

2023 ANNUAL REPORT

Aquatic Invasive Species Management in Utah

AQUATIC INVASIVE SPECIES (AIS) PROGRAM



Utah Division of Wildlife Resources

2023 Aquatic Invasive Species Program Annual Report

The Utah Division of Wildlife Resources Aquatic Invasive Species program strives to keep Utah's waterways and reservoirs safe from invasive species.

This report will discuss what laws have been made to limit the spread of quagga mussels, decontamination locations and methods, technology that is being used to aid these efforts, as well as partnerships and funds that are utilized to battle invasive species in Utah.



Program organization

The AIS Interdiction program is housed in the DWR law enforcement section. A lieutenant is the lead of the program, and two sergeants supervise six full-time interdiction specialists. The interdiction specialists manage the program in the five DWR regions and at Lake Powell. A program coordinator position oversees the budget and grant processes dealing with program funding. Seasonal technicians conduct the hands-on fieldwork across the state. Overall, the AIS program has seven non-sworn full time employees (FTE) and has 11.98 FTEs for seasonal field work. (This means that adding up all of the seasonal technicians' work efforts, it would equate to 11.98 full time employees.)

What are aquatic invasive species?

Aquatic invasive species are any nonnative plant or animal species found in water that are a threat to the abundance, health or diversity of native and/or sport aquatic species.

While there are numerous aquatic invasive species, the main focus of this program is the quagga mussel (*Dreissena bugensis*). These invasive mussels were initially discovered in the Great Lakes area and slowly made their way across the nation. In 2013, quagga mussels were found in Lake Powell in southern Utah and DWR employees have been working to keep the mussels from spreading to other water bodies ever since. Thus far, DWR efforts have contained quagga in Lake Powell for over a decade – despite its spread occurring in other states.

Quagga mussels have the potential to cause numerous problems. Some of these can include:

- They plug water lines, even lines that are large in diameter.
- If they get into water delivery systems in Utah, it will cost millions of dollars annually to remove them and keep the pipes free, which can result in higher utility bills.
- They remove plankton from the water, which hurts fish species in Utah.
- Mussels get into a boat's engine cooling system. Once they do, they'll foul the system and damage the engine.
- When mussels die in large numbers, they stink and the sharp shells of dead mussels cause injury and cuts when people walk along the beaches.

Laws and legislation

In 2008, Utah passed legislation known as the Aquatic Invasive Species Interdiction Act (23A-3-211). This provided regulations on transporting boats and other watercraft across the state. State statutes such as removing the plugs from watercraft and not allowing transportation of watercraft from infested waters without decontamination came from this legislation. What this means is if a person boats on Lake Powell, they must decontaminate their vessel or wait a set number of days prior to launching on another waterbody. This has greatly helped the efforts of DWR conservation officers and technicians in limiting the spread of quagga mussels.

In 2023, legislation was updated to assist with the program. Prior to 2023, boaters paid an AIS fee through the Utah Division of Motor Vehicles when they registered their watercraft. Now, the

AIS fee and registration have been separated. Users still register their watercraft the same way, but in order to streamline the AIS fee, users now pay the fee directly to the AIS program through the [DWR Vessel Enrollment Program](#). Once the fees are paid, DWR sends the watercraft owner a sticker to be placed on their watercraft to show that fees have been paid. These fees are utilized to run the AIS program and keep quagga mussels from spreading and taking over our waterbodies.

Decontamination

Currently, there are over 40 inspection and decontamination locations across Utah. The purpose of these locations is to ensure that boats that have left Lake Powell have either been decontaminated by a DWR approved business or DWR employees or have waited the allotted time before launching again. When a boat leaves Lake Powell, technicians affix a tag (called a “seal”) to the D-ring on the watercraft. The seal is recorded — as well as the bow number of the watercraft — and entered into DWR’s tracking system. When the watercraft goes to another waterbody, the tag is checked and the bow number looked up to see how long it has been since the watercraft has left Lake Powell. If needed, technicians will decontaminate the watercraft prior to launching in the waterbody. Recreators can also access an interactive locator of

[decontamination stations](#) to find a professional service and make an appointment for a decontamination.



In 2023, funding was acquired to continue to develop a property just outside of Kanab along U.S. Highway 89. This will be the newest inspection station for watercraft leaving the Wahweap Lake Powell area. We are expecting it to be operational by summer 2024.

As of December 1, there have been 269,362 vessels inspected and 6,642 decontaminations completed in 2023. Of these inspected vessels, over 180 have had mussels attached to them or mussels were found within the interior systems. This number continues to increase each year. Without these efforts, who knows how far quagga mussels would spread.

Technology

The DWR is constantly trying to balance the impact the AIS program has on watercraft users, while still protecting Utah’s waters. This task is difficult because limiting the spread of quagga and other aquatic invasive species is incredibly important.

Dip tanks

DWR has partnered with Clean Wake LLC to build dip tanks. These tanks have greatly reduced the time it takes for a watercraft to be decontaminated. Dip tanks look like the bed of a large dump truck. In simple terms, the tanks are placed in the ground and hooked up to a filter system and hot water. Rather than having to use hoses and hook ups to decontaminate a watercraft, dip tanks use the watercraft's own system to flush the engine and compartments. The watercraft remains on its trailer and is backed into the dip tank. Engines are started and pumps activated and the hot water is sent into the watercraft system. Dip tanks have reduced the time needed for a decontamination from over one hour on a complex surf boat to roughly 15 minutes. Currently there



are three dip tanks in operation: Wahweap at Lake Powell, Utah Lake State Park and Sand Hollow State Park. Plans to install tanks at Willard Bay State Park and Flaming Gorge Reservoir are in the works, and these should be completed in 2024. An additional tank location is currently being discussed with hopes to have it in place in 2024 as well. Utah Lake’s dip tank went online in June of 2023. As of October 2023, over 800 boats have been decontaminated using Utah Lake’s dip tank.

Cameras

Another technology that DWR is using are cameras. It is impossible to have technicians at Lake Powell’s boat ramps 24 hours a day, and many watercraft leave the lake at times where there are no technicians present, such as early in the morning or late at night. In the summer of 2023, DWR – in cooperation with companies Istonish and AR Inspect – placed cameras at State Line and Wahweap boat ramps. These cameras, using AI technology developed by ARI, record the



bow numbers of watercraft entering and leaving the lake and then add those numbers to the DWR’s monitoring system. This is a very new system and getting everything working in very remote locations has its problems, however, the cameras have a 70% accuracy rate of recording boats entering Lake Powell thus far and that is increasing as the program develops. These cameras provide a 24 hour record of watercraft entering and exiting Lake Powell. Cameras will also be placed at the Bullfrog and Halls Crossing boat ramps in the future.

Partnerships and budget

The AIS program could not be successful without the numerous partners involved. These organizations and individuals provide much needed experience, labor and funds to help protect Utah’s waterways and reservoirs. The following tables summarize the funding sources the AIS program utilizes. Due to this report being an annual report, the tables cover the second half of Fiscal Year 23 and the first half of Fiscal Year 24 as noted. The tables list our partners, the money that they provide, and the directed resources that money covers. These partners include the Utah Legislature, numerous federal agencies, and local water conservancy districts. These monies are critical to the AIS program. Without these partnerships Utah’s efforts in keeping quagga from spreading throughout the state would be impossible.

FY23

Partner	Amount	Duration	Directed Purpose
Utah Legislature	\$500,000	One-time appropriation	Camera system purchase for Lake Powell
Utah Legislature	\$4,000,000	One-time appropriation	Diptank purchase and installation
Utah Legislature	\$1,350,000	Annual General Fund Allocation	Full-time employee budget and current expense
National Park Service	\$500,000	Over 5 years (one-time grant) beginning in 2022	Camera system maintenance
US Fish and Wildlife Service (Quagga and Zebra Action Plan) QZAP	\$350,000	One year (annually renewed)	Lake Powell staffing
US Forest Service	\$371,981	Over 5 years (to be renewed in FY24)	AIS Staffing at US Forest Service locations
US Fish and Wildlife Service	\$130,000	Two years beginning 2023	Utah Lake and Hwy 40 Port of Entry
BLM	\$25,000 for Division of Parks	One year (annually renewed)	AIS operations at Yuba State Park
Central Utah Water Conservancy District	\$88,000 for Division of Parks	One year (annually renewed)	AIS operations at Jordanelle, Deer Creek, Red Fleet, and Starvation State Parks
Provo River Water Conservancy District	\$25,000 for Division of Parks	One year (annually renewed)	AIS operations at Deer Creek and Jordanelle State Parks
Uintah Water Conservancy District	\$6,500 for Division of Parks	One year (annually renewed)	AIS operations at Red Fleet and Steinaker State Parks

FY24

Partner	Amount	Duration	Directed Purpose
AIS Decal Boater Enrollment	To be determined	Began July 1, 2024-annual requirement for boat owners	Statewide AIS efforts
Utah Legislature	\$1,350,000	Annual General Fund Allocation	Full-time employee budget and current expense
US Fish and Wildlife Service- Quagga and Zebra Action Plan (QZAP)	\$350,000	One year (annually renewed))	Lake Powell staffing
US Fish and Wildlife Service-Quagga and Zebra Action Plan (QZAP)	\$250,000	One year (annually renewed)	Kanab AIS Inspection and Decontamination Station Infrastructure
National Park Service	\$500,000	Over 5 years (one-time grant) beginning in 2022	Camera system maintenance
Bureau of Reclamation	\$200,000	One year (one-time grant)	Diptank purchase and installation
US Forest Service	To be determined	Over 5 years	AIS Staffing at US Forest Service locations
BLM	\$25,000 for Division of Parks	One year (annually renewed)	AIS operations at Yuba State Park
Central Utah Water Conservancy District	\$88,000 for Division of Parks	One year (annually renewed)	AIS operations at Jordanelle, Deer Creek, Red Fleet, and Starvation State Parks
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Uintah Water Conservancy District	\$6,500 for Division of Parks	One year (annually renewed)	AIS operations at Red Fleet and Steinaker State Parks

In addition to these partners, this program's success is greatly due to the public's efforts. Removing drain plugs and following decontamination regulations are the two most important things a boat owner can do to help keep this invasive species from spreading. Thank you for your efforts and have fun at the lake.