



COMMONWEALTH of VIRGINIA
Lake Barcroft Watershed Improvement District

Operations Director's Report
(November 2012 – January 2013)

Engineering/Projects

Concrete Restoration for the Dam *(update)*

- To date Contracting Specialist Inc. (CSI) has completed all of the work contracted for with the exception of one task (see below). LBWID is very pleased with the results of CSI's work.
 - The repair of the small and large voids on the cyclopean face below the bascule gate has been postponed until spring of 2013 because weather conditions currently have made it more difficult to obtain results of proper quality.
 - The cost of the small and large void repair is approximately \$15,000.00.
 - To accommodate the change to the schedule, LBWID and CSI has agreed on and signed a contract modification that extends the terms of the contract until July 2013.
 - The bonding for the project has been reduced to \$25,000.00.
- In addition, LBWID has asked WR&A to develop a restoration plan for the dam's western training wall. The purpose of this wall is to keep (train) the water that is released by the bascule gate within the spillway area. The eastern training wall was restored about 20 years ago and remains in great condition today.
 - The concrete surface of the western training wall is showing signs of deterioration and we feel that now is the time to restore it. In all likelihood a very similar restoration method as what was done on the east and west abutments will be used, which was the encapsulation method.
 - WR&A's goal is to submit pre-final design plans to LBWID in early February and then submit final design plans to the Division of Dam Safety by mid- February for their approval .
 - Once the finale design plans have been submitted to the Division of Dam Safety the LBWID will start negotiating a change order with CSI for this additional work.

- At this time it is estimated that this additional work will cost approximately \$120,000.00 (engineering phase and construction phase).
- As it currently stands the cost of the total project is projected to come in at about \$1,012,834.00.
 - This includes the original contract with CSI, all change orders completed by CSI, and the proposed restoration of the western training wall. It also includes all WR&A design engineering services and construction phase services.
 - The total amount that was budgeted for the project was \$1,083.394.00
 - If the project cost closes out as projected there will be a remanding balance of \$70,560.00 in the project budget.

Revision of Dam O&M Manual *(update)*

- WR&A is currently on track to complete the updating of the dam's Operational & Maintenance Manual by March.
 - WR&A has already completed the new hydraulic schematic.
- This a time and a material based contract with WR&A that currently has a not to exceed limit of \$10,000.00.
 - Applied Controls Engineering (ACE) is also updating the manual and design drawings for the electronic controls system. The Cost from ACE is will be between \$2,500 and \$5,000

Biennial Dam Inspection *(update)*

- WR&A is finalizing the 2013 Biennial Dam Inspection Report. The report should be completed by early to mid-February.
 - Over all the inspection has went very well. With all of the hydraulic upgrades and concrete restoration work that has been completed in the last 2 years the report will reflect that the condition of the dam is very good.
- Once the inspection report is completed it will be submitted to Virginia's Division of Dam Safety for their review.

Catwalk for the face of the dam *(update)*

- WR&A is continuing to develop the design of the new catwalk for accessing the dam's four hydraulic cylinders and the lower portion of the bascule gate.
 - The goal is to finalize the design by the end of February and then to have WR&A assist LBWID in identifying at least 3 qualified fabricating companies to solicit bids from.
- LBWID would like to have the catwalk installed by the end of summer 2013.

Operations

Fall In-House Dredging Season (update)

- LBWID started the fall dredging season on Oct. 9th (Holmes Run side of the lake).
- LBWID removed approximately 500 cubic yards of sediment, mostly from the upstream side of Swift Island.
 - This is less than the normal goal of 1250 cubic yards because the annual sediment loading was very light due the drought during the spring and summer season. In addition the new storm water retentions ponds that were built in the area of I-495 and I-66 interchange may have helped minimize sediment transport to some small degree.
- March of this year LBWID will start the spring dredge season on Tripps Run side of the lake.
 - We are anticipating that less sediment than normal will have to be dredged on the Tripps Run side of the lake as well.

Community Garden Restoration (update)

- LBWID has contracted with Campbell and Ferrara Outdoor Living to restore the pond at the Community Garden.
 - This work was started on January 9th but due to almost a week of nonstop rain the progress has been slow thus far.
 - In addition to restoring the actual pond, Campbell and Ferrara will also be doing the following:
 - Installing new a pump for the pond.
 - Providing and installing all new native plants for the immediate area around the pond
 - Building a 16' wide 8 sided open air gazebo with a brick paver floor.
 - Installing 2,700 square feet of new sod.
 - The projected schedule for the contacted work is as follows:
 - Pond restoration – January and February
 - Building of Gazebo – March
 - Installing new plants – April
 - Laying sod – April
 - The total cost of the contracted work is \$60,350.00
- LBWID has already built the two new 8'x16' floating docks for the Community Garden,
 - The new docks are currently being stored at the WID compound and will be installed in the spring.
- In addition to and after the aforementioned work is complete, the LBWID will install a new foot path connecting Dearborn Dr. to the Women's' Club Bridge.
 - The new path will most likely be installed during the upcoming summer.

Upgrade to the dam's data sharing system (update)

- LBWID's contractor (Applied Controls Engineering) has completed the upgrades to the dam's data sharing system that Fairfax County had requested.
 - The cost of the upgrade to the system was approximately \$2,750.00.
 - The County will be reimbursing the LBWID 50% of the cost.
- Fairfax County has also almost completed their new system that collects and organizes data from all of the stream gauges and rain gauges that are installed around the county.
 - The County's new system now allows LBWID to have remote access to all of the gauge sites around the county. .
 - The County uses this live data during large storms to predict the likelihood of flooding and to assist the County Emergency Management Officials with making decisions during storm events.

Annual Review of the Dam's Emergency Action Plan (new)

- On January 23rd LBWID with the Emergency Management Coordinators from Fairfax County and the City of Alexandria for the annual review of the emergency action plan for the dam.
 - This annual meeting is to review/evaluate the emergency action plan and discuss any emergencies that may have happened in the past year to determine if the plan needs to be amended.
 - All in all the meeting went well and all parties consider that the dam's emergency action plan is to be accurate.

Bio-log Project (new)

- In December LBWID had another lake front resident take advantage of the LBWID's bio-log program.
 - LBWID will provide the labor to install the bio-logs if the home owner pays for the materials.
- The purpose of the bio-logs is to reduce shoreline erosion.
 - Bio-logs are made from coconut fiber and are staked along the shoreline as a natural armoring device that will allow plant life to grow and ultimately stabilize the soil.
 - In some cases the natural distribution of plants seeds will start the vegetating of the bio-logs.
 - You can also plant grasses and other vegetation directly into the bio-logs to speed of the natural stabilization process.
 - LBWID is currently researching to determine which native plants would be appropriate to plants into bio-logs here at Lake Barcroft.

Respectfully,
Davis Grant
LBWID Operations Director