

February 15, 2010

**LAKE COLUMBIA PROPERTY OWNERS ASSOCIATION LAKE
MANAGEMENT COMMITTEE
STUDY REPORT**

Kevin Wetzel, Dredging Chairman of the Lake Management Committee, last year drafted a Request for Proposal and submitted it to four engineering firms to bid for a contract to provide a broad based study of Lake Columbia. The company's were Progressive AE (they performed the limited study which was acquired by the past Board of Directors), Atwell-Hicks, ASTI (performed work on the previous dredging project) and Ledy Design Group/FTCH. We received three (3) bids (Progressive AE did not submit a bid) and reviewed and qualified each of the bids confirming that they were "apples to apples" and the low bidder, Ledy Design Group/FTCH, was recommended to the Board to be chosen to perform the proposed lake study. At the November 2008 Board meeting, the Board of Directors approved funding for the comprehensive study of the entire lake. The Study was completed October 22, 2009. (You can find the completed Ledy Design Group / FTCH Study on this Web Site).

THE STUDY WAS ACQUIRED TO DETERMINE THE FOLLOWING:

1. Water quality
2. Areas dramatically affected by infiltration of silt and sediment
3. Possible sites for disposal of spoils from dredging
4. Types of weeds and optional methods of control
5. Areas of fish beds and affects of weeds and sediment on fish stocks

THE FOLLOWING INFORMATION IS INCLUDED IN THE STUDY:

1. Sediment is identified in (9) locations around the lake;
2. Sediment depths are at or near the past pre-dredge conditions in the South Canal;
3. Sediment, leaves, twigs, and nutrient levels contribute to weed growth throughout the lake;
4. Use of chemicals only to treat weeds can promote weed growth;
5. The South Canal does not currently contribute to sediment accumulation in other areas but if this infestation of silt and sediment is not addressed it will eventually negatively impact other areas and the over abundance of weeds in this area is contributing substantially to the spread of weeds throughout the lake;
6. Weed treatments utilizing multiple treatment methods as opposed to the past chemical only protocol is recommended utilizing a proactive treatment plan instead of the reactive method used in the past. Optional methods to consider will be Harvesting, Weevils, Over-dredging;
7. Dredging of the South Canal is recommended in both of the Reports and also by Andy of PLM, the company who treats our weeds. The South Canal has significant sediment buildup and the Study's recommend dredging this area and potentially a number of other areas as well.
8. Optional methods of capturing sediment before it enters the lake were considered but this will be nearly impossible to receive DEQ/DNR approval of redirection of the flow of water. The Study suggests that "over-dredging" of the South Canal may serve the same purpose and eliminate the need for additional property and governmental approvals. There are a number of options to help capture the sediment which will be reviewed and recommendations as to the best and most cost effective method will be made when the Design Documents are completed;

The Study has identified areas that Ledy/FTCH is recommending should be dredged. There are nine (9) total including the South Canal, Stump Bay, and seven (7) smaller areas which are identified as “potential dredge sites” in the Study. The South Canal was identified in the Progressive AE Study that was acquired by the past Board as the only location to be dredged, however, that study was acquired principally to investigate conditions in the South Canal and did not include review of other areas of concern around the lake.

BRIEF PROJECT BACKGROUND:

1. It took nearly thirty three (33) years for sediment to accumulate in the South Canal prior to the first dredging in 1999, but only five (5) years to build back up to similar condition.
2. Lake Columbia is a man made lake and will always try to revert back to its original condition. We will always battle weeds, silt and sediment and controlling our fish population. With careful consideration, we believe that this can be managed much more efficiently and possibly less costly than in previous years.
3. Dredging as maintenance may be required periodically to maintain the quality of the lake
4. Disposal of dredging spoils is a concern and is addressed in a couple of proposed methods:
 - a. Utilizing the previous capture site. This site failed previously and was aborted due to the involvement of the DNR. This site will be considered but has many obstacles that will need to be addressed;
 - b. Utilizing geo bags and removing them from the site after they have dried. This method is prohibitive due to the high cost of the bags (\$14,000 just to purchase each bag) and haul away of the materials;
 - c. Utilization of a portion of the 40 acre site owned by the Association located directly behind the Association Office. There are logistical problems with all of these options but this one may be our least costly and easiest to access with the possibility of using it for disposal of materials from future dredging projects as well.
5. In order to proceed, it will be necessary to design the areas to be dredged, including volume of sediment and a disposal method so that a detailed scope of work can be produced in order to develop a request for proposal for dredging companies. The purpose of the completed study was to determine areas of concern relating to dredging and the impact that the silt/sediment has on the lake as a whole.
6. The Design Phase will provide this scope of work so we can receive bids based on specific criteria and then determine a total budget for the approved project.
7. We are working with the Ralph Damato, the Board Member in charge of weed control, to support his development of a long term, broad based weed treatment program in an attempt to reduce the costs of treating the weeds.
8. We are requesting that the Board determine which areas should be included in the Design Phase and then to approve funding for the Design of those areas. This Phase will provide the information necessary to acquire bids from dredging companies so that the actual cost of the cleanup of the approved areas will be known. Final approval for dredging funds will then need to be made by the Board before proceeding.

Kevin Wetzel – Dredging Chairman
Lake Management Committee

Alan Boyer – Vice President
Ledy Design Group/FTCH