

The College Lake Dam Study



Beginning in early July 2014, the City of Lynchburg, in collaboration with Lynchburg College, initiated a study to assess the condition of College Lake and College Lake Dam. This study is an integral part of the overarching water quality plan the City is pursuing and is a result of a previous engineering study, conducted on behalf of the City, to comply with new State/Commonwealth dam safety regulations.

FACT SHEET

College Lake and Dam Facts

- Constructed in 1934 by the Virginia Department of Highways
- Dam and roadway owned by the City of Lynchburg
- Reservoir owned by Lynchburg College
- Height: 35.4 feet
- Length: 300 feet
- Embankment Crest Width: 54 feet
- Spillway Width: 60 feet
- Surface Area: 19 acres
- Approximate Volume: 629 acre feet
- Watershed Area: 22 square miles



Contact for More Information:

Throughout the process, the City and College will provide opportunities for residents, students, faculty, staff, and the general public to learn more. For more information, contact James Talian, Water Quality Manager-CSO, City of Lynchburg, at 434-455-3953 or James.Talian@lynchburgva.gov; or Shannon Brennan, Director of Media Relations, Lynchburg College at 434-544-8609 or brennan.s@lynchburg.edu.

The earlier study determined the dam spillway was not large enough to handle the flow of water, which could be expected during extremely severe weather conditions, creating a potential safety hazard for those who live below the dam. This fact sheet provides additional information about the current study, the schedule, and the next steps leading to a safer future for those living, working, and playing near the Lake and Dam.



History of College Lake at Lynchburg College

College Lake is a manmade lake, built in the early 1930s by the Virginia Department of Highways as part of the development of U.S. Highway 460, west of Lynchburg. The road, now U.S. 221, needed expansion and improvement. To assist with this project, Lynchburg College gave a piece of its land to the Commonwealth of Virginia for the construction of an earthen dam which impounded Blackwater Creek and created College Lake on the property of Lynchburg College. The Virginia Department of Highways transferred ownership of the dam and roadway to the City of Lynchburg; however, the lake continues to be under the ownership of Lynchburg College.

Past Uses of the Lake

The lake has played an important role in Lynchburg's recreational landscape. In its early history, College Lake was used as a meeting spot and for recreation. A boathouse was located on the lake in the 1940s; boating and fishing were offered during warm weather. The College also used the lake for academic research. However, as the lake has declined, so have the activities. Because the sediment from the City's runoff is trapped above the dam, the

lake has dramatically reduced in size. The original surface area of the lake was reported to be 44 acres and has been reduced to 19 acres due to sedimentation.

Past and Current Studies

From the early 1970s through today, College Lake has been extensively studied. Sedimentation, water quality concerns, dredging, and other rehabilitation scenarios have been documented and proposed. It is now due to stricter dam safety standards that the City has commissioned a new study of College Lake. The new study will incorporate information from past studies along with results from a new investigation into a proposed course of action, which will dictate the future of the lake.

This study will describe two separate plans of action. One possible scenario is rehabilitating the dam to meet current standards. With this scenario, no rehabilitation of the lake will occur. A second scenario will remove the dam entirely, draining the lake and reclaiming Blackwater Creek. This scenario provides options ranging from simply recreating the creek to developing extensive wetlands and hiking trails throughout the former lake bed. The City, together with Lynchburg College, will investigate and propose the potential solution for the lake based on the outcome of these studies.

Decision Considerations

A number of factors need to be considered before any decisions about the future of College Lake and College Lake Dam are made. In addition to flood control and aesthetics, any dam modification will need to address the impacts to wildlife, sedimentation, and water quality downstream. The conceptual plan alternatives will specifically address sedimentation coming from the watershed above College Lake. The College Lake Dam Study is one initiative being undertaken by the City under an overarching watershed management program to better understand the combined effects of activities within the watershed. The outcome of the College Lake Dam Study will be factored into the City's decision-making process to reduce impacts and improve water quality.

Project Schedule – 2014

Engineering review of previous work	August
Field assessments of current conditions	August
Technical investigation	September
Public Open House 1.....	October
Engineering design	October
Public Open House 2.....	November
Submittal of report to regulatory agencies	December

Completion Date: December 31, 2014

Possible Solutions

The City will consider a number of solutions once the technical investigations are complete. The City will work with the College and local stakeholders to determine the best possible outcome for the lake and dam. Among the possible solutions are:

Alternative 1: Rehabilitate the dam to meet current dam safety regulations:

- Armor the dam for overtopping
- Repair or replace the low-level outlet
- Improve the existing bridge and utilities to withstand overtopping
- Build forebays in the original headwater areas of the lake to help regulate sediment flow into College Lake, the James River, and the Chesapeake Bay

Alternative 2: Decommission the dam:

- Replace the embankment with a bridge
- Construct wetlands where existing lakebed exists to:
 - Stabilize sediment,
 - Regulate and improve water quality, and
 - Create recreational and aesthetic improvements to the area
- Build forebays in the original headwater areas of the lake to help regulate sediment flow into the James River and the Chesapeake Bay

Other improvements being considered include:

- Re-engineer the wetlands to make them more effective in addressing water quality and quantity issues
- Build forebays, which are artificial smaller pools created in front of a larger body of water to act as a buffer during flooding and reduce sediment
- Extend Blackwater Creek Trail and the other recreational areas

If a decision is made to replace the dam with a bridge, it is proposed that a pedestrian bridge will be built under the roadway.

