



The Saratoga Lake Protection and Improvement District (SLPID), the legislative body that oversees and manages Saratoga Lake, would like to clarify the latest Saratoga Lake Association (SLA) statements seen below comparing Saratoga Lake quality to the Adirondack Road Salt Reduction Task Force Report:

***Should Municipalities in the Saratoga Lake Watershed Adopt Road Salt Reduction Measures?***

*12/23/23 Shorelines the newsletter of SLA*

***“The current high level of use of road salt in the winter is polluting Saratoga Lake.”***

*12/23/23 Shorelines the newsletter of SLA*

**SLPID** – Saratoga Lake does not suffer from excessive chloride and conductivity levels. These levels are expected for a limestone-heavy lake and watershed. Determining whether chloride levels are high depends on many different influences. Chloride levels between 1 and 100 ppm are normal for freshwater lakes (Goldman & Horne, 1983). Saratoga Lake is a Class A lake in NYS.

***“This is particularly concerning when we compare Saratoga Lake’s chloride loading to Lake George.”***

*12/23/23 Shorelines the newsletter of SLA.*

**SLPID** – Comparing chloride levels in two geologically different lakes involves examining their unique characteristics. This includes various factors, including the size of the lake and the ecosystem. Most importantly, these are two completely different geologic lakes and watersheds. Saratoga Lake is known for its rich mineral content and is a limestone-based lake. It should also be noted that Saratoga Lake is fed very differently, with a much larger watershed than Lake George’s. Saratoga Lake watershed is 244 square miles of an interconnected complex system. Saratoga Lake has deep soils, limestone, and natural springs with high dissolved salt content, explaining higher chloride levels at different times.

***“According to data compiled in DEC CSLAP studies, (see table) Lake George had chloride loads of 22mg/L and 18.8mg/L in 2019 and 2022 respectively, while Saratoga Lake had levels three times higher at 65.0mg/L and 66.2mg/L over the same periods.”<sup>2</sup>***

*12/23/23 Shorelines the newsletter of SLA.*

**SLPID** – 66.2mg/l is a typical value for Saratoga Chloride levels; it is not considered high and is in the normal range for Saratoga Lake. These levels vary depending on circumstances and the time of year. The CSLAP samples in this statement are an average of single samples taken and not a comparison. CSLAP samples are catch samples at that particular site, and they are not loading values at that moment. Saratoga Lake’s pH is neutral to alkaline with moderate conductivity (salt), which is typical for and expected with Saratoga Lake limestone and natural springs with ions. A neutral pH is 7, and anything above is alkaline. Saratoga Lake is between 6.14 and 8.82 PH at different times due to weather conditions, water temperatures, and natural springs. Also, runoff from rocks along the lake (Snake Hill, Stoney Point) with storm events carries chloride. The ten-year median for Saratoga Lake's pH was 7.7. Again, it is necessary to consider geological differences with springs, rock formations, water temperatures, groundwater, and the lake's size.

***“Applying the taskforce’s application estimates might explain why Saratoga Lake’s chloride loading exceeds that of most other unimpaired lakes.”***

*12/23/23 Shorelines the newsletter of SLA.*

**SLPID** – See the above explanation. The task force application is specific to the Adirondack Lakes studied.

***“One of the key findings of the assessment is that Saratoga Lake is experiencing a significant chloride loading issue, with a chloride concentration of 66.2 mg/L which is more than three times the threshold for healthy aquatic life. This high chloride concentration is primarily attributed to road salt runoff from nearby roads, particularly NY State Route 9P.”***

*12/23/23 Shorelines the newsletter of SLA.*

**SLPID** – There is no significant chloride loading issue. A vital fact not considered in the statement is that Saratoga Lakes' annual flushing rate of the lake water volume is about 1 ½ times per year, and there is no chloride loading issue or chemical build-up, as seen in some other lakes. Lake George typically filters out once every eight years, a very long time. Some Adirondack lakes that do not flush as frequently can have an issue of chloride buildup.

Saratoga Lake has a robust aquatic life. According to NYSDEC Fisheries, “Saratoga Lake ranks among the top 20 waterbodies in all New York State in terms of angler days. The NYSDEC manages the lake to provide quality recreational fisheries for warm and cool water species, including panfish, black bass, and walleye.”

In a survey completed by an outside company called Responsive Management in 2017, Saratoga Lake ranks as the 15<sup>th</sup> most fished lake in New York State based on the estimated number of angler days spent there yearly. Saratoga Lake is primarily fished for black bass (~64% of angler days), followed by walleye (~18% of angler days) and panfish (~9% of angler days).

***“Annual drinking water reports from Stillwater, Malta and Saratoga Springs show chloride loads of 13.5mg/L for Malta, 11.3mg/L for Stillwater and a surprisingly high of 130mg/L for Saratoga Springs.<sup>4,5</sup> The Town of Saratoga does not have a municipal water source or principal supplier.”***

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**SLPID** – The drinking water standard for chloride is a maximum level of **250 mg/L**. This standard is based on taste considerations rather than health concerns.

[www.health.ny.gov/environmental/water/drinking/docs/salt\\_and\\_drinkingwater](http://www.health.ny.gov/environmental/water/drinking/docs/salt_and_drinkingwater).

***“Should Municipalities in the Saratoga Lake Watershed Adopt Road Salt Reduction Measures?”***

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**SLPID** – Water quality at Saratoga Lake is not a compelling reason for changing road salt practices. However, investing in new equipment for better de-icing practices by municipalities is a fiscally responsible action. There is a consistent record of NYSDOT and municipalities doing so in New York State.

NYSDOT owns and maintains the major highway that runs along Saratoga Lake. NYS Route 9P is the link to our local municipal roads that are critical for services, safety, and emergency vehicles during a winter event. NYSDOT aims to balance driver safety concerns, the environment, and being fiscally responsible. With that, NYSDOT has implemented some of the most top-of-the-line equipment that monitors ground speeds, storm time, and temperatures with precise amounts of material put out. On the side of the plows are saddle tanks carrying a brine solution mix of 23.3% applied before a winter event. Once snow is on the road, the road salt is applied. The previous brine mixture holds the salt on the road, so it does not become displaced, which helps prevent migration into waterways.

NYSDOT uses Application Program Interface (API – computers communicating) computers in their vehicles. This is locating equipment to track the amount of salt put out based on road temperature and storm conditions to strike a balance between safety and the environment. NYSDOT, in partnership with UAlbany, is working with artificial intelligence to improve road conditions and protect the environment. More information can be heard at [Podcast | Department of Transportation \(ny.gov\)](#)

With this information, the water quality at Saratoga Lake is not a compelling reason for changing road salt practices. However, there are small proactive changes property owners can make to benefit water quality and the lands around Saratoga Lake:

- Limiting the use of de-icing materials on driveways and sidewalks. **Higher salt content favors the growth of non-native plants such as Phragmites, Japanese Knotweed, and purple loosestrife.**
- Do not plow or snow blow snow from driveways, sidewalks, or across Route 9P onto the lake.
- Create vegetative buffers along your shoreline and roadway.
- Redirect runoff spouts from going directly into the lake.
- Limit or eliminate lawn fertilizers.
- Do not dispose of animal or human waste into the lake
- Do not have wood fires along the shoreline.

For more information on water quality and Saratoga Lake concerns or to view reports, please visit [SLPID – Saratoga Lake Protection and Improvement District \(slpidny.gov\)](#)

SLPID is the legislated municipality that manages and protects Saratoga Lake, improves water quality, and conserves the fish and wildlife for a public purpose. [2017 11 30 08 16 20.pdf \(slpidny.gov\)](#)

[Podcast | Department of Transportation \(ny.gov\)](#)

[Salt Sustainability - Maintenance - MnDOT \(state.mn.us\)](#)

[Road salt, smart salting, and winter maintenance - Minnesota Stormwater Manual \(state.mn.us\)](#)

Chloride levels between 1 and 100 ppm are normal (Goldman & Horne, 1983).

[Convert Milligram/liter to Part/million \(ppm\) \(unitconverters.net\)](#)