New York & New Jersey Harbor: Managing Dredging in a Post-Deepening World

Mid-Atlantic Contaminated Sediments Symposium 2012

John F. Tavolaro
USACE New York District
BACK TO THE FUTURE...

1970’s to mid-90’s ➔ Maintenance ➔ Mud Dump

Mid-90’s to 2014 ➔ Deepening/Maintenance ➔ HARS

2014 to ?? ➔ Maintenance ➔ ???
NY & NJ Harbor Deepening Contract Areas

New Jersey

New York

Completed
Deferred Work
Future Awards
Award in CFY
Underway
NY & NJ Harbor Deepening Facts

Types of Dredged Material:

• Rock ---------------------- 7.5 MCY (15%)
• Clay ---------------------- 5.2 MCY (11%)
• Glacial Till --------------- 7.2 MCY (14%)
• Sand --------------------- 16.5 MCY (34%)
• Clean Mud ----------------- 2.4 MCY (5%)
• Contaminated Mud – 10.3 MCY (21%)

Total – 49.1 MCY
NY & NJ Harbor Deepening Facts

Where has the Dredged Material Gone?

- HARS (Ocean Placement) -- $8-18/CY
- Artificial Fishing Reefs -- $50-70/CY
- Remediation of Landfills and Brownfields (Processed DM) -- $60-100/CY
- Newark Bay CDF -- $35-45/CY
- Creation of Marsh Islands in Jamaica Bay -- $30-35/CY
DM Management in the Port of NY & NJ: The Current Paradigm

Large Quantities of Clean Dredged Material Suitable for Multiple Beneficial Uses:

- Wetland Creation
- Artificial Fishing Reefs
- HARS Placement

Smaller Quantities of Contaminated Dredged Material Suitable for Beneficial Use (Landfill / Brownfield Remediation) If Processed

Very Small Quantity of Dredged Material That Can Only be Disposed in the Newark Bay CDF
NY & NJ Harbor Maintenance Dredging: Current Facts

Average Annual Federal Quantity Dredged ----- 550,000 CY

Average Annual Federal Budget for Dredging ----- $14 Million

Average Annual Private Dredging --- 588,000 CY

Total Avg Maintenance Dredging --- 1,138,000 CY

Where Has This Material Gone?
- HARS 53%
- Upland / Processed 31%
- Beach Nourishment 12%
- Newark Bay CDF 4%

Average Federal Cost/CY -------- $25/CY
NY & NJ Harbor Maintenance Dredging: Future Projections

Projected Annual Maintenance Needs for Deepened Channels --- 984,000 CY
(Ground Truth – Historic Annual Quantities from These Channels ---- 1,370,000 CY)

Total Annual Maintenance Needs (With Non-deepened Channels and Private Dredging) --- 2,122,000 CY

If NOTHING CHANGES, Where Will This Material Go?

- HARS 29%
- Upland / Processed 64%
- Beach Nourishment 7%
- Newark Bay CDF 0%

If NOTHING CHANGES, What Annual funding is needed to meet the need?

$70-80 Million ($46-52/CY)
The New Reality:

Nearly Three Times as Much Federal Maintenance Dredged Material to Manage

Larger Percentage of Contaminated Dredged Material Suitable for Beneficial Use (Landfill / Brownfield Remediation) If Processed

Smaller Percentage Suitable for HARS Placement (Mud) and Beach Placement (Sand Only)

No Place for Dredged Material That is Not Suitable for Beneficial Use

Conclusion: The Existing Dredged Material Management Paradigm NO LONGER SERVES US – New Paradigm Needed
What Are We Doing About This Problem?

Engaged Our Partners:
- NY State (Co-Lead)
- NJ State (Co-Lead)
- Other Federal / State Agencies, Port Authority and NY City
- NGOs – Environmental and Port

Formed NY & NJ Harbor Dredged Material Strategic Planning Group
- Consensus Based
- “30,000 Ft. View”
- Review Possible DM Management Options
- Will Make Recommendations This Year
UNIVERSE OF FUTURE OPTIONS...

Upland
- Landfills
- Brownfields
- Quarries
- Mines

New Confined Disposal Facility
- Aquatic Pit
- Island

Use of Existing “CDF’s”
- Island Enhancement
- Basin

Wetland development
- Enhancement
- Creation

Ocean Placement
- HARS
- New Ocean Site
However, There is One Inescapable Fact:

Existing Funding Levels Will be *Inadequate* to Maintain What We Built

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1,534,000 \text{ CY} / \$14 \text{ Million} = \$9/\text{CY}
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(HARS is *Already* \$8-18/\text{CY})