either State Route 210 (Happy Jack Road) or Laramie County Road 210 (Crystal Lake Road; Figure 1). There is one permanent public concrete boat ramp at each reservoir, and shore launching by non-motorized watercraft is possible at many access points along each reservoir (Figures 2-3). Based on Laramie Region port of entry AIS inspection data from 2016 through 2018, the number of boaters entering inspection stations increases mid-May, peaks the 1st week of July, and steadily decreases in September. This regional boating use pattern was also seen at Curt Gowdy State Park during a creel survey conducted in 2003 and is expected to be similar to current use patterns (Hahn 2006a, 2006b).

Based on data from AIS inspections conducted January 1, 2018 through November 11, 2019, Granite Reservoir has a higher proportion of motorized watercraft users (57%) than Crystal Reservoir (25%). Motorized watercraft are typically more complex than non-motorized watercraft, which increases the risk level associated with these vessels potentially harboring dreissenid mussels. This is the primary reason Granite Reservoir has a higher potential risk of invasion by dreissenid mussels than does Crystal Reservoir (Leonard and Bear 2019). The smaller proportion of motorized watercraft at Crystal Reservoir is the result of the special regulation that limits motorized watercraft to 15 horsepower or less on Crystal Reservoir. Additionally, a higher proportion of boats bound for Granite Reservoir were high risk (12%) and/or last used in an infested water or state. The high risk boats bound for Granite Reservoir were most frequently last used in Colorado or Nebraska and were non-motorized watercraft that are simple to drain, clean, and dry. Over the 2018-2019 boating season, there were 42 boats that last came from an infested water (or state) and boated at Granite Reservoir. These watercraft last boated on Lake Powell in Utah, the Missouri River in South Dakota, or in the infested states of Arizona, California, Florida, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, North Carolina, Oklahoma, Tennessee, Texas, Virginia, or Wisconsin. Most boaters bound for Granite Reservoir (92%) or Crystal Reservoir (96%) were from Wyoming or Colorado. Boaters from other states also visit these reservoirs, but in low numbers.



FIGURE 1. Overview map of access roads to Granite and Crystal reservoirs.



FIGURE 2. Overview map of Granite Reservoir within Curt Gowdy State Park with the boat ramp location marked by the white and black pin, the freshwater source marked by the blue pin, and the pipeline influent marked by the red pin.

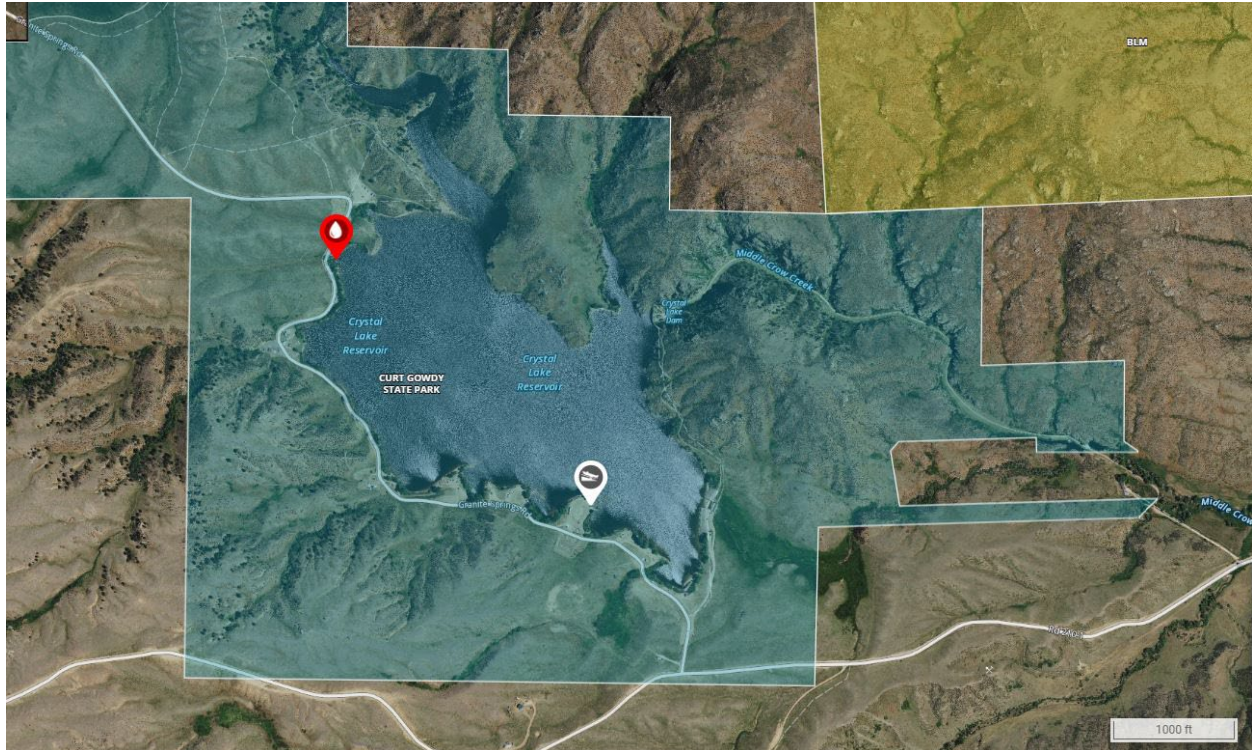


FIGURE 3. Overview map of Crystal Reservoir within Curt Gowdy State Park with the boat ramp location marked by the white and black pin, and the pipeline influent marked by the red pin

RAPID RESPONSE – SHORT-TERM SUSPECT STATUS

In the event that a sample from Granite Reservoir is confirmed positive for dreissenid mussels, Granite and Crystal reservoirs 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 and motors. All watercraft leaving Granite Reservoir or Crystal 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.

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 will 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 WGFD AIS 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. On the regional level, the Laramie Regional Fisheries Supervisor will begin the regional communication chain to disseminate information about the detection to internal and external partners and stakeholders (Figure 4). Internal WGFD contacts include Regional Fish Division personnel, the Regional Wildlife Supervisor, the Regional Habitat and Access Supervisor and the Regional I&E Specialist. The Regional Wildlife Supervisor will then contact the Cheyenne and North Laramie game wardens as well as local wildlife and terrestrial habitat biologists. The Regional Habitat and Access Supervisor will contact appropriate Habitat and Access biologists.

The Laramie Regional Fisheries Supervisor or biologists will also contact key stakeholders, including Curt Gowdy State Park, City of Cheyenne Board of Public Utilities, City of Cheyenne, City of Laramie, Laramie County, Albany County, Medicine Bow-Routt National Forest, Laramie County Weed and Pest, and Colorado Parks and Wildlife Aquatic Nuisance Species Program.

Boater contacts made through the Wyoming AIS inspection stations will be used as a primary notification and education outlet during this time period. The AIS Coordinator will also contact and coordinate with WGFD communication personnel, including Regional I&E (see Public Outreach, below), and regional stakeholders (Western Regional Panel, federal partners, etc.).

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 key individuals can be found in Appendix A.

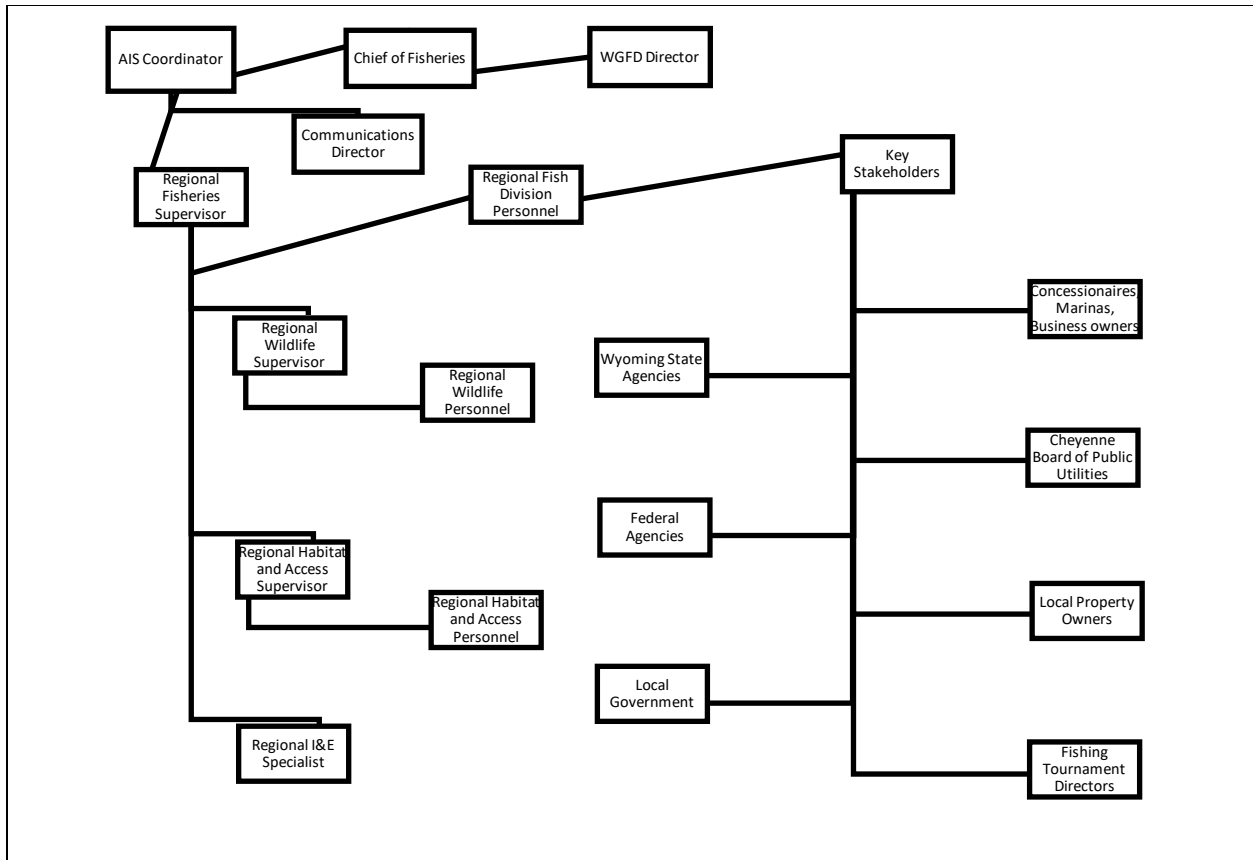


FIGURE 4. Communication chain for dissemination of information on the local and regional level following a dreissenid mussel detection in a Wyoming water.

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>.

Closures

Within the first week of Granite and Crystal reservoirs becoming “Suspect” waters, the Laramie Regional Fisheries Supervisor, working with the Curt Gowdy State Park Superintendent, will implement a seasonal closure prohibiting watercraft from launching on Granite or Crystal reservoirs from November 1 through March 31. In addition, shore launching by motorized watercraft will be prohibited, while shore launching by non-motorized watercraft will be permitted. All watercraft must receive an exit inspection and decontamination before leaving Curt Gowdy State Park. All watercraft would be required to be off the water by the established AIS check station closing time in order to receive an exit inspection and

decontamination. Boats can remain on the water overnight, but must be inspected and decontaminated before leaving the state park. Cheyenne Board of Public Utilities will be exempt from boating closures and launching restrictions when performing duties specific to business operations (water quality monitoring, algae suppression, dam maintenance, etc.). Other agencies will also be exempt from boating closures and launching restrictions when performing emergency duties. Additional closures and restrictions could be considered after discussions among the Curt Gowdy State Park Superintendent and the Laramie Regional Wildlife, Fisheries, and Habitat and Access supervisors.

Check Station

Inspections will be based on current WGFD AIS inspection protocols. All watercraft will be funneled to a single inspection and decontamination station set up near the Granite Reservoir boat ramp, allowing WGFD personnel to inspect all watercraft before exiting Curt Gowdy State Park (Figure 5). This single inspection station would require less effort and resources while increasing success to limit the spread of AIS from Granite or Crystal reservoirs. Check station hours will approximately coincide with sunrise and sunset. Hours of operation for the AIS check station will be 6 AM-8 PM, April 1 to May 15; 5 AM-9 PM, May 16 to August 15; 6 AM-8 PM, August 16 to September 30; and 6 AM-6 PM in October. Signs directing one-way traffic through the Granite Reservoir boat ramp area will need to be installed to improve traffic flow and alleviate congestion near the boat ramp. No other improvements to the check station area will be needed during Short-term Suspect since fresh water and electricity are available on-site. If feasible, construction of a permanent check station to be used during Long-term Suspect and other higher-level AIS statuses will begin during Short-term Suspect Status (see Long-term Suspect Status for location and construction details; see Long-term Suspect budget in Appendix B for associated costs).



FIGURE 5. Overview map of Granite Reservoir parking lot and boat ramp. Temporary AIS check station location shown in white text and new one-way traffic flow shown with black arrows.

Staffing Plan

Staffing needs will be highest from May 16 through August 15 when the AIS check station will be open 16 hours a day, seven days a week. The AIS check station will be staffed

with four inspectors on Thursday-Sunday, working four shifts (5 AM-1 PM; 7 AM-5 PM; 10 AM-8 PM; 11 AM-9 PM). The AIS check station will be staffed with three inspectors on Monday-Wednesday, working three shifts (5 AM-1 PM; 8 AM-6 PM; 1 PM-9 PM). An additional inspector will be stationed near the south entrance (Crystal Lake Road) fee booth in a WGFD vehicle during the peak time that boaters exit the state park (i.e., afternoon Friday-Monday) to inform boaters of the exit inspection requirements. Based on a 40-hour work week, at least seven inspectors will be needed to maintain this staffing level.

During most non-peak months (April 1-May 15, August 16-September 30), the AIS check station will be open 14 hours a day, seven days a week. In October, the AIS check station will be open 12 hours a day, seven days a week. In these non-peak months the AIS check station will be staffed by four inspectors on Thursday-Sunday and two inspectors on Monday-Wednesday. Based on a 40-hour work week, at least four inspectors will be needed to maintain this staffing level.

There will be a fair amount of overlap on inspector shifts, but not all shifts will have multiple inspectors present (i.e., morning time between 6 AM and 9 AM in non-peak season and between 5 AM and 7 AM during peak season, along with evening shifts). When multiple inspectors are present and the check station is not busy, one inspector will rove throughout Curt Gowdy State Park to inform boaters about exit inspection requirements. The roving inspector will target non-motorized boaters and boats exiting Crystal Reservoir. The AIS check station will be open from April 1 through October 31, so long as the reservoir is ice-free.

During the Short-term Suspect Status period, it is recommended that the AIS Specialist be present weekly, spending 40 hours per week overseeing operations. In addition, the AIS check station will be staffed by roving AIS inspectors, Laramie Regional Fish, Wildlife and Services division personnel, and potentially personnel from the Cheyenne Headquarters Office.

Curt Gowdy State Park personnel working the fee booths can also help inform boaters of the exit inspection requirement. The north entrance (Happy Jack Road) fee booth is the primary entrance booth and is staffed during a longer period of the year and for longer hours. The south entrance (Crystal Lake Road) fee booth is usually only staffed June 1 through August 15 and for limited hours, which is why an additional inspector will be stationed at this entrance during the peak time that boaters exit the state park.

Supplies and Equipment

The Laramie AIS Specialist and the regional fisheries biologists will transport two mobile decontamination units to Curt Gowdy State Park. The decontamination units will come from the Laramie Region and will not affect other Laramie Region AIS operations as long as all Laramie Region decontamination units are in working order. If needed, decontamination units will be borrowed from other regions. In addition to an outhouse facility onsite, there is also a well source of fresh water available to fill water tanks (Figure 2). There are other freshwater sources available at Curt Gowdy State Park, but the Curt Gowdy State Park Superintendent recommended using the well shown in Figure 2 since others located nearer to the check station are already approaching maximum use capacity. A 10,000 lb capacity flatbed trailer and $\frac{3}{4}$ ton pickup will be borrowed from the Laramie Region, or elsewhere, to haul water from the well located on the south side of Granite Reservoir to check station decontamination units. Two 550 gal capacity water tanks and a 2-inch trash pump will be purchased and mounted on the trailer. In addition to establishing the temporary inspection station, the Laramie AIS Specialist will install signage around the state park that includes information about exit inspection requirements.

Sign installation will occur after the Curt Gowdy State Park Superintendent approves messaging and placement locations. The Laramie AIS Specialist should use dynamic signs, if available, until permanent signs are installed. The plan will be to install a sign near each entrance to Curt Gowdy State Park. An additional sign will be installed near the north entrance (Happy Jack Road) fee booth that directs vehicles with watercraft traveling north bound on the Granite Springs Road to the AIS inspection station location on the Granite Reservoir boat ramp. Three dynamic messaging signs will be needed in total. Additional smaller signs with information about exit inspection requirements will be placed at multiple locations throughout Curt Gowdy State Park, including areas with high non-motorized boat use. One of these sign will also be placed near the south entrance (Crystal Lake Road) fee booth to inform vehicles with watercraft leaving the state park of the exit inspection requirement and AIS inspection station location. During the Short-term Suspect period, Laramie Regional and Cheyenne Headquarters personnel working the AIS check station will commute from their respective workstations and will not receive camp grocery per-diem. See Short-term Suspect Status budget in Appendix B for information on supply costs associated with this six-week period.

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 Communications 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. All public outreach information, including press releases, should include the logo and approval of Curt Gowdy State Park prior to dissemination to the public. 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 Laramie Regional I&E Specialist to relay information about Short-term Suspect Status at Granite or Crystal reservoir through media outlets (newspapers, radio, etc.). 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, Granite and Crystal reservoirs 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 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 Granite or Crystal reservoirs 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 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 obtain 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 outboard motors and only flush inboard/outboard and inboard motors as these motor types are difficult to drain completely. Public outreach will increase via multiple outlets to highlight the potential threat at the suspect water.

Communication Plan

The administrative communication chain will continue to be utilized to inform all parties on follow-up sampling results and water status (see WGFD AIS Administrative Rapid Response Plan; WGFD 2020). In addition, the Laramie Region internal communication chain outlined in the Short-term Suspect Status section (above) will continue to be utilized to inform the Laramie Region and key stakeholders (Appendix A) of follow-up sampling results.

Closures

All closures, public launching restrictions, and exemptions established during Short-term Suspect Status will remain in place at Long-term Suspect Status. Additional closures and restrictions could be considered after discussions among the Curt Gowdy State Park Superintendent and the Laramie Regional Wildlife, Fisheries, and Habitat and Access supervisors.

Check Station

Inspections will be based on current WGFD AIS inspection protocols. All watercraft will be funneled to a permanent check station located to the northwest of Granite Reservoir boat ramp (i.e., Granite Reservoir AIS check station) for inspections and possible decontaminations (Figure 6). If feasible, Laramie Regional personnel in coordination with Curt Gowdy State Park personnel will begin construction of the permanent check station to be used during Long-term Suspect and other higher-level AIS statuses (i.e., Positive, and Infested) during Short-term Suspect Status. The check station will include designated traffic lanes, decontamination pads, fresh water, and a mobile office with electricity. Signs directing one-way traffic through the Granite Reservoir boat ramp area will be installed to improve traffic flow and alleviate congestion near the boat ramp. Prior to completion of the permanent AIS check station, all watercraft will be funneled to the temporary inspection and decontamination station used during Short-term Suspect Status (Figure 5). A second mobile office will be parked at the south entrance (Crystal Lake Road) and will be hooked up to available electric.

During year 1 of Long-term Suspect Status, hours of operation for the AIS check station will approximate sunrise and sunset and be similar to Short-term Suspect Status (i.e., 6 AM-8 PM, April 1 to May 15; 5 AM-9 PM, May 16 to August 15; 6 AM-8 PM, August 16 to September 30; and 6 AM-6 PM in October). Check station hours will be reduced for years 2 and

3 of Long-term Suspect Status. Hours of operation for the AIS check station will be 8 AM-8 PM, April 1 to May 15; 8 AM-9 PM, May 16 to August 15; 8 AM-8 PM, August 16 to September 30; and 8 AM-6 PM in October. Boater data will be collected during year 1 of Long-term Suspect Status, and if data indicates high use by local boaters, a local boater program will be implemented during Long-term Suspect Status to reduce the need for inspections and decontaminations for boats that only launch at Granite or Crystal reservoirs. Please refer to the Administrative Rapid Response Plan (WGFD 2020) for details on the local boater program.



FIGURE 6. Overview map of Granite Reservoir parking lot and boat ramp. Permanent AIS check station location shown in white text, new one-way traffic flow shown with black arrows, and underground water pipe shown with blue line.

Staffing Plan

During year 1 of Long-term Suspect Status, staffing needs and check station hours will remain the same as Short-term Suspect Status. Based on a 40-hour work week, at least seven inspectors will be needed to maintain adequate staffing. To meet these needs, three 7-month term and three 3-month term technicians will be hired to perform inspections and decontaminations and work the south entrance. In addition, one 9-month term contract Biologist I will be hired to assist with inspections, supervise technicians, and oversee check station operations under two different scenarios. Scenario 1 is if the first detection occurs during annual July or September AIS monitoring surveys. Under this scenario the Laramie AIS Specialist will staff and supervise the Curt Gowdy AIS check station for the remainder of the boating season (through October 31) and then be replaced by the Biologist I the following spring (March 1). Scenario 2 is if the first detection is in the early spring/summer period (before July 1). Under this scenario, the Laramie AIS Specialist will staff and supervise the AIS check station until a Biologist I is hired. In both scenarios, Laramie Fish Management personnel will assume the day-to-day Laramie AIS Specialist duties while the Specialist assumes Rapid Response and containment duties at the Curt Gowdy AIS check station.

Check station hours will be reduced during years 2 and 3 of Long-term Suspect Status, which will eliminate the need for one 3-month term technician. Staffing needs will be highest from May 16 through August 15 when the AIS check station will be open 13 hours a day, seven days a week. The AIS check station will be staffed with three inspectors on Thursday-Sunday, working three shifts (8 AM-4 PM; 10 AM- 8 PM; 11 AM-9 PM). The AIS check station will be staffed with three inspectors on Monday-Wednesday, working three shifts (8 AM-4 PM; 8 AM-6 PM; 1 PM-9 PM). An additional inspector will be hired and stationed at the south entrance (Crystal Lake Road) during the peak time that boaters exit the state park (i.e., PM shift Friday-Monday) to inform boaters of the exit inspection requirements. Based on a 40-hour work week, at least six inspectors will be needed to maintain this staffing level. During most non-peak months (April 1-May 15, August 16-September 30), the AIS check station will be open 12 hours a day, seven days a week. In October, the AIS check station will be open 10 hours a day, seven days a week. In these non-peak months the AIS check station will be staffed by three inspectors on Thursday-Sunday and two inspectors on Monday-Wednesday. Based on a 40-hour work week, at least four inspectors will be needed to maintain this staffing level. The AIS check station will be open from April 1 through October 31, so long as the reservoir is ice-free.

To adequately staff the AIS check-station during years 2 and 3 of Long-term Suspect Status, at least six inspectors will be needed. Three 7-month term and two 3-month term technicians will be hired to perform inspections and decontaminations and work the south entrance. In addition, one 9-month term contract Biologist I will be hired to assist with inspections, supervise technicians, and oversee check station operations. Similar to Short-term Suspect Status, there will be a fair amount of overlap on inspector shifts. When multiple inspectors are present and the check station is not busy, one inspector will rove throughout Curt Gowdy State Park to inform boaters about exit inspection requirements. The roving inspector will target non-motorized boaters and boats exiting Crystal Reservoir.

The Biologist I and technicians hired for the Curt Gowdy AIS check station will be stationed in Laramie and will need to provide their own transportation to and from the AIS check station. If this prevents adequate employee recruitment, sedan(s) may be leased from State Motor Pool to provide employees transportation from Laramie to Curt Gowdy State Park. Costs associated with staffing the check station during Long-term Suspect Status can be found in Appendix B.

Supplies and Equipment

The Laramie Regional Fisheries Supervisor and Laramie AIS Specialist will work with the Laramie Habitat and Access Supervisor, Laramie Habitat and Access Biologist, and the Curt Gowdy State Park Superintendent to improve lands encompassing the Granite Reservoir AIS check station for future inspections and decontaminations (Figure 6). Ideally, this process will be started during the Short-term Suspect Status period. Road base and gravel will be needed to cover the area surrounding the AIS check station, while two concrete pads (25 x 25 feet) will be installed for decontaminations (Figure 6). An underground water pipe that transports water from a nearby well runs near the south edge of the AIS check station (Figure 6). A pipe will be extended from this line to a hydrant-style spigot near the decontamination pads. All decontamination units and two 550 gal storage tanks purchased during Short-term Suspect Status will be kept full, when possible, so water is readily available when inspection rates are high. The well feeding this water line approaches maximum capacity during times of peak use in nearby campgrounds. The well recharges with water quickly when use is low, and should be able to provide enough water to meet the needs of all users if AIS storage tanks are filled at appropriate times. If use exceeds demand, water could be hauled from other water sources available at Curt Gowdy State Park (e.g., well used in Short-term Suspect; Figure 2). A mobile office will be purchased to provide shelter and work space for Department personnel conducting inspections and decontaminations. Electric service is available throughout the state park and a new pedestal box will be installed near the mobile office to provide power to the Granite Reservoir AIS check station. A second mobile office will be purchased to provide shelter for Department personnel stationed at the south entrance (Crystal Lake Road), informing boaters of the exit inspection requirement. This mobile office will be parked to the east of the south entrance fee booth in the preexisting host site, which currently has an electric pedestal box. Three decontamination units will be purchased. A ¾ ton pickup will also be purchased to pull decontamination units, pull the mobile office trailers, haul water (dependent on well capacity), and perform other AIS check station functions.

Three dynamic signs will be purchased to replace the dynamic signs rented during Short-term Suspect. Messaging and placement locations of dynamic signs will remain similar to Short-term Suspect. The Laramie AIS Specialist will replace any temporary signs placed throughout Curt Gowdy State Park with newly purchased permanent signs (e.g., Exit Inspection Required, Motorized Shore Launching Prohibited, Non-motorized Watercraft Need Exit Inspection, etc.). Similarly to Short-Term Suspect Status, sign messaging and placement locations will require approval from the Curt Gowdy State Park Superintendent. During Long-term Suspect Status, AIS personnel working the check station will be stationed in Laramie and will not receive camp groceries. Supply and equipment costs associated with the Long-term Suspect Status response can be found in Appendix B.

Public Outreach

At Long-term Suspect 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 Laramie Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with Long-term Suspect Status on Granite and Crystal reservoirs. All public outreach information, including press releases, should include the logo and approval of Curt Gowdy State Park prior to dissemination to the public.

RAPID RESPONSE – POSITIVE STATUS

Granite and Crystal reservoirs 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). Granite and Crystal reservoirs will remain at Positive Status for five consecutive years of negative sample results, at which time they will be downgraded to Negative Status. Alternatively, if an established population of mussels is detected during that five years, it will be upgraded to Infested Status.

The goal during Positive 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 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 Granite and Crystal reservoirs to Infested Status. All watercraft leaving Granite or Crystal reservoirs will receive a seal and seal receipt to verify the watercraft received an exit inspection. Seals will be red in color to designate use on a suspect, positive or infested water versus the brown seal currently used after a Wyoming AIS inspection.

Communication Plan

The administrative communication chain will continue to be utilized to inform all parties on follow-up sampling results and water status (see WGFD AIS Administrative Rapid Response Plan; WGFD 2020). In addition, the Laramie Region internal communication chain outlined in the Short-term Suspect Status section (above) will be used to inform the Laramie Region and key stakeholders of changes in status level.

Closures

All closures, public launching restrictions, and exemptions established during Short-term Suspect Status will remain in place at Positive Status. Additional closures and restrictions could be considered after discussions among the Curt Gowdy State Park Superintendent and the Laramie Regional Wildlife, Fisheries, and Habitat and Access supervisors.

Check Stations

Inspections will be based on current WGFD AIS inspection protocols. The response for Positive Status will be similar to the response during year 1 of Long-term Suspect Status. For example, a permanent AIS check station to the northwest of Granite Reservoir boat ramp (i.e., Granite Reservoir AIS check station) will be used for inspections and decontaminations and hours of operation for the AIS check station will remain the same. If transitioning from Long-term Suspect Status to Positive Status, the AIS check station will have already been built. If transitioning from Short-term Suspect Status to Positive Status, it will need to be constructed. Additionally, Laramie Regional personnel in coordination with Curt Gowdy State Park personnel will construct a second permanent check station to the southwest of Crystal Reservoir boat ramp (i.e., Crystal Reservoir AIS check station) to be used during Positive and Infested AIS statuses (Figure 7). The Crystal Reservoir AIS check station will include designated traffic lanes, decontamination pads, fresh water, and a mobile office with electricity. During Positive Status, the Crystal Reservoir AIS check station will be open during the busy season and during the peak time that boaters exit the state park. Specifically, the Crystal Reservoir AIS check station will be open four days a week (Friday-Monday) between May 16 and August 15. Hours of operation for the Crystal Reservoir AIS check station will approximate sunrise and sunset and will be 5 AM-9 PM. All watercraft will be funneled to the Granite Reservoir AIS check station on days when the Crystal Reservoir AIS check station is not open. Implementation of a local boater program is recommended during Long-term Suspect Status, and will need to be implemented during Positive Status if transitioning from Short-term Suspect Status. Please refer to the Administrative Rapid Response Plan (WGFD 2020) for details on the local boater program.



FIGURE 7. Overview map of Crystal Reservoir parking lot and boat ramp. Permanent AIS check station location shown in white text.

Staffing Plan

The Granite Reservoir AIS check station hours of operation and staffing plan will remain the same as year 1 of Long-term Suspect Status. The additional 3-month term technician will not be hired and stationed at the south entrance (Crystal Lake Road) to inform boaters of the exit inspection requirement since the Crystal Reservoir AIS check station will be located near this site and open for similar days and hours. At least six inspectors will be needed to maintain adequate staffing at the Granite Reservoir AIS check station. To meet these staffing needs, three 7-month term and two 3-month term technicians will be hired to perform inspections and decontaminations. In addition, one 9-month term contract Biologist I will be hired to assist with inspections, supervise technicians, and oversee check stations.

The Crystal Reservoir AIS check station will be staffed with four inspectors on Friday-Monday, working four shifts (5 AM-2 PM; 7 AM-5 PM; 11 AM-8 PM; 12 PM-9 PM). Four 3-month term technicians will be hired to perform inspections and decontaminations. In total, one 9-month term contract Biologist I and 9 inspectors (three 7-month term and six 3-month term) will be hired to staff both AIS check stations at Curt Gowdy State Park during Positive Status. The Biologist I and technicians hired for the Curt Gowdy AIS check stations will be stationed in Laramie and will need to provide their own transportation to and from the AIS check stations. If

this prevents adequate employee recruitment, sedan(s) may be leased from State Motor Pool to provide employees transportation from Laramie to Curt Gowdy State Park. Costs associated with staffing check stations during Positive Status can be found in Appendix B.

Supplies and Equipment

The supplies and equipment needed to construct the Granite Reservoir AIS check station will be the same as Long-term Suspect Status. In addition, the Laramie Regional Fisheries Supervisor and Laramie AIS Specialist will work with the Laramie Habitat and Access Supervisor, Laramie Habitat and Access Biologist, and the Curt Gowdy State Park Superintendent to improve lands encompassing the permanent AIS check station near the Crystal Reservoir boat ramp for future inspections and decontaminations (Figure 7). Construction of the Crystal Reservoir AIS check station will be started when Granite and Crystal reservoirs meet the criteria for Positive Status. The area that will be converted to the Crystal Reservoir AIS check station is already developed (Crystal Dam Overlook Campground) and includes two camping spots (C183 and C184) that will be decommissioned for the establishment of the AIS check station. Road base and gravel will be needed to improve the existing loop roads and area surrounding the AIS check station, while two concrete pads (25 x 25 feet) will be installed for decontaminations (Figure 7). One 550 gal capacity water tank, one 2-inch trash pump, and two decontamination units will be purchased for the Crystal Reservoir AIS check. An existing spigot that provides water from a nearby well will be used to fill the water tank and decontamination units. The water tank will ensure water is readily available when inspection rates are high. The well feeding the spigot should have the capacity to meet the additional water demands caused by AIS check station operations. If transitioning from Long-term Suspect Status to Positive Status, a mobile office will have already been purchased for use at the south entrance and will need to be relocated to the Crystal Reservoir AIS check station. If transitioning from Short-Term Suspect Status, a mobile office will need to be purchased to provide shelter and work space for Department personnel conducting inspections and decontaminations. An existing pedestal box will provide power to the mobile office. If transitioning from Short-term Suspect Status, a ¾ ton pickup will be purchased to pull decontamination units, pull mobile office trailers, haul water (dependent on well capacity), and perform other AIS check station functions.

Sign purchases, messaging, and placement within Curt Gowdy State Park will be the same as Long-term Suspect Status and will require approval from the Curt Gowdy State Park Superintendent. During Positive Status, AIS personnel working the check station will be stationed in Laramie and will not receive camp groceries. If transitioning from Long-term Suspect Status to Positive Status, most supplies and equipment will have been procured. If transitioning from Short-term Suspect Status to Positive Status, very few supplies and equipment will have been procured. Supply and equipment costs associated with the Positive Status response can be found in Appendix B.

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 Laramie Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with Positive Status on Granite and Crystal reservoirs. All public outreach

information, including press releases, should include the logo and approval of Curt Gowdy State Park prior to dissemination to the public.

RAPID RESPONSE – INFESTED STATUS

Granite and Crystal reservoirs will be considered Infested if an established (recruiting or reproducing) population of dreissenid mussels is identified. Granite and Crystal reservoirs will remain at Infested Status until methods for complete eradication are discovered and implemented. Based on the best available technology and science at the time of this publication, it is expected that Granite and Crystal reservoirs would remain at Infested Status in perpetuity.

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 Granite and Crystal reservoirs 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 administrative communication chain will continue to be utilized to inform all parties on follow-up sampling results and water status (see WGFD AIS Administrative Rapid Response Plan; WGFD 2020). In addition, the Laramie Region internal communication chain outlined in the Short-term Suspect Status section (above) will continue to be utilized to inform the Laramie Region and key stakeholders of changes in status level.

Closures

If the status level of Granite and Crystal reservoirs is raised quickly to Infested, thereby bypassing other status levels, it is recommended that boating be prohibited until the start of the next boating season (April 1). This closure period will allow for completing purchases, hiring, and construction of decontamination stations needed for full containment operations. All closures, public launching restrictions, and exemptions established during Short-term Suspect Status will remain in place at Infested Status. Additional closures and restrictions could be considered after discussions among the Curt Gowdy State Park Superintendent and the Laramie Regional Wildlife, Fisheries, and Habitat and Access supervisors.

Check Stations

Inspections will be based on current WGFD AIS inspection protocols. The response for Infested Status will be similar to the response for Positive Status. For example, two AIS check stations will be located in Curt Gowdy State Park to inspect and decontaminate boats exiting Granite and Crystal reservoirs. The Granite Reservoir AIS check station will be located near the Granite Reservoir boat ramp (see Long-term Suspect Status for location and construction details) and the Crystal Reservoir AIS check station will be located near the Crystal Reservoir boat ramp (see Positive Status for location and construction details). If transitioning from Short-term Suspect Status to Infested Status, both check stations will need to be constructed. If transitioning from Long-term Suspect Status to Infested Status, the Granite Reservoir AIS check station will

have already been built. If transitioning from Positive Status to Infested Status, both AIS check stations will have already been built.

The Crystal Reservoir AIS check station will be open seven days a week during Infested Status, which is more than the four days a week (Friday-Monday) prescribed during Positive Status. Dates of operation for the Crystal Reservoir AIS check station will also be increased during Infested Status, resulting in both Curt Gowdy AIS check stations being open during the entire boating season (i.e, April 1 to October 31). Hours of operation for both check stations will approximate sunrise and sunset and be 6 AM-8 PM, April 1 to May 15; 5 AM-9 PM, May 16 to August 15; 6 AM-8 PM, August 16 to September 30; and 6 AM-6 PM in October. Operating the Crystal Reservoir AIS check station seven days a week during the entire boating season will provide better customer service for boaters exiting Curt Gowdy State Park since full decontaminations will now be required. For example, it will provide boaters with two inspection stations and an increased number of inspectors, which will decrease decontamination wait times and alleviate traffic congestion near the Granite Reservoir boat ramp. Implementation of a local boater program is recommended during Long-term Suspect and Positive Statuses, and will need to be implemented during Infested Status if transitioning from Short-term Suspect Status. Please refer to the Administrative Rapid Response Plan (WGFD 2020) for details on the local boater program.

Staffing Plan

The Granite Reservoir AIS check station hours of operation and staffing plan will remain the same as year 1 of Long-term Suspect Status. The additional 3-month term technician will not be hired and stationed at the south entrance (Crystal Lake Road) to inform boaters of the exit inspection requirement since the Crystal Reservoir AIS check station will be located near this site, which means that at least six inspectors will be needed to maintain adequate staffing. To meet staffing needs at the Granite Reservoir AIS check station, three 7-month term and two 3-month term technicians will be hired to perform inspections and decontaminations. In addition, one 9-month term contract Biologist I will be hired to assist with inspections, supervise technicians, and oversee check stations.

Staffing needs at the Crystal Reservoir AIS check station will be highest from May 16 through August 15 when it will be open 16 hours a day, seven days a week. On Thursday-Sunday, it will be staffed with four inspectors working four shifts (5 AM-1 PM; 7 AM-5 PM; 10 AM-8 PM; 11 AM-9 PM) and on Monday-Wednesday it will be staffed with three inspectors working three shifts (5 AM-1 PM; 8 AM-6 PM; 1 PM-9 PM). Based on a 40-hour work week, at least six inspectors will be needed to maintain this staffing level. During most non-peak months (April 1-May 15, August 16-September 30), the Crystal Reservoir AIS check station will be open 14 hours a day, seven days a week. In October, it will be open 12 hours a day, seven days a week. In these non-peak months the Crystal Reservoir AIS check station will be staffed by four inspectors on Thursday-Sunday and two inspectors on Monday-Wednesday, which will require at least four inspectors to maintain adequate staffing. Three 7-month term, one 5-month term, and two 3-month term technicians will be sufficient to staff the Crystal Reservoir AIS check station.

In total, one 9-month term contract Biologist I and 11 inspectors (six 7-month term, one 5-month term, and four 3-month term) will be hired to staff both AIS check stations at Curt Gowdy State Park during Infested Status. The Biologist I and technicians hired for the Curt Gowdy AIS check stations will be stationed in Laramie and will need to provide their own

transportation to and from the AIS check stations. If this prevents adequate employee recruitment, sedan(s) may be leased from State Motor Pool to provide employees transportation from Laramie to Curt Gowdy State Park. Costs associated with staffing check stations during Infested Status can be found in Appendix B.

Supplies and Equipment

The supplies and equipment needed to construct the Granite Reservoir AIS check station will be the same as Long-term Suspect Status. During Infested Status, a self-contained recirculating decontamination unit will be purchased and installed at the Granite Reservoir AIS check station instead of mobile decontamination units. The recirculating unit will reduce water use and alleviate demand on the well that provides water to this AIS check station, which already approaches maximum capacity during times of peak use in nearby campgrounds. The recirculating unit will also improve efficiency and help increase decontamination rates.

The supplies and equipment needed to construct the Crystal Reservoir AIS check station will be the same as Positive Status. If transitioning from Short-term Suspect Status, a ¾ ton pickup will be purchased to pull decontamination units, pull mobile office trailers, haul water (dependent on well capacity), and perform other AIS check station functions. Sign purchases, messaging, and placement within Curt Gowdy State Park will be the same as Long-term Suspect Status and will require approval from the Curt Gowdy State Park Superintendent. During Infested Status, AIS personnel working the check station will be stationed in Laramie and will not receive camp groceries. If transitioning from Long-term Suspect Status or Positive Status, most supplies and equipment will have been procured. If transitioning from Short-term Suspect Status to Infested Status, very few supplies and equipment will have been procured. Supply and equipment costs associated with the Infested Status response can be found in Appendix B.

Public Outreach

At Infested 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 Laramie Regional I&E Specialist to keep the local boating public aware of the threats and responsibilities associated with Infested Status on Granite and Crystal reservoirs. All public outreach information, including press releases, should include the logo and approval of Curt Gowdy State Park prior to dissemination to the public.

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- WGFD. 2019. Wyoming Game and Fish Department Aquatic Invasive Species Sampling and Monitoring Manual. Wyoming Game and Fish Department, Cheyenne, WY.
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- Hahn, M. 2006b. Crystal Reservoir programmed creel survey. Fish Division Administrative Report, Wyoming Game and Fish Department, Cheyenne, Wyoming.
- Leonard, J. L. and B. A. Bear. 2019. Evaluation of Wyoming waters for potential risk of invasion by dreissenid Mussels. Fish Division Administrative Report, Wyoming Game and Fish Department, Cheyenne, Wyoming.

APPENDIX A: KEY CONTACTS

		Phone	Email
<u>Wyoming Game & Fish Department</u>			
Josh Leonard	Aquatic Invasive Species Coord.	307-721-1374	joshua.leonard@wyo.gov
Bobby Compton	Laramie Region Fisheries Supervisor	307-721-1377	bobby.compton@wyo.gov
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Jerry Cowles	Laramie Region Habitat and Access Supervisor	307-721-1378	jerry.cowles@wyo.gov
Travis Beam	Laramie Region AIS Specialist	307-721-1389	travis.beam@wyo.gov
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Chance Kirkeeng	Laramie Region Fisheries Biologist	307-721-1385	chance.kirkeeng@wyo.gov
Steve Gale	Laramie Region Fisheries Biologist	307-721-1381	steve.gale@wyo.gov
Cody Schoonover	Cheyenne Game Warden	307-638-8354	cody.schoonover@wyo.gov
Vacant	Cheyenne Game Warden	307-777-4585	
Kristen DaVanon	North Laramie Game Warden	307-745-4402	kristen.davanon@wyo.gov
Robin Kepple	Information & Education Specialist	307-721-1383	robin.kepple@wyo.gov
<u>Curt Gowdy State Park</u>			
Patrick Harrington	Superintendent	307-632-7946	patrick.harrington@wyo.gov
Dennis Cease	Wyoming State Parks Law Enforcement Chief		dennis.cease@wyo.gov
<u>City of Cheyenne Board of Public Utilities</u>			
Clint Bassett (Primary)	Water Treatment Division Manager	307-632-9890	cbasset@cheyennebopu.org
Casey Whitman	Source of Supply Supervisor	307-637-0855	cwhitman@cheyennebopu.org
Dena Egenhoff	Water Conservation and Public Relations Specialist	307-637-6415	degenhoff@cheyennebopu.org
<u>City of Cheyenne</u>			
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<u>City of Laramie</u>			
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<u>Laramie County</u>			
Gunnar Malm	County Commissioner Chairman	307-633-4260	commissioners@laramiecounty.com
<u>Albany County</u>			
Terri Jones	County Commissioner Chairman	307-760-7878	tjones@co.albany.wy.us
<u>Medicine Bow-Routt National Forest</u>			
Rick Henderson	USFS Fisheries Biologist	970-870-2219	rhenderson01@fs.fed.us
Aaron Voos	Public Affairs Specialist	307-745-2323	atvoos@fs.fed.us
<u>Laramie County Weed and Pest</u>			
Bret Nelson	Supervisor	307-245-3213	larcoweed@rtconnect.net
<u>Colorado Parks and Wildlife</u>			
Elizabeth Brown	Invasive Species Program Manager	303-291-7362	elizabeth.brown@state.co.us
<u>Fishing Tournaments</u>			
Merrill Bassett	Curt Gowdy State Park Ice Fishing Tournament	720-670-0798	mebes76@hotmail.com
<u>Concessionaires</u>			
Tina	T's Campstore	307-316-2267	tscampingessentials@gmail.com

APPENDIX B: ANNUAL BUDGETS ASSOCIATED WITH EACH STATUS LEVEL

SHORT-TERM SUSPECT STATUS

Supplies	Description	# of units	Cost/unit	Total Cost
	550 gal ag water tanks	2	\$500	\$1,000
	2-inch gas powered water pump	1	\$300	\$300
	DMS sign shipping	1	\$1,200	\$1,200
	3 DMS signs rental (months)	6	\$1,080	\$6,480
	One-way traffic signs and equipment	5	\$100	\$500
	Outreach for newspaper or radio	5	\$1,000	\$5,000
	Total			\$14,480

LONG-TERM SUSPECT STATUS YEAR 1

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I; 1 @ 9 months (Mar-Nov)	9	\$4,543	\$40,887
	Technicians; 3 @ 7 months (Apr-Oct)	21	\$2,863	\$60,123
	Technicians; 3 @ 3 months (Jun-Aug)	9	\$2,863	\$25,767
	Subtotal			\$126,777
Vehicle	Description	# of Months	Cost/Month	Total Cost
	3/4 Ton Truck	1	\$33,000	\$33,000
	Subtotal			\$33,000
Utilities	Description		Cost/Unit	Total Cost
	Water line and hydrant spigot		\$7,000	\$7,000
	Electric pedestal outlet installation		\$10,000	\$10,000
	Subtotal			\$17,000
Supplies	Description	# of Units	Cost/Unit	Total Cost
	Road base and gravel for decon lanes	2	\$15,000	\$30,000
	Concrete decontamination pads	2	\$10,000	\$20,000
	Office trailer	2	\$20,000	\$40,000
	Decon unit with attachments	3	\$12,500	\$37,500
	Misc supplies 231 - 239 series			\$5,000
	DMS signs	3	\$17,000	\$51,000
	Check station signs	6	\$650	\$3,900
	Subtotal			\$187,400
	Total			\$364,177

LONG TERM SUSPECT STATUS YEARS 2-3

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I; 1 @ 9 months (Mar-Nov)	9	\$4,543	\$40,887
	Technicians; 3 @ 7 months (Apr-Oct)	21	\$2,863	\$60,123
	Technicians; 2 @ 3 months (Jun-Aug)	6	\$2,863	\$17,178
	Subtotal			\$118,188
Supplies	Description	# of units	Cost/unit	Total Cost
	Misc supplies 231-239			\$2,500
	Subtotal			\$2,500
	TOTAL			\$120,688

POSITIVE STATUS

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I; 1 @ 9 months (Mar-Nov)	9	\$4,543	\$40,887
	Technicians; 3 @ 7 months (Apr-Oct)	21	\$2,863	\$60,123
	Technicians; 6 @ 3 months (Jun-Aug)	18	\$2,863	\$51,534
	Subtotal			\$152,544
Vehicle	Description	# of Months	Cost/Month	Total Cost
	3/4 Ton Truck ^a	1	\$33,000	\$33,000
	Subtotal			\$33,000
Utilities	Description		Cost/Unit	Total Cost
	Water line and hydrant spigot ^a		\$7,000	\$7,000
	Electric pedestal outlet installation ^a		\$10,000	\$10,000
	Subtotal			\$17,000
Supplies	Description	# of Units	Cost/Unit	Total Cost
	Road base and gravel for decon lanes ^b	4	\$15,000	\$60,000
	Concrete decontamination pads ^b	4	\$10,000	\$40,000
	Office trailer ^a	2	\$20,000	\$40,000
	Decon unit with attachments ^b	5	\$12,500	\$62,500
	Misc supplies 231 - 239 series			\$5,000
	DMS signs ^a	3	\$17,000	\$51,000
	Check station signs ^a	6	\$650	\$3,900
	550 gal ag water tanks	1	\$500	\$500
	2-inch gas powered water pump	1	\$300	\$300
	Subtotal			\$263,200
	Total			\$465,744

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

^b Only two units will need to be purchased if transitioning from Long-term Suspect Status.

INFESTED STATUS

Personnel	Description	# of Months	Cost/Month	Total Cost
	Biologist I; 1 @ 9 months (Mar-Nov)	9	\$4,543	\$40,887
	Technicians; 6 @ 7 months (Apr-Oct)	42	\$2,863	\$120,246
	Technicians; 1 @ 5 months (Jun-Aug)	5	\$2,863	\$14,315
	Technicians; 4 @ 3 months (Jun-Aug)	12	\$2,863	\$34,356
	Subtotal			\$209,804
Vehicle	Description	# of Months	Cost/Month	Total Cost
	3/4 Ton Truck ^a	1	\$33,000	\$33,000
	Subtotal			\$33,000
Utilities	Description		Cost/Unit	Total Cost
	Water line and hydrant spigot ^a		\$7,000	\$7,000
	Electric pedestal outlet installation ^a		\$10,000	\$10,000
	Subtotal			\$17,000
Supplies	Description	# of Units	Cost/Unit	Total Cost
	Road base and gravel for decon lanes ^c	4	\$15,000	\$60,000
	Concrete decontamination pads ^c	4	\$10,000	\$40,000
	Office trailer ^a	2	\$20,000	\$40,000
	Decon unit with attachments ^a	3	\$12,500	\$37,500
	Recirculating Decon unit	1	\$300,000	\$300,000
	Misc supplies 231 - 239 series			\$5,000
	DMS signs ^a	3	\$17,000	\$51,000
	Check station signs ^a	6	\$650	\$3,900
	550 gal ag water tanks ^b	1	\$500	\$500
	2-inch gas powered water pump ^b	1	\$300	\$300
	Subtotal			\$538,200
	Total			\$798,004

^a These items will not need to be purchased if transitioning from Long-term Suspect Status or Positive Status.

^b Only one unit will need to be purchased if transitioning from Long-term Suspect Status and these items will not need to be purchased if transitioning from Positive Status.

^c Only two units will need to be purchased if transitioning from Long-term Suspect Status and these items will not need to be purchased if transitioning from Positive Status.