

# New Jersey Department of Transportation Office of Maritime Resources

## State Channel Dredging Program



## Marine Trades Association of New Jersey Conference and Expo

Woodlake Country Club  
12 March 2015

# All Things Maritime

- Super Storm Sandy Recap
- FEMA Program
- Statewide Maintenance Dredging
- 5 Year Dredging Outlook
- Waterway Linear Segmentation
- Dredge Material Management System
- Research
- Budgeting

# Super Storm Sandy Recap

- September 2011, Super storm Sandy struck our shorelines and crippled our coast.
- Interagency effort
  - NJDOT
  - NJDEP/BCE
  - USACE
  - NOAA
- Side scan sonar/Large debris removal
- Core sample/shoaling analysis
- Engineering evaluations of State channels and CDFs
- Immediate action plans/long term management plans

# FEMA Program

## Project worksheet 4846

- Reimbursement for sandy related sediment in channels
- Reimbursements per channel and by volume
- 131 Channels in Project Worksheet
- 116 Channels in Appeal
  - 99 Appealed
  - 17 Volumes Appealed

## Project worksheet 5074

- 6 CDFs
- Damages exceeding 3M\$ in repairs
- Repairs and Mitigation
- Long term maintenance

# Statewide Maintenance Dredging

- March 2014 Gov. Christie Announces Multi-Year State Channel Dredging Program
  - State's program features an aggressive schedule to maximize efforts during non-restricted months
  - Successful first year with 8 channels dredged
- Adapting and implementing long term solutions
  - Property acquisitions for state owned confined disposal facilities
  - Data collection from top researchers and state agencies strategizing best practice solutions

# 2014 Completed Projects

## Navigation Channels

- Keansburg
  - Waackaack Creek
  - Thorn's Creek
- Cape May
  - Middle Thorofare Lagoon
  - Spicer's Creek
  - Cape Island Creek
  - Schellenger's Creek
  - Devil's Reach
- St George's Thorofare
- Avalon
  - Gravens Thorofare
  - Whale Harbor

# Keansburg





# Keansburg





# 2014 Completed Projects

## Confined Disposal Facilities

- N-61 (Belford Ferry Terminal)
  - Engineered and rebuilt berms for future projects
- Atlantic Highlands
  - Removed ~34K cy of material
  - Redesigned CDF for future capacity
  - Built new mobilization pad
- Monmouth Cove Marina
  - Removed 5K cy of material
  - Graded site for future placement
- Keansburg CDF construction
  - Raised berms to allow existing material to remain in place preserving coastal resiliency
- Leonardo State Marina
  - Acquired Property/ Cleared site
  - Redesigned CDF for future capacity

# Keansburg CDF Construction





# Oyster Creek CDF



# In the Queue

## Channel Projects

- Shark River
- Manasquan
  - Crabtown Creek
  - Wills Hole Thorofare
  - Lower Manasquan
  - Upper Manasquan
- Bay Front Channels
- Leonardo
- Pews
- Stump
- Barnegat Bay Inlet Area & Double Creek Mainland
- Fortescue
- Shrewsbury Complex

## CDF Rehab Projects

- Devils Creek
- Crook Horn Creek
- Oyster Creek
- Gull Island
- Parker Island (FEMA)
- Story Island (FEMA)
- Cape May
- Rumson CC

# 5 Year Dredging Outlook

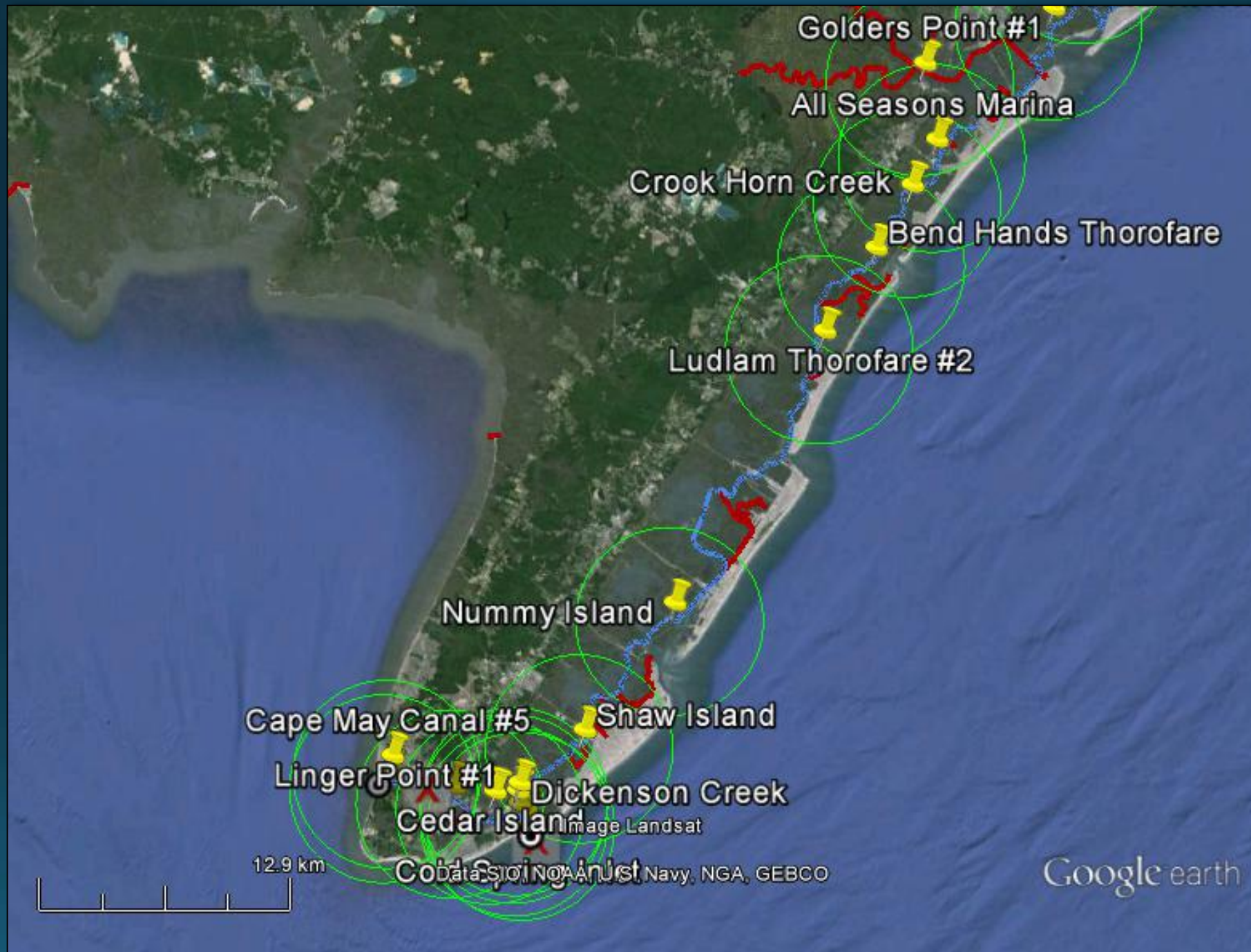
- Channel Prioritization
  - Severe shoaling
  - Ability to place material
  - FEMA reimbursements
  - Economic value
- Channel Management Plan
  - Sustainable solutions
  - Predictable maintenance
  - Generation of comprehensive historical data base
- All FEMA Related Work Substantially Complete



# WLS:

## Waterway Linear Segmentation

- OMR is developing a state of the art asset management system so that federal and state agencies can better manage the NJ Marine Transportation System and share technology
  - In development/Programmers at Work
- Stakeholders involved include, NOAA, NJDEP, USACE Regulatory and USACE Operations, US Fish and Wildlife
- “Smart” Technology Systems



# DMMS:

## Dredge Material Management System

- OMR is developing an on-line database and beneficial use clearinghouse to ensure that dredging projects can be cost effectively and efficiently managed
- Track historical knowledge
- A Dredged Material Marketplace - “dredge material dating site”
- Crowd sourcing for management solutions and updates in real time
- Database of projects and management site characterization to streamline permitting

# CDF-1

Edit



Name: CDF-1

Address: 55 Main St, Belmar, NJ

Type: Dewatering

Owner: NJ DOT

Total Capacity: 6 tons

Remaining Capacity: 1 ton

Creation Status: Complete

Use Status: Inactive

## Cells/Capacity

...

New

## Access Points/Methods

...

New

## Potential Beneficial Uses

...

New

## Transactions

...

New

## Permits

...

New

## Documents

New

-  **Document 1**  
Dredging Area - January 5, 2014
-  **Document 2**  
Dredging Activity - January 5, 2014

Show more ▾

## Notes

New

- [Lorem ipsum dolor sit amet, consectetur adipiscing e...](#)  
January 5, 2014
- [Lorem ipsum dolor sit amet, consectetur adipiscing e...](#)  
January 5, 2014

## Issues

New

- [Lorem ipsum dolor sit amet, consectetur adipiscing e...](#)  
January 5, 2014
- [Lorem ipsum dolor sit amet, consectetur adipiscing e...](#)  
January 5, 2014

## Images

New

-  **Image 1**  
January 5, 2014
-  **Image 2**  
January 5, 2014



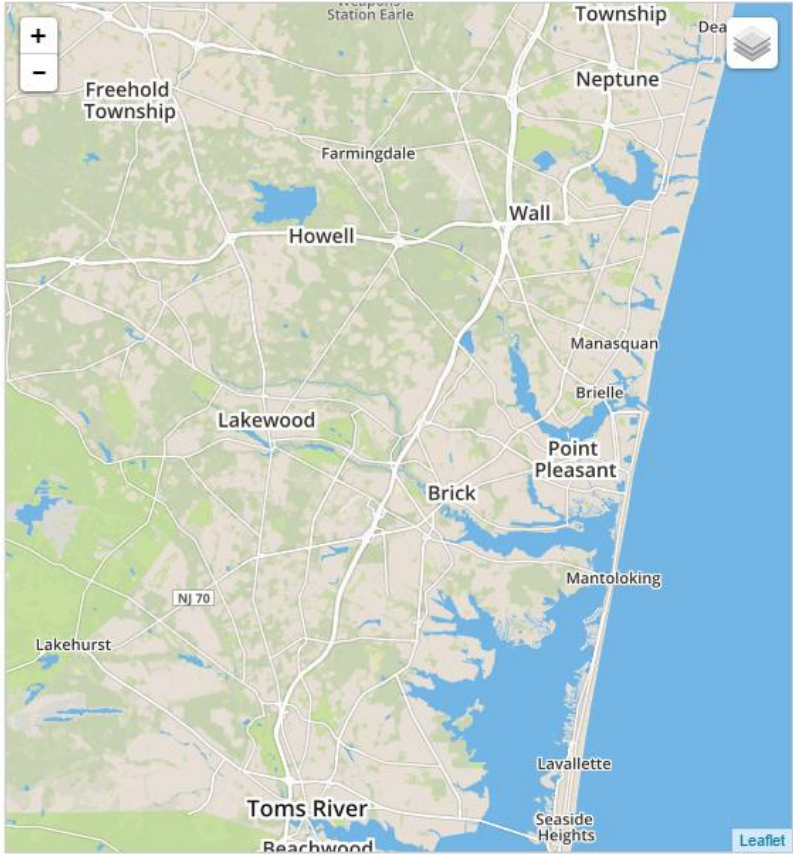
# Dashboard

## Latest Transactions

New

ID	Date	Type	Source	Destination
1	2/13/2015	Dredging	Belmar Marina	CDF-1
1	1/5/2014	Transport	CDF-1	Belmar Playground

List: Dredging Area | Confined Disposal Facility | Beneficial Use





# Research

- OMR has been proactive in researching better ways to capture data and maintain the NJ Marine Transportation System
- Vessel Count Surveys and Accident Data collections
  - Capturing of channel usage to help prioritize maintenance
  - Track accident frequency for channel design and local need
- High tech - Low impact dewatering facilities for dredged material management
- Dredged “hole” research and pilot projects
- Marsh Restoration pilot projects/Thin Layer Placement
- Sediment Modeling

# Budget

- Proposed \$25M Annual Program
  - Transportation Trust Funds (TTF) critically low
  - Alternative funding sources depleted
  - Current capital program allocation to OMR = \$1 Million
- FEMA Appeal
- Planning & Engineering lead time
  - 2 year window requires budgeting in current year
  - Currently spending over \$3 Million in P&E annually

Project Name	Location	Estimated Cost	Funding source
Beach Creek Phase I (disposal construction)	North Wildwood Cape May County	750,000	FY 14 TTF LAR
Beach Creek Phase II (dredging)		1,958,396	FY 14 TTF LAR
Leonardo Phase I (CDF construction)	Middletown Twp Monmouth County	300,000	FY 14 TTF LAR
Leonardo Phase II (dredging)		750,000	FY 14 TTF LAR
Absecon/Lakes Bay Phase I (CDF property acquisition)	Atlantic County	5,000,000	FY 14 TTF LAR
Absecon/Lakes Bay Phase II (dredging)		2,500,000	Not Identified
Doublecreek Phase I (CDF property acquisition)	Barnegat Twp Ocean County	4,750,000	FY 14 TTF LAR
Doublecreek Phase II (dredging Mainland channel)		3,583,766	FY 14 TTF LAR
Doublecreek Phase III (dredging Inlet channel)		1,500,000	Not Identified
Shrewsbury Phase I (disposal construction)	Monmouth County	750,000	FY 14 TTF LAR
Shrewsbury Phase II (dredging sand)		1,000,000	Not Identified
Manasquan Phase I	Manasquan Ocean County	2,500,000	Not Identified
Shark River	Wall/Neptune/Belmar Monmouth County	3,000,000	Various Maritime TTF and FEMA reimbursement
Fortescue	Downe Twp Cumberland County	2,000,000	FY 15 Bond Act
Cape May CDF Rehabilitation	Cape May County	500,000	Not Identified
Lavallette Channel	Ocean County	1,000,000	Not Identified
Program Planning & Engineering FY16		3,000,000	Not Identified
DMM Alternatives & Analysis (Holes)		500,000	Not Identified

# Questions and Comments

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