

Appendix A

Photographs of Greenwood Lake with stumps being reduced during the
drawdown

Figure 1



Figure 2



Figure 1 (Top) Pine Island prior to stump reduction

Figure 2 (Bottom) Pine Island looking from the west, after reduction was complete



Figure.3



Figure 4

Figure 3 (Top) Stump sliced by propellers

Figure 4 (Bottom) Propeller broken off and protruding out of the stump

Figure 5



Figure 6



Figure 5(Top) Massive Stump lying on the ice

Figure 6 (Bottom) Smaller stumps near shoreline of Moosehead Marina

Figure 7

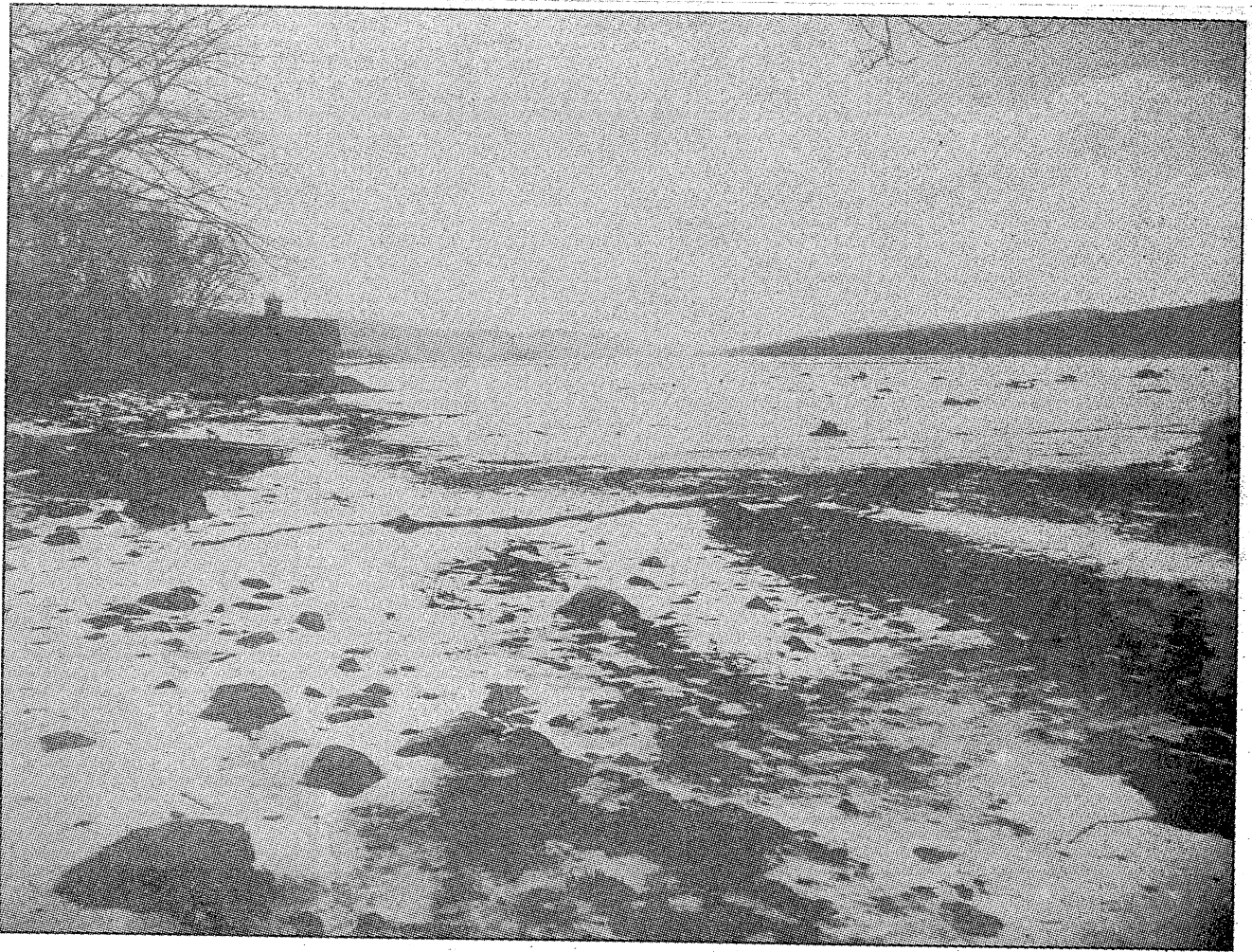


Figure 8



Figure 7 (Bottom) Propeller Blades

Figure 8 (Top) Workers and Equipment out on the ice



Ca. 1900 view from southern end of lake shows stumps of trees that were flooded by the construction of the dam in 1837. — All images from the collection of Stephen Gross

Appendix B

Letters and Articles Relating to Stump Reduction

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February 20, 2007

Greenwood Lake Commission
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Subject: 2007 Stump Removal Project

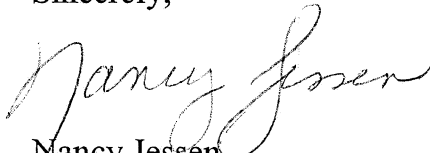
Dear Commissioners:

South Shore Marina would like to express our appreciation for the excellent job that was done during the 2007 stump removal project. On February 9th, 2007 Downes Tree Service was working at the southern end of Greenwood Lake in the area in front of South Shore Marina. We walked out on the ice to see how the stumps were being removed. Stump grinders were being used to remove the stumps. This was an excellent way to remove the stumps because the stump grinders ground the stumps down below the surface of the ice!

Enclosed is a CD of pictures we took that day. These pictures were taken about 15 minutes before the contractor finished. They show the area where the stumps were removed and the area the contractor didn't get to. Hopefully there will be more funding in the future to complete this project.

Congratulation for coming up with the funding and an excellent solution to a problem that people have been talking about for decades! Thank you for a job well done!

Sincerely,



Nancy Jessen
President

By **BARBARA WILLIAMS**
STAFF WRITER

WEST MILFORD — The menacing 170-year-old tree stumps in Greenwood Lake are going to be removed, but apparently not without a fight.

On Monday afternoon, workers braved freezing temperatures to rope an old oak stump and yank it from the icy water with help from a motorized reel on the shore. But the perfectly preserved stump, about 2 feet in diameter, snapped in half as it was dragged out of the lakebed.

"We got this much out, might as well go for the rest," said Eric Hastings, one of the lake commissioners, as he climbed in a boat to go rope the other half with contractor Jim Dahl.

Dahl, owner of Timberline Tree Co., was demonstrating how to pull out just one of the thousands of stumps that have collectively become a serious hazard, taking out boat motors and injuring swimmers every summer. When the lake is at its normal depth, the stumps lurk just below the water's surface. But now that the lake has been drawn down 5 feet to allow for cold-season property repairs and cleanup, the tree remnants have been laid bare.

The commission, which oversees the maintenance of the bi-state lake, received a \$100,000 state grant to get rid of the stumps. Most likely, a contractor will begin cutting and grinding the majority of stumps next week.

"I think grinding them at the ground level is our best choice at this point," Commissioner Steve DeFeo said Monday. "This way we don't disturb the lakebed and we should be able to do quite a few with that method."

The stumps clog a navigation channel and areas near several marinas in the southern

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Fast facts

GREENWOOD LAKE

- 9 miles long
- Covers 1,884 acres
- 22 miles of shoreline
- Average depth: 16 feet
- Maximum depth: 55 feet



CHRIS PEDOTA/STAFF PHOTOGRAPHER

Tree expert Jim Dahl on Monday examining a stump pulled from the bed of Greenwood Lake, where it posed a hazard.



CHRIS PEDOTA/STAFF PHOTOGRAPHER

A crew on Monday removing a tree stump in Greenwood Lake that posed a hazard to boaters and swimmers in warmer weather.

Stumps

From Page L-1

end of the lake. They date to 1836, when the waterway was expanded by building a dam in Ringwood State Park and flooding the area.

At the time, the trees were cut down to about 3 feet high. But once covered with water, the stumps never rotted and are still thick and heavy. Many also are sharp-edged because boat propellers have sliced off shards of

the wood.

"They were cut at a time when people didn't even think of power boats," said West Milford Councilman Phil Weisbecker, who watched the removal Monday.

Adding to the lake's problems over the decades has been an ongoing buildup of silt and massive weed infestation that have made the lake shallower.

Wrestling the stump out Monday took almost two hours as Hastings and Dahl paddled out in a metal rowboat pulling a rope attached to a half-inch steel cable.

The cable ran to what the men called a "tug," a reeled piece of orange-painted machinery set on the rocky shoreline.

Reaching into the frigid water, they wrapped the rope around the stump, rowed out of harm's way and watched as the tug slowly reeled in the cable and dragged first one half and then the other to the water's edge.

The commission estimated it would take about \$200,000 for a thorough stump-removal project, even with leaving some untouched for fish habitat. With only half that

funding amount on hand, it is trying to stretch its budget.

The removal on Monday was to see how efficient and time-consuming the attempted removal process would be compared to the cutting and grinding scheduled for next week.

"I think this went well — it let us see what the contractors can do and what they're capable of," Hastings said. "We need to explore every option within our budget."

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Lack of funding 'stumps' lakes bi-state commission

BY ERIN PETRIE
Staff Writer

The weather was finally cold enough for the Greenwood Lake Commission to get stump grinding machines out on the lake earlier this week, but then another problem arose.

The project officially ran out of money Friday afternoon.

The grinders began work on Tuesday, working in the area between Brown's Point and South Shore Marina. The commission set out to create a navigational path 200 to 250 feet wide between Fox Island and Lakeshore Drive, starting from the Moosehead and Greenwood Small Craft marinas and working south.

Although funding ran out with only about 60 percent of the project done, New York Chair Steve DeFeo said it has been going incredibly well.

"We have people stopping along the road and telling us how great it looks," said DeFeo, who estimated they cut 2,000 stumpheads already.

But their main obstacle has been funding.

"If we had another \$80,000 to \$90,000, we can clean up everything that we need to do," DeFeo said.

The original bid to do the project from Environmental Renewal was around \$270,000, but that was to pull the stumps out by the roots.

Besides costing less, DeFeo said by grinding and cutting, they're not disturbing the bottom of the lake but still creating a more "user-friendly lake."

Previously, the weed harvesters could only cut at three to three-and-a-half feet and would some-

times sustain damage after hitting a stump. Now the commission can run the harvester at five feet deep, DeFeo said, because it will clear the stumps.

As for additional funding, the chances are slim. DeFeo said all the letters the commission has received back from possible sources have been negative.

"It's unfortunate because we're in a position now where we have ideal conditions" with ice and no snow, he said.

Although the commission and lake are bi-state, there's a boundary when it comes to spending money. Any funds that are given to the commission for funding can be used in both states.

But New York state funding has to be used on the New York end and New Jersey state funding has to be used on the New Jersey end, like the \$100,000 Livable Communities Grant from the New Jersey Department of Environmental Protection that's paying for the stump removal.

Legislation passed last year in New York allows the commission to collect user fees from boaters using the lake, ranging from \$37.50 to \$100 per vessel. The commission is working to get a similar bill passed in New Jersey.

The commission estimates \$140,000 to come in per year from the fees, allowing it to continue with the stump removal and weed harvesting and hire office staff.

The stumps, which date back to the 1830s when the New Jersey portion of the bi-state lake was expanded, have become a navigational hazard. Since the water at the southern end is relatively shallow, boats and swimmers often col-

lide with them.

The project was done in conjunction with a drawdown of the lake, which lowered the level five feet. DeFeo said that with the water down, the stumps range from 10 inches to two-and-a-half feet out of the water. The commission began refilling the lake on Feb. 1 because its permit expired. It requested an extension but did not get a response in time.

There was a warm spell at the beginning of the winter but the weather finally cooperated with the commission, allowing large grinding machines out after an arctic freeze swooped down on the region and thickened the surface ice. When the project started Jan. 30, crews cut the stumps off at the ice level because it wasn't thick enough yet for the machines.

But DeFeo said the ice on the edges of the lake are dangerously thin, with most of the workers and several pieces of equipment falling into the water along the shoreline. No pollution from the machines got into the lake, but DeFeo said it was a nuisance.

In the parts of the lake where the ice is three inches thick, which is barely safe, workers were still cutting the stumps at the ice line with chainsaws, DeFeo said. While some parts of the lake still aren't frozen, the grinders went out to areas that are four to eight inches thick.

There were two grinders out on Tuesday, three on Wednesday, six on Thursday and six on Friday.

"I never expected it to go this well," DeFeo said.

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Commission gives something back



JOE SARNO/STAFF PHOTOGRAPHER

In an effort to give something back to property owners on Greenwood Lake, The Greenwood Lake Commission has been leveling tree stumps that have long been dangerous to both boats and people. Shown here is Downe's Tree Service employee Mario Gutierrez, using a chain saw to level stumps along Greenwood Lake's western shore.

BY ERIN PETRIE

Special to Aim West Milford

With four to five inches of ice covering Greenwood Lake this past week, crews began a much-needed stump removal project off the western shore, cutting the century-old stumps off at the ice line.

The Greenwood Lake Commission intended on Monday to begin the project — scaled down because of a lack of funds — but there wasn't enough ice to get machinery out on the lowered lake. But at 8 a.m. Tuesday morning, a crew of 11 men began cutting and removing the navigational hazards.

Steve DeFeo, the New York chair of the commission, said the method proved effective — a dumpster was already full by 11:30 a.m.

The project was planned in conjunction with the lake drawdown, which lowered the water level by five feet to kill off invasive weeds and allow lakeside property owners to perform repairs.

But the commission wanted to give something back to lake users for the inconvenience of a drawdown, which begins in

October, cutting into the tail-end of the boating season.

Left over from when the New Jersey end of the bi-state lake was expanded in the 1830s, the stumps have proven dangerous, wounding both boats and swimmers. Originally intended to span over 100 acres south of Fox Island, the project now will focus on creating channels out of the Moosehead Marina and Greenwood Small Craft Marina.

"Our thought pattern right now is to start there and work south," creating a navigational path 200 to 250 feet wide between Fox Island and Lakeshore Drive, DeFeo said. The commission estimates that there are about 1,500 stumps in this area, ranging from 10 inches to two and one-half feet out of the water.

Some of the stumps that boats continually hit still have pieces of propellers stuck in them, DeFeo said, which he's trying to save a few of.

"A souvenir for the commission," DeFeo said with a laugh.

Environmental Removal, a West Paterson-based company, is handling the \$100,000 project. Originally supposed to be

\$200,000, the commission had a grant but couldn't secure additional funding.

So they brainstormed solutions. There was consideration of grinding the stumps at the ice level, pulling them out by the root from the shore or, if more money is secured, pulling them out from a barge when the lake is filled back in.

The ice was not thick enough for the grinding machine this week, so the commission opted to cut them off instead.

Right now the lake is down five feet. DeFeo said they were letting out 48.4 million gallons per day over the weekend but went down to 15.9 million gallons per day at the start of the week.

The commission's permit requires them to close the dam on Feb. 1, therefore beginning the process of refilling the lake.

"We applied for an extension but the process is just too long," DeFeo said. But closing the dam shouldn't have any effect on the stump removal.

"As long as there's no real heavy rains, we should be in good shape."

Originally published in Suburban Trends.

Boaters: Greenwood Lake is improved

Thursday, May 31, 2007

By BARBARA WILLIAMS

STAFF WRITER

WEST MILFORD -- The experts have spoken: Boaters predict they'll be able to use Greenwood Lake from shoreline to shoreline this summer.

Contrary to the past several years, water clarity is excellent, weeds are virtually non-existent, and stumps are scarce. Thanks to large-scale wintertime projects to clear the lake of obstructions, lake users can now swim, ski and motor in the shallow New Jersey end as well as the New York section.

The lake has long been a regional tourist attraction and once was the site of sailing regattas and powerboat races. Bi-state lake commissioners overseeing improvements have said they want to make Greenwood Lake the boating hot spot it once was.

Although no one keeps count on the number of boats on the 9-mile waterway, marina owners say business is brisk.

"We're a [nearby] lake and people seem to be spending their dollars here instead of down the shore or even on the river," said Bill Link, owner of Moosehead Marina in West Milford.

Some boaters were ecstatic over Memorial Day weekend as they headed out for their first voyage of the season.

Chloris Briggs of Hawthorne was loading beach totes and coolers onto her white motorboat, aptly named "Long Overdue," and talking about how anxious she was to be out on the tranquil water.

"I live for this boat and I couldn't wait to get out," Briggs said. "I used to avoid the New Jersey end like the plague, but now we can go all over."

Projects done by private contractors this winter improved water safety and visibility.

A fall drawdown of the lake's depth by 5 feet allowed wind and cold temperatures to decimate the weed masses, if not eradicate them. The plants had choked boat motors and tangled swimmers' legs, bringing lake use to a standstill in some sections.

With the lake's bottom exposed, workers also sliced off the tops of more than 2,000 tree stumps that lurked just below the water surface -- a \$100,000 state-funded project. Water-skiers had been particularly endangered, and hundreds of boat propellers had fallen victim to the 170-year-old stumps.

And improvements, thanks to a \$913,600 New Jersey grant, are ongoing. Currently, retention basins are being constructed, and huge, strainer-like units are being put in storm sewers to prevent phosphorous sediments from flowing into the lake. Phosphorous is a main ingredient in weed proliferation.

Was it one specific project or the combination of work that led to the clearer water? No one is sure.

Greenwood Lake, N.Y., Police Chief Paul Baresel, who has eight divers in the department and officers patrolling the lake every day, spoke of the dramatically different water visibility.

"Usually we could see about 4 feet, now it's up to about 15 feet," Baresel said. "I'm not sure if it's from the drawdown -- like what happens when you clean out a fish bowl and sort of purge all the water -- but it's so much better out there now."

Clear, but cold. Stark sunshine bouncing off the gently rolling wake didn't do much to warm things up. The surface water temperature hovers at about 68 degrees, and deeper than a foot drops into the 50s.

That didn't seem to bother the Jaffe family from Mahwah. Stephen and Kathleen were ferrying their four kids, ages 6 to 9, out to do some tubing.

"The cold never bothers them," Kathleen Jaffe said. "And now that the New Jersey end is clear of weeds, we can go to that side -- we used to get caught up in them so we started staying away from that end of the lake."

The Jaffes were putting their boat into the water at DeFeo's Marina on the New York side of the lake, where boat sales are up, and people have already been telling employee Laurie Stalter how much better the lake looks.

"We haven't heard anything negative yet, and by this time last year people were already complaining," Stalter said.

Steve DeFeo, owner of the marina and a member of the lake commission, said the panel hasn't had to run the weed harvester in the New Jersey end yet. The large, floating, lawnmower-like machine will undoubtedly be needed, but probably a lot less than in the previous years.

"Last year we started using the weed harvester in April and we were taking out 10 loads a day," DeFeo said.

Link, whose marina is on the New Jersey side, said the absence of stumps has been as important as the lack of weeds.

"We usually have four or five boats a weekend with damaged props from hitting stumps, and we had none last weekend," Link said on Tuesday. "People here are having a lot less hassles and they're happy."