
Name of Organization: Village of Lyndonville

Type of Organization: Municipality

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Project Title: Johnson Pond Restoration Plan

Project Category: Contaminated Sediments

Rank by Organization (if applicable): 0

Total Funding Requested (\$): 48,580 **Project Duration:** 2 Years

Abstract:

A small dam along Johnson Creek in the Village of Lyndonville New York creates Johnson Pond. The Village is in the process of developing a restoration plan to restore the pond and surrounding area. In April 1999, the Village contracted with URS Greiner Woodward Clyde to study the sediment in the pond and present options for dredging and disposal of the material. Sediments were collected and analyzed for possible contamination. Analysis of the sediment samples showed the presence of one VOC (toluene), three pesticides (4,4'-DDE, 4,4'-DDD, and 4,4'-DDT), SVOCs (anthracene, benzo(a)anthracene, chrysene, and total PAHs), three metals (mercury, lead, and copper), and ammonia above the method detection limits. As result of this study the Village has decided to develop a restoration plan which will address the following:

- Dredging and disposal of dredged material in order to restore the pond to a depth sufficient to support the fish habitat and recreational uses
- Creation of a wetland at the inlet to the pond to filter and trap sediments and contaminants entering Johnson Creek from upstream sources
- Construction of a fish ladder to extend the existing fishery to Johnson Creek upstream of the dam
- Plans for a 4.5-acre parcel purchased by the Village to protect the southern portion of the pond from development, and provide for recreational uses such as a fishing pier, nature trails, and an observation deck.

We are requesting funding support from the GLNPO to assist with the development of the sediment treatment portion of the restoration plan. This would include data collection, sediment assessments, and evaluation of cost-effective alternatives for removal and/or treatment of contaminated sediments. The project would result in the selection of the sediment treatment methods, development of a plan of operations, development of contract specifications, and actions needed to meet regulatory permitting requirements.

Geographic Areas Affected by the Project

States:

- | | |
|------------------------------------|--|
| <input type="checkbox"/> Illinois | <input checked="" type="checkbox"/> New York |
| <input type="checkbox"/> Indiana | <input type="checkbox"/> Pennsylvania |
| <input type="checkbox"/> Michigan | <input type="checkbox"/> Wisconsin |
| <input type="checkbox"/> Minnesota | <input type="checkbox"/> Ohio |

Lakes:

- | | |
|-----------------------------------|---|
| <input type="checkbox"/> Superior | <input type="checkbox"/> Erie |
| <input type="checkbox"/> Huron | <input checked="" type="checkbox"/> Ontario |
| <input type="checkbox"/> Michigan | <input type="checkbox"/> All Lakes |

Geographic Initiatives:

- | | | | | |
|--|----------------------------------|-------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> Greater Chicago | <input type="checkbox"/> NE Ohio | <input type="checkbox"/> NW Indiana | <input type="checkbox"/> SE Michigan | <input type="checkbox"/> Lake St. Clair |
|--|----------------------------------|-------------------------------------|--------------------------------------|---|

Primary Affected Area of Concern: Not Applicable

Other Affected Areas of Concern: Lake Ontario (Minor Tributaries) Drainage Basin - 3, Oak Orchard-Twelvemile Hydrologic Unit Code 04130001, Johnson Creek Watershed

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area:

Other Affected Biodiversity Investment Areas:

Problem Statement:

Johnson Creek is located in the Lake Ontario (Minor Tributaries) Drainage Basin. A portion of Johnson Creek has been dammed to form a pond (Johnson Pond). The pond is located west of Main Street (State Route 63) in the center of the Village of Lyndonville, Orleans County, New York. Johnson Pond is formed behind a ten-foot high concrete dam. The pond is slowly being filled by sediments which are impacting recreation and other uses. The Village of Lyndonville is investigating the feasibility of removing the accumulated sediments as well as doing other improvements in and around the pond area. To determine the presence and concentration of contaminants in Johnson Pond, the village retained URS Greiner Woodward Clyde (URSGWC) to prepare a Freshwater Navigational Dredging Sediment Sampling Plan. The plan was reviewed by the NYSDEC on April 28, 1999. Sediment samples were collected from a total of 16 sample locations. Personnel from URSGWC and the Village collected sediment samples from a 0-to 2-foot interval, the 2-to 4-foot interval, and the 4-to 5-foot interval at each sample location. The sediment samples were analyzed for select volatile organic compounds (VOCs), select semi-volatile organic compounds (SVOCs), select pesticides, polychlorinated biphenyls (PCBs), select metals, leachable ammonia, and total organic carbon (TOC).

The analytical results were evaluated against the sediment screening parameters, presented in the NYSDEC Interim Guidance for Freshwater Navigational Dredging, for Class A sediments (no appreciable contamination), Class B sediments (moderate contamination) and Class C sediments (high contamination). Based on the analytical results, the sediment in the 0-to 2-foot interval in the eastern portion of Johnson Pond is classified as Class C sediments; these sediments require disposal at a secure disposal facility. The sediment from the 2-to 4-foot interval in the eastern portion of Johnson Pond are classified as Class B sediments; these sediments can be disposed of with restrictions as Category 2 dredged material. Organic compounds and inorganic analytes detected at levels that exceeded the Class A sediment parameters consisted of one volatile organic compound (Toluene), three pesticides (4,4'-DDE, 4,4'-DDD, and 4,4'-DDT), semi-volatile organic compounds (anthracene, benzo(a)anthracene, chrysene, and total PAHs), three metals (mercury, lead, and copper), and ammonia. Total organic carbon was present in the sediment samples from 0.627 percent to 1.294 percent. All remaining detected organic compounds and inorganic analytes were at levels below the Class A sediment parameters. The estimated volume of sediments to be removed is approximately 26,000 cubic yards. The next step will be to develop a cost-effective way to treat the sediment and meet the restoration goals.

Proposed Work Outcome:

The funding would be used to help develop a suitable course of action for treatment of the sediments in the pond. This

would include data collection, sediment assessments, and evaluation of cost-effective alternatives for removal and/or treatment of contaminated sediments. The project would result in the selection of the sediment treatment methods, development of a plan of operations, development of contract specifications, and actions needed to meet regulatory permitting requirements.

The project will improve the water quality and fish habitat of Johnson Creek, which has been designated a "Significant Coastal Fish and Wildlife Habitat," as Part of the New York Coastal Management Program. The project will advance the following policies contained in the Kendall-Yates-Carlton draft Local Waterfront Revitalization Program.

Policy 7B: The Johnson Creek Significant Coastal Fish and Wildlife Habitat will be protected, preserved and where practical, restored so as to maintain its viability as a habitat. (p. III-11) The project will result in plans to protect and preserve, as well as restore, the Johnson Creek Significant Coastal Fish and Wildlife Habitat. The purpose of the sediment treatment plan is to identify contaminants that may be contained in the sediment to be removed from the pond, in order to determine appropriate means of disposing of the material.

Policy 8: Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources. The proposed plan will evaluate cost-effective alternatives for removing contaminated sediments from the pond. The contaminants, including VOC's, SVOC's, pesticides, and metals, tend to bio-accumulate in fish.

Policy 9: Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing stocks, and developing new resources. Such efforts shall be made in a manner, which ensures the protection of renewable fish and wildlife resources and considers other activities dependent on them.

Policy 9A: Promote the expansion of the fisheries of Lake Ontario and its tributaries

These actions also respond to the Lakewide Management Plan for Lake Ontario May 1998 (LaMP) which states:

*The LaMP will also seek to address the inputs of critical pollutants from water discharges within the Lake Ontario basin, including point sources discharged directly to the lake and point and non-point discharges into tributaries to the lake.

*The lakewide critical pollutants that have been identified as impairing or likely to impair these beneficial uses include PCBs, DDT and its metabolites, dioxins/furans, mirex, mercury, and dieldrin.

*The local use impairments identified ... are best addressed on a local level through the development and implementation of Remedial Action Plans and other local management efforts... restore the lakewide beneficial uses of the lake by reducing the input of critical pollutants and persistent, bioaccumulative toxic to the lake by addressing the biological and physical factors identified...

Project Milestones:	Dates:
Hire Consultant	10/2000
Review Existing Data	11/2000
Explore Treatment Alternatives	12/2000
Do Additional sampling	04/2001
Evaluate Data	05/2001
Develop Treatment Alternatives	06/2001
Draft Plan of Operations	07/2001
Final Plan of Operations	01/2002

Project Addresses Environmental Justice

If So, Description of How:

Project Addresses Education/Outreach

If So, Description of How:

A coordinated outreach and education effort through the Ontario Lake Plains RC&D, Orleans County SWCD, Orleans County Water Quality Coordinating Committee, Fish & Wildlife Service and the Village of Lyndonville would be an integral part of the project. These Organizations have existing outreach methods such as newsletters, mailings, meetings, and press releases, which would be used to reach those who may benefit from this project. Also the Fish & Wildlife Service has been working with the Lyndonville High School Science Department to teach the students about the problems within the Johnson Creek watershed and allow them to be involved with restoring the health of the watershed. This project would fit well with this program, as the School grounds are adjacent to the Johnson Pond site.

Project Budget:

	Federal Share Requested (\$)	Applicant's Share (\$)
Personnel:	2,880	2,000
Fringe:	890	620
Travel:	1,000	0
Equipment:	0	0
Supplies:	0	0
Contracts:	41,500	1,000
Construction:	0	0
Other:	0	0
Total Direct Costs:	46,270	3,620
Indirect Costs:	2,310	0
Total:	48,580	3,620
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

The Village recently received a grant from the New York Department of State Division of Coastal Resources to help develop a plan for the area. \$17,150.00
 Local Match village of Lyndonville for NY Coastal Resources Gant above..... \$17,158.00
 Lyndonville Foundation donation to Village for purchase of the 4.5 acre parcel located on the south shore of the pond.\$26,000.00

Orlean County Soil and Water District \$ 2,000.00*
 Ontario Lake Plains RC&D..... \$ 2,000.00*

These are "in-kind" services to be provided by the major participants in the project.

Indirect cost shown above are based on an Indirect Cost Rate 5%.

Description of Collaboration/Community Based Support:

The project is supported by a broad sector of the community including the Ontario Lake Plains RC&D Council, Orleans County Soil and Water Conservation District, and the Orleans County Water Quality Coordinating Committee. In order to ensure continued active involvement by the citizenry and interested organizations, the Village of Lyndonville will appoint an advisory committee to oversee the preparation of the restoration plan and to make recommendations for the implementation of priority projects. The Committee will consist of representatives of the Village Board, local schools, the Lyndonville Foundation, and other organizations, as well as community residents. The Committee is expected to consist of (10) members, who will attend approximately eight (8) regular meetings.