US Army Corps of Engineers

HARBOR INFRASTRUCTURE INVENTORIES
Lorain Harbor, Ohio

Harbor Location: Lorain Harbor is located on the southern shore of Lake Erie in the city of Lorain, OH about 45 miles west of Cleveland, OH.

Authority: River & Harbor Acts of 1899, 1907, 1910, 1917, 1930, 1935, 1945, 1960, 1965 and the Water Resources Development Act of 1986.

Project Description: Originally authorized by the River and Harbor Act of 1899, Lorain Harbor is a deep draft commercial harbor. Protective structures consist of over 2.5 miles of breakwater structures and 2 piers with a combined length of 1,884'.

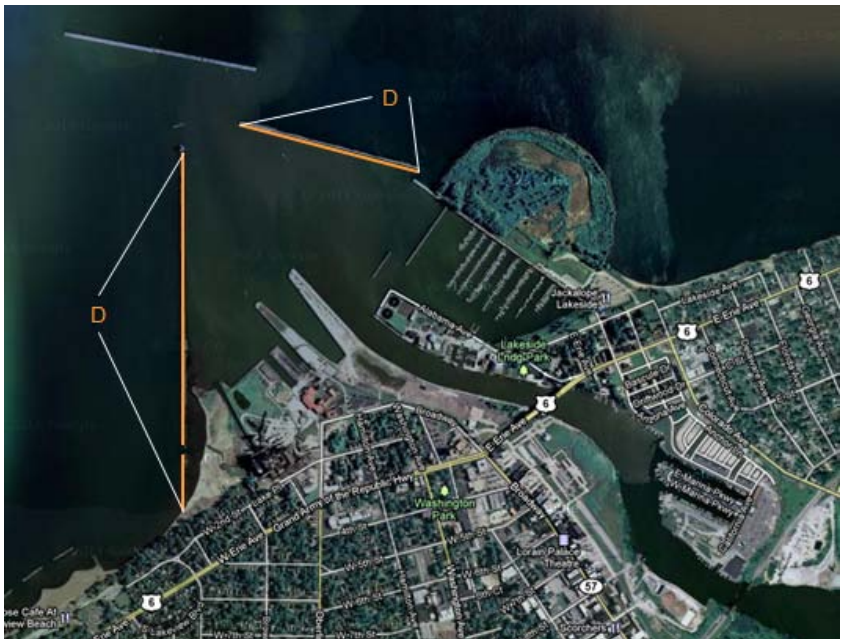
Traffic: 2,486,772 (5-Year average, 2005 – 2009).

Transportation Importance: Major regional receiving port on the Great Lakes for commodities including iron ore, aggregates, limestone, chemicals, ores and minerals.

Congressional Interest:

- Representative Betty Sutton D-OH-13
- Senator Rob Portman R-OH
- Senator Sherrod Brown D-OH

Current Condition Assessment: D



Date of Site Visit: 15 June 2010

Summary of Impact: Prevailing waves come from the southwest to northeast direction. Failure of the protective structures would result in flooding and damage to water and wastewater treatment plants, the Coast Guard craft and facilities and to the marinas located along the shoreline. Breakwater failure would also eliminate the use of the harbor as a harbor of refuge, which the Coast Guard reports that the harbor is widely used for this purpose. The breakwaters also serve to direct flow of the Black River away from the city water intakes, allowing the city to draw clean lake water without contamination from river flows. Additionally, failure would result in increased wave action propagating upstream in the Black River and additional shoaling of the Federal channel. There are a number of industries located upstream on the Black River dependent upon the river for lake access. The CDF provides protection under north-northeast wave action.

Examples of Protected Infrastructure:

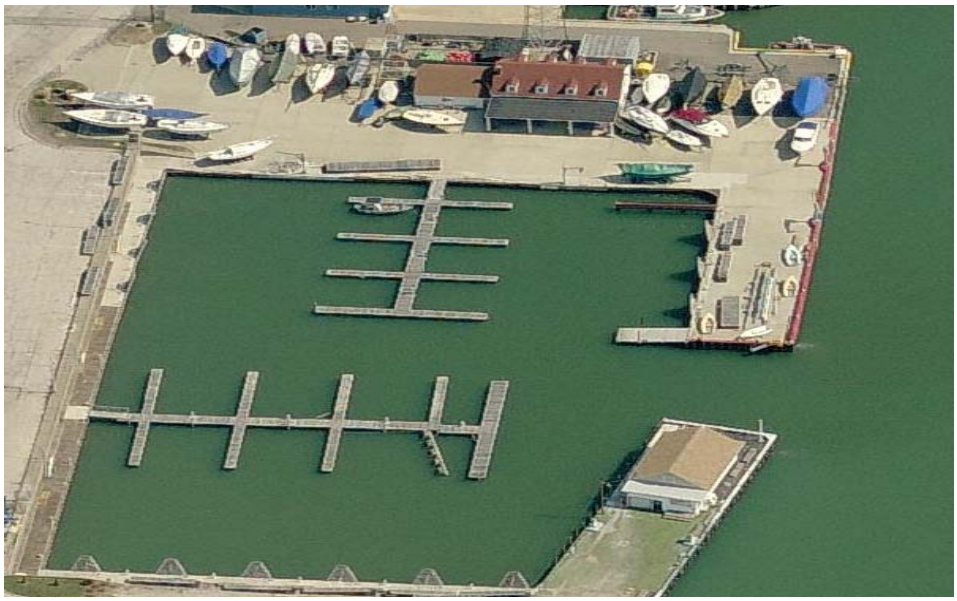
1. Edgewater Decommissioned Power Plant - Owned by First Energy: Former coal fired power plant presently going through asbestos abatement in preparation for demolition. Future site plans are unknown, but site is well protected by breakwaters. Breakwater failure would cause increased wave action on site, and would be detrimental to site stability.

2. Lorain Water Department: 23 million gallon per day water treatment plant built in 1906 with a major rehab most recently occurring in 1994. Plant handles an average of 12 million gallons per day. 48" intake line extending 1,500' into the lake. Serves a population of about 67,000 in the City of Lorain, as well as providing water for the Northern Ohio Rural Water district and the City of Amherst. On shore structures are well protected. Concerns over breakwater failure lie with a possible change in currents causing the water intake to be contaminated by water from the Black River. Presently, the breakwaters direct river flows away from the water intake.

3. Lorain Municipal Pier Launch Ramp: 2 acre municipally run boat ramp with 6 launch ramps, three separate parking lots and a bait and tackle store.

4. U.S. Coast Guard Station - Lorain: Coast Guard Station with area of responsibility extending from Avon Point to Vermilion, OH. 2 search and rescue vessels (41' and 25' in length) and a sheriff's vessel based at site. A two story station is located on-site. Contact states that breakwaters regularly provide a harbor of refuge for boaters. Major concern with breakwaters is a lack of signage indicating speed limits and no wake zones. Coast Guard is also looking for authority to keep boaters from tying off to breakwalls and piers. During high wind events, 2-3 rolling waves still form within harbor. Breakwater failure and inundation would cause damage to coast guard structures, and would eliminate harbor's use as a harbor of refuge.

5. Lorain Sailing and Yacht Club: Privately run marina leased from the Lorain Port Authority with 57 floating steel and plastic slips able to accommodate vessels up to 35'. Seasonal rates range from $1168 to $1,798. Electric and water available at all slips. Other amenities include a 9 ton travel lift, pumpout, fuel (gas only) and a ships store. Structures include a 100'x30' two story clubhouse and a 20'x40' ships store/administrative office building. Breakwater failure would cause increased wave action in harbor, causing damage to structures and vessels. Presently, a northwest wind can cause the water level to drop and rolling waves to form in the harbor.



6. Lorain Sewage Treatment Plant: 15 million gallon per day wastewater treatment facility built in 1954 and expanded in 1971. Facility has an average daily flow of 12 million gallons per day, and can accommodate up to 30 million gallons per day in storm water events. Serves the City of Lorain and the community of Sheffield Lake, a population of about 88,000 people. Plant discharges through a 5' diameter pipe into the river. Breakwater failure would have a detrimental impact on operations, as plant is situated directly behind the breakwaters.

7. Spitzer Lakeside Marina: Privately owned marina with 589 floating wood slips able to accommodate vessels up to 60-65'. Seasonal rates range from $1,049 to $3,680. Electric and water available at all slips. Other amenities include pumpout, fuel (gas and diesel), showers, restrooms, ships store, laundry facility, restaurant/bar and a docker's lounge. Structures include a three story restaurant/bar building and a 2 story ships store/administration building. Breakwater failure would cause increased wave action in harbor, causing damage to structures and vessels. Marina is dependent on breakwaters for business.

8. USACE CDF: Confined Disposal Facility (CDF) constructed by USACE in 1977 to contain dredged material from Lorain Harbor that is not suitable for placement in the open lake. The CDF has an area of 58 acres, and a total capacity of 1,850,000 cubic yards.

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.