

Benefits of Weed Harvesting

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The water quality of Lake Hopatcong, the State's largest and most heavily used recreational lake, has long been threatened and impacted by development of its watershed. Septic systems, road runoff, lawn fertilizers and various other non point sources of pollution are responsible for the degradation of the Lake's water quality. The pollutants having the greatest direct impact on the lake are phosphorus, nitrogen and sediments. Some of the more noticeable impacts caused by these pollutants are the occurrence of summer algae blooms, the in-filling of coves and shallows with silt, and the development of dense beds of invasive aquatic weeds.

Recognizing the need to address the causes of the Lake's water quality problems has been of utmost priority for all involved with the long-term management and restoration of Lake Hopatcong. For example, the Lake Hopatcong Commission has been working closely with county and municipal governments to maintain, and where possible, upgrade storm sewer catch basins. They have also supported the installation of sanitary sewers, a measure that will eventually correct one of the most significant sources of nutrient inputs to the lake, septic systems. In addition, through community outreach and public education efforts, the Lake Hopatcong Commission has been instructing all of the Lake's residents of the measures and practices that everyone who lives around the lake and/or uses the lake can do themselves to avoid negatively affecting the lake's water quality.

Overall, these efforts have helped stem the eutrophication of the lake and lessen the potential impacts caused by development of the watershed. This statement is supported by water quality data compiled over the past twenty-five years. These data clearly show that these actions have had a positive effect. In the late 1970s, the lake's water quality showed a pattern of steady decline. By the mid-1980s though, because of the implementation of aggressive in-lake and watershed management protection measures, conditions began to stabilize. Over the past decade, even in the face of increased watershed development, more intense use of the Lake's shoreline and increased boating and overall recreational utilization of the Lake it has been possible to maintain water quality at a status quo. This does not mean that all involved in the management and care of the lake can relax; it means that well planned and implemented lake management activities lead to meaningful, positive effects on water quality.

One of the most obvious management activities of the Lake Hopatcong Commission is the weed harvesting program. Some may view this as a simple "mowing" of the Lake. However, much more is accomplished than simply opening boating lanes and improving swimming. The harvested weeds represent a significant amount of biomass, and associated nutrients, that if not removed would otherwise add to the siltation of the Lake and contribute to its future eutrophication. **In its first three years of operation, because of the concerted, coordinated efforts of the Lake Hopatcong Commission, over nine million pounds of weeds were removed from the Lake.** This could not have been accomplished without the state-of-art harvesting equipment and the dedicated staff of the Lake Hopatcong Commission. From a water quality perspective, the removal of this much weed mass is very important. The phosphorus associated with these weeds is roughly 1,200 pounds. Although this may not sound like a lot, a single pound of phosphorus can support over 1,100 pounds of algae. Thus, through the weed harvesting efforts of the Lake Hopatcong Commission, phosphorus, that otherwise would be recycled through the Lake and fuel future weed and algae growth, is removed. This has a direct positive benefit to the long-term water quality of the Lake and the control of the Lake's eutrophication. As such, the weed harvesting program contributes in more than the obvious way in the revitalization of the lake and the improvement of its water quality.