

# STORMWATER RETENTION FACILITY POLICY

## RADISSON COMMUNITY ASSOCIATION

### INTRODUCTION

There are six (6)\* stormwater retention facilities located in Radisson:

1. HIDDEN LAKE
2. WILLETT POND
3. LAKE OBERON
4. MALLARD POND
5. CLARE PARK
6. WHISPER RIDGE POND

The purpose of the stormwater retention facilities is to collect rainwater away from residents' property and to control the flow rates of the pond's outfalls and mitigate flooding. The facilities provide ancillary benefits such as enhanced scenery, fishing and water access to aquatic birds. These benefits are available to all residents via the community pathway system.

Water retention facilities are Radisson Common Properties. Some of the shorelines are part of contiguous Radisson common properties; others are private property. All are also located within the Radisson Drainage District, established by the Town of Lysander.

Water quality is affected by annual rain fall, daily ambient temperature and hours of sunlight and introduced nutrients and contaminants.

### WATER QUALITY ISSUES

The factors affecting water quality are interrelated:

1. Levels of dissolved oxygen
2. Density and distribution of free-floating and rooted aquatic flora
3. Fish population
4. Levels of dissolved nutrients
5. Rainfall and humidity

Low oxygen levels are potentially harmful to aquatic fauna including fish. Excess aquatic plants and algae ultimately wash ashore where they decay resulting in noxious odors and unsightly and noisome debris. High levels of dissolved nutrients lead to excessive plant growth of free-floating algae, while rooted plants acquire nutrients from the sediment. Low rainfall decreases the flow of water thru these water retention facilities resulting in stagnant conditions and the growth of algae.

## **MITIGATION OPTIONS**

1. Low oxygen levels are detected by test measurements. The situation is countered by introduction of air via increased turbulent in-flow, mechanical aeration of the pond bottom (bubbling) by air pumps and reduction of oxygen consuming flora.
2. Excessive flora is detected by visual observation and odor. It is countered by introduction of control chemicals and weed eating fish and in extremis, physical removal.
3. Fish die-off is usually caused by low oxygen levels.
4. High levels of dissolved nutrients may be countered by introduction of control chemicals. However, the effectiveness of these chemicals is often quite limited.

## **WATER QUALITY CONTROL POLICY**

It is the policy of the Radisson Community Association (RCA) to employ preemptive actions to control the quality of the retention facility pond waters within the community, consistent with NYSDEC regulations, other laws and budget constraints, and within the resources of the RCA.

## **IMPLEMENTATION**

RCA shall contract recognized expertise in stormwater retention maintenance to perform yearly evaluations of the quality of all Radisson facilities. The evaluation methods and required retesting are to be recommended by the contractor. The results of the evaluations shall be reported and treatments recommended for all RCA facilities. The recommendations should be followed only by action of the Board of Directors.

Yearly budgets shall include both the cost of evaluation, and treatment materials. In extremis, the Board of Directors may approve expenditures beyond that budgeted.

\* Additional ponds become Radisson Common Property

*Approved March 22, 2017*

*Resolution #973*