

Watercraft Inspection Report 2021

Aquatic invasive species (AIS) can cause significant damage to water-based infrastructure, hydropower generation, recreation, and fisheries. Preventing the introduction of AIS avoids expensive mitigation costs and preserves recreation opportunities. AIS are primarily transported by watercraft and a network of inspection stations have been established to address AIS movement. Montana Fish, Wildlife & Parks (FWP) along with tribes, conservation districts, counties, cities, and federal partners work together to operate watercraft inspection stations state-wide to ensure all boats are clean, drained and dry.

New in 2021

- ▶ A record number of mussel fouled vessels were intercepted in 2021 (61 boats).
- ▶ Coordinated with enforcement to improve boater compliance statewide. This included expanding enforcement at the Anaconda inspection station to 4 days a week from Memorial Day to Labor Day.
- ▶ Updated and improved data collection system.
- ▶ Expanded quality control at inspection stations.
- ▶ Conducted night inspection operations at the Hardin station leading up the Fourth of July weekend supported by enforcement staff.
- ▶ Expanded partner involvement with management and operation of watercraft inspection stations.



AIS are primarily transported on watercraft by “hitchhiking”. Some AIS actively attach to boats while others can become entangled on boat motors or trailers or are transported in standing water. Watercraft inspection addresses this issue by ensuring all watercraft are cleaned, drained and dry. Inspection stations also help educate boaters to clean their boats every time they leave the water to help protect the waters they enjoy from the impacts of AIS.

INTRODUCTION

Montana Fish, Wildlife & Parks (FWP) is the lead agency in the state addressing aquatic invasive species (AIS) issues. FWP, Montana Department of Agriculture (MDA), Montana Department of Natural Resources and Conservation (DNRC), and Montana Department of Transportation (MDT) collectively are responsible for the implementation of the Montana AIS Management Plan. Roles and responsibilities for implementation of the plan are outlined through a memorandum of understanding (MOU) between agencies. The goal of the plan is to minimize the harmful impacts of AIS by limiting or preventing the spread of AIS. This goal is achieved through coordination and collaboration between our partner agencies and stakeholder groups; prevention of new AIS introductions; early detection and monitoring of invasive aquatic plants, animals, and pathogens; control and eradication of new and established AIS populations; and outreach and education efforts. This report focuses on the prevention of new AIS introductions in the state, containment efforts at Tiber Reservoir and other AIS prevention efforts. Prevention is primarily accomplished through watercraft inspection stations.

Montana FWP has been operating watercraft inspection stations since 2004. Watercraft and water-based equipment are the most common vector for the transport of AIS and are the focus for prevention efforts. Inspection stations inspect boats and equipment for aquatic organisms, standing water, and illegal bait and fish. Stations also educate the public about the importance of following clean, drain and dry protocols and encourage boaters to do their part to protect the waters they enjoy from AIS.

Following the detection of dreissenid mussels in Tiber Reservoir in late 2016, the program rapidly expanded. Additional stations were established, and program staffing levels were increased. The watercraft inspection season was extended as well as hours of operation. FWP also began contracting with partners to operate watercraft inspection stations, allowing for local management and oversight. In 2021, nine inspection stations were contracted through partners around the state. In addition, Glacier National Park and Yellowstone National Park operate watercraft inspection stations within park boundaries. The City of Whitefish, Confederated Salish and Kootenai Tribes (CSKT), the Blackfeet Nation and the Swan Lakers also independently fund stations for inspecting boats.

2021 ACCOMPLISHMENTS

Accomplishments during the 2021 watercraft inspection season include:

- Continued to address Covid-19 and associated challenges to overall operations.
- Over 123,000 watercraft inspections conducted by FWP and partners in Montana.
- Record number of zebra and quagga mussel fouled vessels (61) intercepted and over 530 vessels intercepted transporting aquatic weeds.
- Continued strong partnerships to operate watercraft inspection stations statewide including contracting with the Confederated Salish and Kootenai Tribes (Ravalli and Thompson Falls), the Blackfeet Nation (Browning), Missoula County (Clearwater Junction), Garfield Conservation District (Wibaux and Flowing Wells), McCone Conservation District (Nashua), Bighorn Conservation District (St. Xavier), and Powder River Conservation District (Broadus).
- Piloted night inspection operations at Hardin leading up to the Fourth of July weekend.
- Coordination with partners on other non-FWP funded stations including Glacier National Park, Yellowstone National Park and the City of Whitefish.
- Improved the Watercraft Inspection and Decontamination mobile data application to improve data collection.

- Updated watercraft inspection training to incorporate an updated curriculum, a new training manual, a new student workbook, and smaller classes.
- Extended season of operation at most stations.
- Targeted law enforcement to improve boater compliance.
- Continued to refine the quality control program and communication plan.

AREAS OF RESPONSIBILITY FOR 5 FWP WATERCRAFT INSPECTION AND DECONTAMINATION STATION SUPERVISORS

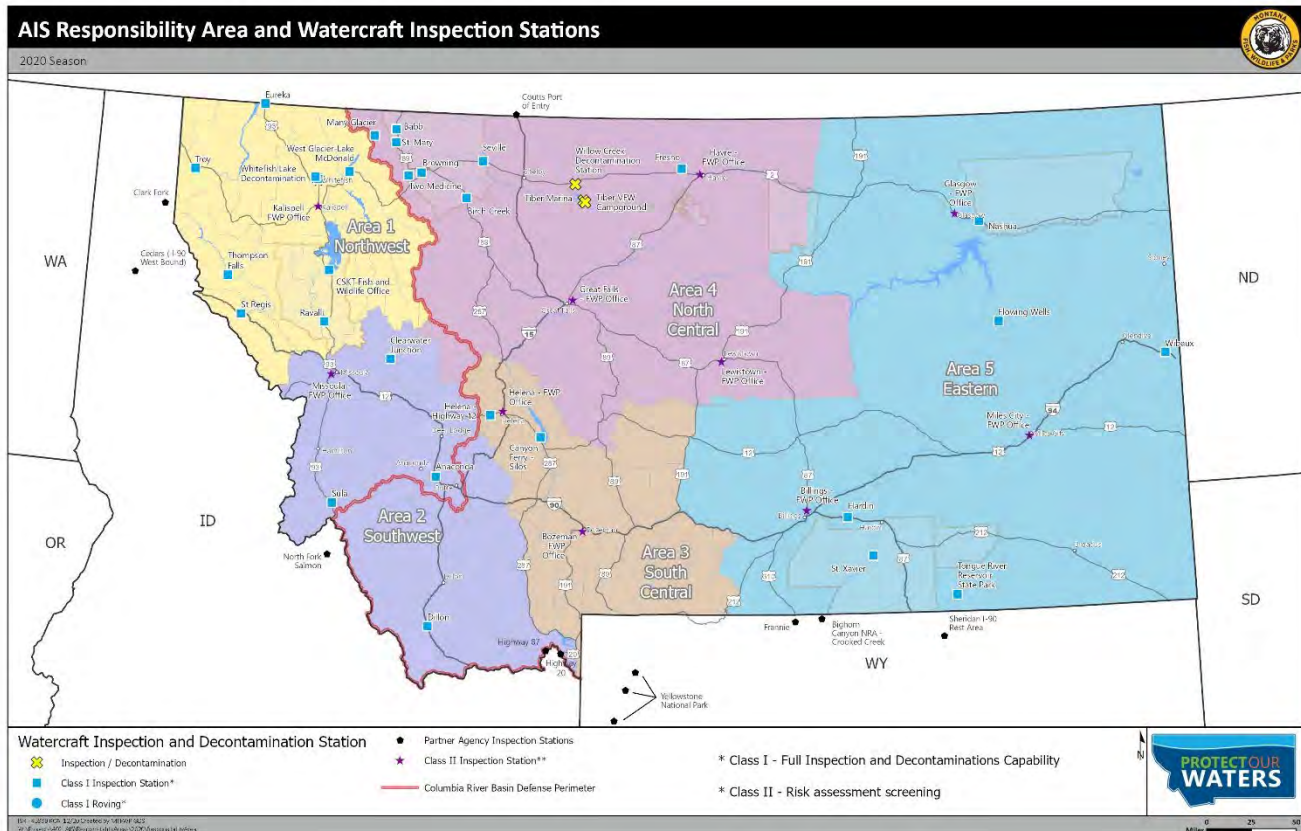


Figure 1. Geographic areas of responsibility for each of the five FWP watercraft inspection and decontamination station supervisors, 2021.

The AIS supervisors by their areas of responsibility are:

- Russ Hartzell – area 1 northwest
- John O’Bannon – area 2 southwest
- Andrew Rivers – area 3 south central
- Austin Jaynes – area 4 north central and Tiber Reservoir
- Sean Flynn – area 5 eastern

AIS supervisors are managed by the prevention specialist, and they make up the team that carries out the majority of the operation on the ground. Supervisor duties include hiring, training, managing staff, logistics, partnerships, quality control, compliance, education and outreach, and maintenance. AIS supervisors also serve as the AIS contact in their regions of operation.

WATERCRAFT INSPECTION STATION LOCATIONS

Watercraft inspection stations are established in locations to address watercraft that present the highest risk of transporting AIS. Stations are located on high traffic corridors entering the state, crossing west over the Continental Divide, and at other strategic locations to intercept high risk boat traffic. Stations are also established at strategic locations on Tiber Reservoir to inspect / decontaminate watercraft exiting that waterbody to ensure all vessels are clean, drained and dry.

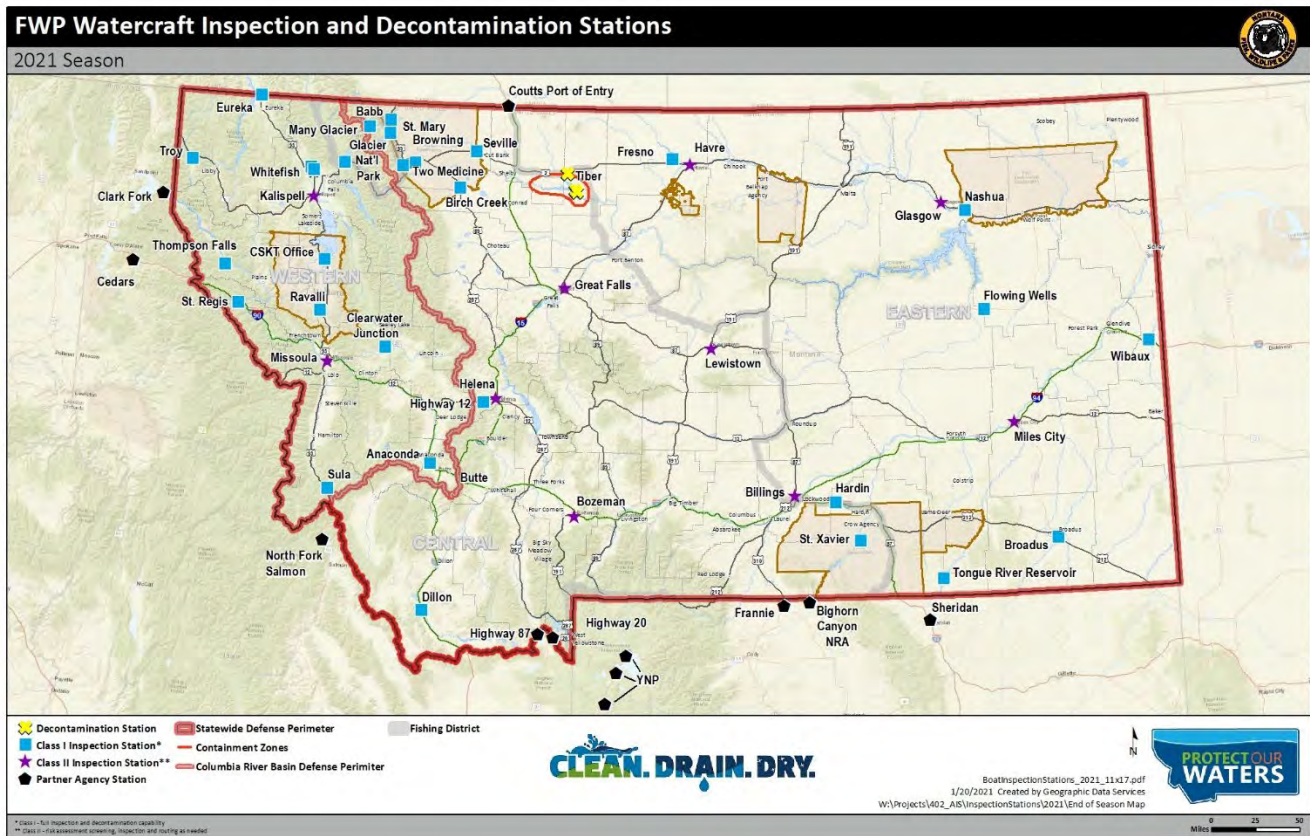


Figure 2. 2021 FWP seasonally permanent watercraft inspection stations. *The Eureka station was closed during the 2021 season due to Covid-19 closure of the US/Canada border.

WATERCRAFT INSPECTION STATION TOTALS

FWP and partners performed 123,311 watercraft inspections this season (Figure 3). Of that total, FWP operated stations inspected 47,641 and contracted partner stations inspected 67,285 watercraft. Other partners conducted the balance of those inspections including 6,652 from Glacier National Park and 1,733 from the City of Whitefish (Figure 4). Stations operated from late February to mid-November in 2021 with most stations operating between April and October (Table 1). The 2021 season had inspection numbers like those observed in 2019. Inspections in 2020 set a record for inspections in the state due to an increase in local recreation related to Covid-19.

Watercraft Inspections By Year

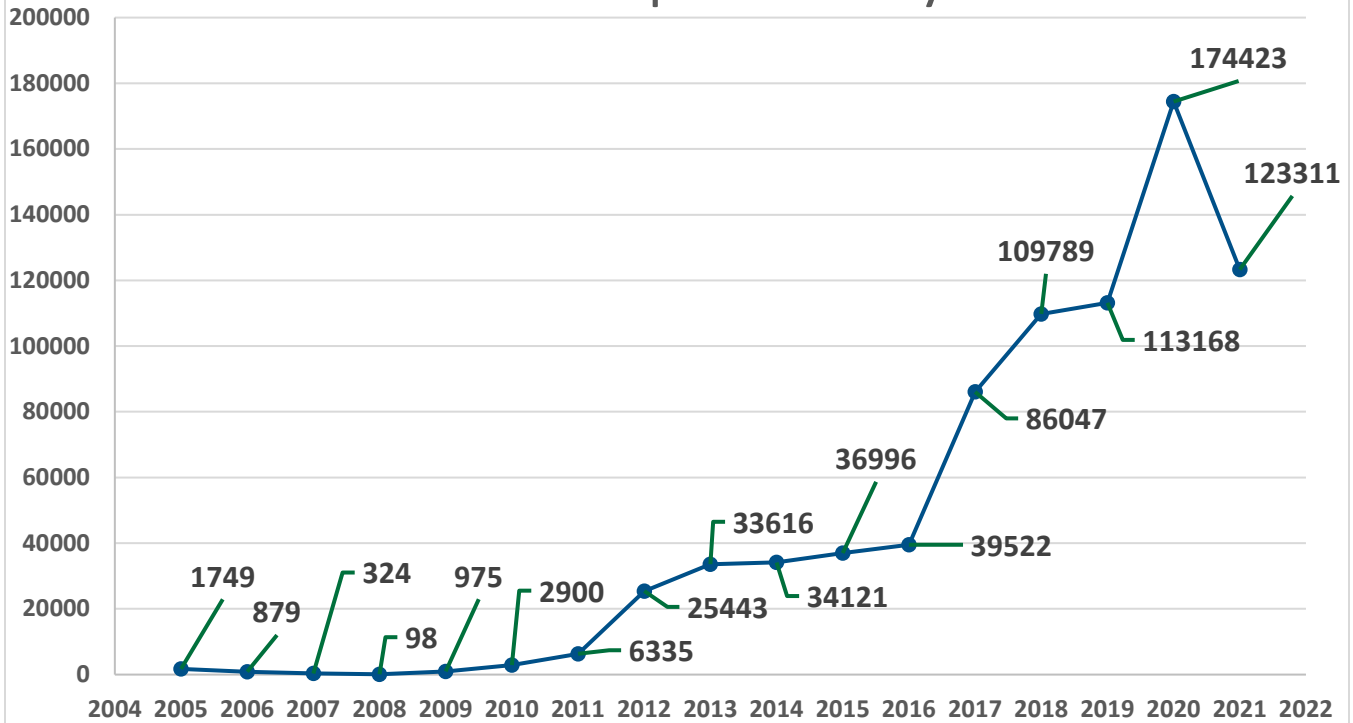


Figure 3. Number of watercraft inspections by year.

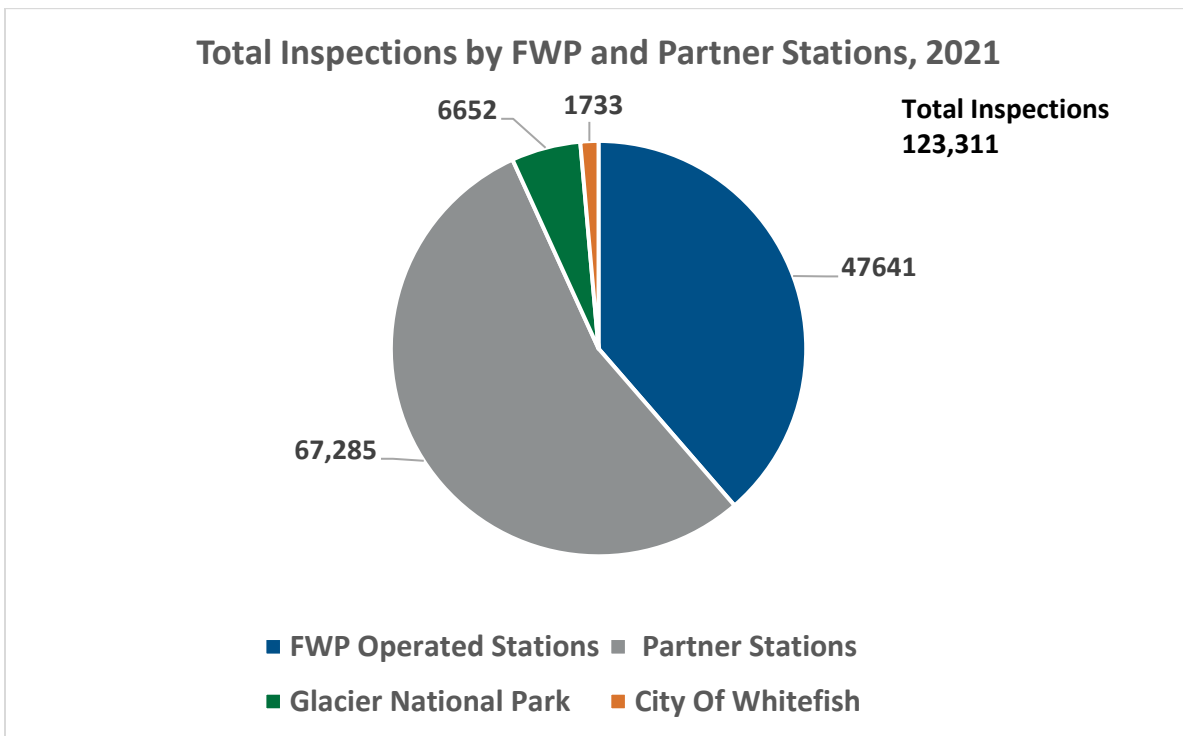


Figure 4. FWP, contracted partner and other partner involvement with watercraft inspections in 2021.

Table 1. Summary of all 2021 watercraft inspection stations.

Station Name	Hwy	Direction of Travel	Open days/week	Hours of Operation	Start date	End date	Total Inspections
Border Stations							
Nashua (MCD)	US 2	West	7	Daylight	17-Apr	24-Oct	2,380
St. Regis	I-90	East	7	Daylight	30-Apr	19-Sep	6,474
Dillon	I-15	North	7	Daylight	13-Mar	23-Oct	3,656
Eureka* Covid-19 closure	US 93	South	0	N/A	N/A	N/A	5
Hardin	I-90	West	7	Daylight	15-Apr	24-Oct	7,741
Broadus (PRCD)	MT 212	West	5	12	12-May	29-Sep	800
Troy	US 2/ MT 56	East/North	7	Daylight	16-Apr	19-Sep	6,331
Wibaux (GCD)	I-94	West	7	Daylight	10-Apr	24-Oct	2,852
Continental Divide Stations							
Anaconda	I-90	West	7	Daylight	20-Mar	24-Oct	10,916
Browning (Blackfeet Nation)	HWY 2	West	7	Daylight	16-Apr	17-Oct	2,383
Clearwater Junction (MSLA County)	MT 200	East/West	7	Daylight	17-Apr	17-Oct	31,014
Hwy 12 Helena	HWY 12	West	7	Daylight	1-May	17-Oct	5,805
Sula	HWY 93	North	7	12	22-May	7-Sep	1,487
Interior Stations							
Swan Lakers	Boat Ramp	N/A	Varied	Varied	25-May	7-Sep	652
Seville (Blackfeet Nation)	Hwy 2	West	7	8	3-May	3-Sep	158
St. Xavier (BCD)	MT 313	South	7	12	1-May	21-Oct	1,029
Flowing Wells (GCD)	MT 200	East/West	7	Daylight	17-Apr	24-Oct	4,087
Fresno Reservoir	Boat Ramp	N/A	4	9	22-May	7-Sep	742
Ravalli (CSKT)	US 93	North	7	24	12-Mar	17-Oct	17,584
Thompson Falls (CSKT)	MT 200	East	7	12	23-Apr	19-Sep	4,346
Whitefish Lake (City of Whitefish)	Boat Ramp	N/A	7	14	1-May	30-Sep	1733

Station Name	Hwy	Direction of Travel	Open days/week	Hours of Operation	Start date	End date	Total Inspections
Parks							
Tongue River Reservoir State Park	State Park	N/A	4	10	20-May	9-Sep	2009
Glacier National Park (NPS)	Glacier	N/A	7	8	May	October	6,652
Regional Offices							
FWP Regional Offices	Kalispell	N/A	5	9	2-Jan	31-Dec	828
Tiber Reservoir							
Marina	Tiber	N/A	7	Daylight	1-May	17-Oct	736
Willow Creek	Tiber	N/A	7	12	31-May	25-Aug	104
VFW	Tiber	N/A	7	Daylight	1-May	17-Oct	807
TOTALS							123,311



Photo 1. Browning watercraft inspection station.

ORIGIN OF WATER USERS, RELATIVE RISK, AND BOATER MOVEMENT

The origin of watercraft and subsequent movement is valuable information that helps guide the placement of watercraft inspection stations. Boats traveling from eastern states tend to come from areas where zebra mussels, quagga mussels and invasive aquatic plants are prevalent, such as the Great Lakes region. Boats coming from southwestern states could be carrying quagga mussels from the lower Colorado River System. Boats that originate in-state also are at risk of transporting AIS and must be cleaned, drained and dry. Of the 123,311 watercraft that passed through inspection stations during the 2021 season, 81,638 were from Montana and 41,025 were from out of state. These values don't include the Swan Lakers data (652) because they don't currently use the FWP data application.

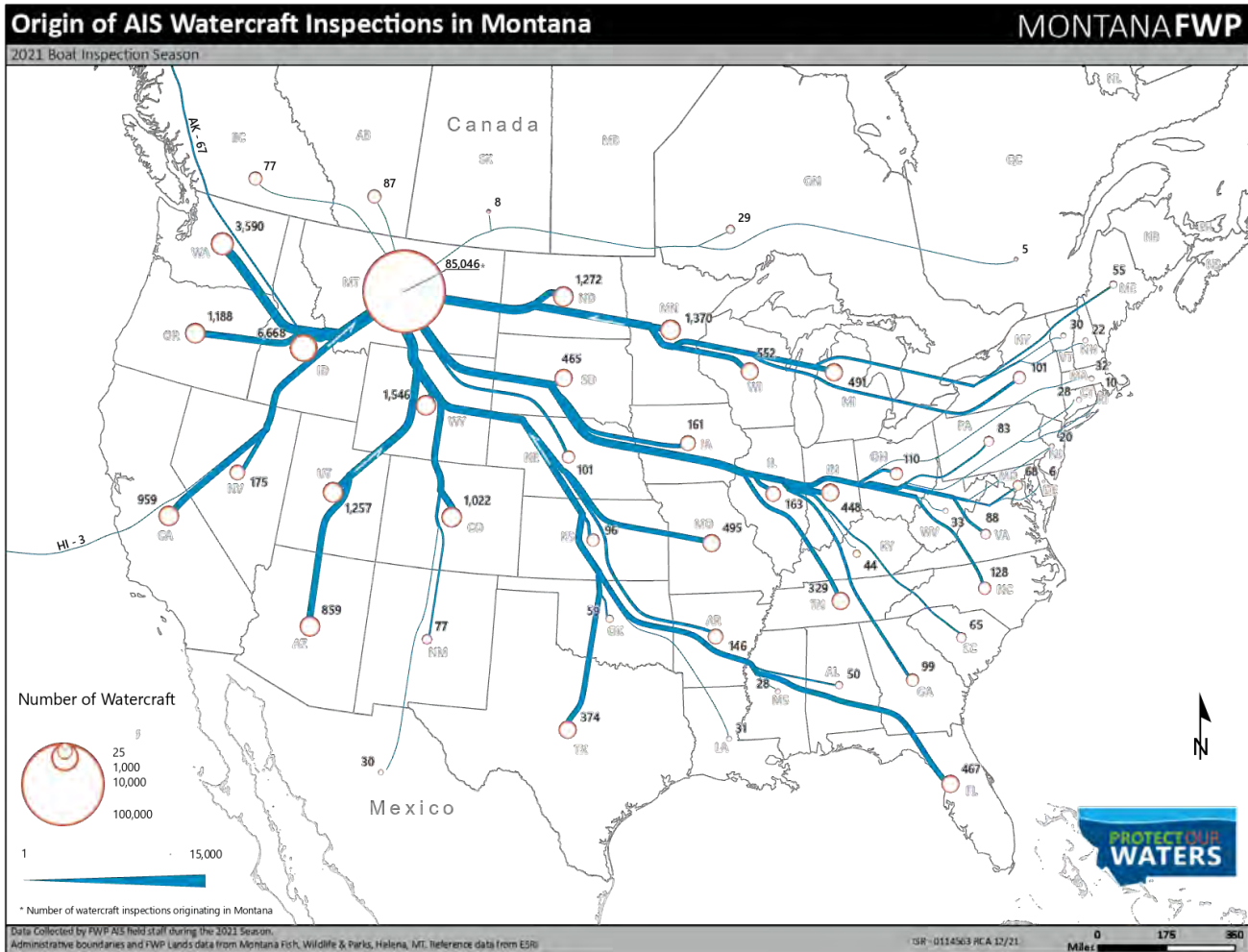


Figure 6. Origin of Montana inspected watercraft in 2021 by postal code.

The figure above, illustrates the great distances people will travel to recreate in Montana. It is important to the overall prevention strategy to ensure both out-of-state and in-state boaters always clean, drain and dry their watercraft.

HIGH RISK BOATS

High-risk boats are categorized as vessels that:

- Originated outside of the northwest (AB, BC, WY, ID, OR, WA, or MT).
- Launched in a waterbody in a zebra or quagga mussel-positive state.
- Are from a mussel-positive state.
- Originated at Tiber Reservoir.
- Or has standing water, plants, animals, dirty or ballast tanks.

These boats are more likely to be carrying adult or veliger (larval) mussels, aquatic weeds or other AIS; therefore, extra time and care is taken during inspection of these boats through a high-risk inspection. In 2021, there were 14,136 high-risk boats that passed through inspection stations, which amounts to 12% of all inspections (Figure 7).

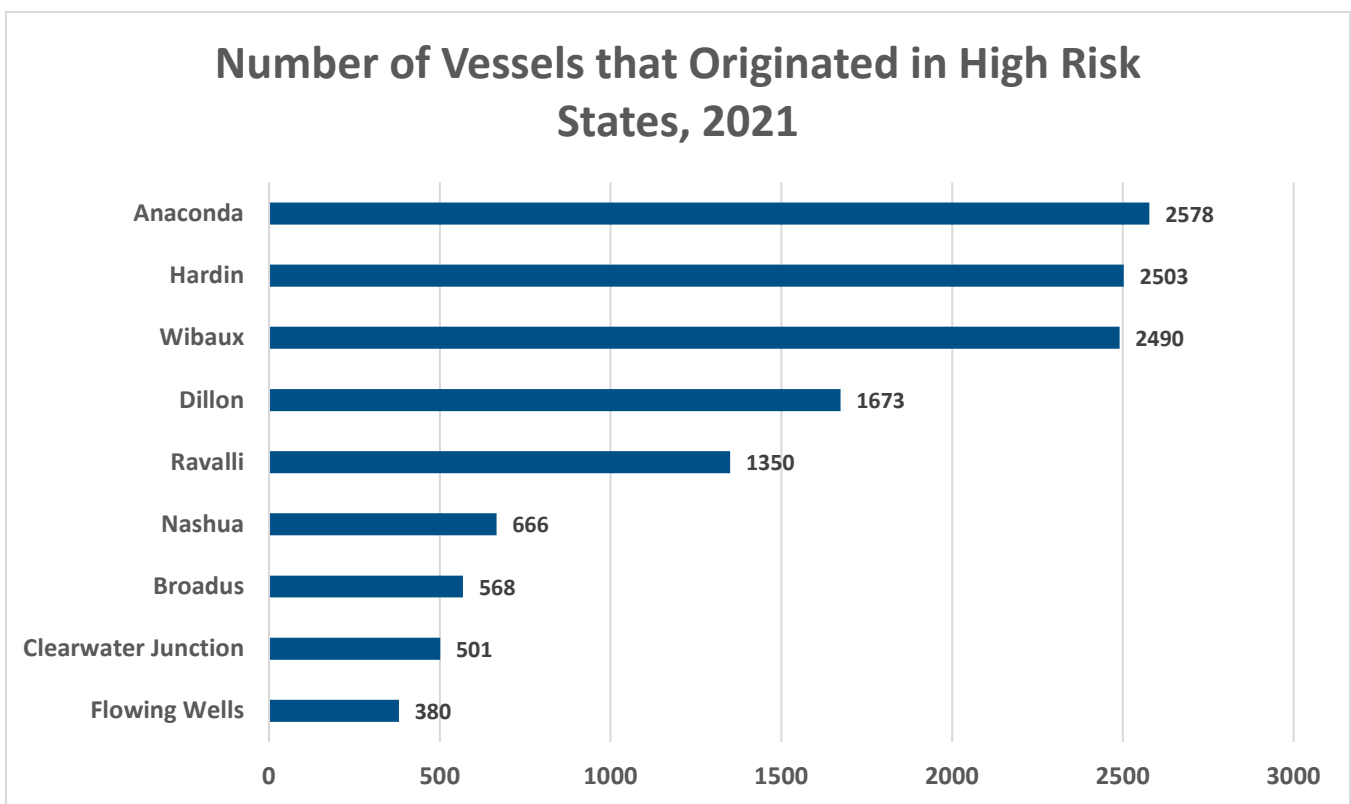


Figure 7. Number of high-risk boats by station based on origin: Mussel positive state or water, 2021. (Figure represents 9 stations with most high-risk vessels)

TIBER RESERVOIR

Following the detection of invasive mussel larvae at Tiber Reservoir and a suspect detection on Canyon Ferry Reservoir in late 2016, mandatory exit inspections were put in place to ensure boats are clean, drained and dry to prevent the spread of invasive mussels to other waters. In 2021, three mandatory inspection stations operated at Tiber Reservoir: Marina, VFW, and Willow Creek. These stations conducted over 1,600 inspections to ensure vessels were clean, drained and dry. If issues were identified on the boat or if standing water could not be drained, station staff decontaminated the vessel. Three Certified Boater ramps were operated at Tiber in 2021; although the Willow Creek inspection station allowed for all public access from July through August. Certified Boater ramps were gated to allow access only to boaters that primarily use Tiber. To access these ramps boaters were required to take a test and sign an affidavit stating they would follow the rules for Certified Boater ramps. Certified Boaters were permitted to use these ramps and could exit without an inspection if they were cleaned, drained and dry. If they intended to launch on another waterbody, an inspection / decontamination was required. There were 389 Certified Boaters for Tiber in 2021.

No evidence of invasive mussels was found in Tiber during the 2021 season. Intensive sampling over the past five years detected no evidence of mussels following the original mussel veliger detection in 2016. Regional standards allow for lifting restrictions following five years of no detects and FWP has initiated the public comment process to remove the “mussel positive” designation from Tiber. This change would remove exit inspection requirements and discontinue inspection station operations.

IN-STATE AND OUT-OF STATE BOATS

Border stations see higher percentages of out-of-state boats than internal stations, but internal stations also see out-of-state-boats and are extremely important to the overall prevention strategy. Many Montana boaters regularly recreate in AIS-positive waters and could potentially spread AIS to other clean waterbodies in the state. It is also common for Montana residents to purchase used boats from out-of state, particularly from Midwestern states. In 2021, half of the boats intercepted transporting zebra or quagga mussels were recently purchased from Midwestern states.

Internal stations provide another level of protection for boats that might miss an inspection at the border. Internal stations also help prevent movement of AIS between Montana waters. In-state boats can still transport AIS including species such as Eurasian watermilfoil, New Zealand mudsnails, Asian clams, faucet snails, illegal bait/live fish and pathogens between waterbodies. Internal inspection stations help contain AIS and minimize the potential spread among Montana waters.

AIS INTERCEPTED

Out of the 123,311 inspections during the 2021 season, 6,160 boats had some type of issue identified (Table 2). Standing water (water in bilges, live wells, etc.) was the most common issue identified followed by dirty boats and vegetation. Standing water is a concern because it can carry mussel larvae, disease-causing pathogens and plant fragments. Zebra or quagga mussels were found on 61 boats over the course of the season (Figures 8 and 9). These vessels are decontaminated on site and require a follow up inspection / decontamination before they are permitted to launch. Additional dry time may be required to ensure no live mussels remain on the vessel.

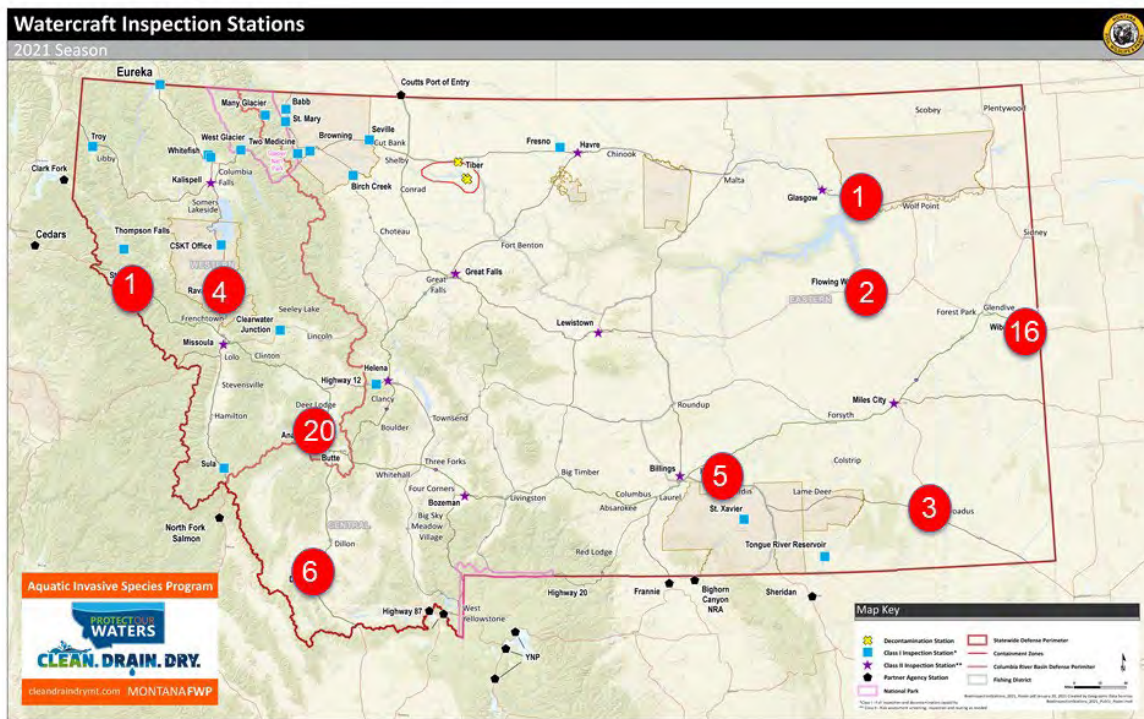
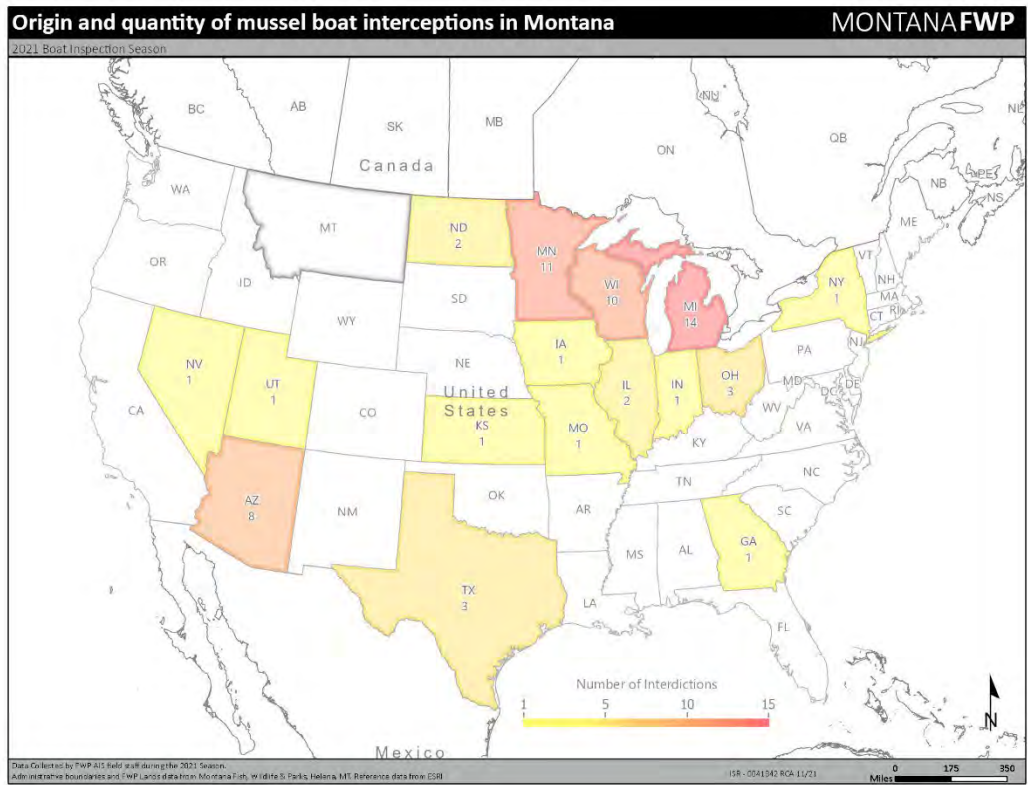


Figure 9. Mussel fouled vessel interceptions by station, 2021.

When a mussel-infested boat or piece of equipment is found, protocol mandates that FWP AIS staff are contacted and they direct next steps for decontamination. If the boat is complex (air conditioning unit, seas strainers, multiple internal compartments, complex plumbing, or ballast tanks), marine mechanics may be brought in to aid in the decontamination process. Boats must pass a second inspection before they can launch in Montana waters. Sixty-one mussel fouled vessel were intercepted in Montana in 2021 and 145 mussel fouled vessels have been intercepted over the last five years (Figure 10). The majority of mussel fouled vessels intercepted in Montana are from Midwest and Great Lakes states (Figure 11). More than half of these boats are used boats that are purchased in the Midwest and are transported to and through Montana. FWP is working with regional and national partners to better address this pathway to ensure boats are clean when they are transported to Montana.

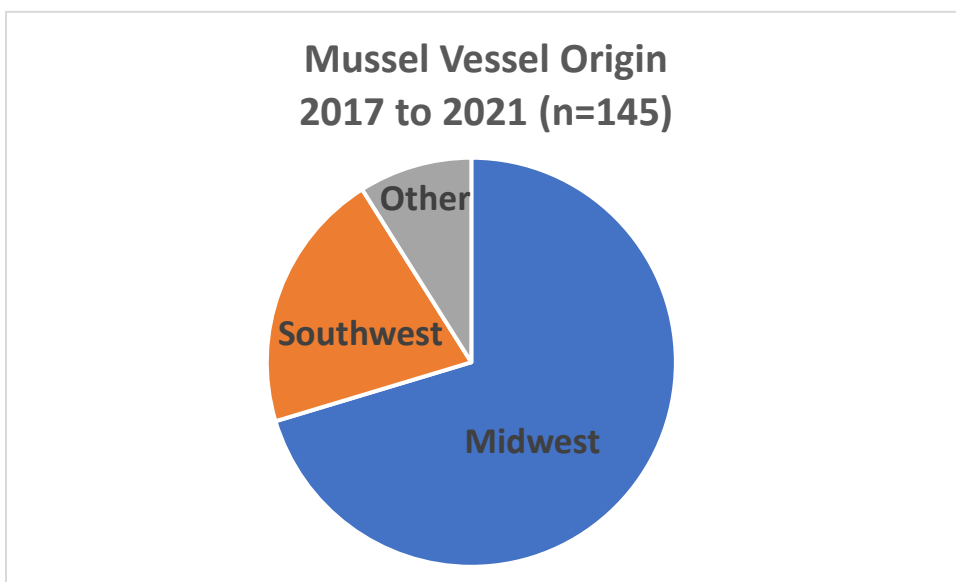
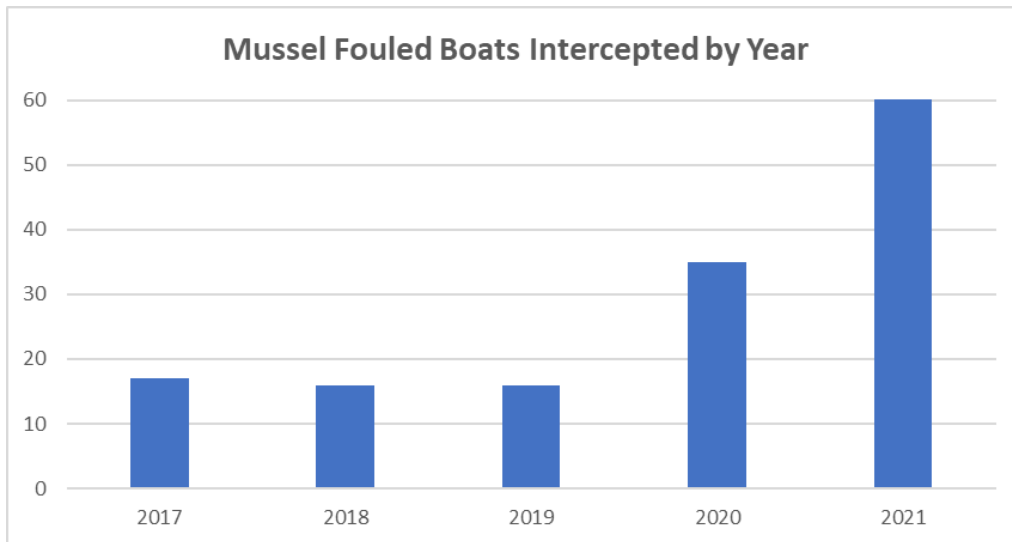


Figure 11: Mussel fouled vessel origin.

Table 2. Observations of mussels, plants, water, ballasts and illegal bait per station.

Station	Out-of-State	In-State	Total	Zebra / Quagga Mussels	Animals Found	Vegetation	Standing Water	Dirty, Crusty, Slimy	Illegal Bait	Illegal Fish	Ballast Boats	Total
Border Stations												
Nashua	806	1574	2380	1	0	4	27	3	0	0	3	2380
St. Regis	5,677	797	6474	1	10	101	237	20	0	0	234	6474
Dillon	3235	421	3656	6	4	8	95	8	0	0	230	3656
Eureka - Closed due to Covid-19	3	2	5	0	0	0	0	0	0	0	0	5
Hardin	3608	4,133	7741	5	7	32	482	36	0	0	405	7741
Troy	2047	4,284	6331	0	5	33	67	9	0	3	71	6331
Broadus (PRCD)	740	60	800	3	1	0	20	8	0	0	1	800
Wibaux	2665	187	2852	16	2	14	284	55	2	0	34	2852
Continental Divide Stations												
Anaconda	5408	5508	10916	20	4	28	149	18	1	0	623	10916
Browning (Blackfoot Nation)	404	1979	2383	0	0	3	6	2	0	0	61	2383
Clearwater Junction (MSLA County)	4936	26,078	31014	0	17	244	417	36	1	1	757	31014
Highway 12 Helena	849	4956	5805	0	1	2	74	3	0	0	133	5805
Sula	1021	466	1487	0	1	0	17	1	0	0	6	1487
Interior Stations												
St.Xavier (BCCD)	141	888	1029	0	0	0	0	0	0	0	1	1029
Flowing Wells (GCCD)	1351	2736	4087	2	0	12	724	20	0	0	14	4087
Seville (Blackfoot Nation)	27	131	158	0	0	0	0	0	0	0	3	158
Fresno Reservoir	121	621	742	0	0	2	115	1	0	0	30	742
Ravalli (CSKT)	5160	12424	17584	4	4	13	43	18	0	1	604	17584
Thompson Falls (CSKT)	1034	3312	4346	0	0	12	26	2	0	0	65	4346
Swan Lakers	n/a	n/a	652	n/a	n/a	n/a	n/a	2	0	0	0	652
Whitefish Lake (City of Whitefish)	246	1487	1733	0	1	5	34	2	0	0	211	1733

Station	Out-of-State	In-State	Total	Zebra / Quagga Mussels	Animals Found	Vegetation	Standing Water	Dirty, Crusty, Slimy	Illegal Bait	Illegal Fish	Ballast Boats	Total
Parks												
Tongue River State Park	511	1498	2009	0	0	0	24	1	0	0	108	2009
Glacier National Park	696	5960	6652	0	0	5	73	717	0	0	0	6652
Tiber Reservoir												
Marina	6	730	736	0	0	6	699	5	0	0	3	736
VFW	11	796	807	0	0	6	774	5	0	0	4	807
Willow Creek	1	103	104	0	0	1	101	0	0	0	1	104
Regional Offices												
Regional Offices	321	507	828	3	1	7	33	1	0	0	31	828
Totals	41,025	81,638	123,311	61	58	538	4,521	973	4	5	3,633	123,311

LIVE FISH

It is illegal to transport live fish, including bait fish, into Montana without authorization from FWP, and it is unlawful to possess or transport live fish away from the body of water in which the fish were taken anywhere in the western and central fishing district. Live non-game fish may be used as bait in certain waters in the central and eastern fishing districts. These regulations exist to prevent the introduction of non-native fish into Montana's waters. Fish and the water they are transported in can also carry pathogens, weeds, snails, mussels, or other AIS. In 2021, inspectors found five cases of illegal live fish over the course of the season. Standard protocol for inspection staff is to confiscate any illegal live fish and call an FWP game warden.

LIVE BAIT OTHER THAN FISH

Live animals such as mealworms, red worms, night crawlers, leeches, maggots, crayfish, reptiles, amphibians, and insects may be used as bait on all waters, but some live bait animals may not be imported into the state without authority from FWP. Leeches must be purchased in Montana or have a bill-of-sale from an FWP-approved out-of-state dealer. Leeches have the potential to transport pathogens and mussel larvae in the water that they are transported in. Watercraft station inspectors confiscate leeches if the angler cannot prove out-of-state leeches were legally obtained. Watercraft inspectors found four cases of illegal leeches in 2021.

COMMERCIALY HAULED AND OVERSIZE VESSEL TRACKING AND INSPECTION

Montana Department of Transportation (MDT) supports AIS prevention in several ways including the tracking and inspection of commercially hauled and oversize vessels (Figure 12). Licensing and permitting personnel with MDT question commercial boat haulers about the origin and destination of vessels during the permitting process and include restrictions on permits requiring boat haulers to contact FWP upon entry into Montana. AIS program staff receive notifications for all permitted vessels entering the state and follow up with all boats destined for Montana. For vessels passing through the state, notifications are forwarded to the destination state or province.



PHOTO 4. ST. REGIS WATERCRAFT INSPECTION STATION

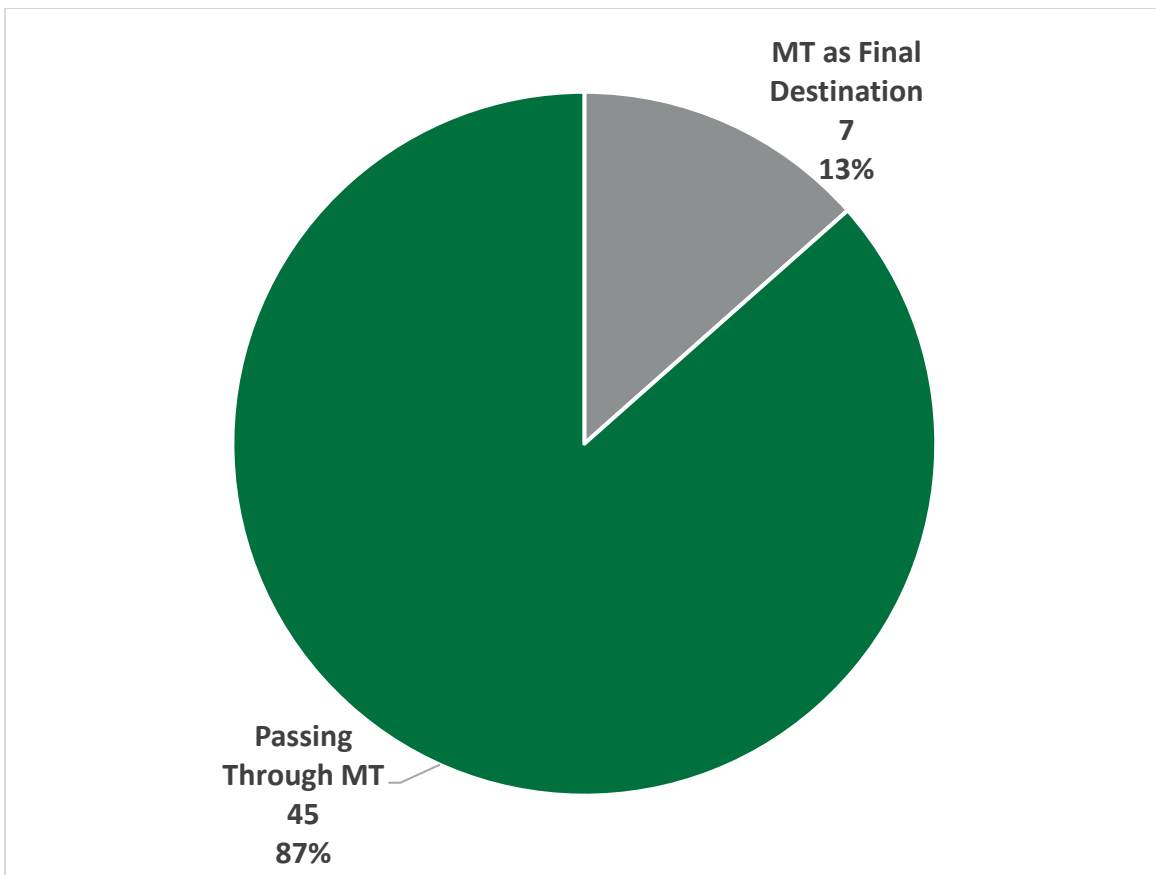


Figure 12. Percentage of commercially hauled boats staying or going through Montana, 2021.

ENFORCEMENT AND COMPLIANCE

Compliance at watercraft inspection stations is an ongoing challenge. To address this, FWP installs signage, flagging and lighted message boards to clearly indicate the inspection station and the mandatory need to stop. Despite this fact, boaters sometimes fail to stop at the station. FWP wardens dedicate time to work at stations throughout the season to enforce compliance. When wardens aren't present, station staff are trained to call 1-800-TipMONT if a boat fails to stop at the station. Enforcement officers from FWP, state police or local enforcement then attempt to follow up with that watercraft. FWP wardens issued 137 AIS related citations and 182 warnings in 2021. Most of these citations and warnings were for failure to stop at inspection stations. FWP wardens also stop boats on the water to ensure boaters have the proper safety equipment, check fishing licenses, non-resident vessel prevention passes and verify boats have met mandatory inspection requirements for entering the state or crossing west over the Continental Divide.

The AIS prevention program coordinates closely with the law enforcement division to direct enforcement resources to stations with compliance issues. The enforcement division did a great job across the state. They also provided the program with coverage at the Anaconda station Thursday through Sunday from Memorial Day to Labor Day. From 2017-2020 compliance has continued to improve and data from the enforcement division demonstrates this over this period. Since 2017 there have been 504 citations and 903 warnings issued to boaters who drive by stations.

OTHER PREVENTION EFFORTS

Wading anglers: FWP promoted a targeted outreach campaign to wading anglers encouraging cleaning boots and gear. Outreach was distributed to partners and user groups as well as through a joint effort with the Upper Columbia Conservation Commission (UC3), the Central and Eastern Montana Invasive Species Team (CEMIST) and FWP to direct outreach to fly shops and other water-based businesses. Signs were also installed at wading angler sites promoting the clean, drain, dry message.

Seaplanes: FWP was approached by the Seaplane Pilots Association (SPA) to help them ensure pilots do not transport AIS. The State of Washington, in coordination with SPA, developed a training and certification to ensure seaplanes are free of invasive species. <https://www.seaplanepilotsassociation.org/invasive-species/> Montana, Idaho and Oregon endorsed this training and coordinate with seaplane pilots to address the AIS issue.

QUALITY ASSURANCE QUALITY CONTROL (QA/QC)

It is an ongoing challenge to ensure that inspectors follow protocols every time to ensure boats are clean, drained and dry. To help address this issue, FWP has sought out local entities that are interested in operating watercraft inspection stations. Contracting with local entities such as tribes, counties or conservation districts allows for local management and expanded local support and participation in AIS prevention efforts. Contracted stations also are required to hire a station supervisor who reinforces protocols and provides additional oversight and management at the station.

QA/QC for the 2021 season included:

1. Updated training to include more hands-on and interactive content.
2. Refresher trainings delivered throughout the season.
3. An online inspection evaluation that was distributed to boaters to report on their inspection.
4. Lanyards with name tags with the back of the name tag stating what needs to be done on every inspection.
5. Evaluations of boats that had been previously inspected by another station.
6. Data review throughout the season.
7. Job performance assessments.
8. Annual performance reviews.
9. Secret shopper station evaluation.

SUMMARY

The 2021 watercraft inspection season was highly successful. Even with the challenges of Covid-19, inspections were still conducted safely and effectively, compliance continued to improve and a record number of mussel fouled boats were intercepted. Recruitment and retention of watercraft inspectors through partners and FWP staff continues to improve. Inspector professionalism and dedication to this issue are instrumental for stations running smoothly and providing good customer service to boaters. Many improvements were put into place in 2021 and the program continues to adjust and improve to become more effective and efficient.

Knowledge and awareness of the issues surrounding AIS also continues to increase because of the outreach and education efforts across Montana. The program is successful in large part due to the many partners around the state that are engaged in this issue. A special thanks to Missoula County Weed District, Confederated Salish and Kootenai Tribes, The Blackfeet Nation, Garfield County Conservation District, Glacier National Park, Whitefish Lake Institute and the City of Whitefish, McCone County Conservation District, Bighorn County Conservation District, and Powder River Conservation District for their involvement in the watercraft inspection effort.



Photo 5. Inspector finds a mussel on prop shaft at Anaconda watercraft inspection station.

Cover photo: Tiber VFW watercraft decontamination station during walleye tournament.