



Shoreline Characteristics Analysis

for determination of desired future conditions in Jamaica Bay Gateway National Recreation Area
National Parks Service, Jamaica Bay Unit



Shoreline Characteristics

- Developed Residential Beach
- Bridge
- Commercial
- Dock
- Lawn
- Mosquito Ditch
- Natural Sand Beach
- Natural Vegetated Area
- Other
- Parking Lot
- Paved Road
- Pier
- Recreation
- Residence
- RipRap in Developed Area
- RipRap in Vegetated Area
- Rock Bulkhead in Developed Area
- Rock Bulkhead in Vegetated Area
- Dirt Road
- Steel or Concrete Bulkhead in Developed Area
- Steel or Concrete Bulkhead in Vegetated Area
- Lighthouse or Lifeguard Tower

The white boundary delimits the Jamaica Bay Unit of the Gateway National Recreation Area

Historic Change



Georeferenced image from the 1950s laid over the 2006 satellite image of Floyd Bennett Field.

In the 1950s, New York City commissioned a series of high definition aerial photos of the entire urban region. The photos for the Jamaica Bay section are being compared to current satellite imagery in order to analyze shoreline characteristics and help determine desired conditions for the Jamaica Bay.

Present Conditions

Shoreline Environment	Meters	Percent of Total
Shoreline	137949.6136	100.00%
Human Modified	56751.42951	41.14%
Residence	14746.67924	10.69%
Commercial	15048.09855	10.91%
Parking Lot	368.30517	0.27%
Bridge	714.628212	0.52%
Dock	565.895673	0.41%
Pier	246.92004	0.18%
Paved Road	2025.923527	1.47%
Beach Developed	1727.225401	1.25%
Steel or Concrete Bulkhead (V)	1271.922072	0.92%
Steel or Concrete Bulkhead (D)	6285.856981	4.56%
Rock Bulkhead (V)	1721.504916	1.25%
Rock Bulkhead (D)	12055.03398	8.74%
Human Modified (re-classed)		
Structure*	33417.75229	24.22%
Road	2025.923527	1.47%
Bulkhead**	21334.31794	15.47%
Natural	81100.62291	58.79%
Sand	25067.0317	18.17%
Vegetation	56007.02636	40.60%

*Includes residence, commercial, parking lot, bridge, dock, pier, beach developed
**Includes all bulkheads in front of developed (D) and vegetated (V) areas



Potential reclamation site (above) and typical shoreline condition (below).



The shoreline of Jamaica Bay (including Broad Channel Island) and its primary creeks is roughly 60% natural and 40% human-modified (see table above for exact figures). The majority (roughly 70%) of the natural coastline contains vegetation with the remainder comprised of sand beaches. It is important to keep in mind, though, that these natural shorelines often do not extend back very far before reaching developed areas. The majority (roughly 60%) of the human-modified areas are comprised of structures (mostly residential and commercial) built directly on the shoreline, with the remainder mostly comprised of bulkheads in front of developed areas. This analysis is being used to identify priority sites for hardened shoreline reclamation in short and long term plans for the bay.



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