
EXECUTIVE SUMMARY

Historic development patterns in Cortlandt present challenges for water quality management. Opportunities for stormwater filtration and treatment are limited because a majority of the developed area in watersheds that drain into Wallace Pond are concentrated near streams, wetlands and along the pond's shoreline. In addition, much of the Town's development predates the adoption of modern stormwater regulations. Thus, many of the developed areas in Cortlandt that drain to Wallace Pond are not treated by BMPs designed to improve water quality, reduce runoff volumes, and protect stream channels.

Water quality analyses conducted for this project identified several potential pollutant issues (Appendix A). Elevated levels of semi-volatile compounds and bacteria were found in the northern and southern tributary streams that flow into Wallace Pond. Elevated lead concentrations were also found in the southern tributary. Concentrations of several metals were elevated in the deep pond sample and these concentrations may have been influenced by metals in pond sediment. Mercury, PCBs, and herbicides were not elevated.

Seven out of the eight locations that were sampled had elevated phosphorus and nitrogen (N) concentrations. Only the northeast tributary stream (Annsville Creek) met the numeric nutrient criteria recommended by USEPA for these nutrients. Phosphorus and N concentrations in the southern tributary and eastern pond sample were extremely elevated. These elevated nutrient concentrations are likely responsible for excessive algal growth and low dissolved oxygen concentrations. Review of nutrient and stormwater management practices should be reviewed. Education and the adoption of voluntary BMPs should be encouraged. Opportunities for expanding stormwater BMPs should be investigated and considered.

The Westchester Lake / Wallace Pond dam was rated unsound by NYS DEC and the pond's current water depth is very shallow. Chemical vegetation treatments are not recommended because of low dissolved oxygen levels in the pond. At the same time, aeration is not recommended because in such a shallow pond, aeration may dislodge pond sediment and create new water quality issues.

In addition to education, outreach and the addition of stormwater BMPs, long term options for pond management could include either dam removal or dam replacement. Dam replacement is expensive and funding for dam construction is limited. Dam removal is a less expensive option and numerous funding sources are available. The Town of Cortlandt may want to further investigate property value impacts, aesthetics, public opinion, availability of external funding, and the overall feasibility of removing the dam and creating a stream-wetland complex.

FIGURES

Figure 1: Wallace Pond Sample Collection Sites

