



Project Profiles for Cayuga & Oswego Region



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ICONS/ACRONYMS FOR CAYUGA & OSWEGO REGION



-  Project location
-  Project owner
-  Approximate cost

Acronym	
ADA	Americans with Disabilities Act
CEHA	Coastal Erosion Hazard Area
CFA	Consolidated Funding Application
CMP	Corrugated Metal Pipe
FEMA	Federal Emergency Management Agency
ft	Feet
FW	Freshwater Wetlands
LF	Linear Feet
LWRP	Local Waterfront Revitalization Program
NTS	Not to Scale
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
OCWA	Onondaga County Water Authority
REDI	Resiliency and Economic Development Initiative
RV	Recreational Vehicle
SUNY	State University of New York
SWPPP	Stormwater Pollution Prevention Plan
WWTP	Wastewater Treatment Plant

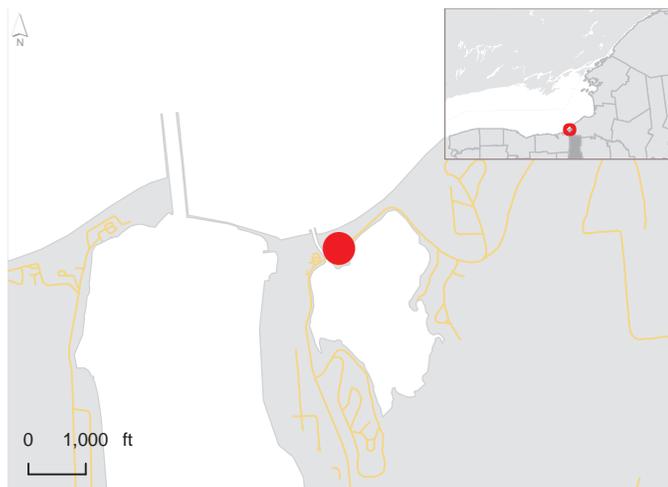
FAIR HAVEN BEACH STATE PARK

This project seeks to protect the Fair Haven Beach State Park and its western parking lot by raising the parking lot. The parking lot separates the Sterling Creek Pond from Little Sodus Bay, and the Pond from Lake Ontario. Located in a vulnerable location between three bodies of water, the parking lot is prone to flooding and restricts access to the waterfront, when flooded.

 Village of Fair Haven,
Cayuga County

 NYS Office of Parks, Recreation
and Historic Preservation

 1,200,000



Fair Haven Beach State Park

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Demolishing the current parking lot
- Raising a new parking lot with imported fill and re-paving

Public Support and Asset Owner

Public support is moderate to high. The state park's parking lot provides access to the beach and waterfront, which is used frequently for tourism and waterfront recreation. The asset owner is public.

Permitting and Feasibility

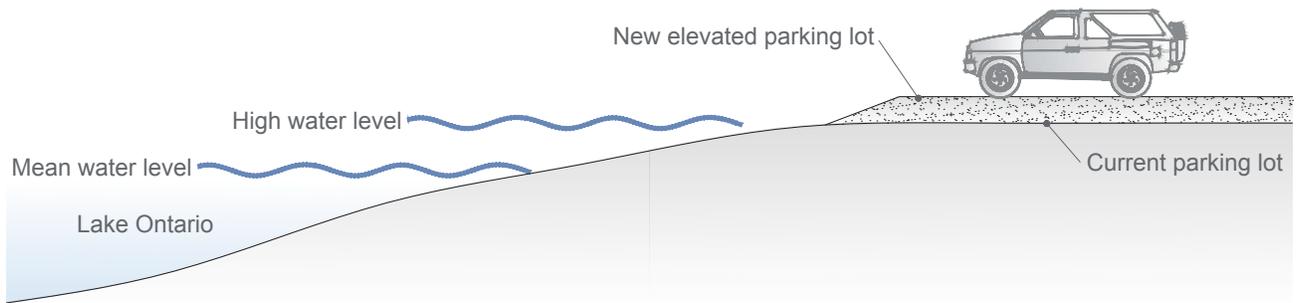
This project is considered moderately feasible. Permitting would be required for making changes to the park, for construction-activity stormwater pollution prevention, and by the town. Maintenance of traffic or temporary parking might need to be accommodated. However, the mitigation practices for the project are considered standard practice and are widely accepted.

Benefits

This project will protect access to the state park and the beach. This will help protect the local economy, while also protecting individuals who choose to park in the west parking lot.

Flexibility

There is flexibility in how the project will be designed, based on materials and the extent of construction. Alternatives can be evaluated during the design process to determine the most sustainable and resilient design.



Raised and re-paved parking lot (Principle sketch, NTS)

Durability

This project will increase the durability of the west parking lot and waterfront access. Repaving the parking lot will alleviate its structural issues; raising it, in conjunction with the repaving, will increase its lifespan due to it no longer being susceptible to frequent flooding.

Economic Development Potential

Raising and re-paving the west parking lot will allow for continued, and possibly increased, access to the waterfront in Fair Haven. This would strengthen the tourism industry by allowing tourists more opportunities to enjoy waterfront access. There are multiple amenities at the park with lake access and access to the beach. Without ample parking, use is limited, resulting in fewer transactions at local businesses in the surrounding community.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize disturbance to the surrounding waterbodies, and will ensure sediment from construction activities is maintained and properly disposed.

Alternatives Considered

No action; retaining walls.

WEST BAY RD. STORM SEWER SYSTEM

This project seeks to reduce floods on West Bay Rd., located adjacent to Meadow Cove and Little Sodus Bay, lying at a low elevation with no stormwater collection. This portion of roadway currently uses roadside ditches to convey water from rainfall events to the bay. The existing system does not convey and/or store stormwater efficiently, and the roads in this area flood.



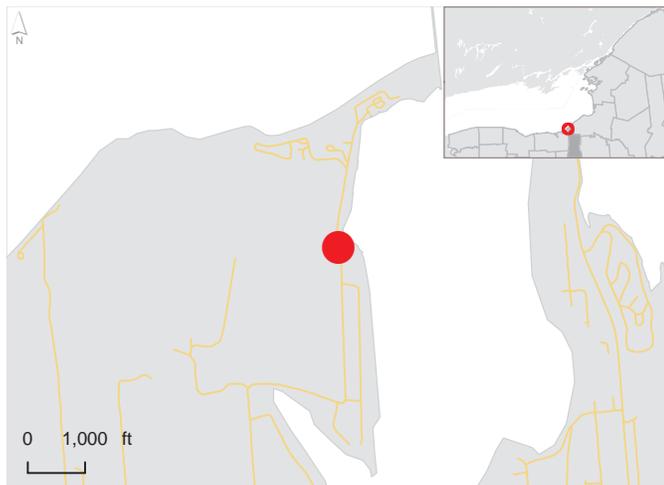
Town of Sterling,
Cayuga County



Town of Sterling



2,700,000



Mitigation Measures

Proposed mitigation measures in the project will consist of installing:

- 1.8 miles of stormwater collection system along West Bay Rd.
- Bioretention basins to infiltrate, store, and filter the rainwater

Public Support and Asset Owner

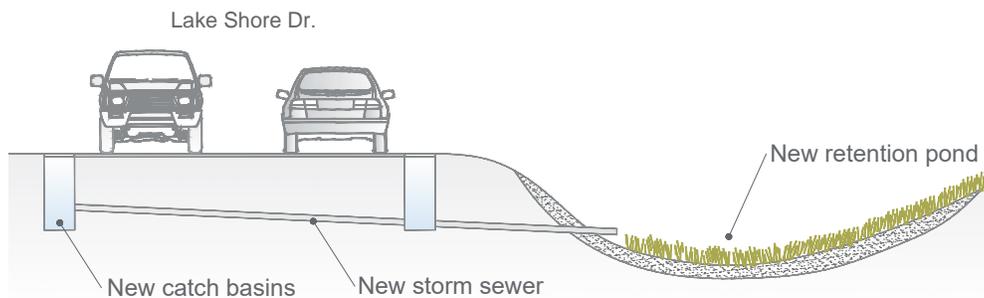
Public support is moderate to high. The public supports the project due to adverse effect on health and safety, and the discouragement of tourists from visiting the town if improvements are not made. The asset owner is public.

Permitting and Feasibility

This project is moderately to highly feasible due to the design and construction of an appropriate stormwater collection system and low maintenance requirements. The project will include standard practices used in the industry that have proven successful. The stormwater system will discharge into Little Sodus Bay, requiring permits from the New York State Department of Environmental Conservation (NYSDEC).

Benefits

The completion of stormwater system improvements will protect the community from health risks due to standing water and contaminants entering the groundwater of Little Sodus Bay. It will also help protect the structural integrity of the roadway by reducing roadway flooding. The project will also protect an estimated 100 homes from flooding.



Stormwater system improvements (Principle sketch, NTS)

Flexibility

The project provides flexibility by having the option for designing the system to whichever storm event seems most appropriate. The stormwater collection system will also have the option of using various types of materials and methods for construction, including green infrastructure practices.

Durability

The project's goals are to ensure durability of the systems and the roadway. The installation of the stormwater collection system infrastructure will ensure limited maintenance requirements, considering they will include already widely acceptable practices.

Economic Development Potential

The project will improve the performance of the system and reduce public health risk. Therefore, the cost due to the health issues will be reduced, and the town would become more attractive to businesses and tourists. It will also protect approximately 100 homes from flooding, helping to maintain property values and tax revenue.

Environmental Considerations

The project will reduce the amount of bacteria and contaminants infiltrating groundwater and flowing into Sodus Bay.

Alternatives Considered

No action; increased ditch/swale system.

ONTARIO SHORES DR.

Ontario Shores Dr. is a private, dirt roadway along the lakefront of Lake Ontario at Moon Beach with access to a two-lane public town road. The roadway will provide access to homes along the shore, as well as the beach. The town is committed to assuming ownership and maintenance of the new roadway.



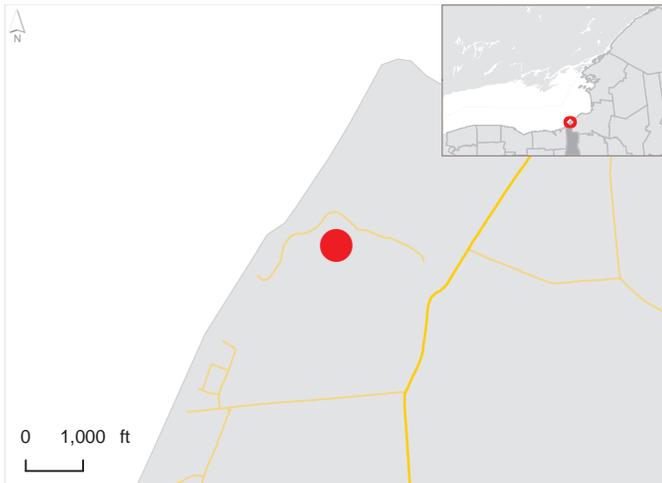
Town of Sterling,
Cayuga County



Town of Sterling



1,500,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Moving, raising, and paving 0.6 miles of dirt road

Public Support and Asset Owner

Public support is moderate to high. The roadway is necessary for 18 homeowners to reach their homes. Additionally, it will allow for access to the beach by the public. The asset owner is private.

Permitting and Feasibility

The project is considered highly feasible. There is an existing dirt road that would be widened and paved. Multi-jurisdictional permit review is needed. The roadway will be designed to New York State (NYS) standards for roadway design.

Benefits

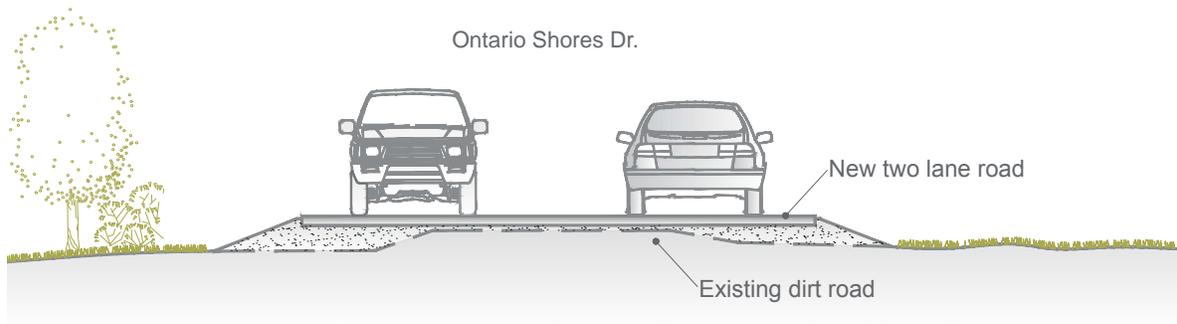
Homeowners' safety will be protected by providing a safer, publicly maintained, road. The project will provide emergency vehicles with better access to the houses, and will allow for easier access and egress for residents.

Flexibility

There is flexibility in this project in the materials and design that will be used for the roadway.

Durability

This project will increase the durability of the roadway. The roadway improvements will follow state standards. By raising the roadway, it will be less likely to flood and will be more durable and resilient to future flooding.



Road expansion from dirt road to two-lane public town road (Principle sketch, NTS)

Economic Development Potential

Improving the roadway will maintain and possibly increase property values along the new roadway by providing safer, more reliable access to homes.

Environmental Considerations

The project will avoid any adverse environmental impacts. The roadway is located offshore and runoff from construction will be captured and not drain directly into surrounding waterways.

Alternatives Considered

No action; paving at existing grade.

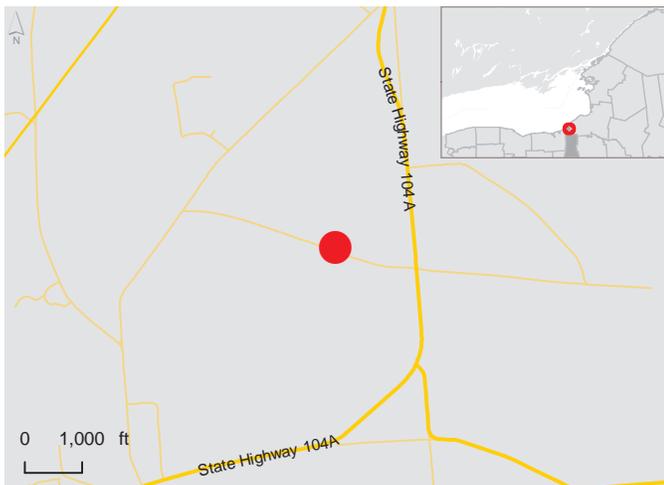
WATER TOWER – SCHOOLCRAFT RD.

The goal of this project is to provide clean, public water to the Town of Sterling and provide a backup water source to the Village of Fair Haven. Currently, the town is receiving public water from the village. This project would create a water district (Town of Sterling Water District #2). Many residents are on private wells greatly impacted by high water from flooding.

 **Town of Sterling,
Cayuga County**

 **Town of Sterling**

 **438,000**



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing of a water storage tank on Schoolcraft Rd.
- Extending water service to approximately 10-12 lakeside parcels

This project would help to create one water district for the Town of Sterling, while providing a back-up for the village. The proposed district would receive water from the Village of Fair Haven, with an optional northern feed from Onondaga County Water Authority (OCWA).

Public Support and Asset Owner

Public support is high. Currently, more than 50 percent of residents are on private wells, which were greatly impacted by the high water from flooding, straining their cleanliness. The town recently lost the opportunity for investment by an industrial plant due to lack of public water. The asset owner is public.

Permitting and Feasibility

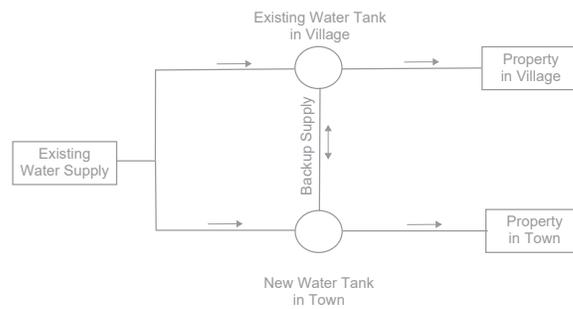
Multi-jurisdictional permit review is needed.

Benefits

Public health will be protected by delivering clean and safe drinking water to homes and businesses.

Flexibility

There is flexibility in this project in the materials and design that will be used.



Water supply flow diagram

Durability

The project will increase the durability of the water system in the village by creating a backup source in the event of an infrastructure failure. Water delivery to homes will be more durable, and residents will not need to rely on their private wells.

Economic Development Potential

The project would ensure delivery of clean, reliable public water, thus improving land sales in the rural town. The lack of public water is currently deterring home buyers from the area, and the completion of the project should entice residents and businesses to settle in the town.

Environmental Considerations

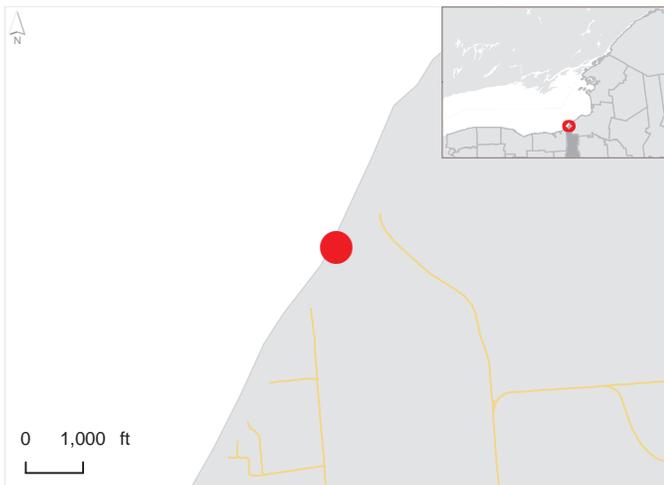
The project will avoid any adverse environmental impacts. The environment will be taken into consideration during all aspects of construction and any runoff from construction will be captured and treated. Sediment during construction will be controlled and properly disposed.

Alternatives Considered

No action.

STERLING NATURE CENTER TRAIL AND PARKING AREA

The Sterling Nature Center at the south shore of Lake Ontario includes wetlands, ponds, bluffs, trails, streams, and an observation deck. With high water levels on Lake Ontario, the trails near the shoreline are subject to flooding. Part of McIntyre Rd. was washed out during heavy rainfalls in 2019. The road is the only access point for emergency responders to this section of the lakeshore.



 **Town of Sterling,
Cayuga County**

 **Cayuga County**

 **1,600,000**



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Designing and constructing green infrastructure including porous pavement, sidewalks, rain gardens, and wetlands
- Providing educational exhibits and programming related to green infrastructure
- Repairing and rerouting approximately four miles of hiking trails, including Dogwood, Lakeview, Heron, Bluff, Buttonbush, and Lake Trail
- Restoring the abandoned section of McIntyre Rd.

Public Support and Asset Owner

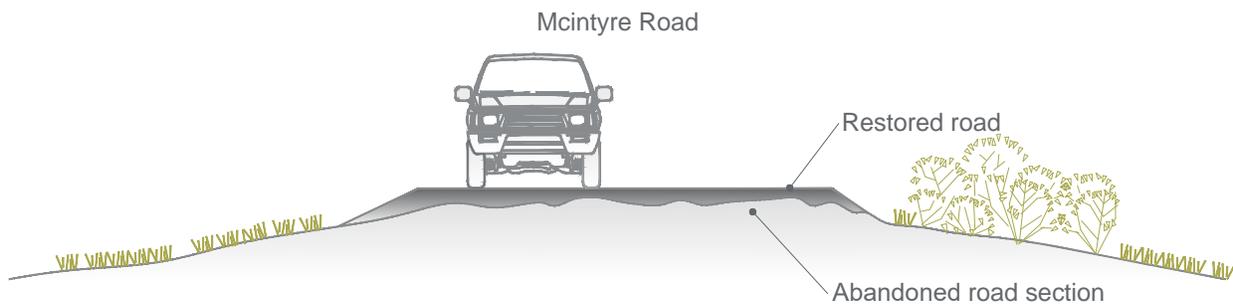
Public support is moderate to high. The nature center draws in a substantial amount of tourism and helps the local economy. There is public support around improving access throughout the nature center by providing flood-resistant trails and improving the water management throughout the center. The asset owner is public.

Permitting and Feasibility

This project is considered moderately to highly feasible. Multi-jurisdictional permit review is needed.

Benefits

The goal of this project is to reduce flood impacts to the Sterling Nature Center, while also protecting users of the facilities by providing stable paths and structures. By reducing the likelihood of flooding, the nature center will become more pedestrian friendly. Restoring McIntyre Rd. will provide first responders with access to people along this lakeshore, helping protect residents and visitors in this area.



Restoration of McIntyre Rd. (Principle sketch, NTS)

Flexibility

There is flexibility in how the project will be designed, based on which materials and the extent of construction. Alternatives can be evaluated during the design process in order to determine the most sustainable and resilient design.

Durability

This project will increase the durability of the Sterling Nature Center by reducing damage to its paths, structures, utilities, and assets. Green infrastructure will allow for overland runoff to be captured away from structures and released into the soil, instead of ponding around structural foundations. Repairing and rerouting the trails will ensure the trails are more resilient to increased rainfall, changes in hydrology, and higher lake levels.

Economic Development Potential

The Sterling Nature Center attracts tourists to the area, increasing revenue for local business and supporting local economy. By increasing access and improving amenities to the nature center, more tourists will visit.

Environmental Considerations

The project will avoid any adverse environmental impacts, including impacts to the flora and fauna in the nature center. The project will aim to minimize disturbance to Lake Ontario and minimize any vegetation-clearing required for the trails.

Alternatives Considered

No action; raising trails; alternative shoreline stabilization treatment, including consideration of natural and nature-based features.

PHILLIPS PARK WALKWAY

Phillips Park, situated on the southeast end of Little Sodus Bay, provides a boardwalk along the waterfront for fishing and recreational use. The gabion retaining wall supporting the boardwalk is failing in some locations, causing the boardwalk to sag. Parts of the boardwalk have been underwater during flooding, and broken wood deck boards cause an uneven and dangerous walking surface.



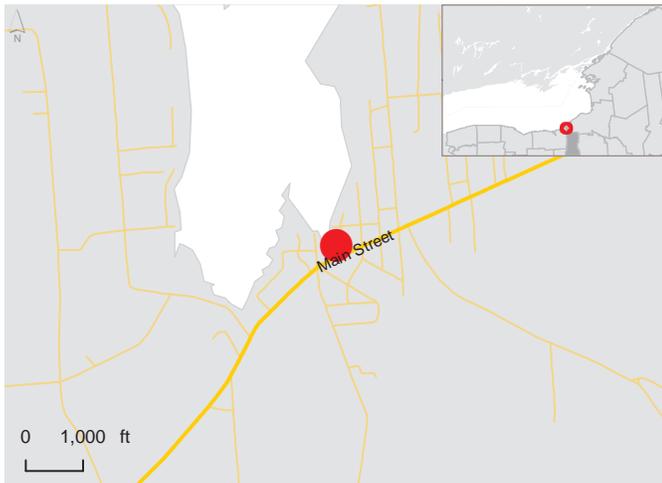
Village of Fair Haven,
Cayuga County



Village of Fair Haven



1,500,000



Phillips Park walkway

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Removal and reconstruction of boardwalk
- Repairing and raising gabion wall
- Adding new isolated structures, such as helical anchors
- Redeveloping the path to the boardwalk to meet current Americans with Disabilities Act (ADA) standards
- Installing railings along waterside of boardwalk

Public Support and Asset Owner

Public support is moderate to high. The village boardwalk is a public amenity that has visitors coming back year after year. Additionally, the boardwalk and its supporting gabion wall are

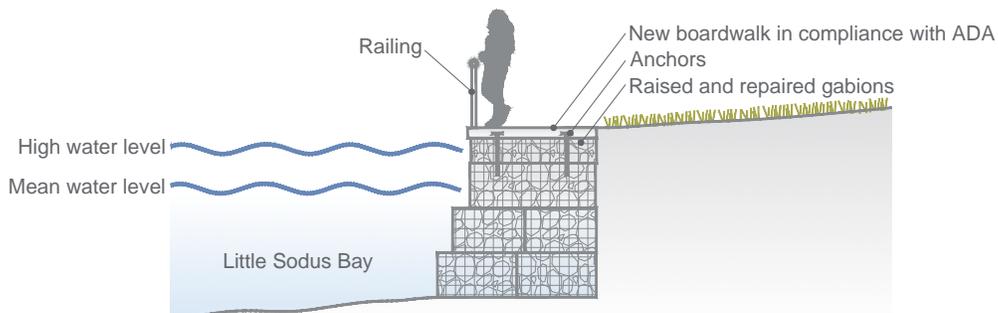
currently protecting Little Sodus Inn and a sanitary pump station (Federal Emergency Management Agency (FEMA) a critical asset), which would leave these assets vulnerable if the boardwalk and wall were to be left without repairs. Therefore, the public supports seeing these repairs made and the boardwalk improved. The asset owner is public.

Permitting and Feasibility

This project is considered moderately feasible. Permitting would be required for building structures in the Coastal Erosion Hazard Area (CEHA) and to ensure there are no negative effects on the environment from this project. Multi-jurisdictional permit review is needed.

Benefits

This project aims to protect the Village of Fair Haven by repairing and bolstering the gabion wall which protects nearby businesses and critical assets. By repairing the boardwalk, the project will protect the safety of the visitors by providing a more even



Repair and raised gabion walls, new boardwalk with railing (Principle sketch, NTS)

walking surface, and will allow disabled visitors to enjoy the boardwalk by making it ADA compliant. The repair will also offer protection to the sanitary pump station and Little Sodus Inn.

Flexibility

There is flexibility in how the project will be designed, based upon which materials and the extent of construction undertaken. Alternatives can be evaluated during the design process in order to determine the most sustainable and resilient design.

Durability

This project will improve the durability of the village boardwalk and adjacent infrastructure. It will ensure that the gabion wall supporting the boardwalk can withstand future high water levels and wave action. The project will also ensure that the pathways and adjacent infrastructure are more durable by not being exposed to flooding as frequently, and, therefore, less susceptible to water damage and deterioration.

Economic Development Potential

Maintaining recreational resources is essential to the Town of Sterling and Village of Fair Haven, as approximately \$6.6 million is spent annually by boaters and summer visitors in the area. Maintaining this public amenity will increase the enjoyment of visitors and entice them to return. It will also help protect local businesses from water damage, allowing them to continue operating, employ local residents, and pay taxes.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to Little Sodus Bay and preserve any waterfront habitats.

Alternatives Considered

No action; alternative shoreline stabilization treatment, considering natural and nature-based features; maintaining elevation; replacing gabion wall in-kind and in-place.

WEST BARRIER BAR PARK

West Barrier Bar Park is in the Village of Fair Haven on Lake Ontario. The barrier bar and park are important to the area because they protect the west shore and marina. The park also provides public access to the waterfront on Lake Ontario.



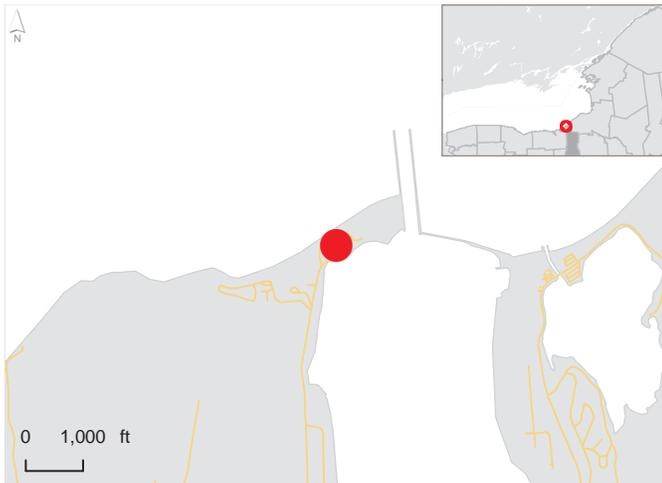
Village of Fair Haven,
Cayuga County



Village of Fair Haven



600,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Milling and repaving approximately 30 linear feet (LF) by 200 LF of asphalt roadway
- Regrading and refilling approximately 125 LF by 150 LF of crushed stone parking lot

Public Support and Asset Owner

Public support is high. The West Barrier Bar Park is vital to tourism in the area and most of the community would benefit from the improvements. The asset owner is public.

Permitting and Feasibility

The project is considered highly feasible, as it includes improvements to an existing piece of infrastructure. Multi-jurisdictional permit review is needed.

Benefits

Public welfare will be protected by providing safer roads for the community. Protecting the roadway and the park is integral to protecting the private marina located on the barrier bar.

Flexibility

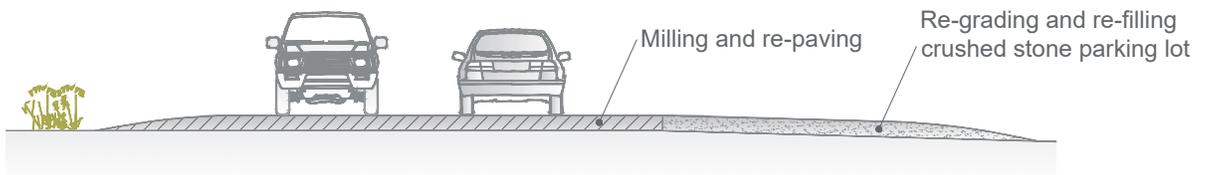
There is flexibility in this project in the materials and design that will be used. Due to the repair of existing infrastructure, the location of the work is not flexible.

Durability

This project will increase the durability of the roadway by creating a surface that will withstand a wide variety of weather events.

Economic Development Potential

There is potential of adding additional recreational activities at the park, increasing revenue in the village.



Roadway and parking improvements (Principle sketch, NTS)

Environmental Considerations

The project will avoid any adverse environmental impacts. The improvements will be made in-kind and will capture and treat any runoff caused by construction.

Alternatives Considered

No action.

STANDBROOK PARK

This project seeks to mitigate the flooding of the dock at Standbrook Park on the waterfront of Little Sodus Bay. The current docks are wooden and are often flooded during high water events. This area is accessible to the public and important to the tourism industry of the Village of Fair Haven.



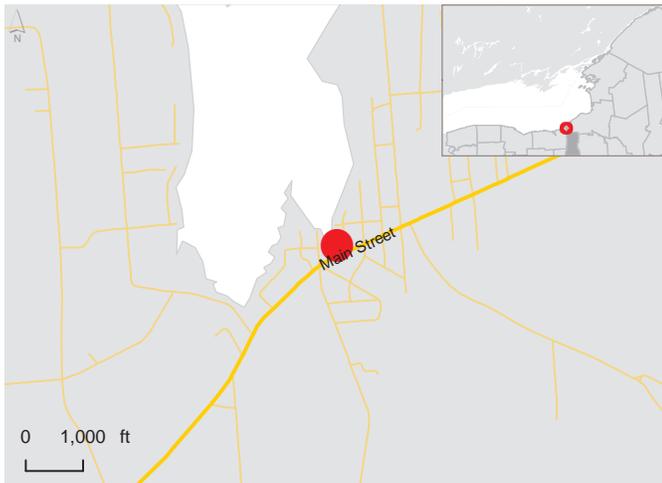
Village of Fair Haven,
Cayuga County



Village of Fair Haven



250,000



Standbrook Park

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Removing and replacing the wooden dock with floating dock
- Replacing the electrical and lighting system
- Improving ADA access to the docks

Public Support and Asset Owner

Public support is moderate to high. The park is frequented by residents and visitors who would benefit from this project. The asset owner is public.

Permitting and Feasibility

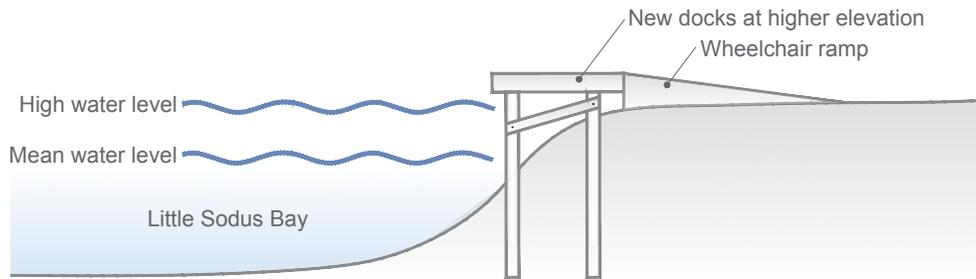
This project is considered highly feasible because it will be replaced in the same location. Multi-jurisdictional permit review is needed.

Benefits

This project will protect public safety by making the dock ADA compliant. Officials will have less worry of individuals becoming injured by existing access. This will also protect the economic value of the park by having the ability to keep the dock open during high water events.

Flexibility

There is flexibility in the materials for the construction of the dock and access. The location of the project limits flexibility on other aspects of the project.



New wooden dock in compliance with ADA requirements (Principle sketch, NTS)

Durability

This project will make the dock more durable to sustain high water levels. It will allow for the dock to remain accessible more frequently throughout the operating season.

Economic Development Potential

The park draws visitors to the area currently, and with the replacement of the dock, visitor satisfaction will improve. With improved satisfaction, more tourism economy can enter the market.

Environmental Considerations

The project will seek to negate any environmental impacts on the project area. The project will be completed in Little Sodus Bay, and measures should be taken to limit any impact on water quality. All runoff from construction will be captured and treated.

Alternatives Considered

No action; reconfiguring parking lot and roadway; alternative shoreline stabilization treatment.

KING ST. RAMP AND PARKING

This project seeks to repair the King St. boat launch. The concrete boat launch is located directly on Little Sodus Bay. Due to higher lake levels, there are concerns about the structural integrity of the ramp. Additionally, the retaining wall that was typically above the water elevation is now, due to higher water level, submerged, creating a hazard to users of the ramp, and the public visiting the adjacent Turtle Cove Resort and Marina.



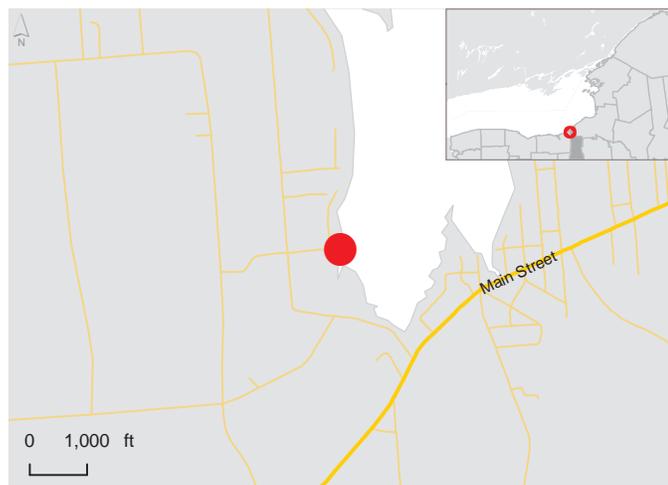
Village of Fair Haven,
Cayuga County



Village of Fair Haven



800,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Repairing the boat launch concrete ramp and retaining wall
- Installing a guardrail along the top of the retaining wall for safety
- Applying modifications to adjacent properties to reduce further flooding

Public Support and Asset Owner

Public support is high. The boat launch has high public support. It is frequented by residents and visitors to the community. The launch provides access for users of the adjacent Turtle Cove Resort and Marina. The asset owner is public.

Permitting and Feasibility

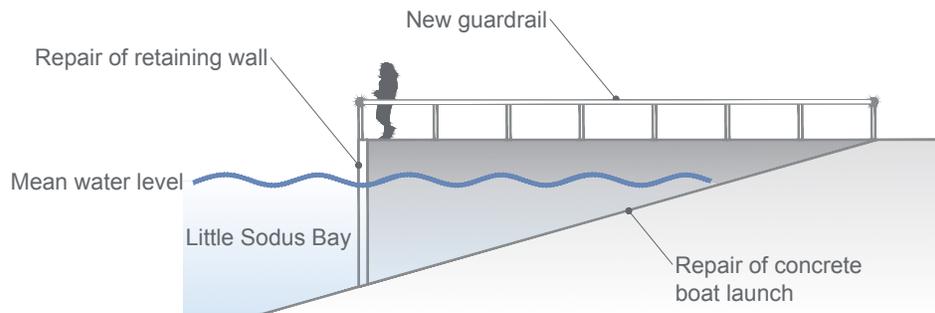
The project will require multi-jurisdictional permit review. The project is highly feasible, as it is a repair of existing infrastructure. An underwater inspection will be required to determine the extent of construction materials and methods.

Benefits

This project will improve public access to the bay and the lake, and users of Turtle Cove Resort and Marina. It will also increase safety for recreational boaters and the general public.

Flexibility

This project is somewhat flexible in the materials and methods used. Although the repair of existing infrastructure lacks a large amount of flexibility, the enhancements to surrounding shorelines can be altered to fit needs.



New guardrail and repair of existing boat launch and retaining wall (Principle sketch, NTS)

Durability

The project will make the ramp and adjacent businesses more durable to high water events by installing the retaining wall. The concrete boat launch will utilize materials to make it durable in the bay environment.

Economic Development Potential

With an estimated 47 percent of Fair Haven residents owning seasonal homes (2018 Town of Sterling and Village of Fair Haven Comprehensive Plan) and \$6.6 million spent annually (directly and indirectly) by boaters summer recreation, is important to the success of the community. Maintaining recreational resources such as the public launch will keep visitors coming back year after year.

Environmental Considerations

The project will avoid any adverse environmental impacts. Any construction runoff caused by the project will be captured and treated.

Alternatives Considered

No action.

LITTLE SODUS HARBOR; COTTAGE ST. PUBLIC PARK

The boat launch, wood docks and retaining wall at the end of Cottage St., adjacent to the Little Sodus Inn, were submerged during 2019 flooding. The village would like to extend the height of the existing concrete retaining wall to reduce impacts from higher lake levels.



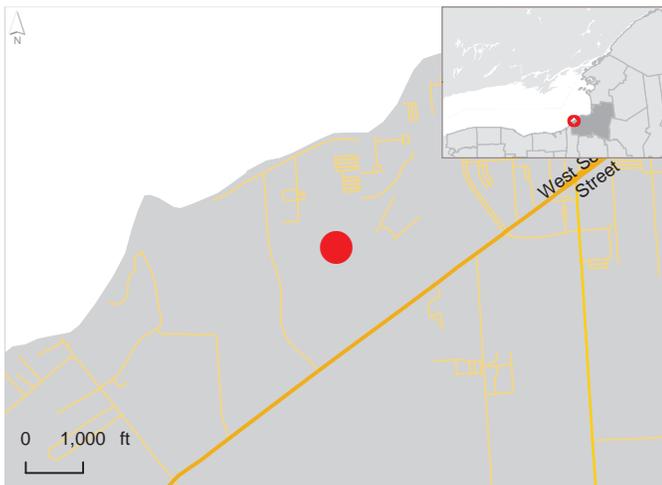
Village of Fair Haven,
Cayuga County



Village of Fair Haven



250,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Extending the height of the existing shoreline stabilization measures to reduce impacts from the higher lake levels
- Installing guardrails for public safety
- Replacing the existing fixed elevation wooden docks with floating docks

Public Support and Asset Owner

Public support is moderate. The project will protect the village owned boat launch and docks, adjacent commercial property, and the visiting public. The asset owners are public and private.

Permitting and Feasibility

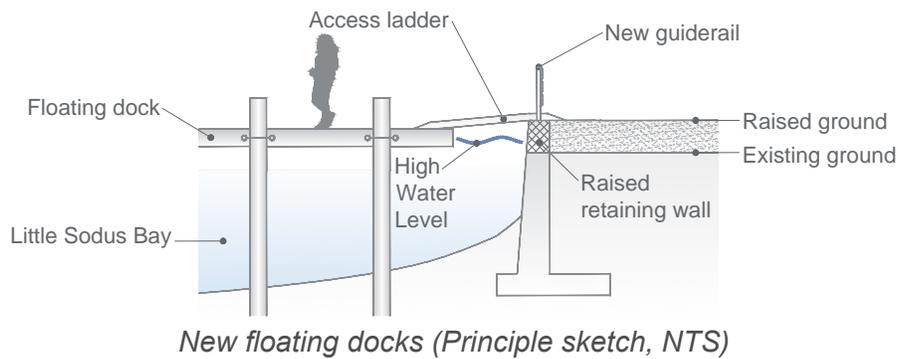
This project is considered moderately to highly feasible as there is an existing retaining wall and dockage. Multi-jurisdictional permit review is needed.

Benefits

The goal of the project is to reduce impacts to existing public and commercial property in the village. It will allow the existing Cottage St. boat ramp, owned by the village, to remain operational, and by raising the wall and installing a guardrail, increase safety for users. Additionally, the adjacent Little Sodus Inn commercial property will benefit from increased traffic.

Flexibility

The design of this project is flexible. There are several options for shoreline stabilization. Floating docks could possibly use the existing dock anchorage method, with modifications.



Durability

Extending the retaining wall height and installing floating docks will allow the facilities to remain operational through a range of static water levels. Additionally, given the flexibility of materials, the project can be designed to withstand a wide range of lake conditions, resulting in an extended planning life.

Economic Development Potential

The Cottage St. boat ramp is an important part of the village, being the only public boat launch on the East Side of Little Sodus Bay. Additionally, increasing the wall height will help reduce impacts from higher lake levels and will allow the adjacent Little Sodus Inn to remain operational, providing revenues to the village.

Environmental Considerations

The project work will remain within the existing boat launch and dockage limits, resulting in decreased adverse impacts on waters of the U.S.

Alternatives Considered

No action; alternative shoreline stabilization treatment.

LAKE ST. PUMP HOUSE

The project seeks to stabilize the shoreline in order to protect the Lake St. Pump House infrastructure and neighboring houses. The pump house serves Fair Haven State Park and local residences. When the pump house is flooded, its operability and water quality are compromised.



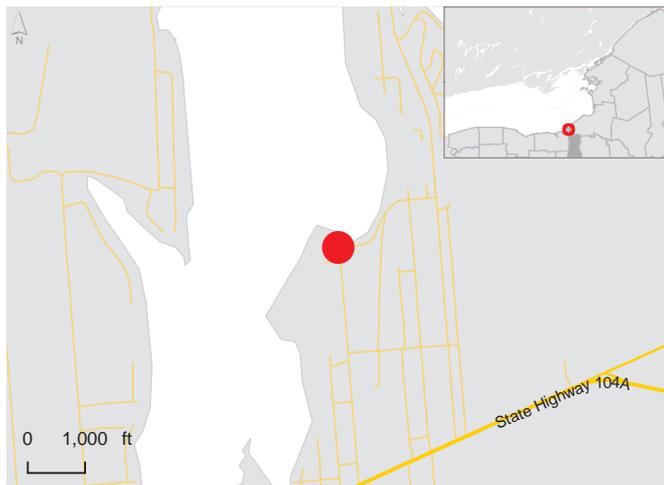
Village of Fair Haven,
Cayuga County



Village of Fair Haven



250,000



Shoreline at Lake St. Pump House

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing shoreline stabilization measures between two residential properties that have already implemented retaining walls (one sheet pile wall and one concrete wall)

Public Support and Asset Owner

Public support is high. The pump station is a critical asset for the community's health and safety. The asset owner is public.

Permitting and Feasibility

This project is considered moderately to highly feasible. The majority of construction would be within the limits of the pump house. The practices being implemented are widely accepted and proven effective for their uses. Multi-jurisdictional permit review is needed.

Benefits

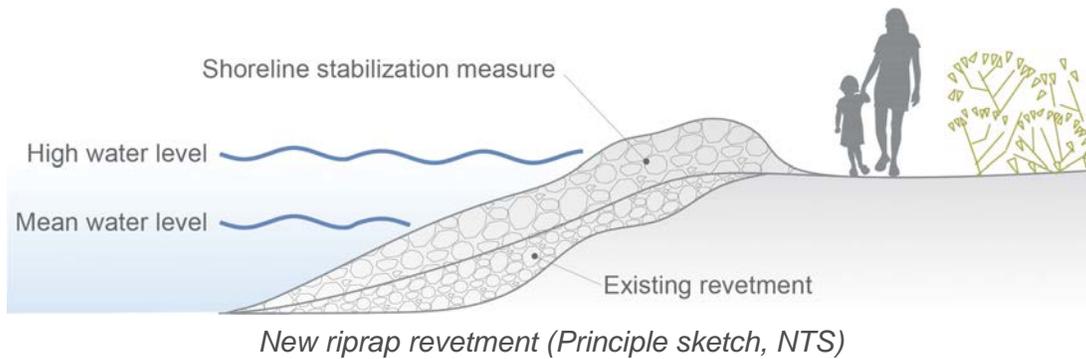
The shoreline stabilization measure will connect to the two adjacent walls, completing a linear protective feature. In doing so, the pump station and adjacent wall will be protected.

Flexibility

Completion of the pump station protective feature will stabilize the adjacent walls and prevent future erosion around the end of the existing walls. When complete, the linear system will provide protection over a range of summer and winter conditions.

Durability

Completing the linear protective feature will increase the durability of the existing adjacent walls. In doing so, the design life of the existing walls and proposed measure will be in excess of 25 years.



Economic Development Potential

The shoreline stabilization measure will help protect the shoreline and adjacent properties, preserving property values. Improving the operability of the pump station will improve public health, and therefore, make Fair Haven a more desirable place for businesses and tourism.

Alternatives Considered

No action.

NINE MILE CREEK BIKE CORRIDOR #6

The project, in the Town of Sterling and Village of Fair Haven, will develop design for 13 miles of bike touring corridor, known as the Central New York (CNY) “Peacemaker Trail” to connect heritage sites, waterfronts, and natural resources in a scenic, safe, and spectacular series of places to visit and enjoy in the CNY Great Lakes coastal region. The trail will include improvements to the Sterling Creek Nature Center canoe launch. Parking and fishing access upgrades will be reviewed across the corridor from a resiliency perspective. The project will foster nature-based recreation and opportunities for stewardship education, community revitalization, and compatible economic development through tourism.

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Design of the 13 mile bike touring corridor with an emphasis on resiliency
- Construction of up to two miles of the bike trail along Main St. in close proximity to Little Sodus Bay.

Public Support and Asset Owner

Public support is high. This project is a priority of the CNY Regional Planning & Development Board and the Village of Fair Haven mayor. This project supports several of the actions under Great Lakes Action Agenda, Goal 9, to enhance recreation and tourism opportunities that capitalize on the rivers and lakes, scenic beauty, and natural and cultural resources that define the character of the Village of Fair Haven and Town of Sterling. The asset owner is public.

Permitting and Feasibility

This project is considered highly feasible due to the amount of support from stakeholders, and the success of similar trail corridors upgraded previously using the same methodologies.

 Village of Fair Haven, Cayuga County

 Cayuga County

 900,000



Benefits

The bike corridor will increase visitation to the community from bicycle enthusiasts, increasing economic activity.

Flexibility

There is flexibility in the design of the corridor and amenities.

Durability

This project supports mitigation of stormwater runoff to Sterling Creek at Sterling Nature Center Canoe Launch on Farden Road, where runoff to the streambank has resulted in erosion and increased sediment loading to the creek. On-road sections will include stormwater runoff improvements, including green infrastructure, that will reduce runoff to local waterways, improving water quality.

Economic Development Potential

This project will connect existing public assets with a safe bike corridor, making it easier for cycling enthusiasts to visit these assets and businesses in the Village of Fair Haven.

Environmental Considerations

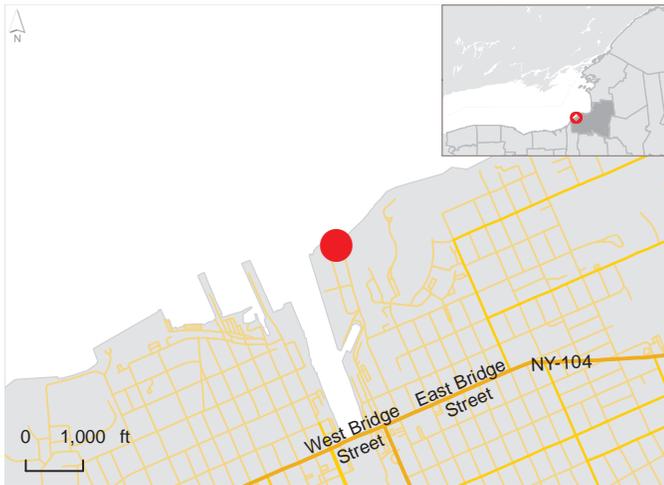
The project will avoid any adverse environmental impacts. It will limit the amount of construction taking place in the lake, and will use practices that are as sustainable as possible.

Alternatives Considered

No action.

PORT AUTHORITY MARINA EAST (EAST OPERATING DOCK)

This project seeks to address high water damage to the north end of the Port Authority East Operating Dock. The asset is located directly on the lake and is highly susceptible to wave action and flooding. The existing stone retaining wall, due to higher lake levels, is no longer able to break waves, resulting in a breach of the wall and direct undercutting the main dock.



 City of Oswego,
Oswego County

 Port of Oswego Authority

 300,000



Mitigation Measures

Proposed mitigation measures in this project will consist of:

- Installing a shoreline stabilization to break the high water wave action in that area and protect the dock

Public Support and Asset Owner

Public support is moderate to high. The Port Authority and the businesses that operate out of it are a large source of revenue for the local economy, providing jobs and tax revenue. If the docks continue to experience failure, they will become inoperable and businesses will be forced to move or close. The asset owners are public and private.

Permitting and Feasibility

This project is considered highly feasible. Multi-jurisdictional permit review is needed.

Benefits

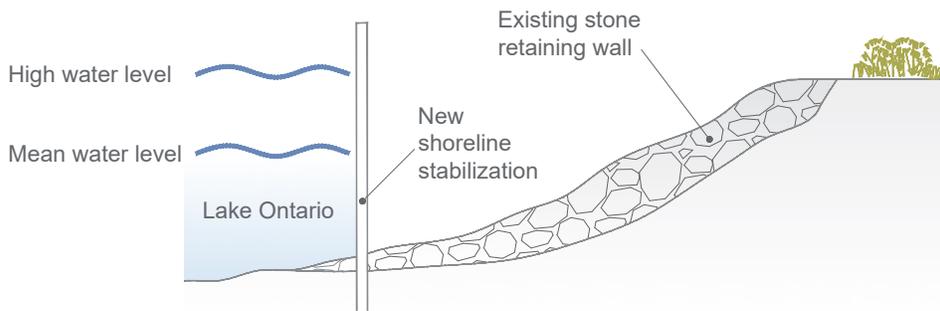
This project will protect those who use the Port Authority docks by ensuring that the structures and foundations remain stable and sturdy. Further failure of the dock's retaining walls could result in closing of port activities, and closing of businesses, or loss of life. By repairing and enhancing the walls of the dock, the possibilities are eliminated.

Flexibility

The project will be implemented to ensure protection over a wide range of static lake levels, storm events, and interior drainage.

Durability

This project will improve the durability of the Port Authority waterfront. The repair designs will ensure the shoreline stabilization measures are able to withstand future high water levels and wave action. Raising and repairing the retaining wall will ensure the adjacent land is not subject to water damage and deterioration.



Installation of new shoreline stabilization in front of stone retaining wall (Principle sketch, NTS)

Economic Development Potential

This project would support the local economy by providing tourists access to downtown Oswego.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to Lake Ontario and the sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action.

PORT AUTHORITY BOATING CENTER (GOBLE DRY DOCK AND SHIP YARD)

This project seeks to provide a community docking area for up to 25 boats, in lieu of the earthen dock, which has been eroded due to high water in Lake Ontario. The dock would be used in conjunction with the port-owned H.L. White Museum for boating. With the docks located close to downtown, this project will help support the local tourism industry for those looking to access downtown Oswego.



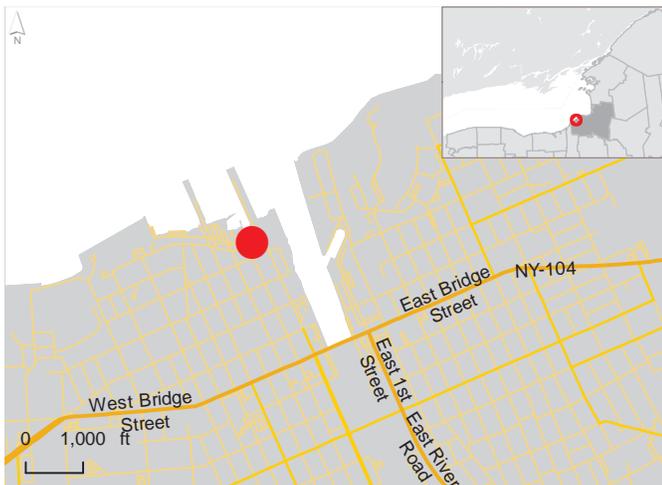
City of Oswego,
Oswego County



Port of Oswego Authority



1,800,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing sheet pile in a new dock design for up to 25 boats

Public Support and Asset Owner

Public support is moderate to high. The community and visitors were using the earthen dock until it became unsafe or unstable. Now they are looking for an alternative that is close to downtown and more flood-resistant. The asset owner is public.

Permitting and Feasibility

This project is considered moderately to highly feasible. Permitting would be required for a new dock, to ensure it is not adversely impacting water-based activities, the environment, and to ensure it is safe.

Benefits

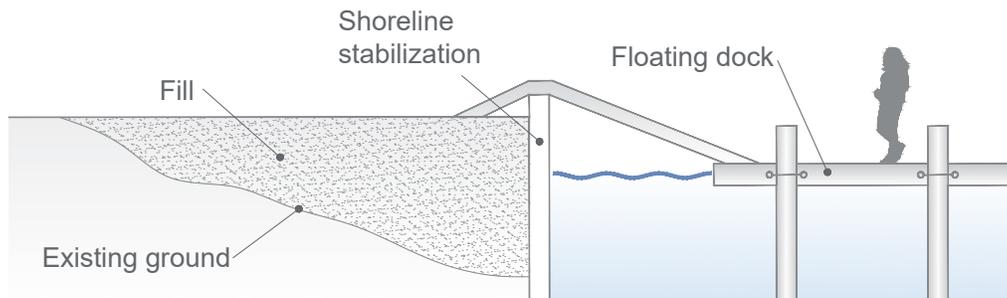
This project will protect boaters previously using the earthen dock. The newly constructed docks would be designed to account for high water levels, protecting the boaters from flooding and inundated docks. The new docks would also help protect the economy by providing access to Oswego for tourists and, increasing revenue from tourism.

Flexibility

There is flexibility in how the project will be designed, based on which materials and the extent of construction. Alternatives can be evaluated during the design process to determine the most sustainable and resilient design.

Durability

This project will include a durable dock design that can withstand high water levels and heavy wave action. The new docks would be flood-resistant,



Installation of new shoreline stabilization (Principle sketch, NTS)

unlike the earthen dock, which has been eroded, so the new dock design would improve the overall durability.

Economic Development Potential

This project would support the local economy by providing tourists with better access to downtown Oswego.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to Lake Ontario and the sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action; rehabilitated earthen dock; stabilize shoreline.

PORT AUTHORITY (LEHIGH CEMENT)

This project seeks to repair a portion of dock along the west side of the waterfront where the Oswego River discharges into Lake Ontario by the Lehigh Cement facility. There is a failure in the south end of the dock where it meets the Sprague retaining wall. A survey of the damage has been performed by the Port Authority.



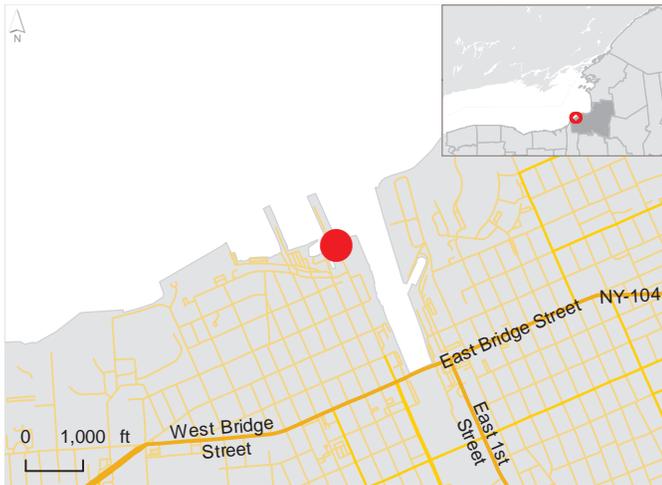
City of Oswego,
Oswego County



Port of Oswego Authority



70,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Repairing a portion of dock by the Lehigh Cement facility

Public Support and Asset Owner

Public support is moderate to high. The dock in this location is a critical facility in Oswego. The dock is located at an area with a high amount of boat traffic and supports facilities key to the Oswego economy. There is a high level of public supports ensuring these facilities remain safe and functional. The asset owner is public.

Permitting and Feasibility

This project is considered highly feasible. Multi-jurisdictional permit review is needed.

Benefits

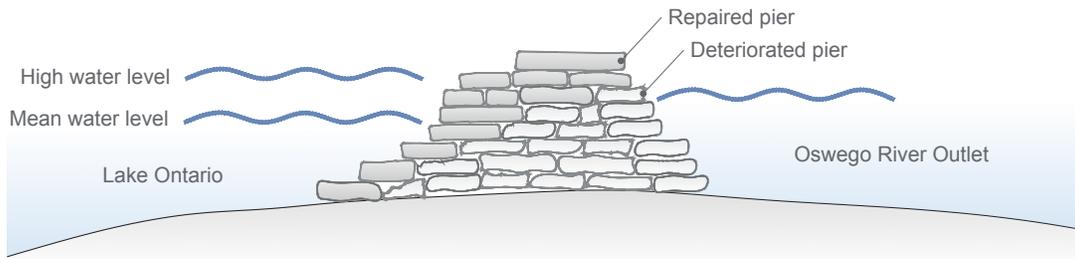
This project will protect those who use the Port Authority dock by ensuring that the structure remains stable and sturdy. Further failure of the dock structure could result in closing of port activities, closing of businesses, or loss of life. By repairing the dock, those possibilities are eliminated.

Flexibility

There is flexibility in how the project will be designed, based on which materials and the extent of construction. Alternatives can be evaluated during the design process in order to determine the most sustainable and resilient design.

Durability

This project will improve the durability of the Port Authority dock. The repair designs will ensure the structure is able to withstand winds, water over the break wall, and wave action.



Dock repair (Principle sketch, NTS)

Economic Development Potential

This project would support the local economy by minimizing property damage and safety risks by keeping the dock and those using it safe. Keeping the businesses on the dock operational ensures employment for local residents and additional tax revenue for the state and city.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to the lake and river, and the sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action; raising the dock.

PORT AUTHORITY MARINA

This project seeks to address damage caused by high water levels at the Port Authority Marina. Installing dock kits to complete marina upgrades will increase flood resiliency. Labor and installation will be provided by the Port Authority.



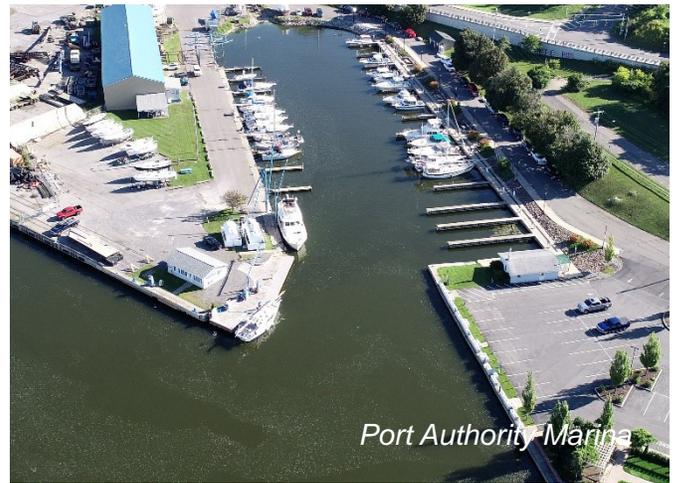
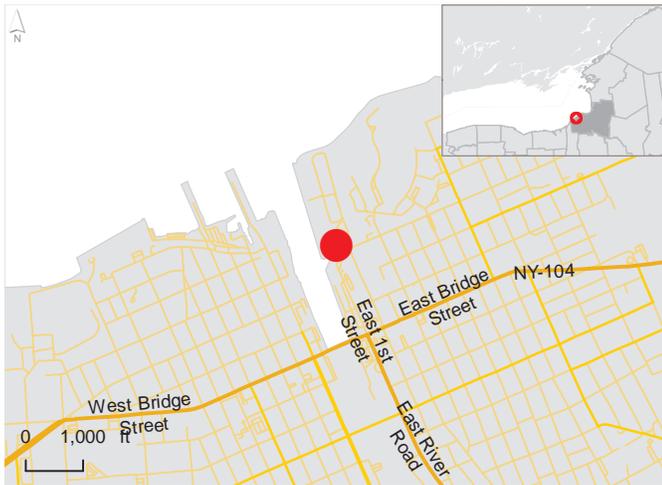
City of Oswego,
Oswego County



Port of Oswego Authority



40,000



Mitigation Measures

Proposed mitigation measures in this project will consist of:

- Installing additional floating dock kits, allowing docks to self-adjust over a range of lake levels
- Electrical Improvements: modification of dock electrical services in tandem with floating docks and/or relocation of facility infrastructure affected by rising water levels

Public Support and Asset Owner

Public support is moderate to high. The Port Authority and the businesses that operate out of it are a large source of revenue for the local economy, providing jobs and tax revenue. The asset owner is public.

Permitting and Feasibility

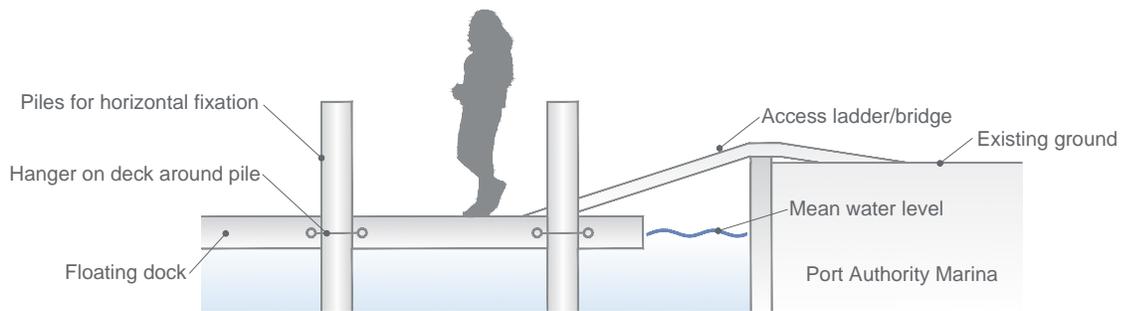
These projects are considered moderately to highly feasible due to the type of improvements. Work will only be conducted in areas that have already been improved.

Benefits

This project aims to reduce the risk of flooding to the marina. The marina supports both charter boat and recreational craft operations with upward of 65 slips to accommodate vessels of various lengths. If the docks continue to experience failure, they will become inoperable and the businesses will be forced to move or close.

Flexibility

All elements of this project will be designed to be flexible over a large range of lake levels, allowing the marina to remain in operation all season.



Installation of additional floating dock kits (Principle sketch, NTS)

Durability

This project will improve the durability of the Port Authority Marina to adjust to changes in lake levels. Construction methods and materials will be designed to withstand a wide range of summer and winter conditions in order to minimize maintenance and ensure longevity.

Economic Development Potential

This project would support the local economy by promoting and increasing tourism in the Oswego harbor and supplementing the new recreational vehicle (RV) park located adjacent to the marina. Located at the head of the Oswego Canal system, the port and the marina serve as a starting point for inland tourism. The asset is valuable to the local economy, as it draws revenue from tourism and has high recreational value.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to the lake and river, and the sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action.

PORT AUTHORITY WEST PIER

This project seeks to repair portions of shoreline stabilization measures on the west pier of the Oswego River outlet to Lake Ontario. Due to high water levels and wave action, retaining walls have failed at two locations near Sprague Energy facilities.



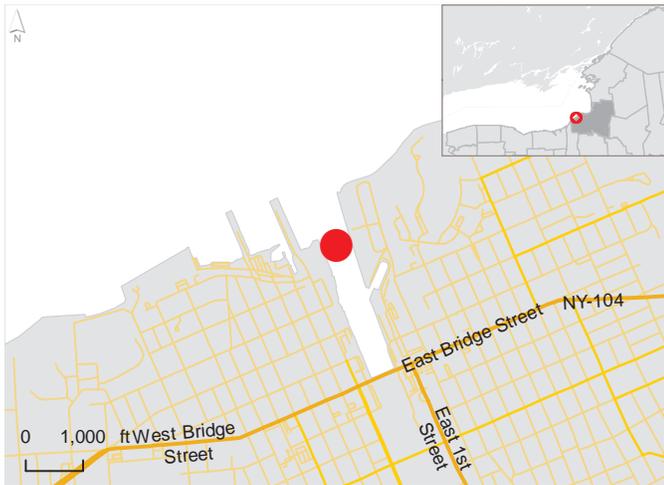
City of Oswego,
Oswego County



Port of Oswego Authority



100,000



Port Authority west pier

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Repairing shoreline stabilization measures on the west side

Public Support and Asset Owner

Public support is moderate to high. The Oswego Port and the businesses that operate out of it are a large source of revenue for the local economy, providing jobs, and tax revenue. If the docks continue to experience failure, they will become inoperable and businesses will be forced to move or close. There is public support for keeping the port and businesses operational, requiring fixing wall failures in the near-term. The asset owner is public.

Permitting and Feasibility

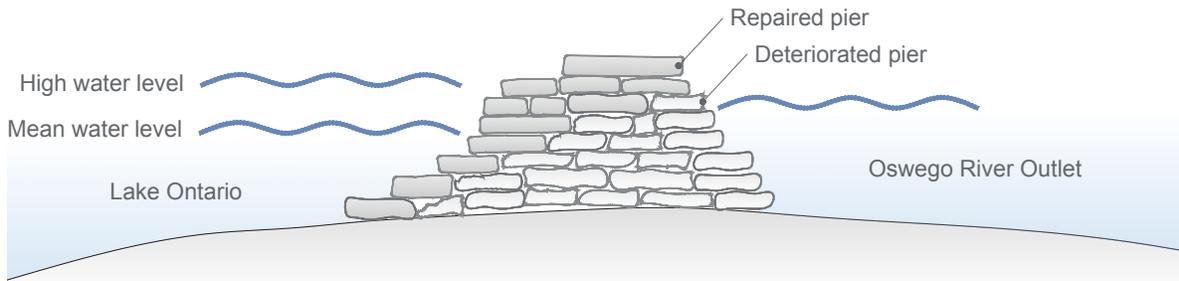
This project is considered highly feasible. Multi-jurisdictional permit review is needed.

Benefits

This project will protect those who use the Port Authority Pier by ensuring that the structures and foundations remain stable and sturdy. Further failure of the pier retaining walls could result in closing of port activities, and business closures, or loss of life. By repairing and enhancing the walls of the pier, risks are reduced.

Flexibility

There is flexibility in how the project will be designed, based on materials and the extent of construction. Alternatives can be evaluated during the design process in order to determine the most sustainable and resilient design.



Raised and repaired western pier (Principle sketch, NTS)

Durability

This project will improve the durability of the Port Authority waterfront. The repair designs will ensure the retaining walls are able to withstand future high water levels and wave action. Repairing the west wall will ensure the adjacent land and business will not be subject to water damage and deterioration.

Economic Development Potential

This project would support the local economy by minimizing potential property damage to those using waterfront, and ensuring the Port Authority and businesses are able to continue operating. Keeping the waterfront businesses operational ensures employment for local residents and brings in tax revenue.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize disturbances to the lake and river, and the sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action; raising the piers; temporary flood protection.

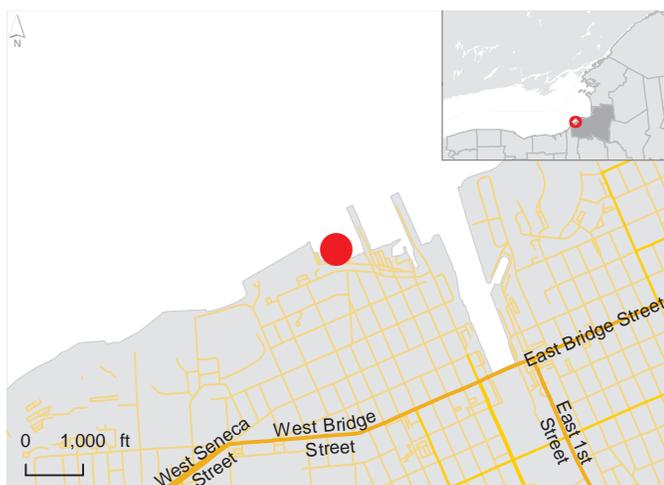
WRIGHTS LANDING MARINA

This project seeks to not only make Wrights Landing Marina more flood resistant, but also to increase business by making it more pedestrian friendly. The project would entail assessing flood damage to docks and making adequate repairs, redesigning and expanding the docks and slips, raising areas of the marina susceptible to flooding, creating a new pedestrian boardwalk and providing landscape improvements. There are two specific areas of the boardwalk that would need to be raised about 3 ft in order to reduce future flooding.

 City of Oswego,
Oswego County

 City of Oswego

 6,100,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Raising the elevation of marina structures to compensate for higher water levels, including the boat launch, pavilion area, parking lot, and access roads.
- Bioretention basins to infiltrate, store, and filter the rainwater

Public Support and Asset Owner

Public support is high. The city strongly supports this development, including it in their Resiliency and Economic Development Initiative (REDI) application focusing on “Transforming the Waterfront”. For the restaurant, the city has already received an “intent to occupy” letter from a local restaurateur, proving the local support for business opportunities on the marina. In 2019, the city was forced to close the

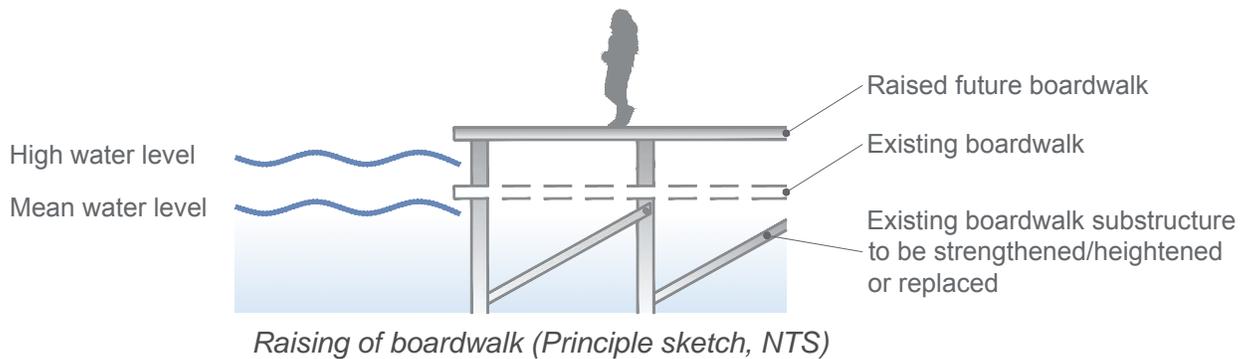
marina during the busiest time of the year, causing a 50 percent loss in revenue. The asset owner is public.

Permitting and Feasibility

This project is considered highly feasible due to the amount of support from stakeholders including the City of Oswego. The redevelopment efforts include measures that are widely acceptable.

Benefits

By raising portions of Wrights Landing Marina, flooding impacts will be reduced to the marina, water-based businesses, and assets. In providing structural repairs and redesign, the docks would be more resilient against wave action. By providing a restaurant and recreational opportunities, the local economy is also protected for longer sustainability.



Flexibility

There is flexibility in the design of the marina, in terms of which businesses and recreational opportunities become available.

Durability

Raising areas of the marina will reduce the potential damage from flooding, by ensuring that water runoff does not pond in areas without drains, and that it is more resilient against wave action. The redevelopment will also include infrastructure and utility rehabilitation and upgrades, providing further durability to the marina. Floating style docks have an approximate design life of 20 years.

Economic Development Potential

The improvements to the Wright’s Landing Marina will help attract more boaters to the marina and the Oswego area. Boaters often choose other areas to rent for the season because no Oswego marina has the quality amenities they desire.

This project proposed is strategically designed to attract new investment, jobs and visitors. The fortification, repair and enhancements at the marina are also part of the strategy to complete the connection between the waterfront district and the new and growing downtown business corridor that is blossoming as a result of the City’s Downtown Revitalization Initiatives.

Environmental Considerations

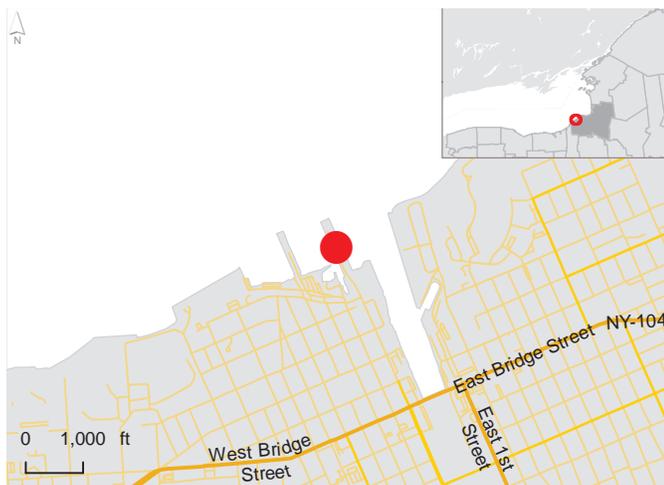
The project will avoid any adverse environmental impacts. It will limit the amount of construction taking place in the lake and will use practices that are as sustainable as possible.

Alternatives Considered

No action; infrastructure protection measures; temporary flood protection.

INTERNATIONAL PIER

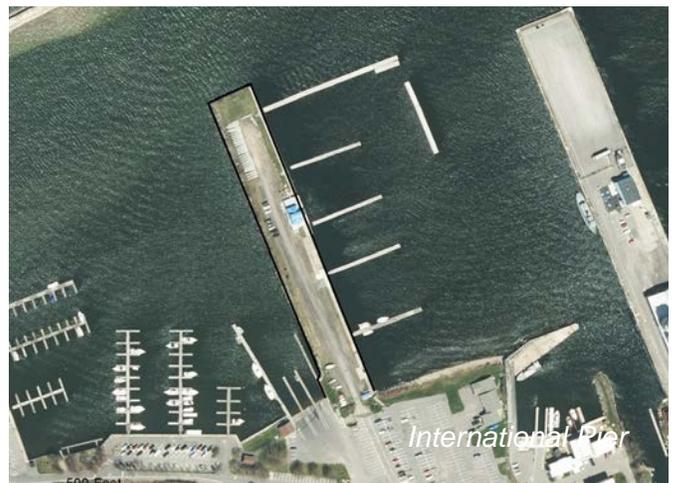
The project will stabilize, protect, and convert the deteriorating International Pier into a pedestrian-friendly open space resembling a park, and connect to the city's walking trail system. The current pier layout underutilizes the space, and does not attract recreational boaters, or draw residents to the waterfront. Ultimately, the project will build upon adjacent infrastructure to create and enhance recreational opportunities creating a vibrant and open public space.



 City of Oswego,
Oswego County

 City of Oswego

 6,500,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing new water, sanitary sewer, stormwater collection, and electrical services, a gateway arch, vehicle parking, and controls
- Improving the landscape
- Relocating and replacing boat slips
- Installing shoreline stabilization measures to protect the pier bulkhead and sidewalls

Public Support and Asset Owner

Public support is high. The project is the highest priority for the City of Oswego and builds on momentum from recent investments made by the city and state through the LWRP in transforming the lower harbor trail. The asset owner is public.

Permitting and Feasibility

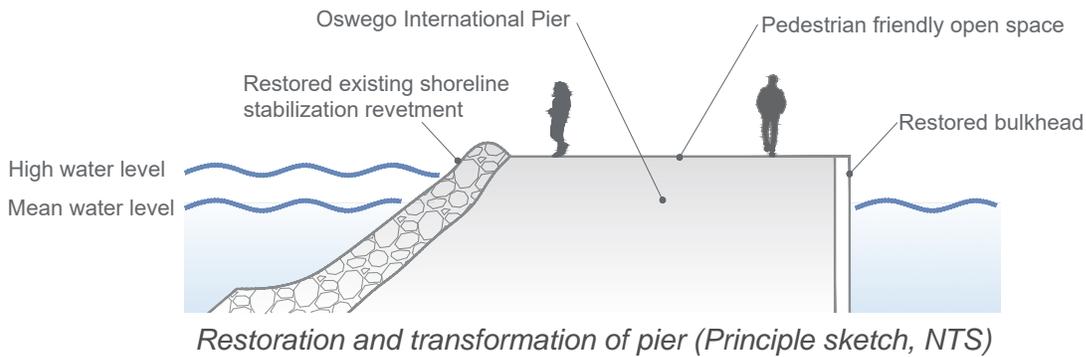
Proposed work will occur within the existing pier footprint, enhancing and replacing existing infrastructure. This project is considered to be highly feasible due to the city and state support and effort that has already gone into planning of the pier. Multi-jurisdictional permit review is needed.

Benefits

The project entails redeveloping the pier so it is more structurally sound and resilient to future wave action and water levels. The project will combine facilities into a more efficient configuration, move assets to the protected west side of the pier, and better connect the pier to the Wright's Landing Marina.

Flexibility

The plan for the pier includes making the east side of the pier flexible for a variety of uses. The pier's structural repairs and resiliency can be flexible by adapting the design to anticipated wave action and



environmental conditions. The proposed parallel parking format of the pier will allow for ships of a variety of lengths to park in the marina, which currently can not fit.

Durability

The project entails durable structural repairs and resiliency measures to ensure the redevelopment has a long life-cycle with minimal maintenance required.

Economic Development Potential

Recreational boating and waterfront activities are a major source of revenue for the city and its businesses. Converting the International Pier into an accessible, vibrant public space will attract boaters, residents, and tourists alike by providing more activities at the immediate waterfront.

Environmental Considerations

The project's construction will lessen the impact on the environment and minimize the disturbance to the lake and river.

Alternatives Considered

No action; pier replacement.

NORTH SANDY POND RESILIENCY PROJECT – BARRIER BARS

This project will address reoccurring breaches along a barrier bar that divides Sandy Pond and Lake Ontario, while maintaining a balance of natural coastal processes, protecting property and infrastructure, and ensuring recreational access. Since 2017, the barrier and the channel leading to Sandy Pond have experienced significant erosion, leading to flooding and the closure of adjacent businesses.



 **Town of Sandy Creek, Oswego County**

 **Town of Sandy Creek**

 **600,000**



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Replacing sand along 4,000 ft of shoreline with between 30,000–40,000 cubic yards of sand from shoal that formed behind the current channel. The source of the shoal is sand that has washed into the channel and beyond from the increased storm surge due to higher water levels on the Lake

Public Support and Asset Owner

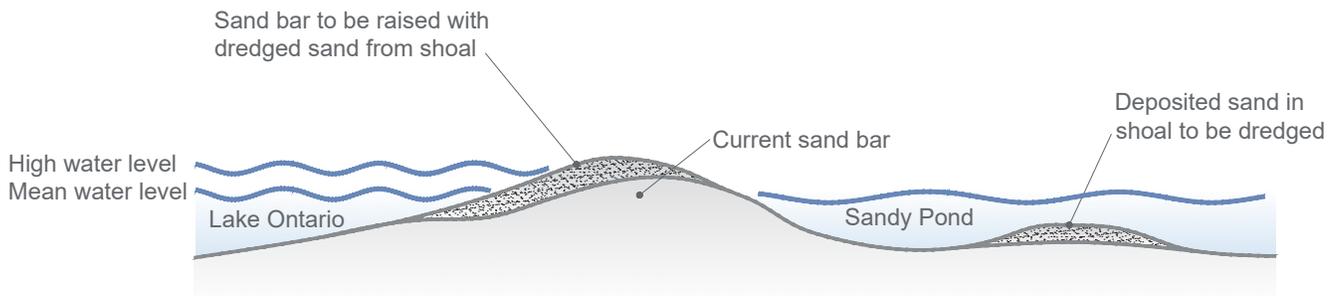
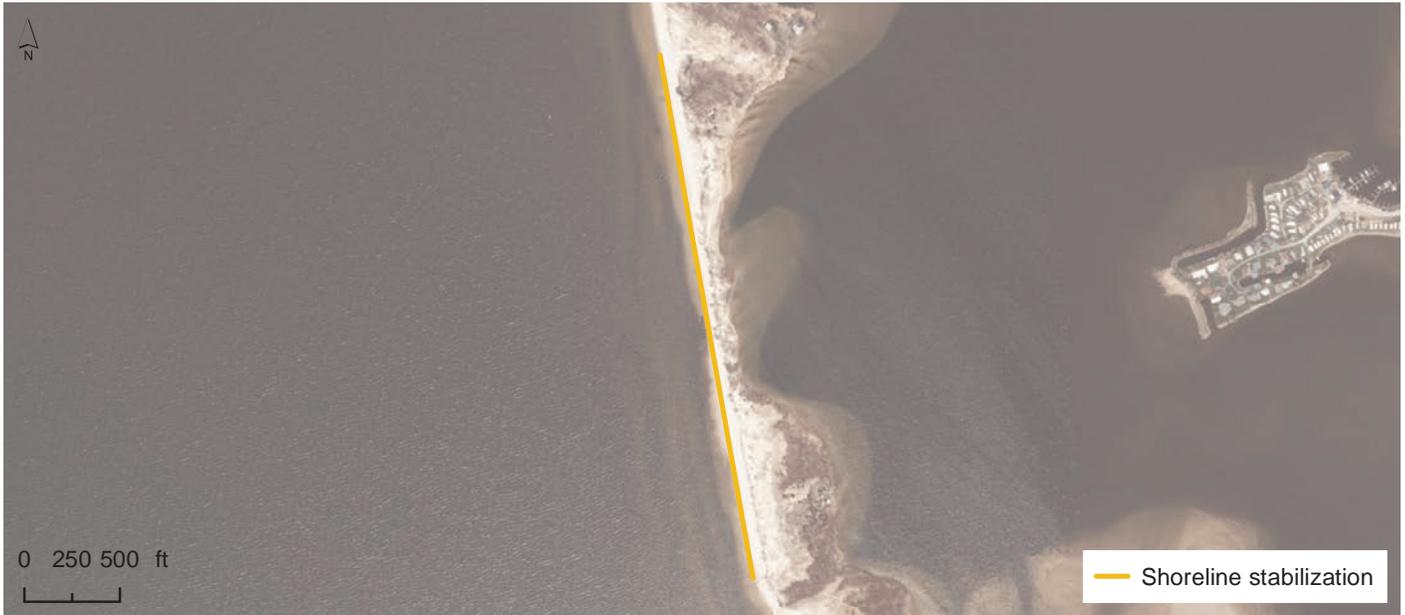
Public support is high. Multiple stakeholders have been engaged and provided input. Some funding is already in place, studies performed, and permits and private owner access agreements obtained. This project has an immediate need since the channel is quickly filling in. The asset owners are private and public.

Permitting and Feasibility

This project is considered highly feasible due to studies already being performed and permits and initial funding obtained. The project will improve access, is low maintenance, and supports green techniques.

Benefits

The barrier bar protects Sandy Pond, which is bordered by local businesses and homes. When breached, debris, ice, and waves can enter the pond unimpeded, cause property damage to structures and erosion to shorelines. The proposed barrier bar enhancement reduces the potential for future breaches and property damage. The project will also restore portions of the beach along Barrier Bar, which is popular with recreational boaters.



Raising of sand bar with dredged material from shoal (Principle sketch, NTS)

Flexibility

The elements of this project can be easily adjusted, including height, length, material composition, position, and addition or subtraction of project elements. This project can also serve as a basis for adaptive management should long-term management goals be unmet, requiring an increased level of protection and accompanying justification.

Durability

Enhancements to the barrier bar will provide a more durable structure to protect Sandy Pond and adjacent property. Maintenance may be required as it is likely that erosion will continue to occur. However, the project will reduce the overall volume of erosion by preventing additional flow from coming into Sandy Pond and eroding more of its shoreline.

Economic Development Potential

The project will protect businesses and allow for more businesses to open, increasing revenue and improving the economic stability of the area. As there

is no road access to the area, Sandy Pond Beach is referred to as a “boater beach” by local residents, and attracts approximately 20,000 visitors per year with associated annual tourism spending of about \$1 million.

Environmental Considerations

It is likely the project will enhance habitats for species in Sandy Pond by reducing the amount of debris, ice, and waves coming into the pond from Lake Ontario. The design and construction will be performed to reduce adverse impacts to the lake, pond, and local habitats.

Alternatives Considered

No action; limited sediment management; adaptive management; infrastructure protection measures; fortification using rock revetment.

MEXICO POINT PARK

Mexico Point Park provides the Town of Mexico with a beach to access Lake Ontario for seasonal water sport rentals, swimming, fishing, and other recreational activities. Over time, the beach has lost 35 ft of shoreline depth due to wave action in Lake Ontario.



Town of Mexico,
Oswego County



NYS Office of Parks, Recreation
and Historic Preservation



480,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing approximately 350 LF of natural or nature-based shoreline stabilization along shoreline present in 2016, backfill, and landscape
- Natural and nature-based features will be considered

Shoreline stabilization measures would help preserve the remaining sand so that visitors can continue enjoying the beach.

Public Support and Asset Owner

Public support is moderate to high. The public would like to see the beach sustained and ensure it remains accessible for waterfront access. The asset owner is public.

Permitting and Feasibility

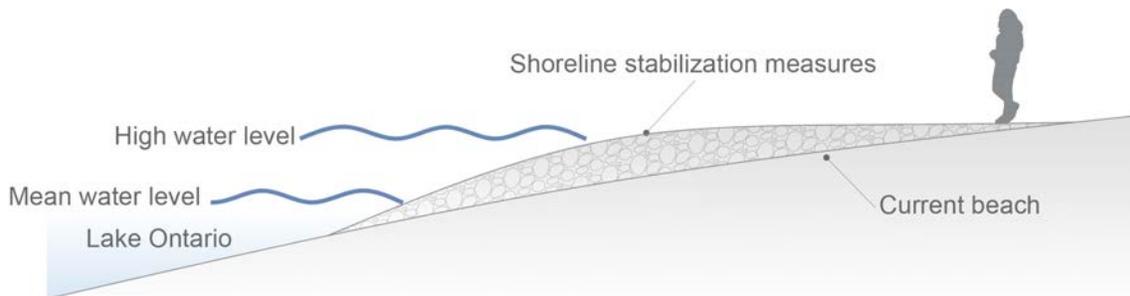
This project is considered highly feasible. Permitting would be required for installing shoreline stabilization measures. However, such measures are widely accepted proven practice, effective for beach protection allowing the project to be highly feasible. Multi-jurisdictional permit review is needed.

Benefits

This project aims to protect the beach of Mexico Point Park. Preserving the beach will help protect the local economy by continuing to attract visitors and tourists with access to Lake Ontario, and supporting other local businesses with tourist revenue.

Flexibility

There is flexibility in how the project will be designed, based on materials and the extent of construction. Alternatives can be evaluated during the design process to determine the most sustainable and resilient design.



Installation of shoreline stabilization measures on beach (Principle sketch, NTS)

Durability

This project will improve the durability of the beach at Mexico Point Park by ensuring that the sand will be in place for a longer period and not as vulnerable to washing away.

Economic Development Potential

This project would support the local economy by continuing to attract visitors and tourists with its many natural, cultural, and historical attributes. Attracting visitors helps support local businesses by drawing in business to the Town of Mexico.

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize disturbance to the lake and will aim to preserve waterfront habitats.

Alternatives Considered

No action; sand bags; seawall.

RESIDENCES & BUSINESSES ALONG NYS ROUTE 104 AND FRED HAYES BLVD./ COMMERCIAL DISTRICT ON COUNTY ROUTE 89

This project seeks to address wastewater issues in the Town of Oswego's commercial areas, adjacent to Lake Ontario's shoreline. During flooding, sewers back up and the quality of the water and the environment are compromised. This project will extend the sanitary sewer districts from the new State University of New York (SUNY) Oswego housing development to the Lake Shore commercial district to eliminate the need for on-site septic systems and the likelihood of septic backup.



 City of Oswego,
Oswego County

 Town of Oswego

 4,800,000



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Extending existing sanitary sewer network to new housing for SUNY Oswego on Route 104 west to Fred Haynes Blvd., then north to County Route 89
- Extending existing sanitary sewer network to the Lake Shore commercial district, collecting wastewater from 78 properties

Public Support and Asset Owner

Public support is high. There is support from multiple stakeholders including Oswego County and SUNY Oswego, which own property that would be serviced

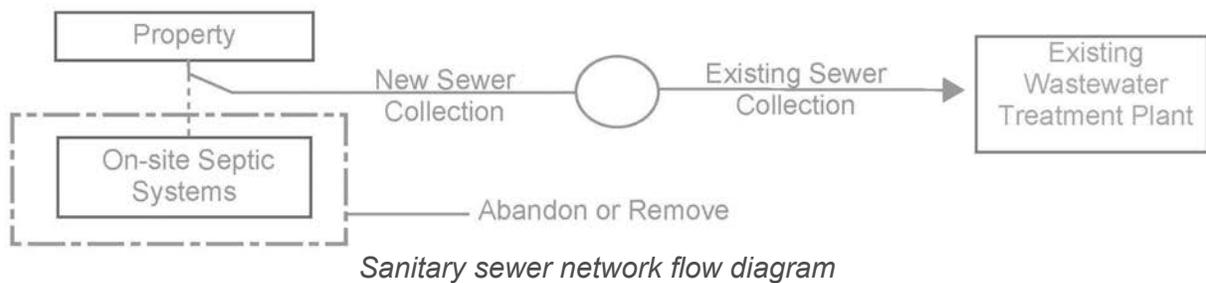
by this project. A petition to form a sewer district was received by the town and signed by 85 percent of the properties affected. The asset owner is public.

Permitting and Feasibility

This project is considered moderately to highly feasible due to improved public health and reduced flooding. With the improvements taking place in-land, lake and natural habitats will not be affected. Multi-jurisdictional permit review is needed.

Benefits

This project will protect property from the impact of septic system backup and overflow and will protect public health from related bacteria and contaminants.



Flexibility

Providing a functional stormwater collection system to the community will allow for flexibility in future development of the area. There is also flexibility in which materials and methods are used for the project. The design will take these into consideration and aim to provide the most sustainable and resilient solution feasibly and economically possible. Feasibility will likely be affected by the ability to feed the additional properties to the existing stormwater collection system.

Durability

The project will provide a durable stormwater collection system for the community. A design-life and maintenance program will be established to ensure the system is as durable as economically feasible. Providing a reliable stormwater collection system to the community will also improve the durability of adjacent property and assets, as they will no longer be inundated with septic overflow.

Economic Development Potential

By providing a reliable stormwater collection system, the properties being serviced will no longer experience septic backup, and property value will increase for this community. This area will become a more desirable location for homeowners and businesses.

Environmental Considerations

The project will improve environmental health by reducing exposure to bacteria and contaminants. The design and construction will avoid any adverse impacts to the environment and will be done in a way that contains any sediment or debris.

Alternatives Considered

No action; increased septic sizes.

SITHE TRAIL

This project seeks to connect two existing trailheads that have lost their connection due to high waters and wind. Previously, the trailheads were connected by a narrow cobblestone beach, 100 yards long, that has been lost or is impassible most of the year. Currently, the area between the two trailheads is mostly marsh that protects the shoreline from erosion.



 **Town of Scriba,
Oswego County**

 **Oswego County**

 **400,000**



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Installing a timber boardwalk on stilts to connect the two trails
- Shoreline stabilization measures and erosion prevention
- Natural and nature-based solutions will be considered

Public Support and Asset Owner

Public support is moderate to high. The trail is frequented by members of the community and visitors. The asset owner is public.

Permitting and Feasibility

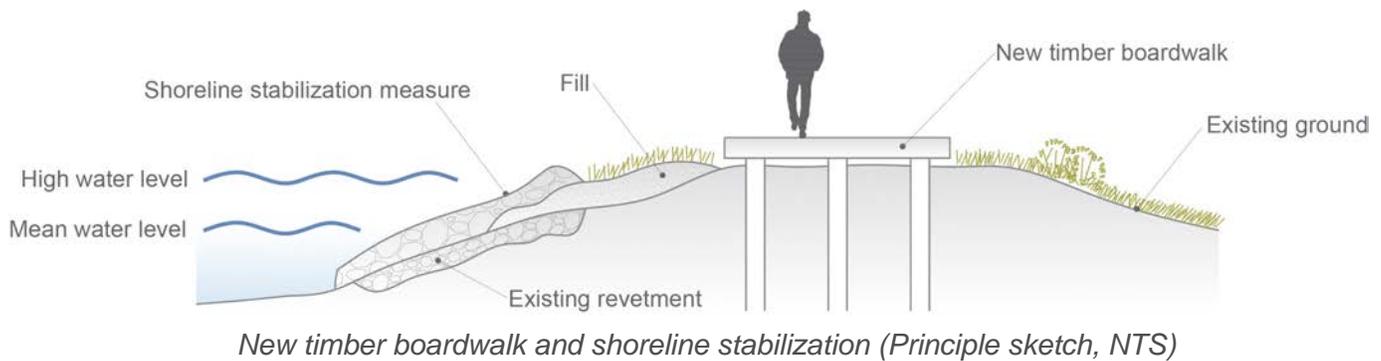
This project is considered moderately feasible. The installation of the timber boardwalk may face feasibility concerns, as it will be installed in a marsh land, and clearing and grubbing may be necessary. Multi-jurisdictional permit review is needed.

Benefits

This project will protect the shoreline from additional erosion due to high water levels. It will also protect the community against a potentially dangerous walk along the beach from one trailhead to the other due to high waves.

Flexibility

The project incorporates materials that will protect the trail from summer and winter wind-driven storms and winter ice. Vegetation will be incorporated to provide strength and stability to the existing ground and new stabilization measures on both sides of the trail.



Durability

This project will have a design life of 20 years for the timber boardwalk, and 100 years for the reinforced revetment.

Economic Development Potential

This project will preserve the value of the nearby shoreline and provide protection to the inland marsh and Novelis facility.

Environmental Considerations

The project will avoid any adverse environmental impacts. It will limit the amount of construction in the lake and use practices that are as sustainable as possible.

Alternatives Considered

No action.

NEW SANDY CREEK SEWER DISTRICT

This project seeks to mitigate the impacts on the Town and Village of Sandy Creek due to septic systems employed in the area. Flooding and high water levels create many septic hot-spot areas in the two communities. Recent flooding of the shoreline along North Sandy Pond has created a need for adequate sanitary treatment and disposal in a highly environmentally sensitive area.



Town of Sandy Creek,
Oswego County



Town of Sandy Creek



200,000



Mitigation Measures

Proposed mitigation measures in the project will consist of a study to support the development of:

- A new sewer district
- Installing a sanitary sewer system and the construction of a WWTP; the sewer system would strive to eliminate septic hot-spot issues in the district

Public Support and Asset Owner

Public support is high. The community's health concerns give this project high public support. The asset owner is public.

Permitting and Feasibility

There are currently no feasibility concerns regarding this project. Portions of Sandy Pond contain Barrier Dunes with seasonal residences. Multi-jurisdictional permit review is needed.

Benefits

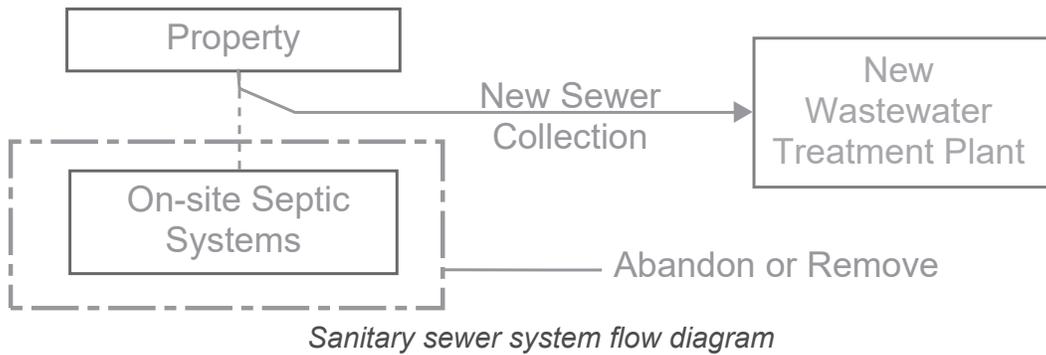
This project will protect public health of the town (population approximately 4,000 people) by improving water quality by reducing the number of septic system overflows.

Flexibility

There is flexibility in the design of this project. A range in materials, installation, and treatment methods can be applied. The extent of the system can also be adjusted to provide the most valuable and cost-effective options.

Durability

The project will make the homes and entire community more durable. The current septic system infrastructure can be greatly impacted by flooding. Measures can be taken to ensure the new system will be durable enough to withstand flooding.



Economic Development Potential

The sewer district will promote industry investment into the area. The new system could also increase property values in the area.

Environmental Considerations

The project will avoid any adverse environmental impacts. The environment will benefit due to the elimination of a high number of current septic system hot-spots. Additionally, the treatment plant should be designed to discharge to safe levels into the surrounding area.

Alternatives Considered

No action.

WEST LAKE RD. OUTFALL TO LAKE ONTARIO

The existing stormwater outfall for West Lake Rd. has been damaged due to the recent increase in lake levels and storm events, causing flooding of adjacent businesses and residences.



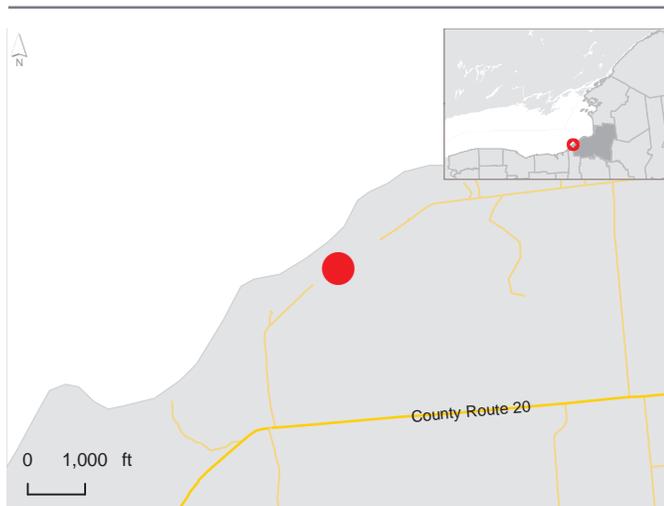
Town of Oswego,
Oswego County



Town of Oswego



400,000



West Lake Rd.

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Replacing a 40-inch corrugated metal pipe (CMP) in order for stormwater to effectively discharge without causing backup and flooding to the adjacent residential and business district

Public Support and Asset Owner

Public support is high. Local businesses have expressed concern about overland flooding into their properties with the outfall in its existing condition. The asset owner is public.

Permitting and Feasibility

This project is considered feasible as it will be a in-kind replacement for the outfall. Multi-jurisdictional permit review is needed.

Benefits

This project will protect adjacent businesses and homes from overland flooding due to an inoperable stormwater system.

Flexibility

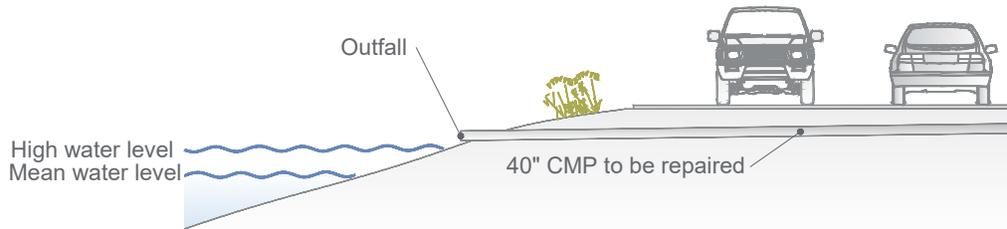
There is flexibility in how the project will be designed, based on which materials and the extent of construction. The outfall, when restored, will function over a range of lake levels.

Durability

This outfall should be replaced with a reinforced concrete pipe, of equal diameter, and anchored with shoreline stabilization measures. Installed in this way, the outfall will withstand a wide range of lake levels and storm conditions.

Economic Development Potential

This project would support the local economy and relieve overland flooding issues within the adjacent community.



Pipe repair (Principle sketch, NTS)

Environmental Considerations

The project will avoid any adverse environmental impacts. The project will aim to minimize the disturbance to Lake Ontario by remaining within the existing footprint.

Alternatives Considered

No action; new outfall; raised shoreline and outfall.

COUNTY ROUTE 5/LAKE ST.

This project seeks to address high water damage to the existing concrete retaining wall and construct a riprap energy dissipater along County Route 5 at the mouth of the Salmon River.



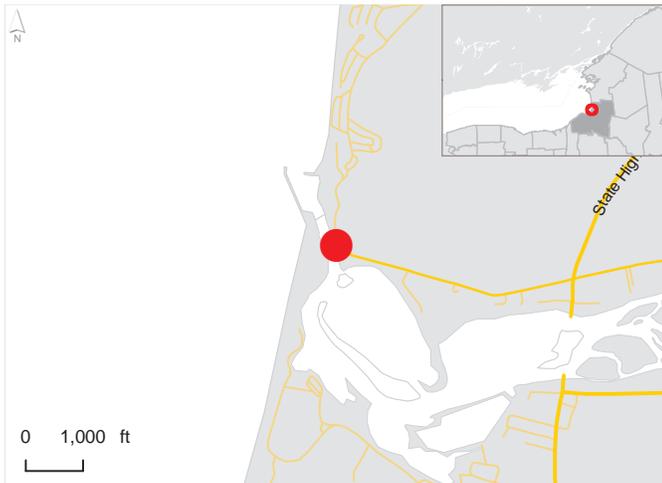
Town of Richland,
Oswego County



Oswego County



500,000



County Route 5/Lake St.

Mitigation Measures

Proposed mitigation measures in this project will consist of:

- Replacing the eroded portion of the riprap with appropriate size stones able to resist wave energy from higher lake levels
- Reinforcing the existing concrete wall that retains County Route 5

Public Support and Asset Owner

Public support is moderate to high. County Route 5 is the only access to the east side mouth of the Salmon River. It also provides access to local residences along Lake St., and the Salmon River Lighthouse and marina, from which charter fishing boat captains, a local source of revenue to the town, conduct business. The asset owner is public.

Permitting and Feasibility

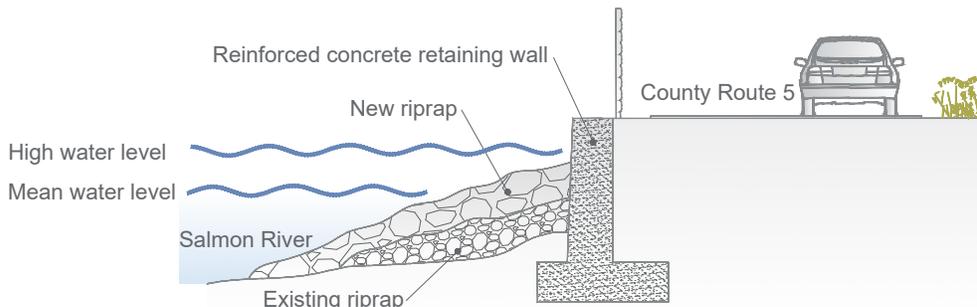
This project is considered highly feasible. Multi-jurisdictional permit review is needed.

Benefits

Reinforcement of the wall and installation of new wave-breaking riprap will protect public and private access to residences and businesses for a range of lake level and storm conditions. The mouth of the Salmon River is protected by a federal breakwater, resulting in lower storm driven wave action along County Route 5, adding to the overall protection of the area.

Flexibility

The project will be implemented to ensure protection over a wide range of static lake levels and storm events, while maintaining flow and sediment conditions on the Salmon River.



New shoreline stabilization in front of existing concrete wall (Principle sketch, NTS)

Durability

This project will improve the durability of the surrounding commercial and residential community. There is flexibility in the design allowing for durability over a range of conditions. The county also has the option to reroute portions of Lake St. to direct residential traffic during construction.

Economic Development Potential

This project would support the local economy by ensuring access to the mouth of the Salmon River for charter fishing enthusiasts, an important part of the local economy. Without safe continuous public access, the charter captains may be forced to relocate, resulting in the closing of the Salmon River Lighthouse and marina. The marina provides services to the surrounding private homes, rental businesses, and Brennans Beach RV Park.

Environmental Considerations

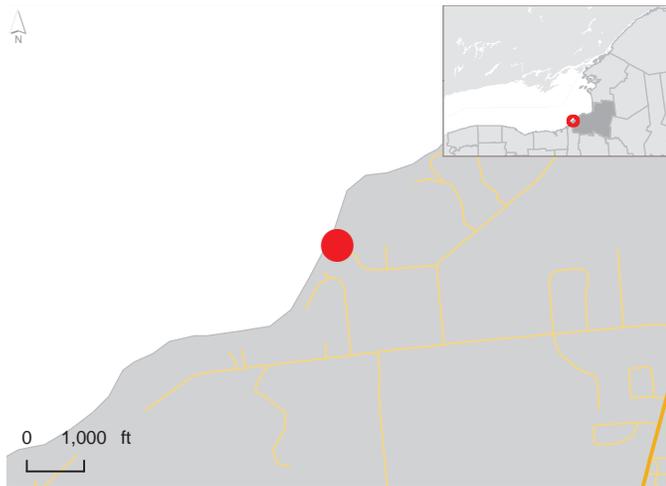
The project will avoid any adverse environmental impacts. The project aims to minimize the disturbance to the Salmon River and will not result in impacts to waters of the U.S.

Alternatives Considered

No action.

CAMP HOLLIS

Camp Hollis is a co-ed summer camp for children ages eight to 14, owned by the Oswego City-County Youth Bureau. The camp's land is situated on the south shore of Lake Ontario. The project seeks to address shoreline erosion against the camp property. Camp Hollis is losing property to erosion from the predominantly northwest winds of the lake and heavy wave exposure. The vegetation around the property up to the top of the shore bluff has been cleared and replaced with turf, causing increased runoff speed and erosion of the shoreline. If the erosion continues, the camp's septic system, ball fields, and pavilion will be undermined, limiting the park's ability to function as a summer camp for under privileged children.



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Re-grading the shoreline bank to a more stable slope
- Installing stabilization measures along the shoreline
- Alternative natural and nature-based solutions were identified and are under consideration
- Installing brush mattresses, a drainage swale, and vegetation up to the edge of the turf



Town of Oswego,
Oswego County



Oswego County



500,000

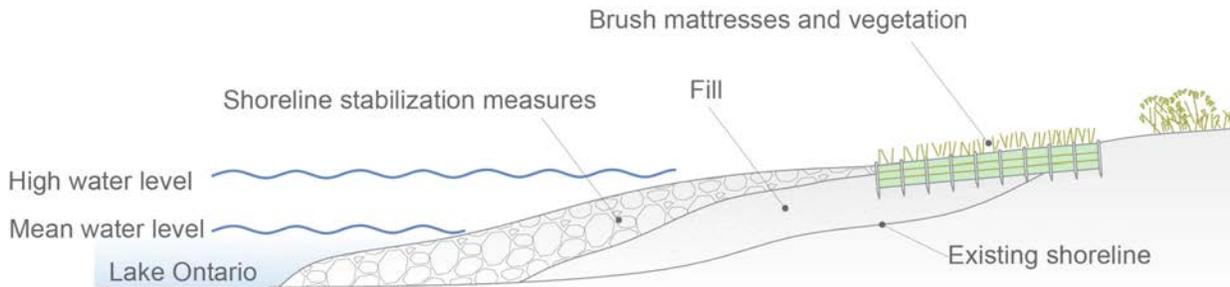


Public Support and Asset Owner

Public support is moderate. The camp owns lakeshore property, but the majority of the assets are set back from the shoreline. There is a high cultural value with a history of the camp providing facilities for more than 2,000 at-risk youth per year no matter their financial background. The asset owner is public.

Permitting and Feasibility

This project is considered moderately to highly feasible. There is currently riprap along the shoreline and this project would seek to increase or replace shoreline stabilization measures. The brush mattress and vegetative measures are an additional benefit to the shoreline, by providing ecological benefits. These are commonly accepted practices that have been proven effective. Multi-jurisdictional permit review is needed.



Re-grading shoreline with fill and brush mattresses and new shoreline stabilization measures (Principle sketch, NTS)

Benefits

This project will seek to protect the property and those using Camp Hollis. This project will protect infrastructure supporting the camp’s activities and the health of the youth and employees at Camp Hollis by ensuring the sewage and water systems remain intact and functional.

Flexibility

The project will function over a wide range of static water levels and storm-driven wave events. Additionally, the design will withstand both summer storm and winter ice conditions.

Durability

This project will improve the durability of Camp Hollis by providing a more stable shoreline that can withstand greater wave action and divert runoff. The shoreline stabilization materials and vegetation will aid in anchoring the soil, while the drainage swale will aid in diverting and slowing high velocity runoff.

Economic Development Potential

This project would ensure the camp can continue to be used for many more children to enjoy. The camp provides financial aid for children to attend who may not be able to afford it.

Environmental Considerations

By adding vegetation, the project will improve the environmental conditions of that area of shoreline. The vegetation will provide additional ecological habitats and aid in filtering the overland runoff. It will be important for the design to include local, non-invasive species. The project will avoid any adverse environmental impacts, and aim to minimize the disturbance to the lake. Sediment from construction activities will be contained and properly disposed.

Alternatives Considered

No action; seawall; break wall.

JOE FULTZ BLVD.

Higher lake levels combined with enhanced wave activity during storms causes lake materials to wash into and restrict the outflow from an unnamed creek. This causes the adjacent wetlands to overflow onto private property from the land side, exacerbating damage to properties and the road. The project will study how well the wetland southeast of the road drains after storms and when lake levels recede.



Mitigation Measures

This project will require a study in coordination with NYSDEC to determine the specifics of the following potential mitigation measures:

- Dredging
- Improving road culverts
- Improving outlet protection to prevent sedimentation
- Study will include an ecological assessment component

Public Support and Asset Owner

Public support is moderate to high. The Town of Scriba has identified this project as a priority. The asset owner is private.

 Town of Scriba,
Oswego County

 Town of Scriba

 60,000 (study)
420,000 (implementation)



Permitting and Feasibility

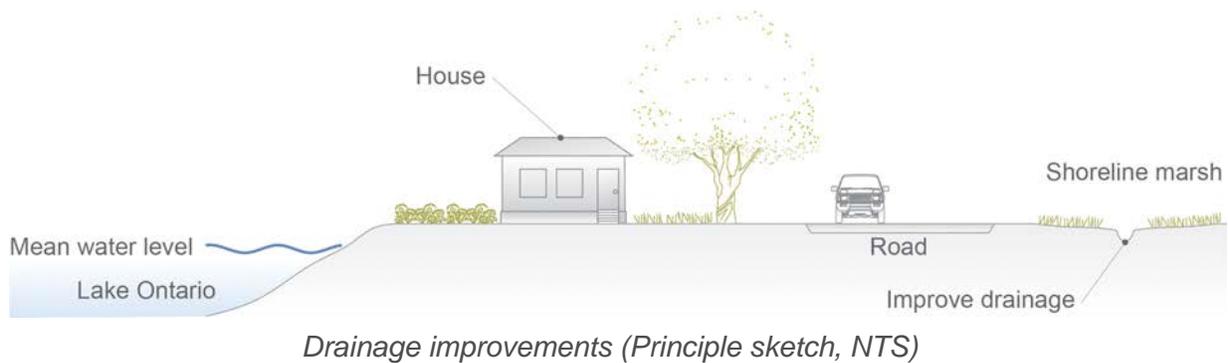
Multi-jurisdictional permit review is needed. NYSDEC must be engaged early, understanding the natural water levels of the wetlands and how they have changed over the years is an environmentally sensitive issue.

Benefits

The terminus of Joe Fultz Blvd. ends at a tributary (Class C stream) to Lake Ontario. The area to the east of Joe Fultz Blvd. is swampy. If water levels can be managed or improved, the road and residences will be less prone to flooding. Approximately 40 homes are located along this road.

Flexibility

Alternatives can be evaluated during the design process to determine the most sustainable and resilient solutions.



Durability

This project will improve the durability of the road.

Economic Development Potential

There is an economic value to maintaining the property value of homes along Joe Fultz Blvd.

Environmental Considerations

The intent of the study will be to identify solutions that will allow proper drainage and connectivity between the lake and the marsh, and not reduce natural water levels during dry conditions. Waterlogged marshes could have negative impacts to native vegetation and fauna.

Alternatives Considered

No action.

LAKE SHORE RD. AT SNAKE SWAMP

This project seeks to improve the resiliency of Lake Shore Rd., which provides access through Snake Swamp, a wetland adjacent to Lake Ontario. Lake Shore Rd. is the primary mode of access for several properties adjacent to the lake. The roadway is receiving FEMA funding for short-term repairs, but needs improvement to make it less flood-prone and more resilient against storms and high water levels.



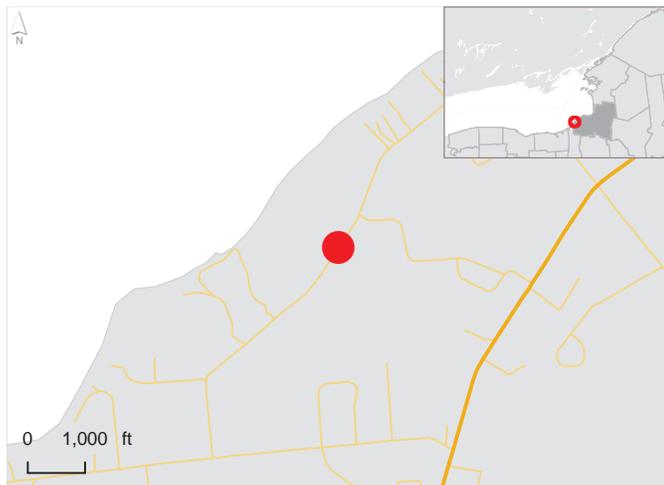
Town of Oswego,
Oswego County



Town of Oswego



200,000



Lake Shore Rd. improvements

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Elevating existing road surface for approximately 1/2 mile

Public Support and Asset Owner

Public support is moderate to high. Lake Shore Rd. is critical to property owners adjacent to Snake Swamp, and visitors wishing to visit the shoreline in this area. The asset owner is public.

Permitting and Feasibility

Lake Shore Rd. runs through Snake Swamp, a wetland, that will require additional protections and limit construction activities. Additionally, Snake Creek (Class C) runs through this area. Multi-jurisdictional permit review is needed.

Benefits

Public welfare will be improved by providing safer roads for the community. The roadways will not be as susceptible to future flooding and damage by repairing sags from sink holes and settlement.

Flexibility

There is flexibility in this project in the materials and design that will be used. A variety of roadway improvements can be chosen to mitigate the risk of flooding.

Durability

This project will increase the durability of the roadway. Raising the roadway will reduce flooding on the road and the amount of maintenance required.



Elevated pavement on Lake Shore Rd. (Principle sketch, NTS)

Economic Development Potential

Given the presence of wetlands, it is unlikely that additional development is possible along Lake Shore Rd. However, improvements to other roadways can allow for greater development. Improving access throughout the town could increase property values by providing homes with safer and more reliable access.

Environmental Considerations

The project will avoid any adverse environmental impacts. The roadway is located within wetlands and will limit the runoff that occurs from any construction.

Alternatives Considered

No action; raise roadway; increase size of stormwater structures; reroute roadways.

COUNTY ROUTE 89

County Route 89 runs along the Lake Ontario shoreline in the Town of Oswego. This project runs westward from the western boundary of SUNY Oswego along County Route 89 until and including the bridge over Rice Creek. The road and associated drainage structures are being undermined by higher lake levels and wave action during storms. This project seeks to increase resiliency and improve the drainage of the roadways.

 **Town of Oswego,
Oswego County**

 **Oswego County**

 **430,000**



Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Repairing or replacing drainage structures
- Elevating portions of County Route 89
- Repairing portions of County Route 89

Public Support and Asset Owner

Public support is moderate to high. The roadway is a major thoroughfare through the Town of Oswego used by residents and tourists. The asset owner is public.

Permitting and Feasibility

This project is considered moderately feasible. Multi-jurisdictional permit review is needed.

Benefits

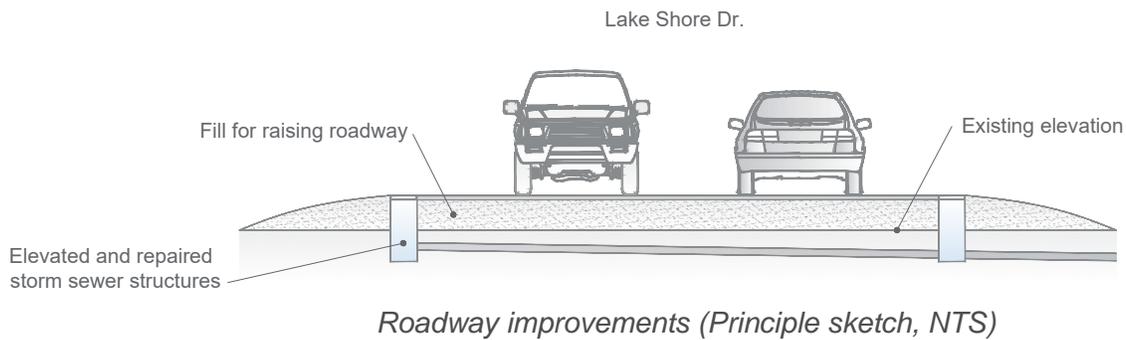
This project would improve public safety by providing safer roadways that do not cause issues due to flooding. It would also repair damages to the roadway and provide a safer driving environment.

Flexibility

There is flexibility in this project in the materials and design. A variety of roadway and drainage improvements can be chosen to reduce the risk of flooding and damage.

Durability

This project will increase the durability of County Route 89 by raising and repairing the roadway and drainage structures. The repairs will reduce flooding and the amount of maintenance required.



Economic Development Potential

This project could improve the economic development of Oswego County by reducing infrastructure maintenance and repair costs. It could also increase property values by providing a safer roadway with more reliable access for residents, retailers, and emergency services.

Environmental Considerations

This project will aim to avoid adverse environmental impacts. The design and construction will take into account any sensitive natural habitats surrounding the project, all runoff during construction will be treated before being discharged.

Alternatives Considered

No action; reroute roadway.

FORD DR./YMCA BRIDGE

The bridge (known as the YMCA bridge) crosses a water route between the North and South Sandy Ponds. Higher water now prevents all but very small boats from going under this bridge, effectively shutting off access between the two ponds and access from the south pond to Lake Ontario. Repeated heavy traffic across this bridge has threatened its integrity making it a public safety issue.



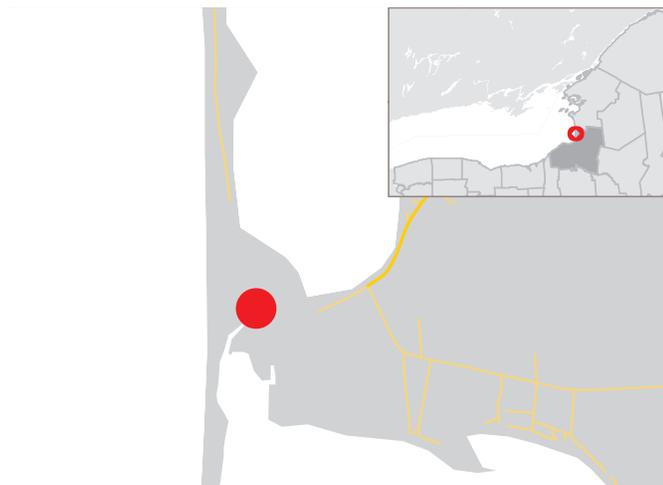
Town of Sandy Creek,
Oswego County



Oswego County



4,000,000



YMCA bridge

Mitigation Measures

Proposed mitigation measures in the project will consist of:

- Replacing the bridge leading to the State Park at Sandy Island Beach with a new structure with higher clearance continued access between the North and South Sandy Ponds

Public Support and Asset Owner

Moderate to high—this project has been identified as a priority by the Town of Sandy Creek. The asset owner is public.

Permitting and Feasibility

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

Benefits

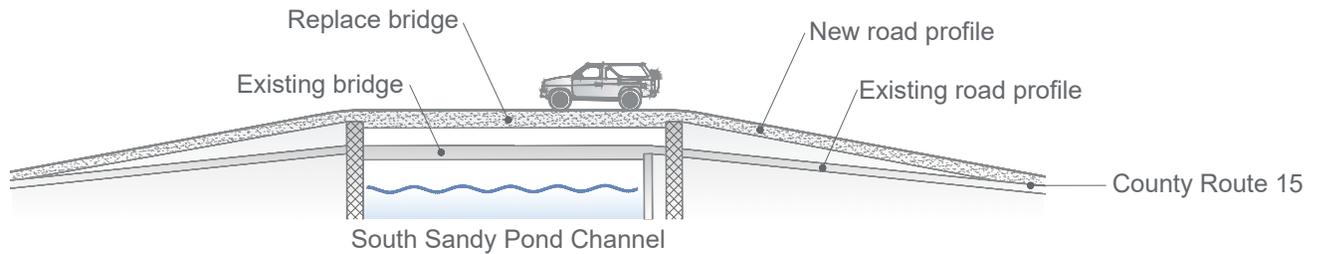
The ultimate goal of the project is to get property owners along South Pond access to North Pond, and also Lake Ontario via North Pond.

Flexibility

There is flexibility in this project in the materials and design that will be used.

Durability

This project will increase the durability of the local bridge by raising the deck safely above flood levels. The new bridge will also be designed in consideration of updated flood levels and scour potential.



Bridge replacement (Principle sketch, NTS)

Economic Development Potential

This project could improve the economic development of Oswego County by improving access to Sandy Island State Park and connectivity between North and South Sandy Pond, which improves the recreational aspects of this area.

Environmental Considerations

This project will aim to avoid adverse environmental impacts. The design and construction will take into account any sensitive natural habitats surrounding the project.

Alternatives Considered

No action. Reroute roadway.

