

2016 Lake George Aquatic Invasive Species Prevention Program

A Trailered Boat Inspection Program

Final Report



**Lake George
Park Commission**

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Executive Summary

Aquatic invasive species, or AIS, are non-native organisms that can devastate ecosystems by outcompeting native species. These aquatic invaders are nearly impossible to eradicate and management of AIS is prohibitively expensive. Lake George currently has five aquatic invasive species and the Lake George Park Commission has undertaken mandatory vessel inspection in an effort to prevent the introduction of additional AIS.

The 2016 Boat Inspection Program saw reduced costs, increased efficiencies and the greatest number of inspections since the program began. Out of a total 31,128 boater contacts, 10,506 required full inspection and 18% of those required decontamination. One hundred twenty seven vessels arrived with visible plant matter and 109 arrived with confirmed AIS present.

The Lake George Boat Inspection Program continues to be a success due in no small part to its strong partnerships with local municipalities, lake-based non-profits, and multiple levels of state and local government. The Commission thanks our state and local partners (shown on page 9) who work together to fund this program in its entirety, allowing it to exist at no cost to boaters on Lake George.



This report gives detailed results from the third year of operation in 2016. For a full overview of the program’s creation, planning and logistics please refer to the Lake George Aquatic Invasive Species Prevention Plan / Environmental Impact Statement on the Commission’s website. Also, please review the dedicated website to this program, at www.lakegeorgeboatinspections.com.

Boat Inspection Program Summary - By the Numbers

2016 Program Description

	2014	2015	2016	Total
Number of inspection sites	6	7	7	7
Total boater inspections and contacts (entrance, exit, re-seals)	20,229	27,852	31,128	79,209
Entrance inspections without VICS seal	10,351	10,247	10,506	31,104
Exit inspections	5,960	9,949	12,259	28,168
Returning boats with seals	3,918	7,656	8,363	19,937
Number of boats decontaminated	1,264	1,631	1,920	4,815
Average boat inspection time	5 minutes	5 minutes	5 minutes	5 minutes
Average boat decontamination time	9 minutes	9 minutes	9 minutes	9 minutes
Highest total number of inspections conducted in one week	1,703	1,949	2,375	N / A

Highest total number of decontaminations conducted in one week	118	148	163	N / A
Percentage of inspections requiring decontamination	12%	16%	18%	15.48%
Number of boats with visible plant matter present	232	154	127	513
Number of boats with visible invasive species present	165	106	109	380
Percentage of uninspected boats with visible invasive species present	1.60%	1.03%	1.04%	1.22%
Number of distinct waterbodies boaters came from prior to Lake George	457	432	477	N / A
Total number of staff at peak season	55	53	48	N / A
Total number of decontamination units	9	9	9	9
Number of public and commercial launches on Lake George	47	47	47	47
Total operational cost	\$ 668,537.00	\$ 575,089.69	\$ 502,159.59	\$ 1,745,786.28
Total cost of seasonal staff	\$ 548,078.00	\$ 482,443.00	\$ 434,858.35	\$ 1,465,379.35
Cost of LANDA equipment (purchased over 3 years)	\$ 204,000.00	\$ 0.00	\$ 0.00	\$ 204,000.00
Cost to boater for inspection/decontamination	\$0/\$0	\$0/\$0	\$0/\$0	\$0/\$0
Operational cost savings due to optimized staffing	N / A	\$ 65,635.00	\$ 47,584.66	\$ 113,219.66
Annual program operating cost goal for future years	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00

Aquatic invasive species are a significant threat to the future of Lake George water quality, ecology, and even the economy of the region. The third year of the Commission's mandatory inspection program began May 1st 2016 and ended October 31st, per the LGPC's permanent boat inspection program regulations. Inspections took place at Dunham's Bay Marina in Queensbury, Transfer Station Road in Lake George, Norowal Marina in Bolton, Roger's Rock Campground in Hague, Mossy Point in Ticonderoga, and Hulett's Landing Marina in Dresden (managed with Marina staff through contract).

Inspection data is collected on paper logs and then uploaded electronically for weekly review. Any invasive species found during inspection are collected and sent to the Darrin Freshwater Institute for identification. Decontamination is performed by using high pressure, hot water. No chemicals are used in the decontamination process.

For more details on the inspection, decontamination and boat sealing processes, please refer to the “Lake George Aquatic Invasive Species Prevention Plan and Generic Environmental Impact Statement” on the Commission website.

Inspection Site Staffing

Inspection Schedules: All inspection stations were open 7 days a week from dawn until dusk during the peak boating season. Hours of operation were adjusted in the shoulder seasons (May 1st -June 24th, September 6th – October 31st) based on 2014 and 2015 launch activity, weather conditions and local events. As expected, Fridays through Sundays were the busiest days requiring at least three or more Inspectors on duty (Figure 6).

Following Labor Day weekend, the Transfer Station site in Lake George was closed as a result of decreased boater activity. The Dunham’s Bay site began weekend-only operations in late September for the same reason.

Staffing:

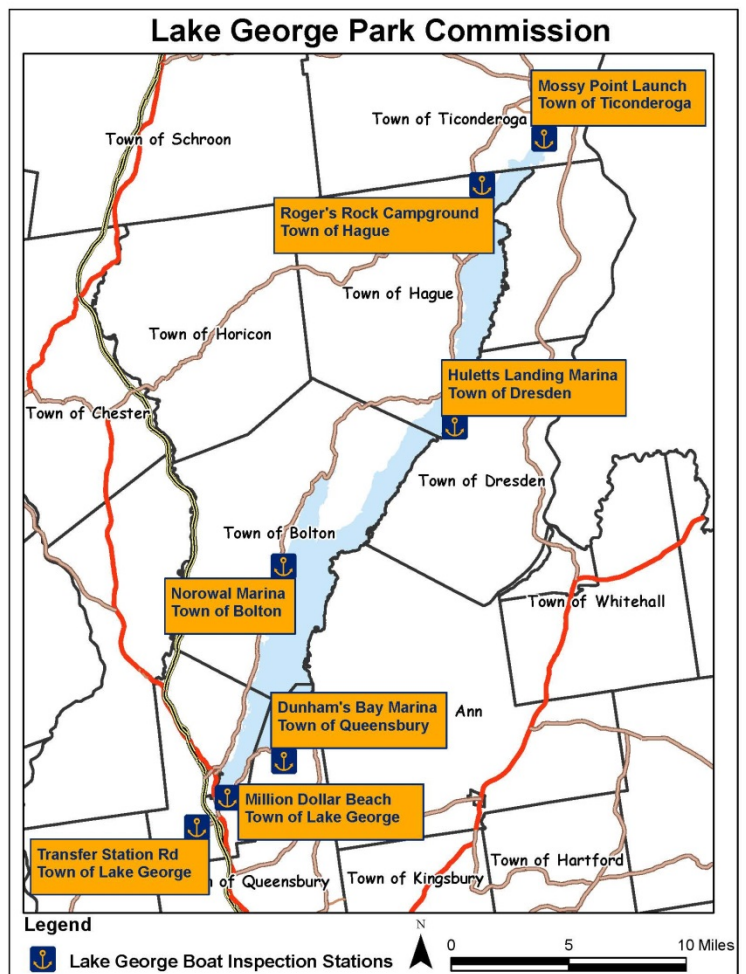
Global Employment Services, Inc. continues to provide staffing, payroll and administrative services. This firm is responsible for providing staffing of all Vessel Inspection Technician positions, liability and worker’s compensation insurance. Commission staff work directly with GES management on the selection and hiring of program personnel, and operational oversight of all seasonal staff falls under the direction of the Commission’s Operations Supervisor III.

Launch Management and Controls

There are three types of launches on Lake George, Public (State and Municipal), Commercial (Marinas and motels), and Private (Home Owners Associations and individual homeowners), totaling over 80 locations. The Commission has signed Launch Agreements with each of these launches to ensure compliance with the program. Each Launch Agreements requires the recording of all launches and retrievals of vessels and securing of the launch during off hours.

Off-Hours Operations at State launches

By NYS DEC operational policy, Rogers Rock and Mossy Point state-owned launches on Lake



George are open to the public at all times. Million Dollar Beach is administered differently as a day-use site, and closes at night in the primary boating season. During the off hours when the Commission's inspection facilities are closed, boaters demonstrate compliance with the regulations by signing into a launch register, removing their VICS and placing it into a secure lock-box provided at the inspection site. When VITs arrive at the launch in the morning, the seals are recovered from the night drop box, and these seals are compared with the number of vessel trailers in the parking lot. Any discrepancies between seals and trailers in the lot are researched to ensure compliance.

Management Efficiencies: "Lake George Only" Boats

In preparation for the Lake George AIS regulations it was recognized that a significant portion of the regulated constituency are boats that are stored locally and only used on Lake George. In consideration of this, the Commission organized programs that would allow these boats to forego the inspection process knowing that they were not a threat to bring new AIS to Lake George. These programs serve as a convenience to the boating public, and also represent significant program efficiencies, and include boat hauler agreements and private launches (described below).

Hauler Agreements

Local marine services professionals who maintain care, custody, and control, of Lake George boats are authorized to launch their registered vessels without inspection, provided the hauler can certify the subject vessel has not been launched into any waterbodies besides Lake George.

Residential and Homeowner Association (HOA) Launches

In order to operate a residential or HOA launch, the respective owner must register the launch with the Commission, and as a condition of this registration process, specify the boats owned by the landowner or respective HOA member, and certify that each of these boats is not trailered to other waterbodies. If and when a boat travels to another waterbody, it may only be launched into Lake George once it has passed a Commission sanctioned Cleaned-Drained-Dry inspection or decontamination and received a vessel inspection control seal.

Trout Lake

Trout Lake was included in the boat inspection program for the 2016 season. Trout Lake is a tributary to Lake George and falls within the Lake George Park boundary. Trout Lake currently has no known AIS, as confirmed by a report conducted by Darrin Freshwater Institute in the summer of 2016. Including Trout Lake into the Lake George Boat Inspection Program serves to protect both waterbodies from potential ecologic and economic damage.

There are no public launches on Trout Lake, but there are several private and HOA launches. The Commission administered Launch Agreements with these launch owners as was done with Lake George launches. Launch Agreements allow vessels owned by the launch owner or those listed on the agreement to be launched into Trout Lake. If the vessel was launched anywhere other than Trout Lake it must be taken to an Inspection Station for inspected and decontaminated if necessary prior to its launch into Trout Lake.

The primary means of accessing Trout Lake under the program is now the Trout Lake Club as their owners have been extremely accommodating in helping this program to succeed on Trout Lake. The Club secures their site against illegal (uninspected) launch, and confirms that all boaters who wish to use their launch are either sealed through the LGPC inspection program or they are on an Association pre-approved list. The Commission thanks the Trout Lake Club owners and operators for their efforts to help keep invasives out of Trout Lake and ultimately Lake George.

Program Cost, Funding, and Partners

This program exists through generous funding provided through a cost-sharing between the NYS Environmental Protection Fund and through local municipal and nonprofit contributions. Expenses and income are detailed in the tables in this section.

To get a full understanding of the program, below are the itemized costs and contributions of the program for 2014, 2015 and 2016.

Expenses

1. Staffing and Program Administration

Table 5: Direct costs associated with staffing and program administration are as follows:

Expense Type	Amount	Amount	Amount	Amount
One Time Expenses	2014	2015	2016	Total
Decontamination units (9, see Table 1)	\$204,000.00	\$0.00	\$0.00	\$204,000.00
Site Work and Signage	\$49,722.41	\$1,617.00	\$0.00	\$51,339.41
Safety/Security (fire extinguishers, lock boxes)	\$1,648.49	\$68.10	\$0.00	\$1,716.59
Radios/Cellphones/tablets/credit card terminals	\$7,155.54	\$2,125.69	\$573.83	\$9,855.06
Inspection site office (1 in 2015 at MDB)	\$31,627.00	\$7,700.00	\$0.00	\$39,327.00
Secure Storage Unit Delivery/Set up	\$1,828.62	\$350.00	\$0.00	\$2,178.62
Canvas Covers for Landas (2 in 2014, 4 in 2015)	\$1,500.00	\$3,000.00	\$0.00	\$4,500.00
Cloud Setup	\$251.27	\$0.00	\$0.00	\$251.27
Subtotal	\$297,733.33	\$14,860.79	\$573.83	\$313,167.95
Recurring Expenses				
Wash Unit Maintenance/misc. parts	\$6,594.44	\$1,445.16	\$3,748.59	\$11,788.19
Training Facility/ Refreshments	\$1,093.48	\$0.00	\$0.00	\$1,093.48

Seals and Wire	\$12,212.40	\$3,094.00	\$10,494.45	\$25,800.85
Fuel & Truck Maintenance	\$4,983.56	\$3,621.70	\$3,000.47	\$11,605.73
Advertising/Rack Cards	\$2,077.14	\$1,285.00	\$0.00	\$3,362.14
Hardware/Supplies	\$8,028.29	\$865.51	\$1,248.76	\$10,142.56
Hulett's Landa Parking Rental	\$3,500.00	\$3,500.00	\$3,500.00	\$10,500.00
Uniforms	\$3,258.99	\$3,770.90	\$3,286.40	\$10,316.29
Subtotal	\$41,748.30	\$17,582.27	\$25,278.67	\$84,609.24
Monthly Expenses				
Utilities (season total: electrical service, outhouses, landlines)	\$4,141.96	\$3,633.24	\$2,783.94	\$10,559.14
Secure Storage (Annual total)	\$3,321.25	\$3,247.68	\$3,247.68	\$9,816.61
Cellular Phones (2014: season total; 2015 & 2016: through Nov.)	\$5,819.44	\$1,485.41	\$2,028.88	\$9,333.73
Cloud Services	\$269.91	\$269.91	\$269.91	\$809.73
SnapSurvey WebHost Service (annual subscription)	\$2,553.00	\$3,350.00	\$4,500.00	\$10,403.00
Subtotal	\$16,105.56	\$11,986.24	\$12,830.41	\$40,922.21
Staffing				
Seasonal Staff Labor Cost	\$548,078.47	\$482,433.11	\$434,858.35	\$1,465,369.93
Background Checks	\$4,865.00	\$3,050.02	\$2,904.79	\$10,819.81
Marina Liability Insurance	\$13,383.00	\$13,800.00	\$14,658.40	\$41,841.40
Finance charges	\$501.94	\$0.00	\$0.00	\$501.94
Full time Park Ranger with Benefits	\$49,738.05	\$49,738.05	\$0.00	\$99,476.10
Subtotal	\$616,566.46	\$549,021.18	\$452,421.54	\$1,618,009.18
Summary: Program Annually Recurring Expense	\$674,420.32	\$578,589.69	\$490,530.62	\$2,041,273.96
<i>Original Estimated Cost</i>	<i>\$700,000.00</i>	<i>\$700,000.00</i>	<i>\$520,000.00</i>	<i>\$2,220,000.00</i>
<i>Percent under budget</i>	<i>3.65</i>	<i>17.34</i>	<i>5.67</i>	<i>8.05</i>
Summary: Program One-Time Up-Front Expense	\$297,733.33	\$14,860.79	\$573.83	\$313,167.95
<i>Original Estimated Cost</i>	<i>\$300,000.00</i>			
<i>Percent under budget</i>	<i>0.76</i>			
TOTAL Program Cost to Date	\$972,153.65	\$593,450.48	\$491,104.45	\$2,056,708.58
<i>Percent under budget</i>	<i>2.78</i>	<i>15.22</i>	<i>5.56</i>	<i>7.36</i>

* In 2016, Park Ranger salary and benefits paid for out of the Commission budget, not Inspection Program funding.

Program Income

Table 6: Staffing and program administration costs incurred by the Commission were shared by New York State and the “Save Lake George Partnership” of locally-based municipal and nonprofit entities:

Source	Funding (For 2016 Annual Program Cost)
NYS Environmental Protection Fund	\$350,000
Warren County	\$100,000
Village of Lake George	\$30,000
Town of Lake George	\$30,000
Town of Bolton	\$30,000
Town of Queensbury	\$30,000
Fund for Lake George	\$30,000
Lake George Association	\$30,000

Table 7: Funds invested in furtherance of the effective administration of this program are as follows:

Funding	Source
\$35,000	Town of Putnam, Staffing the Town’s launch
\$9,952	Town of Hague, Staffing the Town’s launch

2016 Inspection Program Results

The Lake George Park Commission boat inspection program had a total of 31,128 boater contacts in the year 2016 (Figure 1, see Appendices for all figures and tables referenced henceforth). Thirty-three percent of these (10,506) were boats arriving at Lake George without a Vessel Inspection Control Seal (VICS), requiring a full inspection (Figure 2). Of those 10,506 trailered boats, 18% posed a threat of aquatic invasive species transport, and received onsite decontamination (Figure 3).

Almost twenty-six percent of program boater contacts were boats returning to Lake George with a Vessel Inspection Control Seal (Figure 4), meaning they had either already had an entrance inspection from a previous visit or they were returning to Lake George following a previous exit inspection. The exit inspection of trailered boats being retrieved from Lake George represents roughly 39% of all boater contacts.

A total of 109 visible aquatic invasive species were found on vessels throughout the season, equating to approximately 1.04% of boats arriving at Lake George. This is a small increase, compared to the 2015 boating season, where 106 vessels were found to have visible AIS (Table 9).

Table 9: Visible AIS retrieved during entrance inspections in 2014, 2015, and 2016

Species	2014	2015	2016
Eurasian watermilfoil	119	67	69
Zebra mussels	23	20	11

Curly leaf pondweed	13	12	17
Water chestnut	8	7	11
Rusty Crayfish	0	0	1
Snail	2	0	0
Total Number of Boats with Visible AIS	165	106	109

For more detailed results, please see Table 11 in the attached appendices, which break the data out further by origin of boat and what was found.

The 2016 inspection program identified that boats arriving at Lake George had previously visited 477 unique waterbodies across the United States and Canada as the last body of water prior to coming to Lake George (Figure 6, Table 10). The ten most common waterbodies visited prior to coming to Lake George include the Hudson River, Saratoga Lake, and Lake Champlain (Table 12).

As in previous years, there were significantly greater numbers of entrance inspections during the short “peak” summer season (June 25th-September 5th) compared with the longer shoulder season (May 1st - June 24th, September 6th – October 31st). Expanding upon seasonal differences in boater activity, Figures 7 and 8 show the number of entrance inspections and decontaminations throughout the boating season. These data reflect a bell-shaped curve indicating greater boater activity from late June through August, and significantly reduced activity at regional inspection stations during spring and fall.

Total staff hours for 2016 ranged from 588 to 1400 hours per week from late May through early September when hours were lowered in response to waning boater activity (Figures 7 and 8). As expected, diminishing boater activity late in the 2016 season resulted in increasing costs per inspection, with a program-wide cost per inspection rising from a low of \$7.93 the week of July 31st into the hundreds of dollars per inspection in the month of October (Figure 10). The Commission maintains a minimum of two staff people at all open inspection sites through the season for safety purposes, and with the lesser boating activity late season, the cost per inspection inherently rises.

Program Compliance

The monitoring of compliance, or checking to make sure that boaters and facilities are working properly in the program, is conducted primarily by the Commission’s Marine Patrol. The patrol devoted 1,004 hours to aquatic invasive species in 2016 (Figure 11). During the 2016 season, the patrol spent 250 hours at the inspection stations around the lake. The patrol also checked private launches. The patrol recorded if there was contact made at the launch, whether the launch was secured, and if there was activity when checked.

The Patrol spent 674 hours and made 7,298 checks on launches around the lake. During those checks, there was activity present 448 times (Figure 12). Several of those checks resulted in finding vessels that were not registered to launch at certain private launches. In year 2016, four tickets were written under this regulation, three related to launching without an inspection and one for transportation of a water chestnut. The Commission thanks the many owners of privately maintained launches around Lake George for their support and continued efforts under this program to help protect Lake George.

The Commission’s Marine Patrol also spent 80 hours on AIS support time. This time includes participation in the annual Asian clam survey and boater education.

Sanitary Inspections

Beginning in 2016, Vessels Inspection Technicians performed Sanitary Inspections of equipped vessel at the inspection stations when time permitted Pursuant to 6 NYCRR Subpart 646-1.6(i), “No person shall launch any vessel into the waters of the park, or operate a vessel on the waters of the park, which is not permanently sealed to prevent the discharge of wastewater into the waters of the park.” Vessels that were found to be unsealed were provided rubber stoppers as a means of sealing discharge ports. In all cases boaters with unsealed facilities were educated regarding the requirements. Several larger more complex vessels were referred to local marinas as they required significant work so as to comply with the Commission regulations.

Location	Sanitary Inspections
Mossy Point	30
MDB/Transfer	110
Norowal	218
Dunham's	44
Rogers' Rock	0
Total	402

Conclusions and Recommendations

The third year of the Lake George Park Commission’s Aquatic Invasive Species Prevention Program has been successfully implemented and completed. This effort continues to intercept thousands of “at-risk” boats and hundreds of aquatic invaders before they make their way into the incredible resource that is Lake George. Widespread, continued support from the recreational users, local municipalities (all 9 municipalities surrounding Lake George have written resolutions of support), and the media make this program the success that it is. This program would not be possible without support from all levels of government. The Commission gives special thanks to Governor Andrew Cuomo’s Office, Warren County, the local municipalities and our nonprofit lake-based partners including the Lake George Association and the Fund for Lake George, and the business community surrounding Lake George.

As the Commission seeks to maintain a sustainable, long-term program, it is conscious of these partners and their considerable efforts to make it happen. The Commission strives to make the program as cost-effective and public-friendly as possible. Lake George still has the relatively enviable position of having only five invasive species in its crystal clear waters, and by working together, the goal is to keep it that way for generations to come.

Appendices

Figure 1: Total vessel inspections by inspection station in 2016 including boats arriving without VICs, boats arriving with VICs, and exit inspections

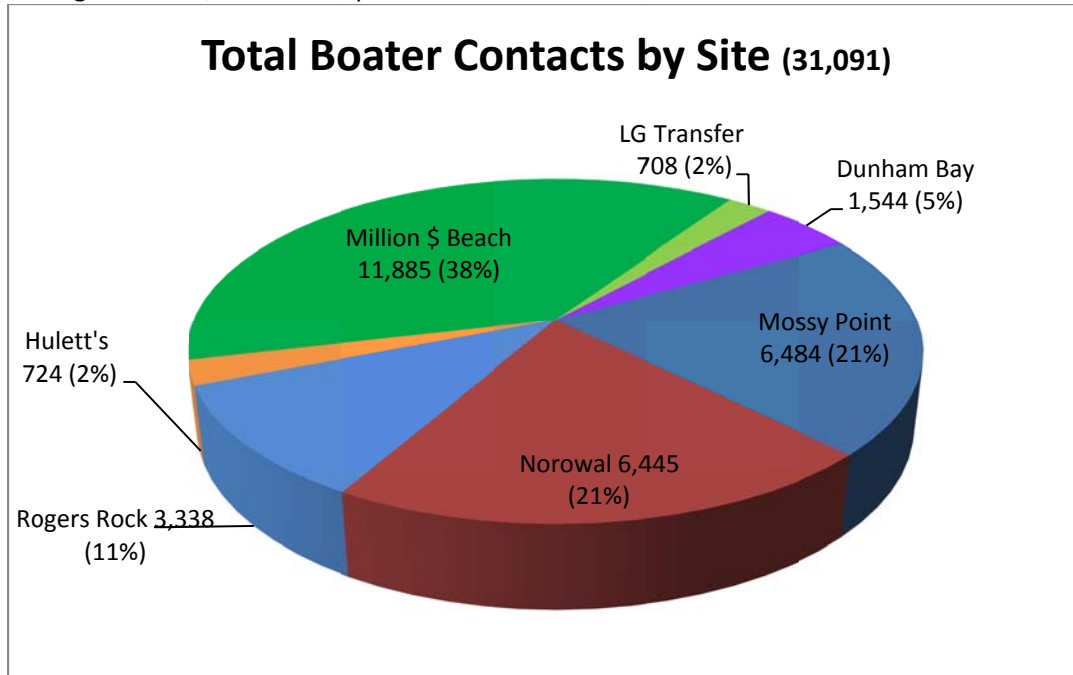


Figure 2: Total number of vessel inspections for boats arriving without VICs

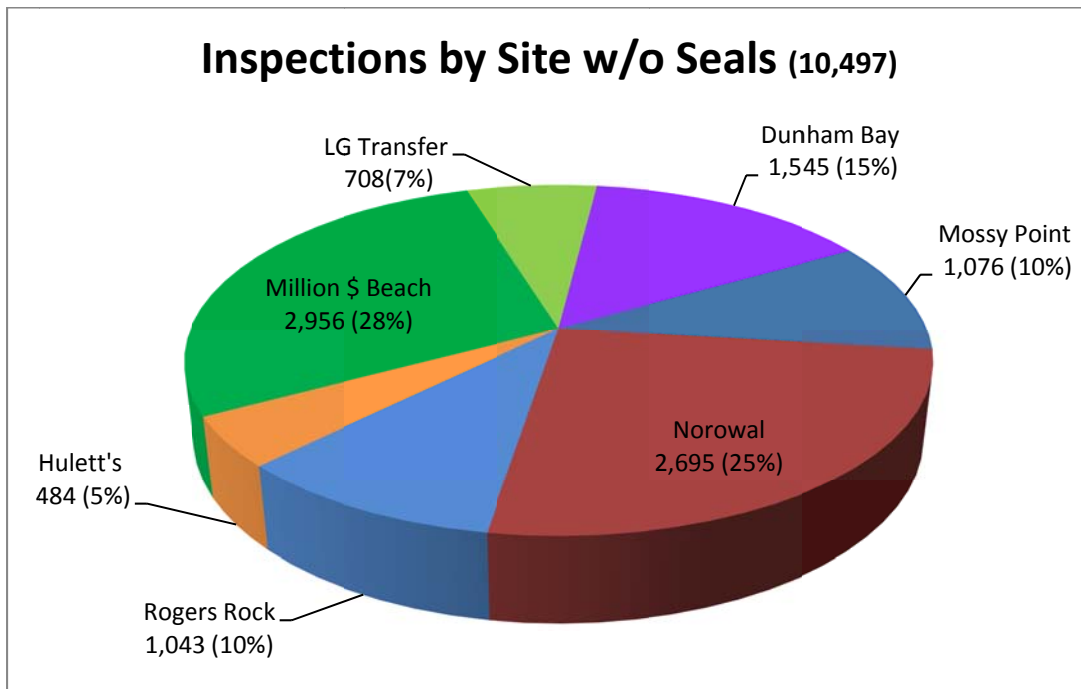


Figure 3: Total number of decontaminations

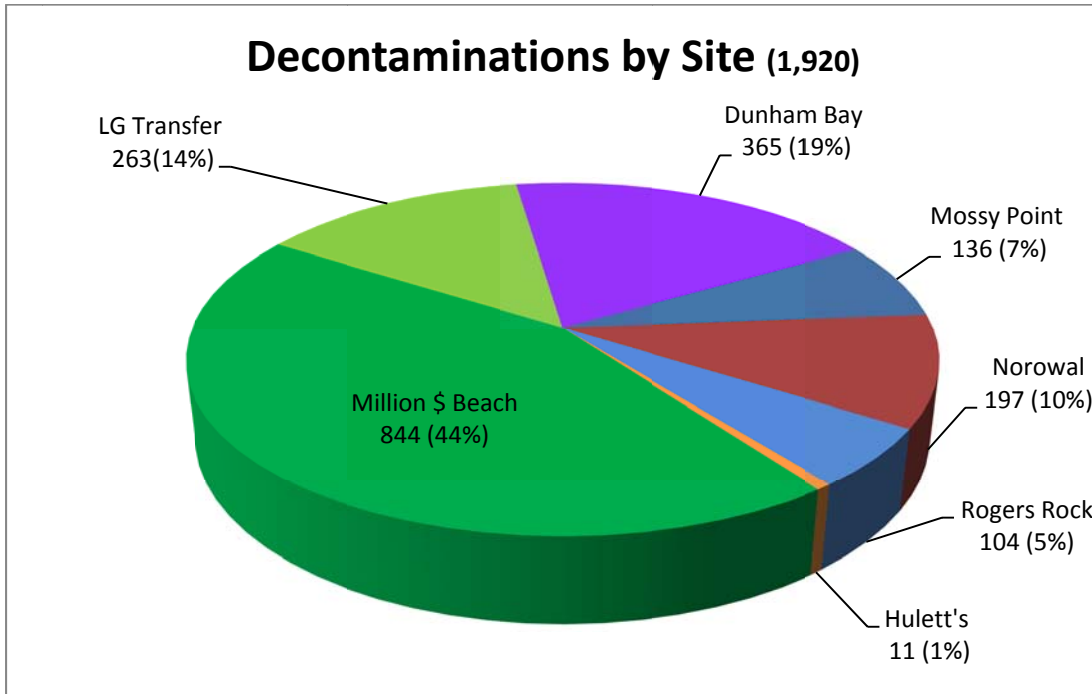


Figure 4: Total number of vessel inspections for boats arriving with VICS

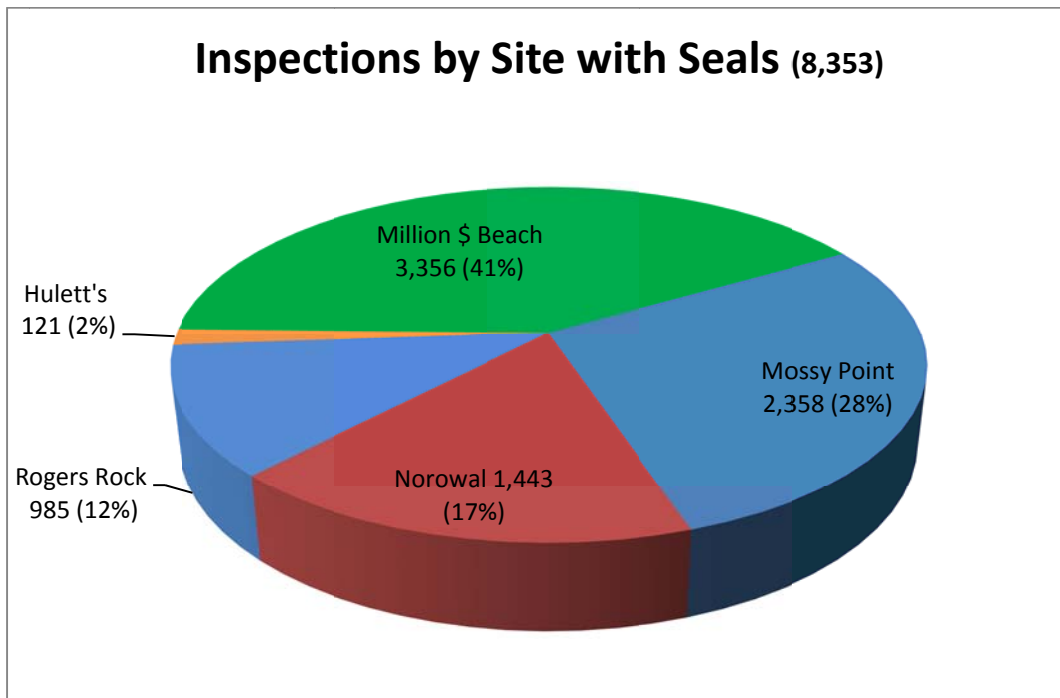


Table 10: Tabular list of 477 waterbodies visited prior to arriving at Lake George

<u>Arkansas</u>	<u>Florida</u>	Charles River
Lake Norfolk	Atlantic Ocean	Chauncy Lake
	Gulf of Mexico	Cheshire Lake
<u>California</u>	Intracoastal Waterway	Comet Pond
Clear Lake	Lake Fairview	Connecticut River
	Lake Harris	Goose Pond
<u>Connecticut</u>	Lake Ida	Great Herring Pond
Atlantic Ocean		Great South Pond
Bantam Lake	<u>Georgia</u>	Hamilton Reservoir
Bashan Lake	Chatuga Lake	Hampton Pond
Beach Pond Lake	Lake Lanier	Lake Buel
Beseck Lake	Lake Nottely	Lake
Bolton Lake		Chaubunagungamaug
Candlewood Lake	<u>Kentucky</u>	Lake Cochituate
Cedar Lake	Kentucky Lake	Lake Congamond
Colebrook River Dam		Lake Garfield
Connecticut River	<u>Maryland</u>	Lake Lashaway
Copake Lake	Chesapeake Bay	Lake Mahkeenac
Coventry Lake	Chester River	Lake Pearl
Crystal Lake	Deep Creek Lake	Lake Pontoosuc
Gardner Lake	Elk River	Lake Quinsigamond
Highland Lake	McGill Creek	Lake Sabbatia
Housatonic River	Northeast River	Lake Shirley
Lake Congamond	Patuxent River	Long Pond
Lake Lillinonah	Potomac River	Manchaug Pond
Lake McDonough	Sassafras River	Manasquan River
Lake Pocotopaug	Sue Creek	Massapoag Pond
Lantern Hill Pond	Susquehanna River	Merrimack River
Lake Zoar		Nantucket Sound
Little Pond	<u>Maine</u>	Norwich Lake
Long Island Sound	Baker Pond	Onota Lake
Cos Cob Harbor	Brassua Lake	Otis Reservoir
Moosic Reservoir	Elk River	Pantoosuc Lake
Phantom Lake	Forest Lake	Plantain Pond
Quaddick Reservoir	Gardner Lake	Plunkett Reservoir
Rain Bow Reservoir	Hamilton Reservoir	Pratt Pond
Roger Lake	Little Sebago Lake	Quabbin Reservoir
Staffordville Lake	Piscataque River	Richmond Pond
Thames River	Range Pond	Salem Harbor
Twin Lakes	Sebago Lake	Wallum Lake
Waramaug Lake	Thomas Pond	Webster Lake
West Hill Pond		Wickaboag Lake
Wononpakook Lake	<u>Massachusetts</u>	Winona Lake
	Anoda Lake	
<u>Delaware</u>	Atlantic Ocean	<u>Michigan</u>
Atlantic Ocean	Big Alum Lake	Devils Lake
Chesapeake Bay	Big pond Lake	Elk Lake
Delaware River	Boston Harbor	Gull Lake
Delware Bay	Buffumville Lake	Houghton Lake
McGinnis Pond	Buzzard Bay	Lake Michigan
Nauticoke River	Cape Cod Bay	Walnut Lake
Rehoboth Bay	Ceder Lake	
	Center Pond	

Minnesota

Pokegama Lake

Nevada

Lake Tahoe

New Hampshire

Atlantic Ocean

Baxter Lake

Branch River

Connecticut River

Conway Lake

Lake Horace

Lake Monomonic

Lake Ossipee

Lake Sunapee

Lake Winnepesaukee

Lake Winnisquam

Lake Tarleton

Moore Dam Reservoir

Newfound Lake

Pine River Pond

Pleasant Lake

Sabago Lake

Second Davis Pond

Silver Lake

Spofford Lake

Squam lake

Walker Pond

New Jersey

Assumpink Lake

Atlantic Ocean

Barnegat Bay

Beaver Creek

Budd Lake

Clinton Reservoir

Collier Mills Lake

Cranberry Lake

Delaware River

Echo Lake

Egg Harbor Bay

Fords Pond

Great Sound

Green Pond

Greenwood Lake

Indian Lake

Lake Apon

Lake Hopatcong

Lake Kinnelon

Lake Mohawk

Lake Owassa

Lake Wallace

Lake Wallenpaupack

Lake Wawayanda

Manahawkin Bay

Manasquan Reservoir

Manasquan River

Merrill Creek Reservoir

Metedeconk River

Monksville Reservoir

Mullica River

Navesink River

New York Harbor

Oak Ridge Reservoir

Oakwood Lake

Oxford Furnace Lake

Passaic River

Pompton Lakes

Raritan Bay

Raritan River

Rising Sun Lake

Round Lake Reservoir

Round Valley reservoir

Salem Canal

Salem River

Sandy Hook Bay

Shark River

Shrewsbury River

South River

Spruce Reservoir

Swartwood Lake

Swinging Bridge Lake

Toms River

Union Lake

White Meadow Lake

New York

Ababakee Lake

Adirondack Lake

Alexander Bay

Alexander Lake

Allegany State Park

Atlantic Ocean

Ballston Lake

Black Lake

Black River

Blue Mountain Lake

Brant Lake

Brantingham Lake

Burden Lake

Butterfield Lake

Canada Lake

Canadarago Lake

Canandaigua Lake

Caroga Lake

Catskill Creek

Cayuga Lake

Cazenovia Lake

Chautauqua Lake

Chenango Lake

Conesus Lake

Copake Lake

Cossayuna Lake

Courtney Pond

Cranberry Lake

Crooked Lake

Crooks Lake

Cross Lake

Crystal Lake

Delta Lake

Deruyter Reservoir

Durant Lake

Eagle Lake

Eighth Lake

Eire Canal

First Lake

Fish Creek Pond

Flower Lake

Forest Lake

Forked Lake

Fourth Lake

Friends Lake

Fulton Chain

Garnet Lake

Genesee River

Glass Lake

Glen Lake

Grafton Lake

Great Sacandaga Lake

Great South Bay

Greenwood Lake

Hadlock Pond

Harris Lake

Hatch Lake

Hedges Lake

Higley Flow Reservoir

Hinckley Reservoir

Honeoye Lake

Hudson River

Indian Lake

Jamaica Bay

Jones Inlet

Keuka Lake

Kinderhook Lake

Kingsley Reservoir

Lake Alice

Lake Champlain

Lake Erie

Lake Flower

Lake Huntington
Lake Luzerne
Lake Mahopac
Lake Moraine
Lake Nancy
Lake Ontario
Lake Oscawana
Lake Placid
Lake Pleasant
Lake Ronkonkoma
Lake Sebago
Lake Wallenpaupack
Lamoque Lake
Lebanon Reservoir
Limekiln Lake
Lincoln Pond
Long Island Oyster Bay
Long Island Sound
Long Lake
Loon Lake
Lower Saranac
Manhasset Bay
Merrick Bay
Middle Bay
Mirror Lake
Mohawk River
Mohegan Lake
Mohican Lake
Montauk Bay
Mullett Lake
New York Harbor
Niagara River
Old Forge Lake
Oneida Lake
Orange Lake
Oscawana Lake
Oswego River
Otisco Lake
Otsego Lake
Owasco Lake
Oyster Bay
Paradox Lake
Peach Lake
Peck's Lake
Peconic Bay
Peconic Lake
Piseco Lake
Queechy Lake
Racquette Lake
Racquette River
Raritan Bay

Reynolds Channel
Rock Lake
Round Lake
Saranac Lake
Saratoga Lake
Schroon Lake
Seneca Lake
Seneca River
Serenade Lake
Seventh Lake
Silver Lake
Skaneateles Lake
Sleepy Hollow Lake
Snyders Lake
Sodas Bay
South Bay LI
St. Lawrence River
Stewart's Bridge Reservoir
Stewarts Pond
Stillwater Reservoir
Sullivan Reservoir
Summit Lake
Susquehanna River
Swinging Bridge Reservoir
Taconic Rudd Pond
Tennanah Lake
Thompson Lake
Thousand Islands
Toronto Reservoir
Trout Lake
Tupper Lake
Upper Saranac
Warner's Lake
Whaley Lake
White Lake

North Carolina

Cape Fear River
Intercoastal
Jordan Lake
Lake Norman
New River
Pamlico Sound

Ohio

Alum Creek Lake
Caesar's Creek
Cwan Lake
Lake Erie
Lake Milton
Mosquito Lake

Pleasant Hill Lake
West Branch Reservoir

Pennsylvania

Tioga-Hammond Reservoir
Beltzville Reservoir
Blue Marsh Lake
Bradys Lake
Conneaut Lake
Delaware Bay
Delaware River
Duck Harbor Pond
Fawn Lake
Harvey's Lake
Hunter Lake
Lake Erie
Lake Harmony
Lake Ladore
Lake Nockamixon
Lake Wynonah
Lake Wallenpaupack
Lehigh River
Marsh Creek Reservoir
Onota Lake
Promised land St. Pk.
Raystown Lake
Roamingwood Lake
Schuylkill River
Susquehanna River
Van Sciver Lake
Wild Acres Lake

Rhode Island

Atlantic Ocean
Burlingame Lake
Echo Lake
Johnsons Pond
Narragansett Bay
Pawcatuck River
Providence River
Slatersville Reservoir
Stafford Pond
Warwick Pond
Waterman Reservoir

South Carolina

Intracoastal Waterway
Lake Hartell
Lake Kowee

Tennessee

Center Hill Lake
Cherokee Lake
Norris Lake

Texas

Eagle Mt. Lake
Lake Conroe
Lake Travis

Utah

Pineview Reservoir

Vermont

Chittenden Reservoir
Crystal Lake
Dunmore
Echo Lake
Harriman Reservoir
Lake Bomoseen
Lake Carmay
Lake Champlain
Lake St. Catherine
Lake Dunmore
Lake Elmore
Lake Fairlee
Lake Hortonia
Lake Iroquois
Lake Memphremasog
Lake Paran
Lake Rescue
Lake Seymour
Lake Whitingham
Lake Willoughby
Somerset Reservoir
Waterbury Reservoir
Woodard Reservoir
Wrightsville Reservoir

Virginia

Chesapeake Bay
Chickanhominy Lake
Lake Anna
Smith Mountain Lake
Occoquan River
Potomac River

Wisconsin

Granger Lake
Pickerel Lake

Canada - Ontario

Drummer Lake
Lake Ontario
Lake Rochelle
Lake Simcoe
Limerick Lake
Lough Borough Lake
Newboro Lake
Ottawa River
Peninsula Lake
Rice Lake
Stony Lake
St. Lawrence River

Canada - Quebec

Lac Memphremagog
Lac St. Louis
Lake Magog
Lake Archambault
Le Fleuve St. Laurent
Musquaro Lake
Richelieu River

Table 11: Visible AIS recovered at inspection stations in 2016 and the last waterbody visited by the subject vessel prior to Lake George

Origins of Aquatic Invasives in 2016						
Water Body last visited	Boats With Invasives	State	Eurasian Milfoil	Zebra Mussel	Curly Leaf Pondweed	Water Chestnuts
Candlewood Lake	4	CT	✓			
Coventry Lake	1	CT	✓			
Salem Harbor	1	MA	✓			
Deep Creek Lake	1	MD	✓			
Delaware River	1	NJ	✓			
Greenwood Lake	5	NJ	✓		✓	
Lake Hopatcong	8	NJ	✓		✓	
Lake Tahoe	1	NV	✓			
Ballston Lake	3	NY	✓	✓		✓
Butterfield Lake	1	NY			✓	
Fulton Chain Lakes	1	NY		✓		
Glen Lake	1	NY		✓		
Great Sacandaga	2	NY	✓			✓
Hadlock Pond	1	NY			✓	
Hudson River	14	NY	✓	✓	✓	✓
Lake Champlain	2	NY	✓			
Lake Mahopac	2	NY	✓	✓		
Lake Moraine	1	NY	✓			
Long Island Sound	1	NY	✓			
Loon Lake	2	NY	✓		✓	
Mohawk River	7	NY	✓	✓		✓
Niagara River	1	NY	✓			
Owasco Lake	1	NY	✓			✓
Saranac Lake	3	NY	✓		✓	
Saratoga Lake	23	NY	✓	✓	✓	✓
Swinging Bridge	1	NY	✓			
Lake Catherine	2	VT	✓		✓	

Table 12: Top ten waterbodies visited prior to arriving at Lake George

	Water Body	Number of AIS	Number of watercraft from		
			2016	2015	2014
1	Hudson River	122	602	515	379
2	Saratoga Lake	4	386	375	279
3	Lake Champlain	50	281	251	203
4	Great Sacandaga Lake	3	272	263	196
5	Long Island Sound	Salt Water	253	246	124
6	Lake Hopatcong	3	216	197	185
7	Schroon Lake	3	196	204	114
8	Greenwood Lake	2	157	127	122
9	Candlewood Lake	3	146	141	125
10	Connecticut River	4	124	127	91

Figure 6: Shows peak season Entrance Inspection activity by day for each inspection station.

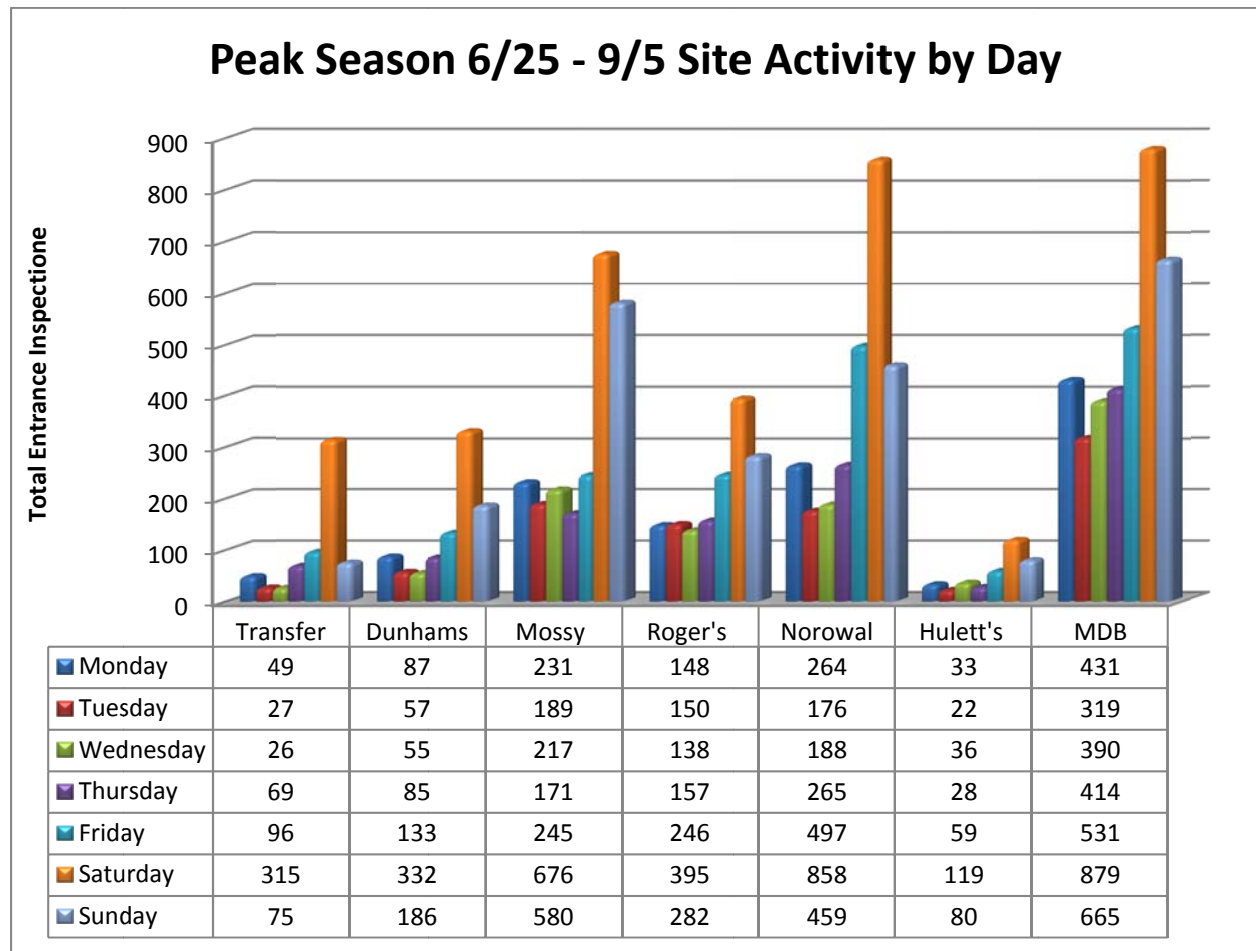


Figure 7: Temporal distribution of entrance inspections by week throughout the boating season

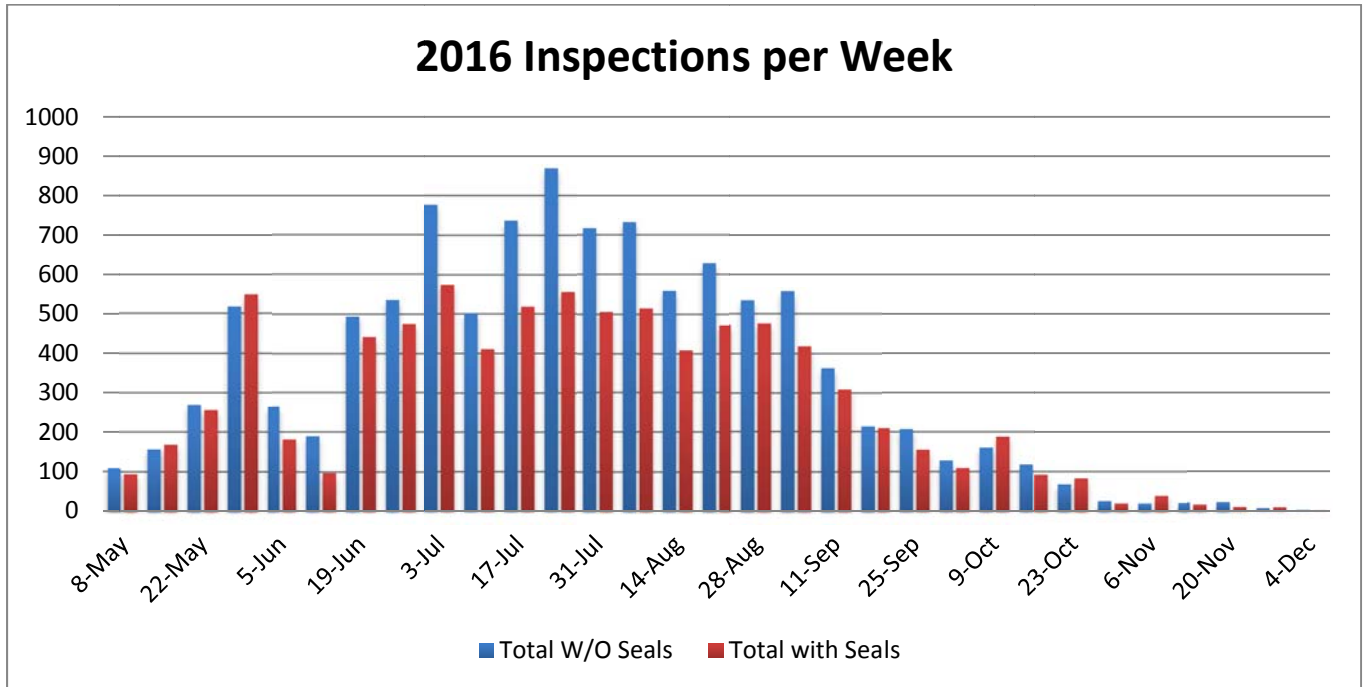


Figure 8: Temporal distribution of inspections and decontaminations by week throughout the boating season

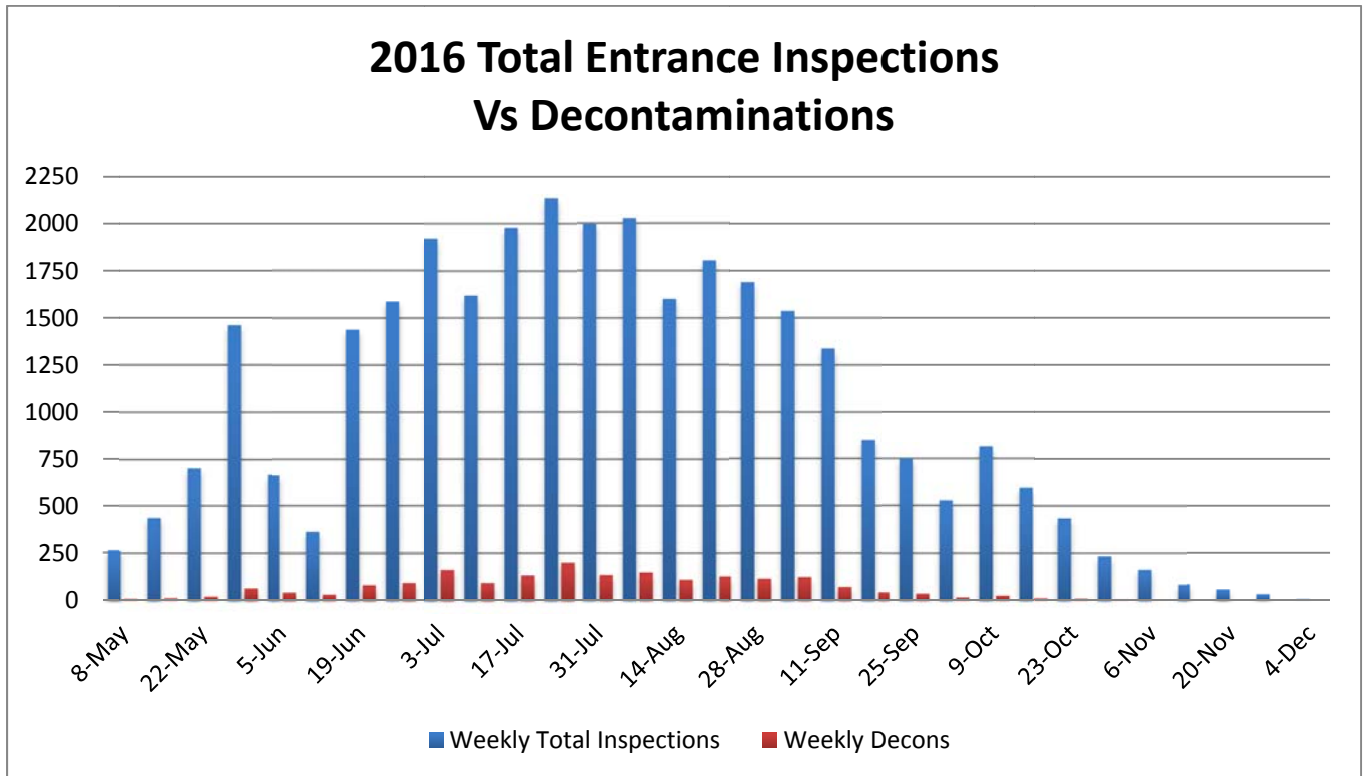


Figure 9: Temporal distribution of staff hours by week throughout the boating season

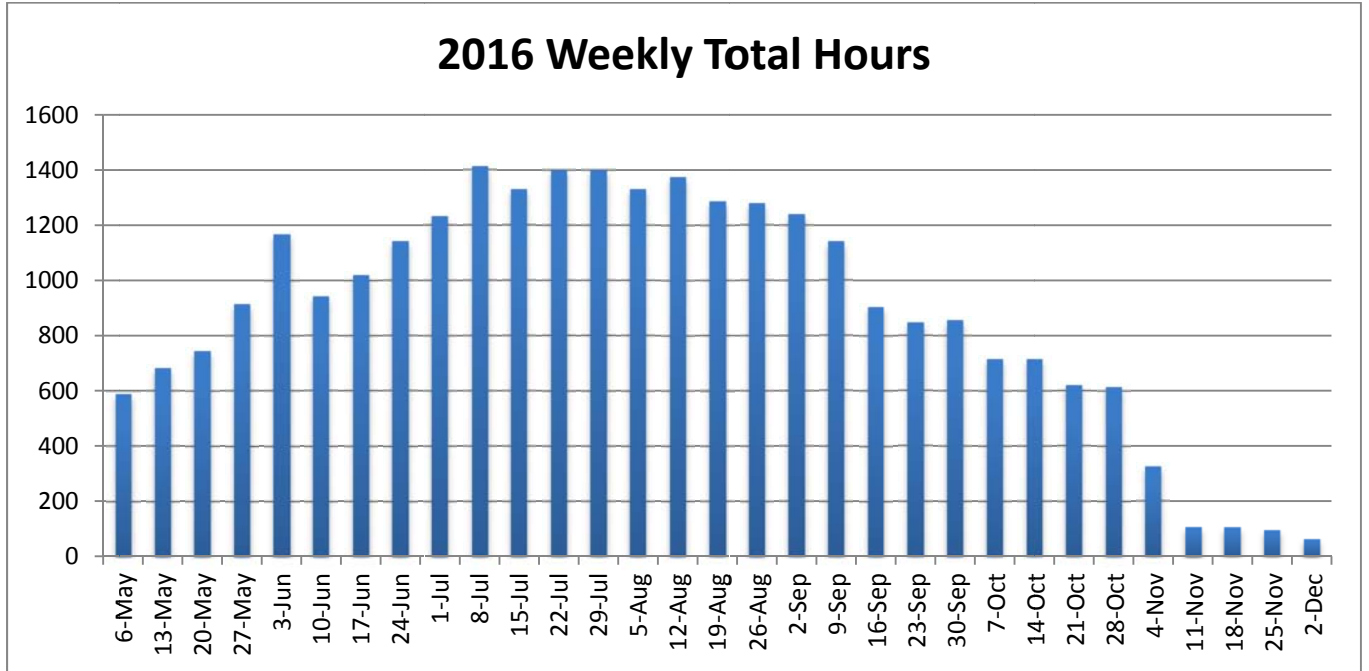


Figure 10: Temporal distribution of cost per interaction (entrance w/ seal, entrance w/o seal, exit inspections combined) by week throughout the 2016 boating season.

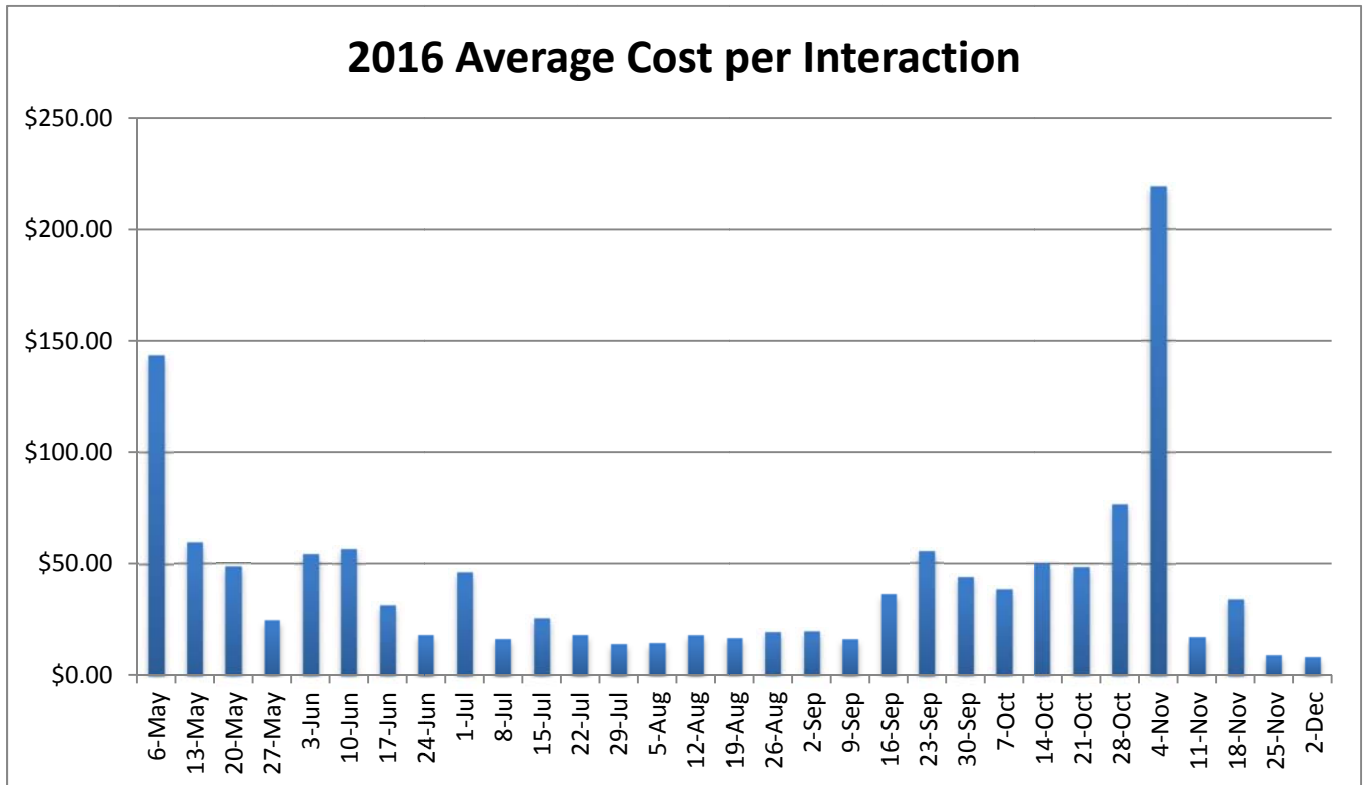


Figure 11: Commission Marine Patrol time dedicated to AIS program compliance, totaling 1,004 hours.

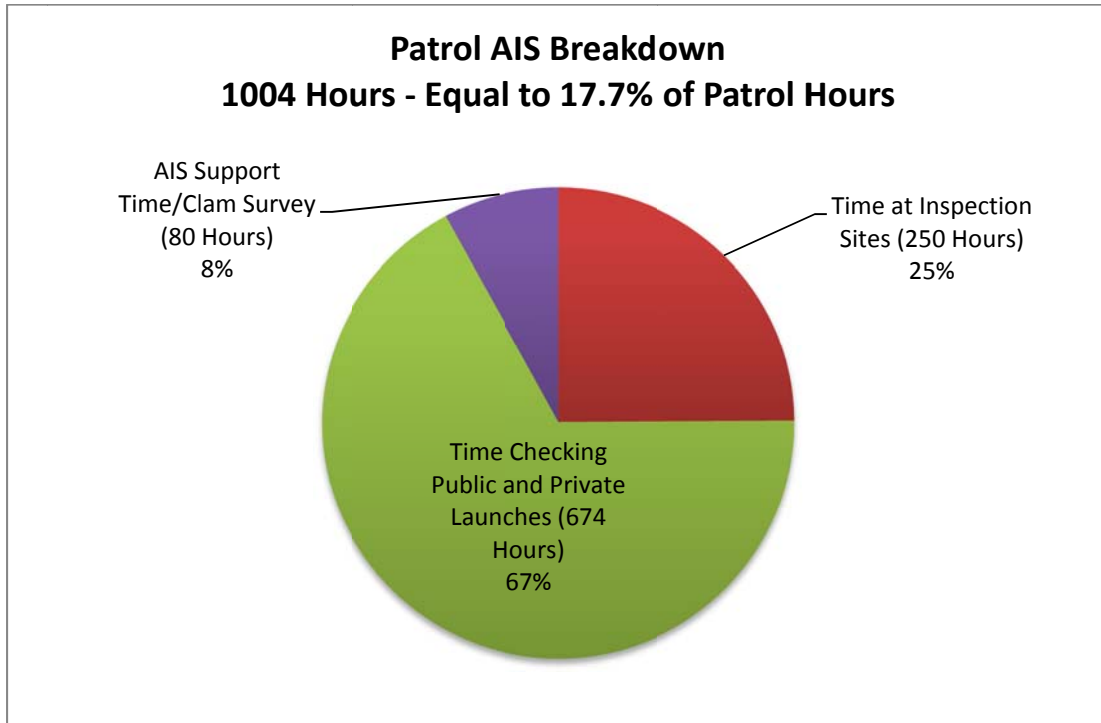


Figure 12: Commission Marine Patrol AIS Launch Compliance Checks by Location

