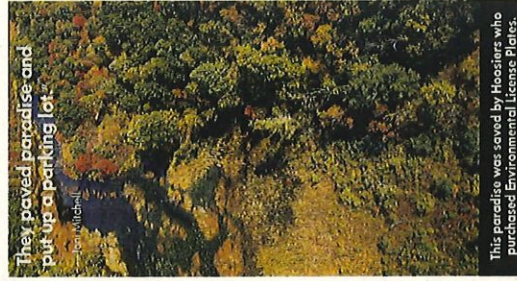


About the Grant

The purpose of the Indiana Lake Michigan Coastal Program is to protect and restore coastal, natural, cultural and historical resources and to enhance the state's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships between federal, state and local agencies and organizations.

The U.S. Congress has made available to states and territories with approved coastal zone management programs, annual funds for competitive grants for community-based coastal activities consistent with the goals and objectives of the Coastal Zone Management (CZM) Act of 1972. Funding and oversight are provided by the National Oceanic and Atmospheric Administration (NOAA), Office of Coastal Resource Management (OORM).

The LaPorte County Parks Foundation and Parks Department competitively applied for and were awarded a Great Lake Coastal Restoration Grant. The entire current study required no local cash contribution and was paid for by utilizing a land-value match from the Red Mill County Parks property.

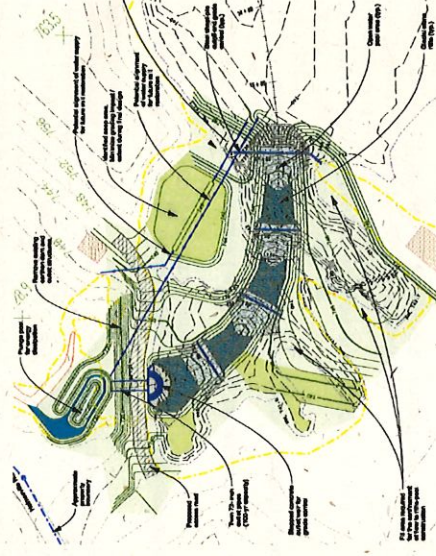


History of the Dam

- The first construction on the dam took place in 1830's.
- The original purpose of the dam was to power a mill.
- The mill was operated until the 1940's.
- Historical records of known dam failures at Red Mill indicate dam breaches in the 1960's and mid-1980's.
- Prior to becoming a County Park, the property was owned by the Girl Scouts of America as Camp Red Mill.
- Red Mill County Park opened to the public on June 29, 2002.
- Acquisition of the site included significant funding from public and private sources.
- The current dam is approximately 265 feet long, 21 feet high, and supports the 21 acre Red Mill Pond and many wetlands.



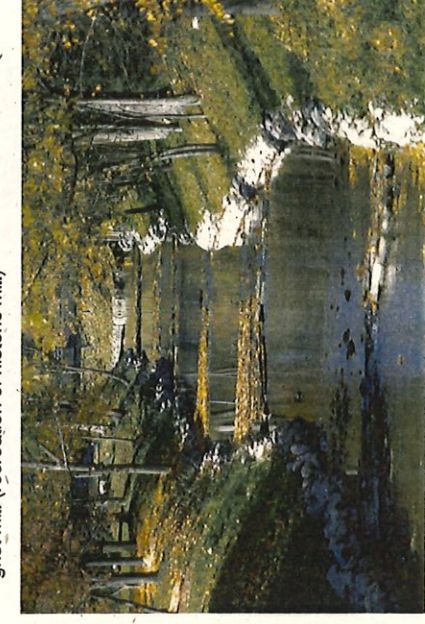
Recommended Alternative



Riffle-Pool System

Following a detailed engineering investigation, a riffle-pool system was selected as the recommended alternative to satisfy the key project considerations. The figure above shows the conceptual layout of the proposed system. The picture below shows a variation of a riffle-pool system following construction. The proposed configuration may include:

- Reduction of the current dam height by approx. 6 feet
- Installation of two culverts through the embankment for access
- Construction of a stepped concrete structure at the downstream end of the last riffle to provide a stable location for the final significant elevation drop of water to direct flow into the culvert structures
- Driving sheetpile cutoff walls to help maintain riffle-pool elevations
- Construction of a series of four riffle-pool systems downstream of the sheetpile cutoff walls
- Installation of a drawdown pipe for riffle access and maintenance and a bypass pipe that may potentially provide water for a future grist mill (recreation of historic mill)



Current Dam Concerns

If the dam was evaluated under the National Dam Inspection Program, the following problems would be noted:

1. The principal and auxiliary spillway systems are undersized and do not have the capacity to safely convey flow from a 0.5 PMP storm event. The auxiliary spillway engages during storm events less than the 100-year storm, due to inadequate capacity of the principal spillway.
2. Concrete on the auxiliary spillway is experiencing some deterioration and cracking. Voids appear to exist beneath the spillway, as evidenced by woody debris that is lodged and protruding from one of the spillway tubes (see picture above).
3. Non-engineered repairs have been performed in the past to repair large voids that are present in the embankment and beneath the auxiliary spillway. The voids were likely the result of previous un-engineered repairs and subsurface soil piping. This mechanism is possibly still active.
4. Geotechnical investigations performed on the dam indicated loose (poorly consolidated) embankment materials which, as placed, are not suitable for dam construction.
5. An uncontrolled breach of the large beaver dam located approximately 200 feet upstream of the current dam may result in a breach or damage to the Red Mill dam.

Key Project Considerations

- Maintaining and preserving the existing wetlands upstream of the current dam was an important goal. The high quality flora and fauna of the site, has been highly recognized. The State of Indiana has dedicated the Little Calumet Headwaters Nature Preserve on County Parkland and used the above picture to promote the Indiana Heritage Trust Environmental License Plate Program.
- Approximately maintaining existing water levels (± 6 inches) and minimizing the amount of disturbed sediment were important considerations to regulatory agencies, park and county officials, park patrons, and adjacent property owners.
- Due to the condition of the dam and the associated liability, inspection, and maintenance requirements, a solution in which the dam is removed or decommissioned was favorable to the LaPorte County Parks Department.

The Next Steps

The LaPorte County Parks and Recreation Board and LaPorte County Parks Department are currently seeking a funding partnership with the U.S. Army Corps of Engineers for design and implementation of the recommended alternative. Fundraising efforts may also be initiated by the LaPorte County Parks Foundation.

The following actions would be anticipated for the design and construction of the selected improvements.

1. Continued Federal, State and Local funding coordination
2. Continued public information meetings
3. Soils investigation and geotechnical analysis within the project limits
4. Detailed design plan development
5. Hydrologic and hydraulic evaluation of proposed project
6. Environmental permit submittals
7. Environmental permit review coordination
8. Preparation of construction drawings, specifications, and bid documents
9. Acquire Contractor bids
10. Project construction



Participation Opportunities

Q: What can the public do to help at Red Mill?

A: The LaPorte County Parks Department is seeking US Army Corps of Engineers involvement in hopes of partnering to make this project a reality. It may be necessary to fund approximately 35% of the project on a local level. Residents can volunteer time to relocate and plant wetlands plants or donate large rounded stones for the rifle-pools. Matching cash donations will also be accepted. Please contact Tim Morgan at the LaPorte County Parks Department for more details.

Regulatory Stakeholders



Work Completed Under This Study

As a part of this study, the following tasks were completed and used to formulate the recommendations contained in the final report and this brochure.

- Reviewed available Park files about dam.
- Reviewed previous studies regarding potential problems/solutions with dam.
- Performed a field determination of wetlands limits adjacent to Red Mill Pond.
- Completed an underwater survey and estimated sediment levels in Red Mill Pond.
- Coordination with LaPorte County Parks and elected County Officials.
- Reviewed potential environmental and regulatory requirements for the project.
- Identified conceptual plan components for further input from the various stakeholders.
- Completed geotechnical investigation.
- Performed environmental sediment sampling within impoundment.
- Held stakeholder update meetings.
- Generated conceptual alternatives and costs.
- Met with regulatory agencies.
- Formulated a recommended concept.

"The overall goal of the project was to develop a locally and federally acceptable and fundable solution that would preserve and enhance the ecological benefits of the site while reducing the hazard presented by the 160 year old dam."

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*Additional copies of this brochure can be obtained at the Red Mill County Park Office. A full version of the final report and a sign showing the recommended alternative can also be viewed at the Park Offices.



Great Lakes Coastal

Restoration Grants Program

Grant No: NA17OZ1381

Little Calumet River Headwaters

Restoration Feasibility Study

2004 - 2005



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