



CHAPTER 1 – Background Information

Introduction

Antietam Lake Park is located in Berks County, just east of the City of Reading. The 643 acre county park was assembled through several acquisitions in 2005, 2008, and 2009. The park's main feature is Antietam Lake, a 13.5 acre impoundment of Antietam Creek which once served as a water supply for the City of Reading. Park land surrounds the lake providing a scenic setting for nature-based recreation.

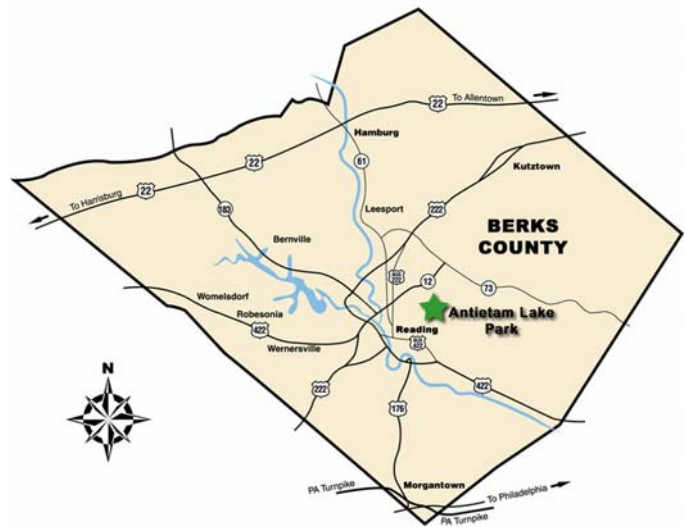


Park Location

Antietam Lake Park is located primarily in Lower Alsace Township with a small portion in Alsace Township. These municipalities are located just east of the City of Reading. Access to the park is from Hill Road, Antietam Road, and Angora Road.

Berks County Parks

Berks County has 12 parks comprising over 1,200 acres. The parks include historic sites, traditional park facilities, and the Union Canal Bicycle and Walking Trail. Antietam Lake Park is the county's newest parkland acquisition. At 643 acres, Antietam Lake Park doubled the acreage of the park system and expanded opportunities for enjoyment of the scenic resources of the county. The majority of the county parks are located northwest of the City of Reading with four additional parks dispersed throughout the county. Antietam Lake Park provides a county park on the eastern side of the City of Reading and adds horseback riding to the mix of recreation opportunities available in county parks.



Background and History

Berks County

Berks County was formed in 1752 from parts of Chester County, Lancaster County, and Philadelphia County and named after William Penn's family home of Berkshire, England. Likewise, Reading was named after the main town in Berkshire, England. Berks County began much larger than it is today, with Northumberland County and Schuylkill County breaking off to form separate counties and Berks County reaching its current size in 1811. Early growth was largely influenced by the Schuylkill River, which made

navigation of flat-bottom boats possible to carry agricultural products to the markets of Philadelphia, and later by the county's early lead in steam railroad growth. Reading's industrial complex attracted a considerable amount of immigrant labor during the late 19th and early 20th centuries, an era of great industrial growth for Berks County. Today, the City of Reading remains the county's largest municipality, based on population. There are 29 boroughs, and 44 townships in the county with approximately half of these boroughs located within the urbanized area surrounding Reading.¹

Lower Alsace Township

The history of Lower Alsace shows the Lenni-Lenape Indians were the first occupants. By 1710, a group of Germans settled the area. In 1888, Alsace Township was divided into two parts; Alsace Township and Lower Alsace Township. Through the 19th and early 20th century Lower Alsace was a rural community with orchards, vineyards, small farms and many resort stops and picnic groves along the Gravity Trolley Railroad route on Mt. Penn Mountain. The suburban boom of the 1920's and 1930's brought on intense residential development to the Pennside and Stony Creek areas.²

Antietam Lake

The origins of Antietam Lake date back to 1865 when the City of Reading purchased a dam and gristmill on Antietam Creek as a water supply for the City. The location was favored for a water supply because water could flow by gravity to the City. The dam was enlarged in 1872 and again in 1880 to a capacity of 101,000,000 gallons. The new dam was constructed of huge dressed boulders and the sides of the entire reservoir were ripped to prevent erosion. The maximum depth of the lake was 45 feet. In 1915, the dam was reconstructed to add a 30-foot wide spillway. Water flows over the 60-foot high solid rock wall which was designed as a natural waterfall. The rock of the waterfall has been studied by generations of geologists and their students and is thought to be 1-1.2 billion years old.

A unique feature of Antietam Lake is the octagonal brick valve house on a stone foundation set within the lake. This structure was built in 1880 to house the valve controls for the dam. A wooden bridge extends from the shore to the structure. A caretaker's house was also developed in 1880 across Angora Road from the valve house.

In 1894, studies found that water from Lake Antietam was contaminated as a result of barnyard runoff. The City of Reading Board of Water Commissioners addressed the crisis by purchasing all surrounding farms within the area and removing the buildings. This was the first purchased primary watershed in the United States. The only remaining buildings were the Bingaman house and barn located on Hill Road. This building has seen many uses since that time, most recently as the City of Reading Department of Recreation Nature Center.

Additional improvements were undertaken to enhance water quality of the lake. The Hinnershitz mill dam on Antietam Creek was rebuilt in 1888 to include a settling basin to collect sediment and prevent it from reaching Antietam Lake. The wall below this dam was straightened. A second settling basin was constructed at the mouth of the lake in 1899. This basin was configured with a dam of seven stone steps. Water flows over the steps into Antietam Lake. A third settling basin was developed where Bingaman's Run flows into the lake.

¹ Scogna, Kathy M. "The Birth of a County – 1752". Berkshistory.org. 2001. November 9, 2010. <http://www.berkshistory.org/articles/berks1752.htm>

² "About Us, History". [latownship.org](http://www.latownship.org/about.asp). 2010. November 9, 2010. <http://www.latownship.org/about.asp>

The land surrounding Antietam Lake was reforested in the early 1900's to prevent soil erosion. A tree nursery was developed on site to provide evergreen seedlings for transplanting throughout the Antietam Lake watershed.

Antietam Lake was officially closed as a water reservoir in 1974. In 1989, the spillway of the lake was lowered 4'6" for safety concerns. The lower elevation left the Bingaman's Run settling basins higher than the lake, allowing Bingaman's Run to bypass the basins and discharge directly into the lake.

In 1998, Antietam Lake was among several properties considered for sale by the City of Reading. The possibility of Antietam Lake property being developed spurred citizens to mobilize as Friends of Antietam Lake in 2000. Finally, in 2008, the Antietam Lake property was sold by the City of Reading to the County of Berks.

Source: Antietam Lake history summarized from: Historical Review of Berks County, volume 74, number 1, Winter, 2008-2009, The City's Oasis: Antietam Dam, Beulah B. Fehr.

Schuylkill River National & State Heritage Area

Antietam Lake Park is located within the Schuylkill River National and State Heritage Area. The Schuylkill River National Heritage Area celebrates the rich culture and history of the Schuylkill River watershed as one of America's most significant cultural and industrial regions. The boundaries of the heritage area cover the Schuylkill River watershed in Schuylkill, Berks, Chester, Montgomery, and Philadelphia Counties. The region is nationally significant for the role that its people, places, and events played in the American, Industrial, and Environmental Revolutions.³

A National Heritage Area is a place designated by the United States Congress where natural, cultural, historic and recreational resources combine to form a cohesive, nationally distinctive landscape. The Schuylkill River received this designation from Congress in 2000. The Schuylkill River watershed was designated a Pennsylvania Heritage Area by the Department of Conservation and Natural Resources in 1995. National Heritage Areas work to revitalize and restore the region through natural and cultural resource preservation, education, recreation, community revitalization, and heritage tourism.⁴



2007 The Berks County Greenway, Park and Recreation Plan

In 2007, Berks County adopted a Greenway, Park and Recreation Plan. The plan sets specific goals for the direction Berks County should take to provide future open space, greenway, and recreation for its citizens and provides recommendations for the preservation of the county's historic sites and districts. The plan addressed Antietam Lake and outlined the following initiatives:

- Develop Antietam Preserve as a County Park to preserve ecological resources, while promoting passive recreational, environmental education, and scenic resources. Specific actions steps that

³ About Us: Schuylkill River Heritage Area, [schuylkillriver.org/About_Us](http://www.schuylkillriver.org/About_Us), November 23, 2010, http://www.schuylkillriver.org/About_Us.aspx

⁴ Ibid.

have been completed include the acquisition and preparation of boundary survey and GIS assessment, while other actions are currently moving forward to include this master plan, repair of the dam, signage, and preparation of a brochure and map.

Berks Vision 2020

The Future Land Use Plan for the Berks Vision 2020, the county’s comprehensive plan consists of six major categories of land use. The following future land use vision pertains to Antietam Lake Park:

- Permanent Open Space and Recreation – ...create a permanent network of adequate and diverse open space, park and recreational resources for the use of all County residents. A wide range of recreational experiences should be provided, which consist of active recreation, passive park opportunities, and natural open space and conservation environments that secure irreplaceable, unique or threatened natural features and resources. A countywide greenway system interconnecting the County’s major park, recreation and open space resources through a network of open space corridors and linear parks and trails is advocated.
- Rural Conservation – Natural features and resources to be conserved include, but are not limited to prime timber stands or large contiguous tracts of woodland (especially in combination with steep slopes), moderate to steep slopes, ridgelines, headwaters for streams, springs, rock outcrops, identified natural areas and locations of animal and plant species of special concern, and wildlife habitat.

Demographics

The 2000 U.S. Census population for Berks County increased 11-percent from 1990 and estimates show that that growth has continued into the next decade. Alsace Township and the City of Reading both gained population from 1990 and 2000, but at a modest rate relative to the county as a whole. Lower Alsace Township lost population in the same time period.

Government Subdivision	2006 Estimated Population	2000 Population	1990 Population	Percent Change 1900 - 2006
Lower Alsace Township	4,487	4,478	4,627	-3.0%
Alsace Township	3,758	3,689	3,459	+ 8.6%
City of Reading	81,183	81,207	78,380	+ 3.6%
Berks County	401,149	373,638	336,523	+ 19.2%

Berks County’s population is diverse racially with the Hispanic population comprising 9.7-percent of the overall population and white population comprising 88.2-percent of the total county population. The 2000 median household income for Berks County was \$44,714 which is above the Commonwealth of Pennsylvania’s median income of \$40,106 per household.

The median age of Berks County residents is 37.4 years which compares closely to the statewide median age of 38.0 years. Countywide, 24.6-percent of the population is under 18 years of age and 15.0-percent is 65 years old or older.

These statistics illustrate the county base from which the county parks will draw local visitors. A full Demographic Profile Table is provided in Appendix A.

Master Planning Process

The Antietam Lake Park Master Plan planning process included five parts:

1. Inventory and Assessment
2. Public Participation
3. Development of Conceptual Alternatives and Pre-Final Designs
4. Final Master Plan
5. Strategic Operations and Management Plan

1. Inventory and Assessment

The natural resources and existing features of the park site were explored. Landscape architects, ecologists, an architect, and a recreation planner, visited Antietam Lake Park several times throughout the planning process to evaluate the site and its features and natural resource characteristics, observe site opportunities, and consider potential impact of public use on the park site and surrounding land uses. This assessment guided the master planning process. Chapter 3 – Resources of Antietam Lake Park documents the findings of the inventory and assessment phase of the planning process.

2. Public Participation

To assure that the design for the park is community based, broad citizen input was critical to the planning process. Public input was gathered by working with a study committee, completing interviews with stakeholders, and conducting a public meeting. Additionally, input from meetings regarding the park site that preceded this planning process was reviewed.

3. Development of Conceptual Alternative Designs

Conceptual alternative designs were developed for the park. The alternatives presented differing approaches to achieving site and recreation goals and locations of proposed improvements. Following review of the alternative designs, a pre-final design was developed. The pre-final design was shared with citizens at a public meeting and additional input was gathered about the ideas and park facilities presented.

4. Final Master Plans

The final master plan for Antietam Lake Park was developed based on the outcomes and conclusions of the planning process. Probable construction cost opinions and a phasing plan for implementation of the final master plan were completed in this phase of work.

5. Strategic Operations and Management Plan

Park operations are the most significant lifetime cost of a park. Recommendations for operation, management, maintenance, and financing the park improvements were defined for Antietam Lake Park.