

**Recommended Uniform Minimum Protocols and Standards for  
Watercraft Interception Programs for Dreissenid Mussels in the  
Western United States**

**Prepared for the:**

**Western Regional Panel on  
Aquatic Nuisance Species**

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**Version: September 2009**

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## **PREFACE**

While the primary goal of watercraft interception programs must be to prevent the transfer of quagga and zebra mussels (referred to here as Dreissenid mussels) on trailered watercraft/equipment in order to safeguard natural resources, water supply, recreation and other important resources, we believe one objective of any long-term mussel interception program should also be to keep public and private waters open to boating to the greatest extent possible. While it may only take one infested watercraft or piece of equipment to establish a Dreissenid mussel population, the vast majority of watercraft are not transporting mussels. By following common sense guidelines a watercraft interception program can be established that will readily identify high risk watercraft so that more restrictive strategies can be focused where they are the most critically needed.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possibly federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

This is a “living” document and will undoubtedly evolve as new information becomes available. We expect that the same process used for reconciliation and adoption of these protocols and standards will be employed to periodically update this document as new information becomes available (especially in regards to watercraft decontamination efficacy and new technologies).

### **I. BACKGROUND**

Following the discovery of quagga mussels in the western United States at Lake Mead in January 2007, and their subsequent detection in downstream Colorado River reservoirs and connected waterways of the Colorado River aqueduct systems in California and Arizona, many water and resource management agencies and organizations in the western U.S. initiated watercraft interception programs to prevent the further expansion of Dreissenid (quagga and zebra) mussels into local waterways. Most of the agencies and organizations employing these programs have relied on the 100<sup>th</sup> Meridian Initiative’s Watercraft Inspection Training (WIT)

program administered by the Pacific States Marine Fisheries Commission (PSMFC) for their initial training and for the development of policies, protocols and standards (<http://www.aquaticnuisance.org/wit>). As a result, there are similarities between many of the watercraft interception programs now being implemented in the western U.S. that are rooted in that initial training. However, variations in watercraft inspection programs exist due to the individual priorities, policies, authorities, responsibilities, budget and physical limitations of each implementing entity.

The Western Regional Panel (WRP) of the national Aquatic Nuisance Species Task Force (ANSTF), the Western States Boating Administrators Association (WSBAA), their member agencies and most organizations currently involved in watercraft interception programs in the West have recognized the need for better coordination and more consistency in the application of protocols and standards currently used to prevent the overland transport of Dreissenid mussels on trailered watercraft and equipment. To address this need, the WRP recently initiated a project to identify and assess the watercraft interception programs of all agencies or organizations that are either currently engaged in or planning to implement watercraft interception programs in 2009. A total of 72 programs employing some form of watercraft interception on about 300 waterbodies in 20 western states were identified through this effort (see **Attachment 1** for a complete list of those agencies and organizations).

Each of these agencies or organizations received an on-line survey in January 2009 designed to identify the key elements of each program and gauge support for developing uniform minimum protocols and standards. Of the 69 entities completing the survey (96% return), nearly 90% favored the development and implementation of more consistent protocols and standards for watercraft interception programs that could be applied across jurisdictional boundaries.

**DEFINITION:**

**Watercraft Interception Program** – Any program which seeks to prevent the spread of Dreissenid mussels and other aquatic nuisance species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

The adoption of region-wide uniform minimum protocols and standards for watercraft interception programs is considered essential by nearly all state, federal, tribal and local agencies and organizations involved in this effort. In May 2009,

the Western Regional Panel submitted a draft “Quagga/Zebra Mussel Action Plan” to the national Aquatic Nuisance Species Task Force. The draft plan’s objective is to underscore the highest priority actions and resources needed to minimize impacts of these invasive shellfish on native species, water delivery infrastructure, and other vulnerable resources in the West. One of the draft plan’s highest priority action items is the development of consistent equipment inspection and decontamination protocols.

**DEFINITION:**

**Clean** - Absent visible ANS or attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels

**Drained** - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water storage area of the watercraft, trailer, engine or equipment

**Dry** - No visible sign of standing water on or in the watercraft, trailer, engine or equipment

Consistent protocols and standards for watercraft interception programs across the western United States would benefit water and resource managers and the boating public in a number of important ways including:

1. Increased effectiveness by ensuring that all programs utilize the best practical science and technology available.
2. Establishing a high level of confidence in the effectiveness of their own programs and trust in the programs employed by others.
3. Reducing the amount of staff time and funding required of all programs by avoiding unnecessary duplication of effort while increasing effectiveness and public acceptance.
4. Making it easier for the boating public to understand, anticipate and comply with watercraft interception and prevention programs.

Not every federal, state and local agency or organization currently has the authority or resources to implement all of the minimum protocols and standards identified here. In those cases where that capacity is lacking, we urge those groups to seek the regulatory authority and resources necessary to stop, inspect, decontaminate, quarantine or exclude high risk watercraft in order to insure protection of the natural resource, economic, public health and cultural assets that are threatened by this invasion.

In the past two years, many states including Washington, Idaho, Montana, Utah, Colorado and California have approved new legislation granting broader authority to intercept watercraft and equipment in transit. In addition, federal agencies like the National Park Service and organizations like local water and park districts have passed regulations establishing that authority within their respective jurisdictions.

While the protocols and standards recommended in this document are directed at preventing the inadvertent transfer of quagga/zebra mussels from areas where they are currently present to unaffected waters on trailered watercraft and equipment, their application will help prevent the spread of other Aquatic Nuisance Species (ANS) as well. The screening, inspection, decontamination and quarantine/drying actions described here to reduce the risk of mussel transfer are also effective for reducing the risk of overland transport of invasive aquatic vegetation, fish, disease pathogens, plankton species and other ANS.

**IMPORTANT REMINDER, EDUCATION:**

While watercraft interception programs are an important public outreach and education vehicle, all agencies and organizations must also recognize the need to use other outreach strategies to make boaters more aware of the importance of preventing the spread of aquatic nuisance species such as zebra and quagga mussels and what role they can play in those prevention efforts. A watercraft interception program by itself is not sufficient to gain public involvement, support and cooperation. Public outreach and education should be the cornerstone of all state, federal and local mussel prevention programs.

## **II. APPROACH**

The protocols and standards recommended here are the products of:  
(Please refer to the References section on page 28):

1. An extensive research review
2. Results from a WRP survey of watercraft/equipment interception programs in the 20 western states completed in February 2009
3. A review of individual agency/organization policies, procedures and standards; and
4. The experience gained from more than 40 Watercraft Inspection and Decontamination trainings delivered to over 2,000 individuals representing 95 different agencies/organizations in 12 western states over the past two years, and the extensive contact network established through that (WIT) training program.

Protocols and standards have been identified for seven possible elements of watercraft interception programs:

1. Self-Inspection (Voluntary/Mandatory): A self-inspection program can be implemented alone or as an “off-hours” adjunct to a more direct and comprehensive interception program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.
2. Screening Interview: The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use for the subject watercraft or piece of equipment. This should be an element of every intervention program that includes individual contact.
3. Watercraft/Equipment Inspection: A close visual and tactile inspection of all or selected watercraft focused on all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

4. Decontamination: The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.
5. Quarantine/Drying Time: The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidity conditions.

**NOTE ON BALLAST TANKS:**

Areas that can maintain water or moisture for extended periods like ballast tanks and other hard to access and drain water storage areas do not dry sufficiently using the prescribed drying time standards referenced in this report. When ballast tanks or other inaccessible water storage areas are present, specific hot water treatment of these areas must be required for all high risk watercraft (See pages 18-20 for specific procedures to be followed).

6. Exclusion: Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, it is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.
7. Certification: A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, sticker, band, etc.). It is important to note that it is not possible to certify watercraft are “free of mussels,” only that the most current and effective protocols and standards have been applied to kill and remove all visible mussels and veligers.

Not all agencies and organizations currently implementing watercraft interception programs employ all of these elements. In fact, less than half of those surveyed employ four or more of these elements in their programs.

**DEFINITION:**

**High Risk Watercraft/Equipment** – Any vessel or piece of equipment that operates on or in the water that has been used in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

**NOTE:** Watercraft/equipment that have been moored or been in the water for several days or longer pose the highest level of risk for attached mussels, while all watercraft with on-board raw water systems present some elevated level of risk for veliger contamination regardless of the length of exposure. Generally speaking, the longer the period of exposure, the higher the risk.

### **III. Recommended Program Levels**

Many agencies and organizations do not have the capacity to implement state-of-the-art programs that include all possible watercraft interception elements. Funding limitations, lack of access control or authority, and/or the level of political understanding and will, all play a role in determining whether a water or resource management agency decides to become proactive enough to implement a watercraft interception program and how extensive that program will be. However, in those situations where the risk is high, the potential savings from preventing a mussel introduction far outweighs the cost of implementing even the most comprehensive interception program.

Because of funding/staffing or authority limitations, a number of western agencies and organizations employ only random, periodic or peak-time interception programs. These programs have obvious limitations so, it is vitally important that agencies and organizations implementing this type of program also complete risk assessments on all major waterbodies and use that information to direct those limited efforts to waters with the highest risk of contamination.

It is also important that, to the extent practical, these programs follow uniform minimum protocols and standards for all elements of their interception programs and consider adopting more inclusive, but cost-effective, programs like volunteer or mandatory self-inspection while seeking more public, political and financial support for expanded programs as the threat continues to increase with each new mussel discovery.

## **DETERMINING INDIVIDUAL WATERBODY RISK LEVEL:**

**High Risk Waterbody** – The determination of a “high risk waterbody” is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters (e.g., calcium) will support the survival, growth and reproduction of dreissenid mussels (these may vary within a given waterbody)

The amount and type of watercraft activity

Proximity to dreissenid positive or suspect waters

When the water in question is a headwater, water or power supply system or supports listed species (These waters warrant special consideration is warranted because the impacts of mussel contamination can have consequences far beyond local impacts).

It is the responsibility of water and resource managers to determine the level of acceptable risk and which type of watercraft interception program most closely reflects the mission and values of their agency or organization. However, consideration for the investments made by neighboring water and resource managers should not be overlooked when seeking support for interception programs. A common concern raised by survey recipients and WIT training program attendees is that up-stream or neighboring managers aren't doing enough to protect those systems, putting their investments and resources at risk.

We recommend the following three program levels for watercraft/equipment interception programs depending on the risk level and individual agency/organization capacity:

**Level 1 (Self-Inspection):** Relatively low cost program for low risk waters or on higher risk waters where organization or physical capacity prevents a more aggressive approach.

As an example, we recommend either a voluntary or mandatory self-inspection program similar to the one developed by the Utah Division of Wildlife Resources and in use at over 100 secondary risk waters in that state. Mandatory programs work best if the authority to enforce provisions of the program (e.g., authority to require that all watercraft operators complete and post self-certification form) are

in place. In the absence of that authority, a voluntary program should be implemented.

This type of program involves the dissemination of an inspection form which can be made available at either an entry station, kiosk or message board with boldly printed instructions for the watercraft/equipment operator to answer all the questions and inspect all designated areas and equipment. The form is then placed in or on the transport vehicle where it can be easily seen. See **Attachment 2** for the form used by the Utah Division of Wildlife. If the program is mandatory, spot checks by enforcement personnel can reinforce compliance.

Self-inspection programs can be implemented for under \$1,000/year in most areas and for under \$25,000/year for an entire state. Including staff time for verifying and/or enforcing compliance can add to both effectiveness and cost.

**Level 2 (Screening out high risk watercraft and equipment):** Moderate to high risk waters where budget or other issues prevent a more comprehensive (Level 3) program.

We recommend a program that includes a screening interview to identify high risk watercraft and/or equipment, an inspection to verify interview information and exclusion of any watercraft/equipment that remain high risk following screening and inspection.

This type of program can often be incorporated into an existing entry station operation that is set-up to collect access fees, confirm reservations or provide use information and regulations. Current entry station staff can be easily trained to conduct verifying inspections and the number of watercraft excluded would normally be expected to be low on waters where this type of program would be implemented. Because a rigorous inspection is not required and no decontamination or quarantine facilities are required, this is a relatively low cost option for some agencies/organizations.

Programs like this typically cost between \$5,000 and \$50,000 a year to operate per water body and are a relatively low cost option.

**NOTE ON LEVEL 1 AND LEVEL 2 PROGRAMS:**

Level 1 and Level 2 programs are options for local jurisdictions when the capacity to implement more aggressive and effective programs is lacking. These programs, however, do not provide the level of security required for any type of cross-jurisdictional reciprocity because they do not offer any assurance that watercraft and/or equipment subjected to either type of program are, to the extent practical, free of mussels or other ANS.

**Level 3 (Comprehensive):** High risk waters and wherever possible.

We recommend this type of program for all high risk waters. A Level 3 program should include screening interviews at the point of entry; a comprehensive watercraft/equipment inspection performed by trained inspectors of all high risk watercraft/equipment; the decontamination and/or quarantine or exclusion of suspect watercraft, and may include vessel certification.

This type of program may require construction or modification of entry facilities, purchase of a hot water powerwash and wastewater containment system, hiring trained inspectors and decontamination operators and provision of a quarantine facility, along with a set of policies and rules that allow all of the above actions. Programs like this can cost between \$50,000 and \$250,000 per waterbody per season to operate depending on the size of water involved, type of equipment and facilities used, hours of operation and the number of access points.

#### **IV. Uniform Minimum Protocols and Standards**

The term “**Uniform Minimum Protocols and Standards**” implies that all agencies/organizations should strongly consider adoption of these as integral components of their Watercraft Interception Program. **However, because each entity is unique; having different missions, authority, resources, facilities and governing bodies, it is understood that additional or stricter standards may be implemented and that cross-jurisdictional reciprocity should be left to the discretion of the implementing agency/organization.**

**DECONTAMINATION SAFETY ADVISORY:**

Extreme caution should always be used when working in and around watercraft and equipment. This is particularly true when working with some of the high pressure equipment and the high water temperatures recommended here.

These protocols and standards reflect the best currently available science, technology and understanding. However, we recognize that watercraft interception and decontamination is a rapidly evolving field and that new information may change the way we view watercraft interception and decontamination in the future. There are at least two research projects currently in the planning stages that we expect will provide a better understanding of the effectiveness of current technology and the viability of alternative decontamination strategies.

**We recommend the following Uniform Minimum Protocols and Standards for watercraft interception programs in the western United States:**

**IVa. Self-Inspection (Mandatory or Voluntary)**

**Self-inspection programs, whether voluntary or mandatory, offer a limited level of protection because compliance and effectiveness are not guaranteed.** However, self-inspection programs are very effective boater education tools, provide some level of protection for waters where implemented, and are cost-effective. If a higher level of protection is not available because of insufficient funding, physical site limitations, lack of intervention authority or the sheer volume of waters needing coverage, the type of program currently implemented by the Utah Division of Wildlife Resources on approximately 100 of their secondary risk waters should be considered as a **minimal** interception tool or “off-hours” adjunct to a more comprehensive program.

Protocols:

1. Provide a self-inspection form and clear directions on how to complete the inspection and form at the point of entry, kiosk or dedicated check-in area.

2. Require (where a law/rule is in place) or request (when rules are not established) that the form be completed, signed, and posted in clear view on the watercraft/equipment transport vehicle prior to launching.

Standards:

Before launching, boaters must confirm that the following conditions have been met by signing and displaying a completed self-inspection form.

1. Watercraft, equipment, trailer have not been in any water known or suspected of having quagga/zebra mussels in the past 30 days.
2. Watercraft, equipment, trailer are cleaned, and to the extent practical, drained and dried.
3. Watercraft, equipment, trailer have been visually inspected at the site prior to launching.

#### **IVb. Screening Interviews**

The screening interview [see **Attachment 3** for an example of a screening interview/boater use survey form from Crowley Lake Fish Camp – Los Angeles Department of Water & Power] involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk posed by that watercraft based on its recent history of use. This should be an element of every intervention program where personal contact with the watercraft/equipment operator is made.

In order to be most effective, the screening interview should not rely totally on the responses given, but the person conducting the interview should be attentive enough to make sure that the responses given match the physical evidence available and are credible.

Protocols:

1. Develop and use a standard screening interview form that, at a minimum, includes the following questions:
  - The home location of the owner/operator

- The specific location (waterbody) where the watercraft or equipment was last used
  - The date of the last use
  - If the watercraft/equipment has been cleaned, drained and dried
2. Verify the responses by checking the license plate or registration (boat ID) number and doing a quick visual inspection and clarify any inconsistencies between the responses given and the physical evidence before clearing the watercraft or equipment for launch.
  3. The screening interview provides all agencies and organizations implementing interception programs the opportunity to explain the importance of prevention and to educate the boating public on ways they can take personal responsibility for “clean” boating.

Standards:

1. Watercraft that have been used in any Dreissenid mussel positive or suspect waterbody in the past 30 days should be subjected to a comprehensive inspection by a trained professional before being allowed to launch.
2. If there is reasonable suspicion of deception on the part of the owner/operator/transporter during the screening interview, the vessel shall be subjected to a comprehensive inspection before being permitted to launch.

### **IVc. Watercraft/Equipment Inspection**

Inspecting watercraft and equipment for the presence or likelihood of Dreissenid mussels is perhaps the most important and difficult element of a successful interception program. Conducting an effective inspection requires some knowledge of Dreissenid mussel identification, life history and biology, a good understanding of the working parts of a watercraft and the cooperation of the boat/equipment operator. In addition, watercraft and equipment inspection needs to be systematic and thorough. A checklist should always be used when conducting a watercraft or equipment inspection in order to assure that all areas where mussels and veligers can be found are inspected.

A basic watercraft inspection and decontamination course, like the Level One course offered by the Pacific States Marine Fisheries Commission and certified by

the 100<sup>th</sup> Meridian Initiative (<http://www.aquaticnuisance.org/wit>) is highly recommended for anyone who will be directly involved in watercraft inspection. An advanced training (Level Two) should be taken by at least one agency/organization representative engaged in or planning to become engaged in watercraft interception. The 100<sup>th</sup> Meridian Initiative Level Two training comes with the tools and resources necessary to become an in-house Level One trainer.

The authority to stop, inspect, decontaminate and/or quarantine watercraft or equipment varies between jurisdictions. Make sure you understand the authority you have in your jurisdiction and exercise it according to the law with regard to search and seizure.

Protocols:

1. Use an inspection checklist and follow it. The inspection checklist should include (at a minimum) the following information (See **Attachment 4** for the inspection form used by the Colorado State Parks):

- The home state or area code where the watercraft or equipment is registered
- The vessel ID number
- The name and date of the last water visited
- A checklist of areas to be inspected, including all of the following:

Exterior Surfaces: (at and below the waterline)

Hull, transducer, speed indicator, through-hull fittings, trim tabs, water intakes, zincs, centerboard box and keel (sailboats), foot-wells (PWCs)

Propulsion System:

Lower unit, cavitation plate, cooling system intake, prop and prop shaft, bolt heads, gimbal area, engine housing, jet intake, paddles and oars

Interior Area:

Bait and live wells, storage areas, splash wells under floorboards, bilge areas, water lines, ballast tanks, drain plug

Equipment:

Anchor, anchor and mooring lines, PFD's, swim platform, wetsuits and dive gear, inflatables, down-riggers and planing boards, water skis, wake boards and ropes, ice chests, fishing gear, bait buckets, stringers

Trailer:

Rollers and bunks, light brackets, cross-members, license plate bracket, fenders

2. Inspect all high risk watercraft (See definition on page 8).
3. Have a systematic plan when conducting inspections to ensure complete coverage of every area of the watercraft.
4. Use the opportunity to educate the boat owner/operator on the importance of pre-launch self-inspection, proper cleaning and drying and the reasons why all watercraft and equipment operators need to clean, drain and dry watercraft and equipment when moving between waters.

Standards:

1. If attached mussels or standing/trapped water are found on a high risk vessel, it should not be allowed to launch without first being decontaminated or subjected to the prescribed quarantined/drying time standard or both.
2. If water is found on exposed areas only (rain or wash-water), on an otherwise low risk and clean watercraft, the watercraft should be thoroughly wiped dry first, but allowed to launch.
3. If no mussels or water are found following a thorough inspection of the watercraft that is considered high risk because it has been in known mussel waters within the last 30 days, but has been out of the water long enough to be considered safe by applying drying time standards, it should be allowed to launch, **except for watercraft that have ballast tanks or other difficult to access and completely drain water storage areas. Normal drying time standards do not apply when areas that cannot be completely drained are present. These areas need to be treated to kill any mussels or veligers that are present.**

4. Any watercraft or piece of equipment with attached vegetation (including algae growth) should not be allowed to launch without their complete removal and re-inspection, if necessary.

**NOTE ON LIVE BAIT FISH:**

If the use of live bait fish is permitted in your jurisdiction and they are found during inspection, remove the bait, place in a bucket of clean water, drain and flush the live bait container with hot water and then return the bait to the clean container (while this system does not assure that mussel veligers or even small settlers are not present on the fish themselves, it is the best “minimum” standard for dealing with this situation currently available).

#### **IVd. Watercraft/Equipment Decontamination**

If, following inspection, a watercraft or piece of equipment transported from one waterbody to another is confirmed or believed to have mussels on board, three options are available: 1) decontamination, 2) quarantine/drying, 3) exclusion. Decontamination is the only option that kills and removes mussels. Since we cannot be sure that all areas of the watercraft and/or equipment have been adequately treated, we recommend that a period of drying (using the 100<sup>th</sup> Meridian Initiative quarantine time calculator or the table on page 23) be used in conjunction with decontamination for all watercraft confirmed or suspected of having mussels on board.

There are a number of ways to decontaminate watercraft, but with the current technology available, we recommend the exclusive use of hot water (140 degrees Fahrenheit or greater at the point of contact) and pressure washing equipment with various attachments to kill and remove all visible mussels (live and dead) and veligers from all areas of the watercraft, engine, trailer, and equipment. [Note: Even though concerns have been raised about the efficacy and safety of hot water pressure washing (Morse 2009), the reality is that many programs throughout the West have already invested in these systems and it will continue to be a primary management tool for at least the near term. Other methods to decontaminate watercraft are currently not available nor produced on a large enough scale to be economically feasible. We do not believe that relying solely on aerial exposure and desiccation as the primary means of decontamination is feasible given the thousands of watercraft that are moving around the west on a daily basis.

Desiccation also will not remove dead mussels (see below). However, we do encourage and support the combination of drying time and hot water decontamination as the most effective means to assure that all mussels are killed, and to the extent practical, all visible mussels are removed.]

The objective of decontamination is to KILL and REMOVE, to the extent practical, all visible mussels. Killing prevents establishment of new populations as a result of watercraft/equipment transfer, but, removing them is also important because a false positive finding may result from the presence of mussel shells (or DNA in samples collected for genetic (polymerase chain reaction {PCR}) analysis, even though they are dead. This can result in unnecessary concern and expensive action if unexplained shells drop or are scrapped-off the hull and are subsequently discovered at a boat ramp or the lake bottom, or if a watercraft is intercepted in transit. Furthermore, there are no standard protocols in place to easily confirm the viability of attached mussels within the context of a watercraft inspection or decontamination. Therefore, mussels on watercraft or equipment that appear to be dead do not necessarily indicate that those mussels, or others not clearly visible settled elsewhere, are in fact dead.

#### Protocols:

1. Before commencing a decontamination procedure, get the permission of the vessel owner after explaining the options and process in detail.
2. Find a location for the decontamination that is away from the water where the run-off and solids from the cleaning process can be contained and will not re-enter any waterbody.
3. If possible, wastewater and solids should be totally contained (low-cost containment systems now exist for this purpose) and directed to an appropriate waste treatment or disposal facility (new guidelines are currently being developed by the EPA for this application).

#### Standards:

1. Use 140 degree Fahrenheit or hotter water (at the point of contact) to kill mussels and veligers. Water loses approximately 15-20 degrees F per foot of distance when sprayed from a power nozzle, so initial temperature should be increased to account for this heat loss to the point of contact.

2. When using a hot water flushing attachment and/or pressure washer to kill and remove attached mussels from the surface of watercraft/equipment, allow **at least** 10 seconds to elapse from the leading edge of the spray to the tailing edge when moving the wand across the surface to maintain sufficient “lethal” contact time. If larger mussels are present, it may require more time to remove them from the surface.

**NOTE ON “HIDDEN” MUSSELS:**

It is not normally possible to remove all attached mussels from every area of the watercraft/equipment. The standard is to remove all “visible” mussels. A day or two following a very thorough decontamination, it is not unusual for mussels to appear as byssal threads begin to decompose and mussels slide out of hidden areas to become visible. In addition there are some areas of almost any watercraft or piece of equipment that cannot be easily accessed to remove dead mussels. If properly treated, these mussels are dead and in the process of decay. Brushes may be used in conjunction with flushing in some of these areas when doing the initial decontamination to reduce (not eliminate) this from occurring.

3. Use a power wash unit capable of spraying at least 4 gallons/minute with a nozzle pressure of 3,000 psi or greater (not to exceed 3,500 psi) to remove attached visible mussels from all exposed surfaces of the watercraft, piece of equipment, trailer and engine.
4. Use a flushing attachment to rinse all hard to reach areas and those areas where pressure may damage the watercraft or equipment (such as the rubber-boot in the gimbal area). A brush may also be used in conjunction with flushing to remove more mussels from hard to access areas.
5. When flushing hard to reach and sensitive areas, maintain a contact time of 60 seconds to assure that mussels receiving only indirect contact are killed since it may not be possible to remove them from these areas.
6. First drain and then use a flushing attachment and 140 degree water to flush the live well, bait well, storage compartments, bilge areas, ballast tanks, bladders, gear and equipment to kill any mussels and veligers that might be present.

7. Use appropriate attachment connected to the powerwash unit or other hot water source, start the engine and run for 1-2 minutes to kill mussels in the engine cooling system.

#### **WARNING ON ENGINE COOLING SYSTEMS:**

Marine engine cooling system pumps and engines are not designed to operate at less than seven gallons per minute (gpm) over an extended period, and most current power wash units are not designed to deliver more than five gpm. Therefore, when using a power wash unit for this purpose, it is important to limit run-time to **one to two minutes** to avoid any possible engine/pump damage. No such limitation exists if an outboard is “tank run” in hot water without the use of a power wash unit.

There must be enough volume to properly supply an engine’s cooling system in order to keep them from overheating. Five gpm will suffice as long as the engine is idling. In all cases, the operator must watch the temperature gauge during the flushing process. The person who is doing the decontamination should monitor the water being discharged from the engine with a handheld temperature gauge to make sure that the discharge temperature is at least 140°F. Volume is critical as is constant temperature monitoring.

#### **IVe. Quarantine or Drying Time**

If watercraft and/or equipment suspected of carrying zebra or quagga mussels cannot be decontaminated for any reason, then they must be held out of water for a period of time to dry-out and kill all mussels and veligers on-board through desiccation. The amount of time required to achieve complete desiccation varies depending on temperature and relative humidity and can range from 3-30 days (McMahon, Personal Communication).

Quarantine/drying is probably the most effective way to assure that live mussels are not transported between waterbodies on trailered watercraft or equipment. The problem with quarantine/drying is that it does not remove attached mussels. If mussels remain on the vessel, they will eventually drop off. If that occurs at a boat ramp or beach, the presence of mussel shells can raise concern of a new infestation, triggering alarm and resulting in expensive and unnecessary action. For that reason, we recommend that all visible mussels be removed from quarantined/dried watercraft before they are allowed to launch.

### **NOTE ON TREATING BALLAST TANKS:**

Remember, drying time does not apply in the same way to watercraft with ballast tanks or other water storage areas that are not easily accessed and cannot be completely drained. If these areas maintain water, then the actual time required to achieve 100% mortality either through desiccation or anoxia will most likely exceed the drying time standards recommended here. In those cases, after draining, remaining water should be treated with hot water. Some ballast system manufactures have indicated that their pumps and/or other system components are designed for temperatures of no more than 130 degrees. For that reason, we recommend treating these areas last after reducing the water temperature and flooding the area with 120-130 degree hot water. Since these areas typically contain only small volumes of un-drained water, the dilution rate and resulting temperature drop should not prevent lethal treatment temperatures from reaching any living mussels or veligers. To maintain lethal temperatures for a long enough time to achieve 100% mortality it is important to pump water through the area for at least one to two minutes and monitor the exiting water temperature with a handheld temperature gauge.

The 100<sup>th</sup> Meridian Initiative has developed a quarantine time calculator based on research performed by Dr. Robert McMahon and others at the University of Texas, Arlington. That calculator is available on the organization's website, <http://www.100thmeridian.org>. When practical, we recommend using this standard for determining the length of quarantine or drying time (except when ballast tanks or other inaccessible raw water storage systems are involved) needed to assure that a watercraft or piece of equipment is safe to launch. When this level of precision is not practical for field operation, a second standard is also recommended below.

#### Protocols:

1. Requiring quarantine, drying time or a waiting period should be applied to watercraft and equipment that meet the definition of high risk; either in lieu of decontamination or in addition to decontamination as an “insurance policy.”

2. Implementation of this option can take several forms.

- Physically quarantining a watercraft or piece of equipment requires providing a safe and secure holding area where they can be “parked” for the amount of time required to kill all mussels on-board. A few agencies/organizations have used this option to take or over-see possession of suspect watercraft (with or without the owner’s permission, depending on individual jurisdiction authority) until they remain out of the water long enough to be considered safe. Establishing and maintaining a dedicated quarantine facility can be expensive and comes with some potential liability issues.
- When a quarantine facility is not available, then quarantine/drying time can be achieved by banding (secured connection between watercraft and trailer) the watercraft or equipment. The operator is advised not to launch into any freshwater area until the date indicated on the “band” or an accompanying paper certificate ( (this form of quarantine does not require a holding facility).
- The final option is simply to require that all high risk watercraft serve a pre-determined drying/waiting period prior to launch (duration determined by risk level and current temperature and humidity conditions).

3. All visible mussels should be removed from watercraft or equipment following quarantine or drying period before being allowed to launch.

Standards:

1. Where practical, the 100<sup>th</sup> Meridian Initiative quarantine time “calculator” should be used to determine the length of quarantine/drying time required (provides the greatest precision but limited availability and predictability for boaters).
2. When the use of the “calculator” is not practical, the standards below should be applied to determine the length of the quarantine/drying time required (Note: information provided in the following table was developed in cooperation with Dr. Robert McMahon, University of Texas, Arlington).

3. Watercraft with ballast or other internal water storage tanks that cannot be completely drained should be treated differently (See page 21).

<u>Maximum daily temperature</u> Degrees Fahrenheit	<u>Minimum days out of water</u>
< 30	3
30- 40	28
40-60	21
60-80	14
80-100	7
>100	3

**NOTE:** Add 7 days for temperatures ranging from 30-100 degrees if relative humidity exceeds 50%

#### **IVf. Watercraft/Equipment Exclusion**

High risk watercraft which are not decontaminated and/or quarantined should be excluded and not allowed to launch; whether the result of vessel owner refusal, or lack of available equipment, trained applicators or facilities. Exclusion should not be used as a long-term substitute for development of a more user-friendly interception program that recognizes the value of recreational boating to the economy, and the legitimate interests of the boating public.

In the two years since Dreissenid mussels were first found in the western U.S., many agencies and organizations responsible for water and recreation management have resorted to the use of exclusion to protect those resources from the mussel threat. The case for doing so is certainly understandable given the lag time needed to develop public policy, establish regulations, budget, train staff and purchase equipment needed for more proactive and considerate approaches.

Protocols:

1. High risk watercraft and equipment (see earlier definition, page 8) that have not been or can not be decontaminated or meet the quarantined/drying time standard should be excluded from launching.

2. The information obtained from the screening interview, used to determine risk level, should be shared with the watercraft owner/operator and made available on a real-time basis at all access points to prevent excluded watercraft/equipment from attempting to launch from any other access.

**NOTE ON WATERCRAFT TRACKING:**

A watercraft tracking software program (QID) has been developed by Quagga Inspection Services (see their website, [www.info@quaggainspections.com](mailto:www.info@quaggainspections.com) for more information). This system is available for subscription and allows watercraft to be tracked across time and space using boater registration ID numbers and hand-held computer/cell phone technology. It can be used to prevent watercraft that have been excluded for cause from being launched at another access point within the system or for a number of other related applications. *Note: Providing information in this document on the QID does not constitute an endorsement as we have no firsthand experience with this system.*

**Standards:**

1. Watercraft or equipment that are coming from known zebra/quagga mussel areas in the last 30 days that have not been decontaminated and/or been out of the water for the required time (based on temperature and humidity conditions by either the quarantine time calculator or alternative method recommended here) should be decontaminated if approved facilities are available; placed in self or on-site quarantine for the required time frame; or excluded.
2. Watercraft that are not clean (having attached vegetation, debris or surface deposits that can mask the presence of small mussels), drained (no visible water in any live well, bait well, bilge area, engine compartment, floor or cooler) and dry (no standing water in boat, equipment, trailer, engine) should be decontaminated and/or quarantined or excluded.

**IVg. Watercraft Certification/Banding**

A number of boating and water management agencies and organizations currently offer some form of certification for watercraft or equipment that have passed inspection, been decontaminated or have remained out of the water long enough to satisfy quarantine/drying time standards. Certification of this type helps the

operator avoid repeated time delays upon reentry and makes it easier for the management agency/organization by reducing work load, processing time and by allowing them to concentrate limited resources on higher risk watercraft. Some groups currently offer a sticker or paper certificate, however, since there is no way to determine where that watercraft or equipment has been between interceptions, this form of certification offers little benefit. Some agencies/organizations (*e.g.*, the States of Idaho, Colorado and several water management agencies in California) have addressed this short-coming by applying “bands” that connect the watercraft/equipment to the trailer so that it cannot be used between interceptions without detection. In some cases, a written certificate is issued with banding.

If agencies and organizations choose to offer certification, we recommend that the watercraft/equipment be banded in such a manner that it can not be launched between interceptions without detection. If banding is coordinated between jurisdictions, further action can be expedited (at the discretion of the implementing agency/organization) at the next launch site anywhere in the western US so long as the tag remains intact. Such a system will reduce the amount of staff and equipment time required at interception facilities region-wide; increasing resource protection, saving money, reducing waiting time and crowding and lowering the frustration level of staff and the boating public.

#### Protocols:

In order to implement a region-wide program that may be acceptable to most agencies and organizations in the western U.S., three conditions should be met:

1. The agency/organization placing the tag/band must implement all Uniform Minimum Protocols and Standards to insure that the best practical science and technology has been employed in certifying the watercraft or equipment.
2. All agencies and organizations participating in this certification program should use a banding system that attaches the watercraft to the trailer that can not be tampered with or removed without detection. The certification is no longer valid if the band has been tampered with, severed or removed.
3. While a variety of different “band” styles and materials may continue to be used, all tags should have the following features: This information can either be incorporated into the band (which may be difficult) or be provided on an accompanying paper receipt or certificate.

- The name and contact telephone number of the agency/organization applying the tag.
- Some way to indicate the basis for certification as one of the following three categories; inspection, decontamination or quarantine (several options are available including color coding, pre-printed number or letter coding or coding applied at the time of issue).
- The banding date should be indicated on the tag (leaving a blank space for writing in the date of issue with indelible ink on the band or providing a dated “paper” certificate in addition to the banding appear to be the most practical options for this).

Standards:

1. Only watercraft or equipment that have passed inspection or have been decontaminated or quarantined in accordance with all of the Uniform Minimum Protocols and Standards as adopted, should receive certification banding.
2. Certification banding should only be applied by a trained inspector.
3. Watercraft and equipment that have been certified and banded by an agency or organization utilizing these Uniform Minimum Protocols and Standards may receive expedited processing at the discretion of the receiving agency/organization.

## **V. ADOPTION OPTIONS**

After a thorough review and reconciliation process, we recommend that the WRP and other entities (potentially the Western State Boating Administrators Association (WSBAA), the Western Association of Fish and Wildlife Agencies {WAFWA}) and others, adopt and broadly promulgate these protocols and standards for watercraft interception programs in the Western United States.

Following that, a decision needs to be made whether or not to actively or passively pursue adoption of watercraft interception protocols and standards by individual agencies and organizations currently implementing or expected to initiate watercraft interception programs in the near future. We see two reasonable approaches.

If the principles choose the active option, one process may be to appoint an oversight committee of members (from the WRP, and other interested organizations {e.g., WSBAA, WAFWA}) to use contacts developed through the Watercraft Inspection and Decontamination Training Program and the WRP Watercraft Interception Program Assessment to facilitate a process that engages these groups with the goal of refining and agreeing to a regional approach. We believe this would involve regional meetings with groups, negotiation, reconciliation between groups and development of a formal process (potentially through a Memorandum of Agreement between states/jurisdictions) for adoption prior to the 2010 boating season.

A second option could be to formally adopt and promulgate the protocols and standards as a “best practices manual” and encourage their use by all agencies/organizations without the commitment of resources to more actively engage these groups in a dialogue; relying instead on their voluntary adoption and interagency agreements. For example, the State of Idaho has agreed to accept watercraft from Colorado that have been inspected and banded.

We realize the inherent difficulty in implementing a regionally consistent watercraft interception program. Adding to the challenge is that numerous programs are already in place, while others are in the early planning or implementation stages. In some instances, changes to regulations at the local, state and possible federal level may be necessary to implement a comprehensive multijurisdictional program. We therefore encourage continued discussion of ideas and cooperation amongst agencies on this issue and realize that this document is one piece for consideration in tackling a complex issue.

## **VI. References**

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<http://www.aquaticnuisance.org/wit>

### **Personal Communications:**

1. Kerry Smith and Jim Foust. Hydro Engineering. Salt Lake City, Utah.
2. Dr. David Britton. USFWS, Arlington, Texas.
3. Dr. Robert McMahon. University of Texas, Arlington.
4. Wen Baldwin. Lake Mead Boat Owners Association, Boulder City, Nevada.
5. Larry Dalton. Utah Division of Wildlife Resources, Salt Lake City, Utah.
6. Sergeant Eric Anderson and Allen Pleus. Washington Department of Fish and Wildlife, Olympia, Washington.
7. Rob Billerbeck and Gene Seagle, Colorado State Parks, Denver, Colorado.

8. Dominique Norton and Breck McAlexander, California Department of Fish and Game, Sacramento, California.
9. Tom McMahon and Kevin Bergersen, Arizona Game and Fish Department, Phoenix, Arizona.
10. Marshall Pike and Sean Senti, Quagga Inspection Services
11. Stephen Wickstrum, General Manager, Casitas Municipal Water District, Oak View, CA.
12. Scott Smith, United States Geological Service, Seattle, Washington.
13. Paul Heimowitz, United States Fish and Wildlife Service, Portland, Oregon.
14. Ken Kreif, Lake Kahola Zebra Mussel Committee, Kansas.

**Watercraft interception program details and manuals were used as references in this document from the following:**

1. Arizona Game and Fish Department. Decontamination Procedures – Day Users and Long Term Use & Moored Boats. Phoenix, Arizona.
2. California Department of Fish and Game. 2008. A Guide to Cleaning Boats and Preventing Mussel Damage. Sacramento, California. 20 pp.
3. Casitas Municipal Water District. 2007. Lake Casitas Recreation Area Invasive Species Contamination Threat. Information, Training & Guidelines for Protection of Water Quality. Ventura, California. 33 pp.
4. Colorado Division of Wildlife. 2009. Aquatic Nuisance Species (ANS) Watercraft Inspection Handbook, Official State of Colorado Watercraft Inspection and Decontamination Procedures. Denver, Colorado. 48 pp.
5. Colorado State Parks. 2008. Colorado State Parks Aquatic Nuisance Species (ANS) Inspection and Education Handbook, Version 2. Denver, Colorado. 107 pp.

6. East Bay Municipal Utility District. 2009. Quagga/Zebra Mussel Prevention Program. Oakland, California. 7 pp.  
[http://ebmud.com/services/recreation/quaggazebra\\_mussel.htm](http://ebmud.com/services/recreation/quaggazebra_mussel.htm)
7. Kahola Homeowners Association. 2009. Zebra Mussels Information for Kahola. Emporia, Kansas. [http://www.kahola.org/zebra\\_mussels\\_info.htm](http://www.kahola.org/zebra_mussels_info.htm)
8. Los Angeles Department of Water & Power and Crowley Lake Fish Camp. Date Unknown. Crowley Lake – Boat Use Survey and Vessel Inspection Certification Form. Los Angeles, California.
9. Metropolitan Water District of Southern California. 2008. Watercraft and Equipment Inspection and Cleaning Procedures for Diamond Valley Lake and Lake Skinner (Draft). Los Angeles, California. 18 pp.
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14. Ruth Lake Community Service District. 2009. Watercraft Inspection and Banding Procedures Instructions for Inspectors. Mad River, California. 9 pp.
15. Tahoe Resource Conservation District. Date Unknown. Screening Process for Aquatic Invasive Species and Lake Tahoe Aquatic Invasive Species Watercraft Inspection Form. South Lake Tahoe, California. 3 pp.

16. Utah Division of Wildlife Resources. 2009. How to Decontaminate Your Boat and Mussel-Free Certification. Salt Lake City, Utah.  
<http://wildlife.utah.gov/mussels/decontaminate.php>
17. Utah Division of Wildlife Resources. Date Unknown. Requirements to Prevent the Spread of Aquatic Invasive Species (Self Certification Form for Watercraft Owners). Salt Lake City, Utah.
18. Washington Department of Fish and Wildlife, Fish and Wildlife Enforcement. 2009. Invasive Species Vessel Inspection Form. Olympia, Washington.
19. Whiskeytown National Recreation Area. Date Unknown. Quagga and Zebra Mussel-Free Certification. Whiskeytown, California. 3 pp.

## **VII. Glossary of Terms**

**Certification** - A process whereby watercraft/equipment are determined to present minimal risk based on inspection, decontamination or quarantine/drying time and receive some visible form of certification of that fact (e.g., trailer tag, band, etc.). It is important to note that is not possible to certify watercraft are “free of mussels”, only that the most currently available and effective protocols and standards have been applied to kill and remove all visible mussels.

**Clean** - Absent visible ANS, attached vegetation, dirt, debris or surface deposits including mussel shells or residue on the watercraft, trailer, outdrive or equipment that could mask the presence of attached mussels.

**Drained** - To the extent practical, all water drained from any live-well, bait-well, storage compartment, bilge area, engine compartment, floor, ballast tank, water storage and delivery system, cooler or other water area of the watercraft, trailer, engine or equipment.

**Dry** - No visible sign of standing water on or in the watercraft, trailer, engine or equipment.

**Decontamination** - The process of killing and removing all visible mussels and, to the extent practical, killing all veligers and remaining mussels from every area of watercraft, trailer and equipment.

**Exclusion** - Not allowing watercraft or equipment to be launched. In extreme cases, exclusion can be applied to all watercraft, but in most cases, is applied to only watercraft and equipment that are considered to be high risk, when other options are not available.

**High Risk Waterbody** - The determination of “high risk waterbody” is the prerogative of the responsible management entity. Some of the factors used to determine risk potential include:

Whether water quality parameters will support the survival, growth and reproduction of dreissenid mussels

The amount and type of boater use

Proximity to dreissenid positive or suspect waters

Whether the water in question is a headwater, water or power supply system or supports listed species

**High Risk Watercraft/Equipment** - Any vessel or piece of equipment that has operated on or in any waterbody known or suspected of having zebra or quagga mussels in the past 30 days, or any watercraft or equipment that is not clean, and to the extent practical, drained and dry.

**Screening Interview** - The screening interview involves asking the vessel operator a series of questions prior to launching or entry that are designed to determine the level of risk based on the recent history of use. This should be an element of every intervention program that includes individual contact.

**Quarantine/Drying Time** - The amount of time out of the water required to assure that all mussels and veligers are killed through desiccation. This time requirement varies widely depending on temperature and humidity conditions.

**Self-Inspection (Voluntary/Mandatory)** - A self-inspection program can be implemented alone or as an “off-hours” adjunct to a more direct and comprehensive inspection program. This type of program involves requiring (mandatory) or requesting (voluntary) the cooperation of individual watercraft operators to complete an inspection of their vessel prior to launching by following a set of instructions and completing a checklist provided at an entry station or kiosk.

**Watercraft/Equipment Inspection** - Where all or selected watercraft are subjected to a thorough visual and tactile inspection of all exterior and interior surfaces, areas of standing/trapped water, trailer and equipment to determine the presence or likelihood of mussel contamination.

**Watercraft Interception Program** - Any program which seeks to prevent the spread of Dreissenid mussels and other Aquatic Nuisance Species (ANS) on trailered watercraft or equipment by requiring that they be cleaned, and to the extent practical, drained and dried prior to launching.

## **Attachment 1: List of Agencies and Organizations Implementing Watercraft Interception Programs in the Western United States.**

### **Alaska:**

#### Statewide

Jeff Heys, Alaska Region ANS Coordinator, Acting  
US Fish and Wildlife Service  
Anchorage Fish and Wildlife Field Office  
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Anchorage, AK 99501  
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[jeffrey\\_heys@fws.gov](mailto:jeffrey_heys@fws.gov)

Tammy Davis, Invasive Species Program, Project Leader  
Alaska Department of Fish and Game  
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Juneau, AK 99811  
907-465-6183  
[tammy.davis@alaska.gov](mailto:tammy.davis@alaska.gov)

### **Arizona:**

#### Statewide

Tom McMahon, Invasive Species Coordinator  
Arizona Game and Fish Department  
5000 West Carefree Highway  
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623-236-7271  
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### **California:**

#### Statewide

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California Department of Fish and Game  
1416 Ninth Street, 12<sup>th</sup> Floor  
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Dominique Norton, Staff Services Analyst  
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Sacramento, CA 95814  
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[dnorton@dfg.ca.gov](mailto:dnorton@dfg.ca.gov)

Border Inspection Stations

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California Department of Food and Agriculture  
1220 N Street, Room A-372  
Sacramento, CA 95814  
916-654-0312  
[gleslie@cdfa.ca.gov](mailto:gleslie@cdfa.ca.gov)

Anderson Reservoir, Calero R, Coyote R, Stevens Creek R, Contra Loma R, Vail Lake, Diamond Valley L, Metcalf Pond, Lexington R

Sean Senti, Marketing/Training Coordinator  
Quagga Inspection Services  
5757-A Sonoma Drive  
Pleasanton, CA 94566  
925-997-2403  
[ssenti@calparksco.com](mailto:ssenti@calparksco.com)

Robert Mitchell, Invasives Detection Manager  
Urban Park Concessionaires/Quagga Inspection Services  
298 Garden Hill Drive  
Los Gatos, CA 95032  
530-526-8645  
[mitchell@calparksco.com](mailto:mitchell@calparksco.com)

Clear Lake, Lake Pillsbury, Indian Valley Reservoir, Highland Springs R, Cache Creek R

Pamela Francis, Deputy Director  
Lake County Department of Public Works  
Water Resources Division  
255 North Forbs Street  
Lakeport, CA 95453  
707-263-2341  
[pamelaf@co.lake.ca.us](mailto:pamelaf@co.lake.ca.us)

Whiskey Town Lake

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National Park Service  
Whiskeytown NRA  
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Ruth Lake

Tom Felt, Manager  
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P.O. Box 31  
Mad River,, CA 95552  
707-574-6332  
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Tahoe Basin/Lake Tahoe

Nicole Cartwright, Invasive Species Program Manager  
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870 Emerald Bay Road, Suite 108  
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Loch Lomond

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City of Santa Cruz  
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831-335-2586  
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Pinto Lake

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City of Watsonville  
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320 Harvest Drive  
Watsonville, CA 95076  
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Lake Berryessa, Lake Folsom

Salvador Martinez, Civil Engineer  
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2800 Cottage Way, MO 157  
Sacramento, CA 95825  
916-978-5207  
[salvadormartinez@mp.usbr.gov](mailto:salvadormartinez@mp.usbr.gov)

Briones Lake, Lake Chabot, Camanche Reservoir, Lafayette Reservoir, San Pablo Reservoir,  
Pardee Reservoir, San Leandro Reservoir

Timothy Cox, Project Manager  
East Bay Municipal Water District and Contra Costa Water District  
5883 E. Comanche Parkway  
Valley Springs, CA 95252  
209-763-5061  
[tcox@ebmud.com](mailto:tcox@ebmud.com)

Lake De Valle, Lake Chabot, Contra Loma Reservoir, Quarry lakes

Shelly Miller, Park Superintendent  
De Valle State Recreation Area  
East Bay Regional Park District  
7000 De Valle Road  
Livermore, CA 94550  
925-373-9398  
[dvpark.ebparks.org](http://dvpark.ebparks.org)

Anderson Reservoir, Calero Reservoir, Coyote Lake, Stevens Creek Reservoir, Visona Lake,  
Lexington Reservoir, Uvas Reservoir

Jim O'Connor, Deputy Director  
Santa Clara County Parks and Recreation Department  
298 Garden Hill Drive  
Los Gatos, CA 95020  
408-355-2226  
[jim.oconnor@prk.sccgov.org](mailto:jim.oconnor@prk.sccgov.org)

San Diego Water Supply Lakes

Joe Weber, Lakes Program Manager  
City of San Diego Water Department  
12375 Moreno Avenue  
Lakeside, CA 92040  
619-668-2030  
[jweber@sandiego.gov](mailto:jweber@sandiego.gov)

San Justo Reservoir

Jeff Cattaneo, General Manager  
San Benito County Water District  
30 Mansfield Road  
Hollister, CA 95023  
831-637-8218  
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Lopez Lake, Santa Margarita Reservoir  
Don Melin, Supervisory Ranger  
San Luis Obispo County Parks  
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Lake Piru  
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United Water Conservation District  
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Piru, CA 93040  
805-521-1645  
[claytons@unitedwater.org](mailto:claytons@unitedwater.org)

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Vista Irrigation District  
1391 Engineer Street  
Vista, CA 92081  
760-597-3187  
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Lake Jennings, Lake Cuyamaca  
Hugh Marx, Supervisory Ranger  
Helix Water District  
9535 Harriet Road  
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619-980-4844  
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City of Poway  
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858-668-4774  
[drichards@ci.poway.ca.us](mailto:drichards@ci.poway.ca.us)

Lake Perris, Silverwood SRA  
Norb Ruhmke, Superintendent  
California State Parks, Lake Perris SRA  
17801 Lake Perris Drive  
Perris, CA 92571  
951-443-2414  
[nruhmke@parks.ca.gov](mailto:nruhmke@parks.ca.gov)

Lake Dixon, Lake Wohlford  
Tony Smock, Lakes/Open Space Superintendent  
City of Escondido  
1700 La Honda Drive  
Escondido, CA 92027  
760-839-4240  
[tsmock@ci.escondido.ca.us](mailto:tsmock@ci.escondido.ca.us)

Lake Casitas  
Rob Weinerth, Ranger  
Casitas Municipal Water District  
Lake Casitas Recreation and Parks  
11311 Santa Ana Road  
Ventura, CA 93001  
805-797-1702  
[rweinerth@casitaswater.com](mailto:rweinerth@casitaswater.com)

Crowley Lake, Klondike Reservoir, Diaz L  
Lori Gillem, Watershed Resource Specialist  
Los Angeles Department of Water and Power  
300 Mandich Street  
Bishop, CA 93514  
760-873-0407  
[lori.gillem@ladwp.com](mailto:lori.gillem@ladwp.com)

Big Bear Lake  
Mike Stephenson, Lake Manager  
Big Bear Lake Municipal Water District  
P.O. Box 2863  
Big Bear Lake, CA 92315  
909-866-5796  
[mstephenson@bbmwd.org](mailto:mstephenson@bbmwd.org)

Lake Skinner  
Kenneth Washington, Park Planner  
Riverside County Parks Department  
4600 Crestmore Road  
Riverside, CA 92509  
951-955-4310  
[kwashington@co.riverside.ca.us](mailto:kwashington@co.riverside.ca.us)

## **Colorado:**

### Statewide

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Colorado Division of Wildlife  
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Denver, CO 80216  
303-291-7362 – Office  
303-547-8690 - Cell  
[elizabeth.brown@state.co.us](mailto:elizabeth.brown@state.co.us)

Rob Billerbeck, Stewardship and Natural Areas Manager  
Colorado State Parks  
1313 Sherman Street, Suite 618  
Denver, CO 80203  
303-866-3437 ext. 4341  
[rob.billerbeck@state.co.us](mailto:rob.billerbeck@state.co.us)

Antero, Eleven Mile and William Fork reservoirs  
Neil Sperando, Recreation Manager  
Denver Water  
1600 West 12<sup>th</sup> Avenue  
Denver, CO 80204  
303-628-6189  
[neil.sperando@denverwater.com](mailto:neil.sperando@denverwater.com)

### Lake Dillon

Bob Evans, Manager  
Lake Dillon Marina  
150 Marina Drive  
Dillon, CO 80435  
970-468-5100  
[bobevans@dillonmarina.com](mailto:bobevans@dillonmarina.com)

Phil Hofer, Manager  
Frisco Bay Marina  
902 East Main Street  
P.O. Box 4100  
Frisco, CO 80443  
970-668-4334  
[philh@townoffrisco.com](mailto:philh@townoffrisco.com)

Stanley Lake

Mark Reddinger, Park Manager  
City of Westminster  
Parks and Recreation Department  
4800 West 92<sup>nd</sup> Avenue  
Westminster, CO 80031  
303-425-1097  
[kcline@ci.westminster.co.us](mailto:kcline@ci.westminster.co.us)

Aurora and Quincy Lakes

Rick Mueller, Chief Ranger  
City of Aurora  
Parks and Open Space Department  
15151 Alameda Parkway, Rm 4600  
Aurora, CO 80012  
303-690-1667  
[rmueller@auroragov.org](mailto:rmueller@auroragov.org)

Boulder Reservoir

Stacy Cole, Acting Administrator  
City of Boulder Aquatics and Reservoirs  
Parks and Recreation Department  
5515 N. 51<sup>st</sup> Street  
Boulder, CO 80301  
303-441-3461  
[coles@bouldercolorado.gov](mailto:coles@bouldercolorado.gov)

Lake Granby

Dale and Tami Casteel, Managers  
Beacon Landing Marina  
P.O. Box 590  
Granby, CO 80446  
800-864-4372  
[beacon@rkymtnhi.com](mailto:beacon@rkymtnhi.com)

Blue Mesa Reservoir

Ken Stahlnecker, Chief of Resource Stewardship and Science  
National Park Service  
Curecanti NRA  
102 Elk Creek Road  
Gunnison, CO 81230  
970-641-2337 ext. 225  
[ken\\_stahlnecker@nps.gov](mailto:ken_stahlnecker@nps.gov)

Wolford Mountain Reservoir

Jeff Miller, Recreational Facility Concessionaire  
Colorado River Water Conservation District  
27219 US Highway40  
Kremming, CO 80459  
303-929-4412  
[jeff@redmtnrvpark.com](mailto:jeff@redmtnrvpark.com)

Bear Creek Reservoir

Drew Sprafke, Regional Parks Supervisor  
City of Lakewood Regional Parks  
15600 W. Morrison Road  
Lakewood, CO 80465  
303-697-6154  
[andspr@lakewood.org](mailto:andspr@lakewood.org)

Denver Area

Tommy Phillips, President/Owner  
Tommy's Slalom Shop  
3740 N Sheridan Blvd  
Denver, CO 80212  
720-253-2213-455-3091  
[tommy.phillips35@yahoo.com](mailto:tommy.phillips35@yahoo.com)

**Iowa:**

Statewide

Kim Bogenschutz, AIS Program Coordinator  
Iowa Department of Natural Resources  
1436 255<sup>th</sup> Street  
Boone, IA 50036  
515-432-2823 ext. 103  
[kim.bogenschutz@dnr.iowa.gov](mailto:kim.bogenschutz@dnr.iowa.gov)

**Idaho:**

Statewide

Amy Ferrier, Invasive Species Coordinator  
Idaho Department of Agriculture  
2270 Old Penitentiary Road  
Boise, ID 83701  
208-332-8686  
[aferriter@agri.idaho.gov](mailto:aferriter@agri.idaho.gov)

Dave Parrish, Resident Fisheries Program Manager  
Idaho Department of Fish and Game  
600 South Walnut  
P.O. Box 25  
Boise, ID 83707  
208-787-2773  
[dparrish@idfg.idaho.gov](mailto:dparrish@idfg.idaho.gov)

Lake Pend Oreille  
Kate Wilson, Program Coordinator  
Pend Oreille Basin Commission  
120 East Lake Street, Suite 301  
Sandpoint, ID 83864  
208-263-4984  
[lakescommission@gmail.com](mailto:lakescommission@gmail.com)

Priest Lake  
Eric Anderson, State Representative  
33 Match Bay Road  
Priest Lake, ID 83856  
208-265-6316  
[eanderso@house.idaho.gov](mailto:eanderso@house.idaho.gov)

## **Kansas:**

Statewide  
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Emporia, KS 66801  
620-342-0658  
[jasong@wp.state.ks.us](mailto:jasong@wp.state.ks.us)

Lake Kahola  
Ken Kreif, Inspection Lead  
Lake Kahola Zebra Mussel Committee  
825 Beaver Trail Road  
Derby, KS 67037  
316-788-1404  
[kkreif@cox.net](mailto:kkreif@cox.net)

Marion County Lake

Steve Hudson, Park and Lake Superintendent  
Marion County Parks Department  
#1 Office Drive  
Marion, KS 66861  
620-382-3240  
[park@marioncoks.net](mailto:park@marioncoks.net)

Lake Wabaunsee

Sherrill Marcutie, Caretaker  
City of Eskridge  
20359 Allen Road  
P.O. Box 156  
Eskridge, KS 66423  
785-449-2507  
[lollipop@kansas.net](mailto:lollipop@kansas.net)

**Missouri:**

Statewide

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Missouri Department of Conservation  
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Jefferson City, MO 65109  
573-522-4115  
[tim.banek@mdc.mo.gov](mailto:tim.banek@mdc.mo.gov)

**Montana:**

Statewide

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1420 East 6<sup>th</sup> Avenue  
Helena, MT 59620  
406-444-2448  
[eryce@mt.gov](mailto:eryce@mt.gov)

**Nebraska:**

Statewide

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Nebraska Game and Parks Commission  
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Alliance, NE 69301  
308-763-2940  
[steve.schainost@nebraska.gov](mailto:steve.schainost@nebraska.gov)

## **Nevada:**

### Statewide

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Nevada Department of Wildlife  
1100 Valley Road  
Reno, NV 89512  
775-688-1532  
[markeraw@ndow.org](mailto:markeraw@ndow.org)

### Lake Mead, Lake Mojave

Bryan Moore, AIS Biologist  
National Park Service  
Lake Mead NRA  
601 Nevada Way  
Boulder City, NV 89005  
702-293-8901  
[bryan\\_moore@nps.gov](mailto:bryan_moore@nps.gov)

## **North Dakota:**

### Statewide

Lynn Schlueter, ANS Coordinator  
North Dakota Department of Game and Fish  
7928 45<sup>th</sup> Street NE  
Devils Lake, ND 58301  
701-662-3617  
[lschluet@nd.gov](mailto:lschluet@nd.gov)

## **New Mexico:**

### Statewide

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Conservation Strategy Coordinator  
New Mexico Department of Game and Fish  
P.O. Box 25112  
Santa Fe, NM 87504  
(505) 476-8188  
[barbaraj.coulter@state.nm.us](mailto:barbaraj.coulter@state.nm.us)

### Navajo Lake, Heron L, Elephant Butte L, Couchas L

James Sandoval, Fisheries Biologist  
U.S. Fish and Wildlife Service  
New Mexico Fish and Wildlife Conservation Office  
3800 Commons NE  
Albuquerque, NM 87109  
505-342-9900 ext. 112  
[james\\_sandoval@fws.gov](mailto:james_sandoval@fws.gov)

## **Oklahoma:**

### Statewide

Jeff Boxrucker, Assistant Chief Fisheries  
Oklahoma Department of Wildlife Conservation  
P.O. Box 53465  
Oklahoma City, OK 73153  
405-521-4606  
[jboxrucker@odwc.state.ok.us](mailto:jboxrucker@odwc.state.ok.us)

## **Oregon:**

### Statewide

Randy Henry, Operations Policy Analyst  
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P.O. Box 14145  
435 Commercial St. NE #400  
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503-378-2617  
[randy.henry@state.or.us](mailto:randy.henry@state.or.us)

Rick Boatner, Invasive Species Wildlife Integrity Coordinator  
Oregon Department of Fish and Wildlife  
Wildlife Division  
3406 Cheery Avenue NE  
Salem, OR 97303  
503-947-6308  
[rick.j.boatnert@state.or.us](mailto:rick.j.boatnert@state.or.us)

## **South Dakota:**

### Statewide

Andy Burgess, ANS Coordinator  
South Dakota Department of Game, Fish and Parks  
523 East Capitol Avenue  
Pierre, SD 57501  
605-773-2743  
[andy.burgess@state.sd.us](mailto:andy.burgess@state.sd.us)

## **Texas:**

### Statewide

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Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
512-389-4652  
[earl.chilton@tpwd.state.tx.us](mailto:earl.chilton@tpwd.state.tx.us)

## **Utah:**

### Statewide

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801-652-2465  
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### Lake Powell

Mark Anderson, Aquatic Ecologist  
National Park Service  
Glen Canyon NRA  
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928-608-6266  
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## **Washington:**

### Statewide

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Washington Department of Fish and Wildlife  
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Olympia, WA 98502  
360-902-2426  
[andereca@dfw.wa.gov](mailto:andereca@dfw.wa.gov)

Allen Pleus, ANS Coordinator  
Washington Department of Fish and Wildlife  
600 N Capital Way  
Olympia, WA 98502  
(360) 902-2724  
[pleusaep@dfw.wa.gov](mailto:pleusaep@dfw.wa.gov)

## **Wyoming:**

### Statewide

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Wyoming Department of Game and Fish  
5400 Bishop Blvd  
Cheyenne, WY 82006  
307-777-4559  
[dirk.miller@wgf.state.wy.us](mailto:dirk.miller@wgf.state.wy.us)

# Attachment 2: Utah Division of Wildlife Resources Self Inspection (and Certification) Form.

## BOATERS MUST SELF-CERTIFY BEFORE LAUNCHING

### Requirements to Prevent the Spread of Aquatic Invasive Species

A. In the last 30 days, has your boat been used, in any of the following waters, all likely affected by quagga or zebra mussels (Rule R657-60):

- |                                                                                                                          |     |    |
|--------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1. Utah: Electric Lake, Red Fleet Reservoir                                                                              | Yes | No |
| 2. Lower Colorado River between Lake Mead & Gulf of California                                                           | Yes | No |
| 3. Lake Mead, Nevada and Arizona                                                                                         | Yes | No |
| 4. Lake Mohave, Nevada and Arizona                                                                                       | Yes | No |
| 5. Lake Havasu, Arizona and California                                                                                   | Yes | No |
| 6. Colorado: Lake Pueblo, Lake Granby, Grand Lake, Shadow Mountain, Willow Creek, Jumbo Reservoir and Tarryall Reservoir | Yes | No |
| 7. Arizona: Lake Pleasant (Maricopa County)                                                                              | Yes | No |
| 8. California: San Justo Reservoir (San Benito County)                                                                   | Yes | No |
| 9. Southern California's inland waters in Orange, Riverside, San Diego, Imperial and San Bernardino counties             | Yes | No |
| 10. All waters East of the Rocky Mountains                                                                               | Yes | No |
| 11. Other _____                                                                                                          | Yes | No |

If you answered "No" to all questions in Section A, Sign form and launch.  
If you answered "Yes" to any question, DECONTAMINATE AS DESCRIBED IN SECTION B:

#### B. Self Decontamination (Rule R657-60)

- CLEAN all plants, fish, mussels & mud from boat (discard unused bait in the trash where you fished).
  - DRAIN all water from bilge, livewell & motor.
  - DRY (7 days summer, 18 days spring/fall or 30 days winter) or freeze (3 days) your equipment.
- Professional Decontamination (Rule R657-60)
  - Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush raw water circulation systems. They must sign form.

Decontamination Company \_\_\_\_\_ Agent Signature \_\_\_\_\_ Date \_\_\_\_\_

### CERTIFICATE OF DECONTAMINATION

I have not used my boat in any waters listed in section A; or  
I have decontaminated my boat and trailer as outlined in Section B1 or B2.

Boater Signature \_\_\_\_\_ Date \_\_\_\_\_

( Do not sign until you have read the instructions )

PLACE SIGNATURE SIDE OF CERTIFICATE FACING UP ON YOUR DASHBOARD  
Certifying false information on this form is unlawful (Rule R657-60)

Boater must fill out a  
**DECONTAMINATION  
CERTIFICATION FORM**  
before launching. IT'S THE LAW!



Notice: It is unlawful (Rule R657-60) to launch a watercraft without first certifying that it has not been in a quagga or zebra mussel affected water within the last 30 days, or that the watercraft has been properly decontaminated. Please fill out certificate on dash board.

After boating, conduct these required decontamination steps:

- CLEAN all plants, fish, mussels and mud.
  - DRAIN all water (bilge, livewells, motor).
  - DRY (7 days summer, 18 days spring/fall and 30 days winter) or freeze (3 days) all equipment.
- Use a professional to apply scalding water (140°F) to wash your boat and trailer and to flush your motor, bilge and livewells.



**Stop Aquatic Hitchhikers!™**

Invasive mussels will DEVA STATE boats, fisheries and recreation areas.

If you see these mussels, call 1-800-662-3337

[www.wildlife.utah.gov/mussels](http://www.wildlife.utah.gov/mussels)

**Attachment 3: Example of a boater screening interview form,  
Crowley Lake Fish Camp - Los Angeles Department of Water & Power.**



**Crowley Lake - Boat Use Survey**

Date: \_\_\_\_\_ CF#: \_\_\_\_\_

1. What is your home state? \_\_\_\_\_ and zip code? \_\_\_\_\_

2. When was the boat last used (approximately)? \_\_\_\_\_

3. Where was the boat last used:

A. Name of last water body: \_\_\_\_\_

State: \_\_\_\_\_ County: \_\_\_\_\_

Number of days in water: \_\_\_\_\_

B. Name of the second to last water body: \_\_\_\_\_

State: \_\_\_\_\_ County: \_\_\_\_\_

Number of days in water: \_\_\_\_\_

Approximately how long ago was the boat in this water body? \_\_\_\_\_

4. Have you removed vegetation and drained any water from the boat since last use?

Yes  No

The above is true and accurate, under penalty of perjury. I voluntarily give permission for any agent of the Los Angeles Department of Water and Power or Crowley Lake Fish Camp to thoroughly inspect the vessel referenced above for invasive species. I understand failure to comply will result in denial of ability to launch the above referenced vessel into Crowley Lake.

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Official Use Only		Inspected by:	
Description:	make and model	Inspection Result:	
Boat			
Vehicle			
Reason Denied	(circle all that apply)	WATER	DEBRIS MUSSELS

# Attachment 4: Colorado Division of Wildlife and Colorado Division of Parks Watercraft Inspection Form.

## State of Colorado

Inspection/Sample #: --  
Water Code      Date (month, day, year)      CL#

### HIGH RISK (ANS) INSPECTION FORM

For use on High Risk Trailered Watercraft

Inspection Location: _____		Date/Time: _____		Water Code: _____	
Vessel Registration# (CL#): _____		Vehicle Tag #: _____		Trailer Tag. #: _____	
<b>REASON FOR HIGH RISK INSPECTION</b> (check all that apply)					
<input type="checkbox"/> Out of state registered or used out of state within last 30 days.					
<input type="checkbox"/> Been in infested waters within last 30 days: _____ (Name/State of water). Days since in infested: _____					
<input type="checkbox"/> Leaving infested waters after more than 24 hours at an infested reservoir					
<input type="checkbox"/> Big/Complex boat <input type="checkbox"/> Standing water present <input type="checkbox"/> Vol Request <input type="checkbox"/> Dirty/Crusty/Slimy below waterline					
<input type="checkbox"/> Entering/Leaving marina <input type="checkbox"/> Other: _____					
<b>VESSEL INSPECTION</b> (inspect very methodically and carefully)					
Overall look and feel of the hull (check box):					
<input type="checkbox"/> Clean/Smooth <input type="checkbox"/> Bumpy/Sandpaper feel <input type="checkbox"/> Other: _____					
<small>(if bumpy/sandpaper feel, then look at bumps with magnifying glass to see if mussels)</small>					
<input type="checkbox"/> <b>Vessel Exterior Checked</b>					
<input type="checkbox"/> Entire hull		<input type="checkbox"/> Trim tabs (top and bot.)		<input type="checkbox"/> Through hull fittings	
<input type="checkbox"/> Transom		<input type="checkbox"/> Transducers		<input type="checkbox"/> Pitot tubes	
<input type="checkbox"/> Anchors and ropes		<input type="checkbox"/> Depth sounders		<input type="checkbox"/> Water intakes/Outlets	
<input type="checkbox"/> Water holding pockets		<input type="checkbox"/> Recessed bolts		<input type="checkbox"/> PWC—foot recesses	
<input type="checkbox"/> Motor well		<input type="checkbox"/> Cavitations plate(s)		<input type="checkbox"/> Lights	
<b>Sailboats:</b>					
<input type="checkbox"/> Centerboard box					
<input type="checkbox"/> Rudder and transom					
<input type="checkbox"/> Keel					
<input type="checkbox"/> Fittings					
<input type="checkbox"/> <b>Motor Checked</b>					
<input type="checkbox"/> Exterior housings		<input type="checkbox"/> Propeller and assembly		<input type="checkbox"/> Propeller shaft	
<input type="checkbox"/> Rudders		<input type="checkbox"/> Propulsion system		<input type="checkbox"/> Lower unit	
				<input type="checkbox"/> Prop., shaft supports	
				<input type="checkbox"/> Gimbel area	
				<input type="checkbox"/> Propeller guards	
				<input type="checkbox"/> Water intake/Outlets	
<input type="checkbox"/> <b>Trailer Checked</b>					
<input type="checkbox"/> Rollers, bunks, pads		<input type="checkbox"/> License plate		<input type="checkbox"/> Trailer lights	
<input type="checkbox"/> Trailer springs		<input type="checkbox"/> Fenders		<input type="checkbox"/> Pockets and hollows	
				<input type="checkbox"/> Trailer wiring	
				<input type="checkbox"/> Trailer axles	
				<input type="checkbox"/> Wheels and tires	
				<input type="checkbox"/> Hangers	
<input type="checkbox"/> <b>Interior/Equipment Checked</b>					
<input type="checkbox"/> Bait and live wells		<input type="checkbox"/> Internal ballast tanks		<input type="checkbox"/> PFD's	
<input type="checkbox"/> Anchors		<input type="checkbox"/> Waterfowl decoys		<input type="checkbox"/> Nets	
				<input type="checkbox"/> Float cushions/belts	
				<input type="checkbox"/> Rope and equipment lockers	
				<input type="checkbox"/> Other equipment	
<input type="checkbox"/> <b>Vessel Thoroughly Drained</b>					
<input type="checkbox"/> Bilge plug or pump		<input type="checkbox"/> Bait and live wells		<input type="checkbox"/> Ballast tanks	
<input type="checkbox"/> Drain inboard motors fully by pulling plugs.				<input type="checkbox"/> Drain lower unit on outboard	
<input type="checkbox"/> Large boats, ask driver to activate bilge pump.				<input type="checkbox"/> Drain water cooled generators, swamp coolers with plugs	
<input type="checkbox"/> If entering a reservoir with any standing water and from infested or out-of-state waters in last 30 days, send to decontamination!					
<input type="checkbox"/> If entering a reservoir with standing water, require draining. If vessel cannot be drained and has more than 5 gallons, send to decontamination. For lesser volumes of water, assess risk to determine whether to decontaminate.					
<input type="checkbox"/> If leaving, drain and educate about Clean/Drain/Dry.					
<input type="checkbox"/> <b>Closeout (if nothing is found)</b>					
<input type="checkbox"/> Ask owner to replace bilge or other plugs		<input type="checkbox"/> Yell "stand clear"		<input type="checkbox"/> Thank them for cleaning/draining/drying	
<b>VESSEL INSPECTION FINDINGS</b> (check all that apply)					
<input type="checkbox"/> Did not find any identified or suspected ANS species					
<input type="checkbox"/> Found: <input type="checkbox"/> Large volume of water <input type="checkbox"/> Suspected ANS in water <input type="checkbox"/> Mussels <input type="checkbox"/> Vegetation					
<input type="checkbox"/> Other: _____ <input type="checkbox"/> Location(s): _____					
<b>INSPECTION COMPLETED IN ACCORDANCE WITH STATE PROCEDURES:</b>					
Inspected by (print # and name): _____					
Inspected by (signature): _____					

## **Attachment 5: Partial List of Decontamination Suppliers.**

### **Power Wash Units and Attachments:**

Hydro Engineering, Inc.  
865 W 2600 S  
Salt Lake City, Utah 84119  
Toll Free 1-800-247-8424  
Direct 801-972-1181  
[www.hydroblaster.com](http://www.hydroblaster.com)

Greenfield Industries  
P.O. Box 158  
Monarch, Montana 59463  
406-236-5549  
[www.greenfield-insustries.com](http://www.greenfield-insustries.com)

Hotsy Cleaning Systems  
240 Shearson Crescent, Unit 2  
Cambridge, Ontario, Canada N1T 1J6  
Toll Free 1-800-265-7146  
Direct 519-740-1331  
[www.hotsyontario.ca](http://www.hotsyontario.ca)

Ben's Cleaner Sales, Inc.  
2221 4<sup>th</sup> Avenue South  
Seattle, Washington 98134  
877-922-4262  
[www.benscleaner.com](http://www.benscleaner.com)

Hydro Tek Systems, Inc  
2353 Almond Avenue  
Redlands, CA 92374  
(909) 583-9934  
(909) 478-3724 fax  
[www.hydrotek.us](http://www.hydrotek.us)

Best Marine Services  
(For Power Wash Attachments Only)  
12098 W 50th Pl  
Wheat Ridge, CO 80033-2038  
(303) 423-3311  
[www.bestmarineservice.com](http://www.bestmarineservice.com)

**Banding Supplies:**

Christian Wenk, Customer Service  
American Casting and Manufacturing Corporation  
51 Commercial Street  
Plainview, New York 11803  
Toll Free 1-800-342-0333 x 117  
Direct 516-349-7010  
[www.americancasting.com](http://www.americancasting.com)

**Watercraft Tracking Systems (QID):**

Marshal Pike  
Quagga Mussel Inspections  
2150 Main Street, Suite 5  
Red Bluff, California 96080  
530-529-1512  
[mp@calparksco.com](mailto:mp@calparksco.com)