

Invasive Species - Stop the Spread!

Invasive species are non-native plants, animals, and other organisms that become established outside of their native range. Invasive species are a problem in Cayuga Lake, as well as worldwide. Introduction of invasives can cause harm, disrupt natural habitats, hurt local economies, and threaten human health.

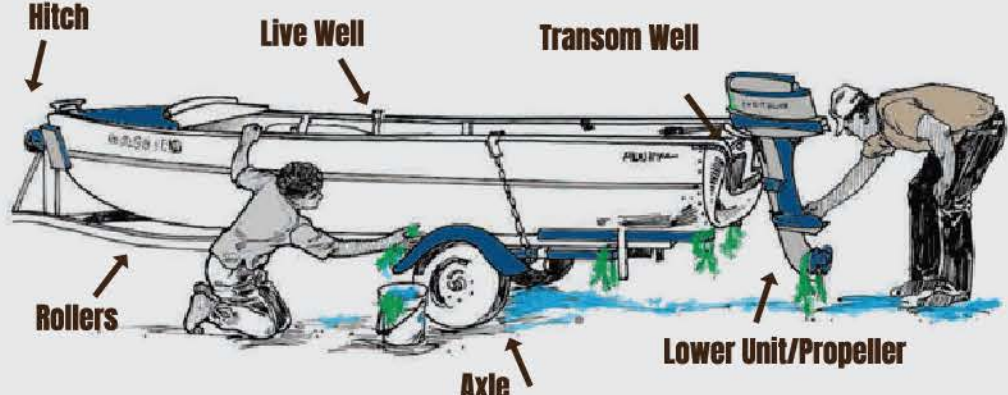
There is nothing like spending time on the water, but be careful that no hitchhikers tag along when you leave. In Cayuga Lake, invasive aquatic plants, fish, clams, and mussels are present. Take care to not transport and release these invasives from one body of water to another.

Stop Aquatic Hitchhikers!

The shallow waters and soft sediments at both ends of Cayuga Lake, including its inlet and tributaries, are prime areas for the expansion of aquatic invasive species. Invasive plants can form dense mats that disrupt boating, swimming, and fishing. They also degrade water quality and can harm wildlife, fish, and plant habitats.

Clean, Drain, and Dry

Inspect your boat, trailer, and other equipment before and after boating



- ☒ **Clean** and remove all visible plants, animals, fish, and mud from your boat, trailer, and other equipment and dispose of these materials in one of the Invasive Species Disposal Stations located at many boat launches, in the trash or at an upland location away from any waterbody.
- ☒ **Drain** water from bilge, live wells, bait wells, ballast tanks, and any other locations with water before leaving the boat launch. Disinfect when possible.
- ☒ **Dry** your boat, trailer, and all equipment completely. At least 5 days of drying time is recommended. Drying times vary depending on weather and materials. If you are unable to dry your boat between uses, at least flush the bilge and other water-holding compartments with water, preferably at a temperature at or above 140°F.

Boat Wash Stations

Boat stewards located at several boat access sites around the lake will help you to ensure proper disinfection of your craft.

Help keep Cayuga Lake clean so that we can all enjoy the lake for generations to come.  
Thank you and happy boating!

Cayuga Lake and all other Finger Lakes are vital natural resources offering enjoyable and varied recreational activities – including boating, fishing, swimming, and sightseeing. Unfortunately, some aspects of boating can have harmful impacts on the ecosystem of the lakes.

This guide will help you to apply the best practices of clean boating in order to protect and preserve this beautiful natural treasure for all!

Created by

The Education Committee of the Water Resources Council of Tompkins County, in cooperation with Tompkins County Planning and Sustainability Department. © 2019

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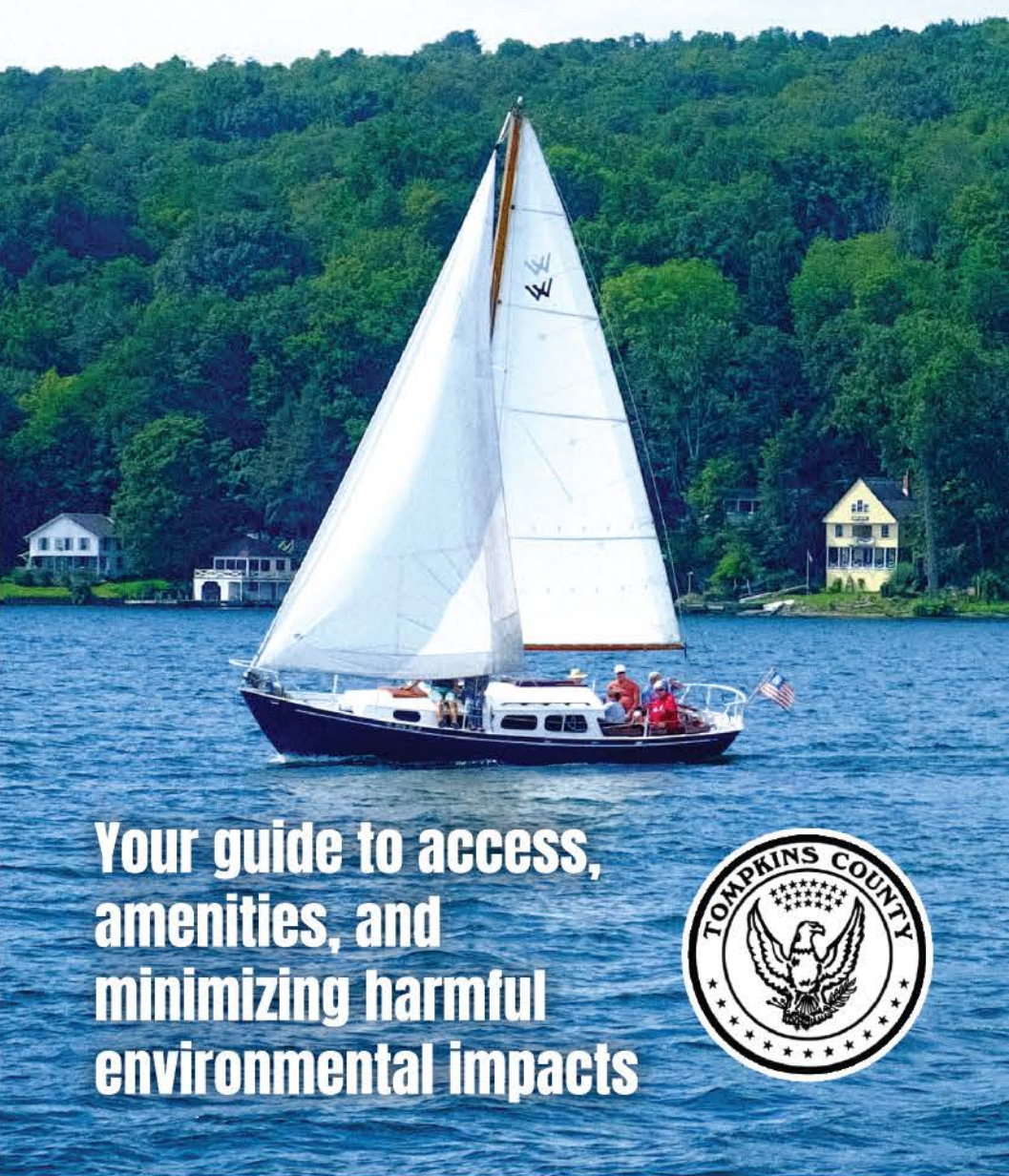
STOP AQUATIC HITCHHIKERS!  
Be A Good Steward.  
Clean. Drain. Dry.  
StopAquaticHitchhikers.org

Partners include the Cayuga County Department of Health and Human Services and the Seneca County Soil & Water Conservation District

Graphic Design by Shira Evergreen, www.shirari.com

Clean Boating on Cayuga Lake

Your guide to access, amenities, and minimizing harmful environmental impacts



Aquatic and Animal Invaders to Watch Out for in Cayuga Lake



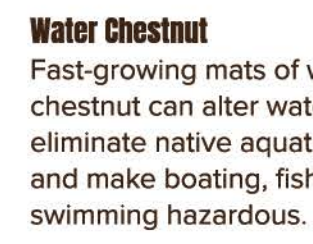
**Zebra and Quagga Mussels**  
Mussels filter and remove particles from water, which increases the clarity, but disturbs the food chain of aquatic ecosystems.

- ☒ Tiny D- or oval-shaped shells with stripes
- ☒ Covers hard surfaces; sharp shells cut feet
- ☒ Shells attach to plants and boats



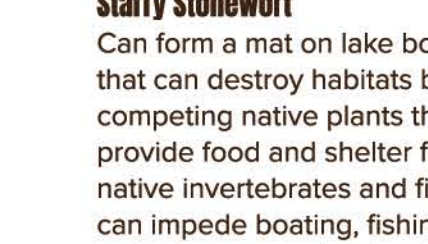
**Asian Clam**  
Clam displaces native mollusks, reduces biodiversity, alters the food chain, may cause algae blooms, damages equipment, and clogs water intake pipes.

- ☒ Yellow-green to brown shells, with elevated concentric rings
- ☒ Usually less than 1 1/2" in length
- ☒ Inside of shells may be light purple



**Water Chestnut**  
Fast-growing mats of water chestnut can alter water quality, eliminate native aquatic plants, and make boating, fishing, and swimming hazardous.

- ☒ Triangular glossy leaves and toothed edges
- ☒ Forms dense floating mats
- ☒ Seeds and plants attach to trailers



**Starry Stonewort**  
Can form a mat on lake bottom that can destroy habitats by out-competing native plants that provide food and shelter for native invertebrates and fish; and can impede boating, fishing, and other recreational activities.

- ☒ Green algae with star-shaped, plant-like structure
- ☒ Grows up to 6 feet tall
- ☒ Forms dense, pillow-like mats



**Round Gobies**  
An aggressive fish that outcompetes natives. They consume large amounts of invasive mussels containing toxins, posing the risk of bioaccumulation further up the food chain.

- ☒ Small, bottom-feeding fish with large, protruding eyes
- ☒ Distinctive black spot on the first dorsal fin
- ☒ Range in length from 4" to 10"



**Hydrilla**  
Hydrilla spreads rapidly and can completely clog waterways and restrict water flow, posing significant threats to aquatic ecosystems and recreational resources.

- ☒ Blade-like leaves in whorls of 4-8
- ☒ Forms dense beds
- ☒ Plant fragments attach to boats and trailers

Sharpen Your Identification Skills and Report Invasive Species

How you can help

The only way to stop an invasive species from causing harm is to prevent them from entering the environment in the first place.

Learn to identify invasive species in your area and report sightings to the proper authorities.

Early detection and rapid response are the best chances to enable land managers to quickly identify and enact control measures for new and spreading invasive species, before the species population grows to the point where it cannot be locally eradicated. If eradication is not possible, then attempt to control growth and to reduce impacts.

There are many helpful identification guides available. A great resource is [www.nyimapinvasives.org/identification-guides](http://www.nyimapinvasives.org/identification-guides).

If you see any invasive species in Cayuga Lake, take a photo and, if possible, record the location, and then report the sighting to iMapInvasives website at [www.nyimapinvasives.org](http://www.nyimapinvasives.org).

In addition to reporting any invasive species to the above website, if you see hydrilla or water chestnut in Cayuga Lake, take a photo, record the location and report sightings to the Hydrilla Task Force at [stophydrilla@gmail.com](mailto:stophydrilla@gmail.com).

- The data reported to the above organizations will be used for:
- 1) Documenting and sharing invasive species observation, survey, assessment and treatment data
  - 2) The coordination of early detection and rapid response efforts
  - 3) Data analysis and summaries

Harmful Algal Blooms (HABs)

Have fun on and in Cayuga Lake, but know that HABs are a global problem in lakes, rivers, and other water bodies. HABs can cause adverse health effects. Knowing how to identify HABs, such as cyanobacteria (also know as blue-green algae), can help you to protect your family and pets. What you can do...

Know it

- It might be HABs if you see:
- 1) Strongly colored water
  - 2) Paint-like appearance
  - 3) Floating mats, films, or scums

Avoid it

- Always stay away from blooms in surface water
- 1) Don't swim, fish, boat, or wade in areas with blooms.
  - 2) Don't eat fish caught from areas with blooms.

Report it

- Report blooms to:
- 1) [Habsholine@gmail.com](mailto:Habsholine@gmail.com) at Community Science Institute or [harmfulalgae@health.ny.gov](http://harmfulalgae@health.ny.gov)

- Report HABs related symptoms to:
- 1) Your local health department or
  - 2) [harmfulalgae@health.ny.gov](http://harmfulalgae@health.ny.gov)

Bloom or no bloom, never drink, prepare food, cook, or make ice with untreated surface water.



Manage Waste Responsibly

Garbage, recycling, composting

To reduce your impact on the environment, it's important to properly dispose of your boating waste and to recycle and compost when possible.

Carry in—Carry out rule. Please carry out what you carry in.

- ☒ Keep trash on board so it doesn't get blown or washed overboard.
- ☒ Keep a covered garbage container on board.
- ☒ Keep cigarette filters and other waste on board and dispose of them properly, as these are non-degradable and can harm wildlife.
- ☒ Keep all fishing lines on board and dispose of them properly. These lines can foul engine props and can maim or kill wildlife.

Human and Animal Waste

Blackwater

Sewage discharge (also known as blackwater) contains pollutants including nutrients, metals, toxins, and pathogens. Blackwater discharged from your boat can impair water quality, negatively affect aquatic ecosystems, and increase risks to human health.

- ☒ Always pump out your sewage tank into appropriate shoreside facilities (see map for disposal site locations). Don't empty your holding tank or portable toilet into the lake.
- ☒ Use the bathroom on shore before heading out.
- ☒ Pumpout stations are found at City Harbor Marina at Ithaca, Treman Marina at Ithaca, and Taughannock Falls State Park near Trumansburg (see map for locations).
- ☒ Avoid using chemical additives or bleach in your holding tank. Safer products include enzyme or bio-active treatments. Avoid using products containing formaldehyde, ammonia, or chlorobenzene.
- ☒ Don't use your boat's head to dispose of items it isn't intended for, such as food waste, solvents, detergents, paints, and other foreign objects. These items can cause problems for you and the environment.

Remember that many people swim in and derive their drinking water from Cayuga Lake.

Maintain Your Engine

Routine maintenance

Routine inspections and maintenance will keep your engine running smoothly and reduce adverse gas and oil impacts on air and water.

- ☒ Get an annual tune-up to keep your engine operating at peak efficiency.
- ☒ Replace your boat's fuel lines every 3 years. Use U.S. Coast Guard approved fuel lines that are resistant to ethanol damage.

Why upgrade to a more efficient marine engine?

Older, 2-stroke outboard engines can discharge up to 30% of their fuel directly into the water. Not only is this environmentally harmful, it is also smelly and expensive. Upgrade to a cleaner, quieter, and more efficient 4-stroke engine.

The cost of a new motor is offset over the lifetime of the engine by gas savings. Scrap (rather than resell) your old gas-guzzling and polluting two-stroke engine. Consider this your gift to our lake.

Practice Good Boat Maintenance

Swabbing the decks!

Use non-toxic cleaning products. Many products used to clean boats contain substances that are toxic to marine life. Even "biodegradable" products often contain harmful ingredients. Biodegradable simply means it breaks down, but not necessarily into elements that are safe. Chlorine bleach is harmful to marine life and can also be a health risk for people.

Cleaning your boat

- ☒ Use absorbents and enzyme-based cleaners to clean up oil and fuel spills.
- ☒ Use cleaning products with "phosphate free" or "non-toxic/non-hazardous" on the label. Natural cleaners, such as baking soda, vinegar, lemon juice, and "elbow grease" prevent harsh chemicals from entering the water.
- ☒ Scrub your boat out of the water. Scrubbing your boat while it is in the water can release a plume of paint. Hosing off your hull when pulling your boat out at the launch site reduces the need for strong chemical cleaners.

Painting your hull

- ☒ Scrape your boat on land where you can collect the scrapings in a tarp.
- ☒ Use a sander with a dust filter and dust collector.
- ☒ Choose your paints wisely. Ensure that hull paint is properly applied and maintained to protect the hull from fouling organisms and to reduce paint leaching into the water.

Boat Access and Amenities Sites on Cayuga Lake

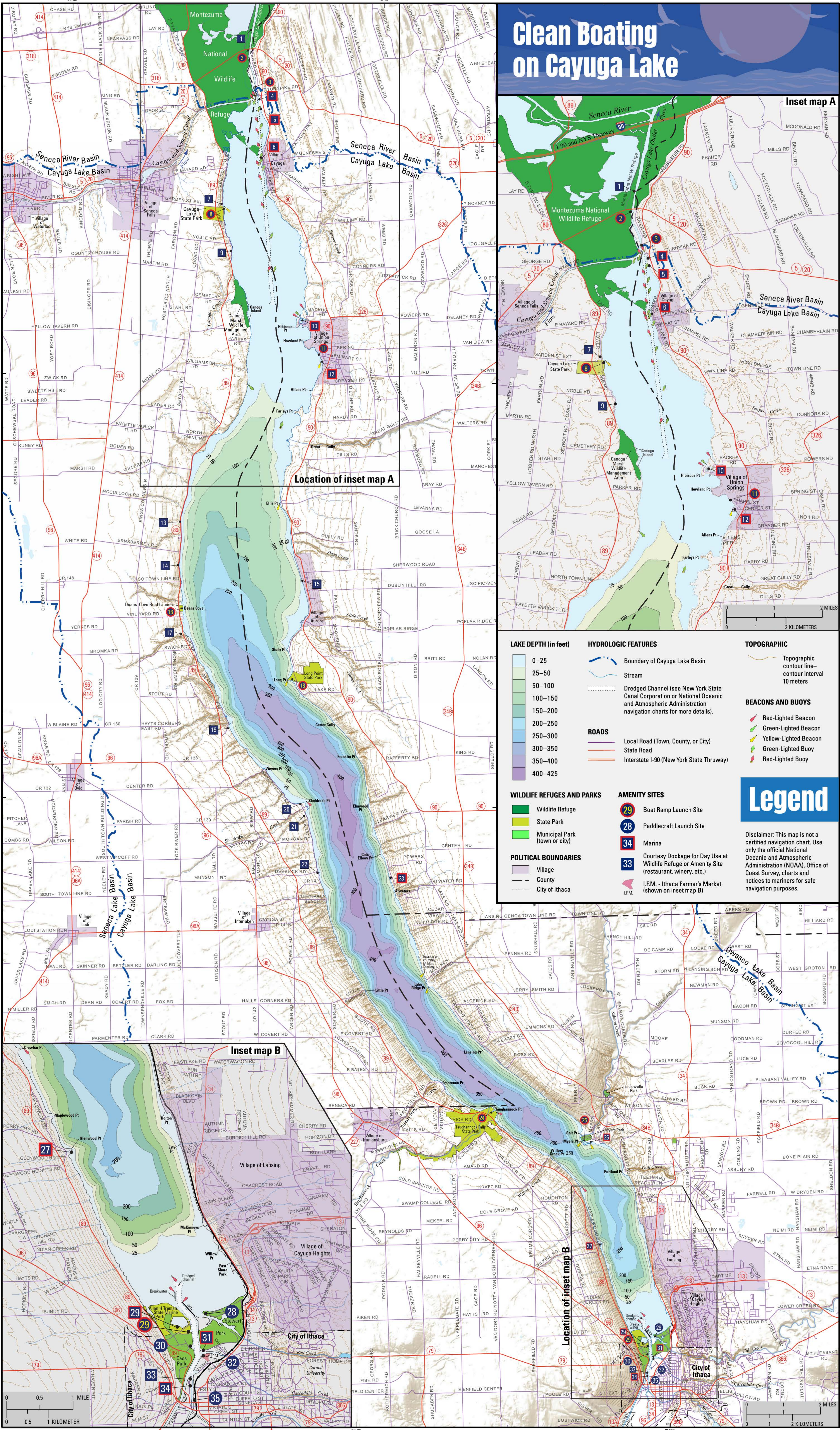
Table 1. Boat access and amenities sites <sup>1</sup> . Site Identification numbers in table correspond to those shown on map. [B&B, Bread and Breakfast; RV, Recreational Vehicle; Fls., Falls; Sggs., Springs; Svcs, Services]																																	
Site Identification Number	Shore	Site	Town	Latitude	Longitude	Site Publicly Owned	ACCESS		ACCOMMODATIONS				BOATER FACILITIES		FUEL	REPAIR	RETAIL			ACTIVITIES													
							Weed box: Clean, Drain, and Dry	Tour Boat/Charter Terminal	Boat Rental Site	Boat (Pump)/Paddle launch	Courtesy Dockage (day use)	Transient Dockage (overnight)	Seasonal Dockage (long term)	Hotel / Motel / B&B / Cottages			Camping: (RV)/(Booth Tent & RV)	Restrooms: (Flush / Portable)	Shore Power		(Potable Water)/Hookup	Wastewater Pumpout	Showers	Wi-Fi	Gas	Diesel	Boat Repair/Service	Marine Supply Store	Convenience Store	Coffee Shop/Bakery	Winery/Brewery	Bar/Tavern	Restaurant
1	W	Dock: Montezuma Wildlife Refuge	Tyre	42.97019	-76.73711	X					X																						
2	W	Boat Ramp: Montezuma	Tyre	42.96204	-76.73874	X																											
3	E	Lock CS1 Cayuga (7.5' lift)	Aurelius	42.94798	-76.73439	X	X					X																					
4	E	Marina: Cayuga Marina Outfitters	Aurelius	42.94212	-76.73310																												
5	E	Marina: Lockview	Aurelius	42.93944	-76.73274																												
6	E	Marina: Beacon Bay	Cayuga	42.92057	-76.73620																												
7	W	Dock: Deer Head Restaurant	Seneca Fls.	42.90125	-76.74978																												
8	W	Park, State: Cayuga Lake	Seneca Fls.	42.90037	-76.74988	X	X																										
9	W	Dock: Woolly's Grill & Marina	Seneca Fls.	42.88297	-76.74453																												
10	E	Marina: Hibiscus Harbor	Springport	42.85579	-76.70664																												
11	E	Boat Ramp: Frontenac Park	Union Sggs	42.84244	-76.69682	X	X																										
12	E	Marina: Frontenac Harbor	Union Sggs	42.83998	-76.69564																												
13	W	Dock: Lakeshore Winery	Varick	42.77629	-76.76911																												
14	W	Dock: Goose Watch Winery	Varick	42.75949	-76.78902																												
15	E	Dock: Aurora Inn	Aurora	42.75394	-76.70420																												
16	W	Boat Ramp: Deans Cove	Romulus	42.74389	-76.76055	X	X																										
17	W	Dock: Buttonwood Grove Winery	Romulus	42.73993	-76.76655																												
18	E	Park, State: Long Point	Ledyard	42.71594	-76.70871	X	X																										
19	W	Dock: Thirsty Owl Wine Company	Romulus	42.69539	-76.74029																												
20	W	Docks: Silver Strand & Driftwood B&B	Ovid	42.66716	-76.70364																												
21	W	Dock: Sheldrake Point Winery	Ovid	42.66220	-76.69888																												
22	W	Dock: O'Malley's Cabin on the Lake	Ovid	42.64009	-76.69154																												
23	E	Marina: Don's	Genoa	42.63818	-76.65433																												
24	W	Park, State: Taughannock Falls	Ulysses	42.54761	-76.59887																												
25	E	Park, Town: Myers	Lansing	42.53723	-76.54905																												
26	E	Marina: Finger Lakes Marine Svcs	Lansing	42.53577	-76.54615																												
27	W	Marina: Ithaca Yacht Club	Ulysses	42.49459	-76.53819																												
28	S	Park, City: Stewart	Ithaca	42.45992	-76.50841	X																											
29	W	Park, State: Allan H. Treman Marine	Ithaca	42.45828	-76.51298	X	X																										
30	W	Park, City: Cass Park	Ithaca	42.45299	-76.51261	X																											
31	E	Marina: Mikes Marine Service/City Harbor	Ithaca	42.45221	-76.50966																												
32	E	Dock: Steamboat Landing	Ithaca	42.45143	-76.50995	X	X																										
33	W	Dock: The Boat Yard Grill	Ithaca	42.44622	-76.51233																												
34	W	Marina: Finger Lakes Boating Center	Ithaca	42.44483	-76.51222																												
35	E	Dock: Puddle Dockers	Ithaca	42.44145	-76.51171																												

1 Source: New York State Canal Corporation: <http://www.canals.ny.gov/developers/index.html>, accessed April 21, 2018.

<sup>1</sup> Source: New York State Canal Corporation: [http://www.canals.ny.gov/developers](http://www.canals.ny.gov/developers/index.html)



This map was compiled using ArcGIS® software by ESRI and exported into Adobe Illustrator for final layout for this publication.



Basemap from online ESRI World Terrain Base. Sources: ESRI, USGS, and NOAA. Updated August 29, 2019. www.arcgis.com