

NEW YORK / NEW JERSEY HARBOR DEEPENING PROJECT

Using Synergy to Successfully Execute A Mega Water Resource Project

Joseph J. Seebode
Deputy District Engineer
U.S. Army Corps of Engineers
New York District



US Army Corps
of Engineers New
York District
BUILDING STRONG®



Why Synergy?

“The pilot directed the ship’s crew and the tugs south down Newark Bay and carefully orchestrated a turn to port into the Kill Van Kull, a narrow channel separating Bayonne from Staten Island and leading to New York’s Inner Harbor.

After passing under the Bayonne Bridge the water traffic became heavier and the channel even narrower and choppier.

Tugs pushing barges, oil tenders, tankers, other container ships and numerous small craft had to be carefully watched.

To add to the congestion, the channel was being deepened to fifty feet by the Army Corps of Engineers, so a huge dredge was anchored and digging away smack in the middle of the channel.

Barges were tendered alongside it, while barges were being filled with rock and mud and others were being pushed away by tugs and empty barges were being nudged into position.”

***From: Found At Sea
By: Mike Breslin, 2003***



Opportunities

Goal: Deep Draft Navigation Channels

- Strategic Contracting
- Regional Water Resource Impact Mitigation
- Air Quality Mitigation
- Beneficial Use of Dredged Material
- Quality of Life Issues (Drilling/Underwater Blasting/Noise/Vibrations)
- Water Quality Improvements (Landfills, etc.)
- Regional Environmental Benefits
- Economic Development & Re-development



Vision of a World Class Harbor Estuary

Navigation/Port

Environment



Channel and berth Dredging;

Dredged Material Management:

Port Facility Expansion
Port Facility Expansion

Drift/floatables Removal

NYC - Comprehensive
Waterfront Plan

Harbor Operations
Committee

Green Port Infrastructure
Improvements

ECONOMIC
BENEFIT

Jamaica Bay Science &
Coastal Resilience
Center

Harbor
Operations

Storm/Flood Risk Reduction
Projects

ENVIRONMENTAL
QUALITY

WORLD CLASS
ESTUARY

NYC Vision 2020

Storm Preparedness
Planning

HRE- Comprehensive Restoration Plan
Beneficial Use of DM

Ecosystem Restoration Projects

Regulatory Mitigation Execution

Water Quality – TMDL/CSO Abatement

PANY&NJ Acquisition Program

Oyster Restoration Partnership

CERCLA Remediation/Natural
Resource Damage Assessment

Urban Parks Initiative/
Public access

HEP - CCMP

RESILIENCY

Climate Change
Adaptation Planning

Partnership

The New York/New Jersey Harbor Deepening Project serves as a model for others seeking integration of public interest opportunity where port, economy, environment and navigation are not mutually exclusive but “partners” in sustainability.

The Harbor Deepening Project involved several government and non-governmental partners

The Port Authority Of New York & New Jersey

U.S. Environmental Protection Agency

National Marine Fisheries Service

U.S. Coast Guard

State of New York (ESDC, NYSDEC, NYSDOS)

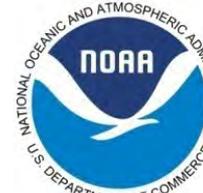
State of New Jersey (DOT-OMR, NJDEP)

City of New York (EDC, DEP)

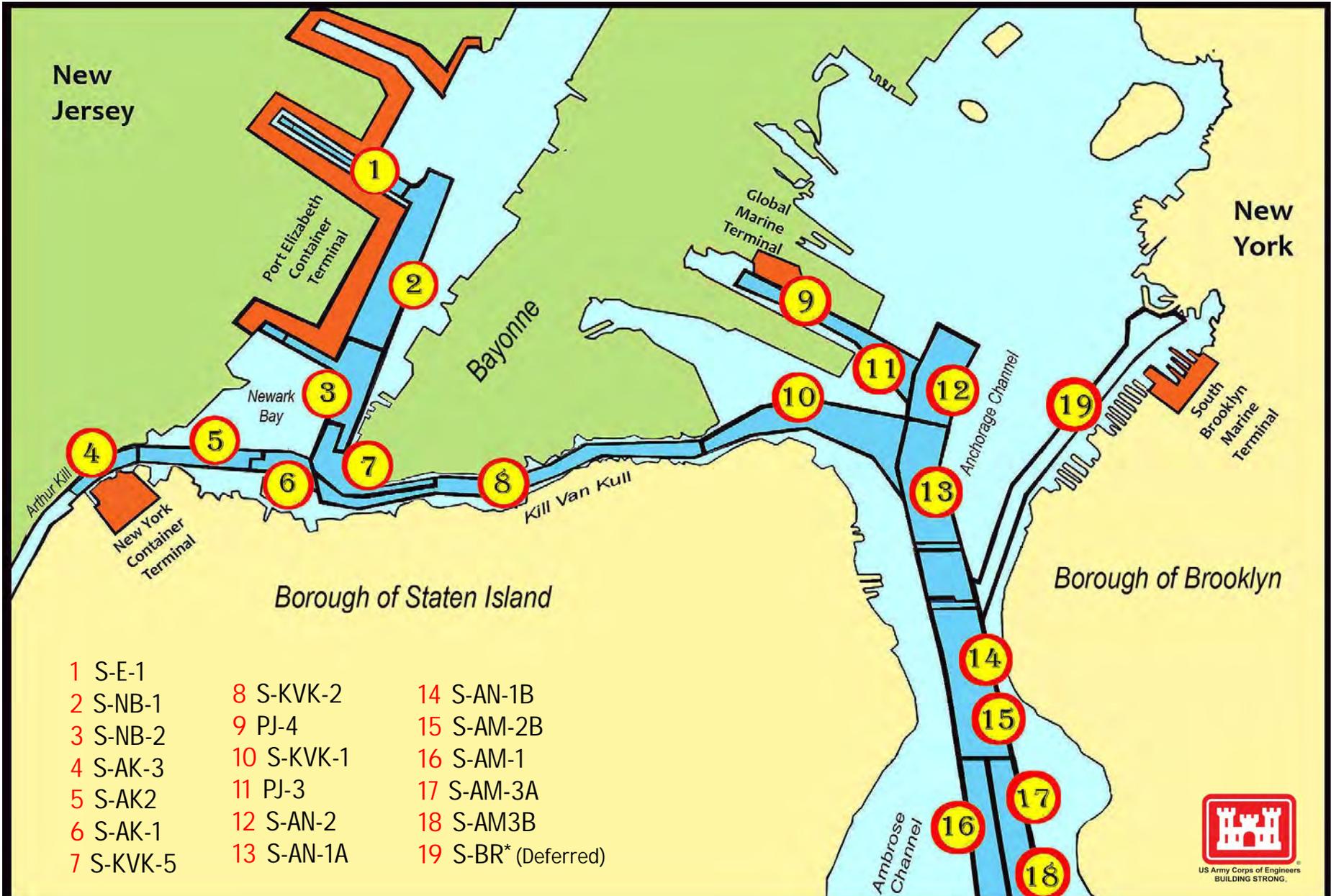
Hudson River Foundation

Environmental Defense

NY&NJ Baykeeper



Various contract areas of different scope and value were awarded over a decade to safely and efficiently execute the deepening over 35 miles of channels



Managing dredging without ever closing the Port



The Channel deepening effort -- part of a more extensive harbor-dredging project to create safe and efficient channels for a larger class of ships that will be calling at the Port of New York and New Jersey.



Managing Drilling and Underwater Blasting to minimize impacts on the environment, natural resources and local communities.



Integrating timely utility relocations or abandonments to sync With channel deepening schedules



In order to complete the deepening, two water siphons (identified as Siphon #1 and Siphon #2) owned, operated, and maintained by the New York City Department of Environmental Protection have been replaced by a new water supply line between the borough of Brooklyn and borough of Staten Island, NYC.

The new line is critical to ensuring a backup water supply to Staten Island and enables dredging in the vicinity and over the historic siphons to safely occur to 50 feet.





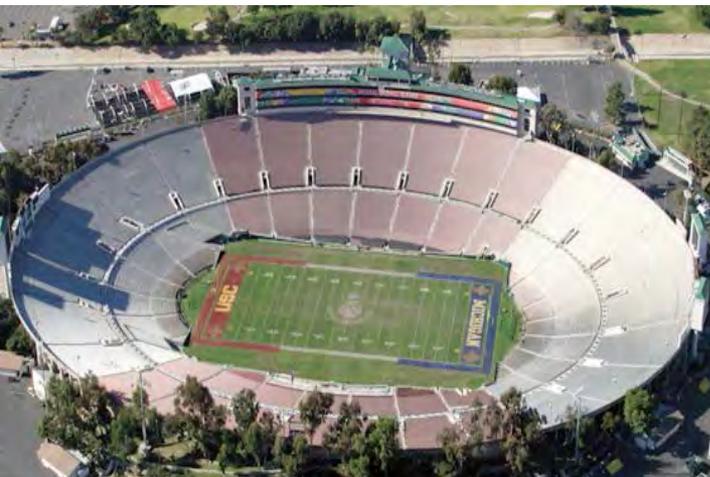
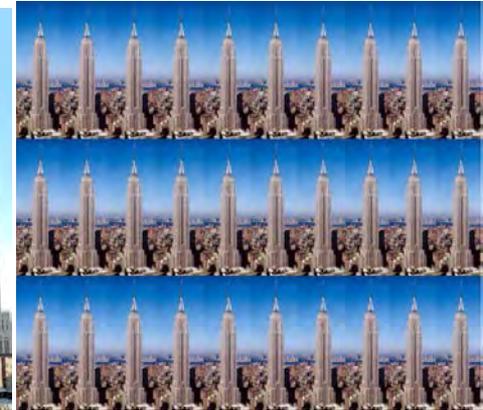
Managing over 50 million Cubic Yards of Dredged Material removed since 2004



Would Fill:

Central Park, New York City
to a depth greater than 30 feet.

Three buildings the size of
the **Empire State Building**
each year for ~12 years



A standard size **football stadium** to a height of
over 5 miles, or greater
than the height of **Mount Everest** (5.4 miles high)



Managing multiple varieties of dredged material



Beneficial Usage

- Sand – island creation or closure of the HARS (Historic Area Remediation Site)
- Soft mud – Same as sand or upland
- Glacial Till - HARS
- Clay - HARS
- Bedrock – Artificial Fish Reef Creation



Creating unique partnerships to enable beneficial uses of dredged material for environmental, recreational, resiliency and economic value



Brownfield Remediation



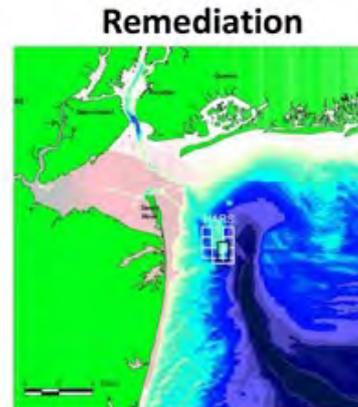
Beach Nourishment/Shoreline Stabilization



Fish Reefs



Ecosystem Restoration



SYNERGY REALIZED

From the outset of construction on the multi-billion dollar deepening of the Port of New York and New Jersey partners committed to a collaborative approach that would expedite dredging activities while ensuring sustainable approaches were realized for the environment, economy, public interest, navigation and safety.

Adopting collaboration and synergy resulted in the opportunity to combine multiple initiatives that have moved the region forward in achieving progress towards the vision of a **WORLD CLASS NEW YORK/NEW JERSEY HARBOR ESTUARY.**

The New York / New Jersey Harbor Deepening experience has shown that synergy is an invaluable tool for the execution of a mega water resource project.





Questions?



C R A D L E O F T H E C O R P S