

# Aquatic Invasive Species District Newsletter



Prevention

Monitoring  
and  
Research

Education

Created in spring of 2020, the purpose of the **aquatic invasive species (AIS)** district is to coordinate the prevention, monitoring and management of AIS within Missoula County, as well as educate the people living and recreating within Missoula County on the identification and impacts of aquatic invasive species to the environment and our economy. Sign up to receive AIS updates through this monthly newsletter on our website!

## Meet the team!



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Coordinator



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Big Sky Watershed Corps  
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# Preventing the spread of AIS: Clearwater Inspection Station

Travel of contaminated watercraft and equipment is one of the single largest vectors for AIS movement from one watershed to the next. This is why it is incredibly important to clean, drain, and dry watercraft and gear before moving from one water body to another and to stop at every inspection station.

Missoula County AISD operates Clearwater Inspection Station in partnership with Montana Fish Wildlife and Parks. The Clearwater Station checks all watercraft traveling east to west on HWY 200. This station serves as a very important piece of defense for the Blackfoot, Clearwater, Flathead, and Swan watersheds against AIS.

Since opening on April 12th, the inspectors have conducted 4560 inspections. 105 of those have been high risk. The inspections have resulted in 74 standing water decontaminations and 1 plant decontamination.

What is a high-risk inspection? These inspections are of watercraft that were recently exposed to infested waters and are therefore likely to be transporting an invasive species.

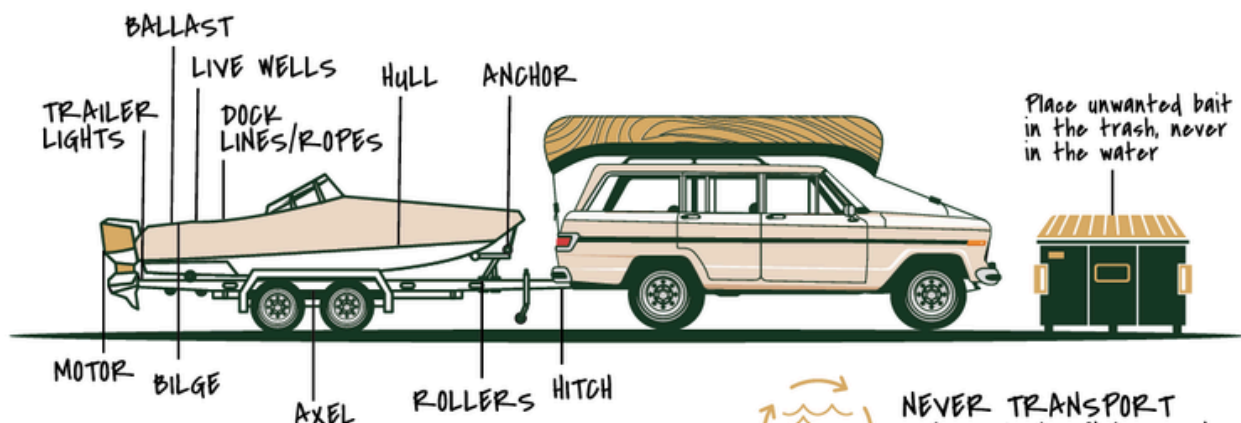


Across the state of Montana there are over 25 inspection stations. Since opening this spring, Montana stations have intercepted over 15 mussel fouled boats. Inspectors work hard to make sure watercraft from inflatable paddle board to jet boat are clean, drained, and dry of all water, debris, and vegetation.

If you have any questions on how WCIS work and how to prepare for them, take a look at our WCIS 101 page on our website.

**Stop at every station every time!**

## CLEAN.DRAIN.DRY. CHECK THESE AREAS OF YOUR BOAT



**NEVER TRANSPORT** water, plants, fish or animals into a different body of water.





## Aquatic Invasive Research and Monitoring Projects

Since 2011 Missoula County has been monitoring for aquatic plants on our lakes and rivers. This summer the district is involved with three different monitoring and research efforts: fragrant waterlily monitoring, early detection of mussel veligers, and monitoring and treatment of invasive plants in Fort Missoula Ponds.

### Fort Missoula Ponds

In partnership with Missoula Parks and Recreation the AIS district is working to control or eradicate Curly-leaf Pondweed (CLP), an invasive plant, that is abundant in the Fort Missoula Ponds. Over the last few years, the AISD has been monitoring the spread of CLP using rake toss surveys and under-water imagery. A rake toss is when a surveyor tosses a rake that is attached to a rope into the water, then drags the rake along the lake bottom pulling up any vegetation it catches. Under-water imagery involves taking photos or videos of the vegetation along the lake bottom. Both efforts enable us to better understand where the CPL is in the lakes and create an informed treatment plan.

### Fragrant Water Lily

Its likely you've noticed round lily pads with white flowers on the lakes and rivers of Missoula County. These are fragrant waterlily (FWL), an invasive species that has spread through the Clearwater Chain. Missoula County AISD monitors the impact of FWL on the water quality and ecology of the invaded water bodies. There are patches of invaded and native waterlily in six lakes that we have been monitoring and assessing. The plots are marked with five PVC pipes, you might have seen some of the plots before. If you ever see the yellow Winnona Canoe with lots of PVC pipe and Go Pros say hi! We are always happy to answer questions about our projects and protocol.

### Veliger Monitoring

The AISD helps with the early detection efforts of Quagga and Zebra mussels by monitoring for the species in their larval form, during which they are called veligers. In this early stage of life, veligers are microscopic free-floating bodies in the water. The process of monitoring for veligers involves dragging a filtering net with a water collection basket behind a boat at different locations on a lake. The intent is collected water will hold a veliger if it exists in the waterbody. The filtered water is then bottled and sent it to MTFWP for processing. The goal of this project is to detect an introduced species before it becomes an established population. We monitor every three weeks on four different lakes within the county starting late spring and going through the summer.



# INVASIVE SPECIES HIGHLIGHT

Zebra and quagga mussels were originally brought to the U.S. in the 1980s by large ships traveling from Eastern Europe to the Great Lakes. Currently, Montana, Washington, and Oregon are the only states left in the contiguous United States that do not have a known population of quagga and zebra mussels.

Quagga and Zebra mussels are filter feeders. Meaning they consume the plankton and bacteria in the water. This reduces the abundance of nutrients, food availability for other species, and can change the waterbodies food web structure.

In their larval form, they are free-floating in the water and invisible to the eye. As they float, the mussels grow byssal threads (strong, silky fibers) that allow them to attach onto surfaces like boats, irrigation lines, pipes, docks, and really anything that has exposure to infested water. In ideal conditions, mussels can survive up to 30 days outside of water enabling their spread over vast distances.

In 2019 the Montana Invasive Species Council, predicted the potential economic impact of a mussel invasion would be up to \$234 million per year. This cost includes revenue loss and management/maintenance cost. To learn more on this projection check [invasivespecies.mt.gov](https://invasivespecies.mt.gov).



## Quagga Mussels

Widely Ranging color with bands of black cream or white



Usually have dark concentric rings on the shell and paler in color near the hinge

Can Reach 4cm in Length

## Zebra Mussels

Usually marked with a zigzag pattern



Stripes can range from brown to yellowish white in color

Adults Approximately 2.5cm in Length

## IMPACTS

- Attach to boat motors and boat hulls, reducing performance and efficiency
- Cover lakesides in sharp and smelly shells
- Clog irrigation intakes, valves, pipes, screens, and sprinklers, decreasing flow rate through irrigation components
- Damage water-based infrastructure and decrease property values
- Impact recreational opportunities and alter ecological systems
- Reduce available food for native fish and other animals
- Increase aquatic vegetation growth and decrease water quality

## How to help:

- Clean, drain, and dry watercraft and irrigation equipment before each use in other water bodies
- Thoroughly wash and decontaminate equipment and boats
- Report any suspect infestations at 1-800-TIP-MONT (1-800-847-6688) or visit <https://fwp.mt.gov/conservation/aquatic-invasive-species/report-an-ais>