



# Recreational Boating: Possible Environmental Impacts

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## Abstract

Seneca Lake is an active recreational boating community, Seneca Lake is the largest of eleven Finger Lakes with a total surface area of 66.3 square miles (2). The goal of the Seneca Lake Watershed Management Plan is to protect the lake and its productivity through monitoring its water quality within the watershed. Seneca Lake is connected to the New York State Canal system which attracts boaters during summer months. In an attempt to better manage Seneca Lake, the impacts of recreational boating should not be over looked. Prior to this course work there has been no research regarding factual impacts of recreational boating and the following risks are areas which should be closely monitored if Seneca Lakes water quality degrades further. The potential areas of risk that were studied are: the overland dispersal of invasive species, the improper disposal of discharge water and, the damage to submerged aquatic vegetation.

## Introduction

In attempts to strengthen the watershed management plan for Seneca Lake, recreational boating must be further managed to minimize its environmental impacts to the water quality. Most specifically, the impacts of recreational boating that need to be addressed are: the overland dispersal of invasive species, the improper disposal of discharge water and the damage to submerged aquatic vegetation. Together these impacts disrupt the quality of Seneca Lake and should be addressed further.

## Marinas

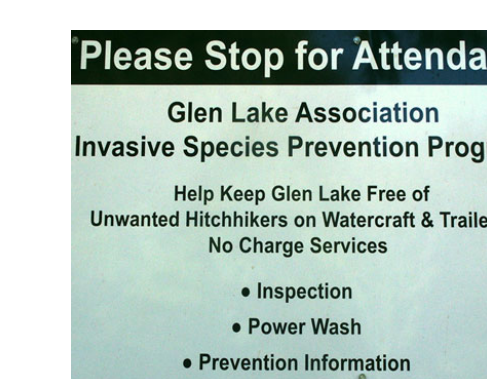
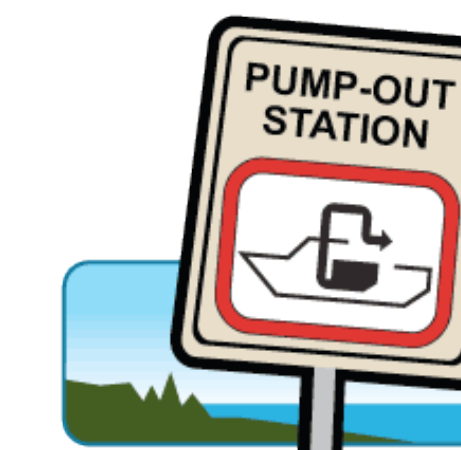
### Seneca Lake

	Public/ Private	Slips	Launch Ramps	Haul Out	Pump Out
Anchor Inn & Marina	PR	10			
Ervays Marina	P	84		x x	x
Glen Harbor Marina	P	73		x x	x
Lembeck's Marina	P	28		x x	x
Lodi Point State Marine Park	P	20		2	
Mark's Marine	P				
Montour Falls Municipal Marina	P	190		2 x	x
Roy's Marina	P	75		x	
Sampson State Park	P	103		4	x
Seneca Lake State Park Marina	P	190		x	x
Village Marina	P	100		x x	x
Watkins Glen Yacht Club	PR	54			

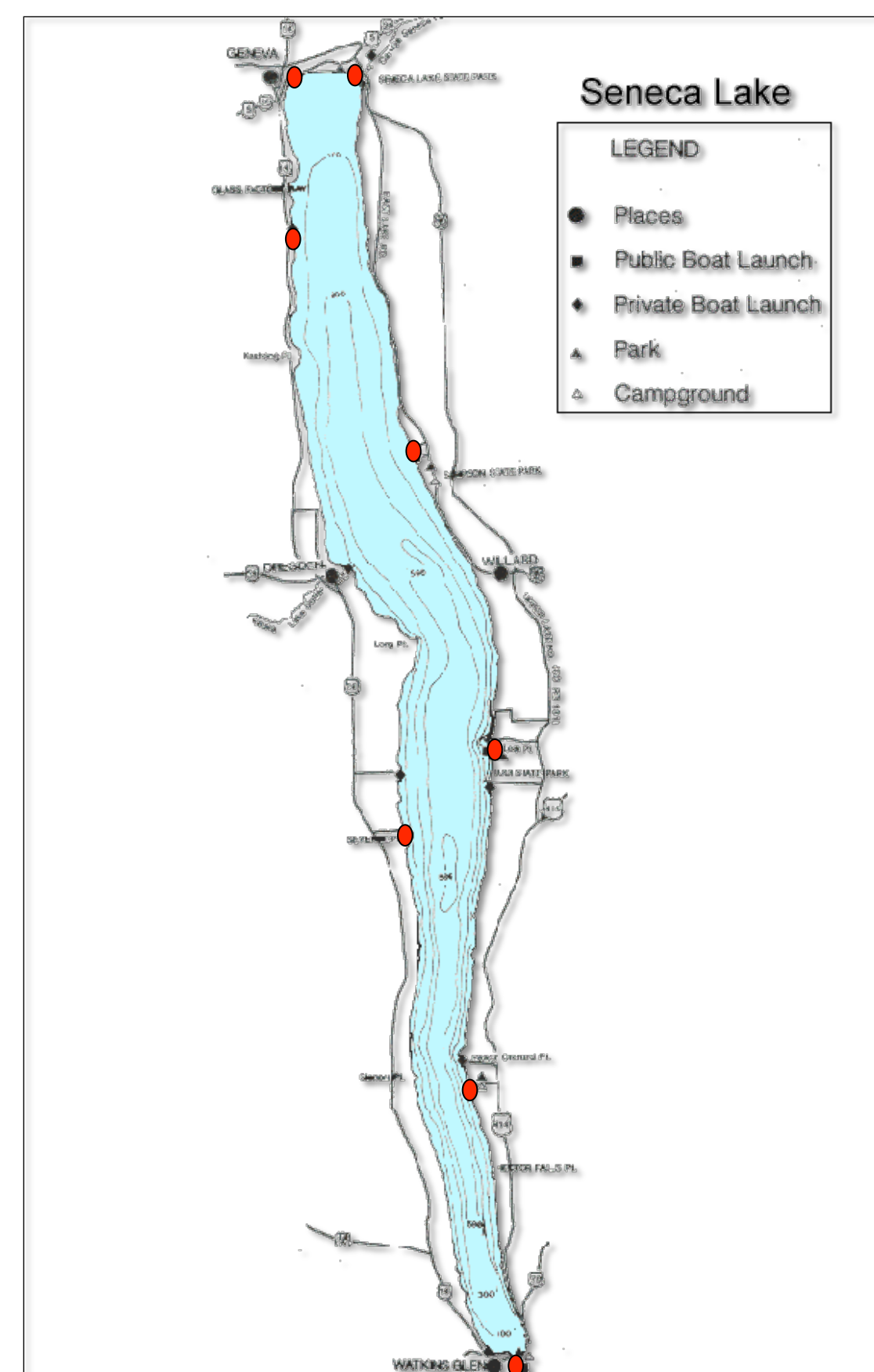
Source 4

## Management

In better managing recreational boaters on Seneca Lake, Designing and displaying signs along ramps entering the lake may give information to the public, which may decrease the risk of transporting invasive species. In better managing Seneca Lake and its watershed, Seneca Lake boaters should all be aware of the discharge regulations and the repercussions for disobeying the law. As well as the management of submerged aquatic vegetation as the turbidity of the water makes the area of growth for aquatic vegetation smaller and smaller.



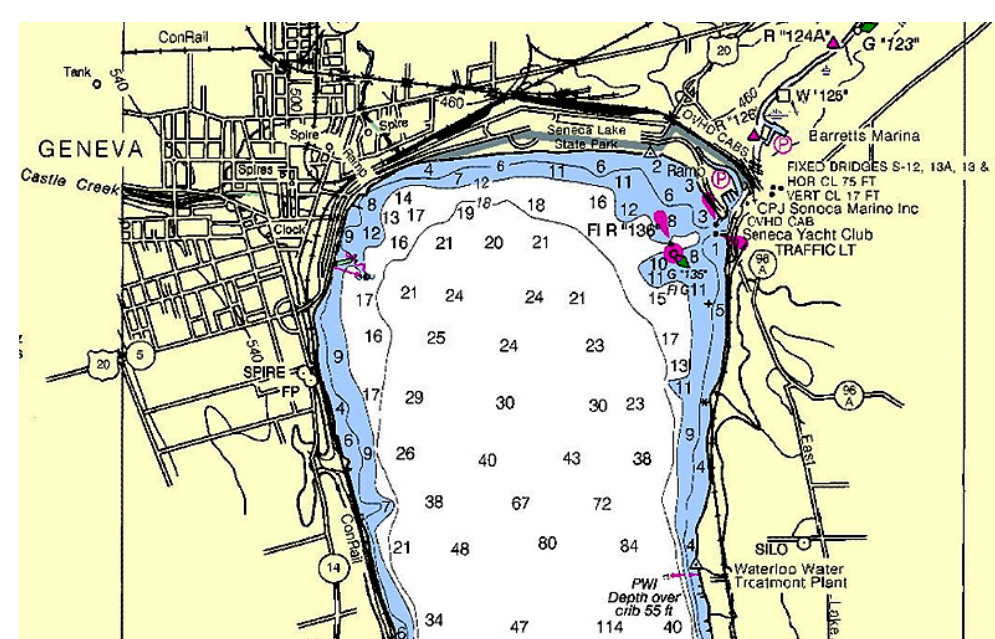
## Background



http://www.dec.ny.gov/outdoor/25659.html

### Facts

- 12 Marinas
- 8 Public Boat Ramps
- 66.3 Square Miles
- 7 Pump Out Stations
- Shallow shoreline



http://www.hydrobowl.com/images/lake/Seneca%20Lake%20Depth%20Chart.jpg

- Recreational boating in New York Sate is a big business and if managed correctly can promote investment and awareness to costal communities.
- In 2003, New York State recreational boaters spent nearly \$2.4 billion, which contributed to 19,000 jobs and nearly \$728 million to labor income.(3)

## Risk



Figure 1: Example of ramp wash-down participation

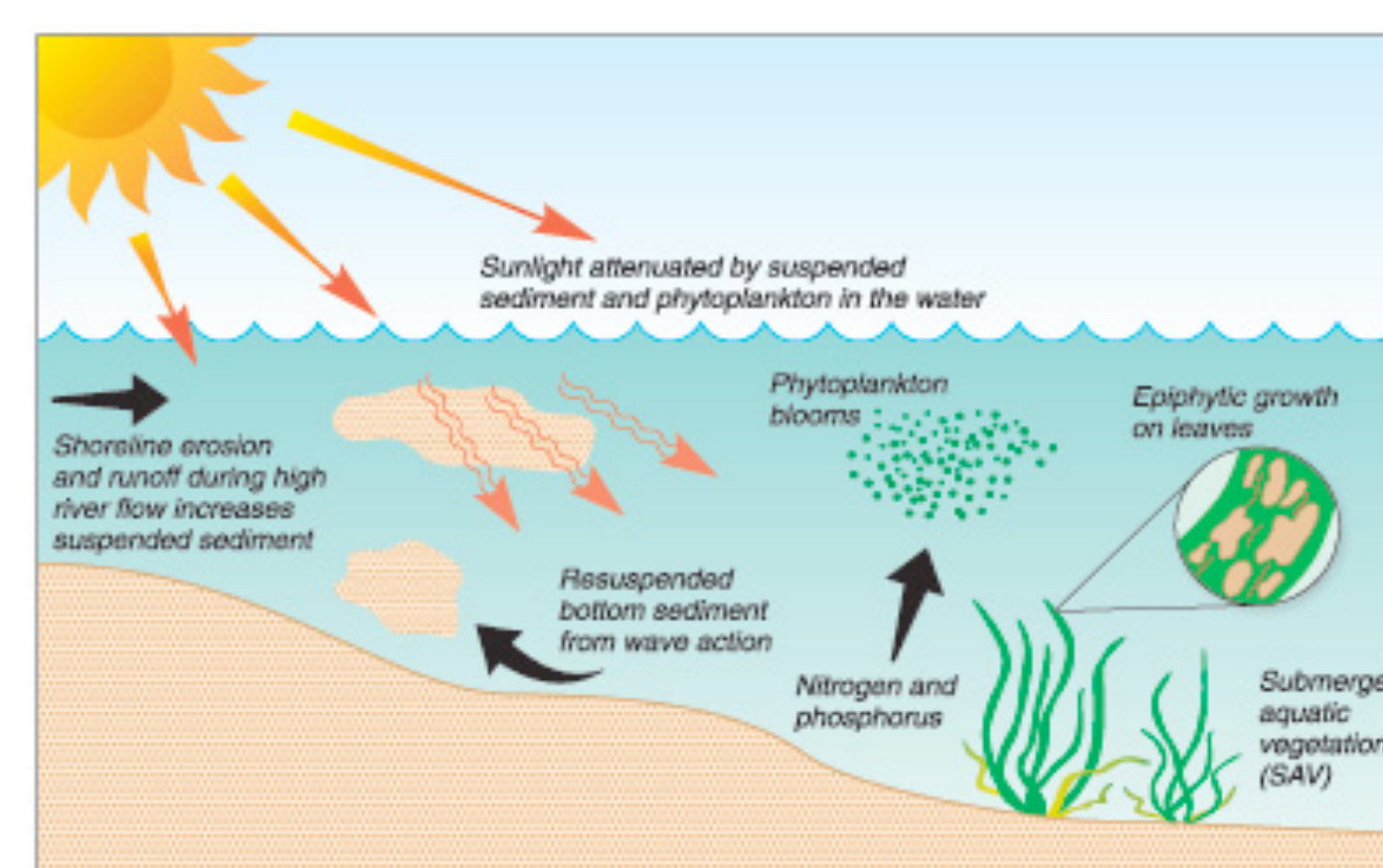


Figure 2: Example of submerged aquatic vegetation and its vital role in aquatic ecosystem

### Ramp Wash-down: Overland Dispersal of Invasive Species

- Ramps are the first area of risk that recreational boaters potentially pose to the quality of Seneca Lake. Public ramps allows boaters to enter the watershed.
- Limit population growth of invasive bivalve species

### Submerged Aquatic Vegetation

- Provide food for waterfowl populations as well as vital habitat for juvenile fish and shellfish (1)
- SAV exists exclusively in shallow-water areas where they are highly vulnerable to impacts of recreational boating.
- Erosion from vessel induced waves

### Improper Discharge of Waste Water

- The discharge of waste water can contain harmful levels of pathogens and chemicals.

## Conclusion

As far as recreational boating goes, Seneca Lake for the months that the water and climate are tolerable, is a surprisingly active lake. A management plan of constructing ramps with attendants to monitor activity and supply information to the public will increase the quality of Seneca Lake. There is also the issue of water discharge from vessels that needs greater enforcement and monitoring during active summer months. Lastly the need to address the issue of submerged aquatic vegetation, and the potential for environmental impacts from recreational vessels. By implementing the management practices above, Seneca Lake and its water quality will extend to further generations making the environment and Geneva a better place to live.

## References

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