



COMMONWEALTH of VIRGINIA
Lake Barcroft Watershed Improvement District

Operations Director's Report
(April 2011 – July 2011)

Engineering/Projects

Concrete Restoration For The Dam *(update)*

- In June WR&A completed the final design drawings, specifications document, and contract documents for the project and submitted the permit application package to the Virginia Division of Dam Safety for review and approval.
- Rob VanLier (Regional Engineer, Virginia Division of Dam Safety) has provided his comments and has requested the following corrections and additional information:
 - Copies of all design drawings with the engineer's original signature next to the engineer's seal (copies of signature are not sufficient).
 - Engineer's seal and original signature on cover page of the Contract Documents and Specifications documents.
 - The submission of a temporary Emergency Action Plan (EAP) for the dam during the construction phase of the project.
- All of the Mr. VanLier's requests have been addressed and LBWID is expecting to receive the permit for the project within the next couple of weeks.
- The next phases of the project are tentatively scheduled as follows:
 - Advertise for bid in early August
 - Pre-bid meeting in early September
 - Bid due date in early October
 - Review bids and negotiate with the two most responsible/responsive bidders during October, November, and December.
 - Award the project to the winning bidder in January of 2012
 - Give the winner bidder the 'Notice to proceed' in February; providing that all insurance information and bonds have been submitted to LBWID.
 - Actual construction to start by mid March or earlier April 2012.

Dam Hydraulic Cylinder Testing Program *(update)*

- LBWID is continuing to perform the hydraulic cylinder testing sessions
 - Recent test have produced some inconsistent and irregular results.
 - These inconsistencies suggest that the issue is not with the cylinders themselves, but are caused by the valves used to isolate the cylinders during the cylinder testing process.
 - LBWID staff is performing more frequent testing to help validate our assessment of the isolation valves.
 - When this is complete we will have our engineers validate our findings and seek a contractor to replace the valves.
 - The existing valves are gate valves. If the valves are replaced we will use ball valves.

Operations

New Dump Truck *(new)*

- LBWID has purchased a larger dump truck to replace the existing dump truck that it has been using for the last 14 years.
 - The existing dump truck is a 1988 International single axle dump truck capable of hauling about 5 cubic yard of dredge spoils.
 - The new dump truck is 2001 Freightliner tri-axle dump truck capable of hauling 12 cubic yards of dredge spoils, which is equivalent to one barge load of spoils. The increased capacity will make our whole dredging operation much more efficient.
 - The new larger dump truck is also much better equipped for moving the WID's large Takeuchi excavator by trailer around the community.
- The cost of the newer dump truck is \$31,000 plus approximately \$1,500 to transport it from Charlotte, North Carolina.

New Hydraulic Pumps For The Dam *(new)*

- LBWID has asked Advanced Fluid Systems Inc. (from Yorktown, PA) to submit a proposal and plan for upgrading the two primary hydraulic pumps that power the dam's massive hydraulic cylinders that move the bascule gate.
 - The existing pumps are roughly 30 years old and have been rebuilt twice.
 - The rebuild kits are becoming increasingly harder to find.
 - The manufacturer of the pumps is no longer in business.
 - The new pumps that are being considered are a similar style (vane pumps) but more efficient, and are more readily available.

- The preliminary price estimate for the project is about \$16,000.

2011 Bathymetry Survey (new)

- On June 7th Princeton Hydro performed the annual bathymetry survey of the upper ends of the Tripps Run and Holmes Run sides of the lake.
- The preliminary results indicate that the LBWID's in house dredging program is working as planned.
 - Dredging 1,250 to 1,500 cubic yards of sediment from the upper ends of the Tripps Run and Holmes Run side of the lake each year to maintain approximately 5 feet of water depth were possible.
 - This equals 2,500 to 3,000 cubic yards of sediment being removed from the Lake each year.
 - Over a 4 year period 10,000 to 12,000 cubic yards will be removed.
 - This is the same amount that was being removed from the Lake when dredging was being outsourced on a 4 to 5 year cycle.
- Once the final survey maps are received they will be posted on LBWID's website for the community to view.
- The cost of the survey and new maps is \$8,000.00

Dam Emergency Action Plan Orientation Seminar (new)

- LBWID is preparing for the annual meeting with the Emergency Management Coordinators from Fairfax County and the City of Alexandria to review the Emergency Action Plan (EAP) for the Lake Barcroft Dam. The purpose of this meeting is to make sure that all of the information in the EAP is up to date and to make sure that everyone is familiar with their agencies responsibilities as stated within the EAP.
- We are LBWID is hoping to schedule the meeting for sometime in August in our office.

2011 Summer Season Debris Removal Program (update)

- So far this summer two large storms that have brought in massive amounts of debris. The staff has removed 55 trash harvester loads, which is equivalent to 40 to 50 tons.
- The staff takes a good deal of pride in being able to restore the Lake to a safe and clean condition within two days after each storm.

Other Matters

2011 LBWID No-Phosphorous Fertilizer and Soil Testing Program *(new)*

- In an effort to better control the amount of free non-phosphorus fertilizer that it distributes the LBWID now requires the resident's lawn soil to be tested.
 - LBWID staff will collect the soil sample and send it to Virginia Tech for testing and will pay the \$10.00 fee for the soil testing.
- All test results will be sent to LBWID for evaluation
- If it is determined that the individual lawns need additional fertilization LBWID will advise the owner of how much to use and will provide them with that amount.
- Approximately 36 residents have signed up for the soil testing.
 - The soil samples are currently being collected and will be sent to Virginia Tech for analysis.
- LBWID is anticipating having the test results back in time so that we can provide the residents with the proper instructions for the fall lawn care season.
 - LBWID will now only distribute non-phosphorus fertilizer during the fall season, it has been determined by experts that fertilizing turf grass during any other season is not productive and harmful to the environment.

Respectfully,
Davis Grant
LBWID Operations Director