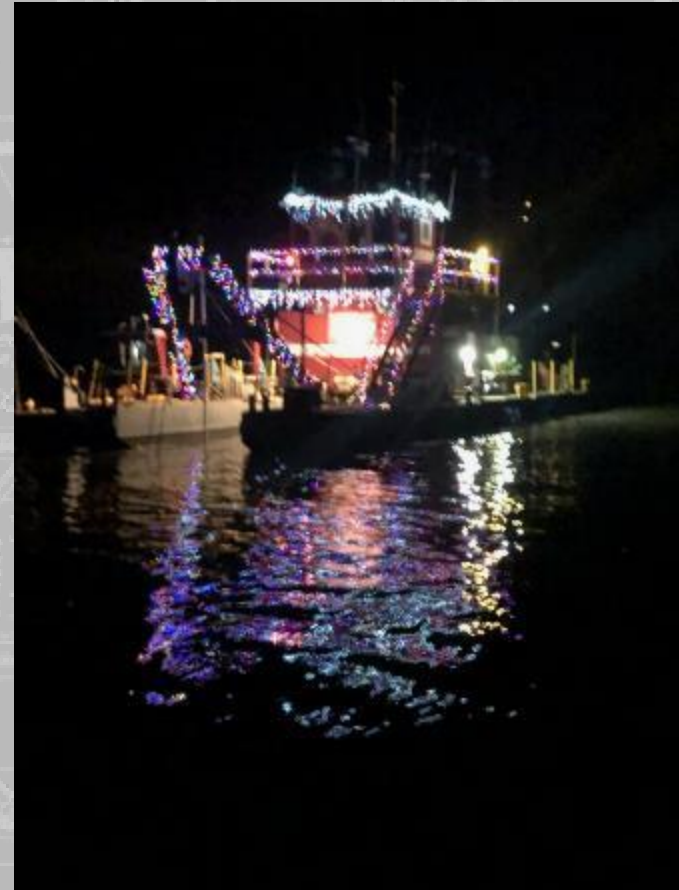


# MAINTENANCE DREDGING FOR SAFE NAVIGATION: NJ INTRACOASTAL WATERWAY UPDATE

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# NJ INTRACOASTAL WATERWAY PHILADELPHIA DISTRICT



- Adopted/authorized as a federal project in 1939
- 117 miles long from Manasquan Inlet to Cape May
- Includes the Cape May Canal and Point Pleasant Canal
- Supports Cape May Lewes Ferry
- Supports recreation in coastal NJ and commercial fishing industry including the 9th most valuable commercial fishing fleet in the U.S. (Cape May/Wildwood)
- Supports 9 U.S. Coast Guard Stations including Cape May training base



# NJ INTRACOASTAL WATERWAY



- Authorized depth 6 ft Mean Low Water & 100 ft wide, southern portion authorized depth is 12 ft MLW
- Location can vary with naturally deep water; working with USCG ATON to better mark deep water and reduce dredging requirements
- State of NJ obligated to provide placement sites (except 2 CDFs in Cape May owned by USACE)
- NJDOT manages State Channel Network
- Marine Trades Association connects users and advocates for waterway



# NJ INTRACOASTAL WATERWAY



- Subject to OMB/HQ budget cuts in 2012 (zero funded)
- Supplemental funds received for Stimulus, Hurricanes Irene & Sandy, now back in O&M budget
- Lease of Plant Maintenance Dredging Contract
  - 2009, 2011-12, 2013-14, 2015-16, 2017-19, 2019-2021
  - Small pipeline dredges
  - CDFs along waterway: private, municipal and State-owned
  - Beneficial use as long-term strategy, *goal of 100% BU of clean material*
  - Acquisition strategy is key to success since builds in flexibility
- USACE Wilmington District Plant



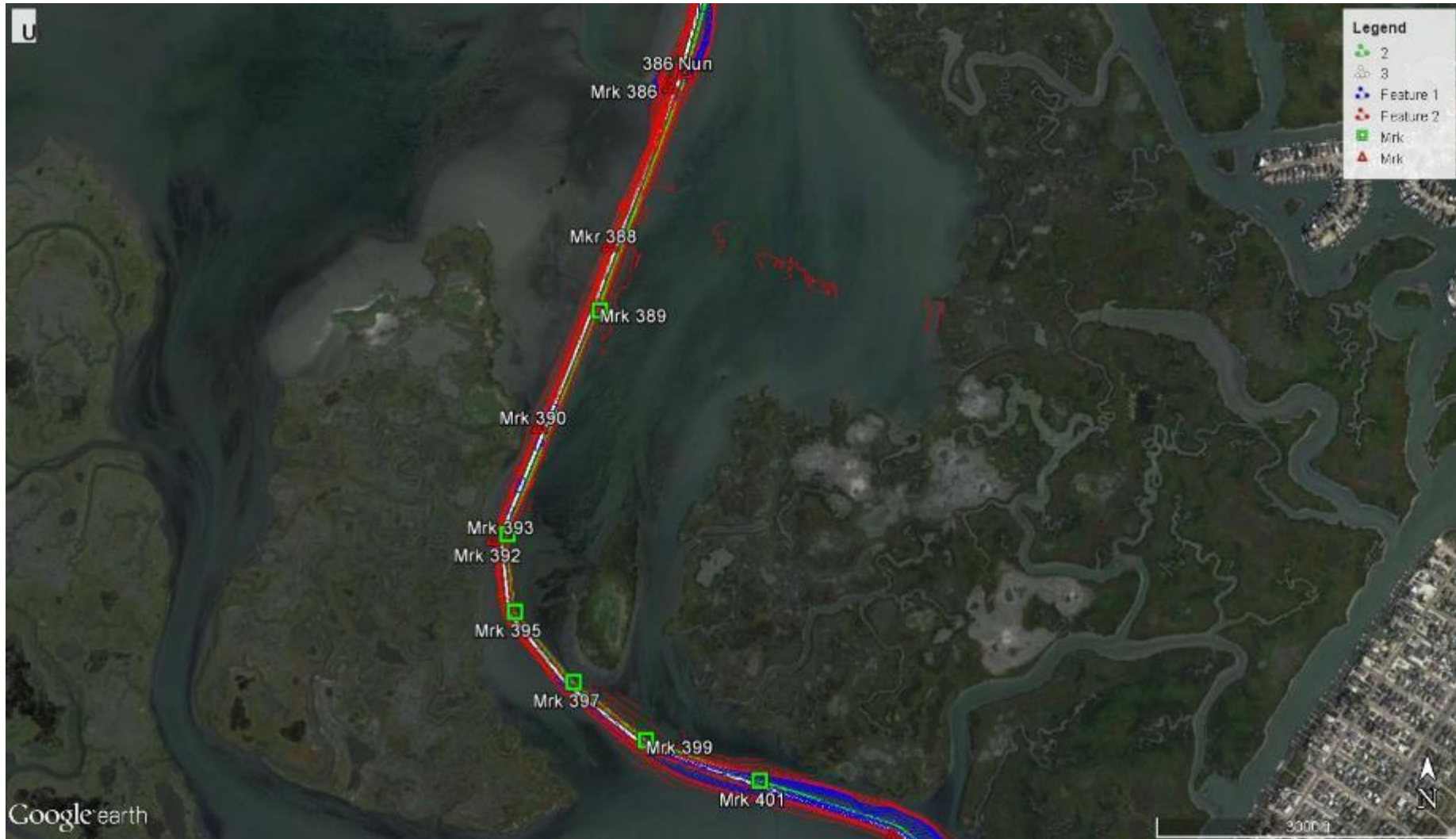
# NJIWW MAINTENANCE DREDGING TYPICAL BACK BAY LOCATIONS







# NJIWW MAINTENANCE DREDGING MARKERS 386 TO 397





# WORKING WITH THE US COAST GUARD FIFTH DISTRICT



## U.S. COAST GUARD FY19 FEDERAL CHANNEL DREDGING PRIORITIES NJICW

Priority #	Unit Affected/Location	Justification
2	ICW aid 453-449	Grassy Sound area is only passable by WLIC at high tide.
➔ 1	ICW aid 424-417	Great Channel is nearly impassible at any tide.
➔ 2	ICW aids 399-383	Gull Island throfare is extremely narrow and shallow particularly near DBN 393
1	ICW aid 282-272	Peck bay area has a hump at the wreck between LT280 and DBN282
1	ICW aid 263-263A	The corner at LT264 is only passable at the highest tide
2	ICW aid 243-233	The Broad Thorofare area is only passable at the highest tides
2	ICW aid 221 area	Only passable at the highest tides
1	ICW aid 209-206	Barely passable at the highest tides
1	ICW aid 163-145	The entire reach between 163 and 145 is narrowing and impassable to all but the smallest vessels at any tide
2	ICW aid 129	The area south of Fish Island at 129 is only passable at high tide
2	"LB"-109	LT"LB" to DBN107 is is narrowing and only passable at high tide
3	ICW aid 49	The turn at DBN 49 is narrowing and is only passable at mid and higher tides
1	ICW aid 46-45	Directly between DBN46 and DBN45 is narrowing and only passable at the highest tides



# USCG FY20 STATEMENT REGARDING NJIWW CRITICAL SHOALS



Siltation of federalized channel has led to reduction in depth of water which has rendered it *impossible for afloat CG operational assets to conduct their mission*. CG vessels are unable to travel from their homeport to some/all of their areas of responsibility to conduct Congressionally mandated missions. *Impacts will include failure to maintain fixed & floating aids to navigation* and inability to depart homeport to conduct marine safety, environmental response, search and rescue, and law enforcement operations.





# WORKING WITH THE US COAST GUARD NATIONAL PRIORITY



## U.S. COAST GUARD FY21 FEDERAL CHANNEL DREDGING PRIORITIES

SILC Priority	Waterway	State	CG District Affected	Justification/Risk/Consequence
1	Brooklyn Basin South Channel (Oakland Inner Harbor)	CA	11	Oakland Inner Harbor, Brooklyn Basin South Channel: The project depth for this channel is 35 feet; however USACE surveys have indicated depths of 25 feet or less and Coast Guard units have reported similar depths. The Coast Guard's National Security Cutters utilize this federally regulated channel to moor and conduct homeport operations off the federal channel and require safe navigation in this confined channel. National Security Cutters require a minimum of 30 feet of water for safe navigation.
2	Fort Macon	NC	5	USACE dredges annually but within 5 to 6 months of dredging extreme shoaling in main ship channel between buoys 14 to 18 occurs. Maintenance dredging will be critical to maintaining required project/controlling depth to ensure safe transits of commercial vessel traffic, DOD Amphibian ships out-load of 2nd Marine Expeditionary Forces, 4 current CG Cutters and Coast Guard small boats as well as significant recreation traffic.
3	NJICW Cape May - Atlantic City	NJ	5	FRCs are restricted to transit as high tide due to consistent shoaling in the NJ Atlantic Intercoastal Waterway (AIW) between Station Cape May and Station Atlantic City. Shoaling makes the waterway inaccessible for CGC SLEDGE who is federally mandated to service ATON. CGC SLEDGE ran aground in APR 2017.
4	Columbia River - Baker Bay & West Channel	WA	13	Continues to shoal throughout the year. Without annual, and possibly mid-season, dredging there will be a greater increase to risk of life on Columbia River Bar. The Columbia-Snake River System is the largest U.S. wheat, wood and bulk export gateway, supporting \$24B in cargo value and 40k local jobs. In 2014, 49% of all U.S. wheat exports were handled along the Columbia-Snake River System. Each year nearly 11,000 containers are exported through the port of Lewiston, ID. The Columbia River (CR) is also the second largest vehicle importer on the West Coast.
5	Pinole Shoals Channel	CA	11	Shoal is encroaching into both sides of the channel. This is a high traffic area for deep draft commercial vessels. DOD and CG Units affected for patrols, maintaining safety and readiness of the waterway.
6	Humboldt Bay Entrance	CA	11	Recent dredging at the entrance to Humboldt Bay was completed in FY17. Humboldt is our northern deep draft port that experiences severe winter storms and annual dredging is required to maintain deep draft channel to accommodate deep draft tankers carrying crude/chemicals. This shoaling negatively affects the channel resulting in breaking surf and larger than normal swells observed in this area. Continued shoaling will have a negative impact on local commerce. Pilots have requested draft restriction to 21ft. D11 issued Emergency Dredging Request to

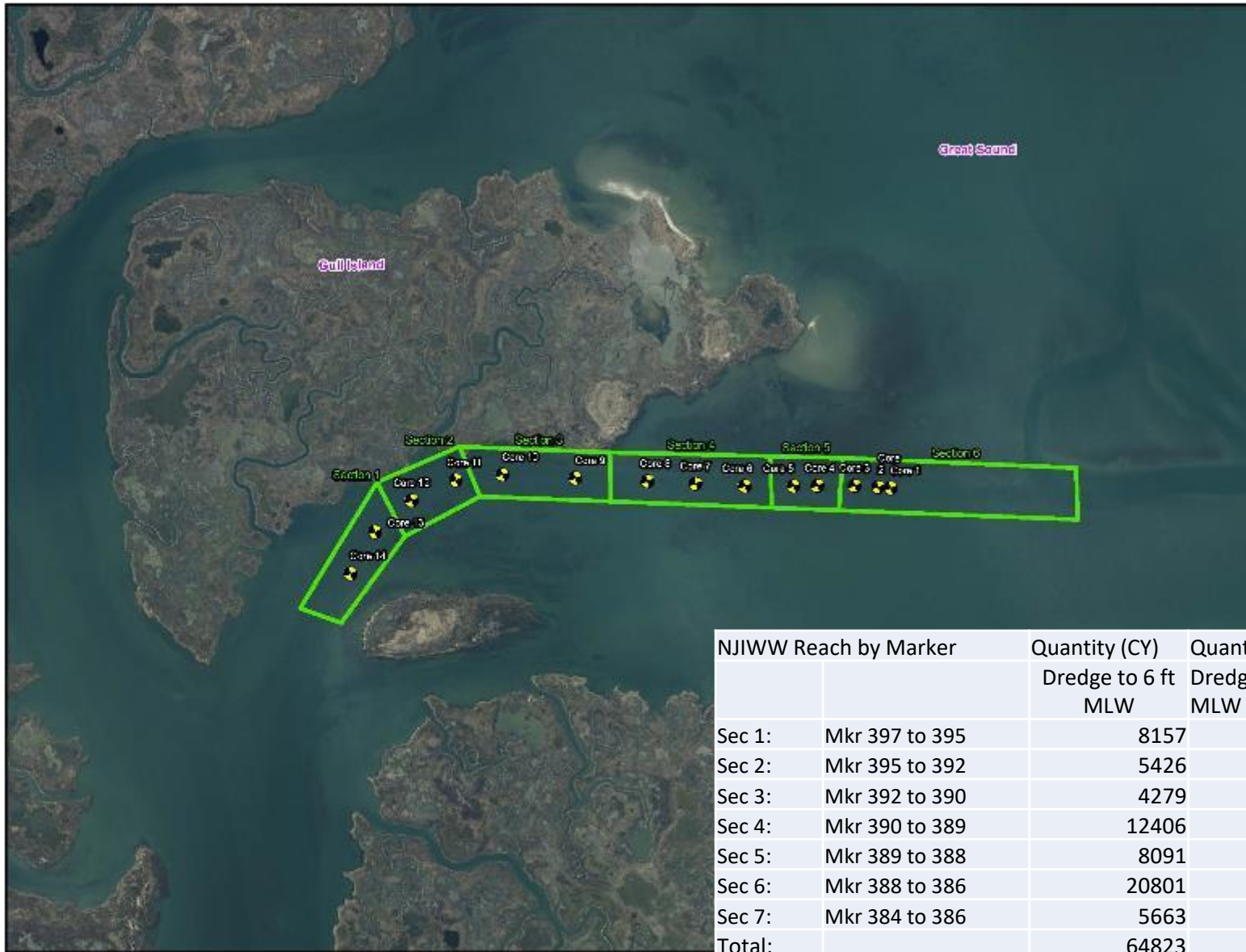


# **NJ Intracoastal Waterway**



## **FY20/21 Maintenance Dredging Contract**



- **Awarded to Barnegat Bay Dredging Company**
- **Lease of Plant for entire NJIWW and adjacent waterways**
- **\$3.98M, 450 day period of performance**
- **USCG Priorities and environmental windows with placement alternatives will guide assignments**
- **For SMIL, dredging and placements in March 2020 (potential) and Fall 2020.**



Source: U.S. Geological Survey, Digital Data Center, 1:250,000 Scale, 1996. Data provided by the U.S. Geological Survey, Digital Data Center, 1:250,000 Scale, 1996. Data provided by the U.S. Geological Survey, Digital Data Center, 1:250,000 Scale, 1996.

- Legend**
-  Sediment Core Sample Locations
  -  Sediment Core Sample Sections

NJIIWW Reach by Marker		Quantity (CY)	Quantity (CY)	Composition
		Dredge to 6 ft MLW	Dredge to 7 ft MLW	
Sec 1:	Mkr 397 to 395	8157	11551	
Sec 2:	Mkr 395 to 392	5426	8544	
Sec 3:	Mkr 392 to 390	4279	8450	
Sec 4:	Mkr 390 to 389	12406	17671	
Sec 5:	Mkr 389 to 388	8091	11087	
Sec 6:	Mkr 388 to 386	20801	27483	
Sec 7:	Mkr 384 to 386	5663	9084	
<b>Total:</b>		<b>64823</b>	<b>93870</b>	



Sample ID	AV-SED-01	AV-SED-02/03	AV-SED-04	AV-SED-05A	AV-SED-05B	AV-SED-DUP
Analyte	(%)	(%)	(%)	(%)	(%)	(%)
Gravel	0.0	0.0	0.0	0.0	0.0	0.0
Sand	23.1	9.8	17.9	34.2	61.2	8.8
Coarse Sand	0.0	0.0	0	0.0	0.0	0
Medium Sand	1.2	1.5	1.3	0.5	0.4	0.7
Fine Sand	21.9	8.3	16.6	33.7	60.8	8.1
Silt	53.5	61.1	60.1	49.4	21.0	52.7
Clay	23.4	29.1	22	16.4	17.8	38.5





# A SEDIMENT PROGRESSION: FROM CONFINEMENT TO IN-WATER CREATION







# QUESTIONS?



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