



US Army Corps  
of Engineers®

## HARBOR INFRASTRUCTURE INVENTORIES Black Rock Lock & Tonawanda Harbor, NY



**Harbor Location:** The Black Rock Channel and Tonawanda Harbor are located along the east side of the Niagara River in the City of Buffalo and Town of Tonawanda, NY.

**Authority:** River & Harbor Acts of 1888, 1902, 1905, 1916, 1919, 1922, 1925, 1934, 1935, 1945 and 1954.

**Project Description:** Originally authorized by the 1888 River and Harbor Act, the Black Rock Channel and Tonawanda Harbor is a deep draft commercial harbor and channel. Protective structures consist of the Bird Island Pier and Black Rock Lock Guide Pier. The Bird Island Pier is approximately 2 miles long and forms the west side of the Black Rock Channel on the southern side of the Black Rock Lock; 6,700' of the pier is a rubblemound stone structure with a concrete public walkway and the remaining 3,900' is a concrete capped timber crib structure.

**Traffic:** With 1,261 lockages in 2009, the lock provided safe passage for 1,736 vessels (344 commercial and 1,392 recreational)

**Transportation Importance:** Major regional lock on the Great Lakes for commodities including coal, petroleum.

### Congressional Interest:

- Representative Brian Higgins D-NY-27
- Senator Kirsten Gillibrand D-NY
- Senator Charles Schumer D-NY

### Current Condition Assessment: **D**

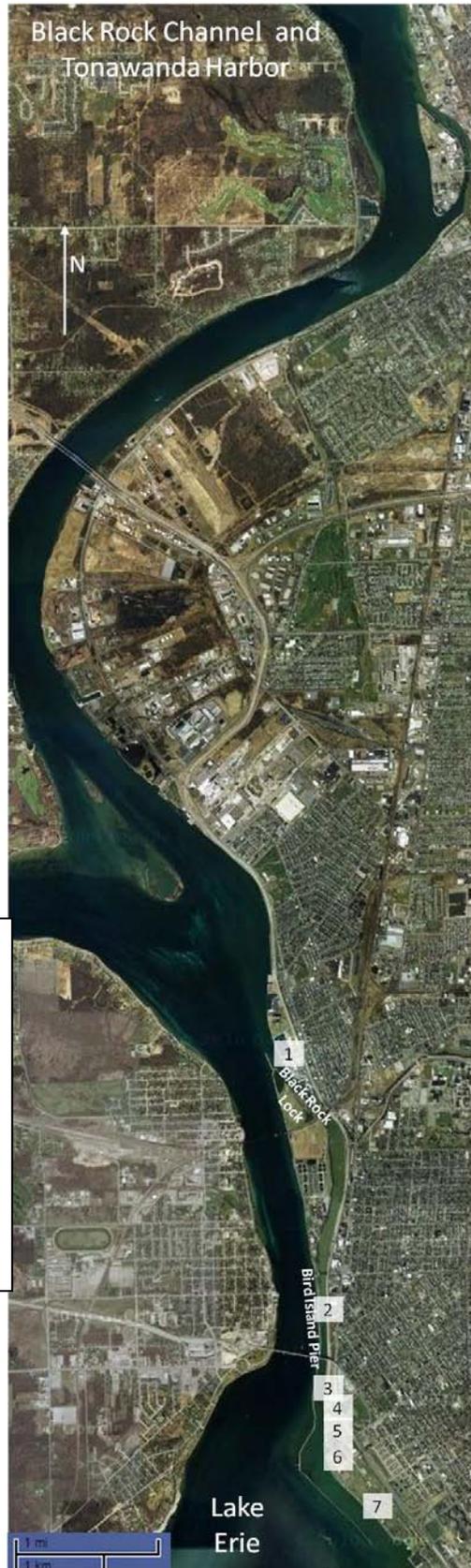


**Date of Site Visit:** 29 June 2010

**Summary of Impact:** Prevailing waves at the southern end of the channel come from the southwest to west direction. At the entrance to the channel, pier failure would result in flooding and inundation to La Salle Park, Colonel Ward Pump Station, Frank Lloyd Wright's Boat House, the West Side Rowing Club and the Buffalo Yacht Club. Additionally, pier failure would eliminate the ability to use the channel to bypass the rapids on the Niagara River, and would allow wave action to undercut the foundation of Interstate 190, running parallel to the channel.

**Examples of Protected Infrastructure:**

- 1 Rich Marine Sales
- 2 Interstate 190 – New York State Department of Transportation
- 3 West Side Rowing Club
- 4 Frank Lloyd Wright's Fontana Boathouse
- 5 Buffalo Yacht Club
- 6 Buffalo Water Authority – Colonel Ward Pump Station
- 7 La Salle Park

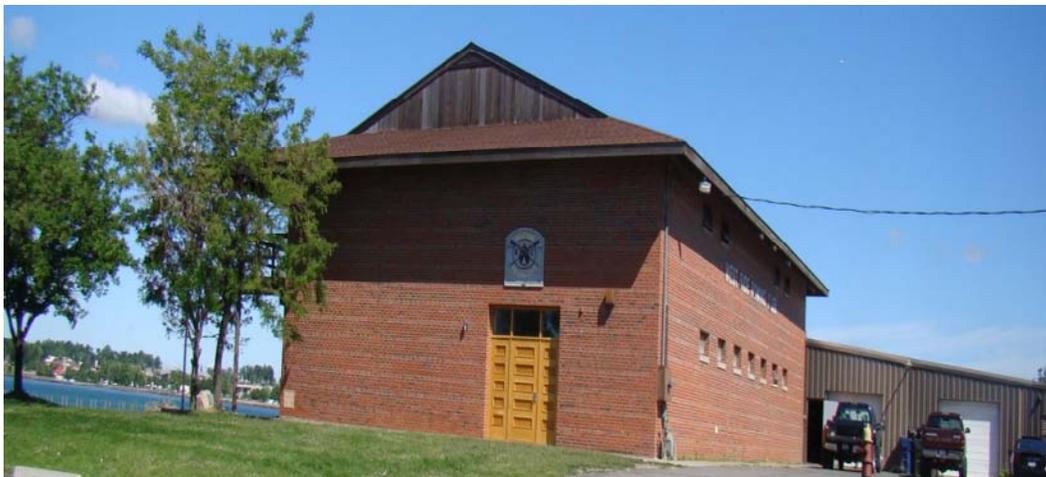


**1. Rich Marine Sales:** Privately owned marina built in the early 60's with 400 fixed steel and wood slips. Able to accommodate vessels up to 50'. Other amenities include a 25 ton travel lift, pumpout, a service facility and a private boat launch. Situated behind Black Rock Lock Guide Pier on the Niagara River. No issues with wave action. The Black Rock Lock provides access to Lake Erie.



**2. Interstate 190- New York State Department of Transportation:** 6 lane interstate highway serving to link downtown Buffalo with Interstate 90, Canada via the Peace Bridge and Niagara Falls. Highway situated onshore behind Bird Island Pier. Breakwater failure could cause erosion of foundation of highway and possible damage to roadway.

**3. West Side Rowing Club:** Not for profit rowing club providing training, education and instruction in rowing. Use the channel extensively for training and is reliant on a calm harbor for operations.



**4. Frank Lloyd Wright's Fontana Boathouse:** Frank Lloyd Wright designed two story 2,960 square foot boathouse built in 2007 used by the West Side Rowing Club. Situated directly behind the Bird Island Pier. The pier serves to protect the structure from wave action. Pier failure would result in increased wave action and flooding.



**5. Buffalo Yacht Club:** Privately owned marina with 63 fixed and floating wood and steel slips able to accommodate vessels up to 43'. Electric and water available at all slips. Other amenities include a restaurant, clubhouse, two hoists, restrooms and showers. Marina is dependent on pier to maintain a calm harbor for operations. Pier failure would impact operations in high wind conditions.



**6. Buffalo Water Authority – Colonel Ward Pump Station:** Water provider for the City of Buffalo. Failure of the Bird Island Pier would cause increased wave action, leading to potential flooding of the facility.



**7. La Salle Park:** Public park with baseball fields, fishing access, dog park, amphitheater and soccer fields. Failure of the Bird Island Pier would cause flooding of the park and damage to facilities.



**Potential Impact Area:** The following graphic displays property parcels that could be impacted within various zones defined by different setbacks from the shoreline behind existing Federal coastal structures. Values are based on real property tax assessments from these parcels, and don't reflect any detailed coastal zone damage assessments. Figures simply reflect property values at various setbacks.

