

Fishing Creek Hydroelectric Station

ADDRESSING NEW FEDERAL GUIDELINES



Duke Power began a project in September 2005 to upgrade Fishing Creek Dam. This will ensure that the facility complies with new federal regulations and continues to provide safe, reliable electricity and recreation to Chester and Lancaster counties for many years to come.

Duke Power's hydroelectric stations are licensed and regulated by the Federal Energy Regulatory Commission (FERC). As a FERC licensee, we must review the stability of the dams and water-retaining structures based on revised FERC guidelines. These guidelines are used to (1) design a new "theoretical" flood known as the Probable Maximum Flood (PMF), and (2) analyze the stability of a dam exposed to such a catastrophic flood.

Calculations estimate peak lake levels for Fishing Creek during the PMF to be higher than those used for the dam's original design in 1915. Two key modifications are planned to ensure appropriate safety factors are maintained in the unlikely event the facility experiences a flood the size of the PMF.

The first modification is the installation of anchors through the concrete bulkhead west of the powerhouse to secure the structure to the foundation, or bedrock (see figures 1 and 2).

The second modification is the construction of four anchored concrete buttresses in the river below the powerhouse to secure the structure to the foundation, or bedrock (see figures 3 and 4).



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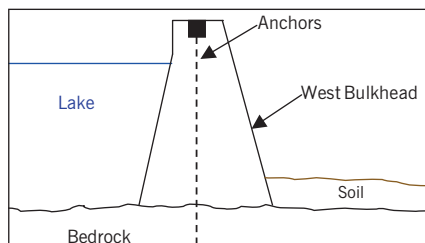


Figure 1: Cross-Section of Bulkhead with Anchors.

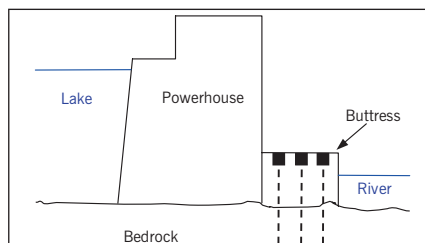


Figure 3: Cross-Section of Powerhouse with Anchored Buttress.



Figure 2: Installing Anchors in 99 Islands Bulkhead, November 2004.



Figure 4: Construction of Concrete Buttresses Below Wylie Powerhouse, December 2002.

Project Facts and Information:

- Fishing Creek Hydroelectric Station – commercial operation 1916
- Duke Power dams are safe and are inspected routinely by Duke Power personnel, annually by the FERC, and every five years by an independent engineering consultant.
- The project is required by the FERC and is part of their nationwide effort to upgrade existing dams to withstand catastrophic floods.
- The PMF is a "worst case scenario" flood design. A flood of this size is extremely unlikely. Even the historic Catawba River floods of 1916 and 1940 did not come close to the PMF.
- Project Duration: September 2005 – March 2006.
- FERC inspectors will be on site periodically to examine work in progress.