Boat Fee Revenues & Expenditures Fiscal Year 2022 Report



Department of Natural Resources Conservation and Recreation Division December 31, 2022 Kayla Lyon, Director



EXECUTIVE SUMMARY

In 2005, the Iowa General Assembly amended Iowa Code Chapter 462A.52 to increase boat registration fees for all types of watercraft, to change the registration cycle, and to require the Iowa Department of Natural Resources (DNR) to report on the increased revenues due to the fee increase and how they are expended. This is the fifteenth such annual report and includes data for FY22 compared to the base year in 2006.

The increased fees are required to be used to control the spread of aquatic invasive species, the administration and enforcement of navigation laws, and water safety education. The mandate required the Department to submit a report to the General Assembly by each year beginning in 2007. It was directed that the report contain summaries of the activities of the Department for the following:

- 1. Administering and enforcing programs to control aquatic invasive species
- 2. Administering and enforcing navigation laws and water safety
- 3. Amount of revenues collected as a result of fee increases
- 4. Detail of how the boat fee revenues were expended
- 5. Amount and source of all other boating related funds expended

Revenues: Comparisons and projections

When boat fees were increased in the 2005 legislative session, the registration period also was changed from two years to three years. For planning purposes, the Iowa Department of Natural Resources now plans revenues over three years.

	FY03	FY04	FY05	FY06
Boat fees	\$2,563,493	\$372,481	\$2,611,295	\$387,908
Federal match	\$1,298,443	\$1,296,070	\$1,411,585	\$1,533,266
Total Revenues	\$3,861,936	\$1,668,551	\$4,022,880	\$1,921,174

Table 1 Previous Revenues Under Two-year Registration Periods

Boat fees generated an average of \$1,483,794 per year (calculated from Table 1 above) during the last four years of the two-year registration cycle.

	FY20	FY21	FY22	3-Years of Revenue
Boat fees	\$1,292,462	\$708,308	\$6,565,196	\$8,565,966
Federal match	\$348,258	1,565,226	\$309,610,	\$2,223,094
Total Revenues	\$1,640,720	\$2,273,534	\$6,874,806	\$10,789,060

Table 2 Collected Revenues Under Three-year Registration Period

Looking at the past three years of collected annual revenue (FY20-FY22) the average increase of boat fees is \$1,371,886 in additional state revenue per year over the base year. Federal funds include the safety and education portion and motorboat access portion from the Federal Aid in Sport Fish Restoration program and Aquatic Invasive Species matching funds.

Expenditures: Comparisons and Projections

The final year under the previous fee structure, FY 2006, is the baseline year to measure future years' expenditures. Note that part of the seasonal Water Patrol Officer costs came from the Marine Fuel Tax fund in FY22 at a cost of \$172,151, and \$155,890. Marine Fuel Tax (MFT) was spent to purchase floating docks so no additional funds were expended to purchase navigational safety patrol boats this year.

	Base FY06	FY22
Navigation Enforcement and Boating Safety	\$1,995,996	\$3,298,848
Boat infrastructure maintenance/mgmt.	\$749 <i>,</i> 406	\$412,814
Aquatic Invasive Species	\$164,556	\$471,073
Water Trails and Dam Safety	\$10,410	\$103,961
Total Expenditures	\$2,920,368	\$4,286,696

Table 3 General Expenditure Categories

More detailed reporting of program-level expenses follow in this report.

AQUATIC INVASIVE SPECIES EXPENDITURES

The Iowa Department of Natural Resources Aquatic Invasive Species Program (DNR-AIS) is responsible for monitoring and managing aquatic invasive species (AIS) in Iowa. Goals of the DNR-AIS as stated in the "Plan for the Management of Aquatic Nuisance Species in Iowa" are:

- I. Minimize the risk of further introductions of AIS into the state of Iowa.
- II. Limit the spread of established populations of AIS into uninfested waters in Iowa.
- III. Eradicate or control to a minimum level of impact the harmful ecological, economic, social, and public health impacts resulting from infestations of AIS in Iowa.

Priority AIS in Iowa include zebra mussels (*Dreissena polymorpha*), Bighead Carp (*Hypophthalmichthys nobilis*), Silver Carp (*Hypophthalmichthys molitrix*), Eurasian watermilfoil (*Myriophyllum spicatum*), and brittle naiad (*Najas minor*). Additional species located in Iowa will also be addressed in this report.

This report reflects expenditures for FY22; however, information related to seasonal staff, surveys and outreach information is from calendar year 2022. Actions utilized to detect, manage, and prevent the introduction and spread of AIS in Iowa in FY22 included developing and maintaining partnerships to coordinate AIS activities, increasing public awareness of AIS, managing AIS infestations, and monitoring AIS populations. Major accomplishments included the following:

- Developed an Aquatic Vegetation Management Biologist position
- Employed 17 Seasonal Natural Resources Aides
- Conducted 2,671 watercraft inspections reaching 7,358 people on 79 waterbodies
- Conducted 106 angler interviews on 22 trout streams
- Supported 28 partnerships and cooperative projects
- Gave 22 live and virtual presentations at conferences, outdoor events and trainings
- Used geo-fencing to target 400,000 ads to visitors at 65 boat ramps
- Ran 100,000 OTT commercials, videos and displays targeting registered boat owners
- Served over 70,000 pre-roll video ads and over 400,000 digital impressions targeting boaters in Iowa
- Ran 330 commercials on Des Moines television stations and Dickinson County radio stations
- Displayed a digital billboard for 3 months in Dickinson County
- Recorded a segment for the Iowa Live television program
- Targeted water recreationists with AIS prevention messages using news station tickers, website takeovers and banner ads, boat ramp signs, news releases, social media and displays
- Chemically treated invasive aquatic plants in 29 waterbodies
- Completed 163 full-lake vegetation surveys
- Surveyed vegetation at 467 access points on 53 lakes
- Surveyed adult zebra mussels in Arrowhead Lake, Lake Pajoha, Rice Lake and Silver Lake
- Placed 76 zebra mussel veliger settlement samplers in 22 lakes and reservoirs
- Collected 81 water samples from 47 lakes and reservoirs and analyzed them for zebra mussel veligers
- Collaborated with Iowa State University and the U.S. Fish and Wildlife Service to acquire grants for 7 Asian carp projects in the Upper Mississippi and Missouri River Basins in Iowa
- Purchased supplies for DNR Fisheries management stations and hatcheries to prevent the spread of AIS during operations



Aquatic Invasive Species Program Personnel and Activities

A Natural Resources Biologist has coordinated the DNR-AIS program since 2000, a full-time Natural Resources Technician was added in October 2006 and a full-time Natural Resources Biologist (Vegetation Management Biologist) was added in December 2021. Seasonal staff for 2022 consisted of 13 Natural Resources Aides who conducted watercraft inspections and 4 Seasonal Workers who surveyed waterbodies for AIS across the state.

Watercraft inspectors discussed inspecting watercraft for AIS with operators from May through September 2022 Watercraft inspectors collected information on AIS presence and location, watercraft type and state of registration, number of people, last and next waterbody visited, and operator familiarity with Eurasian watermilfoil, brittle naiad, zebra mussels, Asian carp, and Iowa's AIS Law. Trailer stickers reminding boaters to prevent the spread of AIS were offered to each operator after inspection.

The table below summarizes the watercraft inspection effort of the DNR-AIS in 2022 and prior to receiving boat registration funds in 2006 when 2-3 seasonal employees split their time between watercraft inspections and AIS surveys. The emphasis for watercraft inspections in 2022 continued to be to target waterbodies that have had few inspections in the past. The number of watercraft inspections was down in 2022 compared to 2021, reflecting a decrease in boaters seen in Iowa and other parts of the country in the summer of 2022.

	2006	2022
Seasonal Employees	3 PT	13 FT
Watercraft Inspected	791	2,671
Personal Contacts	2,350	7,358
Waterbodies	16	79

Watercraft Inspection Summary

New Zealand mudsnails Potamopyrgus antipodarum and Didymo Didymosphenia geminate are two AIS found in trout

streams in the U.S. DNR-AIS seasonal staff for the Decorah and Manchester districts interviewed Iowa trout stream anglers to gauge their knowledge of these species and Iowa's AIS laws. The seasonal staff conducted 106 interviews on 22 trout streams in 2022.

DNR-AIS staff supported many partnerships and working groups in 2022:

- Aquatic Nuisance Species (ANS) Task Force and ANS Task Force Control Committee (Chair), and ANS Task Force Organisms in Trade Working Group
- Association of Fish and Wildlife Agencies (AFWA) Invasive Species Committee (Vice Chair)
- AFWA Conservation and Science MultiState Conservation Grant Program Technical Review Team
- AIS Community of Practice
- Upper Mississippi River Asian Carp Coordination Committee
- Upper Mississippi River Horizon Scan Project
- Asian Carp Lock and Dam 19 Acoustic Deterrent Project Team
- Asian Carp Carbon Dioxide Deterrent Coordination Team
- Missouri River Asian Carp Technical Committee
- Mississippi River Basin Panel (MRBP) on ANS and MRBP Outreach Committee, and MRBP Prevention and Control Committee
- Missouri River Basin AIS Team
- Mississippi Interstate Cooperative Resource Association Invasive Carp Advisory Committee and AIS Committee



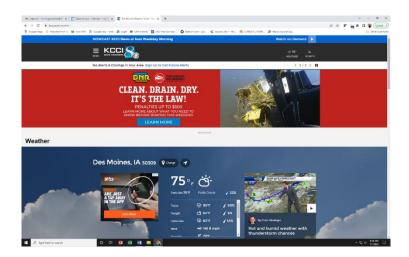
- Midwest Invasive Plant Network (MIPN) (Executive Board Member) and MIPN Diversity and Inclusion Committee, MIPN Education and Communications Committees and MIPN Early Detection and Rapid Response Committee
- Midwest Aquatic Plant Management Society (Board of Directors)
- Midwest Fish and Wildlife Conference 2022 Planning Committee
- Iowa Chapter of the American Fisheries Society
- Rehoming Our Animals/Aquarium Responsibly (ROAR) Working Group
- Iowa Great Lakes Eurasian Watermilfoil Management Working Group
- Lost Island Lake Eurasian Watermilfoil Management Working Group

DNR-AIS staff also started the process to update the AIS Rule by adding additional species to the prohibited fish, invertebrate, and plant lists.



Aquatic Invasive Species Outreach

The DNR-AIS has different types of social marketing and media to target water recreationists in Iowa in 2022. Geofencing advertisements (400,000) were used at 65 high use boat ramps and boat ramps on lakes invested with invasive aquatic plants in June and July to provide messages to boaters about the AIS Law and the need to "Clean, Drain, Dry" when leaving a water access. Over-the-top (OTT) commercials (100,000), pre-roll video ads (71,141), and visual displays (444,403) about the AIS Law and how to "Clean, Drain, Dry" boats and equipment were delivered to registered boat owners and water recreationists in Iowa from June through August. Three new commercials were produced that ran 149 times on Des Moines area television stations in addition to news ticker sponsorships, homepage takeovers, and rotator ads on the television stations and their websites. DNR-AIS staff also recoded a segment that aired on the Iowa Live television program in July. Boaters in Dickinson County were targeted during summer 2022 with 180 radio advertisements, a digital billboard, and a banner ad on the Explore Okoboji website. Postings on the Iowa DNR website and Facebook, Instagram and Twitter also included the "Clean, Drain, Dry" message and information about AIS in 2022.



Signs emphasizing the AIS Law continued to be posted at all boat access sites in FY22. Four CD3 cleaning stations are available for use at boat ramps in Northwest Iowa.

The following informational materials were made available at Iowa DNR offices, at state and county parks and nature centers, and at presentations and field days.

- Protect Our Waters brochure
- Protect Our Waterfowl Habitat brochure

- AIS identification cards
- Invasive Aquatic Plants in the Midwest flyer
- 2022 Iowa Fishing Regulations booklet
- Handbook of Iowa Boating Laws and Responsibilities

News releases also targeted statewide audiences regarding new AIS infestations in Iowa and before high-use boating events such as the Memorial Day and July 4th weekends. DNR-AIS and Fisheries staff were interviewed throughout the year for radio programs, television stories, and newspaper articles regarding AIS distribution, identification, management, and prevention. Exhibits at the 2022 Iowa State Fair included live Bighead Carp, Silver Carp and Goldfish.

DNR-AIS staff participated in or presented at the following conferences, training, field days, and other events in FY22 to spread the AIS message.

- Iowa Association of County Conservation Boards Winterfest
- New Conservation Officer Training
- Fisheries Statewide Meeting (2)
- Valley High School Career Fair
- Go Further: Career Conferences for Girls (3)
- Iowa Weed Commissioners Association Annual Conference
- Water Patrol Officer Training
- Iowa Children's Water Festival
- Seasonal Staff Training (2)
- Johnson County Conservation Board Invasive Field Day (2)
- Outdoor Journey for Girls (2)
- Union Grove Lake Homeowners Association
- Simpson College Virtual Career Fair
- Iowa State University Fisheries Management Class
- Iowa State University Fisheries Techniques Class
- Iowa State University Student Chapter of the American Fisheries Society

Data collected during watercraft inspections and trout stream angler interviews indicates that public awareness of AIS is high as a result of DNR-AIS outreach activities. Fifty-one percent of boaters interviewed in 2001 said that they were familiar with invasive species. That number has increased over the years and has consistently been above 90% since 2014. Knowledge of Asian carp (93%) and zebra mussels (91%) also remained very high in 2022. Awareness of invasive aquatic plants could improve as only about half (46%) of boaters interviewed stated they knew about Eurasian watermilfoil and less than one fourth (22%) knew about brittle naiad. This lack of knowledge may be reflective of targeting waterbodies that have not had many inspections in the past. Knowledge of the AIS Law increased significantly from a low of 22% in 2004 to a high of 95% in 2018. It was 83% in 2021; however, 89% said they knew about the requirement to remove the drain plug. Fewer (59%) trout stream anglers in 2022 were familiar with the AIS Law than in previous years. Additionally, only 22% were familiar with New Zealand mudsnails and 13% were familiar with Didymo. This shows that outreach to trout anglers needs to increase.



Aquatic Invasive Species Management and Monitoring

The addition of the Aquatic Vegetation Management Biologist to the DNR-AIS staff led to increased support of aquatic invasive plant monitoring and management. DNR Fisheries staff cooperated with DNR-AIS staff to chemically treat 29 brittle naiad (BN) and Eurasian watermilfoil (EWM), and yellow floating heart *Nymphoides peltatum* (YFH) infestations in 2022.

- Blue Pit (Cerro Gordo County), EWM
- Casey Lake (Tama County), BN
- Central Park Pond (Jones County), BN
- Cocklin Fish Farm Ponds (Cass County), BN
- Cold Springs Pond (Cass County), BN
- Crawford Creek Lake (Ida County), BN
- Dakins Lake (Story County), BN
- East Okoboji (Dickinson County), EWM
- George Wyth Lake (Black Hawk County), EWM
- Great Western Park Pond (Carroll County), BN
- Grundy County Lake (Grundy County), BN
- Lake MacBride (Johnson County), BN
- Lacey Keosauqua (Van Buren County), BN
- Lake Iowa (Iowa County), BN
- Lower Gar (Dickinson County), EWM
- Lost Island Lake (Palo Alto County), EWM
- McHose Park Pond (Boone County), YFH
- Minnewashta (Dickinson County), EWM
- Moorehead Park Pond (Ida County), BN
- Nelson Park Lake (Crawford County), BN
- Nine Eagles Lake (Decatur County), BN
- Pammel Park Pond (Winnebago County), EWM
- Pleasant Creek (Linn County), BN
- Rodgers Lake (Benton County), BN
- Sawgrass Pond (Polk County), EWM
- Slip Bluff Lake (Decatur County), BN
- Willow Lake (Harrison County), BN
- Yellow Smoke Lake (Crawford County), BN

DNR-AIS and Fisheries staff also continued the multi-year project of testing the use Sonar as an under-the-ice treatment for curlyleaf pondweed *Potamogeton crispus* at Union Grove Lake (Tama County), Hannen Lake (Benton County), and three ponds in the City of Ankeny during the winter of 2022. DNR-AIS staff arranged a tour for SePRO representatives in June 2022 of lakes in Iowa under management with SePRO products.

A pilot project was initiated in 2022 for an online permit application system for lakeshore owners and commercial companies to transport harvested aquatic plants from Clear Lake to local landfill green waste sites. The curlyleaf pondweed density was low in Clear Lake in 2022, so only one permit was applied for and issued. However, the logistics of pilot project were successful and could be implemented in other areas in the future.

DNR-AIS staff completed 163 full-lake vegetation surveys in June, July, and August 2022 to detect new AIS infestations and monitor managed AIS infestations. Seasonal Workers also conducted 467 access point surveys at 53 lakes around the state during the summer of 2022. The emphasis for access point surveys in 2022 was to target waterbodies once a month for early detection on new AIS introductions. Fisheries and wildlife biologists and county conservation board staff also monitored aquatic vegetation in their areas during management activities.

Ten new infestations of Eurasian watermilfoil (EWM), and brittle naiad (BN) were discovered in Iowa in 2022.

- East Okoboji Lake (Dickinson County), EWM
- Lake Petoka (Polk County), BN
- Liberty Lake (Ringgold County), BN
- Lost Island Lake (Palo Alto County), EWM
- Lower Eagle Pond (Polk County), BN
- Lower Gar Lake (Dickinson County), EWM
- Maynes Grove Pond (Franklin County), BN
- Minnewashta Lake (Dickinson County), EWM
- Upper Eagle Pond (Polk County), BN
- Upper Gar Lake (Dickinson County), EWM

DNR staff post signs at all infested waterbodies alerting the public that AIS are present and what Iowa's AIS Law is in order to prevent their spread. Eurasian watermilfoil has been identified in 64 waterbodies, including private ponds, in Iowa since 1993, and brittle naiad has been identified in 76 waterbodies since 2003.

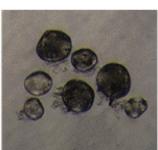
DNR-AIS staff collected 81 water samples for zebra mussel veliger analysis from 47 lakes and reservoirs in 2022 to monitor current populations or detect new infestations of zebra mussels. Zebra mussel veligers were detected in the following waterbodies.

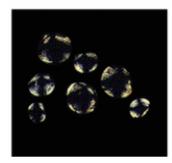
- Arrowhead Lake (Sac County)
- Black Hawk Lake (Sac County)
- Bluebill Lake (Cerro Gordo County)
- Center Lake (Dickinson County)
- Clear Lake (Cerro Gordo County)
- Crystal Lake (Hancock County)
- East Okoboji Lake (Dickinson County)
- Lake Cornelia (Wright County)
- Lake Pahoja (Lyon County)
- Lost Island Lake (Palo Alto County)
- Rice Lake (Winnebago County)
- Silver Lake (Dickinson County)
- Snyder Bend (Woodbury County)
- Spirit Lake (Dickinson County)
- Storm Lake (Buena Vista County)
- West Okoboji Lake (Dickinson County)

DNR-AIS staff conducted follow-up zebra mussel surveys at Arrowhead Lake, Lake Pajoha, Rice Lake, Silver Lake, and Snyder Bend to determine if there were established populations of zebra mussels in these lakes. No adult zebra mussels were found in any of the lakes, but DNR-AIS staff will conduct additional sampling in 2023.

DNR-AIS staff also placed 76 zebra mussel settlement samplers in 22 lakes and reservoirs throughout Iowa in 2022 to monitor for early detection of zebra mussels. No zebra mussels were identified on any of the samplers. We were able to increase the number of lakes with settlement samplers in 2022 because of the staffing changes in the AIS and Vegetation Management Programs.







Following is a list of lakes in Iowa with known infestations of zebra mussels. The date indicates the year in which zebra mussels were first discovered in the lake.

- Black Hawk Lake (Sac County), 2020
- Black Pit (Cerro Gordo County), 2021
- Bluebill Lake (Cerro Gordo County), 2012
- Blue Pit (Cerro Gordo County), 2016
- Center Lake (Dickinson County), 2018
- Clear Lake (Cerro Gordo County), 2005
- Crystal Lake (Hancock County), 2019
- East Okoboji Lake (Dickinson County), 2012
- Iowa Lake (Osceola County), 2020
- Lake Cornelia (Wright County), 2014
- Lake Manawa (Pottawattamie County), 2020
- Lost Island Lake (Palo Alto County), 2018
- Lower Gar Lake (Dickinson County), 2013
- Minnewashta Lake (Dickinson County), 2013
- Storm Lake (Buena Vista County), 2018
- Spirit Lake (Dickinson County), 2017
- Upper Gar Lake (Dickinson County), 2012
- West Okoboji Lake (Dickinson County), 2013

DNR-AIS staff serve as appointed members to the upper Mississippi River Asian Carp Coordination Team and the Missouri River Basin Asian Carp Technical Committee. Federal funding was allocated for FY22 for these river basins for Asian carp management and control. The DNR-AIS collaborated with Iowa State University (ISU) and the U.S. Fish and Wildlife Service to acquire grants for 7 Asian carp projects in the Upper Mississippi and Missouri River Basins in Iowa. These projects include monitoring movement of Asian carp in the Des Moines, Iowa and Cedar Rivers, sampling for Asian carp larvae in Iowa tributaries and monitoring Asian carp movement and habitat use in the Missouri River Basin, and evaluating the effectiveness of the electric barrier below Lower Gar Lake.

The United States Geological Survey and the United States Army Corps of Engineers, and United States Fish and Wildlife Service developed a project plan to test an acoustic deterrent system for Asian carp at Lock and Dam 19 on the Mississippi River. DNR-AIS staff are members of the project's Planning Team, Science Advisory Team, and Communications Team. Testing of the barrier began in May 2021, and DNR-AIS staff assisted with tagging Bighead Carp, Silver Carp, and native fish in 2022 to continue to evaluate movement through Lock 19.



The table below summarizes expenditures in FY22 compared to expenditures in FY06 prior to the DNR-AIS receiving boat registration funds.

Table 4 Aquatic Invasive Expenditures				
	FY06	FY22		
Personnel	\$85 <i>,</i> 234	\$279,204		
Travel Expenses	\$4,915	\$5,407		
State Vehicle Operation	\$3,281	\$42,490		
Office Supplies	\$399	\$97		
Facility Maintenance Supplies	\$26	\$4,757		
Equipment Maintenance Supplies	\$2,936	\$4,084		
Ag Supplies	\$42,751	\$52,523		
Other Supplies	\$100	\$5,229		
Printing	\$477	\$2,992		
Uniforms	\$455	\$1,922		
Postage	\$536	\$1,277		
Communications	\$651	\$2,265		
Utilities	\$0	\$1,181		
Professional and Scientific Services	\$0	\$0		
Outside Services	\$595	\$6,487		
Advertising and Publicity	\$11,390	\$25,228		
Reimbursement	\$0	\$25		
Government Transfer Other Agencies	\$0	\$15		
Equipment	\$1,042	\$211		
IT Equipment and Software	\$0	\$1,975		
Indirects	\$9,768	\$33,704		
Total	\$164,556	\$471,073		

Table 4 Aquatic Invasive Expenditures





BOATING NAVIGATION ENFORCEMENT AND WATER SAFETY EXPENDITURES

During the summer months, conservation officers and seasonal water patrol officers around the state use a variety of enforcement techniques to keep Iowa waterways safe for all ages.

Several group enforcement efforts on Iowa's 19,000 miles of interior rivers are conducted annually and are known as river sweeps. This technique allows officers to start at a specific point and continue downstream contacting boaters and educating them about boating regulations and safety.



Boating While Intoxicated (BWI) enforcement is a focus every year for officers. Iowa participated in "Operation Dry Water" on July 2-4, 2022, which is a national campaign that emphasizes the dangers of boating and drinking.

More than 184 law enforcement officers participated in this three-day event, contacting 5,253 boaters, performing safety equipment checks on 1,425 vessels and issuing 533 citations or warnings. Throughout the summer, a total of 30 BWI arrests were made by various officers.

Conservation officers provide boating education programs to various groups

throughout the year. One hundred twenty eight programs were presented to students about boating safety in all situations, including boating safety while waterfowl hunting. Approximately 4,458 students participated in these programs.



Seasonal Water Patrol Officers Program

The department receives approximately 100 applications each year from potential candidates who want to be a part of the seasonal water patrol officer (WPO) program. The WPO program has been in effect since the 1980s, and allows individuals the opportunity to work for the Law Enforcement Bureau while performing on-the-water education and navigation enforcement.

The seasonal water patrol officers assist full time officers in the enforcement of all fishing and navigation activities across Iowa. This program helps train future full time officers. Currently, almost half of the DNR conservation officers started their careers as seasonal water patrol officers.



In 2006, the department employed 22 seasonal water patrol officers. In FY22, the department had 25 WPOs on the books at a total cost of \$328,421.

Table 5 Law Enforcement Boating Activities (2022)			
Calendar Year*	Totals		
Navigation Contacts	27,680		
Navigation Citations	2,648		
Special Events Patrolled	183		
Incident/Accident Investigations	28		
In-person Boat Iowa Classes	0		
Boater Education Hours	1,986		
Navigation Enforcement Hours	29,396		



Boater Education

The Iowa DNR has a successful and proactive boater education program that aligns nationally with other, boating law administrators and education coordinators to focus on helping boaters understand and realize the importance of wearing life jackets. Iowa requires children under 13 to wear a PFD in a moving vessel.



In FY22 the education program continued to focus on the importance of wearing life jackets but due to staff shortages the boat ramps were not painted in Iowa's state parks.

The "Life Jacket Zone" message reminds boaters about the importance of wearing a life jacket while on the water and the DNR will look at this program again for FY23.

The Boater Education program continued to partner with Honey Creek Resort

and implemented a "life jacket" loaner program. The focus of the program was to make a variety of life jackets available to the public at no cost. The sizes of life jackets ranged from adult sizes all the way down to infant sizes. If a boater is without enough life jackets or the proper size of life jacket for each person on-board, jackets may be borrowed for the day. Over 100 lifejackets were loaned out to the public during this year at Lake Rathbun. The Boater Education program will continue to seek out additional pilot locations for the "life jacket loaner"

program.

The ".08 Don't Go Overboard" campaign used posters, public service announcements and public outreach to educate boaters on the dangers of drinking and boating. Information was again publicized to make sure the public understands that the blood alcohol content level for drinking and boating is now the same as the level for operating a vehicle. The "Boating While Intoxicated" campaign will continue to grow in the future to make the waters of Iowa safer for everyone.



The department also offers Boater Education Certificate classes to accommodate children between the ages of 12 and 18 who need the course to be able to operate motor boats. A total of 1,494 students received a certificate through home study and internet courses offered in 2022.

The table below lists the FY 2022 operations costs for the boating navigation enforcement and safety education programs, with the baseline year of 2006 displayed. Note that part of the seasonal Water Patrol Officer costs came from the Marine Fuel Tax fund in FY22 at a cost of \$172,151(state), and \$155,890 (federal).

Table o Navigation Emolecement and Safety Education				
	FY06	FY22		
Personnel and Operations	\$1,366,842	\$1,823,542		
Officer Retirements	\$73,986	\$68,273		
Vehicles and Depreciation	\$204,916	\$319,033		
In State Travel	\$54,495	\$11,080		
Printing	\$60,274	\$0		
Communications	\$30,509	\$39,337		
Indirects	\$204,974	\$253,949		
Totals	\$1,995,996	\$2515,214		

DNR Patrol Boats

The Law Enforcement Bureau divides the state into 6 districts and employs district supervisors to manage each area. The supervisors determine specific needs when purchasing large patrol boats in order to provide quality navigation enforcement and boating education in each area. Officers use several different types of vessels for navigation enforcement and boating education.

The Department currently has approximately 36 large patrol boats for navigation enforcement and boating education on Iowa's waterways. The goal is to replace vessels at least every 5 years, and earlier if needed.



In FY 2022 the Department used no additional money from the Marine Fuel Tax fund and boat fund to supplement the purchase of large patrol boats for navigation enforcement.

Water Trails and Low-head Dam Public Hazard Program Expenditures

The Iowa DNR water trails and low-head dam public hazard program works statewide to ensure improved navigational safety on waterways throughout Iowa. Water safety education, establishment of a river mileage-based signage system and a hazard warning signage system, development of navigational maps, and advising placements and designs for water accesses and portage trails around dangerous dams are all components of the program mission.

Dozens of water trail construction projects, and planning and design meetings unfolded in fiscal year 2022. These project incorporated techniques developed under statewide plans and are results of locally developed plans. Iowa DNR water

trails and low-head dam public hazard programs are administered by the DNR rivers team under the Land and Waters Bureau. Navigation and water safety activities include:

- Planning and funding for navigational signage placement, including mileage-based access numbers at landings, roadway signage leading people to boat accesses, dam warning signage, etc. via the water trails program.
- Plans, designs, and maintenance of warning signage and portage trails at DNR-owned low-head dams.
- Working with communities to install dam warning signage where dams have led to fatalities for recreational users. All users are considered, including walk-in anglers, powerboaters, tubers, and paddlers.



- Requiring water trail developers to place, maintain, and update dam warning signage.
- Purchasing and distributing educational flyers on canoe and kayak safety, low-head dam safety, participate in "Wear It" campaign targeting canoes and kayaks with promotional items purchased under operations budget.
- Advising fisheries, wildlife, county conservation, and municipal staff on boating access improvements, including boat ramps and canoe/kayak launches.
- Training county conservation, DNR, and children's camp staff in safely leading and teaching during canoe outings using American Canoe Association curriculum and the Rivers' team certified ACA instructors.
- Working to reduce hazards of low-head dams with high death rates through management of mitigation projects.

The Iowa DNR encourages local ownership of water trails throughout Iowa that support education, navigation, and recreation. Technical assistance is provided to communities working to find solutions at aging dams, and provides funds for mitigating dam problems, solving safety hazards, fish passage, upstream flooding, and failure-related issues.

The river programs team serves a growing segment of lowans – canoeists, kayakers, and innertubers, as well as more traditional recreational segments, including anglers and power boaters. National statistics show that canoeists and kayakers have a higher rate of death per capita compared to other boaters. Two brochures, "SmartStart for Safe Paddling" and "The Drowning Machine" continue to be disseminated to county recorders, boat rental facilities, paddling clubs, local governments, and field staff. Dissemination of safety information via social media is also conducted. New rounds of water trail brochures are produced and update each year as new water trails are designated and existing water trails are improved. A recently developed interactive paddling map offers opportunities for rivers staff to alert river users of dangerous hazards, such as, bridge construction projects and river-wide log jams.



Staffing

The river programs coordinator is responsible for overall program direction, which in the current fiscal year involved statewide plan development, collaborating on river survey, assessment, and design work with DNR Engineering, and technical assistance provided to external dam owners. Half of one FTE's time focuses on leading river survey and assessment work at low-head dams. The other half of this position focuses on the Protected Water Areas program, a land conservation program along rivers, and is not within the purview of this report. A water trails coordinator contracts



with local planners to lead planning efforts in coordination with statelevel strategies and standards. An outreach coordinator plans events, maintains Web information, organizes training opportunities for trip leaders and rental personnel, conducts surveys and disseminates safety and mapping materials and publications.

	FY06	FY22
Personnel	\$7,572	\$79,942
Personal Travel In-State	\$1,038	\$1,048
State Vehicle		\$3,138
Depreciation		\$1,676
Pers. Travel Out		\$319
Office Supplies		\$564
Facility Maintenance Supplies		\$242
Equipment Maintenance		\$289
Other Supply (training programs equipment, safety education & outreach materials)		\$525
Print, binding, and publications	\$1,800	\$263
Uniforms		\$436
Postage		\$1,256
Communications		\$890
Rentals		\$53
Reimbursement		(\$132)
ITS Reimbursement		\$431
Equipment Non Inventorial		\$2,031
IT Hardware		\$1,195
Other Expenses		\$137
Indirects		\$9,657
TOTAL	\$10,410	\$103,961

Table 7 Expenditures for Water Trails & Dam Safety

Iowa DNR owns or manages six major low-head dams on navigable streams. In the current fiscal year River programs staff initiated updated signage plans according to the new hazard signage manual, installed signs, and maintained portages at these dams. Staff also initiated an engineering design project to divest itself of one of those dams, the Steamboat Rock Dam on the Iowa River in Hardin County.



Paddlesports safety

The Rivers team offered a total of five "train the trainers" canoe and kayak courses in FY22 for trip leaders, city parks and recreation staff, naturalists and other agency staff. This skills course responds to a need identified by agencies with canoe fleets that take groups on lakes and river. It provides consistent training for leading safe tours, developing risk management plans, and demonstrating appropriate canoeing skills. DNR rivers team staff also received American Canoe Association training from instructor trainers to update training credentials. The national "Wear It" campaign was supported at events throughout the year. Presently, a new outreach campaign to large retailers selling kayaks is being conducted to provide basic safety information and to encourage the purchase and use of life jackets.



Dam mitigation

Iowa DNR River program staff works with dam owners to retire or mitigate a variety of problems when a dam has safety hazard issues and fish passage problems. Oftentimes, federal funding is available for projects that involve fish passage, so a natural development is to solve multiple problems combined into a single project. Iowa DNR staff work with communities statewide to explore, analyze, or develop dam mitigation projects. Dam mitigation priority areas are show on the map (Figure 1) below.

In the past year, the following projects moved forward to mitigate dams for safety and fish passage purposes:

- The Steamboat Rock Dam on the lowa River is in the permitting stage and will be replaced by a fishing park. It will go out for bids early next year.
- The Pammel Park Dam in Forest City is in the permitting phase and will likely be removed and turned into a rapids in 2023.



- The 12th Street Dam in Mason City were permitted and converted to rapids on the Winnebago River.
- The Otranto Dam was removed and comverted to a rapids on the Cedar River.
- The Pinicon Ridge Park Dam on the Wapsipinicon River was bid to be converted to a rapids.
- More than 10 new dam mitigation projects are in early stages

Program outlook

Training programs will continue to focus on individuals who lead programs, safe livery operations, and increasing availability of American Canoe Association courses offered throughout the state will also be important responses to increasing interest in river recreation. Dam mitigation and water trail projects are ongoing, with plans for infrastructure development in place.

See Figure 1 (below) for locations of completed and future hazard mitigation projects via removal or modification at several dams. Figure 2 shows the current status of water trail developments



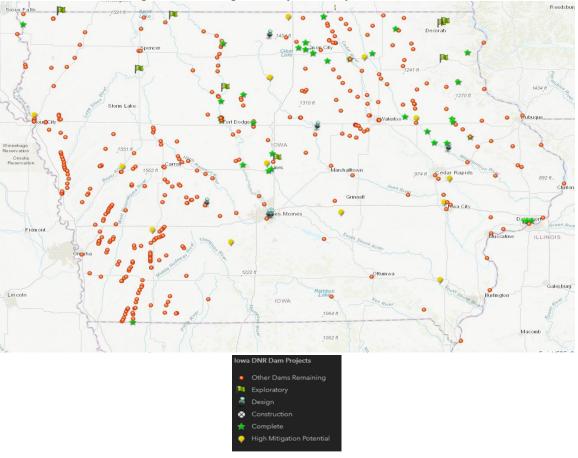
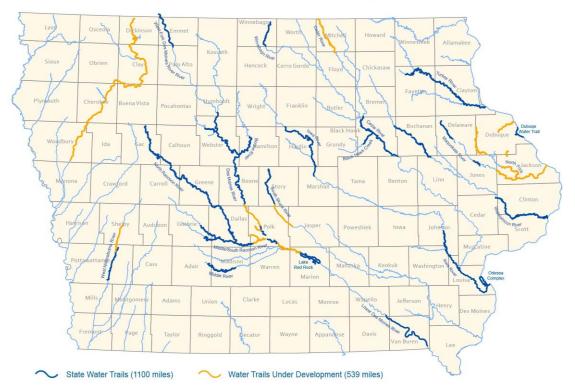


Figure 1 Dam Mitigation Projects, Completed and Active

Dams Mitigated				
Boone Waterworks Rapids	Buffalo Creek Park Dam Removal			
Littleton Rapids	Lincolnway Gaging Dam to Rapids Conversion			
Quasqueton Rapids	River Valley Park Whitewater			
Otranto Dam				
12 th Street Dam to Rapids (Mason City)				
Illinois Street Rapids (Mason City)	Hydroelectric Dam Removal (Fort Dodge)			
Fourth Street Dam Removal (Mason City)	Little Dam Removal (Fort Dodge)			
Lagoon Diversion Dam (Mason City)	Goldfield Rapids			
East Park Slide Dam (Mason City)	Hopkinton Dam to Rapids			
North Washington Mill Dam Removal	Story City Dam to Rapids			
Elkader Rapids	Ice Plant Dam Removal (Webster City)			
Quaker Mill River Restoration	Buffalo Creek Dam Removal (Kossuth)			
Manchester Whitewater Park	Hickory Grove Rd Rapids			
Charles City Whitewater Park	Washington St. Rapids			
Rockford Dam Removal	Marquette Rd Rapids			
Vernon Springs Rapids	Jersey Ridge Rd Rapids			
Corn Belt Power Dam Removal	Warner's Ford			
Troy Mills Rapids	Klondike Rapids			

Figure 2 Water Trails and Water Trails under Development, 2022

2022 State Water Trails Map



As of 2022, eleven regional master plans are complete. The localized plans completed since 2010 have led to a consistent and vetted local planning framework for water trail projects and low head dam mitigation, which is highly important in a state dominated by private landownership like lowa. Statewide, this results in a more robust and easy-to-understand navigational system. Two water trails, Cedar River and Black Hawk Creek in



Black Hawk County were state designated in 2022, adding 61 new state water trail miles, bringing the total to 1100. As numbers of recreational users increase, increasing focus on managing the experiences for all Iowans - from young to old - will become more important than ever. It has also led to increased law enforcement and education needs related to interacting with private landowners and other users along navigable rivers. To handle increased use, all Iowans must learn to treat our waterways respectfully to avoid litter and obnoxious behavior. The "Keep It Clean, Keep It Fun" campaign continues to be very popular with most local land managers promoting the campaign by installing the optional "Keep it Clean, Keep it Fun" sign at their water accesses, in addition to handing out mesh bags for local paddlesports enthusiasts to pick up trash on their trips between access points.



Table 8 Water Trails & Dam Safety Status at a Glance

	2006	2022
Total number of individual water trails with state designation, to date	0	33
Miles of water trails designated	0	1,100
Number of low-head dams with warning signs	2	44
Number of portage trails around low-head dams completed, to date	2	32
Number of low-head dams modified or removed for safety purposes, to date	0	34

In addition to the 1,100 miles of state-designated water trails (see Figure 2) the river programs staff and local planning contractors are working with local communities on 539 miles of state paddling routes. An exciting opportunity presented itself this year when local county conservation directors from seven counties along 200 miles of the Little Sioux River were able to leverage assistance from National Parks Services through its Rivers, Trails and Conservation Assistance (RTCA) program to help with public engagement, the first step in developing the water trail plan, and eventually state designation. The collaborative juices have really been flowing as local leaders team up with state and federal agencies to work toward mutually beneficial goals. The water trails program has focused on implementing statewide plans focusing on river management and law enforcement needs, infrastructure needs, maintenance expectations, and comprehensive navigational / warning signage systems based on river mileage. These plans solve address problems, including safety, overcrowding or underuse, jurisdictional issues, and user expectations.

Two new water trail designations are anticipated for spring, and one for fall 2023. A number of individual water trail access projects have been funded for state designated water trails, with most of the grant dollars being provided by DNR's Water Trail Enhancement Grant and DOT's Federal Recreational Trails Grant which leverages 20 - 35% local match. The momentum is building as more funding becomes available.

Increasingly, river restoration components are being incorporated into all river programs projects. Examples include stream bank restorations along water trails for safety/aesthetic/angling improvements, site restoration at dam mitigation projects, and incorporating aquatic habitat into navigational access projects for anglers and river species. Restoration skills among program staff are helping with project stability needs in the always changing river setting.



Boating Recreation Infrastructure Maintenance and Management

The lowa DNR owns or manages infrastructure for boating recreation across the state. *This infrastructure is integral to safe boating and access to the waters.*

The Law Enforcement Bureau and the Fisheries Bureau do not typically manage land and do not have the staff for this type of maintenance and management. The Wildlife Bureau staff manages and maintains state fishing access areas, boat ramps and docks in cooperation with other bureaus. See the attached Addendum A for the listing of the safe boating access areas managed by the Wildlife Bureau staff. Boating populations, including paddlers, have increased over the years and there is an ever-growing demand for safe, convenient and appropriate boating access areas.

These areas are heavily used for access 9 months of the year, or even more depending on the weather. They require frequent maintenance, especially since most are along river corridors in



flood plains. Maintenance and management includes re-rocking areas, cleaning silt from the boat ramps, custodial functions such as removing trash and debris and maintaining signage. In addition to the staff time of the actual work, drive time and driving expenses are included, as Wildlife Headquarters cover 4-6 counties and the areas are remote.

The attached listing of areas represents 105 accesses that qualify for federal boat access funds. There is a detailed federal process to obtain the funds through a formula, and rigorous federal audits on those funds to make sure the boat fees and federal funds are used for the purpose of maintaining safe boat access areas. There are between one and four access ramps for each of the sites that require maintenance. The total cost per access averages out to less than \$5,000 a year in maintenance. The cost of this program is leveraged **75% federal** with 25% boat registration fees.

Table 9 Boat Fee Expenditures for Boating Infrastructure Maintenance & Management (Salaries for labor, contracted services, equipment, signage, publications, etc.)

	Federal	Boat Fees	Total
FY06 (base year)	\$562 <i>,</i> 055	\$187 <i>,</i> 351	\$749,406
FY22	\$309,610	\$103,203	\$412,814

NOTE: These federal funds can only be used for this purpose, and would be forfeit if not matched by boat fees.

Iowa's Marine Fuel Tax (MFT) Program

The Iowa DNR Marine Fuel Tax program is not directly tied to the boat fee revenues and expenditures, but it is a complimentary program. MFT has played a vital role in providing recreational boaters new opportunities as well as maintaining public lakes used by boaters.

• Revenue from the excise tax on the sale of motor fuel used in watercraft

The amount of revenue generated by the marine fuel tax legislation equals ninetenths of one percent of the state excise tax on gas, minus 3% of the marine fuel tax total for administrative costs and minus the amount refunded to commercial fishers based on the gallons of fuel they used.

• MFT funds are leveraged with a variety of sources including Federal Coast Guard, Corps of Engineers Section 1135, State of Iowa Parks and Institutional Roads Fund, and local city and county conservation funds.



- Annual MFT funding \$4.0 to \$4.4 million. Funds are often "carried forward", as they are connected with construction projects that might take multiple years to complete.
- MFT funds are appropriated to the DNR to support and enhance recreational boating. Funded projects may include but are not limited to:
 - 1. Dredging and renovation of lakes of this state.
 - 2. Acquisition, development, and maintenance of access to public boating waters.
 - 3. Development and maintenance of boating facilities and navigation aids.
 - 4. Administration, operation, and maintenance of recreational boating activities.
 - 5. Acquisition, development, and maintenance of recreational facilities associated with recreational boating.
- Examples of MFT projects:
 - Docks and buoys
 - New lake construction projects
 - Boat ramp restroom installations (various counties)
- DNR Water Recreation Access Cost-Share Program
 - Around \$400,000 of MFT funds are available in the form of grants to local cities and counties for boat access facilities to lakes and streams.
 - Projects are funded 75% state to 25% local match
 - DNR receives grant requests for 15 to 30 projects and awards amounts usually between \$2,000 and \$50,000

Addendum B is the FY 2022 MFT expense report.

Addendum A - Wildlife Bureau Management and Maintenance of Boating Accesses Areas

Badger Creek Recreation Area Badger Lake Wildlife Area Barringer Slough Wildlife Area Bartlett Access Bay's Branch Wildlife Area Beaver Lake Wildlife Area Bel Aire Access & Outlet **Big Sioux River Complex** Black Hawk Wildlife Area Blackhawk Bottoms Wildlife Area Blue Lake Wildlife Area **Bluebird Access** Boone Forks Wildlife Area Brown's Lake Wildlife Area **Center Lake Complex** Chenoweth Access **Christopherson Slough Complex Cliffland Access** Cone Marsh Wildlife Area Cutshaw Wildlife Area Dan Green Slough **Deception Hollow** Deer Island Wildlife Area Dewey's Pasture Complex **Diamond Lake** Dudgeon Lake Wildlife Area

Elk Creek Marsh Elk Lake Wetland Complex **English River Access** Five Island Lake **Fogle Lake** Gambril Access Gitchie Manitou Goose Lake-Kossuth Hales Slough Hardfish Access Hawthorn Wildlife Area Highway 21 Access Hooper Wildlife Area Highway 44 Access Ingham-High Wetland Complex Iowa Lake-Emmet Iowa Lake – Osceola Iowa Lake Access 3 Kettleson Hogsback Complex Klum Lake Wildlife Area Koszta Access Lake Cornelia Access Lake Icaria Lake Icaria Wildlife Area Lake Sugema Wildlife Area Lennon Mills Wildlife Area

Little Clear Lake Little Sioux Wildlife Area Little Storm Lake Lizard Lake Meadow Lake Middle Decatur Bend Wildlife Area Morse Lake Wildlife Area Mount Ayr Wildlife Area Odessa Wildlife Area **Olin Access** Otter Creek Marsh Otterville Wildlife Area Perry Access Pickerel Lake **Pictured Rocks Wildlife Area** Pool Slouch Wildlife Area Princeton Wildlife Area Rand Access **Randolph Access** Rice Lake Wildlife Area **Riverton Wildlife Area Rock Creek Island Preserve** Rock Creek Wildlife Area Round Lake Wildlife Area **Rubio Access** Rush Lake-Palo Alto

- Selma Access Silver Lake-Palo Alto Silver Lake Complex Skunk River Wildlife Area Snyder Access South Skunk River Access South Skunk River Access South Twin Lake Sweet Marsh Three Mile Wildlife Area
- Troy Mills Wildlife Area Tunnel Mill Access Tuttle Lake Wetland Complex Tyson Bend Wildlife Area Upper Decatur Bend Wildlife Area Upper Iowa River-Iverson Bottoms Upper Iowa River-Plymouth Rock Upper Iowa River-Seegmiller Upper Iowa River-Upper Dam
- Virgin Lake Weedland Access West Swan Lake White Horse Access Wiese Slough Wildlife Area Williamson Pond Willow Slough Willows Access Winnebago Bend Wildlife Area

Addendum B - MFT 2022 Expenditure Report				
Project	Federal	MFT	Other	Total
12 Mile Lake South Ramp Pit Vault	\$ -	\$ 38,431	\$ -	\$ 38,431
Big Creek Boat Storage Parking Lot	\$ -	\$ 270,439	\$ -	\$ 270,439
Big Creek Boat Access Improvement Match to BA	\$ -	\$ 461,934	\$ -	\$ 461,934
Geode State Park Boat Ramp Improvements-CG	\$ 33 <i>,</i> 483	\$ 33,483	\$ -	\$ 66 <i>,</i> 965
Geode State Park Boat Ramp Impr-non-CG	\$ -	\$ 55,436	\$ -	\$ 55,436
Iverson Cement Boat Ramp	\$ -	\$ 13,065	\$ -	\$ 13,065
Lake Sugema Jetty Repair	\$ -	\$ 10,802	\$ -	\$ 10,802
Lansing Village Boat Channel Dredge	\$-	\$179,550	\$-	\$179,550
Littleton Dam/Navigation-Development	\$ 11,893	\$ -	\$ -	\$ 11,893
Lost Grove Pit Vaults & Cleaning Service Contract	\$ -	\$ 7,200	\$ -	\$ 7,200
McIntosh Woods Decontamination Station Pulloff	\$-	\$36,748	\$ -	\$ 36,748
Saylorville Sportsman Parking Lot/Ramp Improvement	\$742	\$742	\$-	\$1,485
Saylorville Upper Fraser Shoreline Near Ramp	\$742	\$ 742	\$ -	\$ 1,485
State Parks Minor Projects	\$ -	\$ 170,366	\$ -	\$ 170,366
Statewide Boat Dock; Fish Cleaning Stations; Buoys	\$ -	\$ 77,215	\$ -	\$ 77,215
CG cost shared floating docks/Gull Point Dock Proj	\$119,805	\$119,805	\$-	\$239,610
Statewide Emergency/Miscellaneous	\$ -	\$8,722	\$ -	\$ 8,722
Statewide Engineering & Design	\$ -	\$ 433,669	\$ -	\$ 433,669
Statewide Shoreline Access Acq & Dev	\$ -	\$ 208,942	\$ -	\$ 208,942
Statewide-Outside Design	\$-	\$1,391	\$-	\$1,391
Statewide Shoreline Rip Rap	\$-	\$ 454,195	\$ 80,000	\$ 534,195
Statewide Shoreline Rip Rap-GV match to LWCF	\$-	\$90,236	\$-	\$90,236
Statewide Water Recreation Access Grants	\$ -	\$ 297,270	\$ -	\$ 297,270
Steamboat Rock Dam Navigation Design	\$ -	\$ 1,193	\$ -	\$ 1,193
Vegetation Management	\$ -	\$86,902	\$ -	\$ 86,902
Water Trails Grant Program	\$ -	\$ 58,346	\$ -	\$ 58,346
Water Recreation Resources- Operations	\$ -	\$432,003	\$ -	\$432,003
Water Trails Minor Projects	\$ -	\$ 38,872	\$ -	\$ 38,872
Wildlife Minor Projects	\$ -	\$ 257,554	\$ -	\$ 257,554
Total Marine Fuel Tax	\$ 218,090	\$ 3,930,793	\$80,000	\$ 4,228,883

Addendum B - MFT 2022 Expenditure Report