

**Dead Horse Bay, Spring Creek South & Hamilton
Beach Restoration Sites**

Land Disturbance History Maps

Working Group Meeting
Fort Wadsworth, Staten Island

June 25th, 2003

Dead Horse Bay Land Disturbance Maps

Figure 3. Dead Horse Bay in 1899.

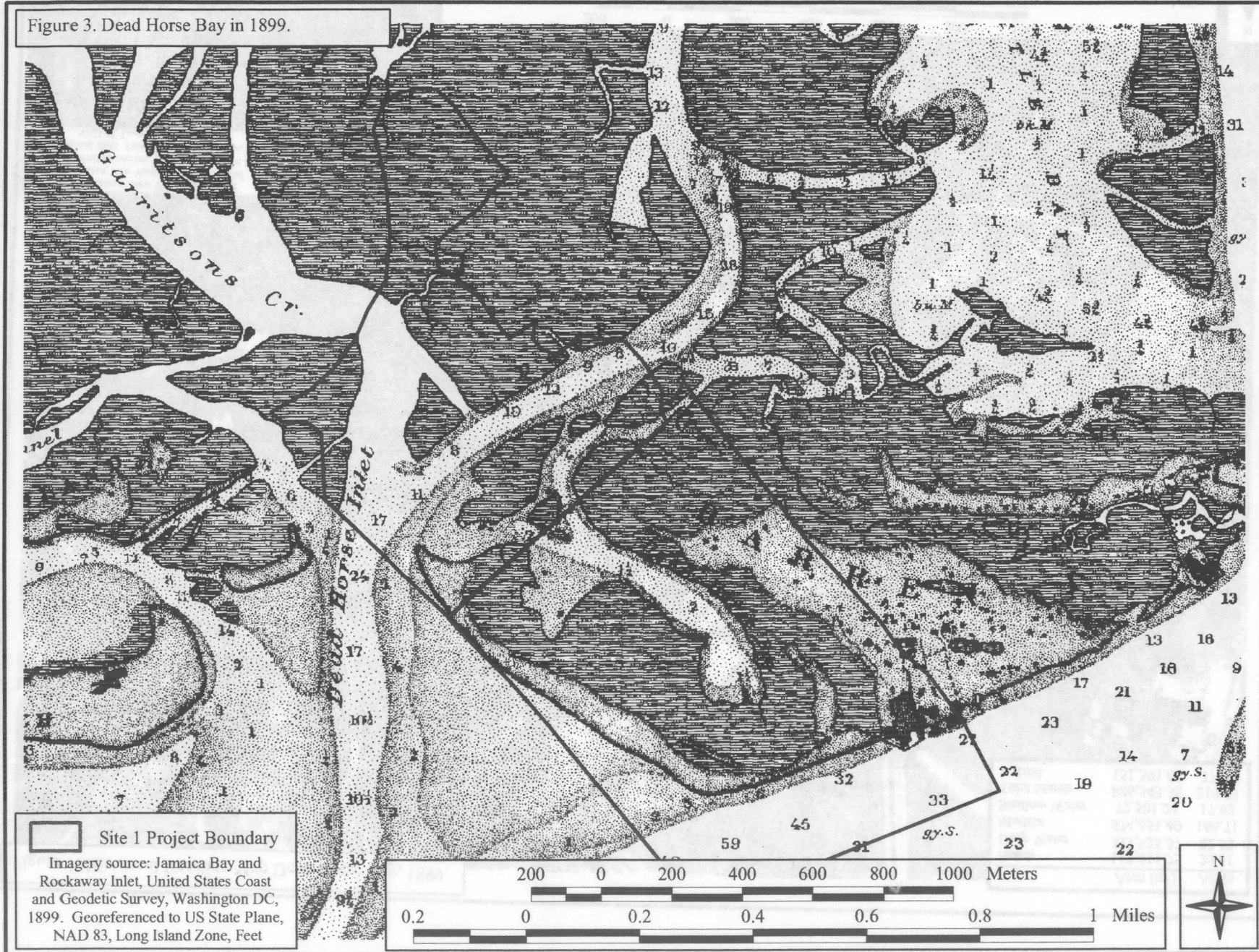


Figure 1. Historical Baseline Map Dead Horse Bay, 1899.

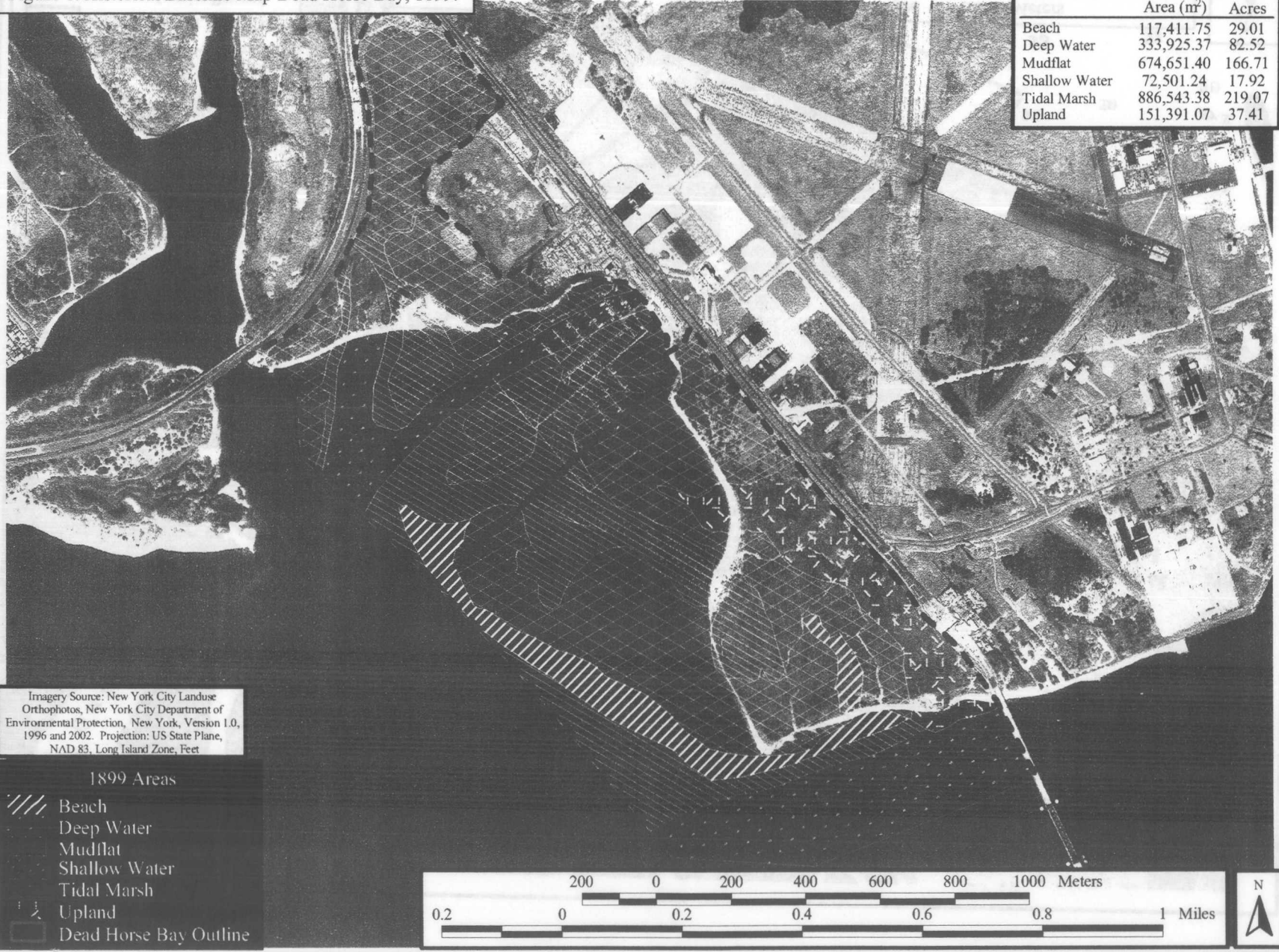
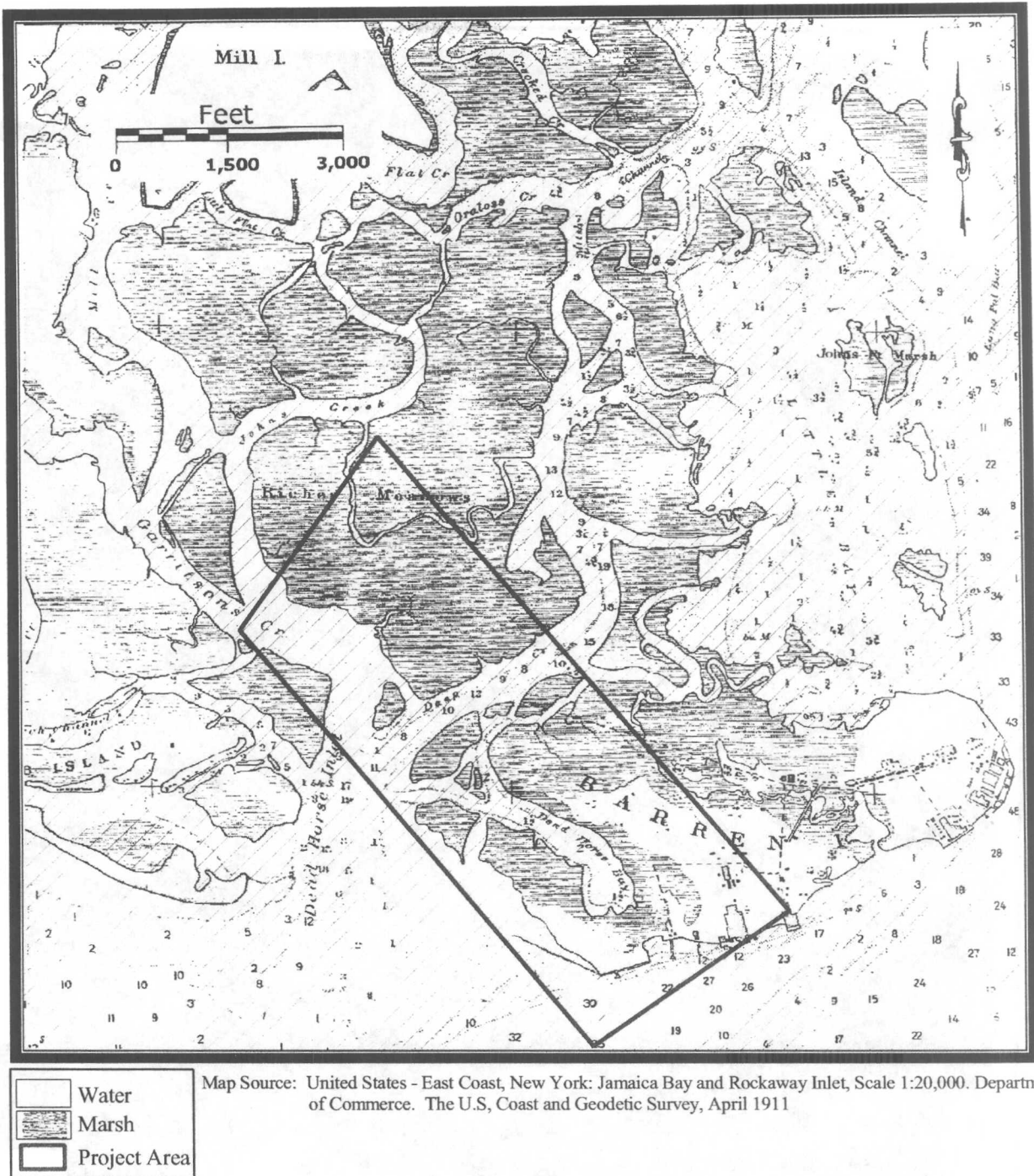


Figure 12. Dead Horse Bay in 1924.



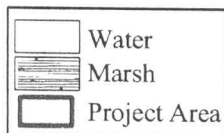
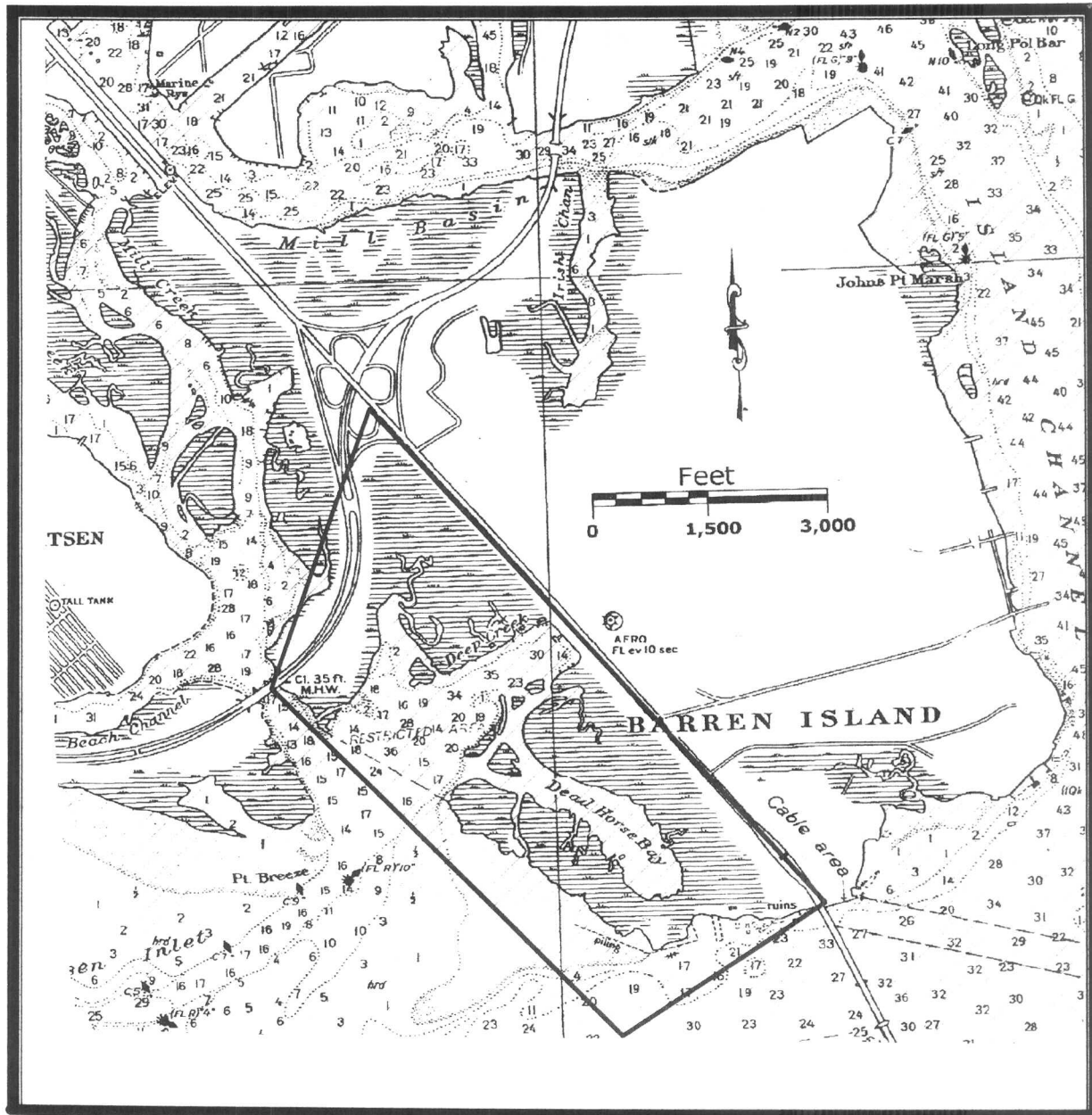
Figure 4. Dead Horse Bay, April 1911.



In 1911:

- Only southern and eastern sides of Barren Island appear to have navigational channels
- Horse rendering facilities seen with village at southwest portion of Barren Island
- Bulkhead installed south of Dead Horse Bay to protect shoreline
- Remaining interior tidal marshes, flats and creeks undisturbed

Figure 6. Dead Horse Bay, January 1940.

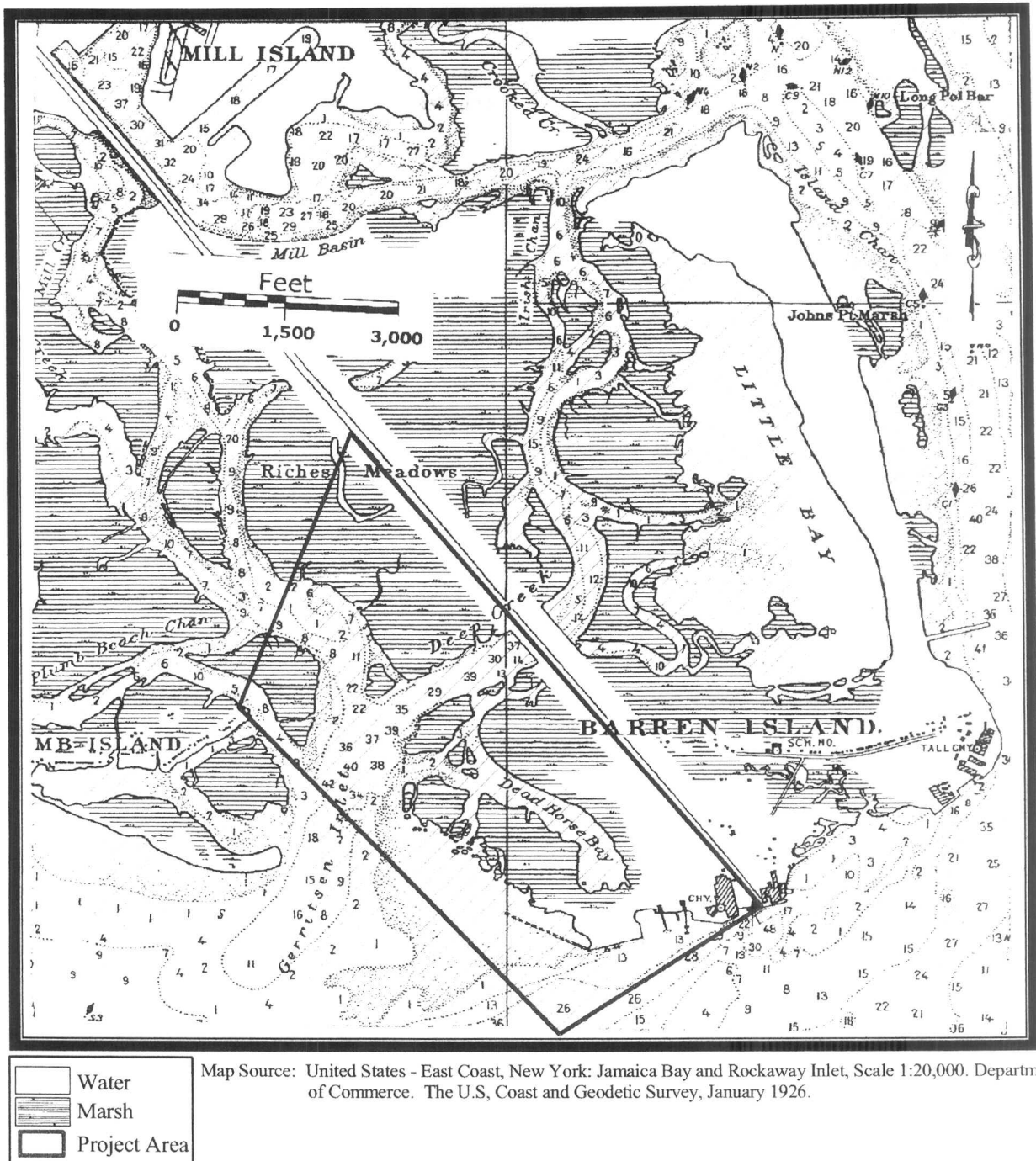


Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, January 1940.

In 1940:

- Horse rendering plant, trash incinerator facilities and village gone with ruins noted
- Tidal flat still apparent with only pilings remaining southeast of Dead Horse Bay
- Little Bay and the tidal marsh systems of Barren Island filled completely to Flatbush Avenue
- Irish Channel not filled completely with roughly 3,000 feet remaining
- Belt Parkway constructed including Flatbush Avenue interchange

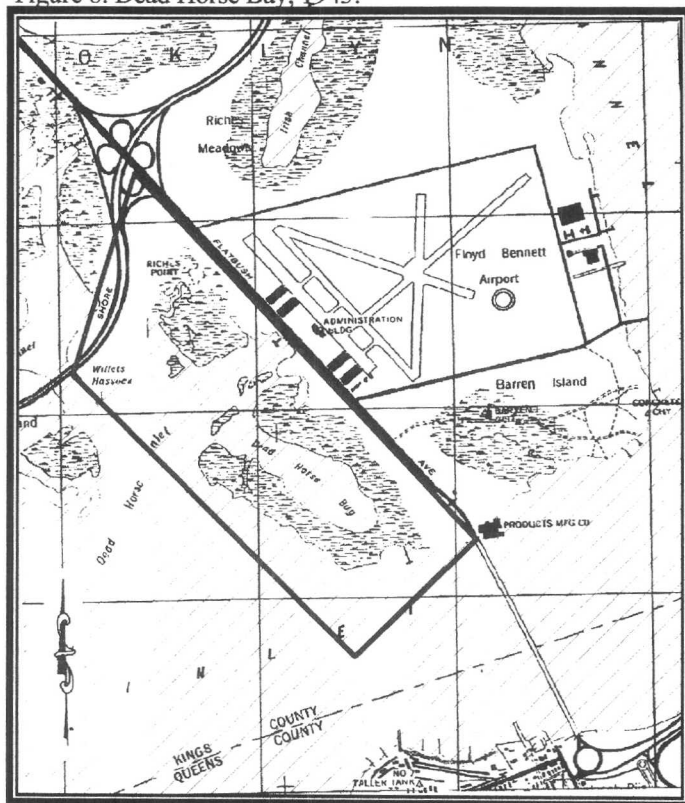
Figure 5. Dead Horse Bay, January 1926.



In 1926:

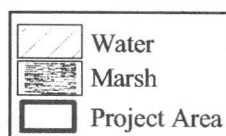
- Flatbush Avenue constructed to horse rendering and incinerator plants filling in wetlands and blocking Deep Creek
- Southwest side of Deep Creek dredged roughly 20 feet with fill apparently used for roadway embankment
- Channel dredging also evident for Mill Basin and along eastern side of Barren Island
- Channel cuts apparently used for the initial filling of Floyd Bennett Field closing off Little Bay from Jamaica Bay
- Tidal flats and bulkhead still apparent southeast of Dead Horse Bay

Figure 8. Dead Horse Bay, 1943.



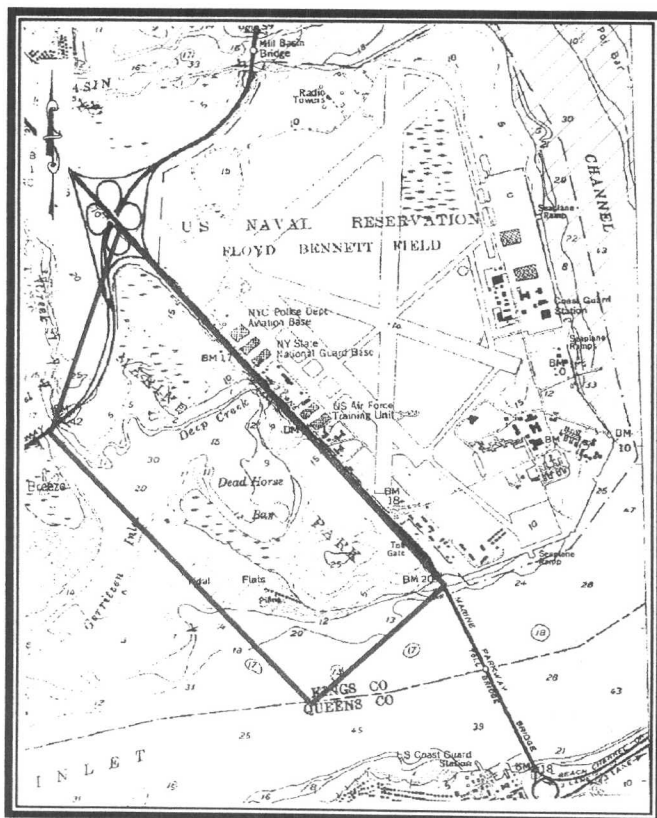
In 1943:

- Wetlands shown in study area to roughly same area as in 1926
- Wetlands also shown in north, northeast and south areas of Floyd Bennett Airport
- Irish Channel still evident



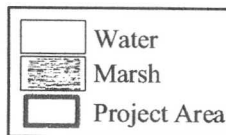
Map Source: United States Geological Survey 15 minute Coney Island Quadrangle, Washington DC, MD, 1943.

Figure 9. Dead Horse Bay, 1955.



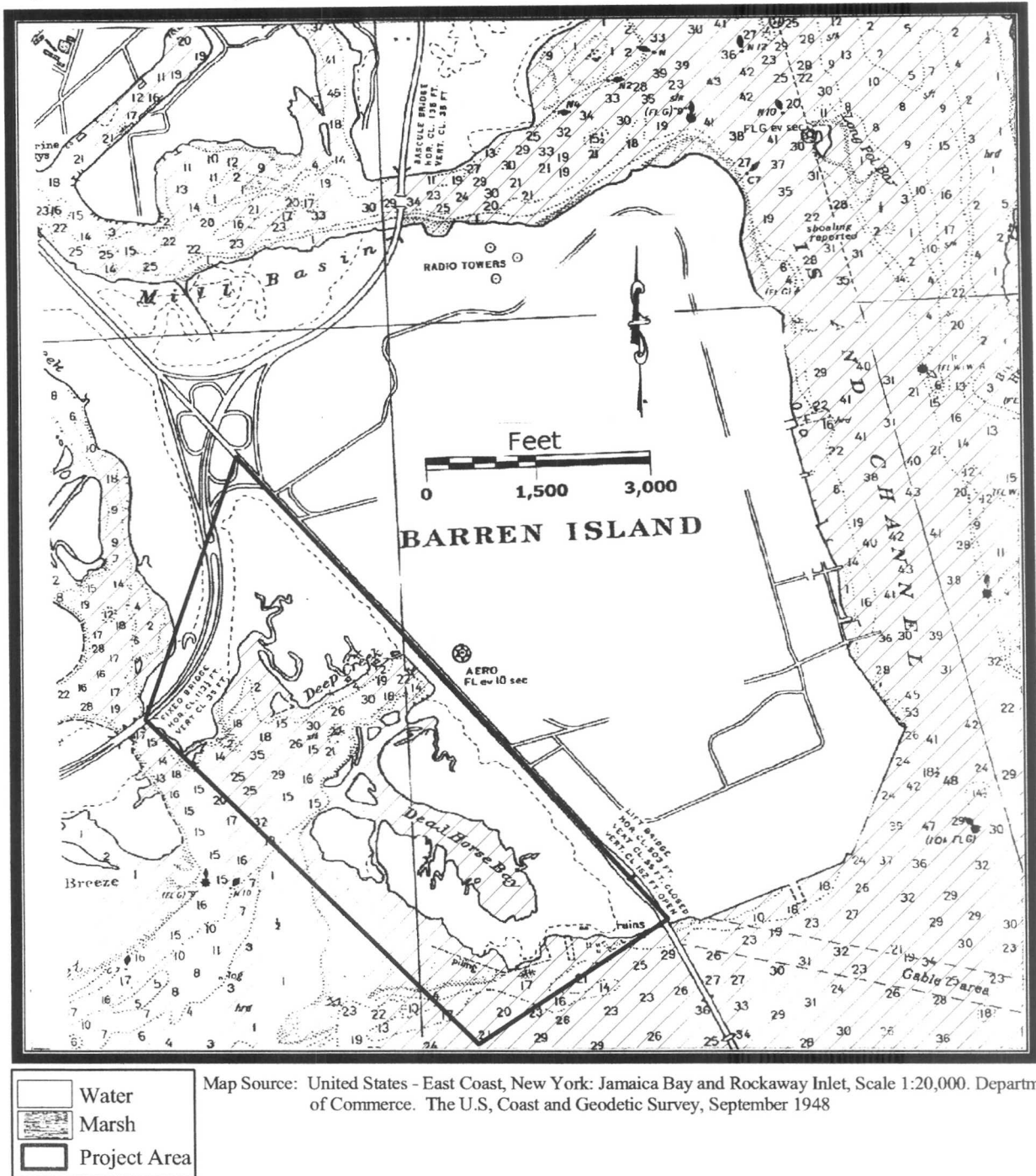
In 1955:

- Fills apparent in southeast part of Dead Horse Bay mounded up to elevation 25
- Southern wetlands filled in
- Irish Channel and associated wetlands filled in
- Tidal flats and bulkhead pilings noted extending southeast of Dead Horse Bay



Map Source: United States Geological Survey 15 minute Coney Island Quadrangle, Washington DC, MD, 1955.

Figure 7. Dead Horse Bay, September 1948.



In 1948:

- The remaining 3,000 feet of Irish Channel completely filled in
- Barren Island east of Flatbush Avenue completely filled in with hardened shoreline forming the south and southern eastern edges
- Ship grounded on Dead Horse Bay tidal flat with apparent dredging executed to gain access
- Pilings and ruins of horse rendering plant still apparent
- Wetlands in study area relatively unchanged from 1940

Spring Creek South Land Disturbance Maps

Figure 11. Dead Horse Bay on the NOAA Nautical Chart.

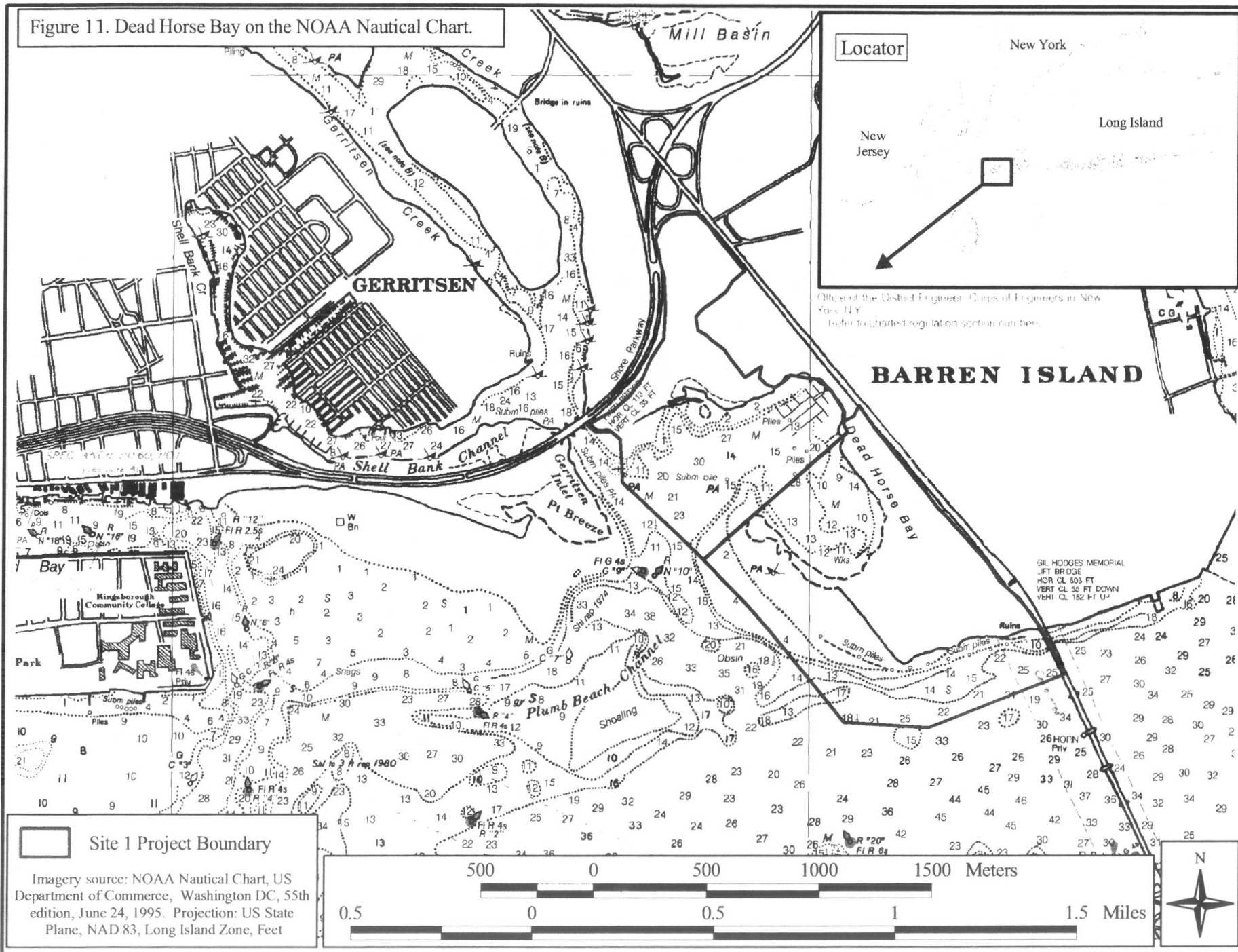


Figure 13. Dead Horse Bay Existing Conditions.

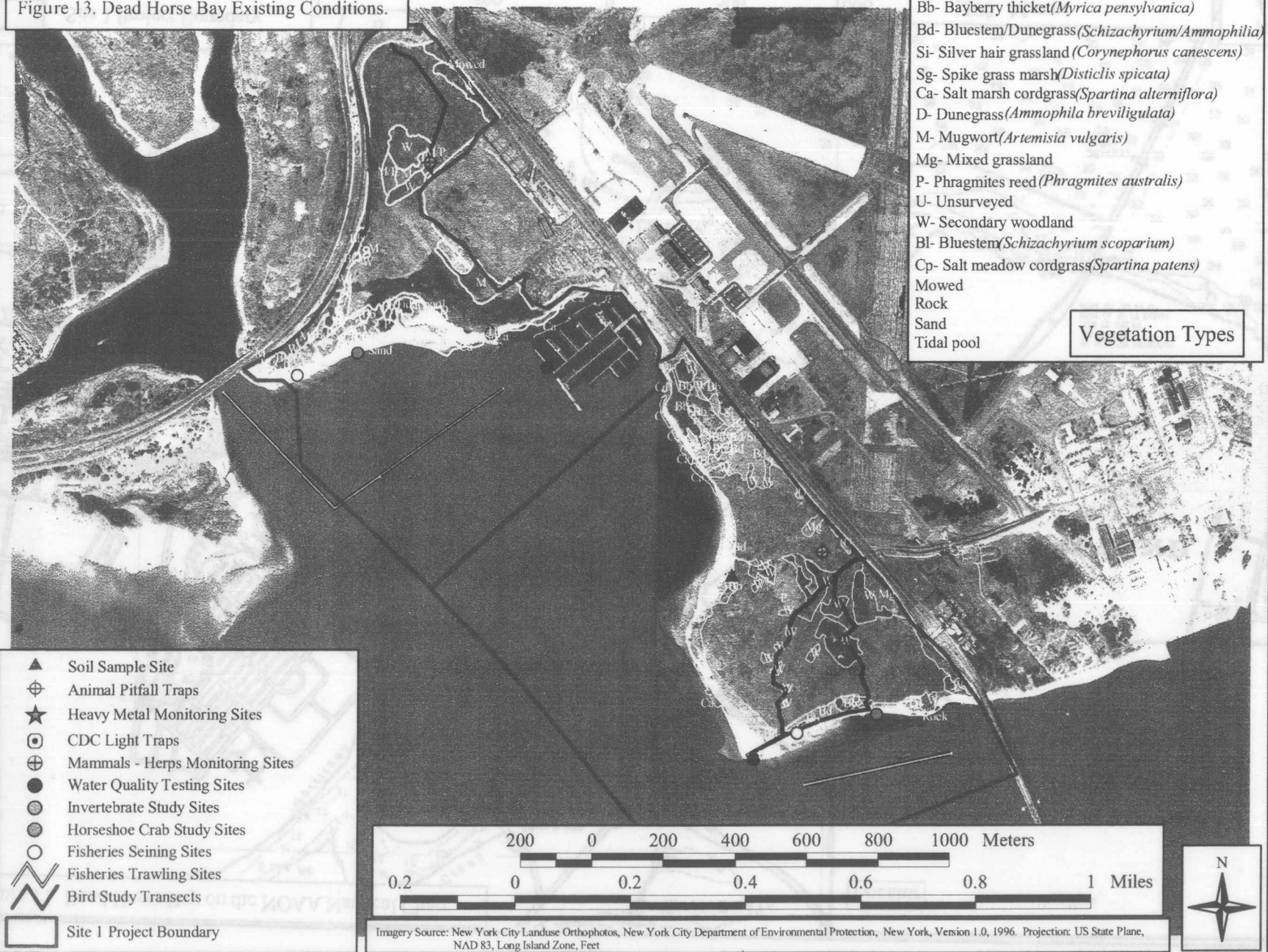
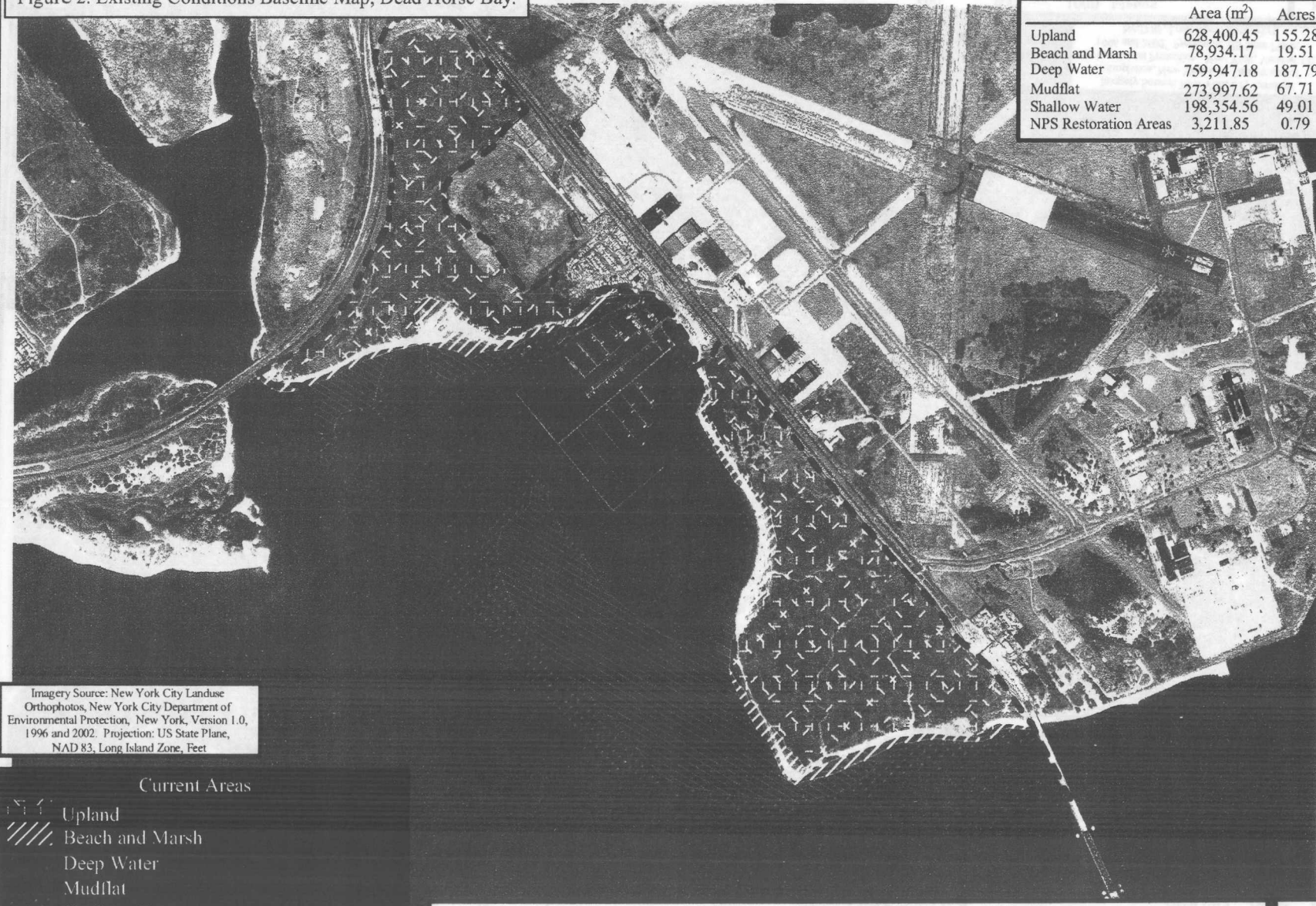


Figure 2. Existing Conditions Baseline Map, Dead Horse Bay.

	Area (m ²)	Acres
Upland	628,400.45	155.28
Beach and Marsh	78,934.17	19.51
Deep Water	759,947.18	187.79
Mudflat	273,997.62	67.71
Shallow Water	198,354.56	49.01
NPS Restoration Areas	3,211.85	0.79



Imagery Source: New York City Landuse
Orthophotos, New York City Department of
Environmental Protection, New York, Version 1.0,
1996 and 2002. Projection: US State Plane,
NAD 83, Long Island Zone, Feet

Current Areas

-  Upland
-  Beach and Marsh
-  Deep Water
-  Mudflat
-  Shallow Water
-  National Park Services Restoration Areas
-  Dead Horse Bay Outline

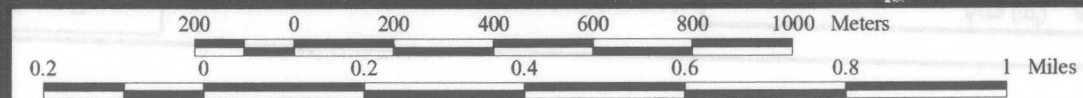
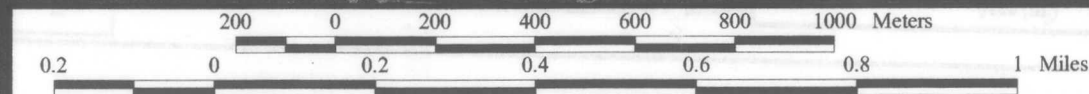


Figure 3. Proposed Restoration Features Map, Dead Horse Bay.

	Area (m ²)	Acres
Channel	16,176.93	4.00
Dune	87,183.53	21.54
High Marsh	45,901.65	11.34
Low Marsh	134,104.79	33.14
Maritime Forest	196,330.73	48.51
Upland	74,182.33	18.33
Preseved Beach Areas	43,105.41	10.65
NPS Restoration Areas	3,211.85	0.79
Unstructured Recreation	128,628.62	31.79
Use-By-Reservation	501,077.38	123.82

-  Channel
 -  Dune
 -  High Marsh
 -  Low Marsh
 -  Maritime Forest
 -  Upland
 -  Preseved Beach Areas
 -  Shoreline Stabilization Training Structures
 -  National Park Services Restoration Areas
 -  Use-By- Reservation
 -  Unstructured Recreation
 -  Dead Horse Bay NPS Outline
 -  Dead Horse Bay Outline
- Proposed Areas



Imagery Source: New York City Landuse
Orthophotos, New York City Department of
Environmental Protection, New York, Version 1.0,
1996 and 2002. Projection: US State Plane,
NAD 83, Long Island Zone, Feet



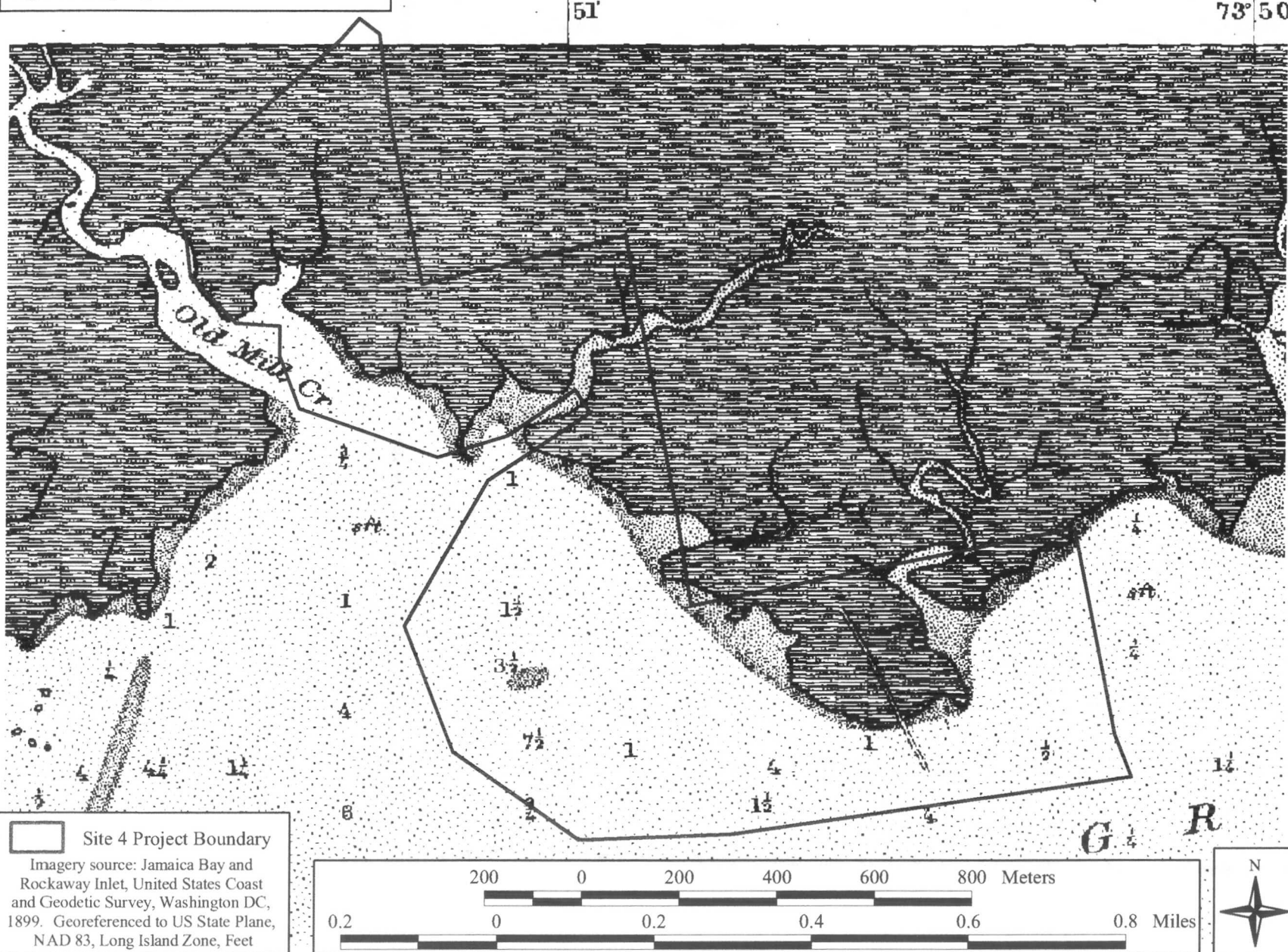
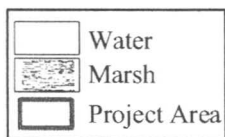
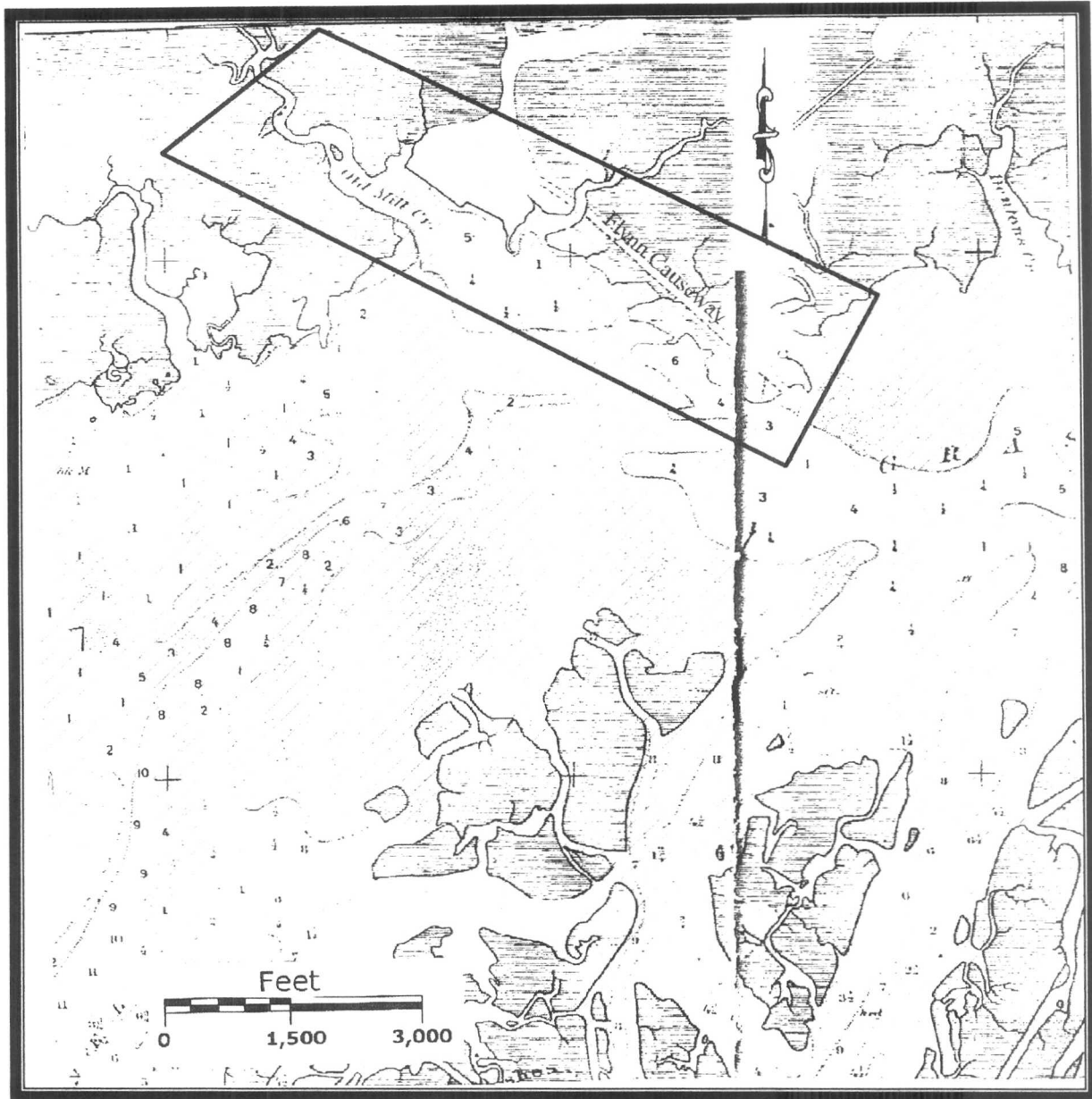


Figure 35. Spring Creek, April 1911.



Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, April 1911

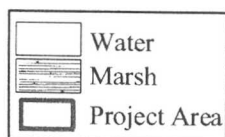
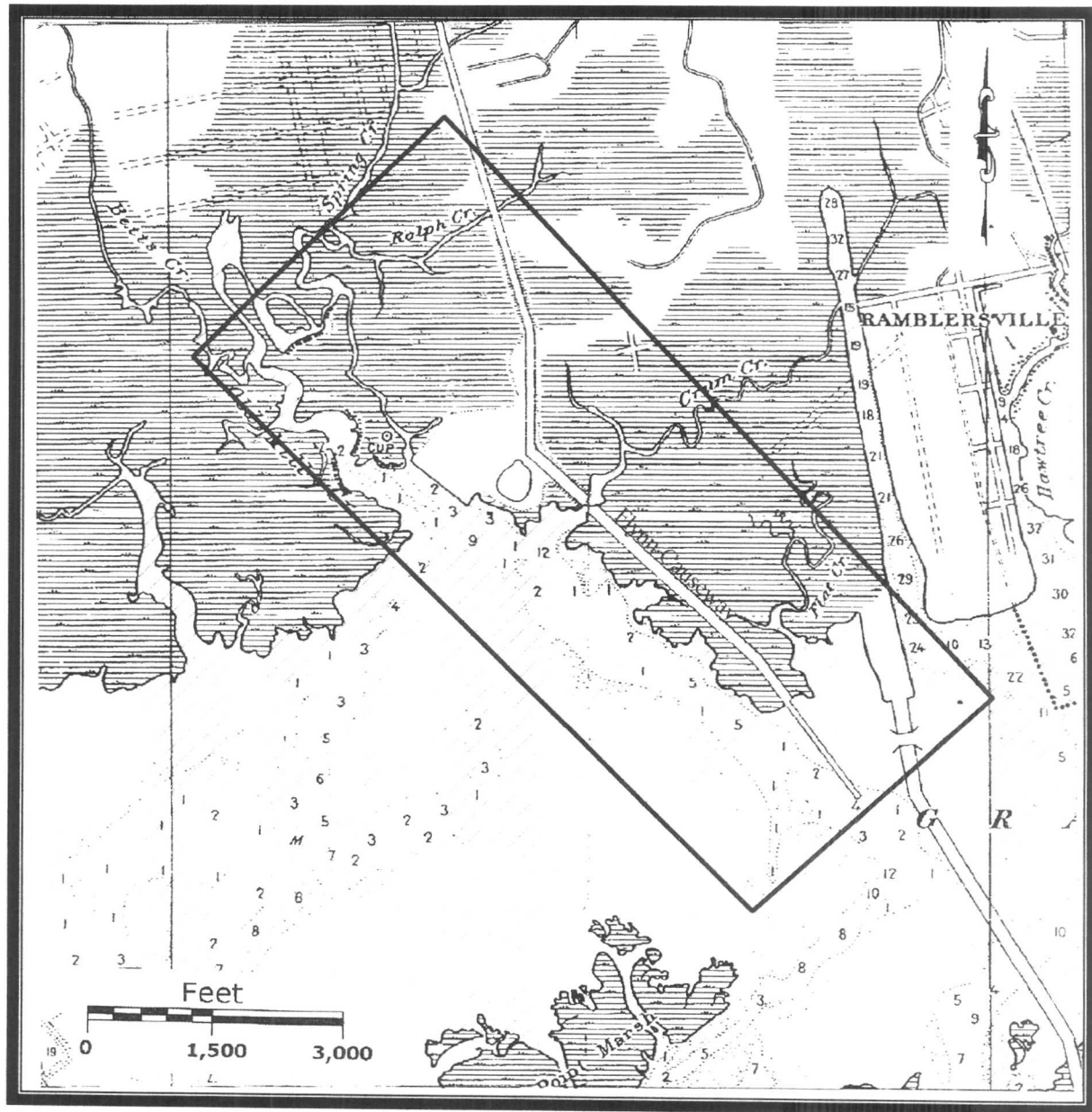
In 1911:

- Flynn Causeway evident from northwest to southeast at bottom of study area
- Flynn bulkheaded stockpile shown on northeast side of Old Mill Creek
- Remaining tidal marshes, flats and creeks undisturbed
- Surrounding Jamaica Bay depths very shallow at 5 feet or less

Figure 1. Historical Baseline Map, Spring Creek, 1899.



Figure 36. Spring Creek, January 1926.



Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, January 1926.

In 1926:

- Flynn Causeway and stockpile still evident
- Jamaica Bay portion of Cross Bay Boulevard under construction
- Tidal marsh portion of Cross Bay Boulevard not constructed
- Town of Ramblersville established on fill with canal cutting Crum Creek in half
- Dirt roads in marsh apparent on west side of Spring Creek

Figure 1. Historical Baseline Map, Spring Creek, 1899.



	Area (m ²)	Acres
Marsh	486,740.28	120.28
Mudflat	123,741.01	30.58
Shallow Water	621,530.48	153.58
Upland	2,578.55	0.64

Imagery Source: New York City Landuse
Orthophotos, New York City Department of
Environmental Protection, New York, Version 1.0,
1996 and 2002. Projection: US State Plane,
NAD 83, Long Island Zone, Feet

1899 Areas

- Marsh
- /// Mudflat
- Shallow Water
- Upland
- Spring Creek Outline

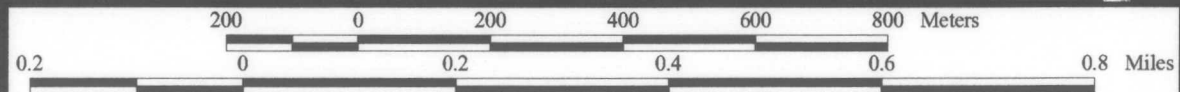


Figure 43. Spring Creek South in 1924.



Site 4 Project Boundary

Imagery source: New York City Fairchild
Aerial Photography, 1924. Georeferenced
to US State Plane, NAD 83, Long Island
Zone, Feet

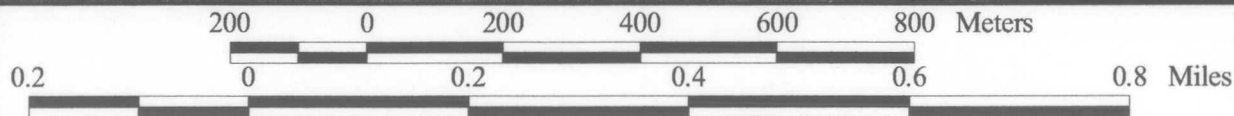
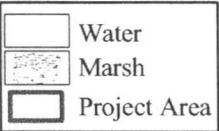
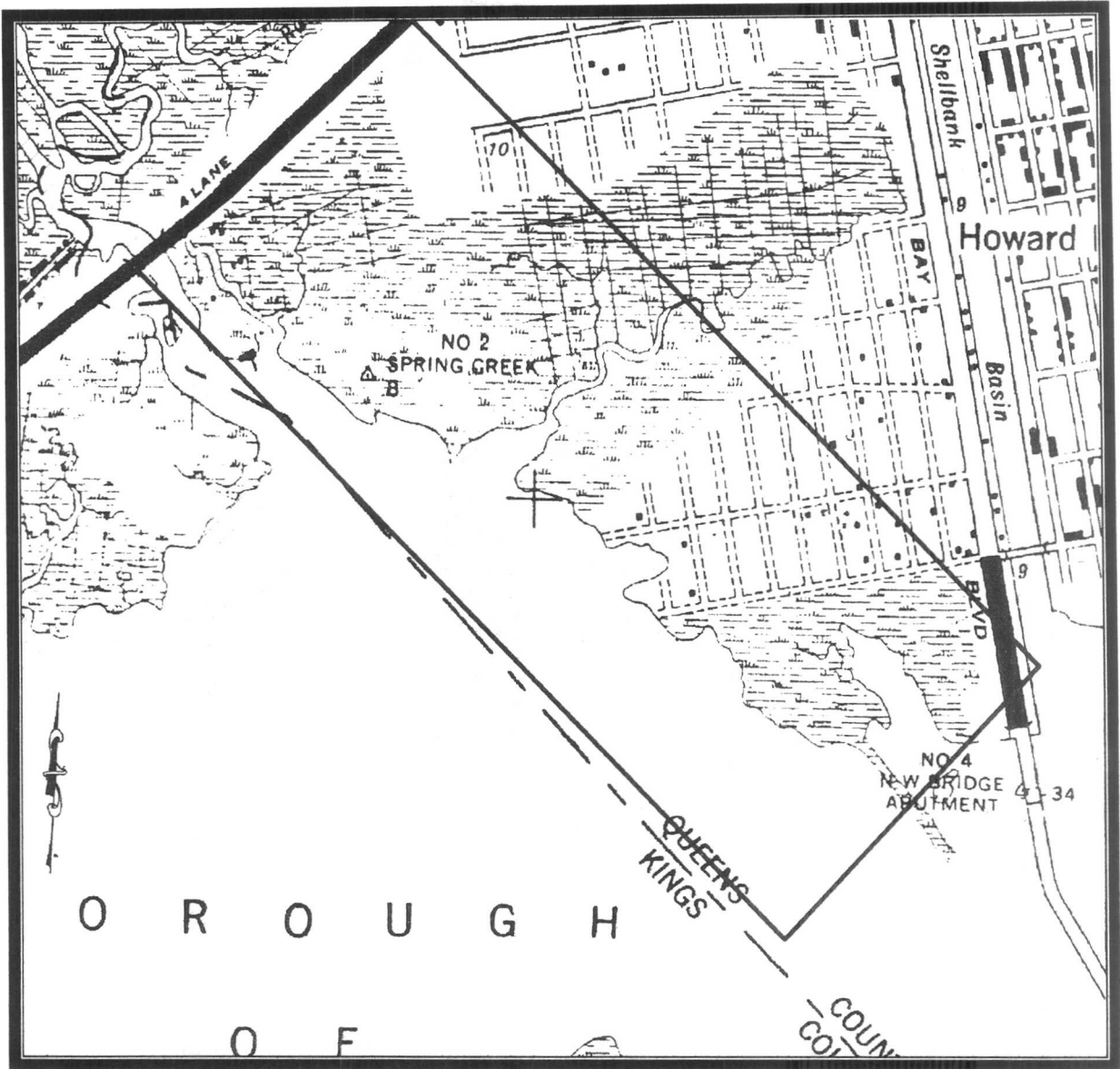


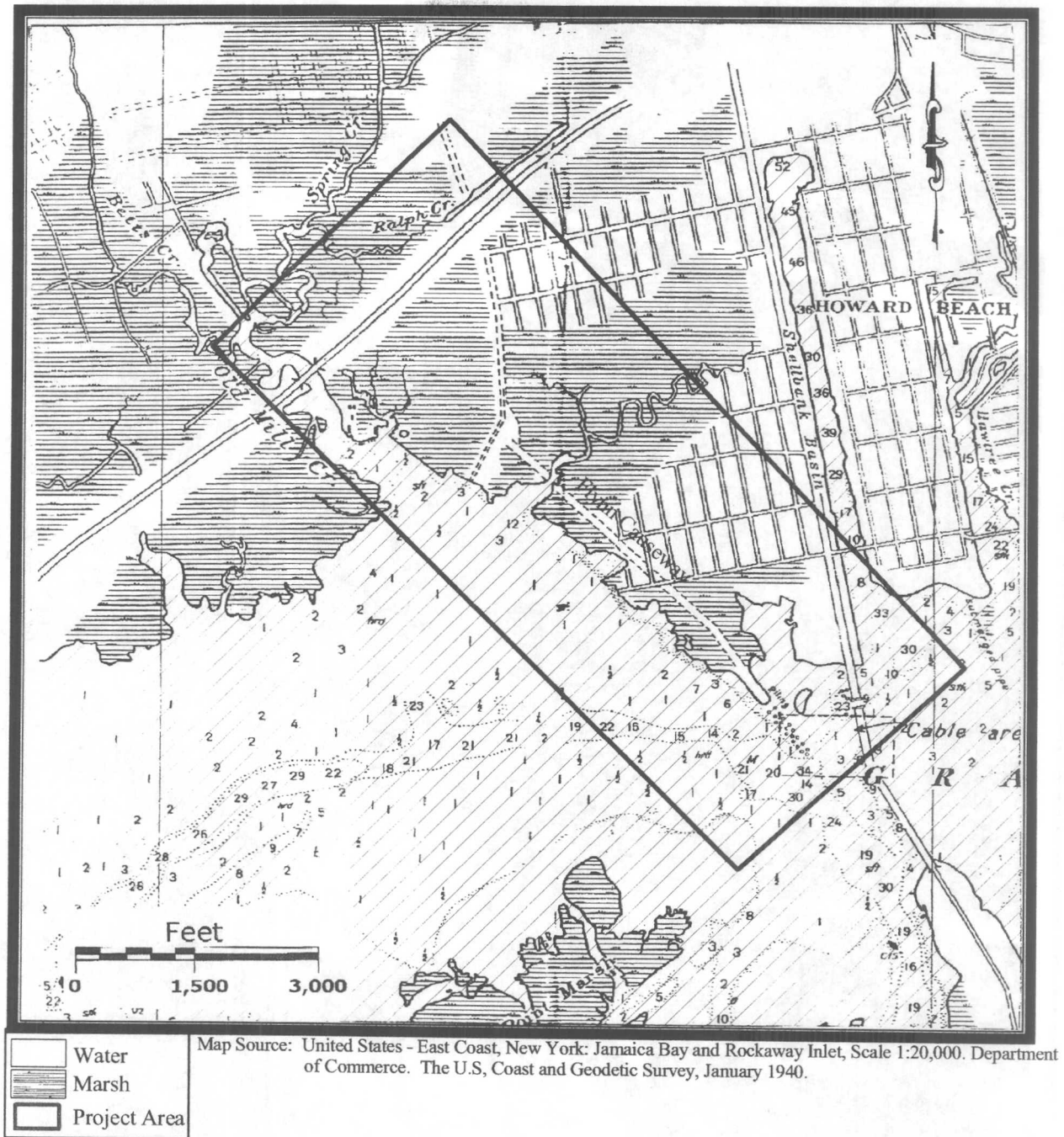
Figure 38. Spring Creek, 1943.



Map Source: United States Geological Survey 15 minute Coney Island, NY Quadrangle, Washington DC, MD, 1955.
United States Geological Survey 15 minute Brooklynn, NY Quadrangle, Washington DC, MD, 1956.

- In 1943:
- Wetlands along Crum Creek and Mill Creek ditched for mosquito control
 - Dirt roads form development with few houses noted

Figure 37. Spring Creek, January 1940.



In 1940:

- Cross Bay Boulevard and Belt Parkway completed
- Roads constructed in vicinity of Betts Creek
- Dredged channel evident in Jamaica Bay
- Flynn Causeway still evident with old pilings in lower area
- Development over wetlands noted north and south of Crum Creek
- Crum Creek east of Cross Bay Boulevard completely filled in with Howard Beach development
- Town of Ramblerville now Howard Beach

Figure 3. Proposed Restoration Features Map, Spring Creek.



	Area (m ²)	Acres
Coastal Dune	162,963.31	40.27
High Marsh	41,031.64	10.14
Low Marsh	199,267.40	49.24
Upland	360,457.27	89.07
Organized Recreation Area	155,340.05	38.39

Proposed Areas

-  Coastal Dune
-  High Marsh
-  Low Marsh
-  Upland
-  Organized Recreation Area
-  Spring Creek Outline

Imagery Source: New York City Landuse
Orthophotos, New York City Department of
Environmental Protection, New York, Version 1.0,
1996 and 2002. Projection: US State Plane,
NAD 83, Long Island Zone, Feet

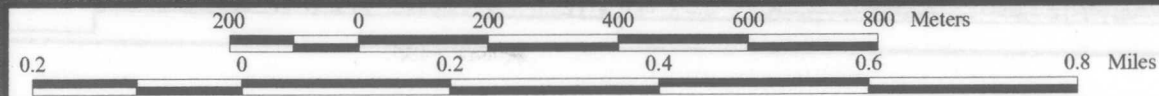
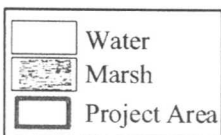
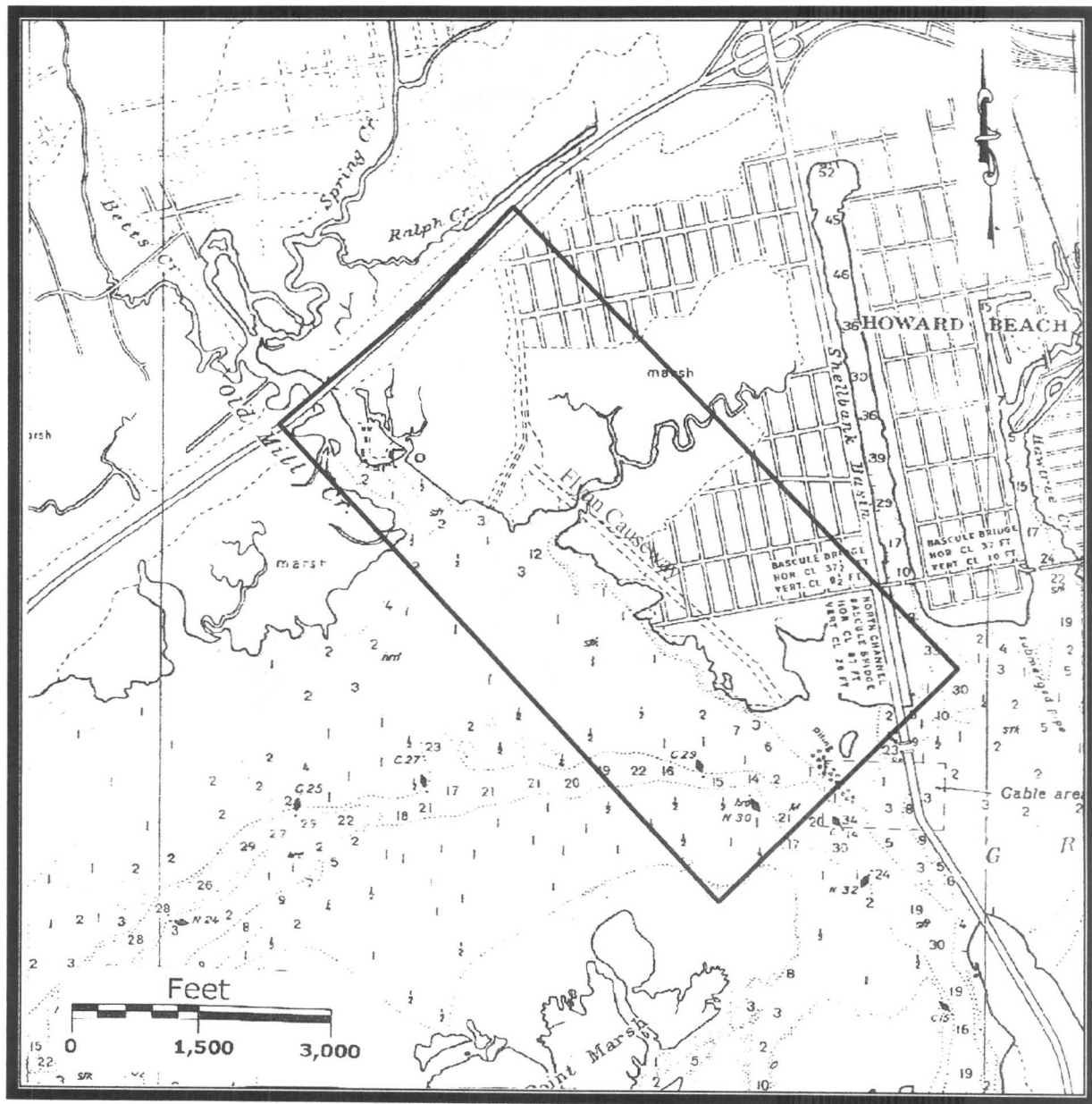


Figure 39. Spring Creek, September 1948.

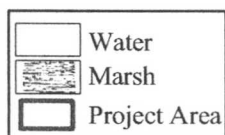
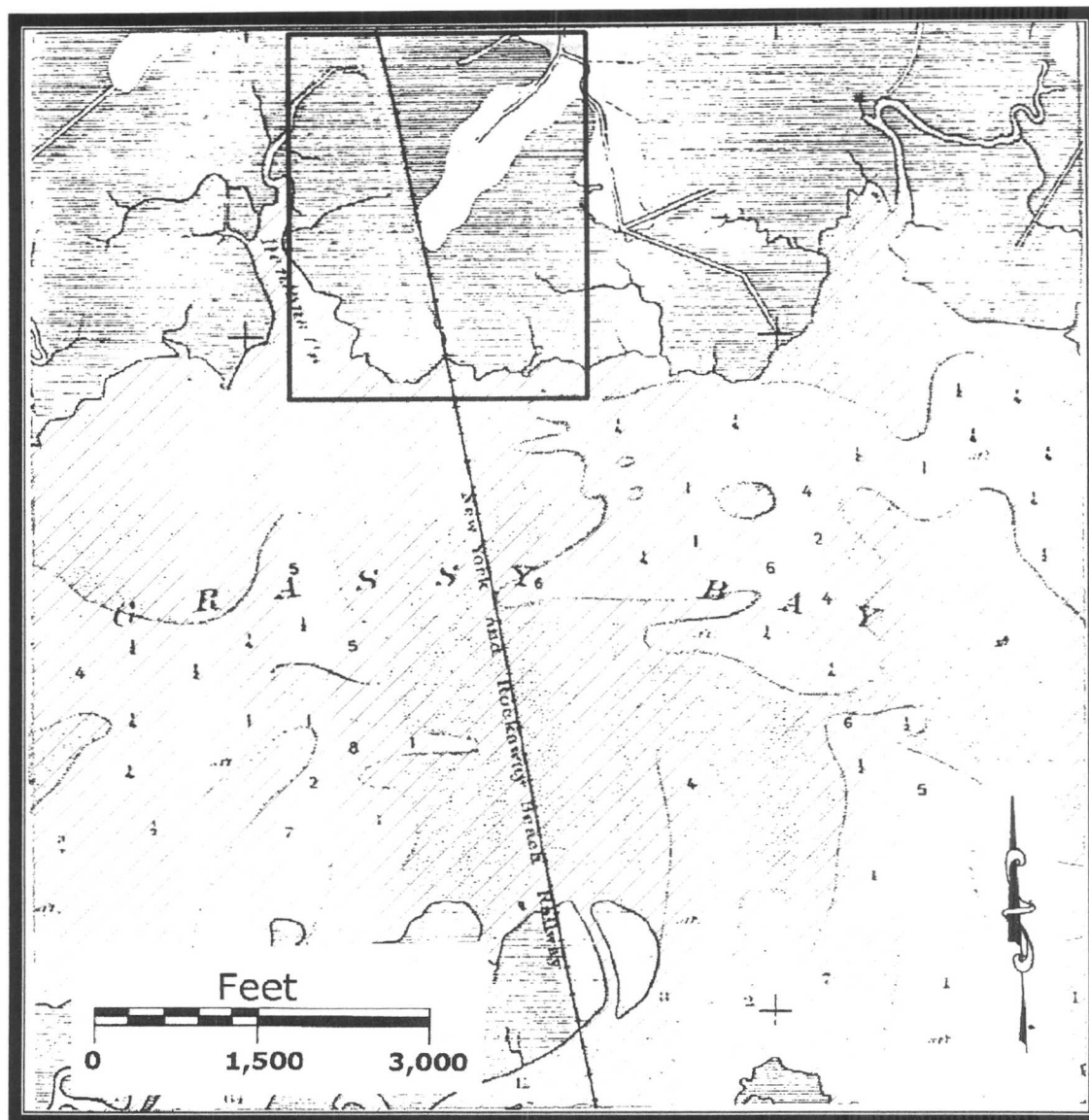


Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, September 1948

In 1948:

- Very little change noted in salt marsh systems filled and/or ditched
- Jamaica Bay and surrounding waters bathymetry not changed appreciably

Figure 46. Hawtree/Bergen Basin, April 1911.

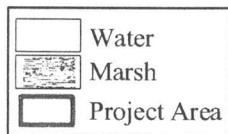
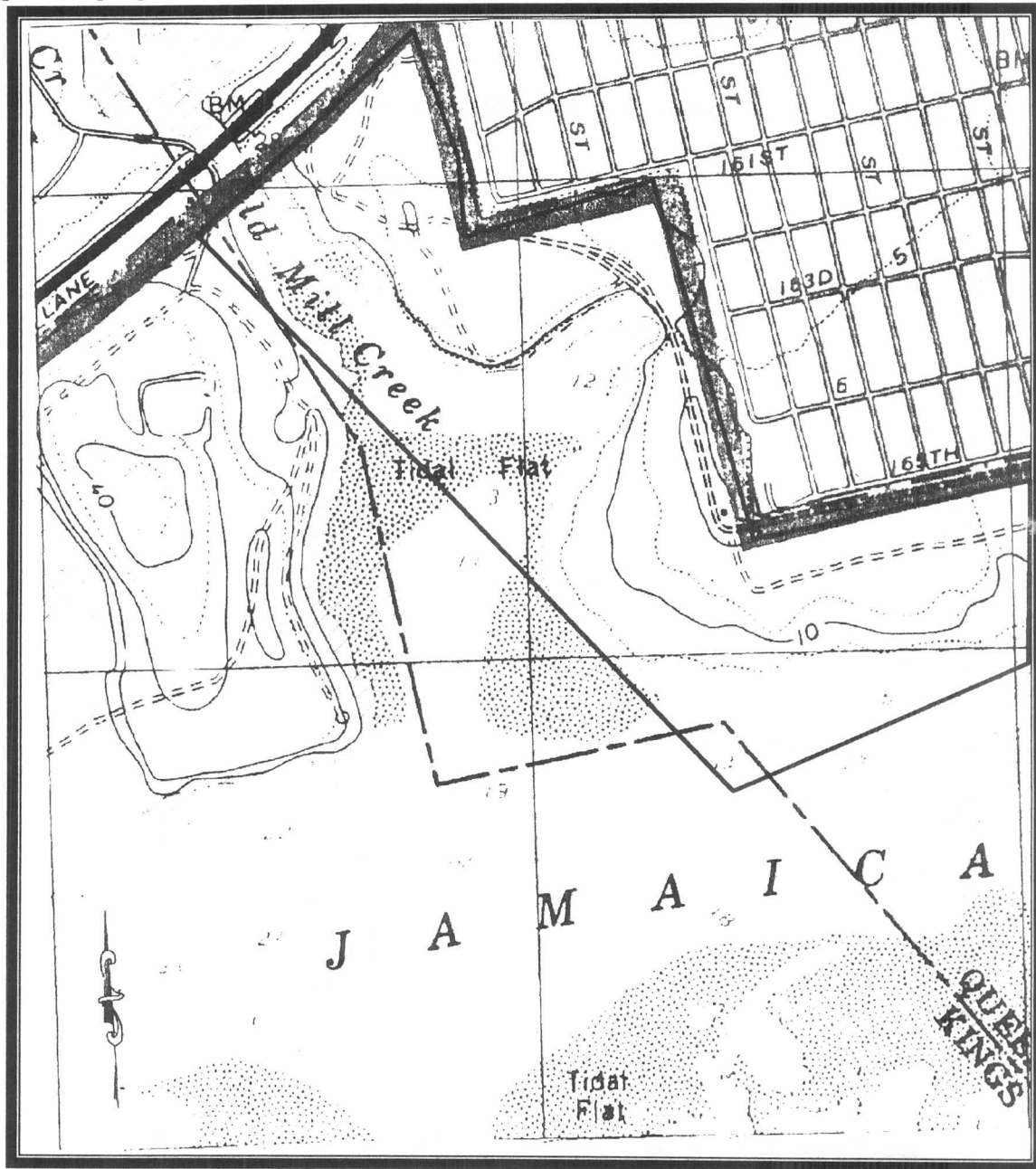


Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, April 1911

In 1911:

- Roads evident along upland peninsulas
- New York and Rockaway Beach Railway existing across Jamaica Bay
- Tidal marsh, flats and creeks relatively undisturbed with shallow water depths noted in Jamaica Bay

Figure 41. Spring Creek, 1994.

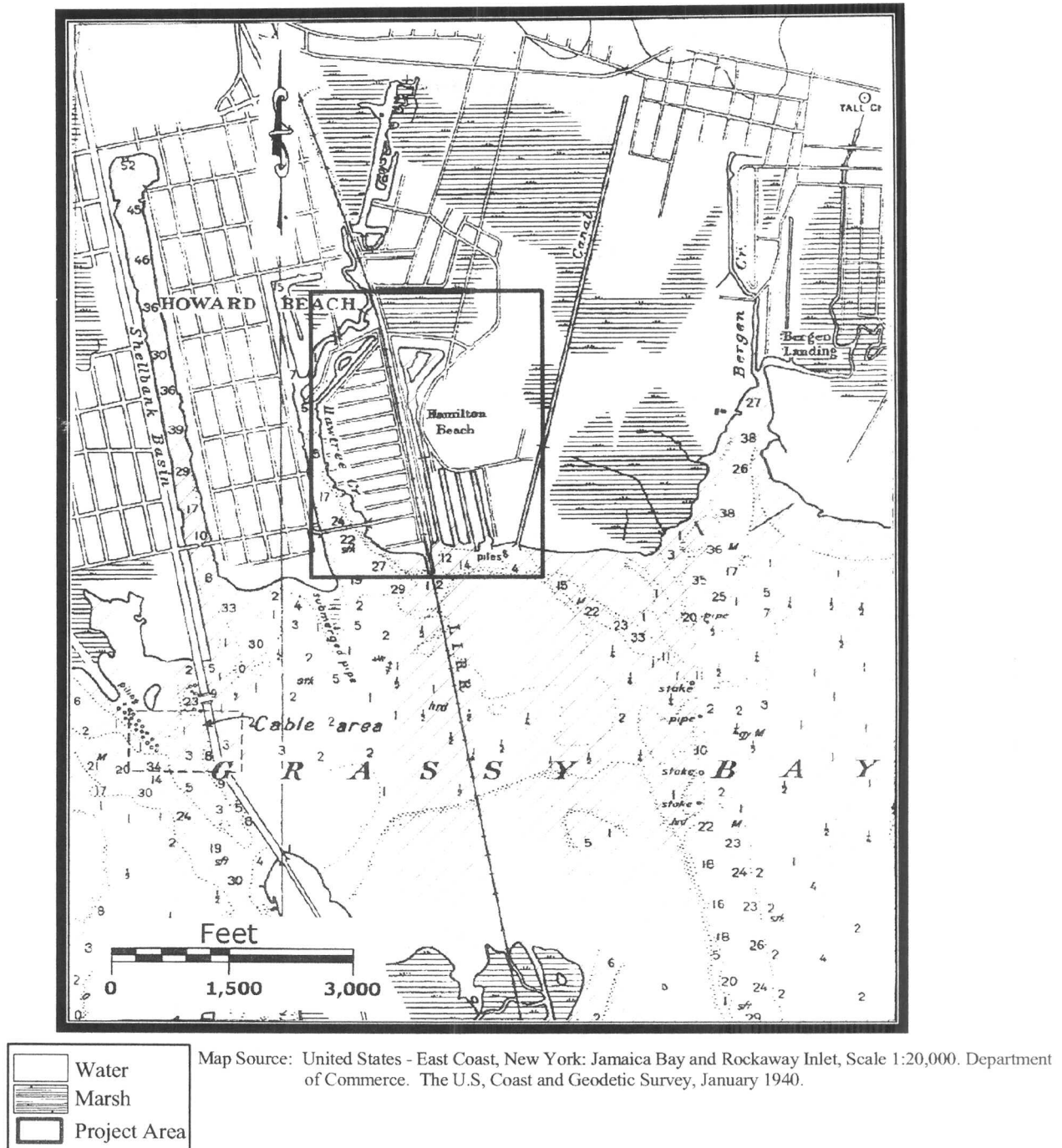


Map Source: United States Geological Survey 15 minute Jamaica, NY Quadrangle, Washington DC, MD, 1994.

In 1994:

- Development filled in over Crum Creek area
- Pennsylvania Avenue landfill grades extend up to elevation 40
- Tidal flats form large areas of Old Mill Creek

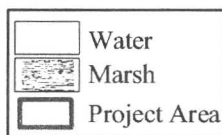
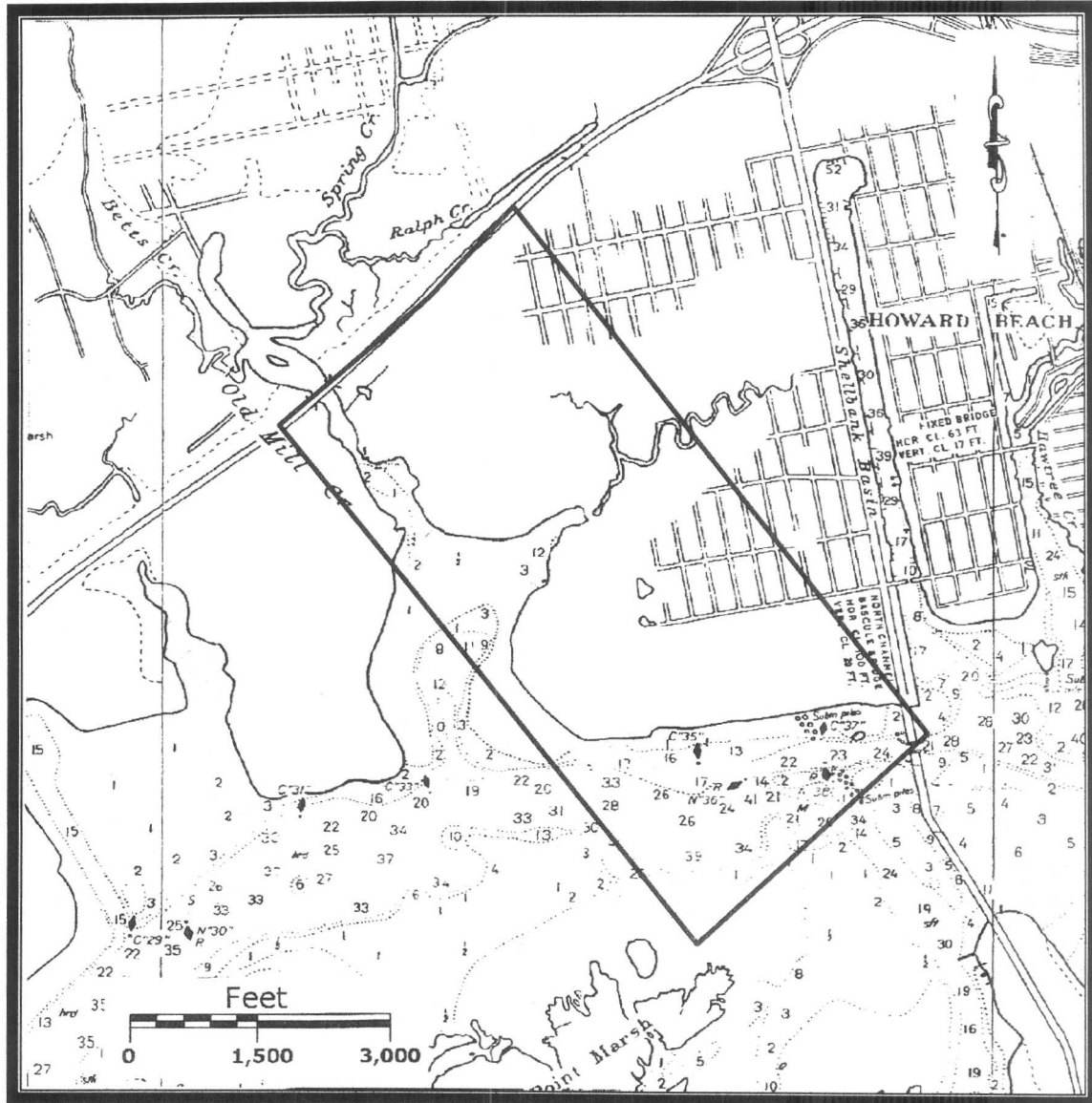
Figure 48. Hawtree/Bergen Basins, January 1940.



In 1940:

- Road system extended to Hamilton Beach
- Fills placed throughout area covering and fragmenting tidal marshes
- Upper portion of Hawtree Creek dredged to straight alignment
- Dredge channels evident in Jamaica Bay to access Shellbank Basin, Hawtree Creek, Hamilton Beach and Bergen Creek

Figure 40. Spring Creek, January 1970.

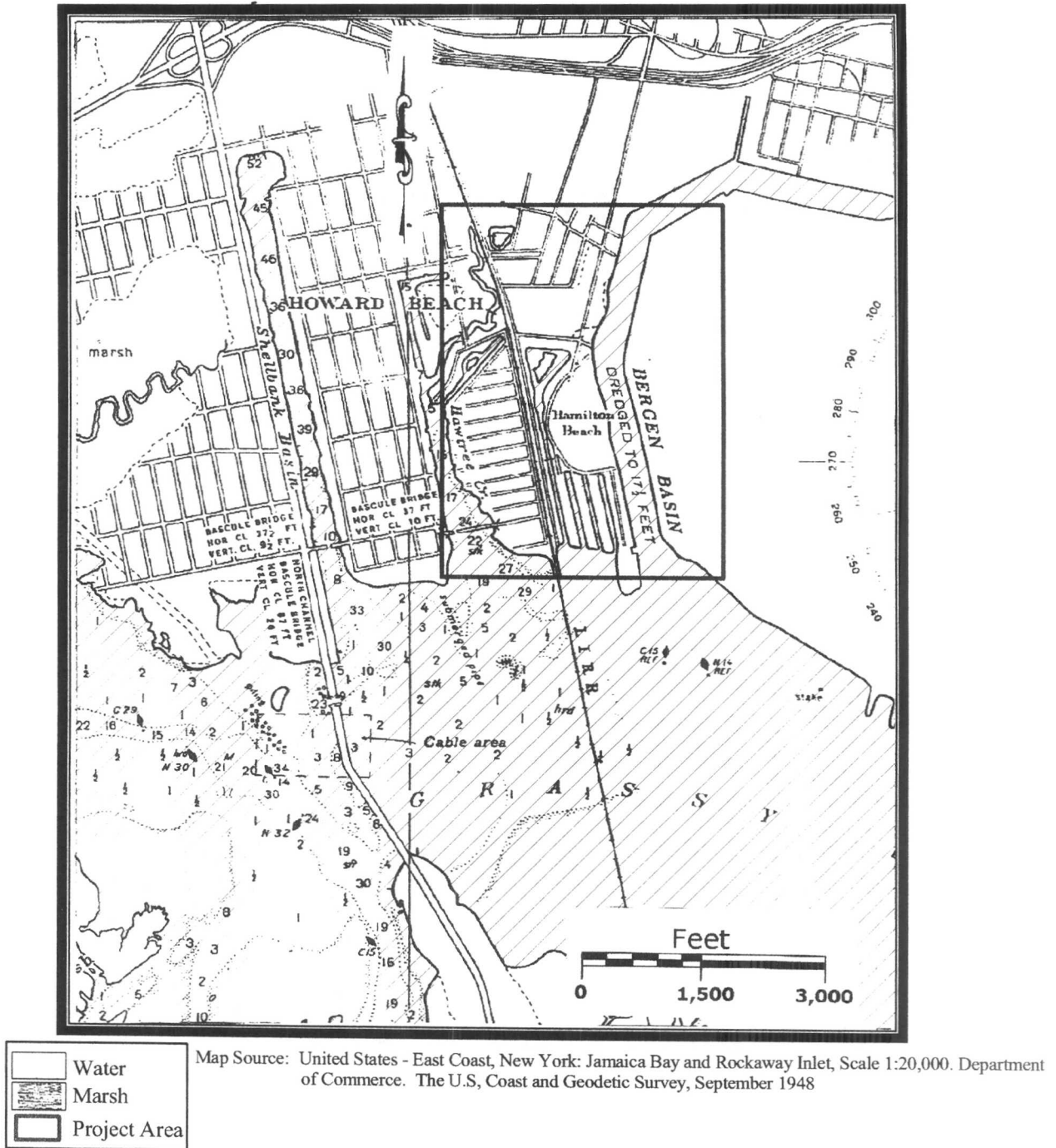


Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, January 1970

In 1970:

- Salt marsh no longer present on either side of Crum Creek
- Salt marsh absent from west side of Old Mill Creek with shoreline extended into bay apparently reflecting Pennsylvania Avenue landfill
- South shorelines of the study area extend into Jamaica Bay
- Shoreline also extended west into Old Mill Creek in north portion of study area

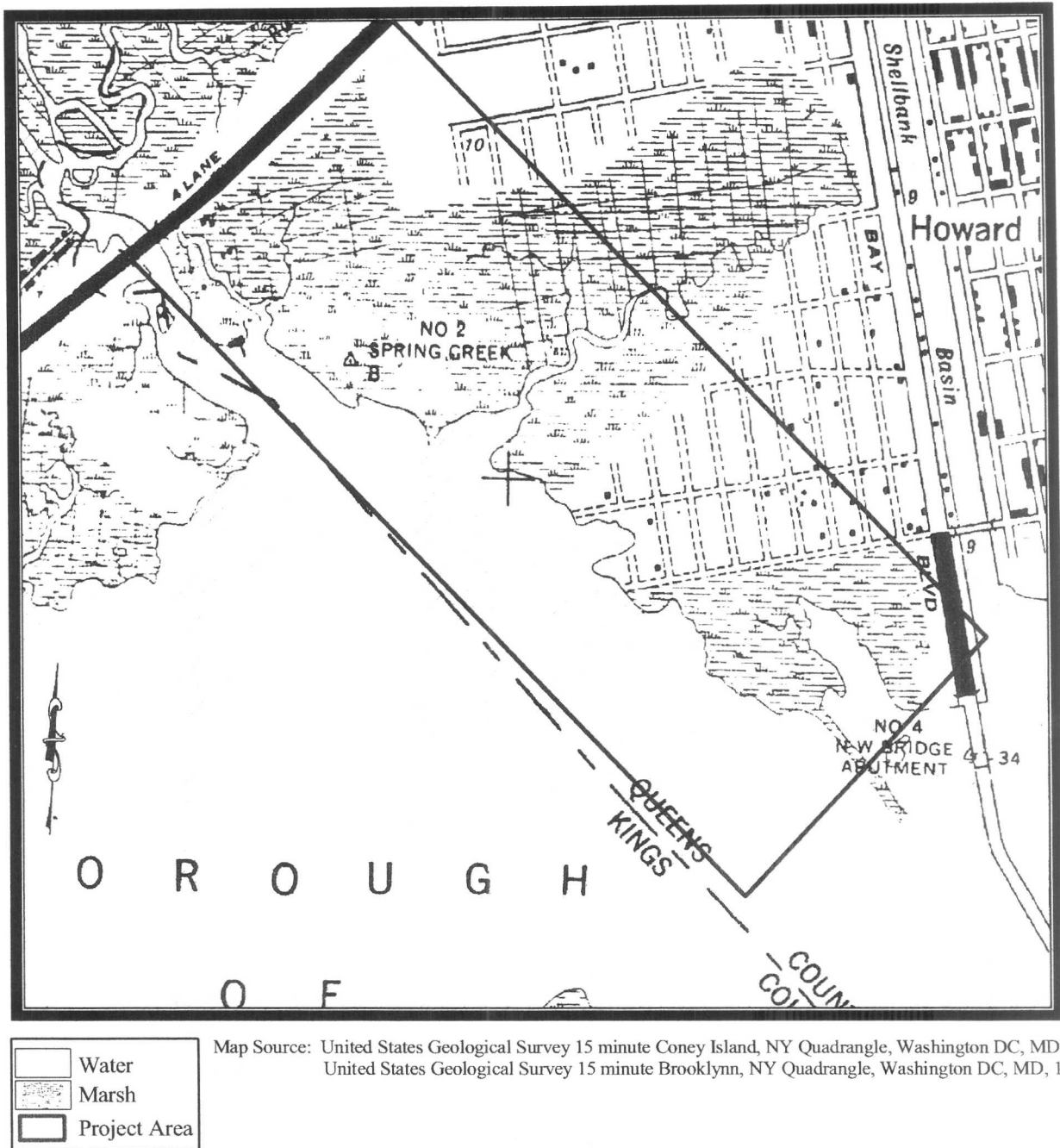
Figure 50. Hawtree/Bergen Basins, September 1948.



In 1948:

- Bergen Basin substantially widened and dredged to 17.5 feet
- Remaining areas left essentially unchanged from 1940
- Grassy Bay east of LIRR apparently in the process of being dredged

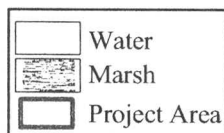
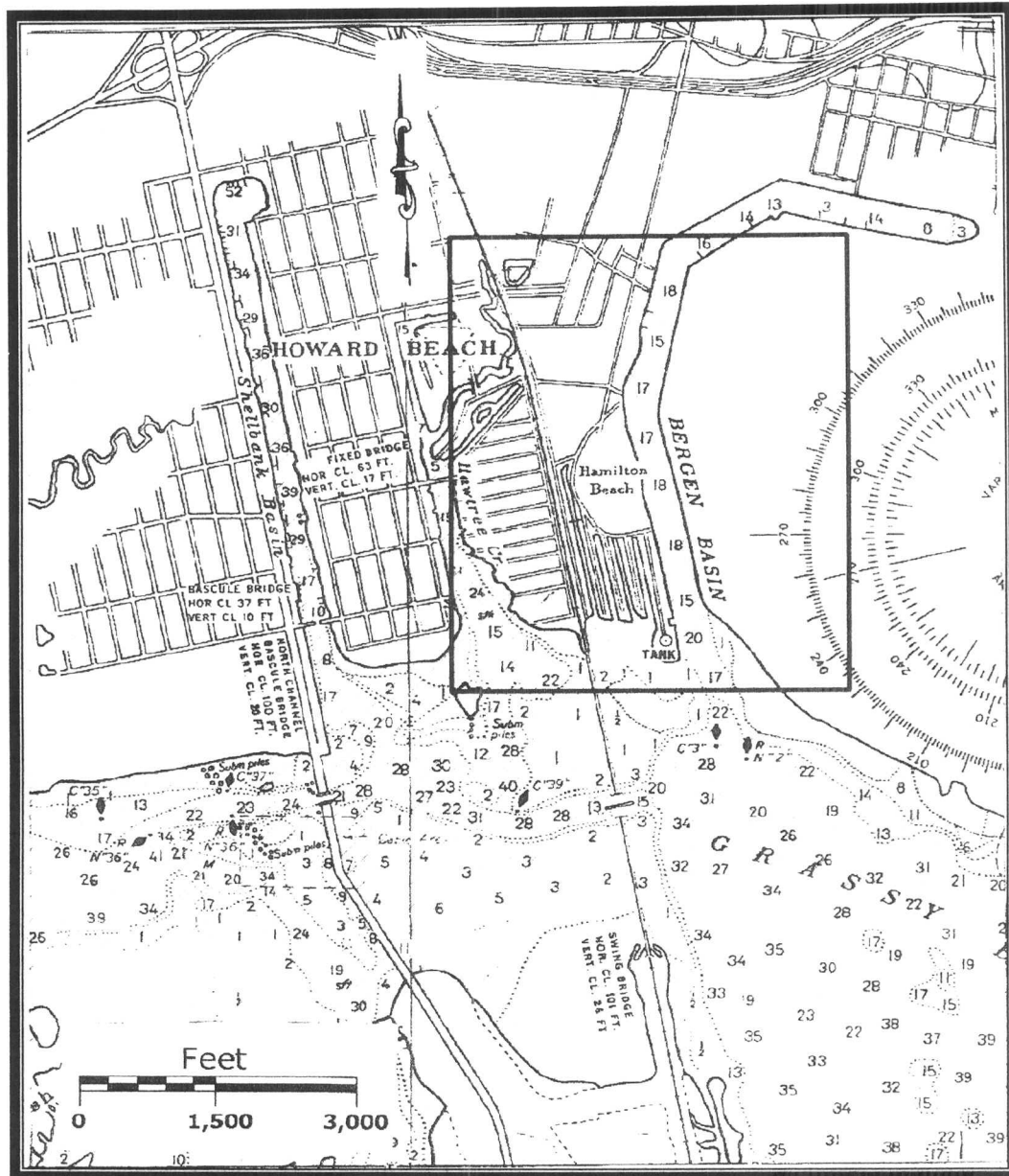
Figure 38. Spring Creek, 1943.



In 1943:

- Wetlands along Crum Creek and Mill Creek ditched for mosquito control
- Dirt roads form development with few houses noted

Figure 52. Hawtree/Bergen Basins, January 1970.



Map Source: United States - East Coast, New York: Jamaica Bay and Rockaway Inlet, Scale 1:20,000. Department of Commerce. The U.S. Coast and Geodetic Survey, January 1970

In 1970:

- Tidal marsh systems absent from project area
- Grassy Bay east of LIRR dredged to depths ranging from 19 to 38 feet

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