

HIBERNIA DAM

REHABILITATION PLANNING STUDY FACT SHEET

BRANDYWINE CREEK WATERSHED

HIBERNIA DAM'S SHORT STORY

The Chester County Water Resources Authority (CCWRA), the Chester County Board of Commissioners, and the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) in cooperation with other local and state partners, completed the Brandywine Watershed Work Plan in 1962 to address the prevalent needs for flood prevention, water supply and recreation in the Brandywine Creek watershed through various actions including planned construction of five flood control and multi-purpose dams. Hibernia Dam and Chambers Lake Reservoir, located on Birch Run just north of Wagontown, PA, were completed in 1994 and provide flood control, water supply and recreation. The dam and reservoir are owned and operated by CCWRA.

Hibernia Dam and Chambers Lake Reservoir provide supplemental water supplies for the greater Coatesville public water system, and offers excellent recreational opportunities, especially fishing, boating, hiking and bird watching. The lake and adjoining riparian lands also support in-lake and downstream fisheries, bog turtle habitat, raptor habitat, resident and migratory avian species habitat, and other terrestrial wildlife and wetlands habitat created as part of the original project. Multiple storm events have occurred since construction of the Hibernia Dam. In each case, the dam detained millions of gallons of runoff that would otherwise contribute to downstream flooding.

Hibernia Dam was designed to meet the dam safety engineering standards in place at the time of its construction. Recent advances in dam safety engineering have resulted in increased design standards above and beyond those used for Hibernia Dam. Other aspects of Hibernia Dam have been identified that could improve the structural and operational safety of the dam throughout its service life. CCWRA requested assistance from NRCS to evaluate these components and potential alternatives for rehabilitating the Hibernia Dam.

REHABILITATION PLANNING PROCESS

The Watershed Protection and Flood Prevention Act (PL-566) was amended in 2000, to provide NRCS authorization to assist communities with rehabilitation of their aging dams. The legislation authorizes NRCS to work with local communities and watershed project sponsors to address public health and safety concerns and potential environmental impacts of aging dams. NRCS provides technical and financial assistance in planning, designing, and implementing watershed rehabilitation projects. The Planning Study for Hibernia Dam is currently underway to evaluate needs, objectives, and alternatives for potential rehabilitation of the dam.

Rehabilitation projects may be cost shared between the federal government and local sponsors. NRCS may provide 65 percent of the total cost of the rehabilitation project. Local sponsors can provide the remaining 35 percent in cash or through "in kind" costs for the value of land rights, project administration, and other planning and implementation costs associated with the project. Federal funds cannot be used for operation and maintenance activities.

PROJECT NEED

The Dam was originally constructed in 1994 with a 50-year service life and to meet the design standards in place at that time. Both NRCS and the Pennsylvania Department of Environmental Protection, Bureau of Waterways Engineering, have classified Hibernia Dam as a High Hazard Dam. This hazard classification is based on the prevalence of population, bridges, roads and buildings located within the downstream dam breach inundation zone that would be exposed to flood loss and potential loss of life in the unlikely event of dam failure. Dam safety design standards for high hazard dams have increased since completion of this dam. Thus, the Project Need includes the following:

- Continue providing and improving flood damage reduction downstream from the dam and address applicable NRCS and Commonwealth of Pennsylvania standards and design criteria for public health and safety to reduce the risk of loss of human life and property damage.
- Continue providing up to 4 million gallons per day of source water for public water supplies from Hibernia Dam and Chambers Lake Reservoir.
- Continue supporting and improving the recreational uses and aquatic and terrestrial wildlife habitat directly dependent upon Chambers Lake and its surrounding lands.
- Continue providing water for local fire departments for fire protection.

PROJECT FACTS

Size of Reservoir	90 acres
Maximum Depth	48 feet
Height of Dam	65 feet
Length of Dam	700 feet
Floodwater Storage Capacity	257 million gallons
Water Supply Storage Capacity	382 million gallons



Hibernia Dam and Chambers Lake Reservoir

PROJECT OBJECTIVES


The project objectives are to:

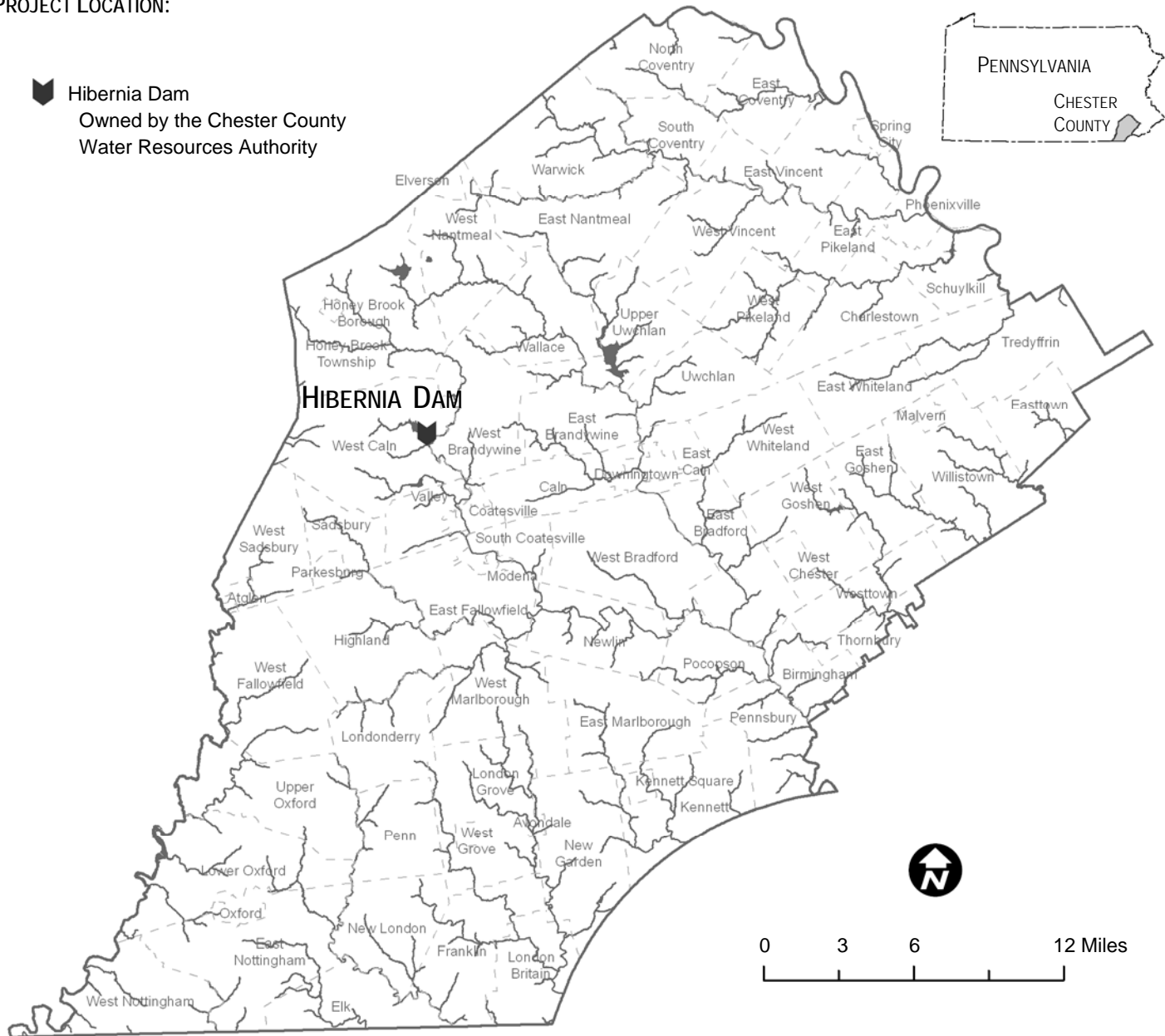
- Meet or exceed state and federal dam safety criteria.
- Maintain or enhance the current level of flood protection provided by Hibernia Dam.
- Maintain or enhance the current level of availability of water supplies provided by Hibernia Dam and Chambers Lake Reservoir.
- Maintain or enhance the current recreational values, and aquatic and terrestrial wildlife habitat values provided by Chambers Lake and its adjoining riparian lands.
- Maintain or enhance the current provision of water for fire protection.

PROJECT SCHEDULE

Planning Phase	Start Date	Anticipated Completion Date
Collection and Analysis of Information	11/1/2011	3/15/2012
Formulation and Evaluation of Alternatives	3/31/12	8/30/2012
Preparation of Supplemental Watershed Plan/Environmental Evaluation	8/30/2012	3/29/2013

PROJECT LOCATION:

 **Hibernia Dam**
Owned by the Chester County
Water Resources Authority



For further information regarding the Hibernia Dam Rehabilitation Planning study, please visit www.chesco.org/water or contact CCWRA at 610-344-5400.