



WHAT'S WITH OUR LAKES?

Many people consider our Lakes recreational facilities that were created for our pleasure; but they are not. Our lakes are actually storm water retention ponds designed for the primary treatment of storm water runoff. Their function is for the filtering and cleaning of impurities and contaminants that come from the surrounding streets, parking lots, lawns and wildlife. They were not created for beautification but for purification. With that in mind the primary goal is to build an environment of aquatic life and vegetation that will create a balanced eco system and yet look attractive.

Our four lakes are each different in size, shape, and depth and each presents its own challenge to achieve that balance.

Kings Lake and Prince Lake present a greater challenge than Duchess Lake since they were created before there were County regulations as to their design. Both lakes are very shallow and in essence create a littoral shelf across the entire lake bottom. The sun can penetrate to the lake bottom making it possible for vegetation to grow across the entire surface. Measures must be taken to limit growth but at the same time preserve the desirable plants that help to clean the water. We are fortunate to have naturally growing Spike Rush which is excellent water cleaner. Together with the Spike Rush, Pickerelweed, and Arrowhead, the health of Kings Lake is very good. But to limit the growth of these desirable littoral plants, a constant program of cut back is conducted on a regular basis. The amount of this cutback is of constant debate by the resident's that live around the lake. How much is the proper amount? How much can you remove before you lose the natural filtration that they provide? How much is visually acceptable? Our current goal is to maintain a 15 ft ribbon around the perimeter of the lake and continue to do quarterly water quality testing. In the coming weeks, Solitude has been instructed to cutback spike rush in targeted areas before the heavy rain season is upon us.

Prince Lake presents much the same problem as Kings Lake in that is very shallow and in some places, it is only a foot deep. This is due the years of muck build up caused by the constant herbicide treatment to treat the Hydrilla, Bladderwort and Naiad. It is currently being treated with a bio agent in hopes that the muck can be organically decomposed and a deeper water level be returned. Biological treatment will not only reduce the amount of

muck, increase the water depth, reduce the size of the littoral shelf and increase the amount of dissolved oxygen in the water. When dissolved oxygen is too low, fish kills occur.

Duchess Lake has a different problem. Since it was once a quarry and is 17 feet deep at one point and has steep banks in most places; there is really no littoral planting area. Beneficial plants like Spike Rush will not grow since the water is too deep.

To best deal with the treatment of the lakes, the Board of Directors has hired an environmental scientist and a professional lakes management company. In addition they have consulted with Kamila Perez, senior environmental specialist with Collier County. Working as a team they have come up with a treatment plan that has been successful. Laboratory testing on a quarterly basis has shown that all these actions have kept the phosphorus, nitrogen and dissolved oxygen levels at acceptable levels, the fish healthy, and the lakes pleasant to look at and enjoy.

Dave Dardi

Lakes Committee