# Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program Year-End Report 2021


INVASIVE SPECIES MANAGEMENT
CAPITAL REGION

Contract # C011280
Capital Region Partnership for Regional Invasive Species Management hosted by Cornell Cooperative Extension of Saratoga County | 50 W High Street, Ballston Spa, NY 12020

# Capital Region PRISM

## Partnership for Regional Invasive Species Management

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NEW YORK STATE INVASIVE SPECIES MANAGEMENT

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**Abbreviation List**

| | |
|---|---|
| **AIS** | Aquatic Invasive Species |
| **AISSPP** | Aquatic Invasive Species Spread Prevention Program |
| **CCE** | Cornell Cooperative Extension |
| **EPF** | Environmental Protection Fund |
| **IFB** | Invitation for Bid |
| **NYNHP** | New York Natural Heritage Program |
| **NYS** | New York State |
| **NYS DEC** | New York State Department of Environmental Conservation |
| **PPE** | Personal Protective Equipment |
| **PRISM** | Partnership for Regional Invasive Species Management |
| **PWC** | Personal Watercraft |
| **Steward** | Watercraft Steward |
| **SUNY ESF** | State University of New York College of Environmental Science and Forestry |
| **SUP** | Stand-up Paddleboard |
| **WISP** | Watercraft Inspection Steward Program |
| **WISPA** | Watercraft Inspection Steward Program Application |
| **WB** | Waterbody |

# Abstract

The following report summarizes data and highlights for the 2021 Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program (AISSPP), Contract Number C011280 as administered by Cornell Cooperative Extension (CCE) of Saratoga County through the Capital Region Partnership for Regional Invasive Species Management (PRISM). The AISSP program was made possible through the New York State Department of Environmental Conservation (NYS DEC) Environmental Protection Fund (EPF). The program is in the final year of a three-year contract with a possible fourth year extension in 2022. The goal of the AISSP program is to prevent the introduction and slow the spread of aquatic invasive species (AIS) in the Hudson and Mohawk River Valleys through education and outreach and voluntary watercraft inspections.

The AISSPP contract originally permits the Capital Region PRISM to place up to 26 watercraft stewards at a possible 29 designated launch locations along the Hudson and Mohawk Rivers from 2019 – 2021 starting the Friday before Memorial Day and ending on Labor Day each year. The designated window of operation for the program encompasses the entirety of New York State's primary boating season for each year of the contract.

In 2021, the Capital Region PRISM hired 15 watercraft stewards who were placed at 23 launch locations in the geographic area of the contract. Watercraft stewards helped prevent the spread of aquatic invasive species by delivering AIS spread prevention education and outreach awareness to boaters. Stewards delivered clean, drain, dry programming as outlined in the "New York State Watercraft Inspection Steward Program Handbook" Publication ID: NYSGI-H-14-001 and recommended by the NYS DEC. Watercraft stewards surveyed boaters launching and retrieving at sites while demonstrating to boaters how to inspect and remove plants and organisms from their equipment through voluntary watercraft inspection.

In total, the Capital Region PRISM's watercraft stewards educated 16,868 individuals while inspecting 11,467 watercrafts. Stewards intercepted 533 AIS from watercraft during inspections which encompassed 4.6% of all watercraft inspected. 67% of individuals surveyed utilized clean, drain, dry practices before arriving at the launch and 76% of boaters had previously interacted with a watercraft steward in the past. Based on several factors, there were noticeable differences between launch sites in terms of main type of watercraft launching, primary activity of boaters, transport rates of AIS, and percentage of recreational users taking spread prevention measures. This report reviews data collected from the launch locations covered during the 2021 boating season.

**16,868** – Individuals educated

**11,467** - Watercraft inspections

**533** - AIS intercepted

**4.9%** - Watercraft inspected carrying AIS

**159** - Unique previous waterbodies

**15** - Watercraft Stewards

**23** – Launch locations

**67%** - Boaters preventing spread of AIS

**76%** - Boaters interacted with steward in the past

# Introduction

## About Cornell Cooperative Extension of Saratoga County & the Capital Region PRISM

The Capital Region PRISM is hosted by the Cornell Cooperative Extension of Saratoga County. The Capital Region PRISM is financially supported through the New York State Department of Environmental Conservation through the Environmental Protection Fund. The organization was fully funded in 2018 with a five-year contract through 2022.

The Capital Region PRISM is a not-for-profit quasi-governmental agency. The office is staffed with a full time Aquatics, Terrestrial, Education and Outreach, and Lead Coordinator. Seasonal staff include watercraft stewards and interns from affiliated colleges in the Capital Region. The PRISM provides services in eleven counties in the New York State Capital Region: Albany, Columbia, Montgomery, Rensselaer, Schenectady, and portions of Fulton, Greene, Herkimer, Saratoga, Warren, and Washington.

The Capital Region PRISM is one of eight PRISMs in New York State. The PRISMs were created in response to the growing problem of invasive species in NYS over the past several decades. In 2003 New York State established an Invasive Species Task Force. In 2005 the NYS Invasive Species Task Force recommended building and funding a network of invasive species partnerships to prevent or minimize the harm caused by invasive species to New York's environment in its report to the Governor and legislature. To act on that recommendation, the NYS DEC contracted the establishment of eight PRISMs across the state.

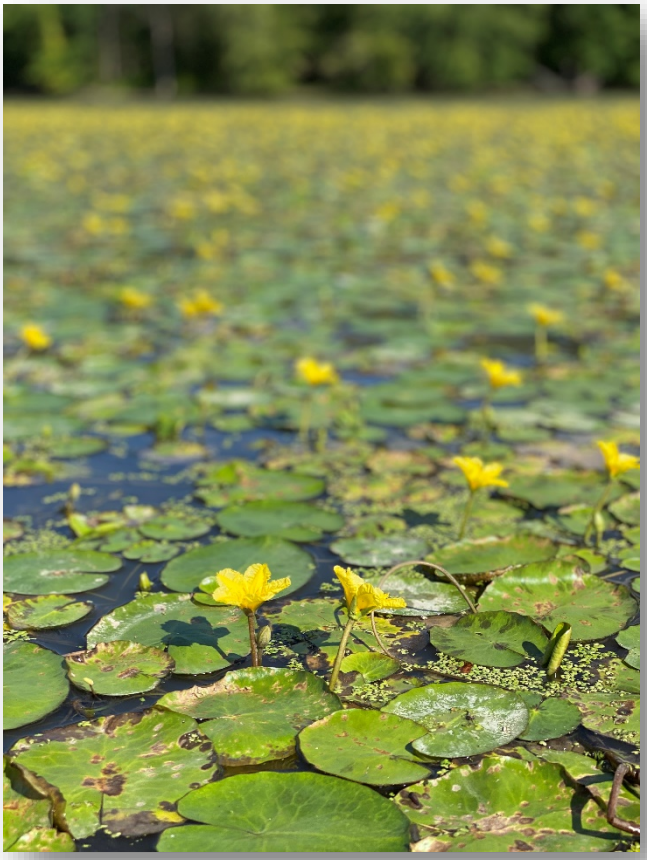
The primary goal of the Capital Region PRISM is to prevent the spread of invasive species through prevention and education strategies, early detection, rapid response efforts, and restorative measures. The PRISM serves as a point of contact in which collaborations are fostered, resources are distributed, and information is shared. The PRISM also supports research projects.

In 2018, the New York State Department of Environmental Conservation solicited an Invitation for Bid on the AISSP program for the Hudson and Mohawk River Valleys. The Capital Region PRISM, hosted by the Cornell Cooperative Extension of Saratoga County, was awarded the bid in 2019 from the NYS DEC. By deploying the AISSP program through the CCE of Saratoga County, the Capital Region PRISM is able to work towards the primary goal of preventing the spread of invasive species through prevention and education strategies.

## The Hudson and Mohawk Rivers and the Threat of Aquatic Invasive Species

Both the Hudson and Mohawk Rivers are critically important waterbodies on a local and regional scale. The two rivers support a multitude of native species, both aquatic and terrestrial, and provide numerous recreational opportunities for the public. The Hudson River boasts a unique brackish ecosystem as a tidal estuary, making it an important component for our aquatic ecosystems. The Hudson Valley is also one of the most species rich regions in the Northeast. The Hudson River is home to more than 200 fish species which include the largest remaining population of endangered Atlantic and short nose sturgeon (The Hudson Valley Conservation Strategy, Scenic Hudson, 2017).

Unfortunately, over the past few decades, invasive species have plagued both waterways and have caused numerous issues for our native species. Over 120 aquatic nonnative and invasive species have been found within the Hudson River estuary (New York State Aquatic Invasive Species Management Plan, NYS DEC, July 2015). The Mohawk River has not been spared either, invaded by numerous aquatic invasive species found within the Hudson River and Great Lakes due to the river's connection with each waterbody. With the Mohawk and Hudson Rivers acting as navigable commercial waterways for New York State, the two rivers act as a vector for the spread of invasive species to other waterbodies (some entirely uninvaded by AIS) throughout the state. Thus, the implementation of a watercraft inspection steward program along these corridors that actively engages and educates the public about the threats of AIS was imperative. By placing watercraft stewards at launch locations along both the Hudson and the Mohawk Rivers, the chance of aquatic non-native and invasive species spread to other waterbodies can be reduced.



# Program Description and Methods

## Background

The Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program adds great value to the NYS Department of Environmental Conservation by aiding in accomplishing the goals of the New York State Comprehensive Invasive Species Management Plan (2018). Among the initiatives of the management plan are the goals of (1) engaging and informing the public and (2) advancing prevention and early detection of

invasive species. Through AISSPP, the Capital Region PRISM is able to fulfil both of these goals through educating boaters and the public and completing watercraft inspections for AIS at various locations along the Hudson and Mohawk Rivers.

The Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program exists to provide education and outreach to the public and prevent the spread of aquatic invasive species. Watercraft stewards are stationed at public boat launches to educate the public on the treats of AIS and help prevent AIS transport from each location (if AIS is present) and prevent new AIS introductions. Watercraft stewards provide voluntary, non-decontamination, inspections for watercraft recreationist at each launch. One of the goals of the inspections is to train the public on how to prevent the spread of AIS. This is achieved through encouraging participation in the inspection process which ultimately encourages a behavioral change that motivates individuals to practice Clean, Drain, Dry standards on their own.

Watercraft stewards work on a full-time, seasonal basis from the Friday of Memorial Day weekend until Labor Day week. Stewards typically work Thursday-Monday from 7:00 am-3:30 pm, totaling 640 hours for the season per contract requirements. Some watercraft stewards are assigned to one location for the entirety of the season, while others are assigned to up to four launches that are rotated through throughout the season.

Cornell Cooperative Extension of Saratoga County through the Capital Region PRISM is responsible for administers the 3-year contract (C011280) from 2019 to 2021, with a possible contract extension into 2022. The program began on March 1, 2019 and is anticipated to run until December 31, 2021. The main deliverables of the contract include recruiting and fully training qualified watercraft stewards, deploying the WISP from the Friday of Memorial Day Weekend through Labor Day, delivering DEC AIS spread prevention products and consistent messaging, and collecting data through the Watercraft Inspection Steward Program Application.

The original parameters of the AISSPP contract allowed for up to 26 watercraft stewards to be hired at 29 launch locations. Contractual locations were modified for the 2021 season by the DEC and the Capital Region PRISM to better facilitate programmatic deliverables at higher use sites based on data collected from 2019 and 2020. In 2021 after alterations to total launch locations, the Capital Region PRISM hired 15 stewards and provided coverage at 23 launch locations in 10 different counties (Albany, Dutchess, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Ulster, Washington and Westchester). Due to factors such as recruitment difficulties due to the Covid-19 pandemic, rural locations, and safety concerns, coverage was not available at all launch locations that were selected for 2021.

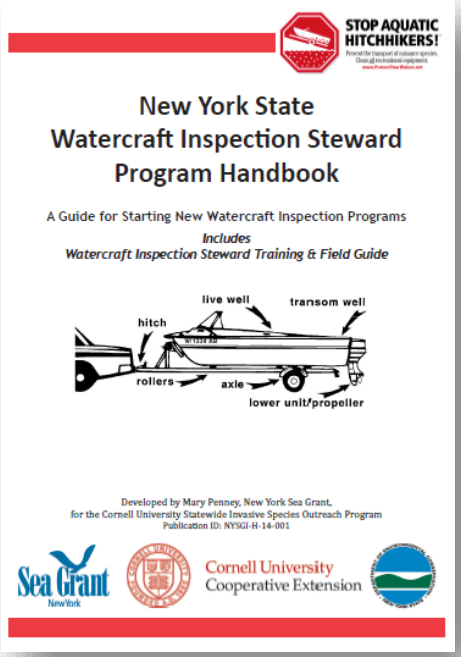
While the Capital Region PRISM has utilized watercraft stewards in the past to gather boater and launch use data, 2021 was only the third year the organization has administered a full-scale watercraft inspection steward program across both the Hudson and Mohawk River regions. In 2020, the Capital Region PRISM employed 22 full-time watercraft stewards that covered 28 launch locations along the Hudson and Mohawk River regions. In 2019, the Capital Region PRISM employed 18 full-time watercraft stewards that covered 23 launch locations along the Hudson and Mohawk River regions. In 2018, the Capital Region PRISM housed three interns who gathered spread metrics of aquatic invasive species at 5 launch sites throughout the Capital Region.

Each subsequent year has showed growth in the program and offers a host of new information for both the Capital Region PRISM and the NYS Department of Environmental Conservation regarding spread prevention measures used by patrons as well as potential new introductions of AIS to the Hudson River, Mohawk River, and local waterbodies.

This is not the first Watercraft Inspection Steward Program implemented within New York State. Multiple agencies such as the Adirondack Watershed Institute, the New York State Office of Parks, Recreation, and Historic Preservation, State University of New York College of Environmental Science and Forestry, the Finger Lakes PRISM, and many others, have been running watercraft inspection steward programs for years with the same goals of education and prevention of AIS spread. Methods currently followed for the delivery of clean, drain, dry protocol are based on prior practices within these agencies. Through years of running similar programs, there agencies have laid the ground work for newer watercraft inspections steward programs like the Capital Regions PRISM's program.

## Watercraft Inspection Steward Training

Prior to the start of the season, watercraft stewards participated in a three-day training program designed to familiarize them with the responsibilities of the job. The program included training on native and aquatic invasive species identification, data collection protocol using the Watercraft Inspection Steward Program Application (WISPA), watercraft inspection methods utilized throughout New York State, strategies for educating the general public, and important safety measures. Training on iMapInvasives was also provided to encourage stewards to record invasive species found outside of watercraft inspections. Training was standardized based on the protocol outlined in the "New York State Watercraft Inspection Steward Program Handbook" Publication ID: NYSGI-H-14-001 as recommended by the New York State Department of Environmental Conservation.




Due to concerns surrounding the Covid-19 pandemic, the Capital Region PRISM hosted the watercraft inspection steward training virtually through Zoom on May 24-25, 2021. A third day of in-person, socially distanced, training took place on May 26, 2020 at Schoharie Crossing State Historic Site, Coeyman's Landing, and Highland Landing boat launches. Along with the initial three-day training, stewards received additional training on the job during site visits throughout the season from Lead Stewards and Supervisors.

The first two days of training consisted of familiarizing watercraft stewards with the basics of aquatic invasive species and the watercraft inspection process. Stewards participated in trainings focused on the background of AIS, regulations surrounding AIS in New York State, conduct and safety, native and aquatic invasive species identification, watercraft inspection basics, and a review of the Watercraft Inspection Steward Program Application for data collection. One the third day of in-person training, stewards were able to take the information from the first two days of training and apply it hands-on during day three. During day three,

stewards learned how to set up their steward station with educational materials and samples, completed mock inspections of watercraft using WISPA, and practiced identifying native and AIS samples. Throughout the season, the steward supervisor continued to provide various native and invasive samples for identification training during site visits.

Instruction for training was provided by the Capital Region PRISM staff including Kristopher Williams, PRISM Coordinator, Lauren Henderson, Aquatic Invasive Species Coordinator, and Sam Schultz, Watercraft Steward Supervisor. John Marino and Mitchell O'Neill from the New York Natural Heritage Program provided a pre-recorded training on the Watercraft Inspection Steward Program Application (WISPA). Ken Donnelly provided a pre-recorded training getting commitments from boaters on clean, drain, dry practices.

The Capital Region PRISM stewards also participated in Human Resources orientation and training for Cornell Cooperative Extension of Saratoga County. The Human Resources session covered Cornell Cooperative Extension's policies and practices, harassment training, and Covid-19 guidelines.

## Watercraft Inspection Steward Program Methods

Beginning on the Friday of Memorial Day weekend, the Capital Region PRISM deployed the Watercraft Inspection Steward Program for 15 weeks from May 28th to September 6th along the Hudson and Mohawk Rivers and five other waterbodies within the region. During this time watercraft stewards provided coverage at 23 launch location Thursday-Monday from 7:00 a.m. – 3:30 p.m. each week.

Watercraft stewards were provided equipment for their launch locations to increase their visibility at the launch and encourage more educational opportunities. Each steward was given a folding table, canopy chair, sandwich board sign stating "Voluntary Watercraft & Trailer Inspections," 8-inch tablet with an Android operating system, first aid kit, plastic bin, binder of steward materials, Tupperware for displaying samples, brochures, and multiple educational handouts. Stewards were instructed to set up their workstations in highly visible locations, out of the path of traffic, in order to increase public awareness of steward presence and reduce safety concerns. All stewards wore highly visible blue shirts noting that they worked for the Capital Region PRISM as well as a bright blue safety vest provided by the NYS Department of Environmental Conservation.

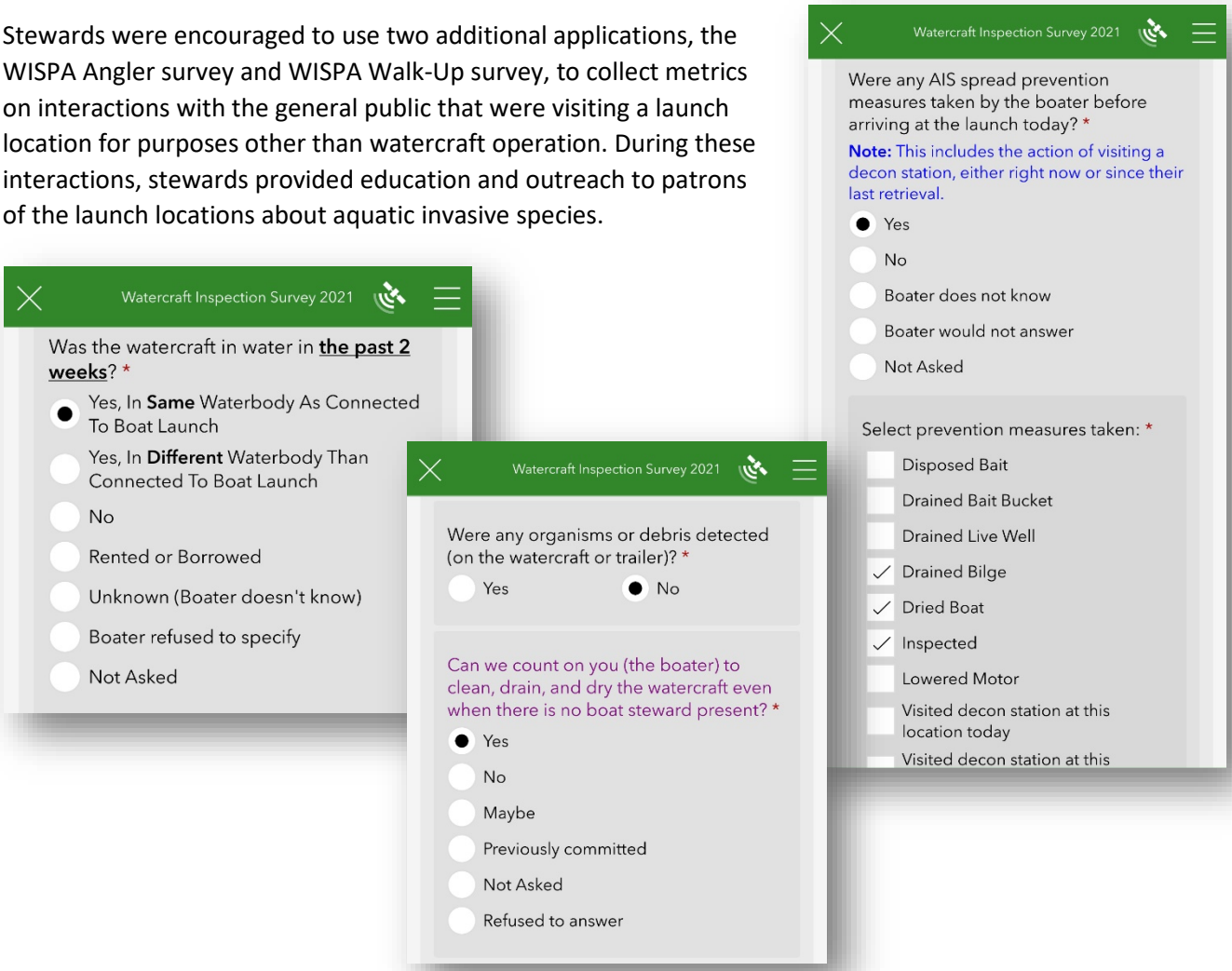

Throughout the season stewards gathered metrics using the Watercraft Inspection Steward Program Application (WISPA), a survey that allows multiple data metrics to be collected easily on a tablet, while stationed at their launch location. These metrics included type and number of watercrafts, primary activity performed, group size, state of boat registration, date and time of arrival, whether the group was launching or retrieving, and what waterbody the watercraft had been in within the last 2 weeks. The survey also collected metrics on what spread prevention measures the

boater had taken, if the boater had interacted with a watercraft steward in the past, and record of any plant or animal species found during an inspection. A social component is included that encouraged stewards to ask boaters, *"Can we count on you to clean, drain, and dry the watercraft even when there is no boat steward present?"* This question was asked to gather information on whether boaters will, without the guidance of a watercraft steward at a launch location, take measures to prevent the spread of aquatic invasive species.

During launching and retrieving inspections, stewards asked boaters if they could remove any visible organic matter found on the watercraft and asked boaters to drain all water from their watercraft. Removal of organic matter and draining all water greatly reduces the chances of AIS being introduced into un-infested waterbodies throughout NYS. This practice also teaches boaters where to look for plant and/or animal matter and follows clean, drain, dry practices.

Watercraft inspections involved checking all areas of a watercraft that could be harboring AIS. These areas include but are not limited to the hull, trailer, engine, anchors, lines, gear, and drainage areas. Watercraft stewards were not permitted to board any watercraft to inspect gear or compartments, instead they encouraged the boater to inspect these areas themselves.

Stewards were encouraged to use two additional applications, the WISPA Angler survey and WISPA Walk-Up survey, to collect metrics on interactions with the general public that were visiting a launch location for purposes other than watercraft operation. During these interactions, stewards provided education and outreach to patrons of the launch locations about aquatic invasive species.



# Comprehensive Summary of Results

## Historical Results

Figures 1-4 show historical data collected by watercraft stewards from 2019 to 2021. Figures 1-2 shows total individuals educated and inspections complete accompanied by the number of stewards that were employed during that season. Total stewards employed during each season is included to explain fluctuations in seasonal totals.

**Figure 1: Total Individuals Educated at Launches from 2019-2021**

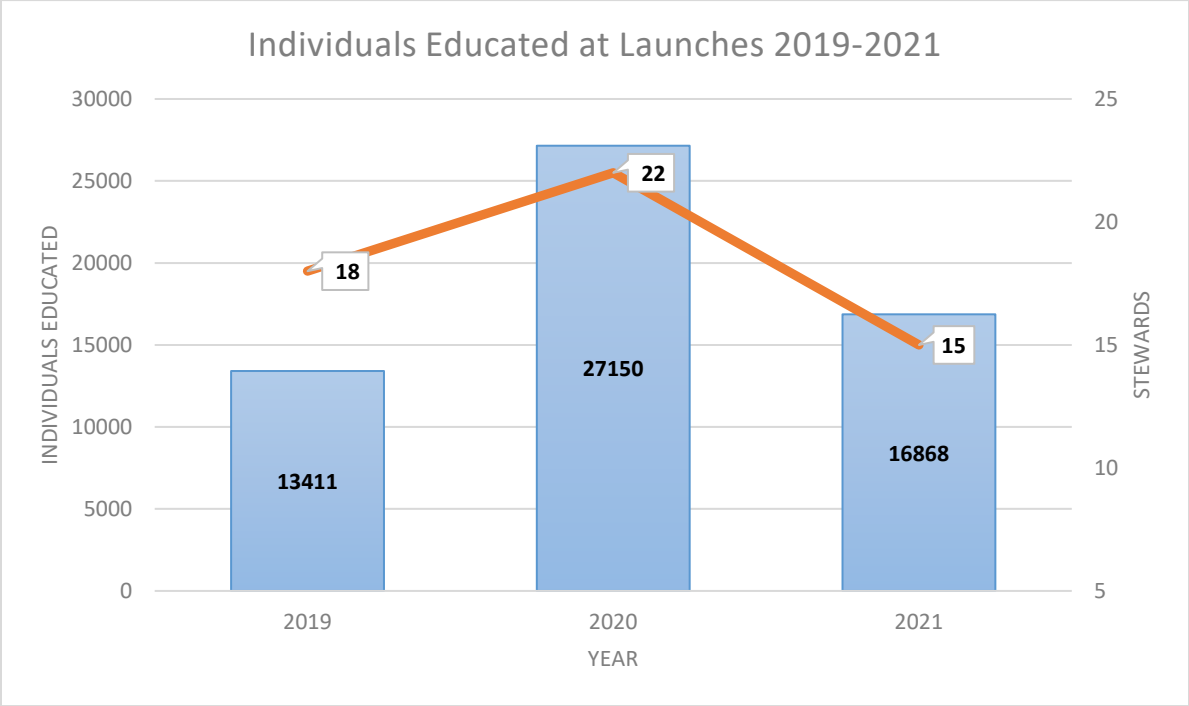



**Figure 2: Total Inspections from 2019-2021**

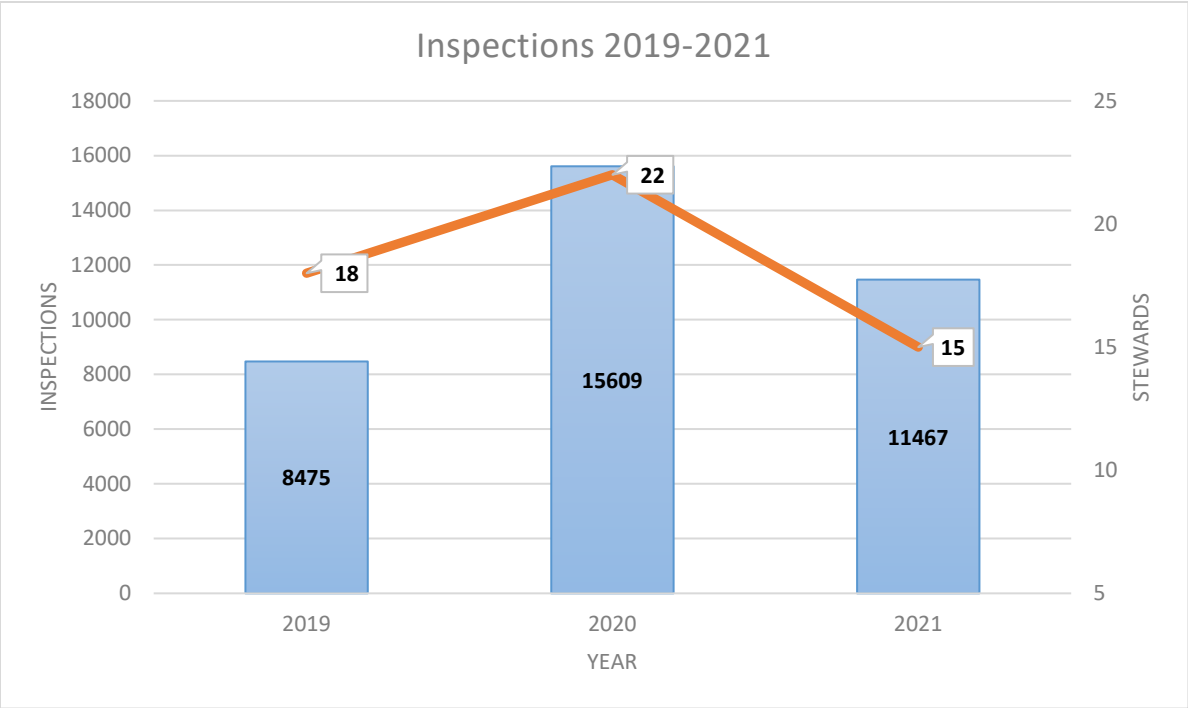



Figure 3 shows total AIS intercepted compared to total inspections complete each season. Due to improved plant identification training in 2021, identification skills were more accurate which may account for a higher total of AIS intercepted.

**Figure 3: Total AIS Intercepted from 2019-2021**

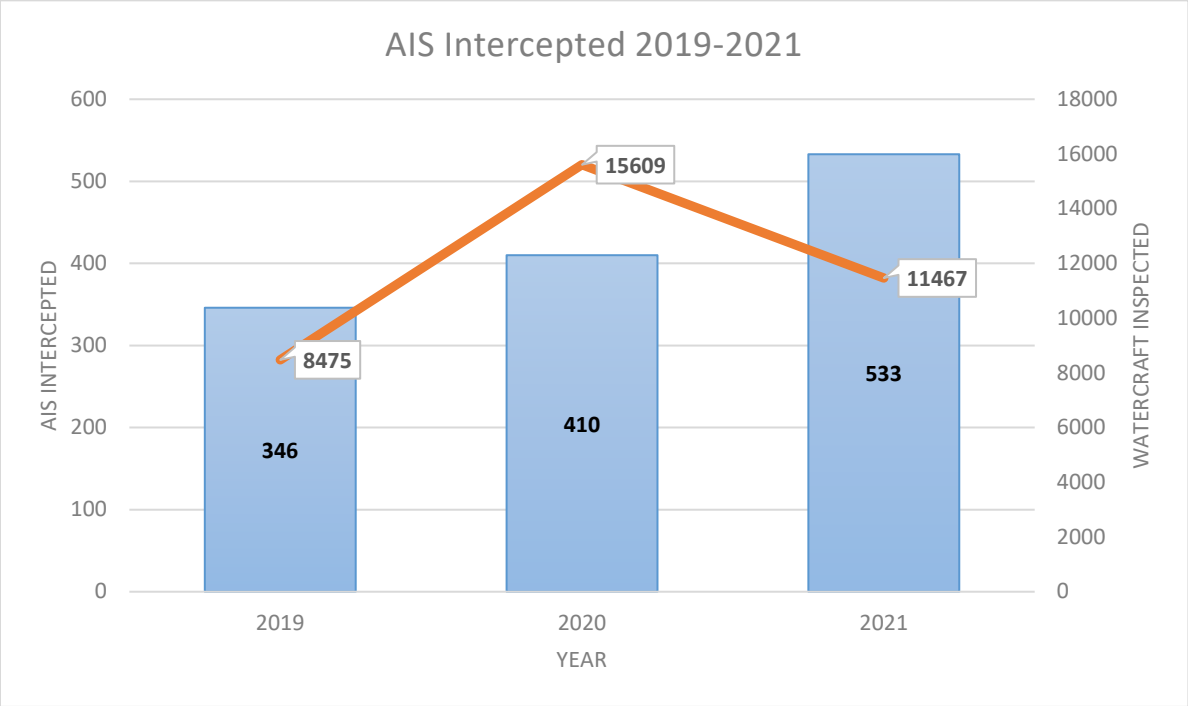
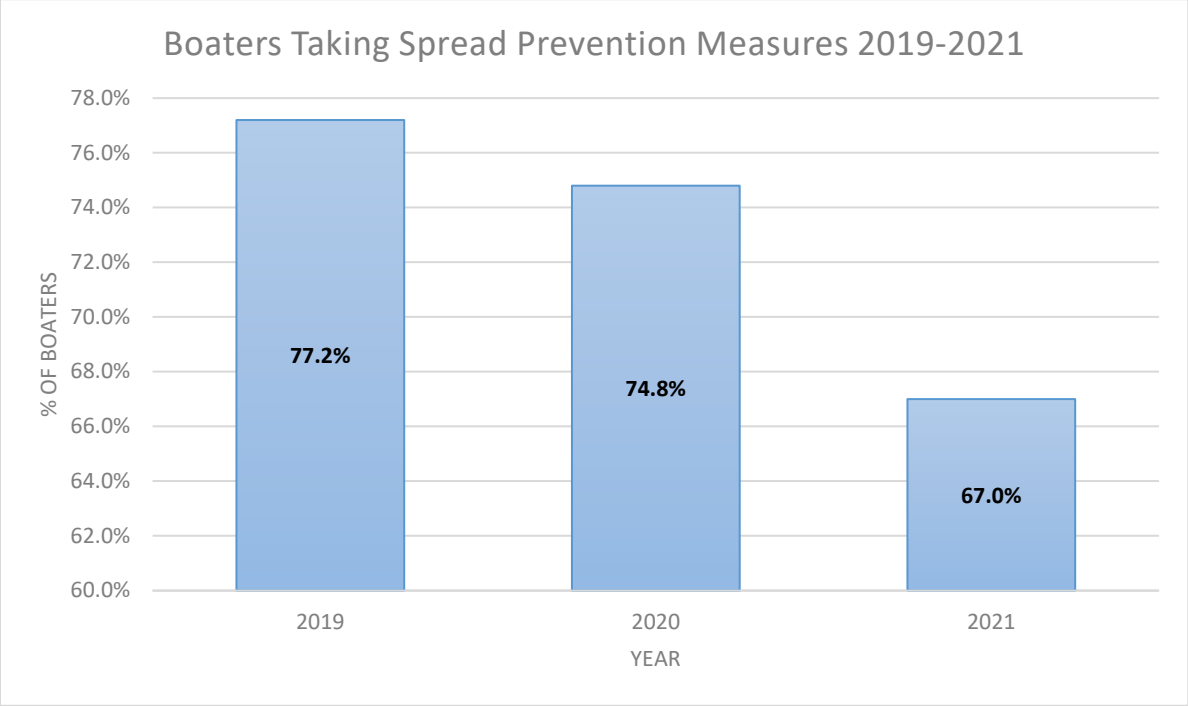


Figure 4 shows the percentage of boater that stated they are taking spread prevention measures during before launching their watercraft. There has been a decline in boaters taking spread prevention measures since the start of the program. This could be attributed to

**Figure 4: Percentage of Boaters Taking Spread Prevention Measure from 2019-2021**




## 2021 Summary of Results

In total, the program educated 16,868 individuals regarding spread prevention measures (i.e. clean, drain, dry) and performed 11,467 watercraft inspections and for aquatic invasive species. A total of 67% of boaters visiting a launch actively took spread preventions measures prior to arriving at the launch and 76% of boaters had interacted with a watercraft steward in the past. A total of 533 aquatic invasive species were intercepted by Capital Region PRISM watercraft stewards.

In the following sections a comprehensive summary of results is provided for each launch locations that received watercraft steward coverage during the 2021 Watercraft Inspection Steward Program.

## Launch Summaries

In 2021, steward coverage varied based on how busy each location was and the amount of coverage allotted to each launch location. Stewards were stationed full-time at 11 locations that were considered to be high traffic launch sites. The remaining stewards split their time between 2 or more launch locations due to lower traffic volume. Given that many watercraft inspection stewards were college students, launch coverage reduction began in the middle of August.

Tables 1-3 provides weekly steward coverage information, dates of coverage, total days of coverage was, and total number of watercraft inspections complete for each launch location. Stewards at Round Lake completed the most inspections (3,655), requiring coverage from two stewards to ensure as many watercraft were inspected as possible. Following Round Lake, Waterford Point complete 1,225 inspections and Echo Boat Launch

completed 1,104 inspections. Figures 6-8 provide a visual snapshot of the launch locations and total inspections completed at each site.

**Figure 5: Total Watercraft Inspections by Launch Location, 2021**

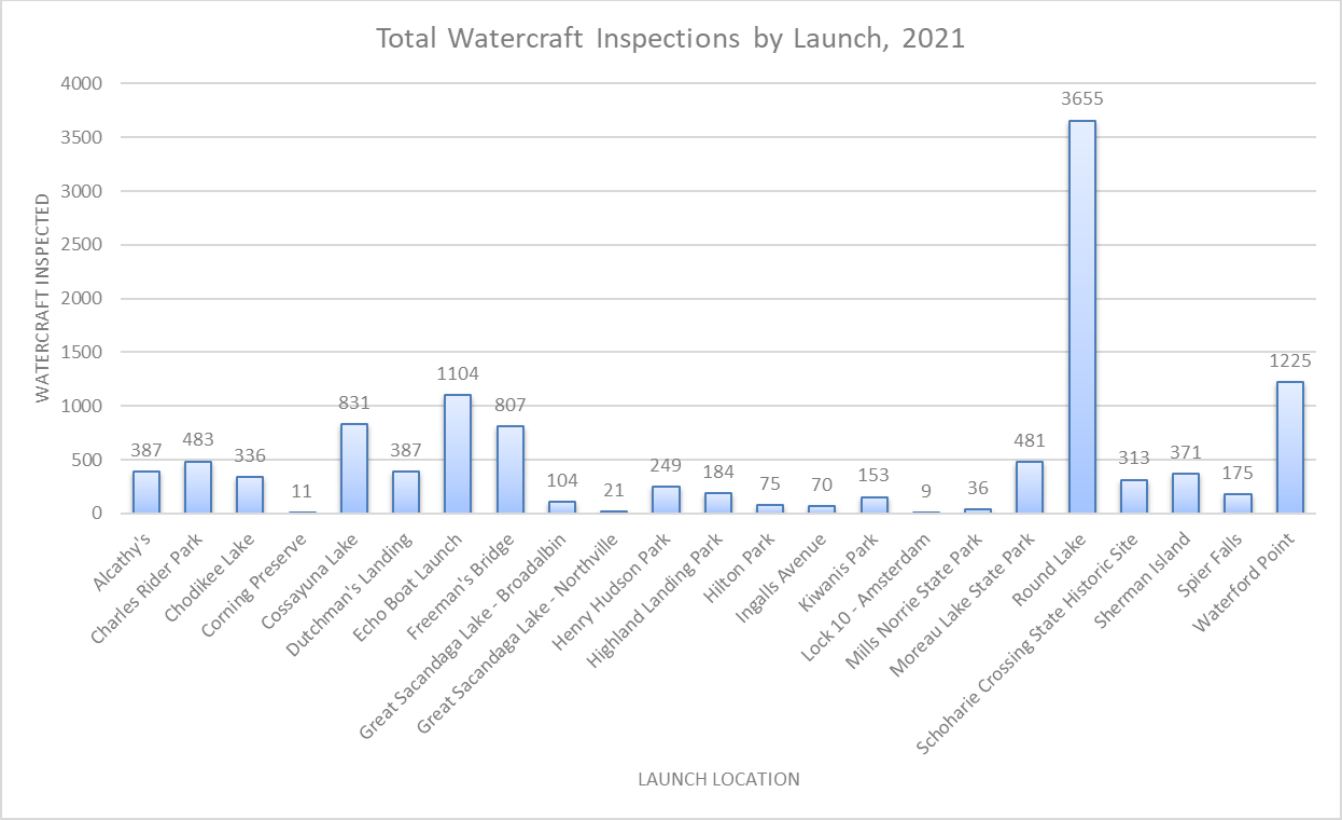



**Table 1: Covered launch locations along the *Hudson River*, 2021**

| Launch Locations | County | Dates of Coverage | Days Covered | Weekly Steward Coverage | Total Watercraft Inspections | % of Program Total Watercraft Inspections |
|---|---|---|---|---|---|---|
| **Charles Rider Park** | Ulster | 5/29/21 - 8/28/21 | 59.5 | 5 days/week | 483 | 4.2% |
| **Corning Preserve** | Albany | 7/25/21 - 8/7/21 | 2.5 | -- | 11 | 0.1% |
| **Dutchman's Landing** | Greene | 5/30/21 - 7/8/21 | 27 | 5 days/week | 387 | 3.4% |
| **Echo Boat Launch** | Westchester | 5/28/21 - 9/6/21 | 65 | 5 days/week | 1104 | 9.6% |
| **Henry Hudson Park** | Albany | 7/2/21 - 8/29/21 | 35 | 5 day/week | 249 | 2.2% |
| **Highland Landing Park** | Ulster | 5/28/21 - 8/15/21 | 51.5 | 5 days/week | 184 | 1.6% |
| **Hilton Park** | Rensselaer | 5/28/21 - 8/19/21 | 44 | 4-5 days/week | 75 | 0.7% |
| **Ingalls Avenue Boat Launch** | Rensselaer | 5/28/21 - 8/19/21 | 26.5 | 1-2 days/week | 70 | 0.6% |
| **Mills-Norrie State Park** | Dutchess | 5/28/21 - 6/7/21 | 9 | 5 days/week | 36 | 0.3% |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sherman Island Boat Launch** | Saratoga | 6/4/21 - 8/19/21 | 12 | 1 day/week | 371 | 3.2% |
| **Spier Falls Boat Launch** | Saratoga | 6/3/21 - 8/16/21 | 12 | 1 day/week | 175 | 1.5% |
| **Waterford Point** | Saratoga | 6/18/21 - 9/6/21 | 51 | 5 days/week | 1225 | 10.7% |

**Table 2: Covered launch locations along the *Mohawk River*, 2021**

| Launch Locations | County | Dates of Coverage | Days Covered | Weekly Coverage | Total Watercraft Inspections | % of Program Total Watercraft Inspections |
|---|---|---|---|---|---|---|
| **Alcathys Boat Launch** | Saratoga | 6/18/21 - 8/23/21 | 30 | 3-4 days/week | 387 | 3.4% |
| **Freeman's Bridge** | Schenectady | 5/28/21 - 8/23/21 | 54 | 5 days/week | 807 | 7.0% |
| **Kiwanis Park** | Schenectady | 6/24/21 - 9/6/21 | 27.5 | 2-3 days/week | 153 | 1.3% |
| **Lock 10 Boat Launch** | Montgomery | 5/28/21 - 7/26/21 | 21 | 1-3 days/week | 9 | 0.1% |
| **Schoharie Crossing State Historic Site** | Montgomery | 5/28/21- 9/5/21 | 26.5 | 2-3 days/week | 313 | 2.7% |

**Table 3: Covered launch locations at *lakes* across the region, 2021**

| Launch Locations | County | Dates of Coverage | Days Covered | Weekly Coverage | Total Watercraft Inspections | % of Program Total Watercraft Inspections |
|---|---|---|---|---|---|---|
| **Chodikee Lake** | Ulster | 6/24/21 - 8/19/21 | 36 | 5 days/week | 336 | 2.9% |
| **Cossayuna Lake** | Washington | 5/28/21 - 8/21/21 | 21 | 1-2 days/week | 831 | 7.2% |
| **Great Sacandaga Lake (Broadalbin)** | Fulton | 7/22/21 - 8/23/21 | 14 | 1-2 days/week | 104 | 0.9% |
| **Great Sacandaga Lake (Northville)** | Fulton | 7/25/21 - 8/19/21 | 6 | 2-4 days/week | 21 | 0.2% |
| **Moreau Lake State Park** | Saratoga | 5/30/21 - 8/23/21 | 17 | 1-2 days/week | 481 | 4.2% |
| **Round Lake** | Saratoga | 5/28/21 - 9/6/21 | 70 | 5 days/week | 3655 | 31.9% |

**Figure 6: Capital Region Launch Locations and Total Watercraft Inspected, 2021**

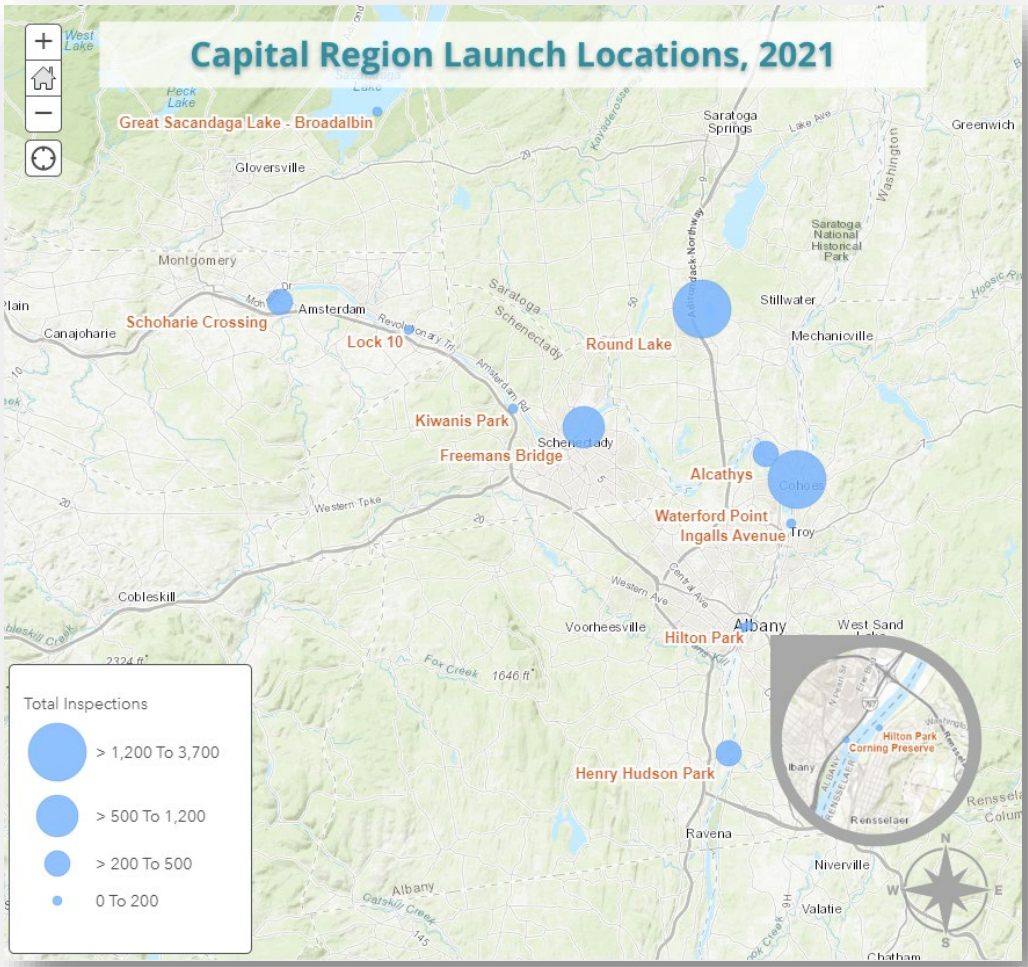



**Figure 7: Lower Hudson Launch Locations and Total Watercraft Inspected, 2021**

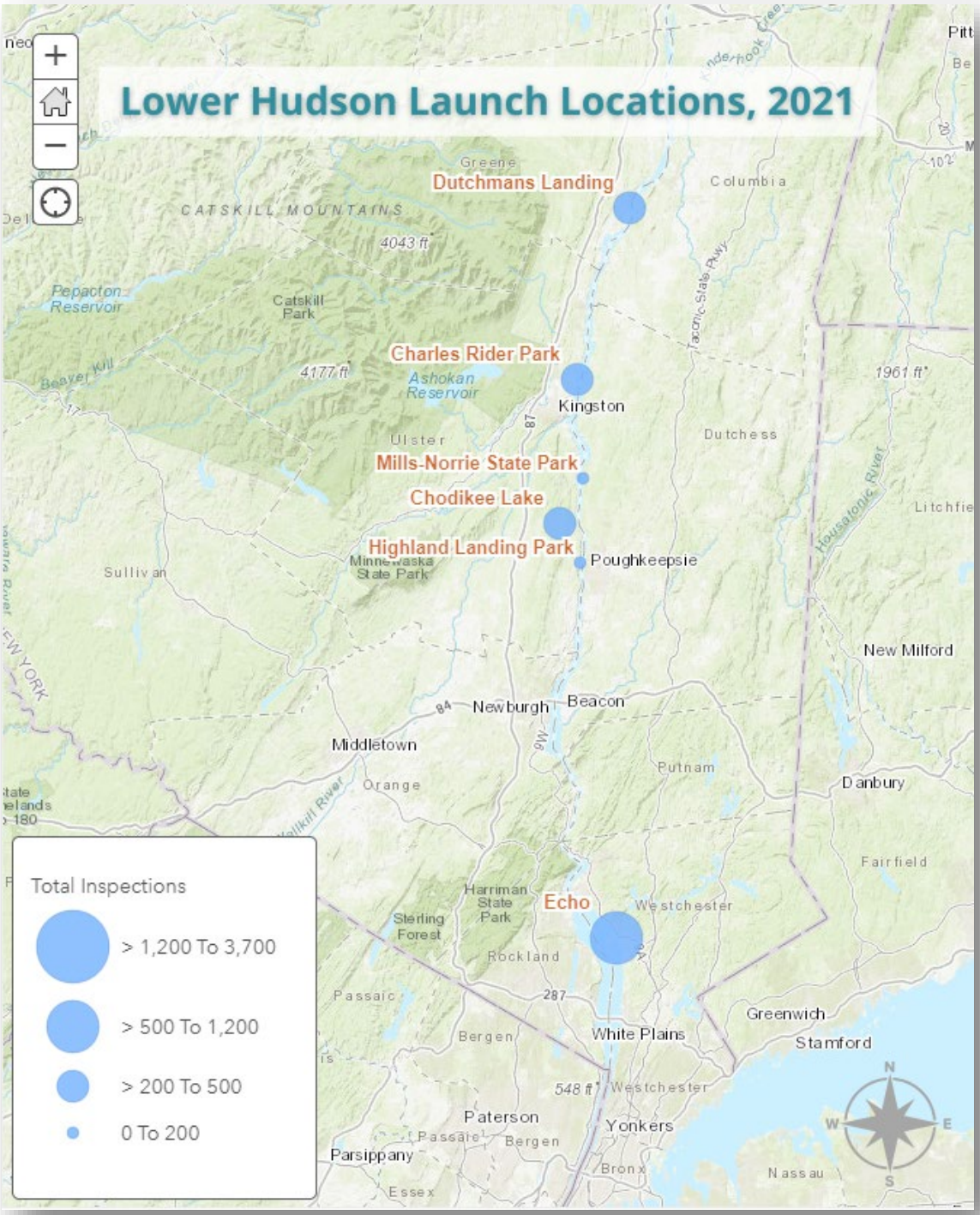
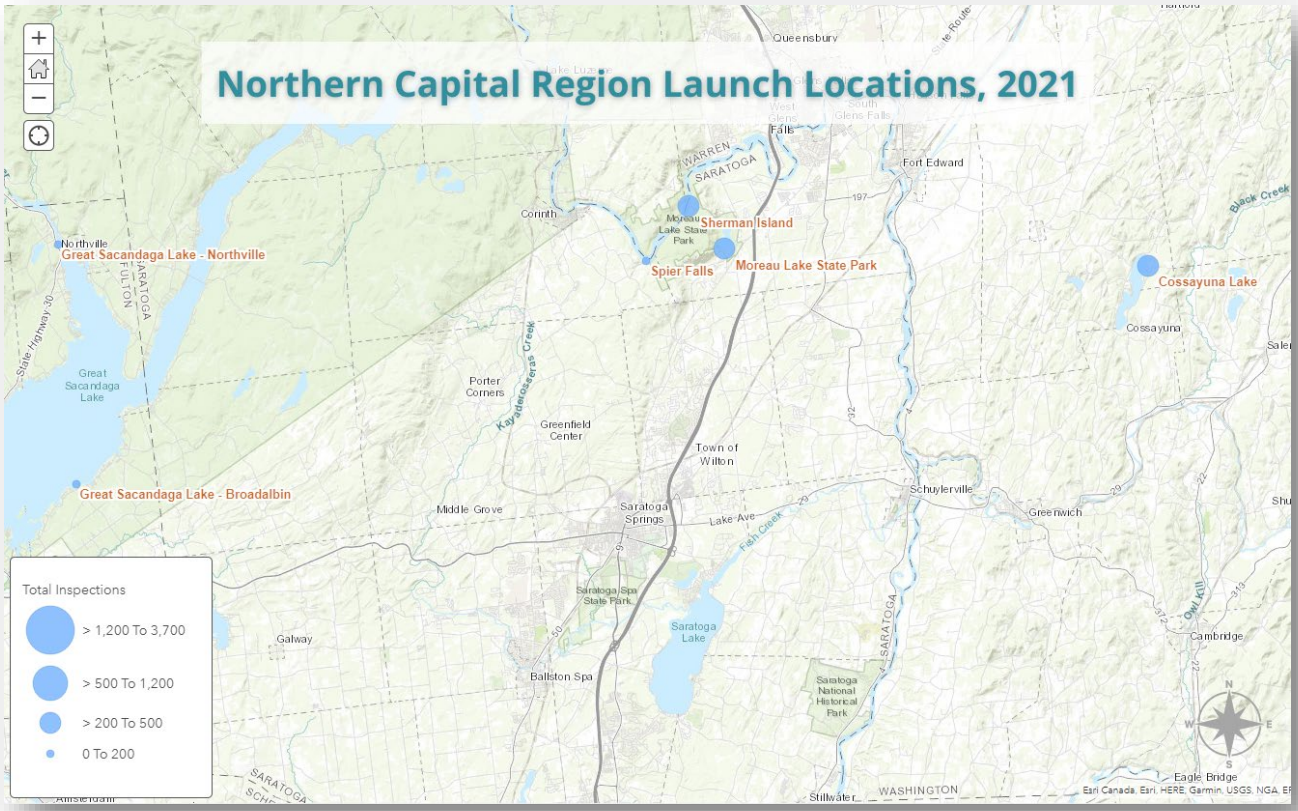


**Figure 8: Northern Capital Region Launch Locations and Total Watercraft Inspected, 2021**




## Watercraft Types

As noted in Table 4, during the 2021 boating season, stewards observed all watercraft type except barges. Kayaks were the most commonly observed watercraft with a total of 6,611 recorded. Motorboats were the second most common watercraft type with a total of 3,352 recorded. Round Lake observed the highest number of kayaks and motorboats. In total, across all launch locations, 11,832 boats were observed (not all were necessarily inspected) along the Hudson River, Mohawk River, and local waterbodies.

**Figure 9: Watercraft Types Observed, 2021**

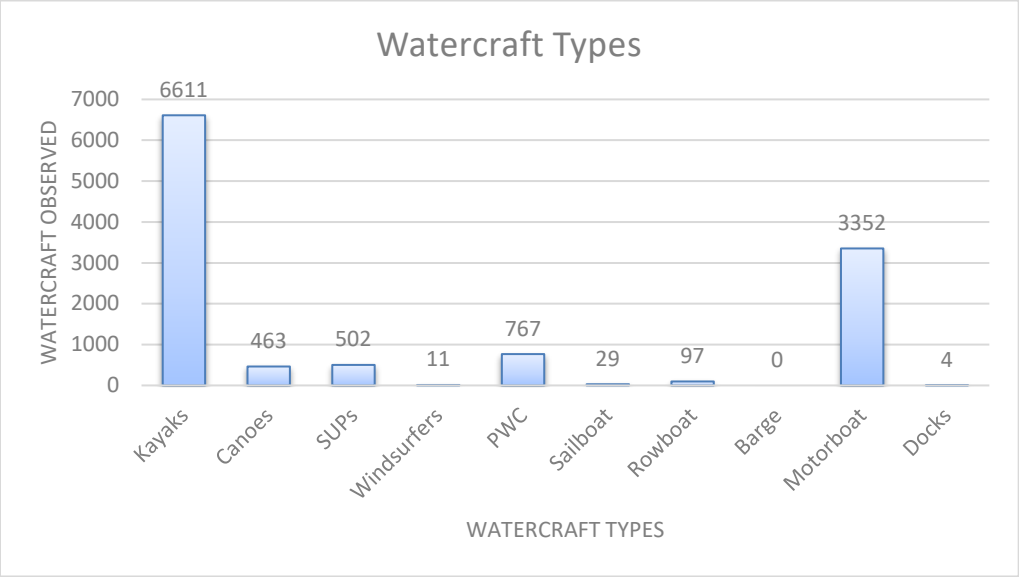



**Table 4: Comprehensive data summary of watercraft types at each launch location, 2021**

| Launch Location | Watercraft Type | | | | | | | | | | Total watercraft: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Motorboat | Kayak | Canoe | SUP | Windsurfer | PWC | Sailboat | Row | Barge | Docks | |
| **Alcathy's** | 304 | 41 | 2 | 0 | 0 | 84 | 0 | 0 | 0 | 1 | 431 |
| **Charles Rider Park** | 279 | 12 | 0 | 0 | 3 | 198 | 1 | 0 | 0 | 0 | 493 |
| **Chodikee Lake** | 31 | 261 | 28 | 4 | 0 | 0 | 0 | 12 | 0 | 0 | 336 |
| **Corning Preserve** | 7 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 12 |
| **Cossayuna Lake** | 602 | 210 | 18 | 3 | 0 | 29 | 2 | 22 | 0 | 1 | 886 |
| **Dutchman's Landing** | 248 | 113 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 400 |
| **Echo Boat Launch** | 3 | 1013 | 30 | 131 | 0 | 0 | 0 | 0 | 0 | 0 | 1177 |
| **Freeman's Bridge** | 437 | 260 | 47 | 3 | 1 | 78 | 0 | 3 | 0 | 1 | 829 |
| **Great Sacandaga Lake - Broadalbin** | 72 | 12 | 0 | 0 | 6 | 12 | 3 | 0 | 0 | 0 | 105 |
| **Great Sacandaga** | 15 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 21 |

| Launch Location | Watercraft Type | | | | | | | | | | Total watercraft: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Motorboat | Kayak | Canoe | SUP | Windsurfer | PWC | Sailboat | Row | Barge | Docks | |
| **Lake - Northville** | | | | | | | | | | | |
| **Henry Hudson Park** | 175 | 34 | 6 | 0 | 0 | 35 | 5 | 1 | 0 | 0 | 256 |
| **Highland Landing Park** | 104 | 3 | 3 | 0 | 0 | 76 | 1 | 0 | 0 | 0 | 187 |
| **Hilton Park** | 29 | 20 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 78 |
| **Ingalls Avenue** | 60 | 7 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 75 |
| **Kiwanis Park** | 47 | 96 | 14 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 162 |
| **Lock 10 - Amsterdam** | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| **Mills Norrie State Park** | 30 | 17 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 56 |
| **Moreau Lake State Park** | 0 | 360 | 43 | 67 | 0 | 0 | 0 | 24 | 0 | 1 | 494 |
| **Round Lake** | 645 | 2403 | 200 | 246 | 1 | 138 | 16 | 29 | 0 | 0 | 3678 |
| **Schoharie Crossing State Historic Site** | 126 | 192 | 6 | 1 | 0 | 22 | 0 | 1 | 0 | 0 | 348 |
| **Sherman Island** | 29 | 325 | 4 | 18 | 0 | 0 | 0 | 2 | 0 | 0 | 378 |
| **Spier Falls** | 39 | 100 | 16 | 22 | 0 | 2 | 0 | 2 | 0 | 0 | 181 |
| **Waterford Point** | 63 | 1123 | 45 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 1239 |
| **Grand Total** | **3352** | **6611** | **463** | **502** | **11** | **767** | **29** | **97** | **0** | **4** | **11832** |
| **% of watercraft observed** | **28.3%** | **55.9%** | **3.9%** | **4.2%** | **0.09%** | **6.5%** | **0.25%** | **0.82%** | **0%** | **0.03%** | |

*PWC = personal watercraft (jet ski); SUP = stand-up paddleboard.

## Boater Activity Type

While completing the WISPA survey, stewards observe and record the primary activity each boater is performing while using the launch. Table 5 provides a breakdown of boaters' primary activity at each launch location. The most common reason for use of launches was recreation (71.4%) followed by fishing (26.2%). Recreation was the most common boater activity at almost all launches except Cossayuna Lake where fishing was the most common boat activity. The Lock 10 – Amsterdam boat launch had equal boater activity for recreation and fishing.

**Figure 10: Boater Activity Type, 2021**

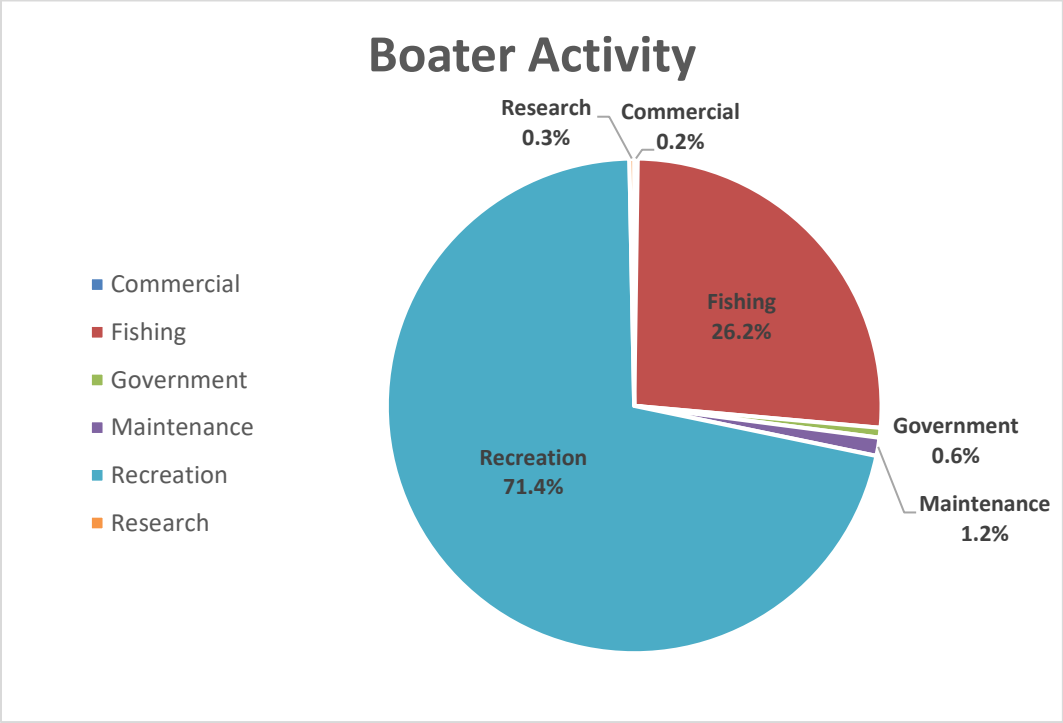



**Table 5: Comprehensive summary of the main activity of watercraft operators, 2021**

| Launch Location | Primary Activity Performed | | | | | | Grand Total |
|---|---|---|---|---|---|---|---|
| | Commercial | Fishing | Government | Maintenance | Recreation | Research | |
| **Alcathy's** | 0 | 143 | 7 | 10 | 251 | 2 | 413 |
| **Charles Rider Park** | 1 | 29 | 0 | 17 | 432 | 1 | 480 |
| **Chodikee Lake** | 1 | 19 | 0 | 0 | 199 | 0 | 219 |
| **Corning Preserve** | 0 | 3 | 0 | 0 | 9 | 0 | 12 |
| **Cossayuna Lake** | 0 | 536 | 0 | 6 | 246 | 0 | 788 |
| **Dutchman's Landing** | 12 | 33 | 6 | 2 | 278 | 0 | 331 |
| **Echo Boat Launch** | 1 | 0 | 1 | 0 | 557 | 0 | 559 |
| **Freeman's Bridge** | 1 | 229 | 3 | 1 | 497 | 0 | 731 |
| **Great Sacandaga Lake - Broadalbin** | 1 | 15 | 0 | 0 | 86 | 0 | 102 |
| **Great Sacandaga Lake - Northville** | 0 | 7 | 0 | 0 | 14 | 0 | 21 |
| **Henry Hudson Park** | 0 | 27 | 1 | 8 | 206 | 2 | 244 |

| Launch Location | Primary Activity Performed | | | | | | Grand Total |
|---|---|---|---|---|---|---|---|
| | Commercial | Fishing | Government | Maintenance | Recreation | Research | |
| **Highland Landing Park** | 0 | 11 | 6 | 0 | 168 | 1 | 186 |
| **Hilton Park** | 0 | 11 | 0 | 1 | 62 | 2 | 76 |
| **Ingalls Avenue** | 0 | 22 | 12 | 1 | 36 | 1 | 72 |
| **Kiwanis Park** | 0 | 41 | 2 | 0 | 70 | 0 | 113 |
| **Lock 10 - Amsterdam** | 0 | 3 | 2 | 0 | 3 | 0 | 8 |
| **Mills Norrie State Park** | 0 | 0 | 4 | 0 | 46 | 0 | 50 |
| **Moreau Lake State Park** | 0 | 44 | 0 | 0 | 232 | 0 | 276 |
| **Round Lake** | 2 | 795 | 1 | 52 | 1621 | 12 | 2483 |
| **Schoharie Crossing State Historic Site** | 0 | 99 | 3 | 2 | 143 | 0 | 247 |
| **Sherman Island** | 0 | 33 | 0 | 0 | 201 | 0 | 234 |
| **Spier Falls** | 0 | 48 | 1 | 0 | 78 | 0 | 127 |
| **Waterford Point** | 0 | 59 | 5 | 0 | 585 | 5 | 654 |
| **Grand Total** | **19** | **2207** | **54** | **100** | **6020** | **26** | **8426** |
| **% of watercraft observed** | **0.2%** | **26.2%** | **0.6%** | **1.2%** | **71.4%** | **0.3%** | **100%** |

## AIS Spread Prevention Awareness

Table 6 outlines the level of boater awareness regarding spread prevention measures. While watercraft stewards are completing the WISPA survey, boaters are asked if they took any spread prevention measures prior to arriving at the launch. Of all groups asked this question, 67% of boaters indicated they actively take steps to prevent the spread of AIS.

Out of 7,921 boaters asked if they take spread prevention measures, 2,258 boaters that said they do not take spread prevention measures. Out of the boaters that stated they do not take spread preventions measures, 37.7% of boaters stated that they only use their watercraft in the same waterbody, therefore unintentionally taking steps to prevent the spread of AIS by not transporting their watercraft to other waterbodies. Of those that answered no, 38.3% stated it was the watercrafts first launch of the year indicating there should be no living organisms on the watercraft.

Of those who said yes, 82.6% stated they wash their watercraft, 46.7% stated they dry their watercraft, 15.8% stated they inspect their watercraft, 12.9% stated they drain any standing water out of their watercraft, 3.6% stated they utilized a decontamination station before arriving at the launch, 1.8% stated they drain their livewell, and 0.4% stated they properly dispose of bait. The small percentage of boaters using decontamination stations is most likely attributed to the lack of decontamination stations in the Capital Region and Hudson River Valley.

**Table 6: Comprehensive summary of boater awareness AIS spread prevention, 2021**

| Launch Location | Yes | % Yes | Inspect | Dry | Wash | Drain | Livewell | Bait | Decon | 1st Launch | Same WB | Asked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alcathy's | 201 | 52.1% | 63 | 43 | 139 | 4 | 11 | 0 | 4 | 58 | 96 | 386 |
| Charles Rider Park | 264 | 72.9% | 6 | 9 | 160 | 15 | 1 | 0 | 137 | 43 | 24 | 362 |
| Chodikee Lake | 195 | 89.9% | 41 | 78 | 161 | 0 | 0 | 1 | 2 | 3 | 7 | 217 |
| Corning Preserve | 6 | 54.5% | 0 | 6 | 4 | 3 | 0 | 0 | 0 | 1 | 4 | 11 |
| Cossayuna Lake | 362 | 50.6% | 71 | 61 | 282 | 24 | 17 | 1 | 6 | 71 | 138 | 716 |
| Dutchman's Landing | 142 | 44.4% | 5 | 145 | 134 | 108 | 9 | 0 | 2 | 84 | 92 | 320 |
| Echo Boat Launch | 377 | 70.1% | 130 | 341 | 336 | 0 | 0 | 0 | 0 | 26 | 137 | 538 |
| Freeman's Bridge | 653 | 90.3% | 84 | 410 | 606 | 35 | 11 | 1 | 0 | 26 | 40 | 723 |
| Great Sacandaga Lake - Broadalbin | 77 | 78.6% | 68 | 58 | 16 | 0 | 0 | 0 | 5 | 1 | 1 | 98 |
| Great Sacandaga Lake - Northville | 14 | 66.7% | 10 | 5 | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 21 |
| Henry Hudson Park | 125 | 60.4% | 45 | 20 | 86 | 15 | 1 | 0 | 4 | 28 | 13 | 207 |
| Highland Landing Park | 176 | 94.6% | 124 | 116 | 96 | 25 | 16 | 5 | 0 | 3 | 5 | 186 |
| Hilton Park | 44 | 63.8% | 11 | 23 | 28 | 17 | 2 | 0 | 0 | 15 | 7 | 69 |
| Ingalls Avenue | 40 | 58.0% | 20 | 21 | 18 | 25 | 1 | 1 | 0 | 7 | 8 | 69 |
| Kiwanis Park | 91 | 82.7% | 4 | 55 | 83 | 28 | 1 | 0 | 1 | 0 | 0 | 110 |
| Lock 10 - Amsterdam | 6 | 100.0% | 1 | 3 | 5 | 2 | 0 | 0 | 0 | 5 | 4 | 6 |
| Mills Norrie State Park | 30 | 81.1% | 5 | 18 | 21 | 0 | 0 | 0 | 0 | 5 | 2 | 37 |
| Moreau Lake State Park | 143 | 53.8% | 8 | 40 | 123 | 2 | 0 | 0 | 4 | 37 | 32 | 266 |
| Round Lake | 1667 | 71.4% | 73 | 566 | 1494 | 197 | 14 | 6 | 13 | 349 | 157 | 2335 |
| Schoharie Crossing State Historic Site | 204 | 83.3% | 27 | 127 | 182 | 70 | 6 | 5 | 3 | 16 | 11 | 245 |
| Sherman Island | 147 | 64.2% | 6 | 50 | 123 | 2 | 1 | 0 | 0 | 14 | 20 | 229 |
| Spier Falls | 65 | 53.3% | 4 | 26 | 56 | 0 | 1 | 0 | 0 | 12 | 17 | 122 |
| Waterford Point | 260 | 40.1% | 30 | 248 | 215 | 111 | 1 | 0 | 4 | 59 | 37 | 648 |
| **Grand Total** | **5289** | **67%** | **836** | **2469** | **4370** | **683** | **93** | **20** | **188** | **864** | **852** | **7921** |

## Organism Interceptions

Table 7 provides a summary of aquatic invasive species intercepted on inspected watercraft. The most common invasive species found on watercraft was Eurasian watermilfoil (215), followed by water chestnut (134), curly-leaf pondweed (132), zebra mussel (41), brittle naiad (10), and variable leaf watermilfoil (1). Round Lake had the highest number of AIS intercepts (302) followed by Charles Rider Park (64), and Cossayuna Lake (60). A total of 4.9% of all watercraft inspected had aquatic invasive species visibly observed on them. In total, 533 AIS were intercepted by watercraft stewards.

**Figure 11: AIS Intercepted, 2021**

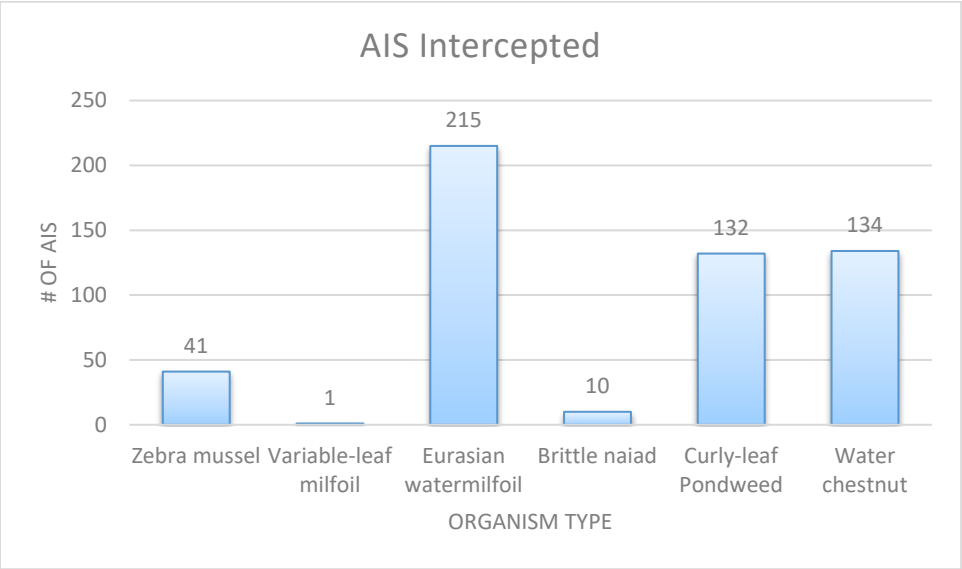



**Table 7: Comprehensive summary of aquatic invasive species intercepts on inspected watercraft, 2021**

| Launch Location | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS | % inspected watercraft with AIS |
|---|---|---|---|---|---|---|---|---|
| **Alcathy's** | 0 | 0 | 2 | 0 | 2 | 28 | 32 | 8.3% |
| **Charles Rider Park** | 4 | 0 | 13 | 0 | 0 | 47 | 64 | 11.6% |
| **Chodikee Lake** | 0 | 0 | 0 | 0 | 3 | 4 | 7 | 3.6% |
| **Corning Preserve** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Cossayuna Lake** | 32 | 0 | 13 | 2 | 11 | 2 | 60 | 6.6% |
| **Dutchman's Landing** | 3 | 0 | 0 | 0 | 0 | 17 | 20 | 5.2% |
| **Echo Boat Launch** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Freeman's Bridge** | 1 | 0 | 0 | 0 | 1 | 2 | 4 | 0.5% |
| **Great Sacandaga Lake - Broadalbin** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Great Sacandaga Lake - Northville** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Henry Hudson Park** | 0 | 0 | 1 | 1 | 0 | 3 | 5 | 2.0% |
| **Highland Landing Park** | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.5% |
| **Hilton Park** | 1 | 0 | 3 | 0 | 1 | 0 | 5 | 5.3% |

| Launch Location | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS | % inspected watercraft with AIS |
|---|---|---|---|---|---|---|---|---|
| **Ingalls Avenue** | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2.9% |
| **Kiwanis Park** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Lock 10 - Amsterdam** | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 11.1% |
| **Mills Norrie State Park** | 0 | 0 | 1 | 0 | 0 | 4 | 5 | 11.1% |
| **Moreau Lake State Park** | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0.2% |
| **Round Lake** | 0 | 0 | 175 | 6 | 113 | 8 | 302 | 8.9% |
| **Schoharie Crossing State Historic Site** | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1.0% |
| **Sherman Island** | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.3% |
| **Spier Falls** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| **Waterford Point** | 0 | 0 | 6 | 1 | 1 | 12 | 20 | 2.6% |
| **Grand Total** | **41** | **1** | **215** | **10** | **132** | **134** | **533** | **4.9%** |

A large percentage of the species observed by watercraft stewards this year were native species. Out of the 2,034 total species observed, 60.2% were identified as native species. Due to the condition species were found in when observed, not all species were able to be identified with 100% certainty. Of all species observed, 11.8% showed characteristics of a milfoil species but were degraded to a point where a positive identification could not be made. A total of 1.7% of the species observed were in a state that was entirely unidentifiable. The totals for "milfoil unknown" and "unknown species" are not included in the total non-AIS count.

Table 8 summarized all categories of species observed during watercraft inspections. In total, 14.8% of watercraft that were inspected were found to have some type of organic matter attached during the inspection. This number indicates that a majority of boaters are consciously or unconsciously preventing the spread of AIS by maintaining clean watercraft.

**Table 8: Comprehensive summary of species observed during watercraft inspections, 2021**

| Launch Location | Total AIS | % inspected watercraft with AIS | Total Non-AIS | % inspected watercraft with non-AIS | Milfoil Unknown | Unknown Species | % watercraft inspected that were not clean |
|---|---|---|---|---|---|---|---|
| **Alcathy's** | 32 | 8.3% | 19 | 4.7% | 5 | 3 | 13.4% |
| **Charles Rider Park** | 64 | 11.6% | 34 | 7.0% | 1 | 0 | 16.1% |
| **Chodikee Lake** | 7 | 3.6% | 19 | 6.5% | 0 | 0 | 9.2% |
| **Corning Preserve** | 0 | 0.0% | 0 | 0.0% | 0 | 0 | 0.0% |
| **Cossayuna Lake** | 60 | 6.6% | 303 | 23.7% | 57 | 2 | 26.8% |
| **Dutchman's Landing** | 20 | 5.2% | 10 | 2.6% | 0 | 0 | 7.5% |
| **Echo Boat Launch** | 0 | 0.0% | 0 | 0.0% | 1 | 0 | 0.2% |
| **Freeman's Bridge** | 4 | 0.5% | 38 | 4.8% | 2 | 0 | 5.5% |
| **Great Sacandaga Lake - Broadalbin** | 0 | 0.0% | 5 | 4.8% | 1 | 0 | 5.8% |
| **Great Sacandaga Lake - Northville** | 0 | 0.0% | 0 | 0.0% | 0 | 0 | 0.0% |
| **Henry Hudson Park** | 5 | 2.0% | 47 | 13.7% | 2 | 0 | 13.7% |
| **Highland Landing Park** | 1 | 0.5% | 5 | 2.7% | 0 | 0 | 3.3% |

| Launch Location | Total AIS | % inspected watercraft with AIS | Total Non-AIS | % inspected watercraft with non-AIS | Milfoil Unknown | Unknown Species | % watercraft inspected that were not clean |
|---|---|---|---|---|---|---|---|
| **Hilton Park** | 5 | 5.3% | 11 | 16.0% | 0 | 0 | 20.0% |
| **Ingalls Avenue** | 2 | 2.9% | 7 | 10.0% | 2 | 0 | 14.3% |
| **Kiwanis Park** | 0 | 0.0% | 7 | 5.2% | 0 | 1 | 5.9% |
| **Lock 10 - Amsterdam** | 1 | 11.1% | 0 | 0.0% | 0 | 0 | 22.2% |
| **Mills Norrie State Park** | 5 | 11.1% | 0 | 0.0% | 0 | 0 | 11.1% |
| **Moreau Lake State Park** | 1 | 0.2% | 28 | 7.7% | 4 | 0 | 8.3% |
| **Round Lake** | 302 | 8.9% | 574 | 17.7% | 157 | 18 | 25.9% |
| **Schoharie Crossing State Historic Site** | 3 | 1.0% | 29 | 12.5% | 0 | 1 | 13.4% |
| **Sherman Island** | 1 | 0.3% | 15 | 2.7% | 1 | 1 | 3.0% |
| **Spier Falls** | 0 | 0.0% | 21 | 8.0% | 1 | 2 | 8.6% |
| **Waterford Point** | 20 | 2.6% | 53 | 5.8% | 7 | 7 | 8.2% |
| **Grand Total** | **533** | **4.9%** | **1225** | **10.5%** | **241** | **35** | **14.8%** |

## AIS Intercepts – Launching Watercraft

Table 9 provides total AIS observed on watercraft before launching at each launch location. Round Lake recorded the most AIS observed on launching watercraft (17), followed by Cossayuna Lake (15), and Charles Rider Park (14). Of all AIS intercepted during the 2021 season, only 13% were found during launching inspections. This low percentage could be attributed to increased public awareness of clean, drain, dry standards and regulations.

**Table 9: Comprehensive summary of AIS observed on launching watercraft, 2021**

| Launch Location | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS |
|---|---|---|---|---|---|---|---|
| **Alcathy's** | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| **Charles Rider Park** | 0 | 0 | 2 | 0 | 0 | 12 | 14 |
| **Chodikee Lake** | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| **Corning Preserve** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cossayuna Lake** | 10 | 0 | 2 | 0 | 2 | 1 | 15 |
| **Dutchman's Landing** | 3 | 0 | 0 | 0 | 0 | 3 | 6 |
| **Echo Boat Launch** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Freeman's Bridge** | 1 | 0 | 0 | 0 | 0 | 2 | 3 |
| **Great Sacandaga Lake - Broadalbin** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Great Sacandaga Lake - Northville** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Henry Hudson Park** | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| **Highland Landing Park** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hilton Park** | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| **Ingalls Avenue** | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| **Kiwanis Park** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Lock 10 - Amsterdam** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Launch Location | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS |
|---|---|---|---|---|---|---|---|
| **Mills Norrie State Park** | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Moreau Lake State Park** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Round Lake** | 0 | 0 | 12 | 0 | 5 | 0 | 17 |
| **Schoharie Crossing State Historic Site** | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Sherman Island** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Spier Falls** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Waterford Point** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total** | **15** | **0** | **20** | **0** | **10** | **25** | **70** |

## AIS Intercepts – Retrieving Watercraft

Table 10 provides total AIS observed on watercraft upon retrieval at each launch location. Of all AIS intercepted during the 2021 season, 87% were found during retrieving inspections. A dramatically higher percentage in AIS observed on retrieving boats is due to both the Hudson and Mohawk Rivers being considered source points for many aquatic invasive species across New York State. Round Lake is also infested with various AIS and overserved the highest number of species during retrieval (285) followed by Charles Rider Park (50) and Cossayuna Lake (45).

**Table 10: Comprehensive summary of AIS observed on retrieving watercraft, 2021**

| Row Labels | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS |
|---|---|---|---|---|---|---|---|
| **Alcathy's** | 0 | 0 | 2 | 0 | 1 | 27 | **30** |
| **Charles Rider Park** | 4 | 0 | 11 | 0 | 0 | 35 | **50** |
| **Chodikee Lake** | 0 | 0 | 0 | 0 | 1 | 4 | **5** |
| **Corning Preserve** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Cossayuna Lake** | 22 | 0 | 11 | 2 | 9 | 1 | **45** |
| **Dutchman's Landing** | 0 | 0 | 0 | 0 | 0 | 14 | **14** |
| **Echo Boat Launch** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Freeman's Bridge** | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| **Great Sacandaga Lake - Broadalbin** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Great Sacandaga Lake - Northville** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Henry Hudson Park** | 0 | 0 | 0 | 1 | 0 | 2 | **3** |
| **Highland Landing Park** | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| **Hilton Park** | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| **Ingalls Avenue** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Kiwanis Park** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Lock 10 - Amsterdam** | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| **Mills Norrie State Park** | 0 | 0 | 1 | 0 | 0 | 3 | **4** |
| **Moreau Lake State Park** | 0 | 0 | 1 | 0 | 0 | 0 | **1** |
| **Round Lake** | 0 | 0 | 163 | 6 | 108 | 8 | **285** |
| **Schoharie Crossing State Historic Site** | 0 | 0 | 0 | 0 | 0 | 2 | **2** |

| Row Labels | Zebra Mussel | Variable-leaf Milfoil | Eurasian Watermilfoil | Brittle Naiad | Curly-leaf Pondweed | Water Chestnut | Total AIS |
|---|---|---|---|---|---|---|---|
| **Sherman Island** | 0 | 1 | 0 | 0 | 0 | 0 | **1** |
| **Spier Falls** | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Waterford Point** | 0 | 0 | 6 | 1 | 1 | 12 | **20** |
| **Grand Total** | **26** | **1** | **195** | **10** | **122** | **110** | **464** |

## Previous Waterbodies Visited

Table 11 provides responses from boaters when asked what was the last waterbody that their watercraft was in within the past two weeks. In total, 159 unique waterbodies were visited prior to arriving at the different launch locations covered by Capital Region PRISM stewards.

**Table 11: Comprehensive summary of waterbodies visited within the past two weeks by boaters, 2021**

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Saratoga Lake (Saratoga County) | 101 |
| Great Sacandaga Lake (Fulton/Saratoga Counties) | 53 |
| Mohawk River | 49 |
| Lake George (Essex/Warren/Washington Counties) | 44 |
| Hudson River (Albany County) | 39 |
| Moreau Lake (Saratoga County) | 26 |
| Unspecified - Privately Owned | 24 |
| Ballston Lake (Saratoga County) | 19 |
| Grafton Lakes State Park (Rensselaer County) | 19 |
| Sacandaga Lake-Moffitt Beach (Hamilton County) | 19 |
| Round Lake (Saratoga County) | 17 |
| New York Other | 16 |
| Hudson River (Saratoga County) | 14 |
| Lake Champlain (Unknown County/Launch) | 14 |
| Lake Lonely (Saratoga County) | 14 |
| Hudson River (Unknown County) | 13 |
| Schroon Lake (Essex/Warren Counties) | 12 |
| Thompsons Lake (Albany County) | 12 |
| Atlantic Ocean | 11 |
| Bran tLake (Warren County) | 8 |
| Round Lake (Essex County) | 8 |
| Cossayuna Lake (Washington County) | 7 |
| Glen Lake (Warren County) | 7 |
| Lake Champlain (Ticonderoga Launch) | 7 |
| Stewarts Bridge Reservoir (Saratoga County) | 7 |

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Dunham Reservoir (Rensselaer County) | 6 |
| Lake Luzerne (Warren County) | 6 |
| Collins Lake (Schenectady County) | 5 |
| Glass Lake (Rensselaer County) | 5 |
| Black Creek (Allegany County) | 4 |
| Canada Lake (Fulton County) | 4 |
| Long Island Sound | 4 |
| Round Lake (Hamilton County) | 4 |
| Wallkill River | 4 |
| Connecticut River | 3 |
| Dyken Pond (Rensselaer County) | 3 |
| Eighth Lake (Hamilton County) | 3 |
| Esopus Creek | 3 |
| Fish Creek Ponds (Franklin County) | 3 |
| Greenwood Lake (Orange County) | 3 |
| Hudson River (Warren County) | 3 |
| Lake Bomoseen (Rutland County, VT) | 3 |
| Lake Ontario (Unknown County) | 3 |
| Lake Saint Catherine (Rutland County, VT) | 3 |
| Long Lake (Hamilton County) | 3 |
| Saranac Chain of Lakes - Unspecified (Essex/Franklin Counties) | 3 |
| Canadarago Lake (Otsego County) | 2 |
| Candlewood Lake (Fairfield County, CT) | 2 |
| Catskill Creek | 2 |
| Chesapeake Bay | 2 |
| Forked Lake (Hamilton County) | 2 |
| Galway Lake (Saratoga County) | 2 |

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Hudson River (Dutchess County) | 2 |
| Indian Lake (Dutchess County) | 2 |
| Indian Lake (Franklin County) | 2 |
| Kayaderosseras Creek (Saratoga County) | 2 |
| Kinderhook Lake (Columbia County) | 2 |
| Lake Champlain (Champlain Canal-Washington County) | 2 |
| Lake Champlain (Crown Point Launch) | 2 |
| Lake Eaton (Hamilton County) | 2 |
| Lake Placid (Essex County) | 2 |
| Lake Superior (Sullivan County) | 2 |
| Loon Lake (Franklin County) | 2 |
| Minerva Lake (Essex County) | 2 |
| Mohawk River (Schenectady County) | 2 |
| Normans Kill (Albany County) | 2 |
| Old Forge Pond (Hamilton County) | 2 |
| Other | 2 |
| Otsego Lake (Otsego County) | 2 |
| Paradox Lake (Essex County) | 2 |
| Pleasant Pond (Androscoggin County, ME) | 2 |
| Queechy Lake (Columbia County) | 2 |
| Rich Lake (Essex County) | 2 |
| Rondout Creek | 2 |
| Schoharie Creek | 2 |
| Seventh Lake (Hamilton County) | 2 |
| Somerset Reservoir (Windham County, VT) | 2 |
| St Lawrence River Alex Bay (Jefferson County) | 2 |
| Susquehanna River | 2 |
| Sylvia Lake (St Lawrence County) | 2 |
| West Lake (Hamilton County) | 2 |
| Alcove Reservoir (Albany County) | 1 |
| Archer Vly (Saratoga County) | 1 |
| Barnum Pond (Franklin County) | 1 |
| Black Lake (St Lawrence County) | 1 |
| Blue Mountain Lake (Hamilton County) | 1 |
| Bog River (Hamilton County) | 1 |
| Boreas Ponds (Essex County) | 1 |
| Burden Lake (Rensselaer County) | 1 |
| Canandaigua Lake (Ontario/Yates Counties) | 1 |
| Caroga Lake (Fulton County) | 1 |

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Carter Pond (Warren County) | 1 |
| Cassadaga Lakes (Chatauqua County) | 1 |
| Catlin Lake (Essex/Hamilton Counties) | 1 |
| Cayuga Lake (Cayuga/Seneca/Tompkins Counties) | 1 |
| Cazenovia Lake (Madison County) | 1 |
| Chadwick Lake (Orange County) | 1 |
| Chapel Pond (Essex County) | 1 |
| Clinton Reservoir (Passaic County, NJ) | 1 |
| Colebrook River Lake (Berkshire/Hampden Counties, MA & Litchfiled County, CT) | 1 |
| Conesus Lake (Livingston County) | 1 |
| Contoocook Lake (Cheshire County, NH) | 1 |
| Cranberry Lake (St Lawrence County) | 1 |
| Crane Pond (Essex County) | 1 |
| Crystal Lake (Rensselaer County) | 1 |
| Delaware River | 1 |
| East Branch Reservoir (Putnam County) | 1 |
| East Canada Lake (Herkimer/Montgomery Counties) | 1 |
| East Pine Pond (Franklin County) | 1 |
| Echo Lake (Hamilton County) | 1 |
| Erie Canal (NiagaraCounty) | 1 |
| Erie Canal (Saratoga County) | 1 |
| First Lake (Herkimer County) | 1 |
| Fourth Lake (Hamilton County) | 1 |
| Genessee River | 1 |
| Glen Lake (Rutland County, VT) | 1 |
| Goodyear Lake (Otsego County) | 1 |
| Goose Pond (Berkshire County, MA) | 1 |
| Great South Bay (Long Island) | 1 |
| Green Lake (Greene County) | 1 |
| Hadlock Pond (Washington County) | 1 |
| Hamilton Lake (Hamilton County) | 1 |
| Henderson Pond (Jefferson County) | 1 |
| Hoosic River | 1 |
| Hudson River (Columbia County) | 1 |
| Hudson River (Essex County) | 1 |
| Hudson River (Greene County) | 1 |
| Hudson River (New York County) | 1 |
| Hudson River (Rensselaer County) | 1 |
| Hudson River (Washington County) | 1 |

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Lake Lauderdale (Washington County) | 1 |
| Lake Abanakee (Hamilton County) | 1 |
| Lake Champlain (Addison County, VT) | 1 |
| Lake Champlain (Essex County) | 1 |
| Lake Champlain (South Bay Launch) | 1 |
| Lake Champlain (Westport Launch) | 1 |
| Lake Champlain (Willsboro Launch) | 1 |
| Lake Clear (Franklin County) | 1 |
| Lake Desolation (Saratoga County) | 1 |
| Lake Flower (Essex/Franklin Counties) | 1 |
| Lake Mahopac (Putnam County) | 1 |
| Lake Montauk (Suffolk County) | 1 |
| Lake Moraine (Madison County) | 1 |
| Lake Ontario (Cayuga County) | 1 |
| Lake Ontario (Jefferson County) | 1 |
| Lake Pleasant (Hamilton County) | 1 |
| Lake Wallenpaupack (Wayne County, PA) | 1 |
| Lewey Lake (Hamilton County) | 1 |
| Long Pond (Monroe County) | 1 |
| Long Pond (Rensselaer County) | 1 |
| Loon Lake (Steuben County) | 1 |
| Loon Lake (Warren County) | 1 |
| Lower Saint Regis Lake (Franklin County) | 1 |
| Maine Other | 1 |
| Mariaville Lake (Schenectady County) | 1 |
| Mason Lake (Hamilton County) | 1 |
| Mirror Lake (Essex County) | 1 |
| Newcomb Lake (Essex County) | 1 |
| Nicks Lake (Herkimer County) | 1 |
| North-South Lake (Greene County) | 1 |
| Norwood Lake (St Lawrence County) | 1 |

| Previous Waterbody | # of watercraft from previous WB |
|---|---|
| Onota Lake (Berkshire County, MA) | 1 |
| Oswego River | 1 |
| Otisco Lake (Onondaga County) | 1 |
| Otsego Lake (Otsego County) | 1 |
| Peck Lake (Fulton County) | 1 |
| Raquette Lake (Hamilton County) | 1 |
| Raquette Lake (Hamilton County) | 1 |
| Rensselaer Lake (Albany County) | 1 |
| Rudd Pond (Dutchess County) | 1 |
| Sandy Creek (Jefferson County) | 1 |
| Schroon River | 1 |
| Seneca Lake (Ontario/Schuyler/Seneca/Yates Counties) | 1 |
| Silver Lake (Dutchess County) | 1 |
| Sleepy Hollow Lake (Greene County) | 1 |
| Spy Lake (Hamilton County) | 1 |
| Stilwell Lake (Orange County) | 1 |
| St Lawrence River (St Lawrence County) | 1 |
| St Lawrence River (Unspecified County) | 1 |
| Summit Lake (Washington County) | 1 |
| The Vlaie (Schoharie County) | 1 |
| Tibbits Creek (St Lawrence County) | 1 |
| Tupper Lake (Franklin County) | 1 |
| Tyler Lake (Litchfield County, CT) | 1 |
| Unadilla River (Herkimer County) | 1 |
| Upper Saranac Lake (Franklin County) | 1 |
| Wallum Lake (Worcester County, MA) | 1 |
| White Lake (Sullivan County) | 1 |
| White Pond (Putnam County) | 1 |
| **Grand Total** | **816** |

## Recommendations and Conclusion

In 2021 the Watercraft Inspection Steward Program continued to develop and advance in many ways, even with the many challenges associated with the Covid-19 pandemic. There were several noteworthy successes during the programs third season including additions to staff and a stronger focus on watercraft steward training.

The addition of a Watercraft Steward Supervisor in 2021 allowed for increased supervision of the program and training that continued throughout the season. Three regions were developed within the program boundaries that were each assigned a Lead Steward. The supervisor completed weekly site checks, visiting at least 2 regions a week on a rotating basis. Lead stewards completed weekly site checks within their designated region. The increase in supervision and training allowed issues to be addressed more efficiently.

Along with increased supervision and continued training, stewards received a more focus training on aquatic species. A native aquatic species identification guide was created to assist stewards in determining if detected species were a threat or not. This increase in training allowed for more accurate documentation of detected species and decreased the margin for error in data submit through WISPA.

Although the 2021 season did see a decrease in staff coverage and total interactions at launch locations, the result of the program were still favorable. Fifteen stewards were still able to provide coverage at 23 launch locations and interact with 16,868 individuals. From 2020 to 2021, there was a 37.9% decrease in individual educated about AIS and a 26.5% decrease in watercraft inspection with 7 less stewards.

Despite the decrease in some areas of the program, there were increases in total AIS intercepted by stewards. In 2021 there was a 23.1% increase in AIS intercepted during watercraft inspections. This increase can partially be attributed to increased training and confidence in species identification. Although there was an increase in AIS detected, the total watercraft carrying AIS compared to total watercraft inspected remained low with only 4.9% of watercraft carrying AIS.

One negative trend discovered in the 2021 data was boaters' responses to taking step to prevent the spread of AIS prior to launching. In 2021, 67% of boaters stated they took steps to prevent the spread of AIS compared to 74.8% in 2020. This number is down 7.8% from 2020 and 10.2% from 2019. While there has been a decrease in boaters taking steps to prevent the spread of AIS before launch, more than half all boaters surveyed are still taking the proper steps.

Along with the many success of the program in 2021, there are recommendations that can be implemented to strengthen the program in coming seasons. These recommendations include continued improvement to the program as a whole specifically in the areas of hiring, training and supplemental resources for stewards. A comprehensive list of recommended improvements to the AISSP program in future seasons is listed below.

In addition, collaboration will continue with other statewide Watercraft Inspection Steward Programs and state agencies to enhance the overall execution of contract deliverables. A greater effort will be dedicated to communicating with Environmental Conservation Officers to support stewards with safety concerns.

## Hiring

Due to labor shortages and increasing wages nationwide, hiring was a somewhat difficult process in 2021 even with a wage increase. In an effort to recruit a larger pool of candidates in the 2022 season, the Capital Region PRISM has established a more competitive wage for stewards in the coming season.

Similar to previous seasons, recruiting for rural launch locations was also a challenge. The Capital Region PRISM continues to explore new opportunities to recruit qualified candidates in areas that are historically difficult to source qualified applicants.

Even with the challenges of hiring in 2021, the Capital Region PRISM was still able to hire a total of 15 watercraft stewards to provide coverage a majority of the season. In 2022, the PRISM will continue to develop new recruitment methods and continue to adjust to the new virtual process of hiring and onboarding. Additional instruction will be provided in the field to offset any deficiencies with remote preseason onboarding and training.

## Training

- *Watercraft Inspection Steward Program Application (WISPA)* – More detailed training should be provided on WISPA including a resource with detailed explanations of survey questions. No major data flaws were discovered as all stewards had a good base understanding of the survey. Further explanation of questions and response will help alleviate the need for data clean-up, create more consistency in responses, and allow for easier data analysis.
- *Plant Identification* – A stronger emphasis was provided on the AIS plant identification portion of training in 2021 and resulted in more accurate species identification by stewards. Due to training being mainly virtual, the hands-on aspect of AIS plant identification can be difficult. In future season, a continued emphasis should be put on incorporating more training on AIS plant identification during training and weekly site checks during the season. Resources guides should be maintained and updated as needed in coming seasons.
- *Native Plant Identification* – Native plant identification was introduced as a new topic during 2021 steward training along with a new native aquatic plant guide. The addition of native species training allowed stewards to have more confidence in their identification skills and ability to discern native from invasive species. Native plant identification is imperative to help assist stewards in understanding the difference between look-a-like species and for educating the public on the differences between AIS and native plants and should be continued in the coming seasons.

## Capital Region PRISM WISP Handbook

The development of a Capital Region PRISM specific WISP Handbook is recommended. This handbook should cover policies, dress code requirements, launch and table set-up requirements, reporting protocol, emergency contact information, and frequently asked questions.

## WISP Supervisor

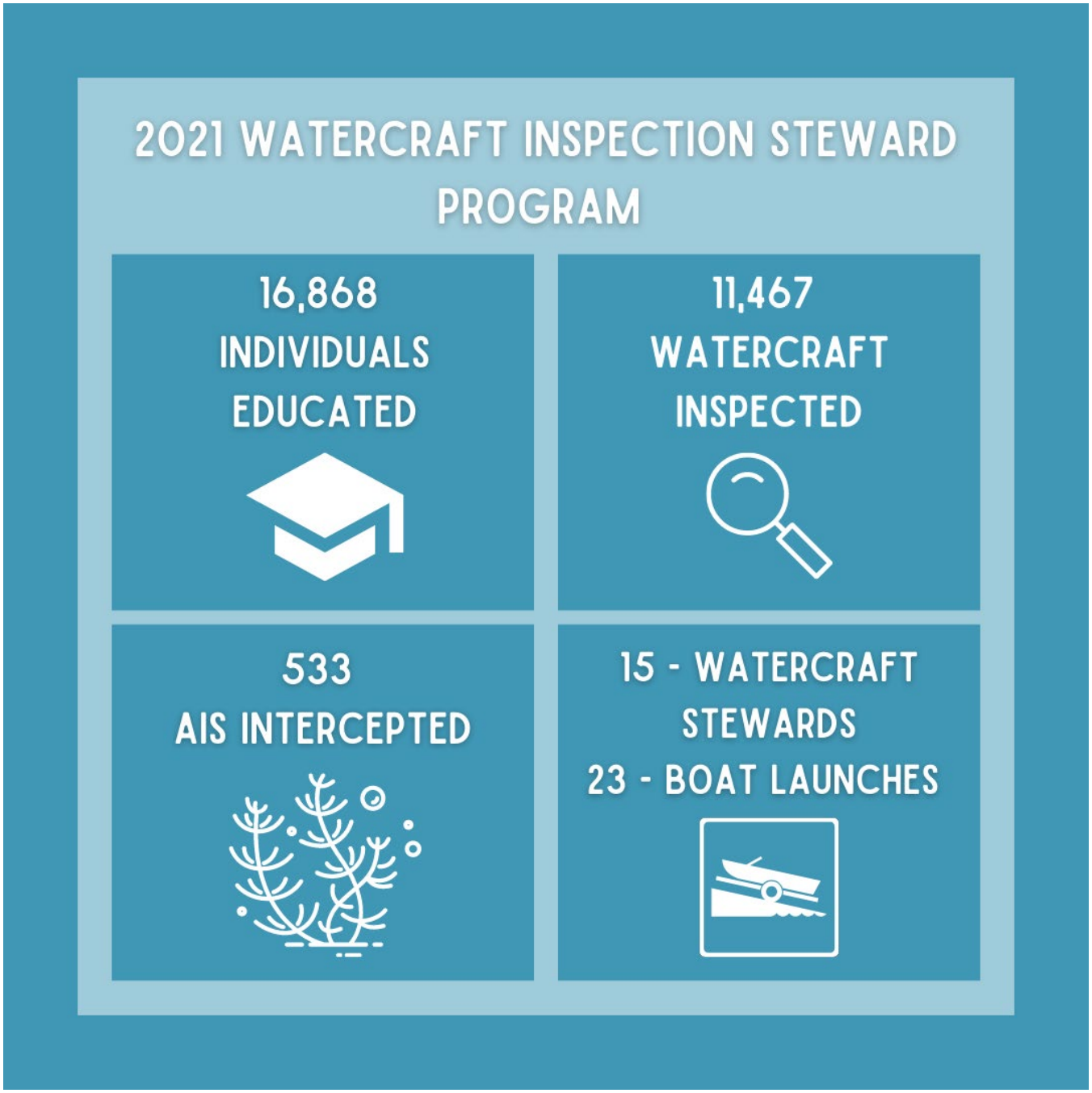
The inclusion of a Watercraft Steward Supervisor is recommended for future seasons. Under the supervisions of the Capital Region PRISM's Aquatic Invasive Species Coordinator, the WISP Supervisor is responsible for daily interactions with all watercraft stewards, completing weekly site visits, ensuring PPE and supplies are delivered and available for all staff, and a number of administrative tasks. The supervisor is also be responsible for quality

control of the data collected in WISPA with a strong focus on confirming plant identifications. The inclusion of a WISP Supervisor with increased responsibility in comparison to a Lead Steward ensures full attention is given to the Watercraft Inspection Steward Program during all operating days throughout the season.

## Conclusion

In conclusion, the Capital Region PRISM successfully completed it's third full-scale WISP season despite the challenges thrown its way in 2021. Without the strength, enthusiasm, support and perseverance of the watercraft stewards, this program would not be what it is today. Watercraft stewards are the first line of defense against the spread of aquatic invasive species. The Capital Region PRISM is proud to have had 16 (including supervisor) outstanding staff in 2021 that helped continue to spread the message of clean, drain, dry.

The Capital Region PRISM strongly support the AISSP program's purpose of protecting our aquatic environments from future infestations. Along with protecting our aquatic environments, the Capital Region PRISM supports the programs capacity to help maintain the viability of local and regional economies and recreational activities that benefit New York residents and tourists.


2021 WATERCRAFT INSPECTION STEWARD PROGRAM
16,868 INDIVIDUALS EDUCATED
11,467 WATERCRAFT INSPECTED
533 AIS INTERCEPTED
15 - WATERCRAFT STEWARDS
23 - BOAT LAUNCHES