

Forge Pond / Lake Matawanakee Drawdown – Winter 2023-2024

The Friends of Forge Pond performed a drawdown of Lake Matawanakee / Forge Pond during the winter of 2023 – 2024. The weather was not conducive to success. The longest below-freezing period was too short to be helpful, and the lake level did not fall much, due to sustained rain. Similar to the previous year's effort, it's unlikely that the 2023-2024 drawdown had much effect on the plant population.

When they work, winter drawdowns are the most environmentally benign means to control invasive aquatic plants in the lake. Freezing and drying the exposed lakebed inhibits these plants in an environmentally favorable manner. About two weeks of hard freeze with low water are needed to accomplish this, and did not occur during the reporting period. Results from drawdowns vary from year to year due to variations in precipitation and temperature. A series of annual drawdowns helps decrease invasive plant growth, improving both the wildlife habitat and the recreational quality of the lake.

The drawdown began on October 16, 2023. At the start, the lake level elevation was at a typical summer level, about even with the threshold of the main spillway of the dam. Opening the gates and stoplogs lowered the lake over the next month nearly to 201 feet. The target level is just below 200 feet.

When air temperatures are below freezing, precipitation lands as snow and stays on the ground (and out of the lake) until spring, allowing the lake level to remain low. But when the air is above freezing, precipitation falls as rain, flows into waterways and raises the lake. This is what happened during most of last winter.

During December and January the lake was near summer levels. February was marginally colder and the frozen lake surface was safe for skating for about a week. But this wasn't enough to effectively freeze the plants, and the level was too high to expose much of the lake bed. The longest interval below freezing was less than 8 days.

The variations in lake level during the drawdown are shown along with air temperature in the graph below. Data points are plotted every 15 minutes. The Order of Conditions governing the drawdown allows the level to fall to 199.9 feet, but the lowest level reached was 201.2 feet, and that only briefly.

Achieving a sustained hard freeze requires repeated night-time temperatures below 20°F. This occurred about a dozen times on scattered nights in February. So the objective of exposing the lakebed to a sustained hard freeze was not achieved. Shaded areas in the graph indicate intervals when the air temperature stayed below freezing for more than 24 hours.

The Friends of Forge Pond began a controlled refill of the lake on March 9, 2024. Rain helped the lake refill promptly. By April 1, 2024, the lake level was over 205 feet, surpassing the level required by environmental authorities.

Forge Pond Winter Drawdown 2023-2024

