

Based on discussions with Richard Bennett from the NYSOGS Bureau of Land Management in December of 2009, the interest in underwater lands is attached to either the new upland property that is created through fill activity or to the coterminous upland property. As ownership of the land changes hands, the interest in the underwater land moves with the title to that land. For private property, because the interest in the underwater lands is attached to the title, there is no need for the State to reconvey the lands to the new landowner. Therefore, underwater land ownership has been transferred, over the years, to the present day owners of the upland properties. In the future, when shoreline property owners are proposing the installation of off shore docking facilities or other structures requiring use of bottom lands, confirmation of the land grants should be cleared with the OGS.

2.6 Surface Water Uses, Navigation and Harbor Management

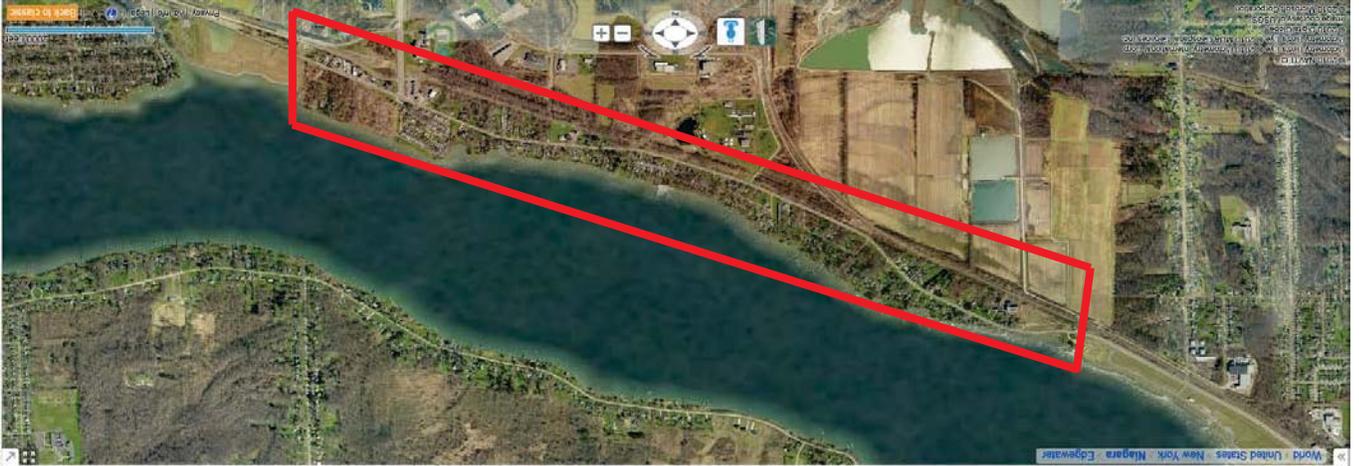
2.6.1 Vessel Use and Navigation

Sub-Area 1: Niagara River

Vessel use along the Wheatfield waterfront is limited to small pleasure craft, which are used for recreation and fishing. There are no commercial vessels docked in the area and no commercial fishing industry or support facilities. A large number of residents along the shoreline have docks that are supported through underwater land grants (as noted above). Many of these structures (approximately 50 percent) are removed in the winter. These private docks are used primarily to launch small craft that would otherwise be docked at a marina outside the area (see Appendix D).

There is a federally-designated navigation channel that extends through the central portion of the Niagara River. Known as the Niagara River Channel, this navigation channel is dredged to a depth of 12 feet. This channel is maintained by the U.S. Army Corps of Engineers to facilitate safe passage. The Army Corps of Engineers conducts surveys to determine when the channel may need maintenance dredging.

According to the National Oceanic and Atmospheric Administration (NOAA) navigation chart, the off-shore water depths in the Niagara River range between 5 feet or less along the shoreline to between 10 and 13 feet mid river. While in places the near-shore bottom is sandy, the river bottom is predominately mud and silt. According to National Oceanic and Atmospheric Administration navigation charts, there are underwater obstructions in the form of submerged pilings and cribs. There are pilings for abandoned floating docks located near the shoreline in areas up to six feet deep. The cribbing is deeper and includes the wastewater treatment plant outfall.



Approximate Boundaries of Sub-Area 1 – Along the Niagara River

Water depths in the Niagara River are also impacted by the regular diversion of river water for the Robert Moses Niagara Hydroelectric Power Station. At night, a substantial portion of Niagara River water (up to 600,000 gallons per second) is diverted through massive underground pipelines, away from Niagara Falls, to a large storage reservoir located approximately 4.5 miles to the north. The water is removed through two large intake facilities that are located on the Niagara River shoreline, approximately four miles west of the Sub-Area 1. In 1950, the United States and Canada signed a treaty that regulates the amount of water diverted for hydroelectricity production. On average, more than 200,000 cubic feet per second (cfs), or 1.5 million gallons of water per second, flows from Lake Erie into the Niagara River. The 1950 treaty requires that at least half of the normal flow over the falls (100,000 cfs) is maintained, at least during the daytime throughout the tourist season (from 8:00AM to 10:00PM April 1 through September 15, and 8:00AM to 8:00PM September 16 to October 31). At night and during the winter months (non-tourist season), the flow over the falls may be reduced to a quarter (50,000 cfs).

The diversion of river water for the Niagara Falls power project causes the water levels off shore of Sub-Area 1 to drop significantly (what locals refer to as the “NYPA tide”). There are times when the river bottom is exposed and access to navigable water is precluded from shore. Residents along the waterfront are occasionally subjected to odors and views of the exposed debris that collects along the river bottom. In addition, sedimentation can exacerbate this problem. Although the flow of water through the dredged navigation channel in the mid-section of the river is swift, the current diminishes as you move toward the shore and sediment that is carried by the river occasionally sloughs off and accumulates in the nearshore areas. This can affect the ability to launch vessels from the shoreline and could create a situation that forces property owners to either dredge or construct docks that extend further out away from the shoreline in an effort to gain access to navigable waters. However, sedimentation is not a significant problem in this area.



Niagara Falls Power Project Water Intake Facilities

The fluctuating water levels create more significant shoreline icing problems in the winter. Although the power authorities are responsible for managing ice flow in the river, particularly to prevent from entering water intake facilities, including the installation of the ice boom at the mouth of Lake Erie, there is no ice management program that assists residents along the shorelines.

Sub-Area 2: Erie Canal (Tonawanda Creek)

Pursuant to the NYS Law (21 NYCRR Sub-chapter D, Parts 150-156), all activities on the Erie Canal are regulated by the New York State Canal Corporation. Certain Statewide boating regulations are in force along the Erie Canal, including speed limitations, requirements for the use of personal flotation devices and vessel waste treatment and disposal restrictions. The Erie Canal channel is 12 feet deep. Bridge clearance for the Niagara Falls Blvd. overpass varies between 15.5 and 20 feet. Every boat, vessel, raft or other floating apparatus that is navigated on the Canal must be in good operating condition. The vessel speed limit in the Canal is 10 miles per hour, unless otherwise posted. The New York State Police and the Niagara County Sheriff's Department are the agencies responsible for enforcing these regulations. In the event of a violation, Canal personnel will contact one of these agencies to launch a patrol boat in response to the call. There are no police boats temporarily or permanently docked in the Canal.

According to NYS Canal Law Section 156, the use or occupation of lands owned by the Canal Corporation requires a revocable use permit. Residences and camps that wish to gain access to canal waters must pay a fee of \$50 per year. This type of permit is restricted to upland owners and includes only lands between the upland residence or campsite and the canal waters. The permitted area cannot exceed one acre in size and cannot contain any building improvements



Approximate boundaries of Sub-Area 2 along Tonawanda Creek (Erie Barge Canal)

The permit gives the property owner the right of exclusive access across the canal lands to canal waters. An additional annual charge of \$50 is charged for erecting and/or maintaining a dock, ramp, slip or float within the canal waters. Permit fees for the use of canal lands and facilities not in conjunction with a private residence or camp are based on the fair market value of the property and the use of the permitted area, including, but not limited to, the placement of docks, ramps, slips and floats (see aerial photos of shoreline in Appendix D).

2.6.2 Marinas, Docks and Bulkheads

There are no marinas within the LWRA. There are three public boat launch ramps available at parks located immediately outside of the LWRA, including Gratwick Park in the City of North Tonawanda and Griffin Park in the City of Niagara Falls, adjacent to Sub-Area 1; and West Canal Marina Park, in the Town of Pendleton, adjacent to Sub-Area 2. Within the LWRA, there are numerous private docking facilities found along the shoreline that are associated with private residential properties, which enable residents to utilize the Niagara River for recreational boating and fishing. A number of these structures include boathouses. Some residents hunt waterfowl from private docks or the shoreline along the Niagara River during open season. The docks along the river extend far enough into the river to allow navigable access, yet do not infringe on the navigation channel.

Sub-Area 1 – Docks and Bulkheading

The increased proliferation of docks and other over-water structures, such as boathouses, can pose potential cumulative impacts, presenting a concern with respect to waterfront management.



There is evidence that over-water structures can adversely affect aquatic habitat through shading of submerged aquatic vegetation and fragmentation of habitats. These structures are known to alter patterns of water flow, introduce chemicals into the marine environment, impact navigation, and restrict access to public trust lands and resources.

The installation of docks, pilings, decks and boathouses along the Niagara River, in Sub-Area 1, is regulated by the Army Corps. of Engineers and requires the issuance of a Regional Permit, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Structures that do not meet the conditions of the Regional Permit can be considered for approval under an Individual Permit. NYSDEC approval may also be required depending on the circumstances. The NYS Canal Corporation enforces guidelines governing the construction of docks along the Erie Canal in Sub-Area 2, as set forth in the Standards for Docks on the Canal System publication (see Appendix C).

Various forms of shoreline protection are in place along much of the Niagara River and the Erie Canal waterfront. At a minimum, most locations utilize stone rip rap or rubble to protect the shoreline from erosion. The restricted vessel speed limit in the Canal helps to control deterioration along the shoreline from wave action; therefore, there is not a significant extent of erosion control protection in this area. More intensive erosion protection is found along the Niagara River.

Sub-Area 2 – Bulkheading and Shoreline Dockage



In Sub-Area 1, where a combination of forces (wind, wave action and current) impacts the shoreline, erosion protection structures are comprised of a mix of concrete walls and barriers, corrugated metal sheet piling, wooden bulkheading and stone rip rap. A limited number of locations along the shoreline in both sub-areas remain natural. While shoreline hardening may provide some temporary relief from erosion in areas subjected to intense storms and significant wave action or current, structural measures are expensive to install, degrade shoreline habitat, interrupt natural shoreline processes and may act to transfer erosion problems to adjacent areas.

Alternative shoreline management techniques exist and should be considered for use as a first or next step for erosion protection, whenever possible. Examples of alternative measures for protecting the shoreline include bioengineering techniques and planted buffers that utilize deep rooted vegetation. These alternative solutions can result in a more naturalized shoreline, which has ecological and aesthetic benefits. Hard structural erosion protection measures should only be used as a last alternative, where there is a documented erosion problem and where alternative measures have been proven to be inadequate to protect the principal use. The construction and modification of erosion protection structures along the Niagara River requires review and approval from the U.S. Army Corps. of Engineers, as well as the NYSDEC. Structures along the Erie Canal are regulated by the NYS Canal Corporation.

2.7 Natural Resources

2.7.1 Water Resources

There are no major lakes or ponds within the LWRA. There are no major creeks or streams that outlet to the Niagara River in Sub-Area 1. According to the Upstate New York Groundwater Management Program report of the NYSDEC, there are no Primary or Principal Aquifers underlying either sub-area. The key waterbodies in the Wheatfield LWRA include: