

# Cuyahoga River Ecosystem Restoration Canal Diversion Dam Project



Public Open House  
CVNP Happy Days Lodge - September 7, 2016

# Environmental Impact Assessment



National Environmental Policy Act (NEPA)  
An Umbrella Law  
Alternatives and Balancing Impacts



## Project Purpose and Need



The purpose and need of the Canal Diversion Dam project is to identify an ecological restoration strategy to improve the water quality conditions of the river while upholding the mission of protecting and preserving resource values of the park.

# Project Alternatives

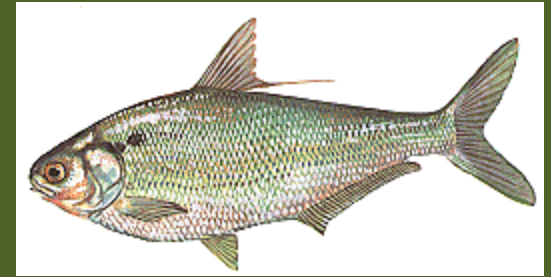
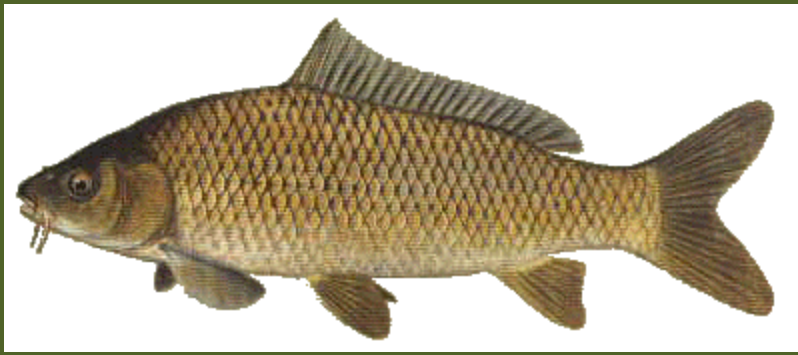


- Alternative 1: No Action
- Alternative 2: Dam Modification
- Alternative 3: Dam Removal

# Canal Diversion/Brecksville Dam

## What does a dam do?

- Create dissolved oxygen depletion in the pool
- Block fish movement
- Alter habitat
- Recreational hazard



**Fish tolerant of  
Impaired water  
and impoundments**







**Fish living in clean  
free flowing rivers**



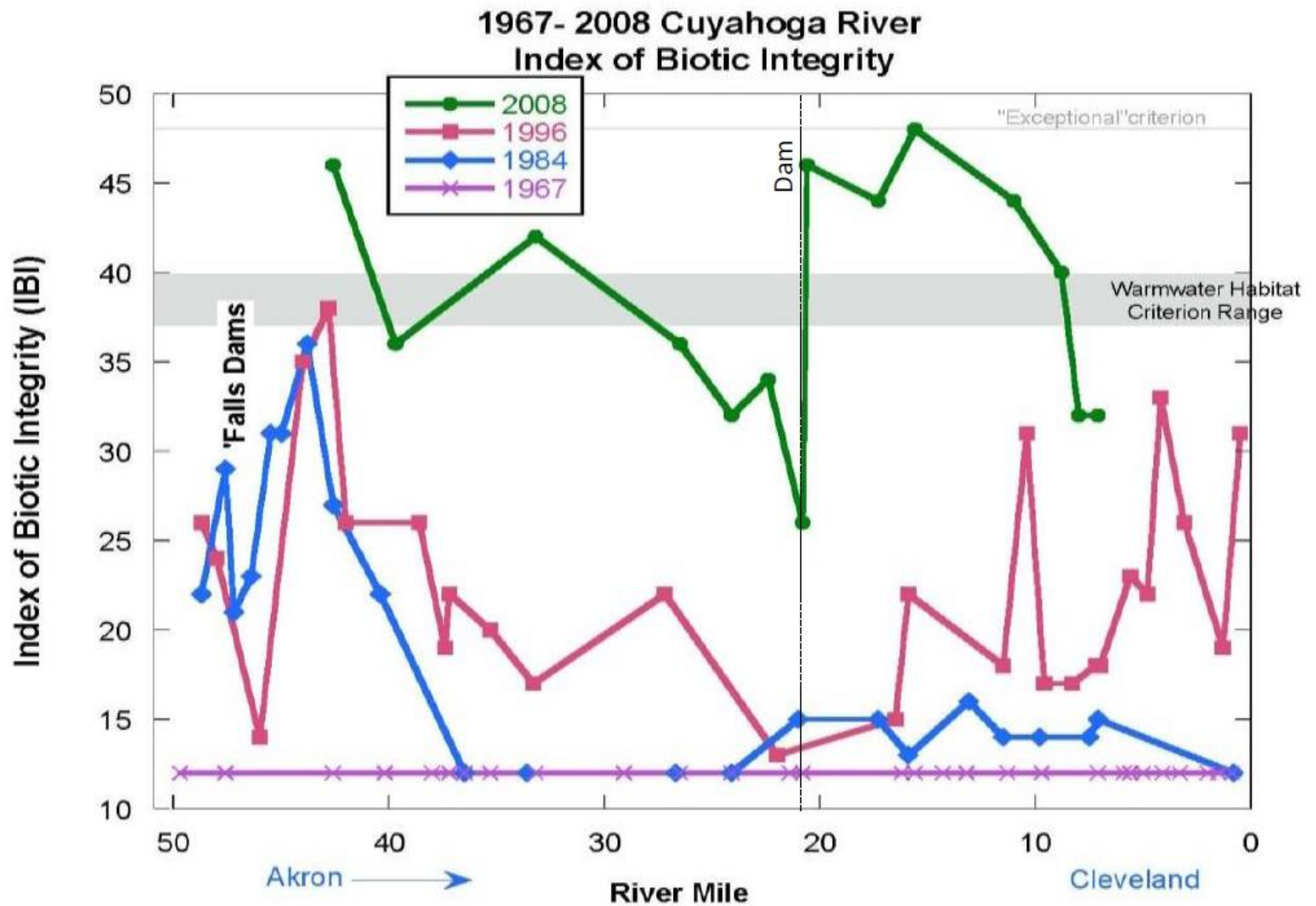


Figure 9. Index of Biotic Integrity 1967-2008



## QHEI Scores 2008 Ohio EPA Survey

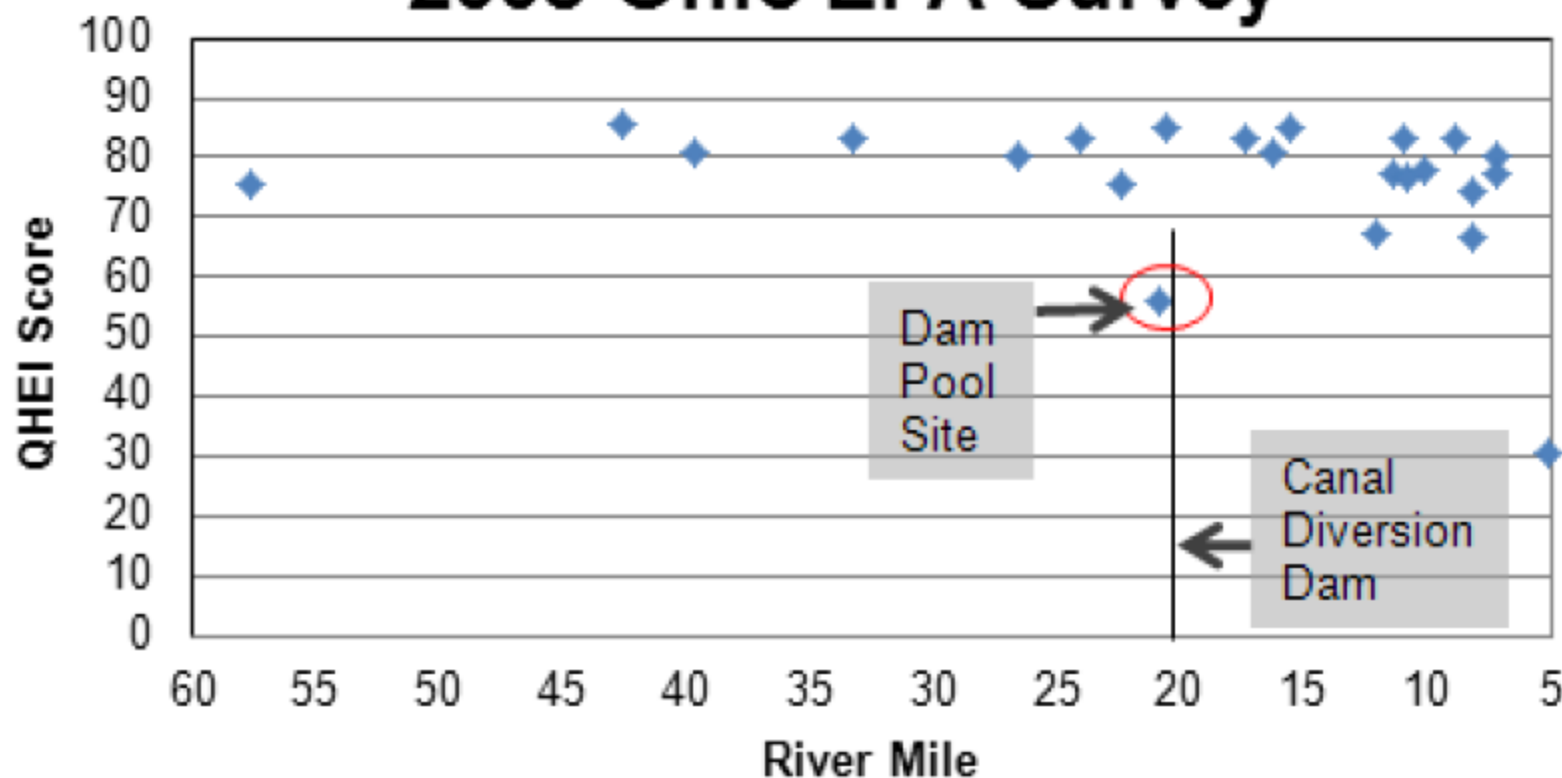
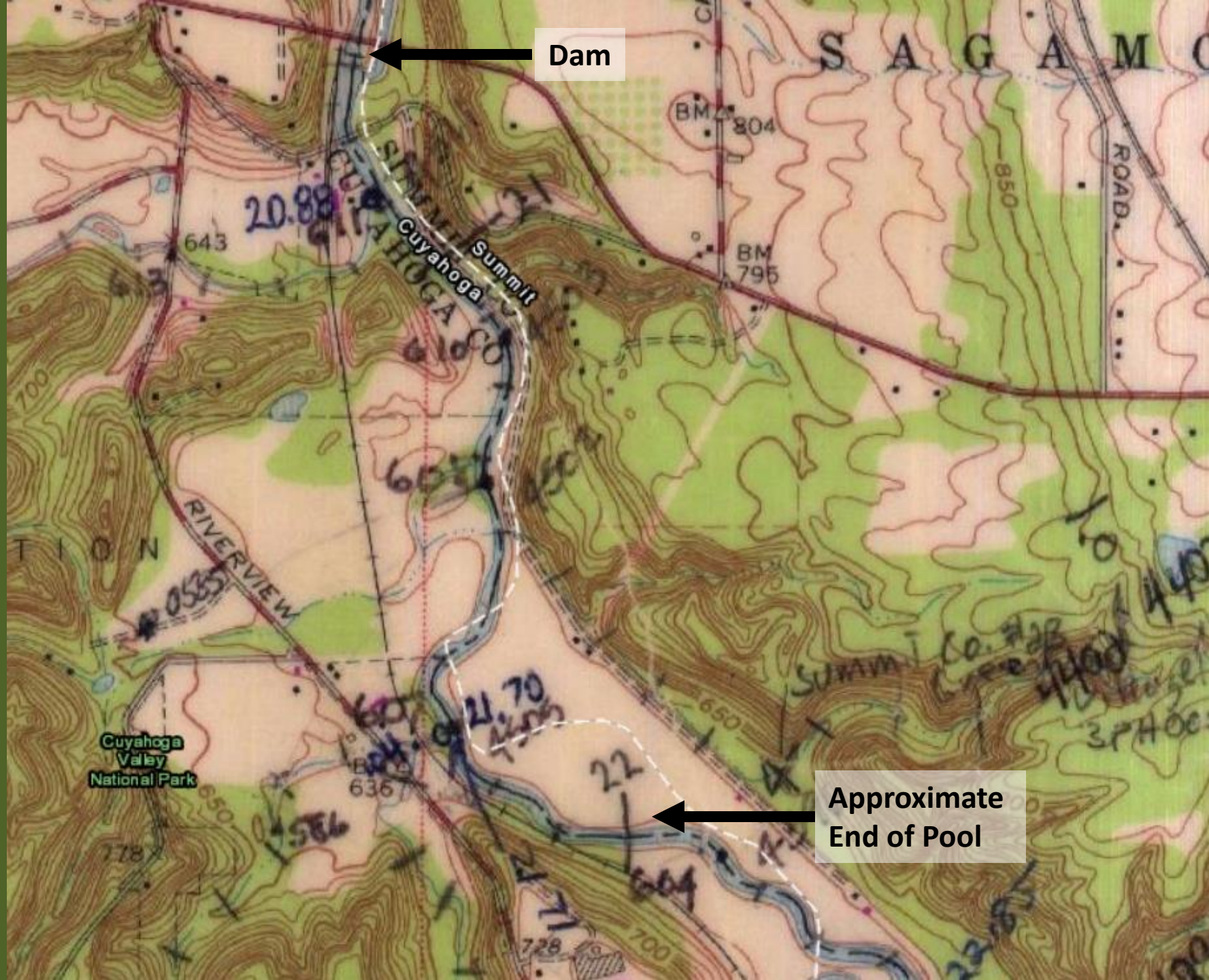


Figure 10. QHEI Scores

Dam



Approximate  
End of Pool



# Cultural Resource Management



Nation Historic Preservation Act (NRHP)  
The Section 106 Process  
Consultation and Effects



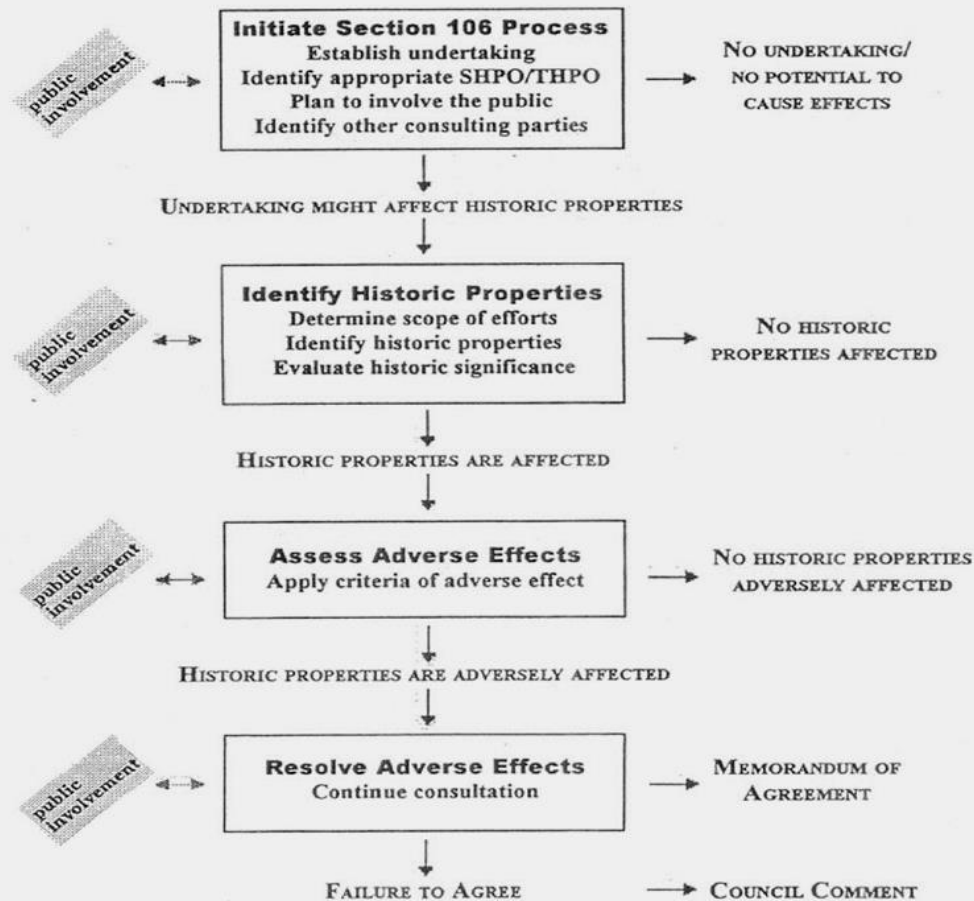
# Protection of Historic Properties



The NPS *exists* to protect and foster appreciation of the cultural resources in its custody and ensure that the treatment of cultural landscapes that will preserve significant physical attributes, biotic systems, and uses when those uses contribute to its historical significance.

Cuyahoga Valley National Park *exists* in part to preserve and protect its foundational cultural resources and the historic values of the Cuyahoga River valley.

**The Revised Section 106 Process:  
Flow Chart  
May 1999**

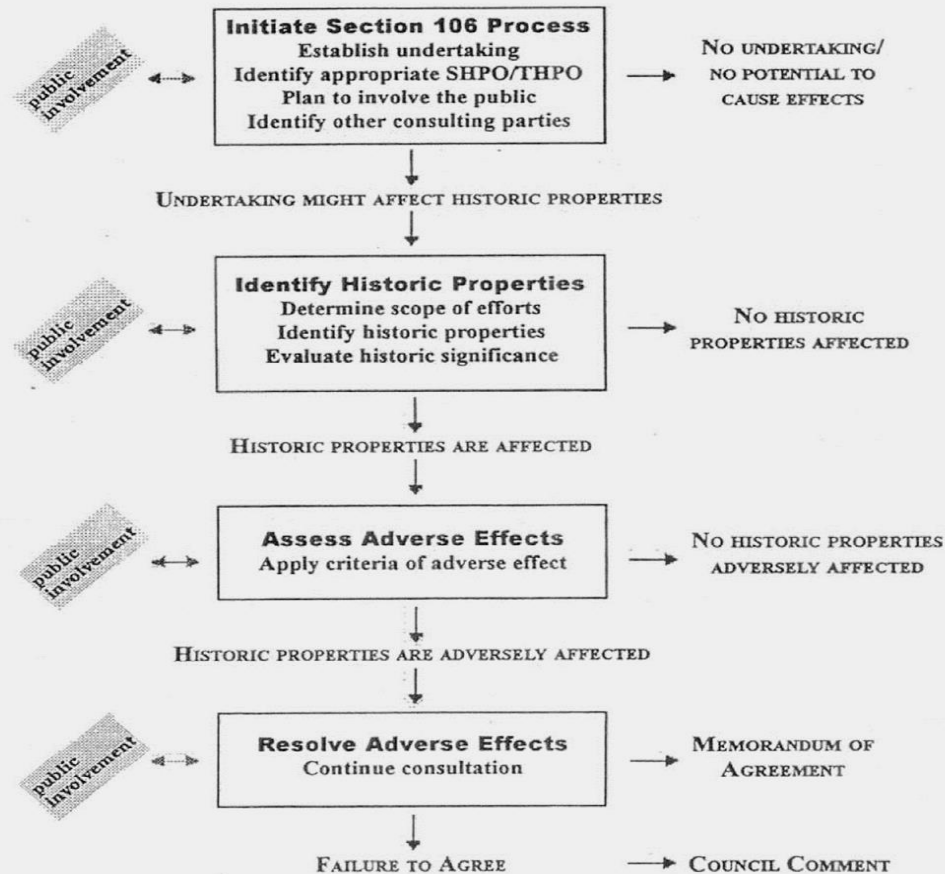








**The Revised Section 106 Process:  
Flow Chart  
May 1999**



# What is the National Register of Historic Places?



- Nation's official list of cultural resources worthy of preservation.
- Keeper of the National Register
- Established by the National Historic Preservation Act of 1966.
- Over 80,000 properties, 2,400 National Historic Landmarks.

## What is a National Historic Landmark (NHL)?



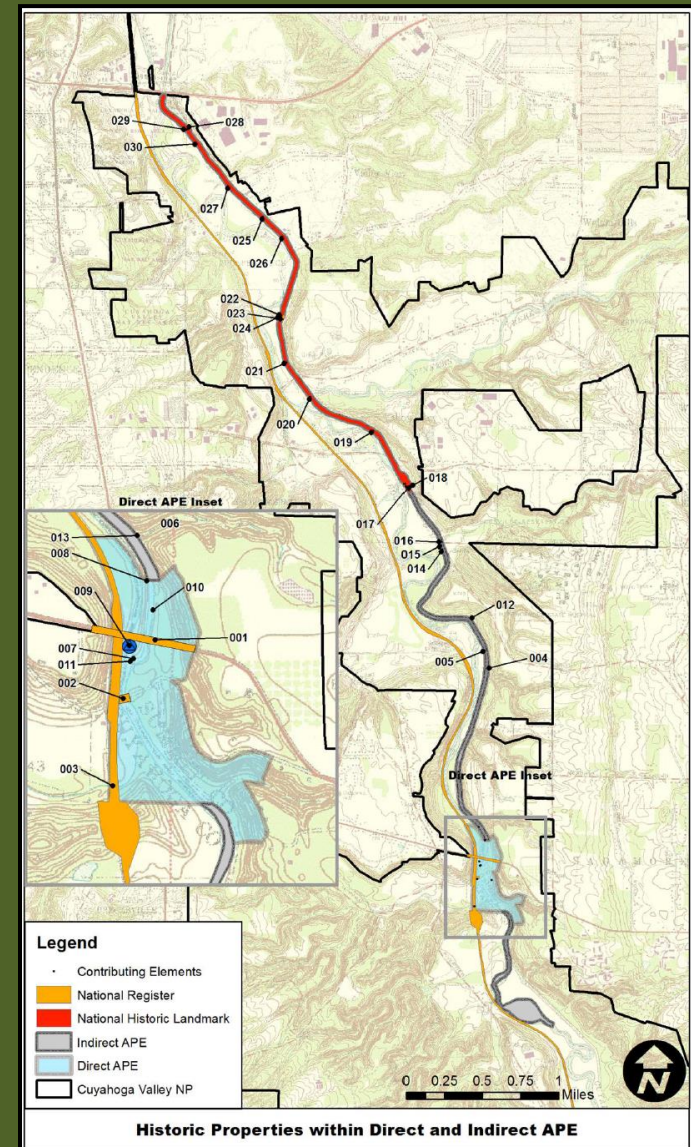
- NHLs are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. The project area contains a site designated as NHLs, the Ohio & Erie Canal. Designation of NHLs are under original authorization by the Historic Sites Act of 1935 and further authorization by the NHPA of 1966



# Historic Properties in the Area of Potential Effects (APE)

The NPS and Ohio EPA identified 30 previously recorded aboveground cultural resources within the APE, most of which have been recorded in multiple inventories .

In spite of there being 30 cultural resources, there are only four NRHP historic properties within the APE: The Brecksville-Northfield High Level Bridge, the Station Road Bridge, the Valley Railway Historic District, and the Ohio & Erie Canal.



## Ohio and Erie Canal NHL: Watered Section

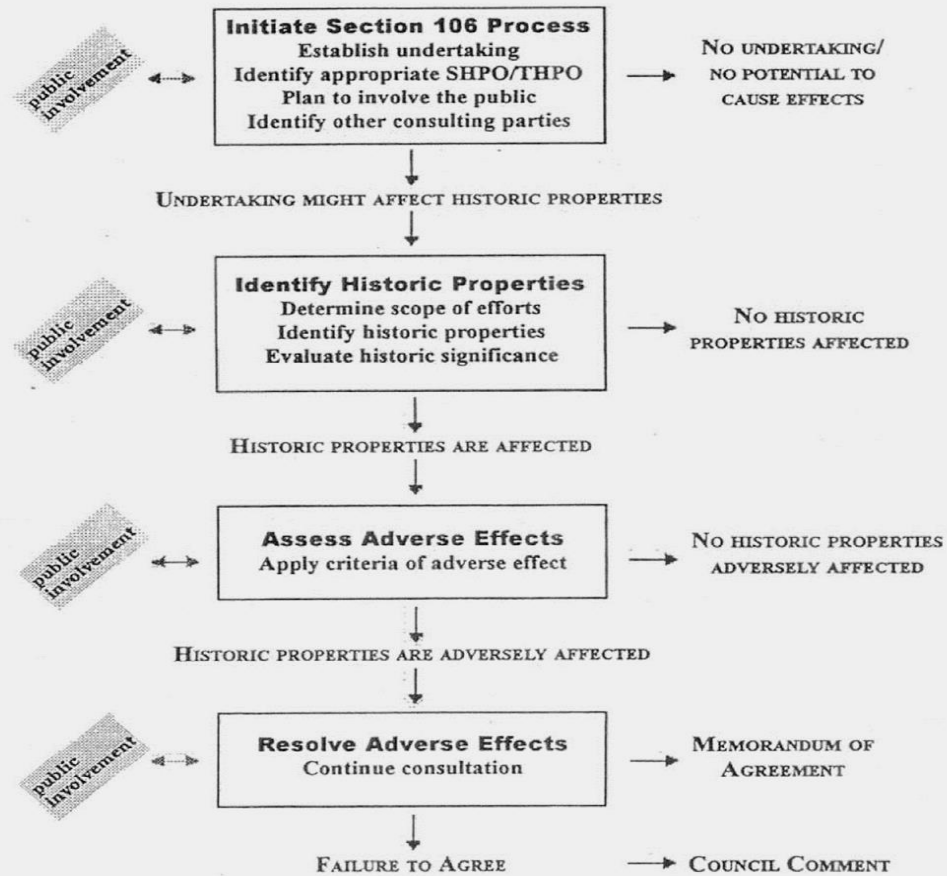








**The Revised Section 106 Process:  
Flow Chart  
May 1999**



# Define Effects

Historic Property	Definition of Effect and Evaluation	Alternative 1 Evaluation  No Action	Alternative 2 Evaluation  Modification	Alternative 3 Evaluation  Removal
Brecksville-Northfield High Level Bridge	The engineering significance of the Brecksville-Northfield High Level Bridge is conveyed through the bridge's location, design, materials, and workmanship, which is reflected in the historic property boundary that encompasses the bridge and its immediate setting. Alternatives 2 and 3 would change the setting to small degree through removal of the dams. Alternative 3 would also involve the construction of a new pump house, but this would in no way detract from the ability of material characteristics to convey the significance of the structure.	No Effect	No Effect	No Effect
Station Road Bridge	Like the High Level bridge, the significance of the Station Road Bridge is reflected in its material characteristics: the location, design, materials and workmanship of the bridge and its abutments, which is encompassed by a discrete historic property boundary. The setting, although altered through the establishment of the Park, construction of the modern dam, and changes in the transportation system represented by the High Level Bridge, helps convey its historical associations by illustrating the changes to transportation over time. The removal or alteration of the modern 1952 Brecksville Canal Diversion Dam will alter the setting by removing a modern intrusion, but will not detract from the significance of 1882 Pratt Whipple Truss Bridge.	No Effect	No Effect	No Effect
Valley Railway Historic District	The location, design, setting and association are the significant aspects of the Valley Railway Historic District, which includes the bed, ballast, ties and rails within a variable right-of-way that serves as the historic property boundary. Because the railroad is active, and requires constant maintenance and upkeep, of the materials and workmanship, as well as some of the design, are of very recent vintage. Because its significance is expressed through its location and its associations, the modification or removal of the modern Brecksville Canal Diversion Dam will not result in a change to any of the Valley Railway Historic District's contributing elements.	No Effect	No Effect	No Effect
Ohio and Erie Canal	The scale and nature of the NRHP-eligible O & E Canal Landscape as defined by the CLI greatly expanded the qualities that constitute its significance to include the entire spectrum of associated resources, including some beyond the 70 ft. wide corridor defined in early NRHP documentation. Although the CLI also noted the deteriorating condition of the canal landscape due as a threat to the resource, the no action alternative would not measurably change this condition for better or for worse, and would not affect the O & E Canal. Alternative 2, would involve the removal of the modern Brecksville Canal Diversion Dam and associated head gates, would expose the now submerged Pinery Crib Dam to the atmosphere, accelerating its decay, and would result in a change to the water level in the downstream section of the canal, affecting the landscape as a whole, as well as contributing elements to the NHL such as Alexander's Mill and Lock 38. Alternative 3 would result in the demolition of the Brecksville Canal Diversion Dam, alteration of its head gates, removal of the remnant of the Pinery Crib Dam, and construction of a pump house to maintain a constant level of water in the canal, which would add a new element to the landscape.	No Effect	Historic Property Affected	Historic Property Affected

**Definition of Effect:** An effect is defined as the alteration to the characteristics of a historic property qualifying it for inclusion in, or eligibility for, the NRHP.

Only the Ohio and Erie Canal Historic District and Landscape would be affected

# Assess Adverse Effects



**Criteria of Adverse Effects:** An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP *in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association* (36 CFR 800.16).

Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.



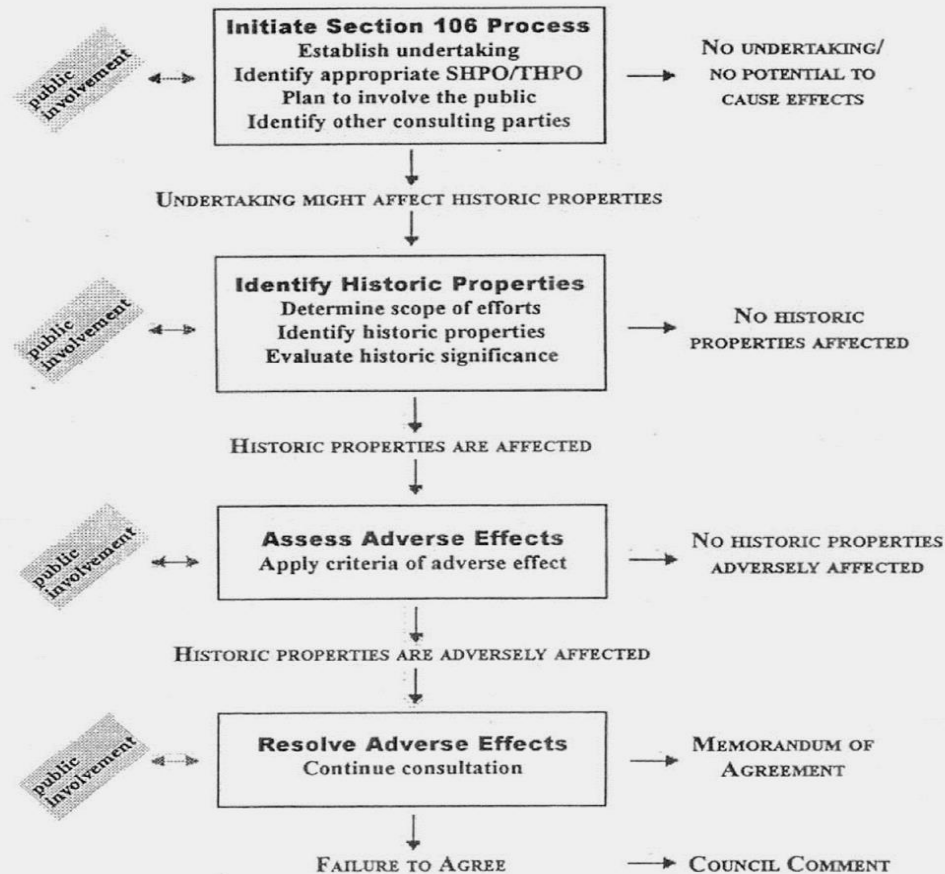
## Alternative 3: Adverse Effect



The development of Alternative 3 would have no effect to 23 contributing elements to the Ohio & Erie Canal, no adverse effect to one resource, and will result in adverse effects to the Canal Diversion Dam and the remnant of the Pinery Dam.

Therefore, Alternative 3 will have an adverse effect to contributing elements the Ohio & Erie Canal, but preserves the flow of water through the first designated historic portions of the canal and will have no adverse effect to the NHL.

**The Revised Section 106 Process:  
Flow Chart**  
May 1999



## Resolve Adverse Effects



Consult with the State Historic Preservation Officer, the Advisory Council for Historic Preservation, the MWRO, Consulting Parties and the Public to develop specific mitigation measures: **AVOID, MINIMIZE and MITIGATE**

Chronicle the commitments in a Memorandum of Agreement between the NPS, SHPO, and ACHP.



# Mitigation MOA

NPS and Ohio EPA will document the Canal Diversion Dam and the remnants of the Pinery Dam to Historic American Engineering Record (HAER) Level II standards.

NPS and Ohio EPA will update a draft Historic Structures Report (HSR) for the Ohio and Erie Canal within the Park.

NPS and Ohio EPA will create one or more interpretive signs and install them on site to provide the public with information about the history and significance of the dams.

**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
THE OHIO ENVIRONMENTAL PROTECTION AGENCY,  
THE NATIONAL PARK SERVICE, CUYAHOGA VALLEY NATIONAL PARK,  
AND THE  
OHIO STATE HISTORIC PRESERVATION OFFICER  
REGARDING  
CUYAHOGA RIVER ECOSYSTEM RESTORATION  
CANAL DIVERSION DAM PROJECT  
SUMMIT AND CUYAHOGA COUNTIES, OHIO**

**WHEREAS**, the National Park Service, Cuyahoga Valley National Park (NPS) and the Ohio Environmental Protection Agency (Ohio EPA), in partnership with the US Army Corps of Engineers (USACE) and the Ohio Department of Natural Resources (ODNR), have considered a range of alternatives for the modification and/or removal of the Brecksville Canal Diversion Dam in the Cuyahoga River; and

**WHEREAS**, the NPS, Ohio EPA, USACE and ODNR recognized the need to work together to establish procedures for timely disposition of issues or problems connected with the planning for the modification and/or removal of the Canal Diversion Dam; and

**WHEREAS**, the agencies determined that the NPS is the lead federal agency with the Ohio EPA, USACE and ODNR as cooperating agencies with the responsibility to comply with National Environmental Policy Act (NEPA) and other legal requirements for the proposed modification/removal of the Canal Diversion Dam; and

**WHEREAS**, the agencies determined that the Ohio EPA is responsible for the preparation of the environmental document with the technical support of the NPS; and

**WHEREAS**, the NPS and Ohio EPA have chronicled the results of its analysis in the *Cuyahoga River Ecosystem Restoration Canal Diversion Dam Project Environmental Assessment* (Environmental Assessment); and

**WHEREAS**, the purpose of the environmental assessment is to identify an ecological restoration strategy to improve water quality conditions that are currently impaired by the existing Canal Diversion Dam; and

**WHEREAS**, the removal or modification of the existing dam is needed to improve water quality and strengthen aquatic communities, and therefore allow the river to meet full attainment of the State of Ohio's Water Quality Standards; and

**WHEREAS**, through interagency consultation and public involvement, the NPS and Ohio EPA have considered a wide range of alternatives to meet the project purpose and need and have three alternatives (Alternative 1, No Action; Alternative 2, Dam Modification; Alternative 3, Dam Removal) to detailed analysis; and

**WHEREAS**, the Canal Diversion Dam and its predecessor, the Pinery Dam, supplied water to the Ohio and Erie Canal, a downstream portion of which is a National Historic Landmark (NHL); therefore all action alternatives will maintain the canal in a watered condition; and

**WHEREAS**, the NPS and Ohio EPA have concluded that Alternative 3, Dam Removal, is the environmentally preferred alternative that best meets the project purpose and need; and

# Restoring the River

## Removing Barriers

Restoring the Cuyahoga as a healthy, free-flowing river remains a top priority. The National Park Service and several partners are working to make sure that happens. A major goal is removing disused dams that block fish migrations and degrade natural wildlife habitats. Increasing the numbers of young insects and other small animals supports more fish, otters, and eagles. Removing barriers also benefits kayakers, canoeists, and sports-fishing citizens.

Another challenge facing park managers involves diverting some waters into the Ohio & Erie Canal. Parts of the watered section are a National Historic Landmark.

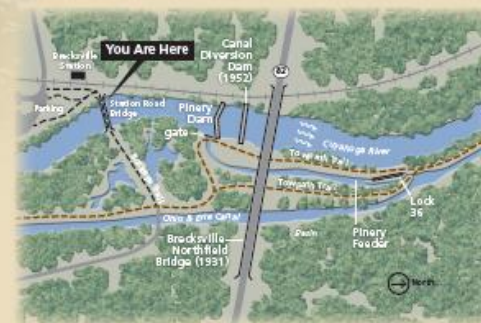


Scientists expect the Brecksville Dam removal to improve native fish populations. Rainbow darters (top) and smallmouth bass (bottom) are among the species that will benefit.

The concrete structure in front of you replaced the wooden dam's original stone abutments.



The 1827 wooden Plenary Feeder Dam (above) and the 1952 concrete Brecksville Dam (background photo) were built to divert water to the Ohio & Erie Canal.



A canal gate regulates the Plenary Feeder's flow—or blocks it so this canal section can be drained for maintenance. If the dam is demolished, water will be pumped into the feeder.



# Cuyahoga River Ecosystem Restoration Canal Diversion Dam Project Environmental Assessment

## Open for Public Review and Comment



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A comment period closes in  
**27 Days, 9 Hours, 9 Min.**

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## Plan Process

[Cuyahoga Valley National Park » Cuyahoga River Ecosystem Restoration Canal Diversion Dam Project](#)

The National Park Service (NPS) in cooperation with the Ohio Environmental Protection Agency (Ohio EPA), the US Army Corps of Engineers (USACE), and the Ohio Department of Natural Resources (ODNR) is considering actions at Cuyahoga Valley National Park (CUVA) to identify the range of alternatives for the modification and/or removal of the Canal Diversion Dam from the Cuyahoga River. The Ohio EPA has concluded that the Canal Diversion Dam negatively affects the water quality of the Cuyahoga River and interrupts aquatic communities.

The following environmental assessment (EA) describes the effects of the project on the human environment and provides an opportunity for the public to comment on the project in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality regulations (Title 40 Code of Federal Regulations [CFR] Part 1500 et sequentia), and other applicable laws, regulations, and policies. This EA also assesses the effects of the project on historic properties in accordance with Section 106 of the National Historic Preservation Act (NHPA).

The preferred method for receiving comments on this EA is online through the NPS's "Planning, Environment and Public Comment" website at <http://parkplanning.nps.gov/brecksvilledam>. However, for those without internet access, written comments, including name and address, may be submitted via regular mail by September 29th, 2016 and addressed to:

Craig Kenkel, Superintendent  
Cuyahoga Valley National Park  
15610 Vaughn Road  
Brecksville, OH 44141



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## Expected Timeline:

September 29, 2016	Public Comment Period ends.
December, 2016	Comments Addressed; Document finalized.
Feb/March 2017	EA Approved and accepted by other agencies.
June 2017	Finding of No Significant Impact
Early 2018:	Implementation of Project