



Project Profiles for Jefferson & St. Lawrence Region

Other Planning Committee Projects – Public



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ICONS/ACRONYMS FOR JEFFERSON & ST. LAWRENCE REGION



-  Project location
-  Project owner
-  Approximate cost

Acronym	
ft	Feet
MBR	Membrane Bioreactor
NEC	National Electric Code
NTS	Not to Scale
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSEFC	New York State Environmental Facilities Corporation
PER	Preliminary Engineering Report
POTW	Publicly Owned Treatment Works
REDI	Resiliency and Economic Development Initiative
SSDS	Subsurface Sewer Disposal System
STEP	Septic Tank Effluent Pumping

PILLAR POINT, COUNTY RD. 59

This project seeks to address roadside shoreline erosion along County Rd. 59. This asset is especially vulnerable, as it is located on the eastern end of Lake Ontario, where the largest fetch occurs. The roadside shoreline will need to be rehabilitated to protect the roadway from further damage and erosion. Some sections of the roadway have experienced significant undermining with 20 ft of erosion.



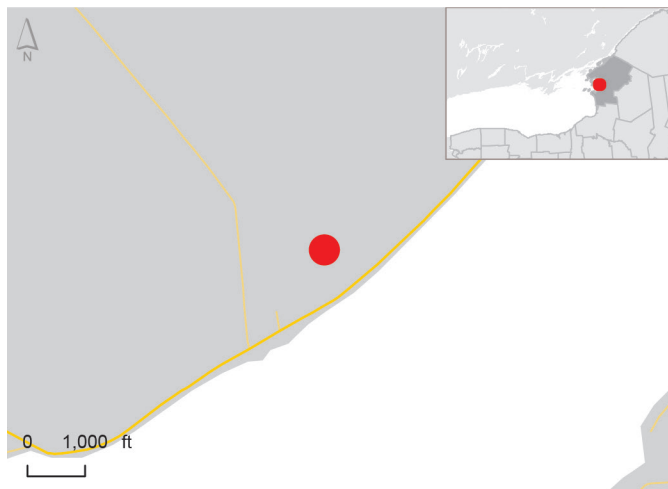
Town of Brownville,
Jefferson County



Jefferson County



12,510,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Restoring and repairing 10,000 ft of impacted roadway
- Replacing culverts and stabilizing the road and shoreline

Public Support and Asset Owner

Public support is moderate. Population served by this improvement project is indeterminate, but the road provides access to Pillar Point and is a significant transportation asset. The asset owner is public.

Permitting and Feasibility

The project is feasible. Multi-jurisdictional permit review is needed.

Benefits

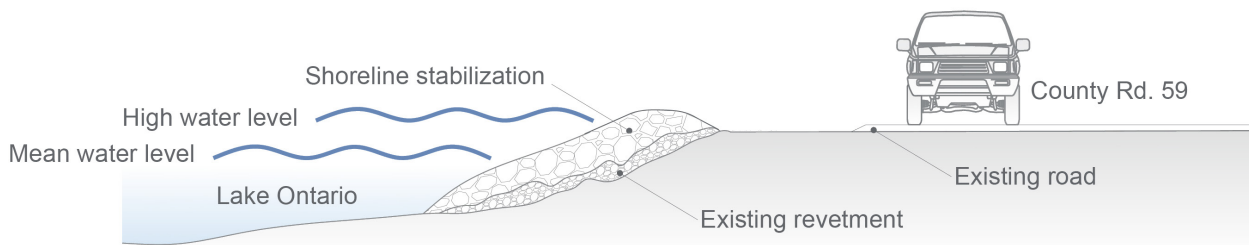
A fully functional road will provide benefits to the community for emergency access, and access to local residences and businesses. The road will become impassable and/or hazardous if the roadside is eroded.

Flexibility

Flexibility is limited by its proximity to the water on one side and adjacent resources (e.g., homes) on the other. The proposed project limits need to be defined such that the project can be implemented in a manner that minimizes impacts to traffic patterns. Existing culvert sizes will need to be identified to develop the scope for the project.

Durability

The proposed project will increase the resiliency and durability of the asset.



Shoreline stabilization (Principle sketch, NTS)

Economic Development Potential

The project will protect the county road, allowing for more community access and increasing business for the local economy.

Environmental Considerations

Materials used for construction will include sustainable materials. Shoreline erosion mitigation will protect the road from erosion. Impacts to aquatic and wetland resources and associated protected species will be minimized to the extent practicable.

Alternatives Considered

Alternatives include raising the road in addition to shoreline stabilization, including adding a vegetated shoreline buffer on the lakeside of the road. A potential emergency mitigation project is to restore, rehabilitate, and improve 10,000 ft of roadside shoreline. Alternative natural and nature-based solutions were identified and are under consideration.

WASTEWATER SYSTEM

This project seeks to address the failing and inadequate subsurface sanitary systems along Henderson Harbor and Stony Creek that serve a population of more than 1,500. The asset is located directly on Henderson Harbor, which makes the asset highly susceptible to flooding. Flooding has compromised the private waterfront septic systems, and illegal outputs to the lake have impacted water quality in the area. Town residents and commercial/business entities currently utilize individual Subsurface Sewer Disposal Systems (SSDS) to dispose of sanitary sewer wastes due to the absence of a town-wide sanitary sewer to transport wastewater to a central treatment plant. The New York State Department of Environmental Conservation (NYSDEC) has documented the water quality effects of the systems and has stated that the agency will initiate legal action against individual residential and commercial violators if sufficient progress has not been made to mitigate contamination.

The town has evaluated options for sewer and publicly owned treatment works (POTW) in the past, and most recently, in 2017, developed a preliminary engineering report (PER) recommending a septic tank effluent pumping (STEP) collection system and membrane bioreactor (MBR) treatment system to serve Henderson Hamlet and Henderson Harbor. The PER has not been approved by NYSDEC and New York State Environmental Facilities Corporation (NYSEFC).

Mitigation measures

Proposed mitigation measures in the project will consist of:

- Implementing the STEP process followed by an MBR

This project was recommended as the most cost-effective solution to serve both the hamlet and the harbor. The STEP system will use low-pressure sewers for sanitary sewer collection, with primary treatment in the homeowner's septic tank, allowing effluent from tanks without solids to be delivered to



Town of Henderson,
Jefferson County



Town of Henderson



10,600,000



the POTW. The MBR was selected as the treatment system following the STEP collection system due to its cost-effectiveness and small footprint.

Public Support and Asset Owner

Public support has been low due to significant opposition from residents due to cost. Resiliency and Economic Development Initiative (REDI) support may alleviate this concern. The asset owner is public.

Permitting and Feasibility

The project is feasible and highly dependent on the amount of funding provided. A detailed engineering report was completed (Henderson Harbor Water Quality Improvement Project), including cost estimates and alternatives, and the project is currently undergoing additional planning. Grant and loan opportunities offered by New York State (NYS) and the U.S. government have been identified but have not been secured to date. Multi-jurisdictional permit review is needed.

Benefits

The proposed project would improve the water quality of the waterbodies surrounding Henderson Bay. An upgraded municipal sewer system would allow new homes/businesses to be constructed in the Town of Henderson, resulting in moderate economic growth. Lake Ontario is also used as a source of drinking water for several Jefferson County municipalities, so increased water quality will improve public health and safety.

Flexibility

The number of improvements that can be undertaken will depend on funding and scheduling.

Durability

The project will provide long-term protection against future sewer system failures.

Economic Development Potential

The proposed project would increase water quality in Henderson Bay, allowing for increased residential/commercial development at Henderson Harbor. Many local businesses, such as motels, hotels, inns, restaurants, and retail stores, all benefit from the influx of anglers and tourists throughout the season. Water quality concerns have affected recreational activities, such as swimming, and limited the ability for new homes and businesses to be constructed in the area.

Environmental Considerations

The existing, on-site sanitary systems present risks to the surrounding environment and public health. Discharge from systems directly enters Henderson Harbor and other portions of Lake Ontario through Stony Creek. Henderson Bay is currently designated by NYSDEC as a Priority Water. The water supply, public bathing, and recreation are described as “stressed,” while fish consumption has been described as “impaired.”

A NYS regulated freshwater wetland has been identified within the project area, located north of NYS Route 178 between the Henderson boat launch and Eastman Tract Rd. Rare plants/animals have also been identified within project boundaries.

Alternatives Considered

Conventional gravity sewer collection systems and pump stations were initially recommended as the most cost-effective technology option when factoring operation and maintenance costs, but this option was ultimately determined to be too costly. Vacuum sewers were also researched and determined to be infeasible.

WASHINGTON ISLAND BRIDGE

The Washington Island Bridge is highly vulnerable due to high water and constant wave action. The 15-ft-wide bridge leading from the Village of Clayton to Washington Island is constructed from concrete reinforced T-beams. The road leading to the bridge is lined with large rocks to prevent erosion of the causeway. During recent floods, large rocks washed away, leaving the causeway vulnerable to erosion.



Village of Clayton,
Jefferson County



Village of Clayton



1,600,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Replacing or repairing the bridge

Public Support and Asset Owner

Public support is moderate. The asset owner is public.

Permitting and Feasibility

The project is assessed to be feasible, and a preliminary engineering assessment was completed, though temporary disruption of service provided by the bridge will need to be addressed. Multi-jurisdictional permit review is needed.

Benefits

The project will benefit the community as the bridge provides the only vehicular access to Washington Island. Potential damage to the bridge could render it hazardous, and damage to the force sewer main along the bridge would have severe consequences.

Flexibility

The project has flexibility in that two strategies are being considered: full bridge replacement or making repairs to the bridge.

Durability

Replacement of the bridge is a longer-term solution, as it would ensure the bridge is protected from future high water events.



Economic Development Potential

The bridge provides access to Washington Island, which is a part of the Thousand Islands, a key tourist location. Increased access to the island would benefit the local economy and tourism industry.

Environmental Considerations

Materials used for construction will be as sustainable as feasibly and economically possible. Protecting the sewer force main located on the bridge from potential breaches would protect surrounding environmental assets. Impacts to aquatic resources and associated protected species will be minimized to the extent practicable.

Alternatives Considered

The two alternatives being considered are full bridge replacement and making repairs without full replacement.

PUBLICLY OWNED BUSINESSES, REGIONAL DOCKS, AND BOAT LAUNCHES

Towns of Hammond, Lisbon, Louisville, Lyme, and Oswegatchie; villages of Alexandria Bay, Chaumont, Clayton, and Dexter; City of Ogdensburg

Mitigation Measures

Proposed mitigation measures for these projects will require some or all of the following improvements:

- Replacing fixed elevation docks with floating docks and slips, inclusive of anchorage and posts to restrict dock movement vertically
- Relocating fuel pumps and fuel tanks to a higher elevation to protect against rising lake levels
- Modifying dock electrical services in tandem with floating docks and/or relocating facility infrastructure affected by rising water levels
- Raising elevation of permanent structures located close to water's edge and at elevations below anticipated high water levels
- Installing stabilization measures at water's edge; in some cases, extending height of existing infrastructure to higher elevation

The attached table summarizes projects located within the Jefferson and St. Lawrence regions.

Public Support and Asset Owner

Public support is high. The facilities provide substantial economic impact to the area in the form of jobs, tax revenue, recreation, and tourism. In many communities, these assets are at the core of community identity. The asset owners are public.

Permitting and Feasibility

These projects are considered moderately to highly feasible due to the type of improvements, and work will only be conducted on assets that have existing impacted facilities. Multi-jurisdictional permit review is needed.



Jefferson and St. Lawrence Counties



Public



12,759,000

Benefits

Proposed shoreline stabilization will protect local infrastructure from flooding and damage due to debris, ice, and waves experienced under current conditions. Relocating marine fueling facilities and electric and sanitary sewer facilities to a higher elevation will improve safety and reduce negative impacts to adjacent aquatic resources.

Flexibility

The final project components will be determined during design and tailored for each facility. All electrical work will be completed in accordance with National Electric Code (NEC), building modifications in accordance with local building codes, and shoreline stabilization measures constructed of materials locally available and in alignment with project funding.

Durability

Infrastructure improvements will be in accordance with national and local codes and generally will have a 20-year design life. Shoreline stabilization will be based on the selected site-specific design guidance and will typically last 30 to 40 years and be low maintenance.

Economic Development Potential

Recreational boating is of high value to this region and per 2014 data, results in an approximate annual direct spending of \$18 million for slip rental, launch lanes, and charter boats. Translated into 2019 dollars, this value likely exceeds \$22 million when inflation, fuel sales, boat repairs, and restaurants are included.

**Jefferson and St. Lawrence Counties
Mitigating Projects – Publicly Owned Businesses, Regional Docks, and Boat Launches**

County	Municipality	Asset	Quantity of Slips	Total Project Cost
Jefferson	Village of Clayton	Centennial Park - Bain Street	NA	\$506,000
Jefferson	Town of Lyme	Concrete Dock Structure	NA	\$73,000
Jefferson	Village of Alexandria Bay	Upper James Public Restroom and U.S. Customs Office	NA	\$500,000
Jefferson	Village of Chaumont	Municipal Beach	NA	\$229,000
Jefferson	Village of Dexter	Village Park	NA	\$290,000
Jefferson	Town of Lyme	Lake Access Points	110	\$1,182,000
Jefferson	Village of Dexter	East Dock Infrastructure	NA	\$50,000
St. Lawrence	Town of Hammond	Kring Point State Park	NA	\$635,000
St. Lawrence	Town of Lisbon	Lisbon Town Beach/Campground/Boat Launch	NA	\$3,725,000
St. Lawrence	Town of Oswegatchie	New Boat Launch at Intersection of Stone Church Rd. and St. Lawrence River	NA	\$983,000
St. Lawrence	City of Ogdensburg	Crescent Trail Park (on Oswegatchie River)	NA	\$2,894,000
St. Lawrence	Town of Lisbon	Galop Island (water access)	NA	\$825,000
St. Lawrence	Town of Louisville	Whalen Park	NA	\$867,000
				\$12,759,000

Environmental Considerations

Projects will avoid causing harm to adjacent properties through careful design of proposed improvements. Construction will follow appropriate standards and permit requirements. Impacts to aquatic and wetland resources and associated protected species will be minimized to the extent practicable.

