



# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Ms. Mary Sapp  
Clerk, Borough of Neptune City  
106 W. Sylvania Ave  
Neptune City, NJ 07753

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. Sapp:

This letter is to provide you with legal notification that an application will be submitted to the New Jersey Department of Environmental Protection (NJDEP) Office of Dredging and Sediment Technology for a permit for the proposed dredging project shown on the enclosed plan.

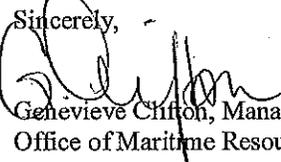
Three copies of the complete permit application are enclosed for your file and your review. Please distribute one copy to the planning board and one copy to the environmental commission. The third copy shall be maintained in the clerk's office and be made available for public review.

The NJDEP welcomes comments and any information that you and/or the public may provide concerning the proposed maintenance dredging project. Please submit your written comments within 15 days of receiving this letter to:

New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information, please contact Joselyn Wall at (609) 530-4772 or by e-mail at [Joselyn.Wall@dot.nj.gov](mailto:Joselyn.Wall@dot.nj.gov).

Sincerely,

  
Geheviève Clifton, Manager  
Office of Maritime Resources

Enclosures





## State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
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*Lt. Governor*

May 26, 2015

Suzanne U. Dietrick, Chief  
NJDEP - Office of Dredging and Sediment Technology  
401 East State Street, 6<sup>th</sup> Floor  
P. O. Box 420, Mail Code#401-06C  
Trenton, NJ 08625

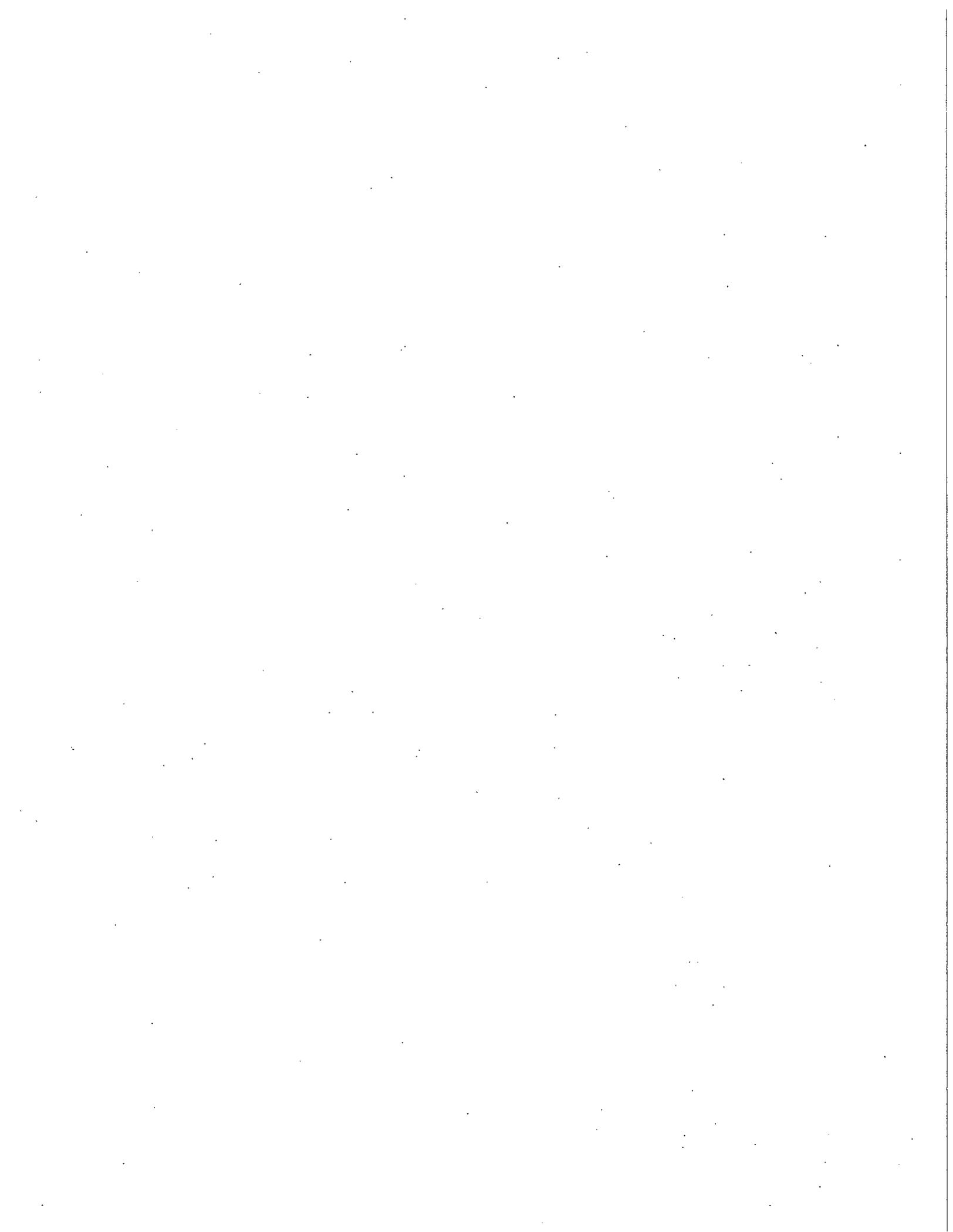
RE: Waterfront Development Permit Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. Dietrick:

The New Jersey Department of Transportation, Office of Maritime Resources is requesting a Waterfront Development Permit application to conduct maintenance dredging within the Shark River Channel (#038) and Shark River Spur (#039) State channels, Borough of Belmar, Borough of Neptune City, and Neptune Township, Monmouth County to restore the channels to the authorized project depth for safe navigation. Dredged material is proposed to be dewatered on an adjacent area as shown on the project plans.

Please find the following enclosed for your review and approval:

1. Division of Land Use Application (DLUR) Application Form;
2. Project Location Map;
3. Public Notice Information
  - Copy of Municipal Clerk notification letter w/certified mail receipt;
  - Copy of County Planning Board, County Environmental Commission, Municipal Construction Official and U.S. Army Corps of Engineers notification letters w/certified mail receipts;
  - Copy of Newspaper Ad (proof of publication will be provided upon receipt);
4. Coastal Zone Management Compliance Statement (7 copies);  
May 6, 2015 Sediment Sampling Report (ASI Job #35-025) (1 hard copy and 1 electronic copy);
5. Copy of Tidelands Dredging License #0000-14-0005.1;



Suzanne Dietrick

May 26, 2015

Page Two

6. Consents:
  - Neptune Township's consent for dewatering location
  - Belmar Borough's consent for dewatering location
  - Monmouth County Landfill's consent for material placement; and
7. Site plans (7 sheets) (5 full size copies and 5 reduced size copies);

If you have any questions or need any additional information please contact Jo Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov).

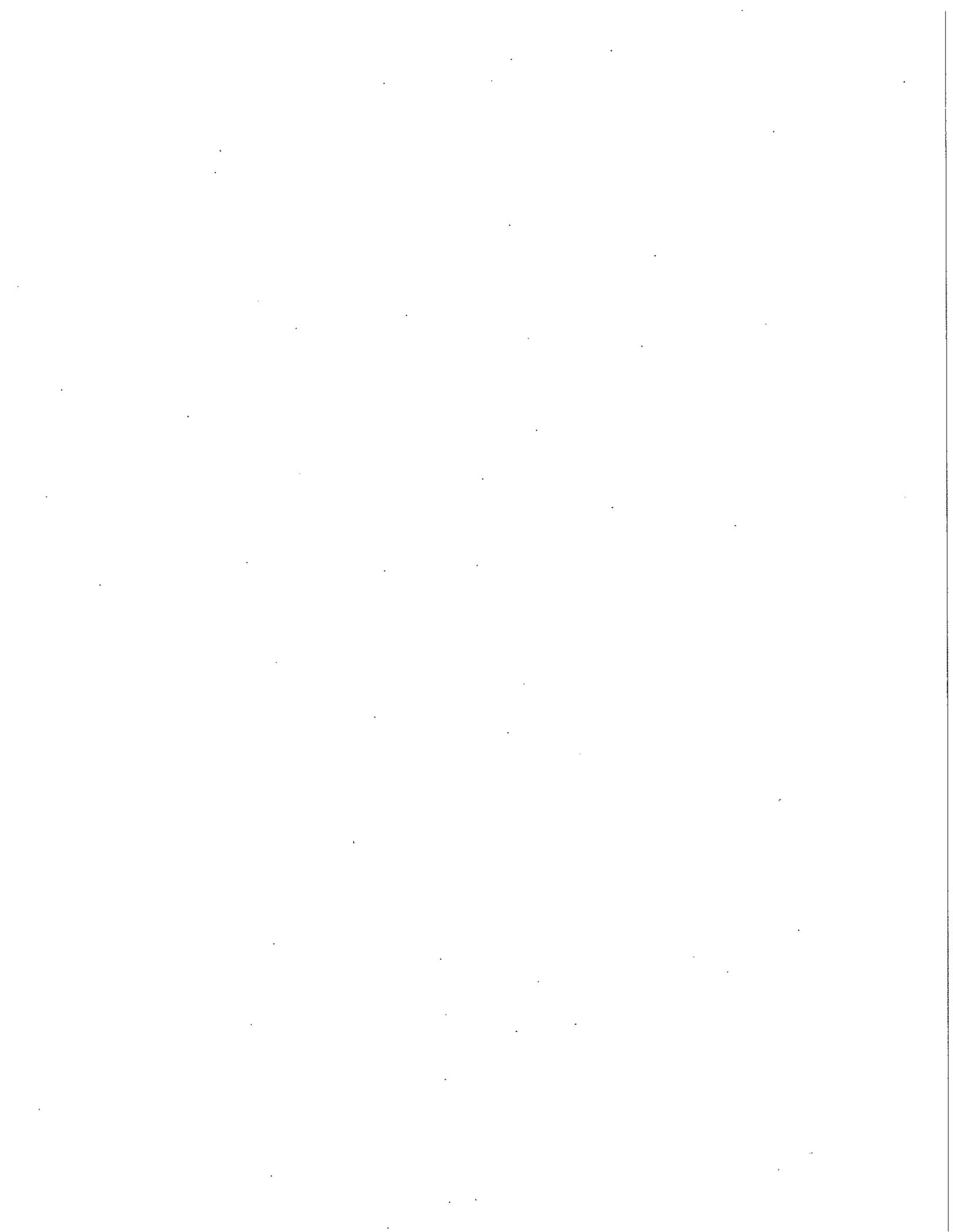
Sincerely,



Genevieve Clifton, Manager  
Office of Maritime Resources

Enclosures

c: Jodi McDonald, U.S. Corps of Engineers – New York District





**State of New Jersey**  
**Department of Environmental Protection**  
 Division of Land Use Regulation Application Form (DLUR)  
 501 E. State Street Mail Code 501-02A P.O. Box 420  
 Trenton, NJ 08625-0420  
 Phone #: (609) 777-0454 Web: www.nj.gov/dep/landuse



Please print legibly or type the following: Complete all sections unless otherwise noted Is this project Superstorm Sandy Related Yes  No

1. Applicant Name: Mr./Ms./Mrs. NJDOT Office of Maritime Resources E-Mail: \_\_\_\_\_  
 Address: 1035 Parkway Avenue, P.O. Box 600 Daytime \_\_\_\_\_  
 Phone: Ext. Trenton, NJ 08625 \_\_\_\_\_  
 City/State: \_\_\_\_\_ Zip Code \_\_\_\_\_ Cell \_\_\_\_\_  
 Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

2. Agent Name: Mr./Ms./Mrs. Scott Douglas E-Mail: SCOTT.DOUGLAS@dot.nj.gov  
 Firm Name: NJDOT Daytime 609-530-4773  
 Address: 1035 Parkway Ave \_\_\_\_\_  
 Phone: Ext. Trenton, NJ \_\_\_\_\_  
 City/State: \_\_\_\_\_ Zip Code 08625 Cell \_\_\_\_\_  
 Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

3. Property Owner: Mr./Ms./Mrs. State of New Jersey - State Channel E-mail: \_\_\_\_\_  
 Address: \_\_\_\_\_ Daytime Phone: \_\_\_\_\_ Ext. \_\_\_\_\_  
 City/State: \_\_\_\_\_ Zip Code \_\_\_\_\_ Cell Phone: \_\_\_\_\_

4. Project Name: Shark River and Spur (038 & 039) - Maint. Dredging Address/Location: Shark River Channel and Spur  
 Municipality: Neptune Township, Boro of Neptune City, Belmar Boro County: Monmouth County  
 Block(s): n/a Lot(s): n/a  
 N.A.D. 1983 State Plane Coordinates (feet) E (x): 620,555.4 N (y): 492,568.4 Not Longitude/Latitude (= Sta. 0+00 centerline)  
 Watershed: Whale Pond Bk / Shark R / Wreck Pond Subwatershed: Shark River (below Remsen Mill gage)  
 Nearest Waterway: Shark River  
 Fees: Total Fee: n/a Check #: \_\_\_\_\_ Project Cost: \_\_\_\_\_

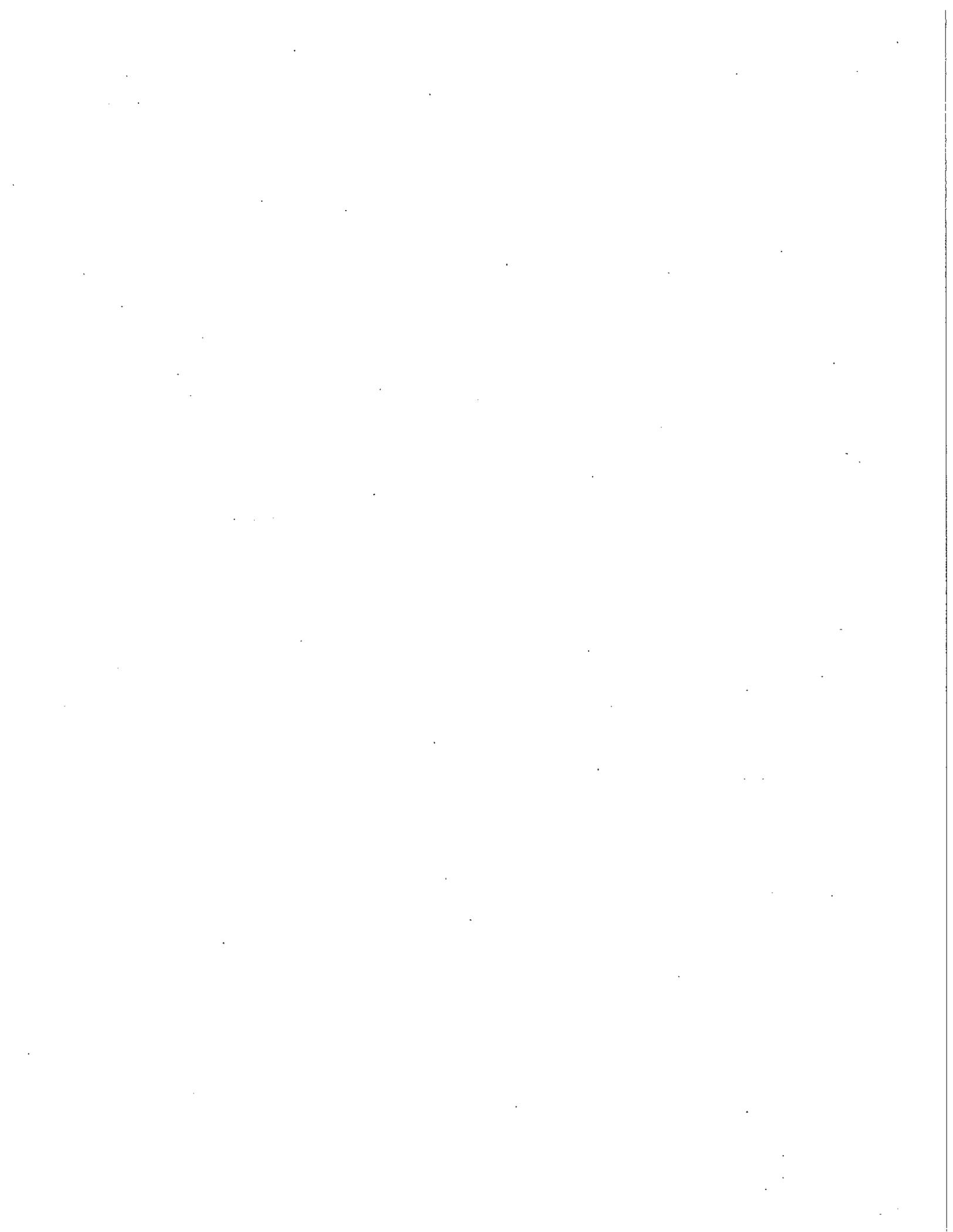
5. Project Description: This application is for a Waterfront Development Permit for hydraulic maintenance dredging of the Shark River Channel and Spur to project depth including sediment deposited by Superstorm Sandy. Dredged material consisting predominantly of silt/sand shall be hydraulically pumped to the dewatering site at Block 108 Lot 1 - Borough of Belmar, Monmouth County or Block 563 Lots 1 & 2 Township of Neptune, Monmouth County.  
 Provide if applicable: Previous LUR File # (s): \_\_\_\_\_ Waiver request ID # (s): \_\_\_\_\_

A. SIGNATURE OF APPLICANT (required):

I certify, under penalty of law, that the information provided in this document is true and accurate. I am aware that there are significant civil and criminal penalties for submitting false or inaccurate information. If corporate entity, print/type the name and title of the person signing on behalf of the corporate entity.

Genevieve Clifton  
 Signature of Applicant  
5.27.15  
 Date  
Genevieve Clifton, Manager  
 Print Name

\_\_\_\_\_  
 Signature of Applicant  
 \_\_\_\_\_  
 Date  
 \_\_\_\_\_  
 Print Name



**B. PROPERTY OWNER'S CERTIFICATION**

I hereby certify that the undersigned is the **owner of the property** upon which the proposed work is to be done. This endorsement is certification that the owner grants permission for the conduct of the proposed activity. In addition, I hereby give unconditional written consent to allow access to the site by representatives or agents of the Department for the purpose of conducting a site inspection(s) or survey(s) of the property in question.

In addition, the undersigned property owner hereby certifies:

- 1. Whether any work is to be done within an easement? Yes  No
- 2. Whether any part of the entire project (e.g., pipeline, roadway, cable, transmission line, structure, etc.) will be located within property belonging to the State of New Jersey? Yes  No
- 3. Whether any work is to be done on any property owned by any public agency that would be encumbered by Green Acres? Yes  No
- 4. Whether any part of this project requires a Section 106(National Register of Historic Places) Determination as part of a federal permit or approval? Yes  No

G. Clifton  
 Signature of Owner  
5-27-15  
 Date  
 \_\_\_\_\_  
 Print Name  
**Genevieve Clifton, Manager**

\_\_\_\_\_  
 Signature of Owner  
 \_\_\_\_\_  
 Date  
 \_\_\_\_\_  
 Print Name

**C. APPLICANT'S AGENT (Notary seal is required for Flood Hazard Area (FHA) applications)**

I **Genevieve Clifton**, the Applicant/Owner and \_\_\_\_\_, co-Applicant/Owner authorize to act as my agent/representative in all matters pertaining to my application the following person:

**Scott Douglas**  
 Name of Agent  
PROJECT MANAGER  
 Occupation/Profession of Agent

\_\_\_\_\_  
 Signature of Applicant/Owner  
 \_\_\_\_\_  
 Signature of co-Applicant/Owner

**AGENT'S CERTIFICATION:**

I agree to serve as agent for the above-referenced applicant:

W. Scott Douglas  
 Signature of Agent

**NOTARY:**

Sworn to me, this day of: \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
Notary Public

**D. STATEMENT OF PREPARER OF PLANS, SPECIFICATIONS, SURVEYOR'S OR ENGINEER'S REPORT**

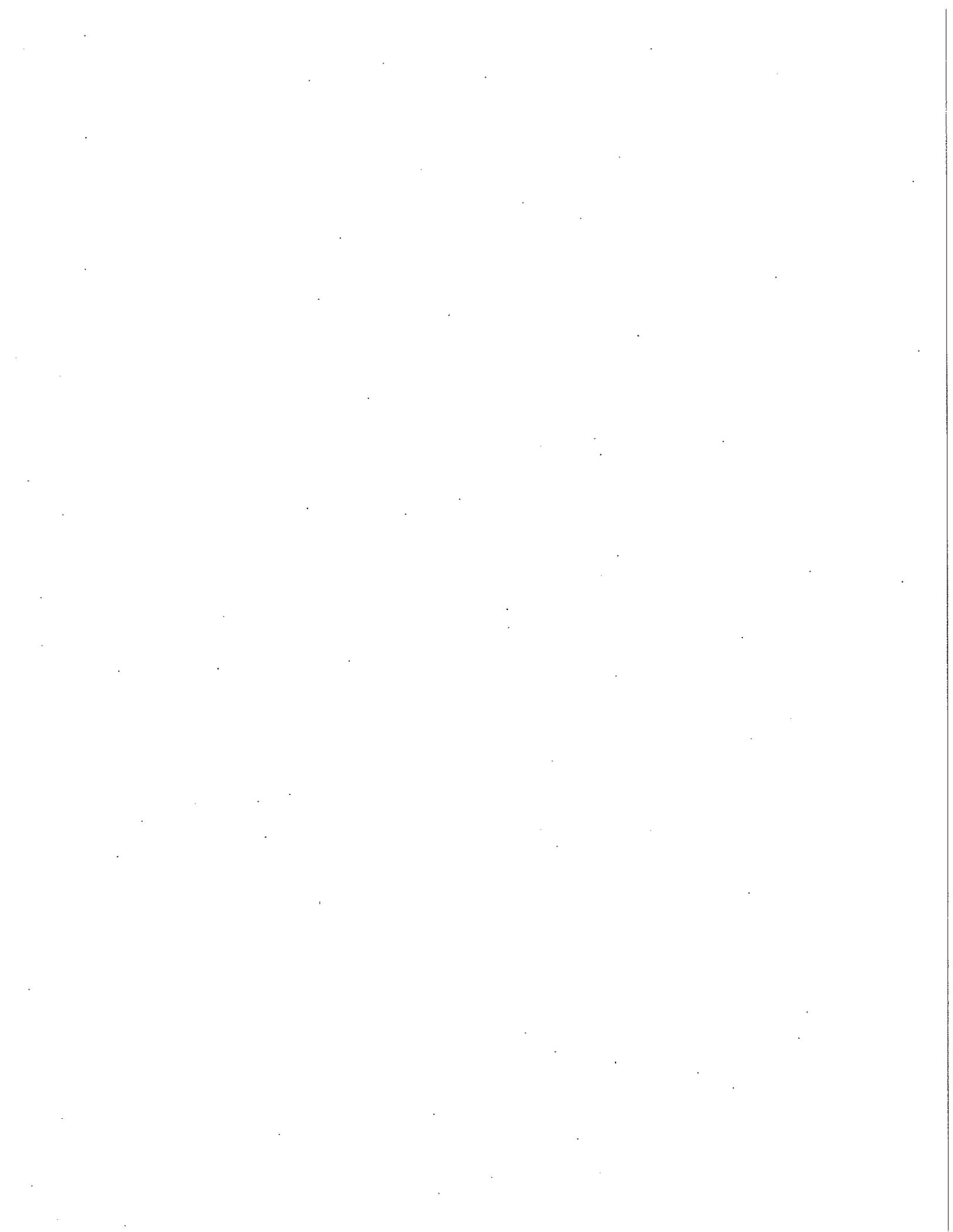
I hereby certify that the plans, specifications and engineer's report, if any, applicable to this project comply with the current rules and regulations of the New Jersey Department of Environmental Protection with the exceptions as noted. In addition, I certify the application is complete as per the appropriate checklist(s).

James D. Heeren  
 Signature  
**James D. Heeren, PE**  
 Print Name  
 Senior Environmental Engineer, Dewberry  
 \_\_\_\_\_  
 Position & Name of Firm  
 24GE04031000  
 \_\_\_\_\_  
 Date  
 May 26, 2015  
 \_\_\_\_\_  
 Professional License #  
 \_\_\_\_\_  
 Date

**E. STATEMENT OF PREPARER OF APPLICATION, REPORTS AND/OR SUPPORTING DOCUMENTS (other than engineering)**

I certify under penalty of law that I have personally examined the information submitted in the document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining and preparing the information, I believe that the information is true, accurate and complete in accordance with the appropriate checklist(s). I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

W. Scott Douglas  
 Signature  
**Scott Douglas**  
 Print Name  
 Project Manager/NJDOT  
 \_\_\_\_\_  
 Position & Name of Firm  
 \_\_\_\_\_  
 Date  
 May 26, 2015  
 \_\_\_\_\_  
 Professional License #  
 \_\_\_\_\_  
 Date  
 \_\_\_\_\_  
 (If Applicable)



F. APPLICATION(S) FOR: (Check all that apply – follow directions on page 5)

	CAFRA	Fee Amount	Fee Paid
<input type="checkbox"/>	Individual Permit		
<input type="checkbox"/>	Exemption Request	\$300.00	
<input type="checkbox"/>	Permit Modification		
<input type="checkbox"/>	CAFGP5 / Amusement Pier Exp	\$600.00	
<input type="checkbox"/>	CAFGP6 / Beach/Dune Maintenance	\$600.00	
<input type="checkbox"/>	CAFGP7 / Voluntary Reconstruction	\$600.00	
<input type="checkbox"/>	CAFGP8 / New Single Family or Duplex	\$600.00	
<input type="checkbox"/>	CAFGP9 / Reconstruct Single Fam/Dup	\$600.00	
<input type="checkbox"/>	CAFGP10 / New Bulkhead/Fill Lagoon	\$600.00	
<input type="checkbox"/>	CAFGP11 / Revetment	\$600.00	
<input type="checkbox"/>	CAFGP12 / Gablions	\$600.00	
<input type="checkbox"/>	CAFGP13 / Support Facilities/ Marina	\$600.00	
<input type="checkbox"/>	CAFGP14/Reconst Bulkhead above MHWL	\$600.00	
<input type="checkbox"/>	CAFGP15 / Hazard Waste Clean-up	\$600.00	
<input type="checkbox"/>	CAFGP16 / Landfill of Utilities	\$600.00	
<input type="checkbox"/>	CAFGP17 / Recreat Facility Public Park	\$600.00	
<input type="checkbox"/>	CAFGP18 / Bulkhead Construct/Fill upland	\$600.00	
<input type="checkbox"/>	CAFGP21 / Shoreline Stabilization	\$600.00	
<input type="checkbox"/>	CAFGP22 / Avian Nesting Structures	\$600.00	
<input type="checkbox"/>	CAFGP23 / Electrical Sub Facility	\$600.00	
<input type="checkbox"/>	CAFGP24 / Legalize Filling of Tidelands	\$600.00	
<input type="checkbox"/>	CAFGP25 / Construct Telecom Tower	\$600.00	
<input type="checkbox"/>	CAFGP26 / Tourism Indust. Construction	\$600.00	
<input type="checkbox"/>	CAFGP27 / Geotechnical Borings	\$600.00	
<input type="checkbox"/>	CAFGP29/Habitat Create/Restore/Enhance	\$600.00	
<input type="checkbox"/>	CAFGP30 / 1 to 3 Turbines < 200 Feet	\$600.00	
<input type="checkbox"/>	CAFGP31 / Wind Turbines < 250 Feet	\$600.00	
<input type="checkbox"/>	Individual Permit Equivalency/CERCLA	No Fee	No Fee

	Waterfront Development	Fee Amount	Fee Paid
<input type="checkbox"/>	WDGP10 / New Bulkhead/Fill Lagoon < 75'	\$600.00	
<input type="checkbox"/>	WDGP14 / Reconstruct Bulkhead	\$600.00	
<input type="checkbox"/>	WDGP19/Dock/Piers/Boat Lifts Lagoon	\$600.00	
<input type="checkbox"/>	WDGP20 / Minor Maint Dredge Lagoon	\$600.00	
<input type="checkbox"/>	WDGP21 / Shoreline Stabilization	\$600.00	
<input type="checkbox"/>	WDGP32 / Dredge Lagoon (post storm event)	\$600.00	
<input type="checkbox"/>	WDGP33 / Dredge post Bulkhead Failure	\$600.00	
<input type="checkbox"/>	WDGP34 / Dredge Marina (post storm event)	\$600.00	
<input type="checkbox"/>	WDGP35 / Aquaculture Activities	\$600.00	
<input type="checkbox"/>	WDGP36/Placement of Shell (shellfish areas)	\$600.00	
<input type="checkbox"/>	Individual Permit/Upland		
<input checked="" type="checkbox"/>	Individual Permit/Inwater		
<input type="checkbox"/>	Zane Letter	\$300.00	
<input type="checkbox"/>	Modification		
<input type="checkbox"/>	Individual Permit Equivalency/CERCLA	No Fee	

	Coastal/Tidal Wetlands	Fee Amount	Fee Paid
<input type="checkbox"/>	Coastal/Tidal Wetlands Permit		
<input type="checkbox"/>	Coastal Wetland Permit Modification		

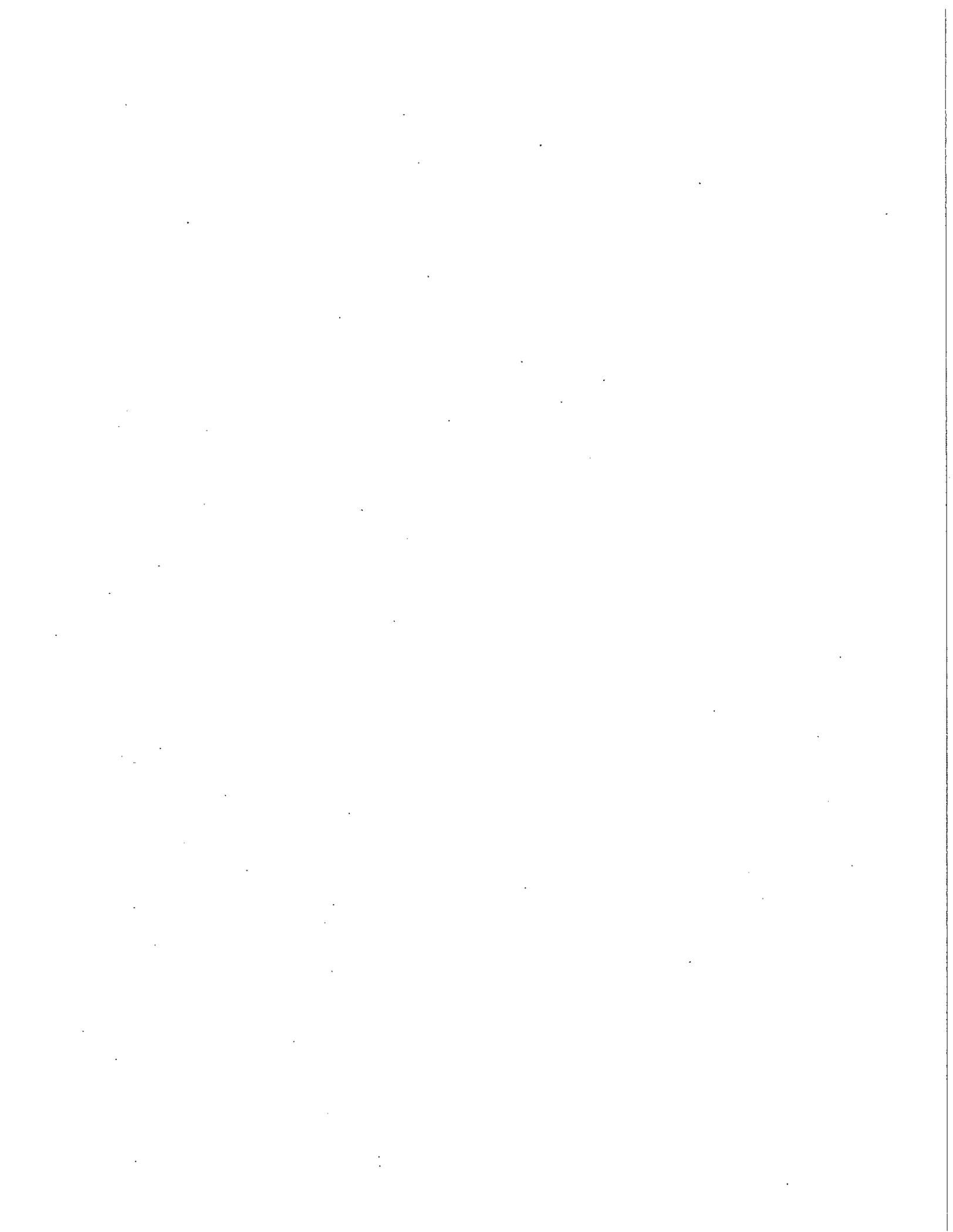
	Applicability Determination	Fee Amount	Fee Paid
<input type="checkbox"/>	Coastal Jurisdictional Determination	No Fee	No Fee
<input type="checkbox"/>	Highlands Jurisdictional Determination	No Fee	No Fee
<input type="checkbox"/>	Flood Hazard Area Applicability	No Fee	No Fee
<input type="checkbox"/>	Executive Order 215	No Fee	No Fee

	Flood Hazard Area	Fee Amount	Fee Paid
<input type="checkbox"/>	FHA Verification		
<input type="checkbox"/>	FHA Individual Permit		
<input type="checkbox"/>	FHA Hardship Exception	\$4,000.00	
<input type="checkbox"/>	FHAGP1 / Chan Clean w/o Sed Removal	No Fee	No Fee
<input type="checkbox"/>	FHAGP1 / Chan Clean w/Sed Removal	No Fee	No Fee
<input type="checkbox"/>	FHAGP2A / Ag - Bank Restoration	\$500.00	
<input type="checkbox"/>	FHAGP2B / Ag - Channel Cleaning	\$500.00	
<input type="checkbox"/>	FHAGP2C / Ag - Road Crossing	\$500.00	
<input type="checkbox"/>	FHAGP2D / Ag - Wetlands Restoration	\$500.00	
<input type="checkbox"/>	FHAGP2E / Ag - Livestock Ford	\$500.00	
<input type="checkbox"/>	FHAGP2F / Ag - Livestock Fence	\$500.00	
<input type="checkbox"/>	FHAGP2G / Ag - Livestock Water Intake	\$500.00	
<input type="checkbox"/>	FHAGP3 / Bridge/Culvert Scour Protection	\$500.00	
<input type="checkbox"/>	FHAGP4 / Stormwater Maintenance	\$500.00	
<input type="checkbox"/>	FHAGP5 / Building Relocation	\$500.00	
<input type="checkbox"/>	FHAGP6 / Rebuild Damaged Home	No Fee	No Fee
<input type="checkbox"/>	FHAGP7 / Residential in Tidal FHA	\$500.00	
<input type="checkbox"/>	FHAGP8 / Utility Crossing <50acres	\$500.00	
<input type="checkbox"/>	FHAGP9 / Road Crossing <50acres	\$500.00	
<input type="checkbox"/>	FHAGP10 / Stormwater Outfall <50acres	\$500.00	
<input type="checkbox"/>	Revision of a GP, IP or Verification		
<input type="checkbox"/>	Transfer of an Approval	\$200.00	
<input type="checkbox"/>	FHA Indv. Permit Equivalency/CERCLA	No Fee	No Fee

	Stormwater Review Fees	Fee Amount	Fee Paid
<input type="checkbox"/>	Fee for all Stormwater Reviews		

	Consistency Determination	Fee Amount	Fee Paid
<input type="checkbox"/>	Water Quality Certificate		
<input type="checkbox"/>	Federal Consistency	No Fee	No Fee
<input type="checkbox"/>	HMC Water Quality Certificate		

	Highlands	Fee Amount	Fee Paid
<input type="checkbox"/>	Emergency Permit		
<input type="checkbox"/>	Pre-application Meeting	\$500.00	
<input type="checkbox"/>	Preservation Area Approval		
<input type="checkbox"/>	Resource Area Determination footprint		
<input type="checkbox"/>	Resource Area Determination <one acre	\$500.00	
<input type="checkbox"/>	Resource Area Determination >one acre		
<input type="checkbox"/>	HPAAGP 1/ Habitat Creation/Enhance	No Fee	No Fee
<input type="checkbox"/>	HPAAGP 2 Bank Stabilization	\$500.00	
<input type="checkbox"/>	PAA with Waiver (Specify type below)		



	Freshwater Wetlands	Fee Amount	Fee Paid
<input type="checkbox"/>	FWGP1 / Main. & repair Exist Feature	\$600.00	
<input type="checkbox"/>	FWGP2 / Utility Crossing	\$600.00	
<input type="checkbox"/>	FWGP3 / Discharge of Return Water	\$600.00	
<input type="checkbox"/>	FWGP4 / Hazard Site Invest/Cleanup	\$600.00	
<input type="checkbox"/>	FWGP5 / Landfill Closure	\$600.00	
<input type="checkbox"/>	FWGP6 / Filing of NSWC	\$600.00	
<input type="checkbox"/>	FWGP6A /TA- Filing of NSWC	\$600.00	
<input type="checkbox"/>	FWGP7 / Fill ditch / swale	\$600.00	
<input type="checkbox"/>	FWGP8 / House Addition	\$600.00	
<input type="checkbox"/>	FWGP9 / Airport Sightline Clearing	\$600.00	
<input type="checkbox"/>	FWGP10A / Very Minor Road Crossing	\$600.00	
<input type="checkbox"/>	FWGP10B / Minor Road Crossing	\$600.00	
<input type="checkbox"/>	FWGP11 / Outfalls / Intakes	\$600.00	
<input type="checkbox"/>	FWGP12 / Survey / investigation	\$600.00	
<input type="checkbox"/>	FWGP13 / Lake Dredging	\$600.00	
<input type="checkbox"/>	FWGP14 / Water Monitoring	\$600.00	
<input type="checkbox"/>	FWGP15 / Mosquito Control	\$600.00	
<input type="checkbox"/>	FWGP16 / Habitat Create / Enhance	No Fee	No Fee
<input type="checkbox"/>	FWGP17 / Trails / Boardwalks	No Fee	No Fee
<input type="checkbox"/>	FWGP17A / Multiuse paths	\$600.00	
<input type="checkbox"/>	FWGP18 / Dam Repairs	\$600.00	
<input type="checkbox"/>	FWGP19 / Dock or Pier	\$600.00	
<input type="checkbox"/>	FWGP20 / Bank Stabilization	\$600.00	
<input type="checkbox"/>	FWGP21 / Above Ground Utility	\$600.00	
<input type="checkbox"/>	FWGP23 / Expand Cranberry	No Fee	No Fee
<input type="checkbox"/>	FWGP24 / Spring Developments	\$600.00	
<input type="checkbox"/>	FWGP25 / Malfunction Septic System	No Fee	No Fee
<input type="checkbox"/>	FWGP26 / Channel / Stream Clean	\$600.00	
<input type="checkbox"/>	FWGP27 / Redevelop Disturbed Site	\$600.00	
<input type="checkbox"/>	FWGP Modification	\$240.00	
<input type="checkbox"/>	FWGP Extension	\$240.00	

	Freshwater Wetlands	Fee Amount	Fee Paid
<input type="checkbox"/>	Individual Wetlands Permit		
<input type="checkbox"/>	Individual Open Water Permit		
<input type="checkbox"/>	Individual Permit Mod. Major/Minor		
<input type="checkbox"/>	Individual Permit Extension	\$1,200.00	
<input type="checkbox"/>	Wetlands Exemption	\$240.00	
<input type="checkbox"/>	Permit Equivalency/CERCLA	No Fee	No Fee

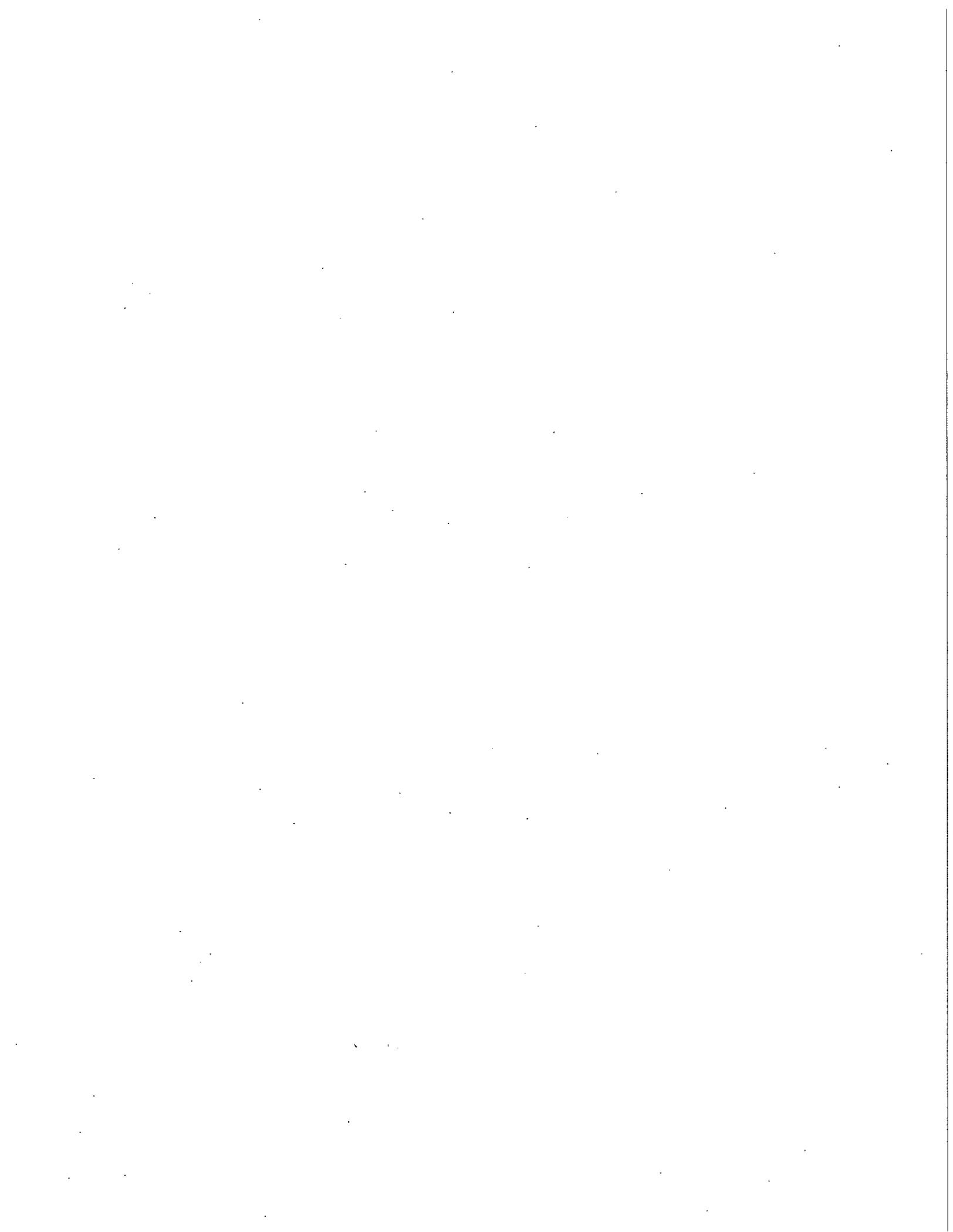
	Transition Area Waiver		
<input type="checkbox"/>	Averaging Plan		
<input type="checkbox"/>	Reduction		
<input type="checkbox"/>	Hardship Reduction		
<input type="checkbox"/>	Special Activity Stormwater		
<input type="checkbox"/>	Special Activity Linear Development		
<input type="checkbox"/>	Special Activity Redevelopment		
<input type="checkbox"/>	Special Activity Individual Permit		
<input type="checkbox"/>	Exemption	\$240.00	
<input type="checkbox"/>	Modification Major/Minor		
<input type="checkbox"/>	Extension	\$240.00	

	Letter of Interpretation		
<input type="checkbox"/>	Presence Absence	\$240.00	
<input type="checkbox"/>	Presence Absence Footprint	\$480.00	
<input type="checkbox"/>	Delineation < 1.00 Acres	\$600.00	
<input type="checkbox"/>	Verification		
<input type="checkbox"/>	Extension		

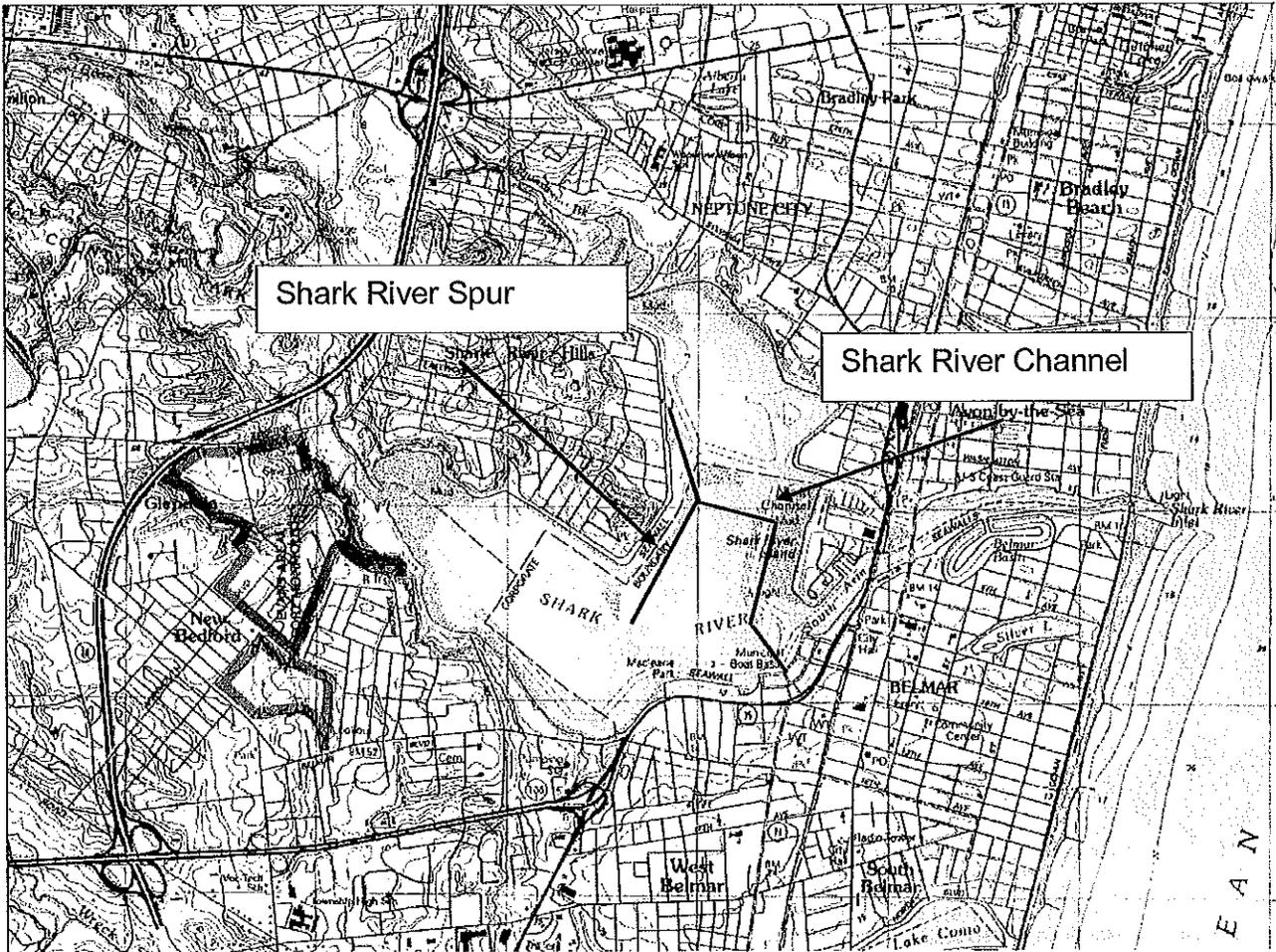
**Please note:** If no fee amount is specified in the "Fee Amount" column, please refer to the Regulatory Fee Schedule which can be found at [www.nj.gov/dep/landuse/forms](http://www.nj.gov/dep/landuse/forms).

**Also:** In addition to the standard paper submission, an electronic copy of the entire application, including plans, may be submitted on CD-ROM to assist the Department in the review this application. Plans should be submitted as a CAD file or Shapefile, georeferenced in NJ state plane feet NAD83. Please do **NOT** send the electronic version via E-Mail.

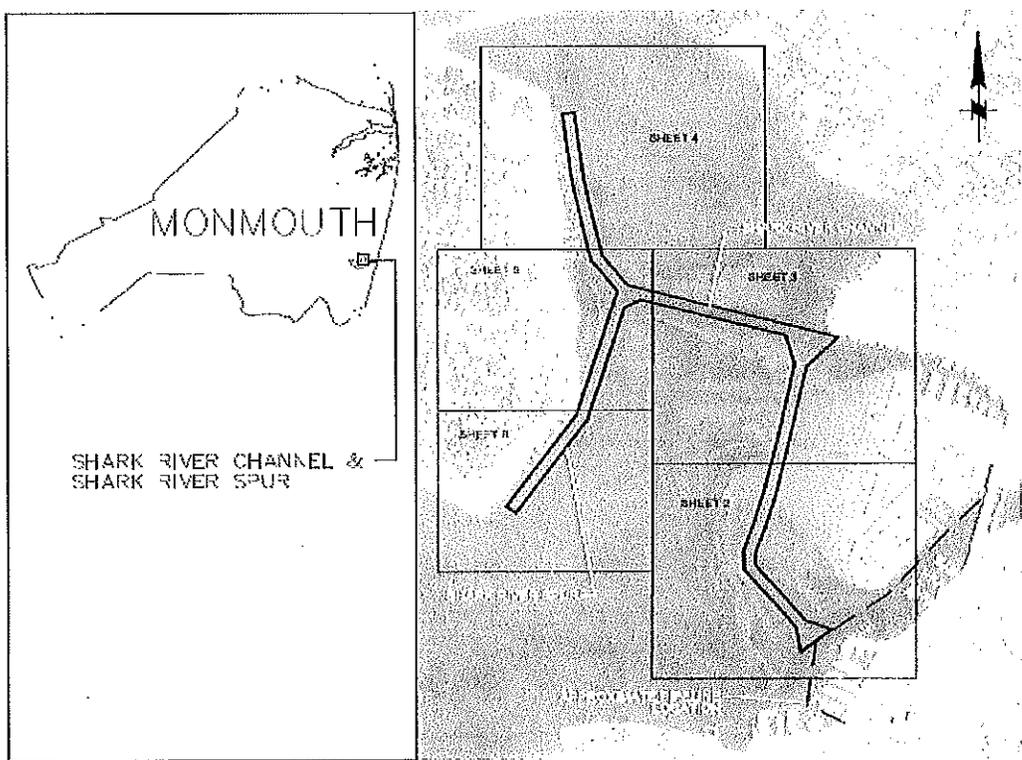
Electronic permitting and/or application submittal is available for specific applications. Please see the Division website at [www.nj.gov/dep/landuse/epermit.html](http://www.nj.gov/dep/landuse/epermit.html) for more information.



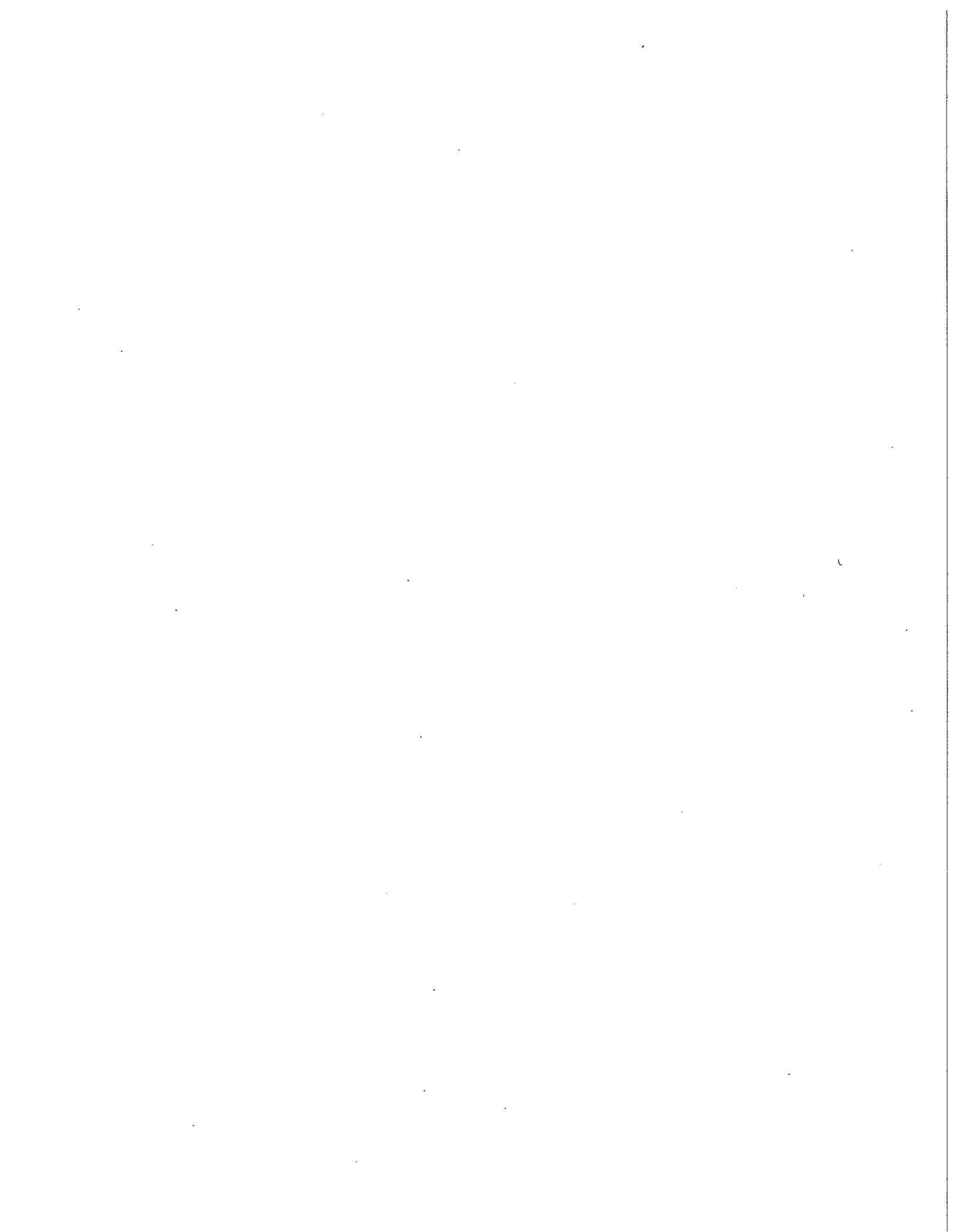
USGS Quad Map



Asbury Park, NJ  
1995



Project Location Map





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Jodi M. McDonald, Chief  
U.S. Army Corps of Engineers  
New York District -- Regulatory Branch  
Jacob K. Javits Federal Building  
26 Federal Plaza, Room 1937  
New York, NY 10278-0090

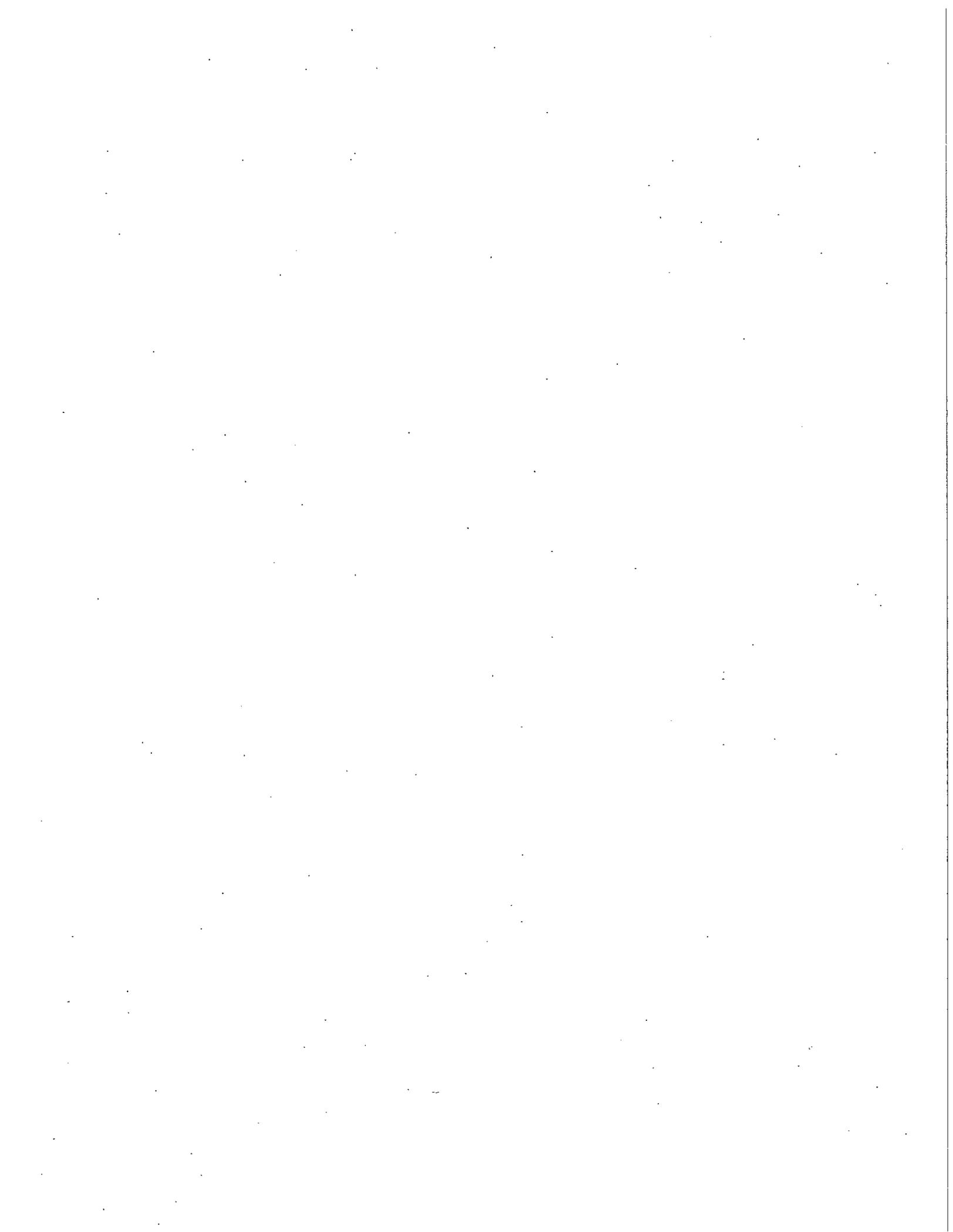
RE: Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Belmar Borough, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. McDonald:

The New Jersey Department of Transportation, Office of Maritime Resources is requesting United States Army Corps of Engineers authorization to conduct maintenance dredging within the Shark River Channel and Shark River Spur. A ten year maintenance dredging provision is also requested in order to maintain safe navigation conditions in this channel.

Please find the following enclosed for your review and approval:

1. Department of the Army Permit Application, ENG Form 4345;
2. A completed Environmental Questionnaire;
3. A USGS Quadrangle map with the project area highlighted;
4. Project Location Map (aerial photo);
5. "Consistency Certification" with the New Jersey State Coastal Zone Management Program;
6. March 2015 NJDEP Compliance Statement;
7. "Public Notice" information, including project description, and mailing addresses of adjoining property owners, post office(s), city and county governments and the local newspaper(s);
8. Site plans (One (1) copy of full scale plans and three (3) copies reduced size (8.5" x 11")
9. November 15, 2013 Sediment Sampling Report (ASI Job #33-051 R9) (1 hard copy and 1 electronic copy);

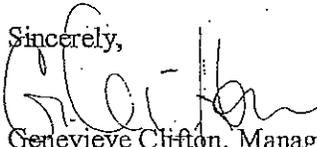


Ms. Jodi McDonald  
May 26, 2015  
Page Two

An application for this project was also submitted to the New Jersey Department of Environmental Protection and is currently pending review.

If you have any questions or need any additional information please contact Jo Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov).

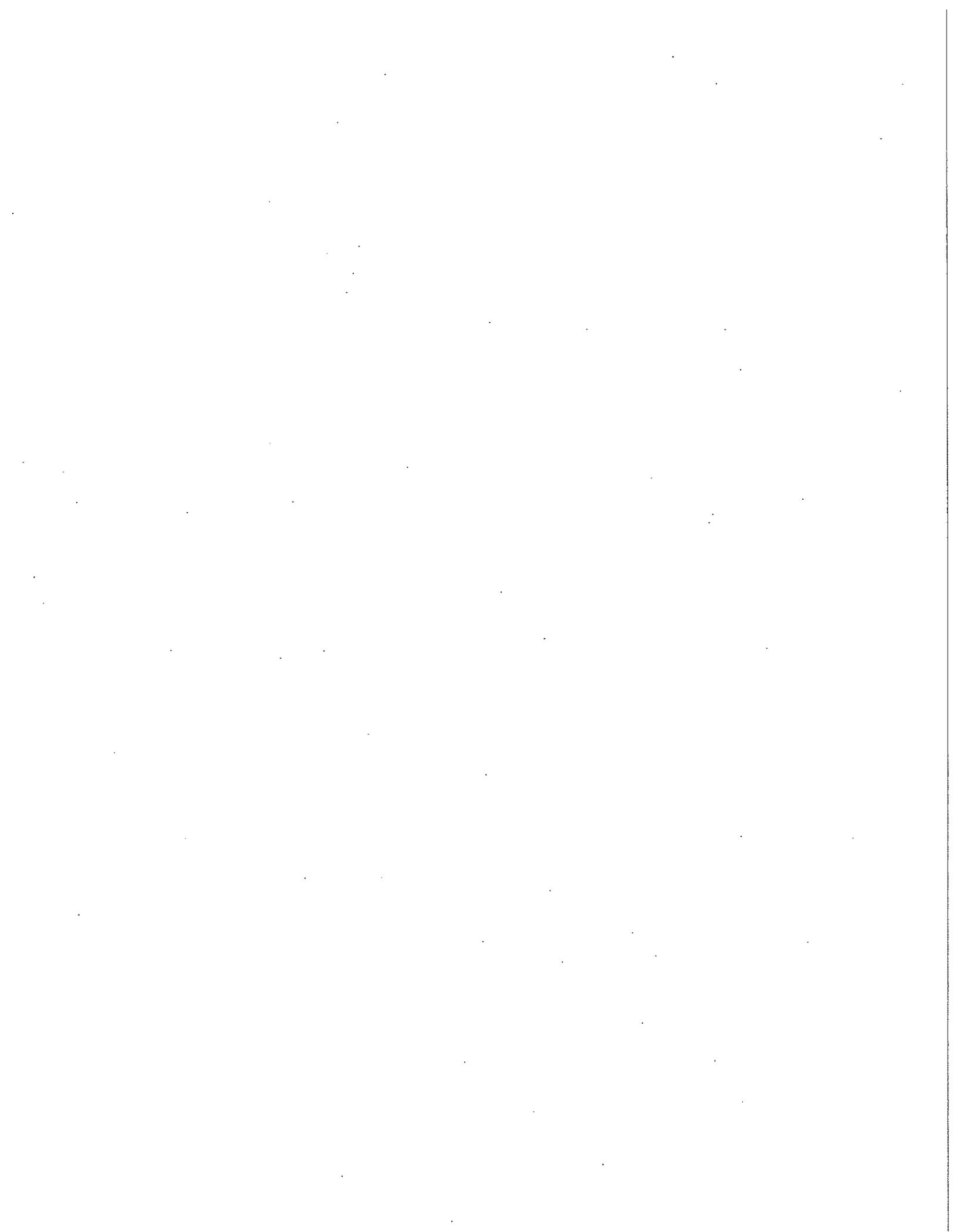
Sincerely,



Genevieve Clifton, Manager  
Office of maritime Resources

Enclosures

c: Suzanne U. Dietrick, Chief, Office of Dredging and Sediment Technology





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Mr. Ted Bianchi  
Construction Official, Borough of Belmar  
601 Main Street  
Belmar, NJ 07719

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Bianchi:

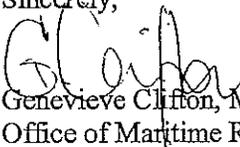
This letter is to provide you with legal notification that an application will be submitted to the New Jersey Department of Environmental Protection (NJDEP) Office of Dredging and Sediment Technology for a permit for maintenance dredging of the Shark River Channel and Shark River Spur navigation channels located in Borough of Belmar, Borough of Neptune City and Neptune Township, Monmouth County.

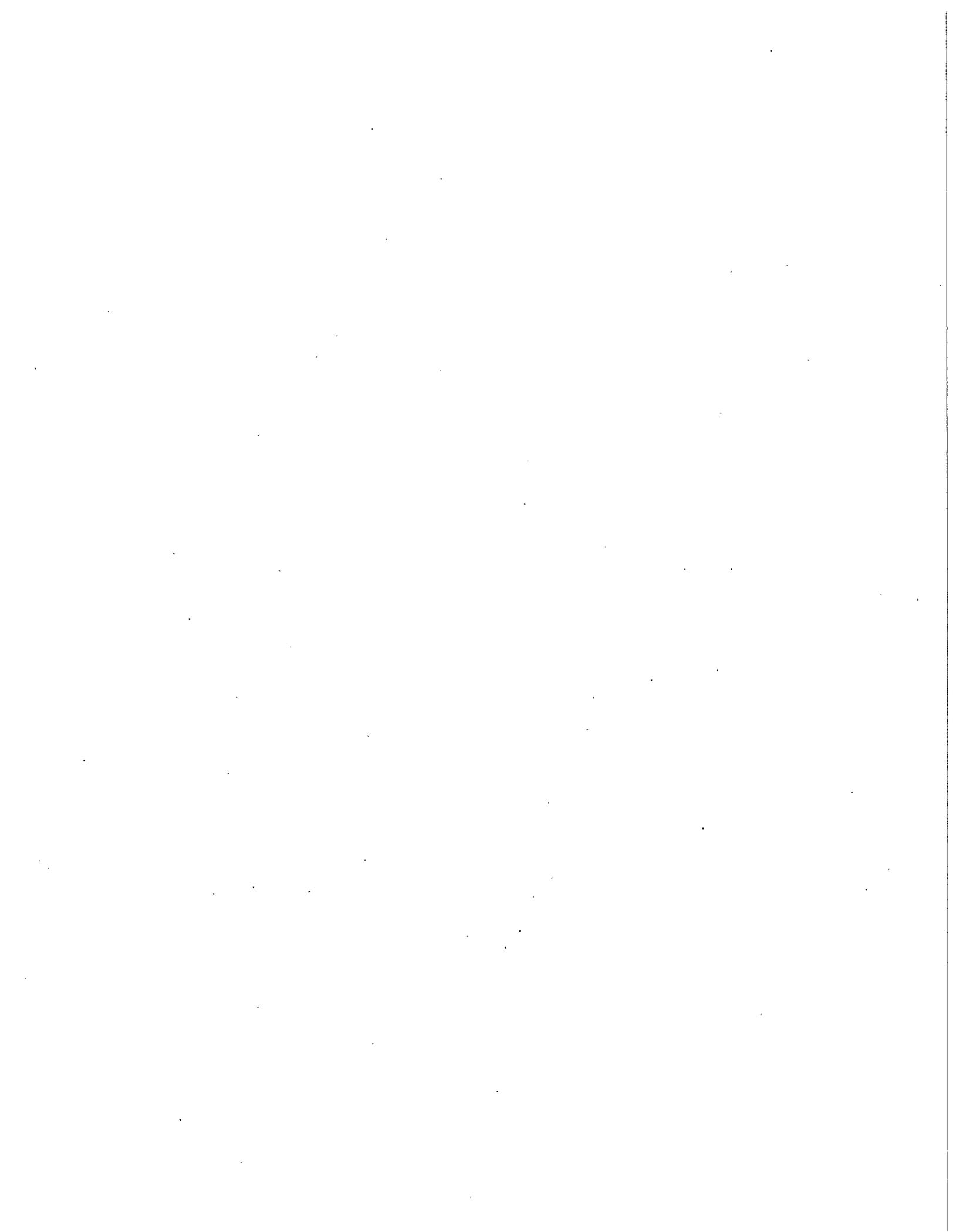
The complete permit application package can be reviewed at either the municipal clerk's office or by appointment at the Department of Environmental Protection's Trenton office. The Department of Environmental Protection welcomes comments and any information that you may provide concerning the proposed development and site. Please submit your written comments within 15 days of receiving this letter to:

New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information please contact Jo Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov).

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Mr. William J. Doolittle,  
Construction Official, Borough of Neptune City  
106 West Sylvania Avenue  
Neptune City, NJ 07753

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Doolittle:

This letter is to provide you with legal notification that an application will be submitted to the New Jersey Department of Environmental Protection (NJDEP) Office of Dredging and Sediment Technology for a permit for maintenance dredging of the Shark River Channel and Shark River Spur navigation channels located in Borough of Belmar, Borough of Neptune City and Neptune Township, Monmouth County.

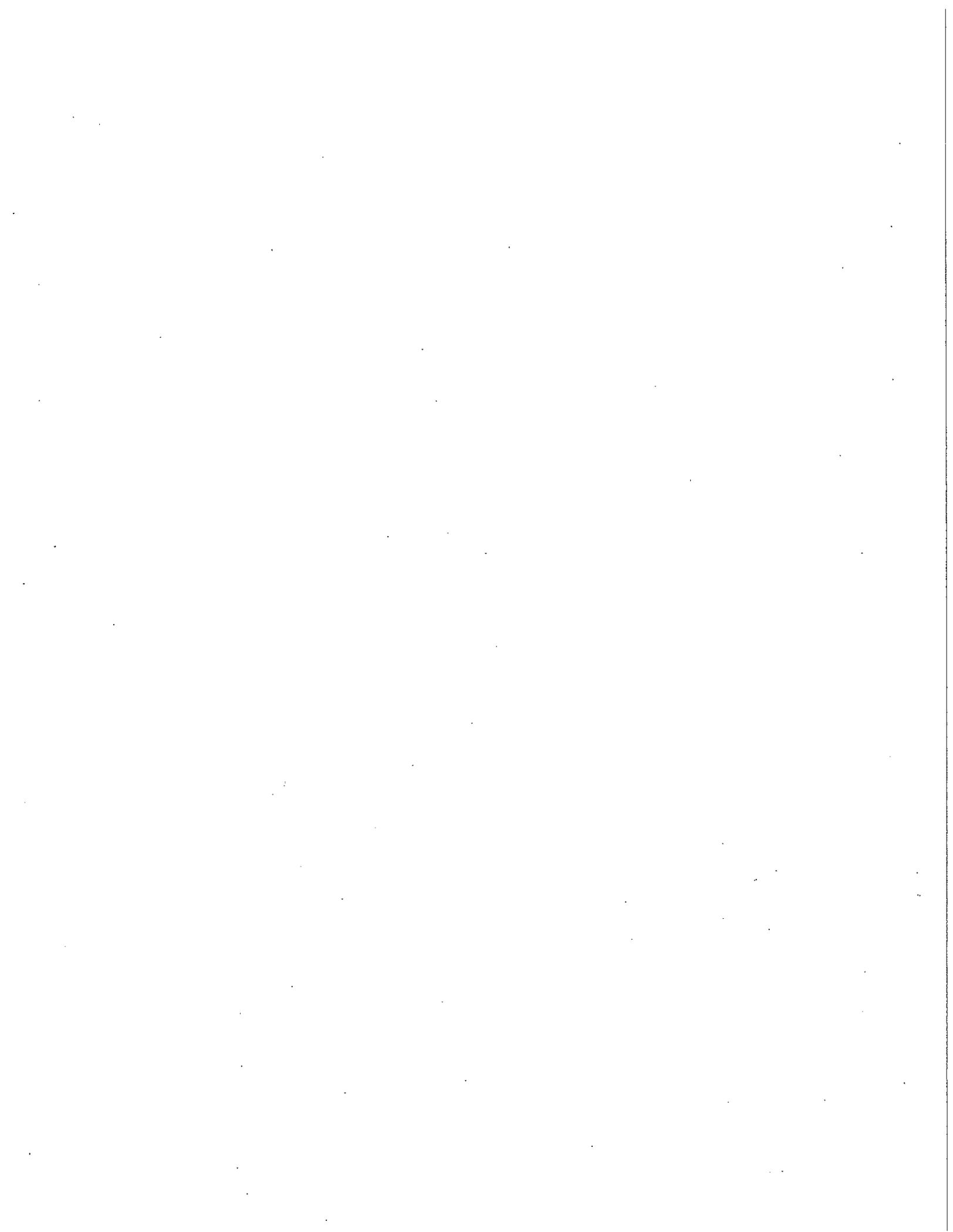
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Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Mr. William J. Doolittle,  
Construction Official, Neptune Township  
25 Neptune Boulevard  
Neptune, NJ 07753

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Doolittle:

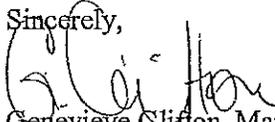
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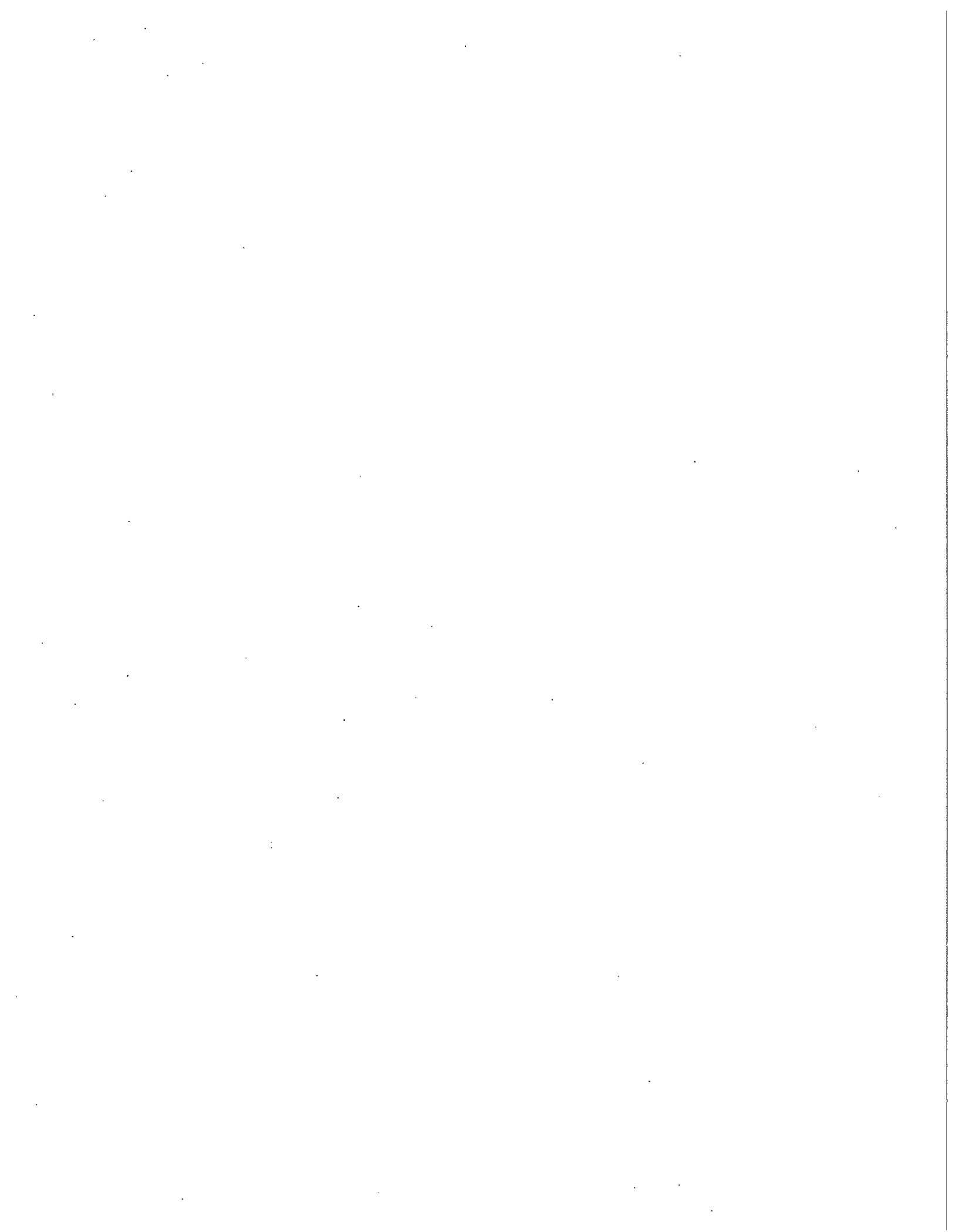
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P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information please contact Jo Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov)

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





## State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O. Box 600

Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*  
May 26, 2015

Mr. Edward Sampson, PP, AICP, Director  
Monmouth County Division of Planning  
Monmouth County Hall of Records  
One East Main Street, P.O. Box 1255  
Freehold, NJ 07728

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Sampson:

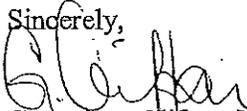
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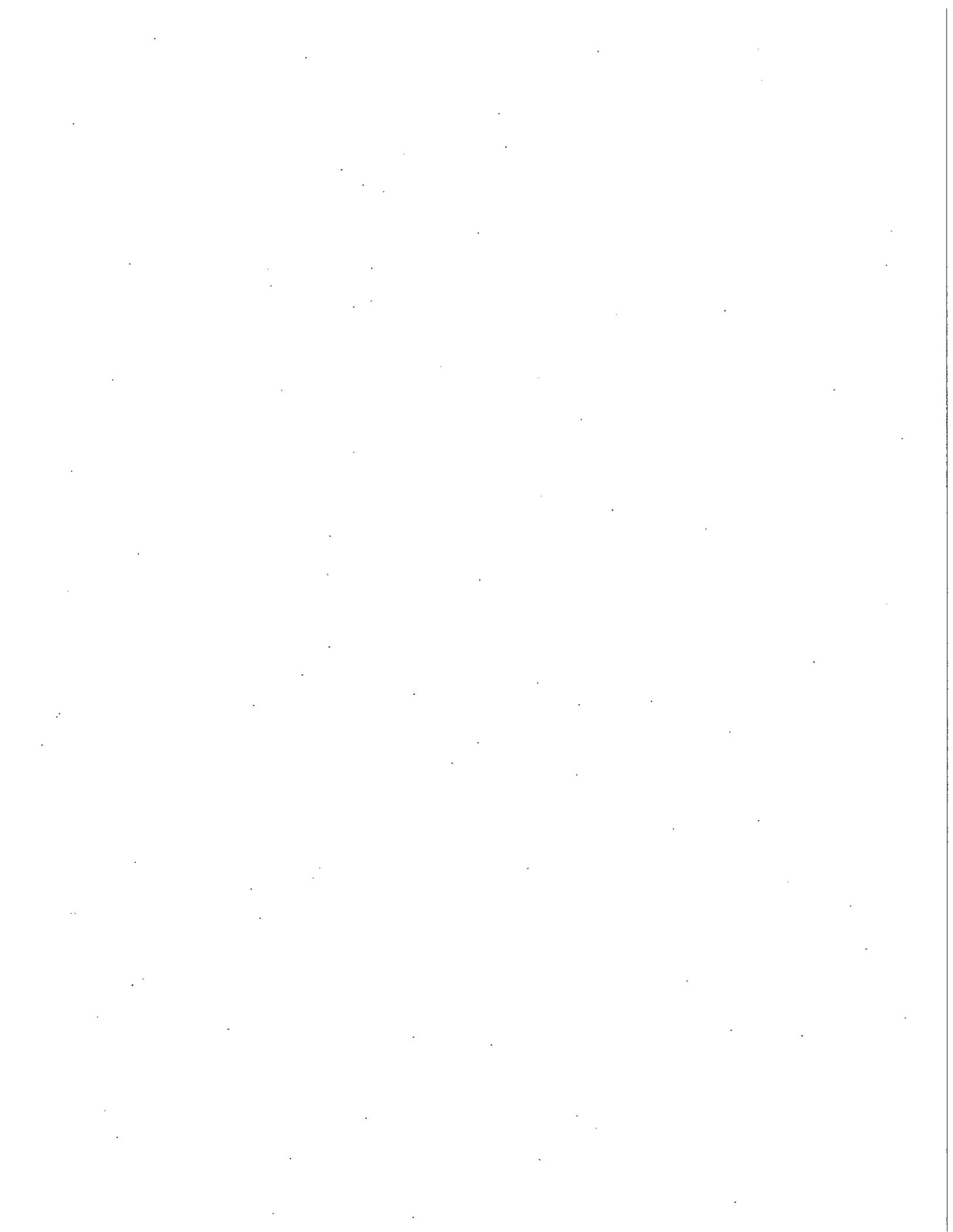
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New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information please contact Jo Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov).

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





## State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*  
May 26, 2015

Mr. Michael Meddis, MPH, Public Health Coordinator  
Monmouth County Health Department  
3435 Highway 9  
Freehold, NJ 07728

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Meddis:

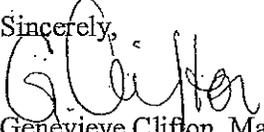
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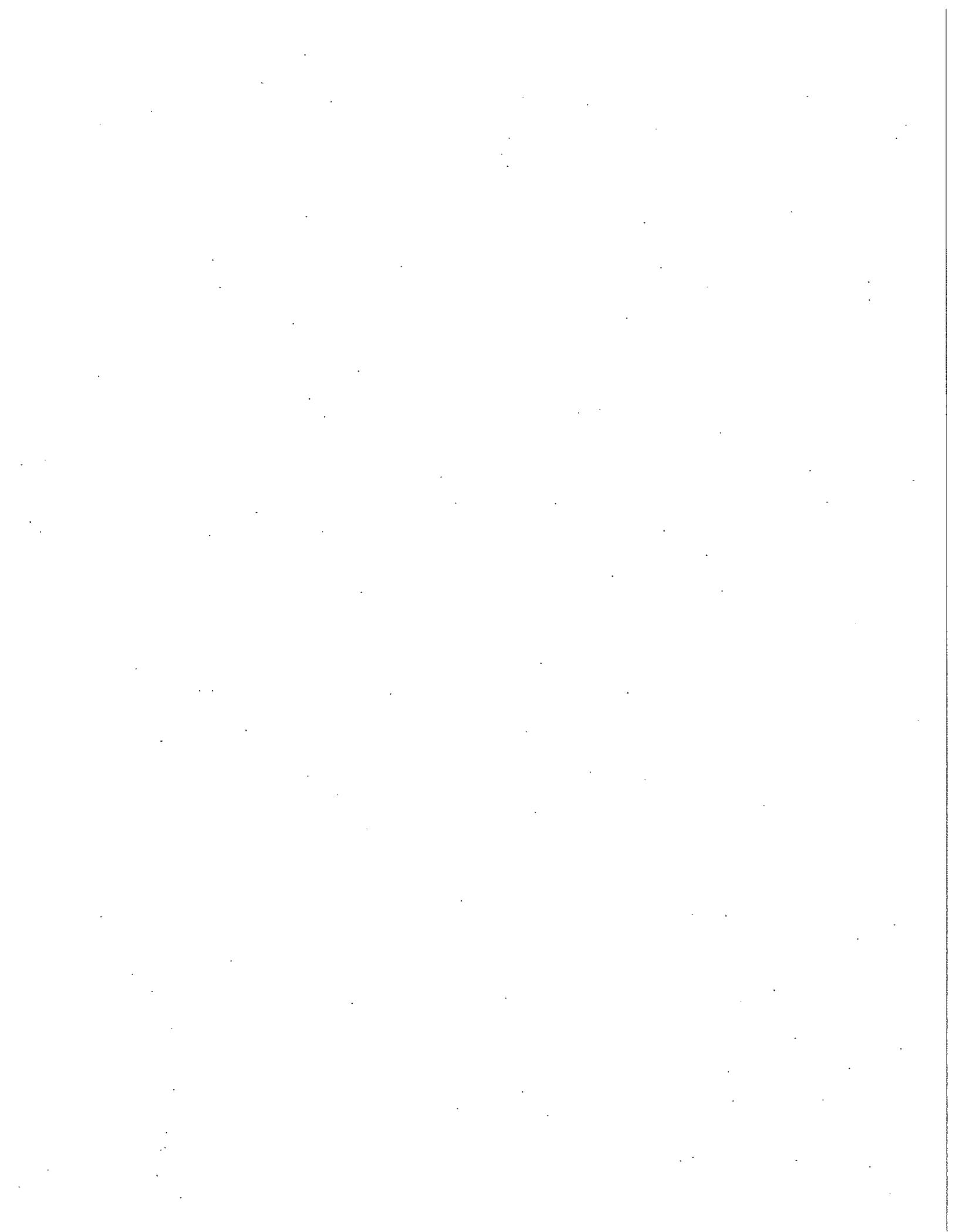
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Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

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Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Ms. Jodi McDonald, Chief  
New York District -Regulatory Branch  
United States Army Corps of Engineers  
Jacob K. Javits Federal Building  
26 Federal Plaza, Room 1937  
New York, NY 10278-0090

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. McDonald:

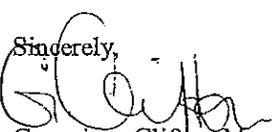
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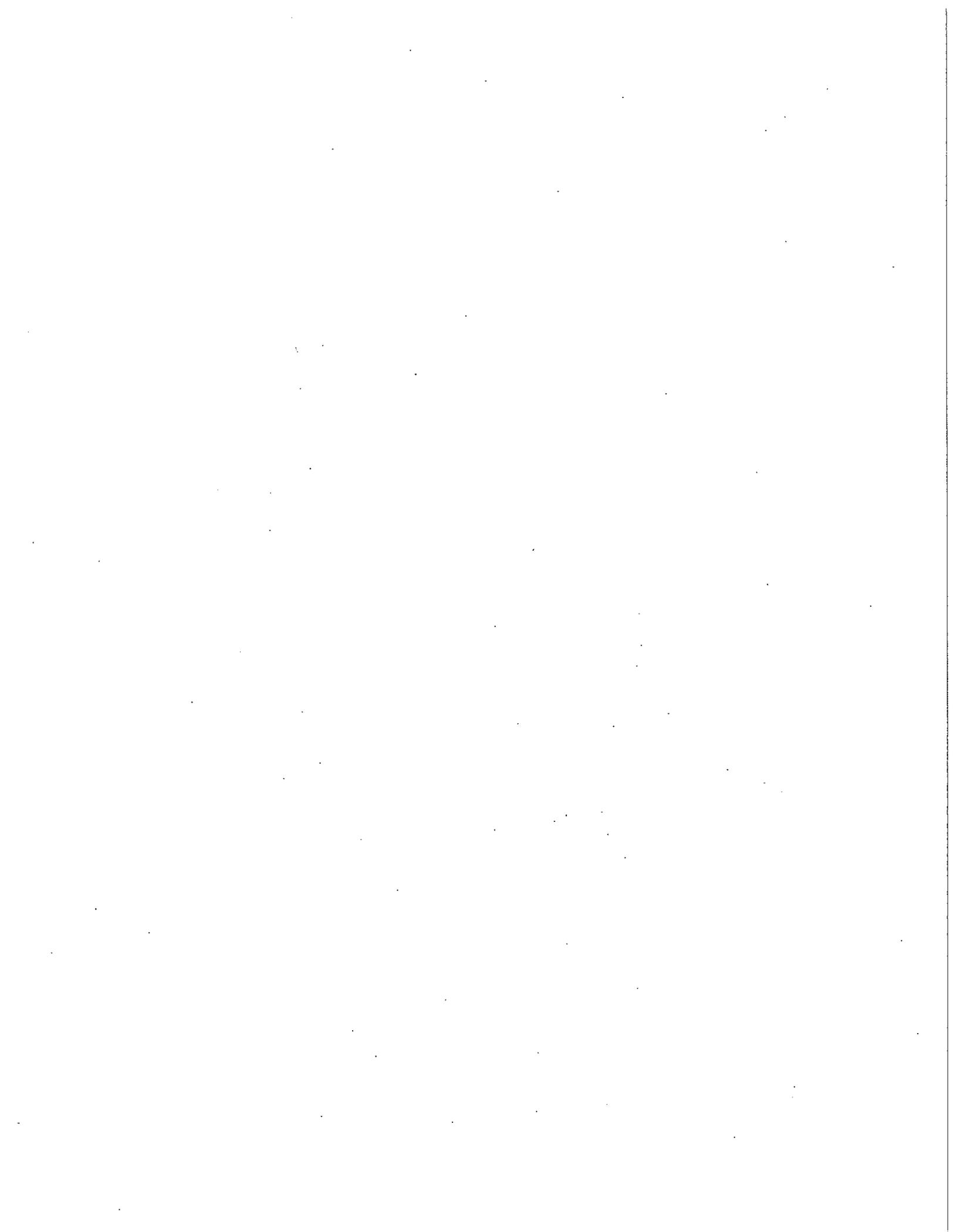
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Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information please contact Joselyn Wall at (609) 530-4772 or by e-mail at [Joselyn.wall@dot.nj.gov](mailto:Joselyn.wall@dot.nj.gov).

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources





# State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O. Box 600

Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Ms. April Claudio  
Clerk, Borough of Belmar  
601 Main Street  
Belmar, NJ 07719

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. Claudio:

This letter is to provide you with legal notification that an application will be submitted to the New Jersey Department of Environmental Protection (NJDEP) Office of Dredging and Sediment Technology for a permit for the proposed dredging project shown on the enclosed plan.

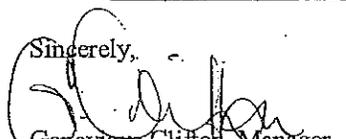
Three copies of the complete permit application are enclosed for your file and your review. Please distribute one copy to the planning board and one copy to the environmental commission. The third copy shall be maintained in the clerk's office and be made available for public review.

The NJDEP welcomes comments and any information that you and/or the public may provide concerning the proposed maintenance dredging project. Please submit your written comments within 15 days of receiving this letter to:

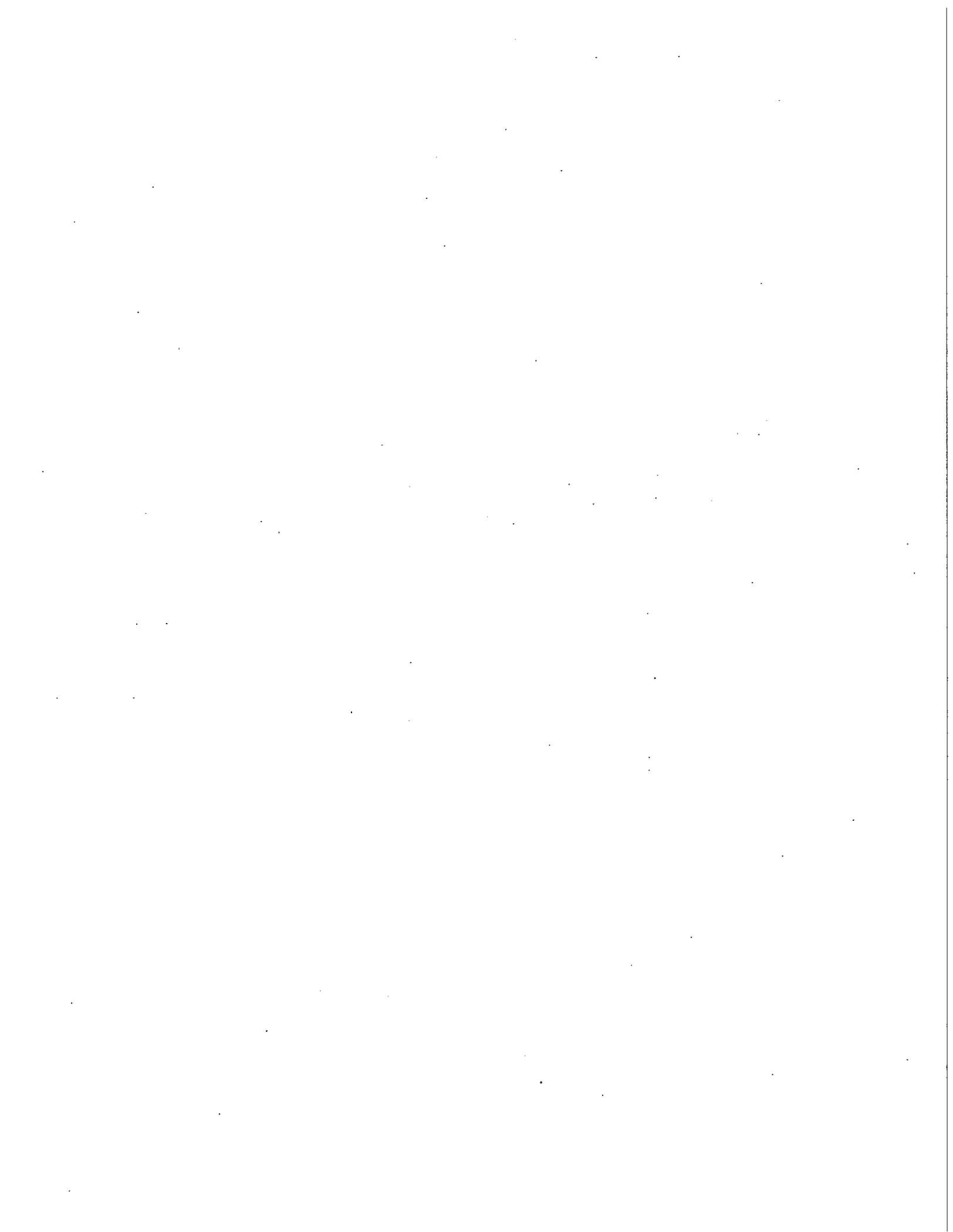
New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information, please contact Joselyn Wall at (609) 530-4772 or by e-mail at [Joselyn.Wall@dot.nj.gov](mailto:Joselyn.Wall@dot.nj.gov).

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources

Enclosures





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Mr. Richard Cuttrell  
Clerk, Neptune Township  
25 Neptune Blvd.  
Neptune, NJ 07753

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Mr. Cuttrell:

This letter is to provide you with legal notification that an application will be submitted to the New Jersey Department of Environmental Protection (NJDEP) Office of Dredging and Sediment Technology for a permit for the proposed dredging project shown on the enclosed plan.

Three copies of the complete permit application are enclosed for your file and your review. Please distribute one copy to the planning board and one copy to the environmental commission. The third copy shall be maintained in the clerk's office and be made available for public review.

The NJDEP welcomes comments and any information that you and/or the public may provide concerning the proposed maintenance dredging project. Please submit your written comments within 15 days of receiving this letter to:

New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

If you have any questions or need any additional information, please contact Joselyn Wall at (609) 530-4772 or by e-mail at [Joselyn.Wall@dot.nj.gov](mailto:Joselyn.Wall@dot.nj.gov).

Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources

Enclosures





# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

May 26, 2015

Ms. Mary Sapp  
Clerk, Borough of Neptune City  
106 W. Sylvania Ave  
Neptune City, NJ 07753

RE: Waterfront Development Permit/WQC/AUD Application  
Shark River Channel (#038) - Maintenance Dredging  
Shark River Spur (#039) - Maintenance Dredging  
Borough of Belmar, Monmouth County  
Borough of Neptune City, Monmouth County  
Neptune Township, Monmouth County

Dear Ms. Sapp:

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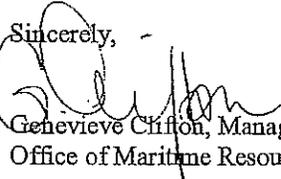
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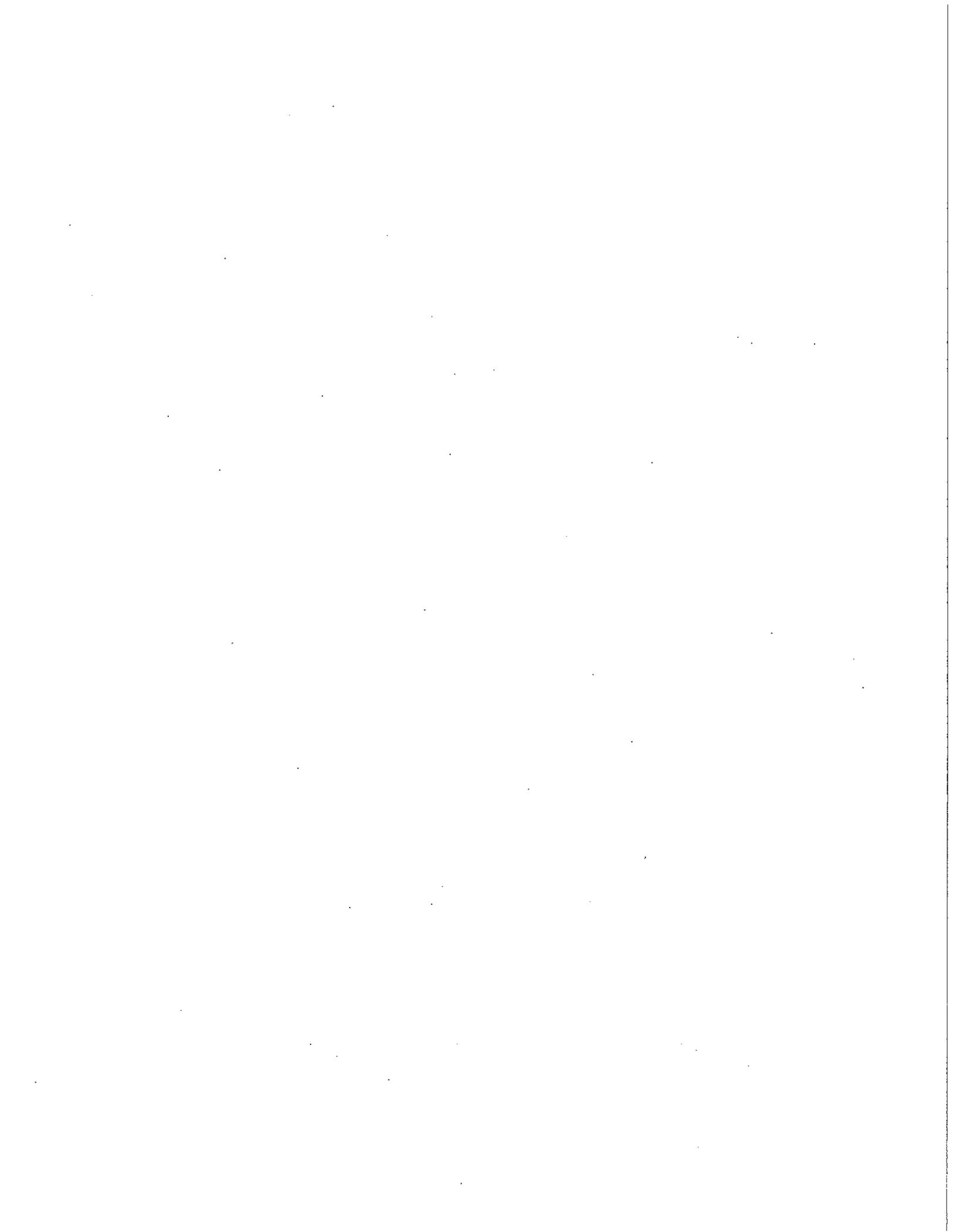
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P.O. Box 420 Mail Code #401-06C  
Trenton, New Jersey 08625-0420

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Sincerely,

  
Genevieve Clifton, Manager  
Office of Maritime Resources

Enclosures



7005 0390 0000 9190 1310

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Ted Bianchi  
Construction Official, Borough of Belmar  
601 Main Street  
Belmar, NJ 07719

7005 0390 0000 9190 1334

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Michael Meddis, MPH  
Public Health Coordinator  
Monmouth County Health Department  
3435 Highway 9  
Freehold, NJ 07728

7005 0390 0000 9190 1297

U.S. Postal Service  
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William Doolittle  
Construction Official, Neptune Township  
25 Neptune Boulevard  
Neptune, NJ 07753

7005 0390 0000 9190 1303

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William Doolittle  
Construction Official, Bor. of Neptune City  
106 W. Sylvania Avenue  
Neptune City, NJ 07753

PS Form 3800, June 2002 See Reverse for Instructions

PS Form 3800, June 2002 See Reverse for Instructions

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Sent To Richard Cuttrell  
Clerk, Neptune Township  
25 Neptune Boulevard  
Neptune, NJ 07753

7005 0390 0000 9190 1266

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

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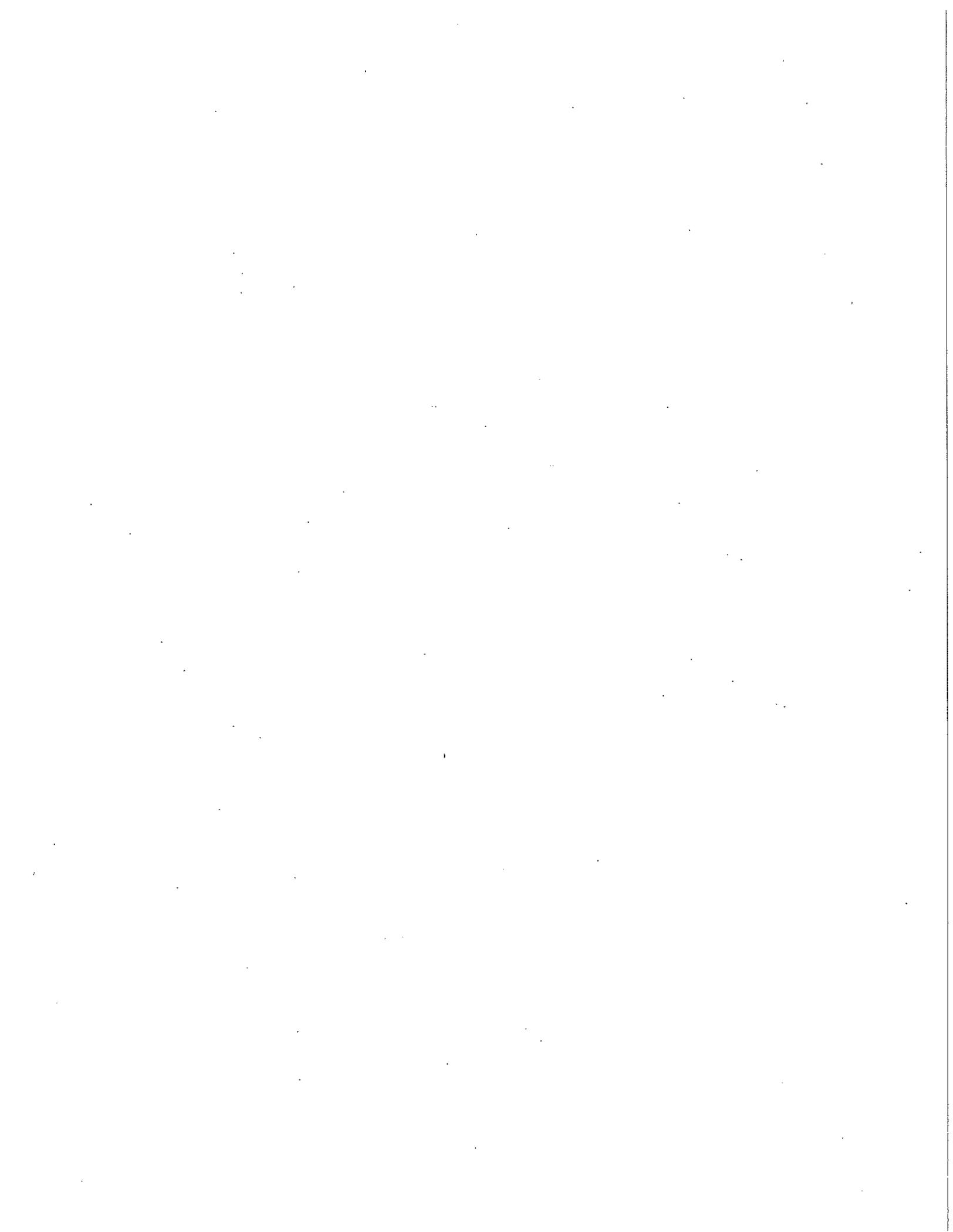
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Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	

Sent To Mary Sapp  
Clerk, Borough of Neptune City  
106 W. Sylvania Avenue  
Neptune City, NJ 07753

PS Form 3800, June 2002 See Reverse for Instructions

PS Form 3800, June 2002 See Reverse for Instructions



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Edward Sampson, PP, AICP, Director  
Monmouth County Division of Planning  
Monmouth County Hall of Records  
One East Main Street, PO Box 1255  
Freehold, NJ 07728

7005 0390 0000 9190 1273

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Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		

Total Postage & Fees \$

Sent To April Claudio  
Belmar Borough Clerk  
Street, Apt. N or PO Box No 601 Main Street  
City, State, Zi Belmar, NJ 07719

PS Form 3800, June 2002 See Reverse for Instructions

7005 0390 0000 9190 1280

**U.S. Postal Service™**  
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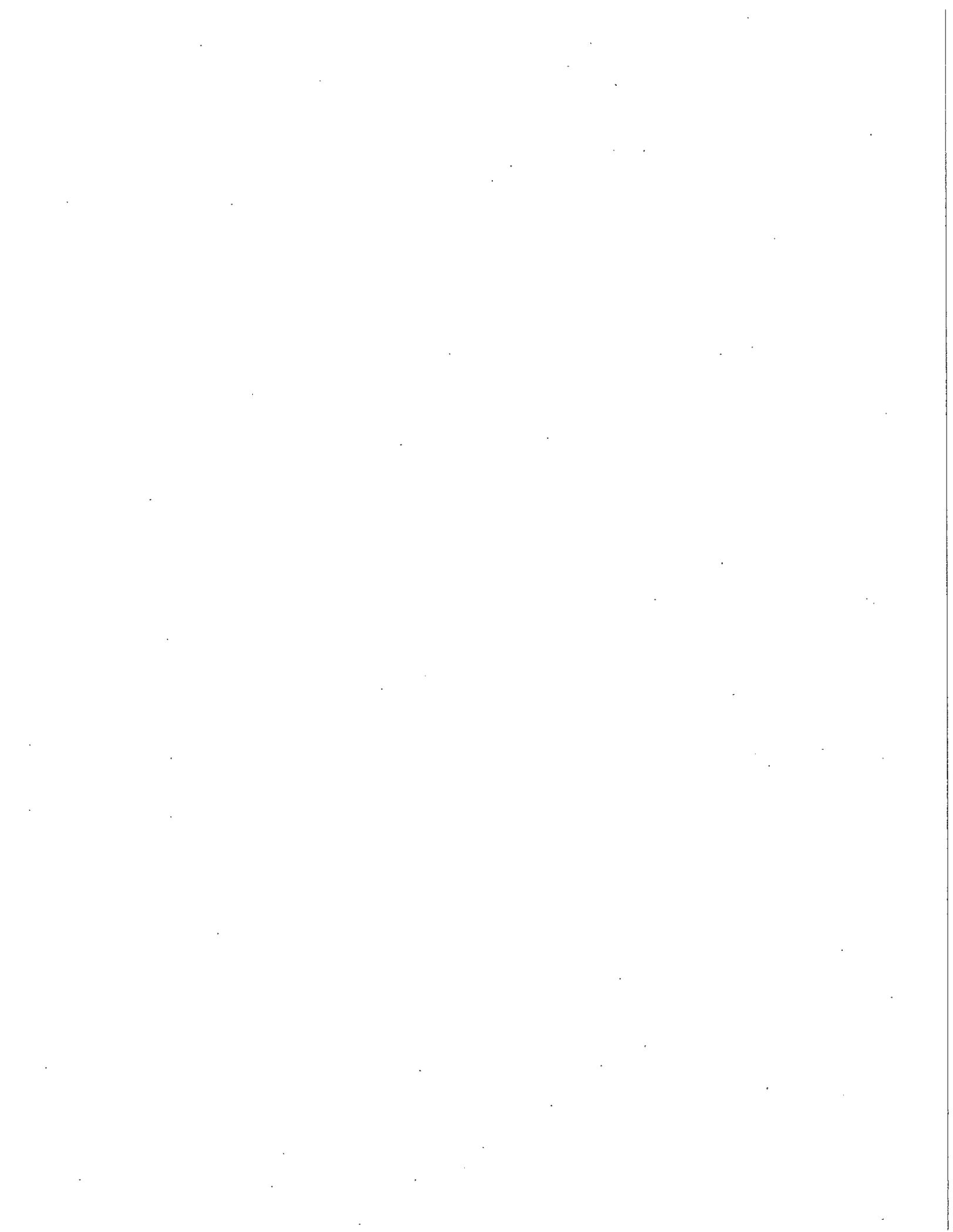
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Ms. Jodi McDonald, Chief  
New York District -Regulatory Branch, USACE  
Jacob K. Javits Federal Building  
26 Federal Plaza, Room 1937  
New York, NY 10278-0090

PS Form 3800, June 2002 See Reverse for Instructions



Take Notice that an application has been submitted to the New Jersey Department of Environmental Protection, Office of Dredging and Sediment Technology for a Waterfront Development Permit for the development described below:

**APPLICANT:** NJDOT Office of Maritime Resources

**PROJECT NAME:** Shark River Channel and Spur- Maintenance Dredging

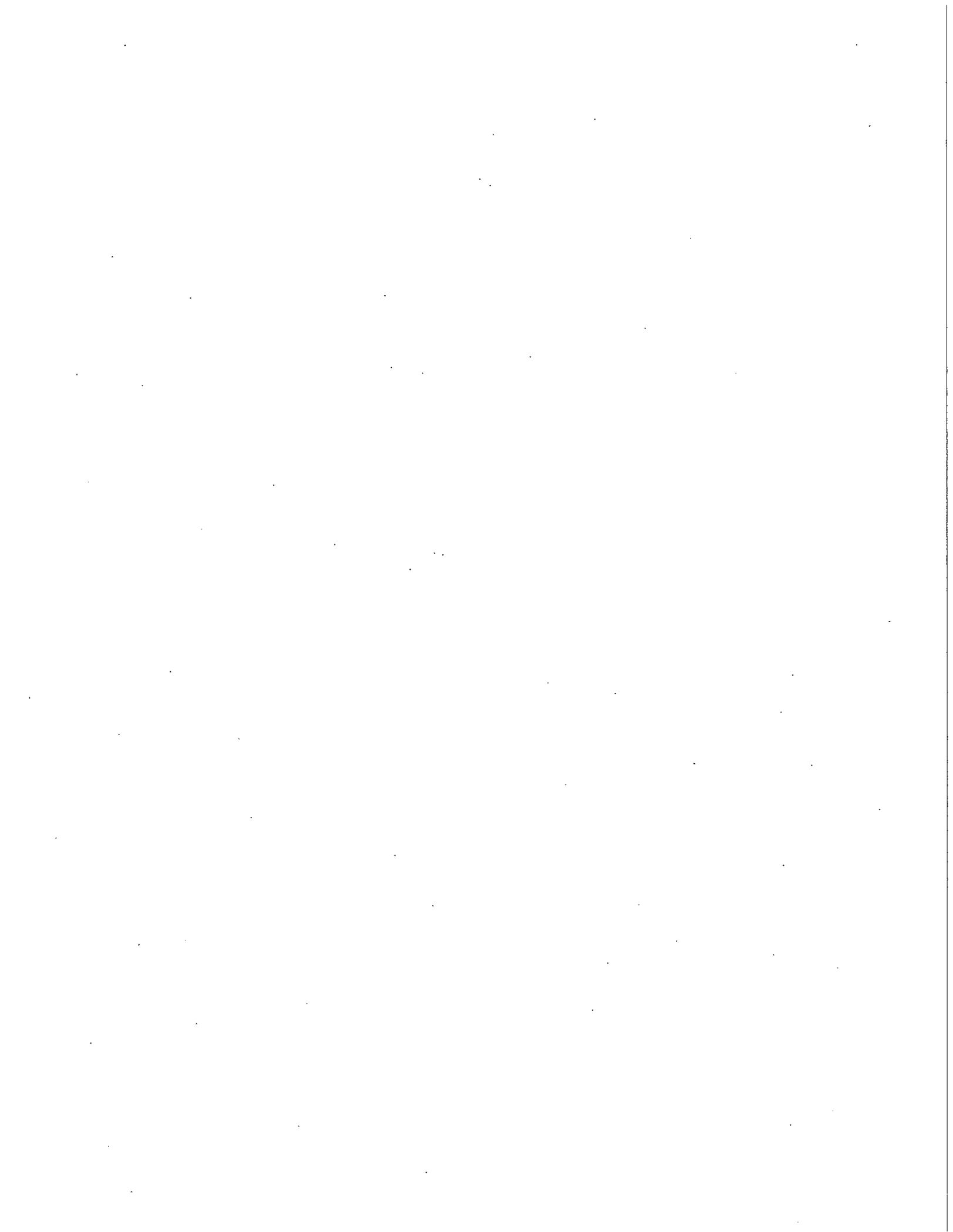
**PROJECT DESCRIPTION:** Maintenance dredging by hydraulic method approximately 102,000 cubic yards of sediment from approximately 8,600 linear feet of the Shark River Channel and Spur (#038 and #039). The project depth is six feet below mean low water (-6' MLW) plus one foot (1') of allowable overdrudge. The channel design width is 100'. Channel side-slopes are 3:1. Dredged material is proposed to be pumped to the dewatering site located at Block 108 Lot 1 Borough of Belmar, Monmouth County or Block 563 Lots 1 & 2 Township of Neptune, Monmouth County with final placement of dredged material at an approved landfill.

**PROJECT STREET ADDRESS:** Seaview Circle  
**BLOCK:** 563 Dewatering Area)  
**LOTS:** 1 & 2 (Dewatering Area)  
**MUNICIPALITY:** Neptune Township  
**COUNTY:** Monmouth

**PROJECT STREET ADDRESS:** Belmar Marina  
**BLOCK:** 108 (Dewatering Area)  
**LOT:** 1 (Dewatering Area)  
**MUNICIPALITY:** Belmar Borough  
**COUNTY:** Monmouth

The complete permit application package can be reviewed at either the municipal clerk's office or by appointment at the Department's Trenton office. The Department of Environmental Protection welcomes comments and any information that you may provide concerning the proposed development and site. Please submit your written comments within 15 days of publication of this notice to:

New Jersey Department of Environmental Protection  
Office of Dredging and Sediment Technology  
PO Box 420  
Mail Code: #401-06C  
401 East State Street  
Trenton, New Jersey 08625-0420



# **Compliance Statement**

## **Coastal Zone Management Rules**

**(N.J.A.C. 7:7E)**

**Statutory authority:**

N.J.S.A. 13:19-1, N.J.S.A. 12:3-1, N.J.S.A. 12:5-3, and N.J.S.A. 13:9A-1

**Date last amended:**

July 15, 2013

## **Shark River Channels (#38 #39)**

### **Maintenance Dredging**

**Borough of Neptune City**

**Neptune Township**

**Borough of Belmar**

**New Jersey Department of Transportation**

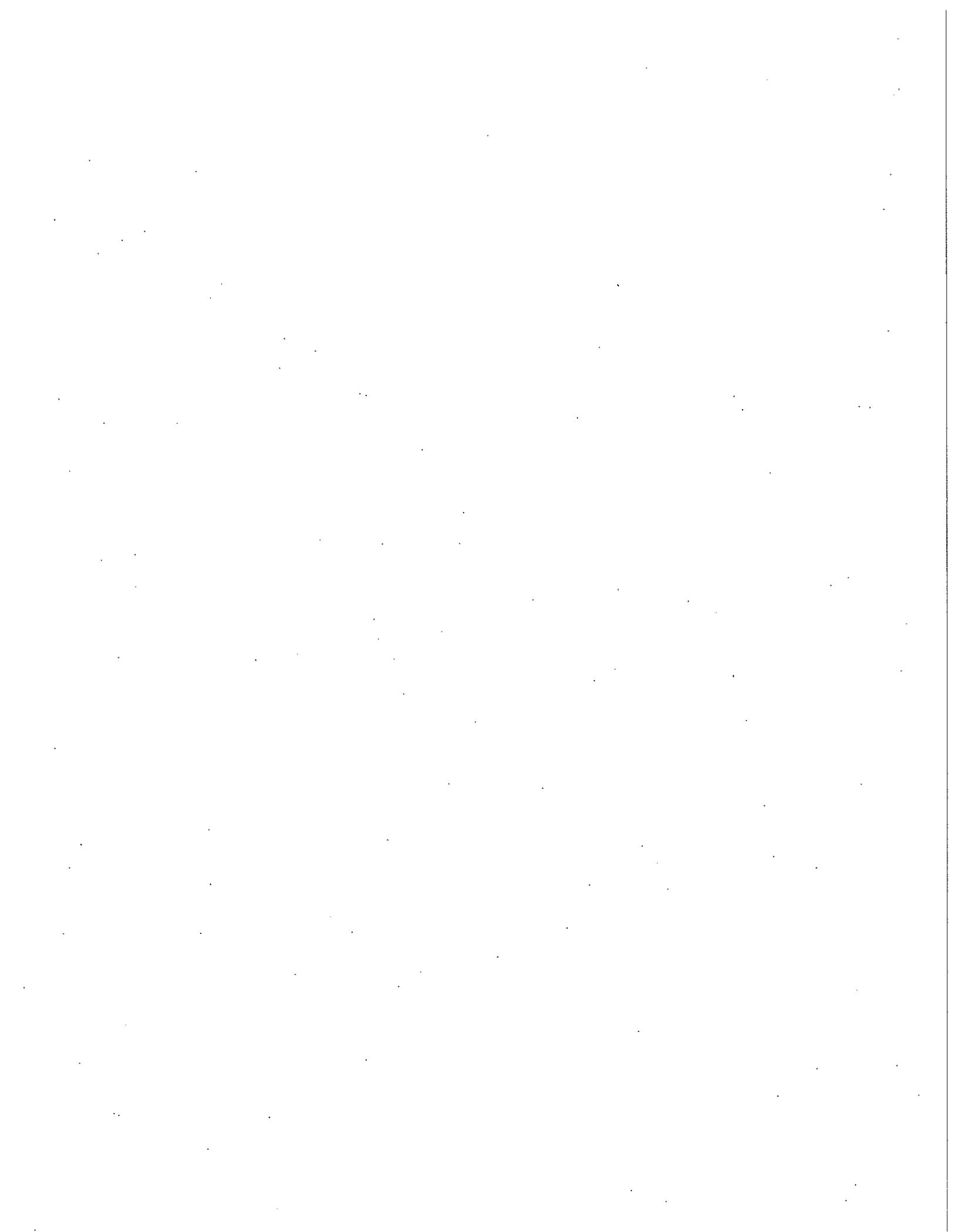
**Office of Maritime Resources**

**P.O. Box 600**

**1035 Parkway Avenue**

**Trenton, New Jersey 08625**

**May 2014**



Project Summary

Project: Shark River Channels – Maintenance Dredging

Municipality: Neptune City, Borough of Neptune City, Borough Of Belmar County: Monmouth

Dredged Material Quantity: ~102,000 yds<sup>3</sup>

Project Depth: -6' MLW plus one foot of allowable over dredge.

Dredging Method: hydraulic.

Temporary Dewatering Locations: Belmar Marina  
1024-1044 River Road  
Belmar, NJ 07719  
Tax Block: 108 Lot: 1  
Borough of Belmar, Monmouth County

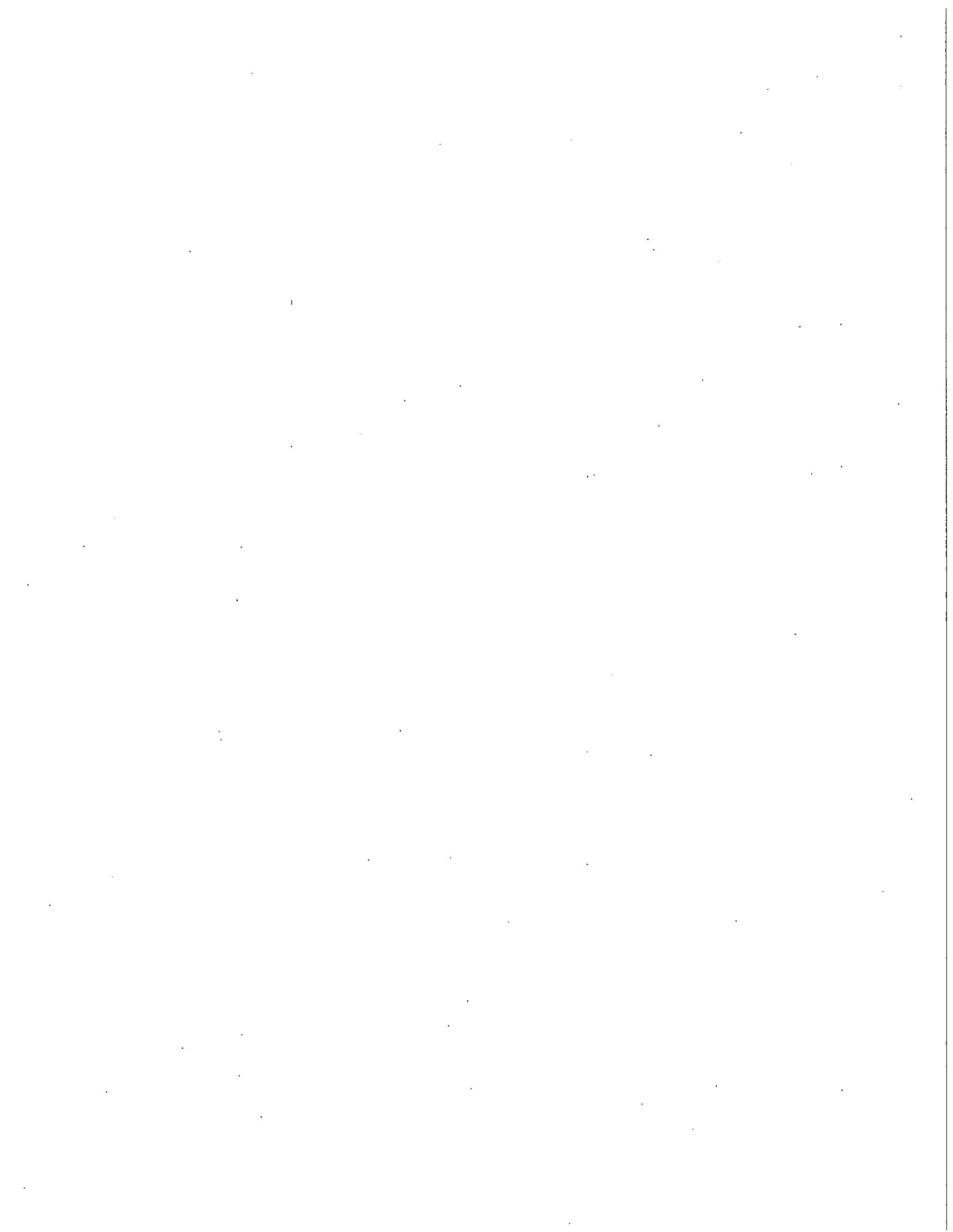
Or

Shark River Island  
1701 New Jersey 35  
Borough of Neptune City, NJ 07753  
Tax Block: 563 Lots: 1 & 2  
Township of Neptune, Monmouth County

Dredged Material Placement Locations: Monmouth County Landfill  
6000 Asbury Avenue  
Tinton Falls 07753

State Plane Coordinates (NAD 1983):

Shark River Channel (038)		
Channel Centerline (Station 0+00)	E (x): 623,082.2	N(y): 491,356.8
Channel Centerline (Station 63+72.46):	E (x): 621,042.4	N(y): 496,212.8
Shark River Spur (039)		
Channel Centerline (Station 0+00)	E (x): 620,555.4	N(y): 492,568.4
Channel Centerline (Station 22+56.15):	E (x): 621,500.6	N(y): 494,587.6



Dewatering Location Coordinates

Shark River Island	E(x) 624,334.213	N (y) 493,139.450
Belmar Marina	E(x) 623,514.331	N (y) 490,716.722

Site Plans: Seven (7) sheets titled, "Maintenance Dredging and Channel Improvements for Shark River Channel & Shark River Spur" dated May 1, 2015, and prepared by Dewberry Engineers, Inc.

Project Description: The project consists of maintenance dredging within the Shark River Channel (#038) and Shark River Spur (#039) located in the Borough of Neptune City, and the Township of Neptune and the Borough of Belmar. This maintenance dredging event is limited to dredged material comprised of sand and silt (Station 0+00 to Station 63+72.46 and Station 0+00 to Station 22+56.15) with the material proposed to be dewatered at a nearby site location at the Belmar Marina located between 1024-1044 River Road Belmar, NJ 07719 or on Shark River Island located at 1701 New Jersey 35 Borough of Neptune City, NJ 07753.

Maintenance dredging shall consist of hydraulic dredging of approximately one hundred and one hundred and two thousand cubic yards cubic yards (~102,000 yds<sup>3</sup>) of sediment comprised of sand and silt, from approximately eight thousand six hundred linear feet (~8,600') of the Shark River Channel and Shark River Spur (# 038 and # 039). The project depth is six feet below mean low water (-6' MLW), plus one foot (1') of allowable overdredge. The channel design width is 100 feet. Channel side slopes are 3:1. Maintenance dredging of the creek was last authorized by the State of New Jersey Department of Environmental Protection (NJDEP) in 1983, (permit #83-0043-1.)

Shoaling, including sediment deposited by Superstorm Sandy, has impeded navigation within this important channel. The maintenance dredging project is intended to restore the channel to the authorized project dimensions to allow safe passage for recreational and commercial marine traffic.

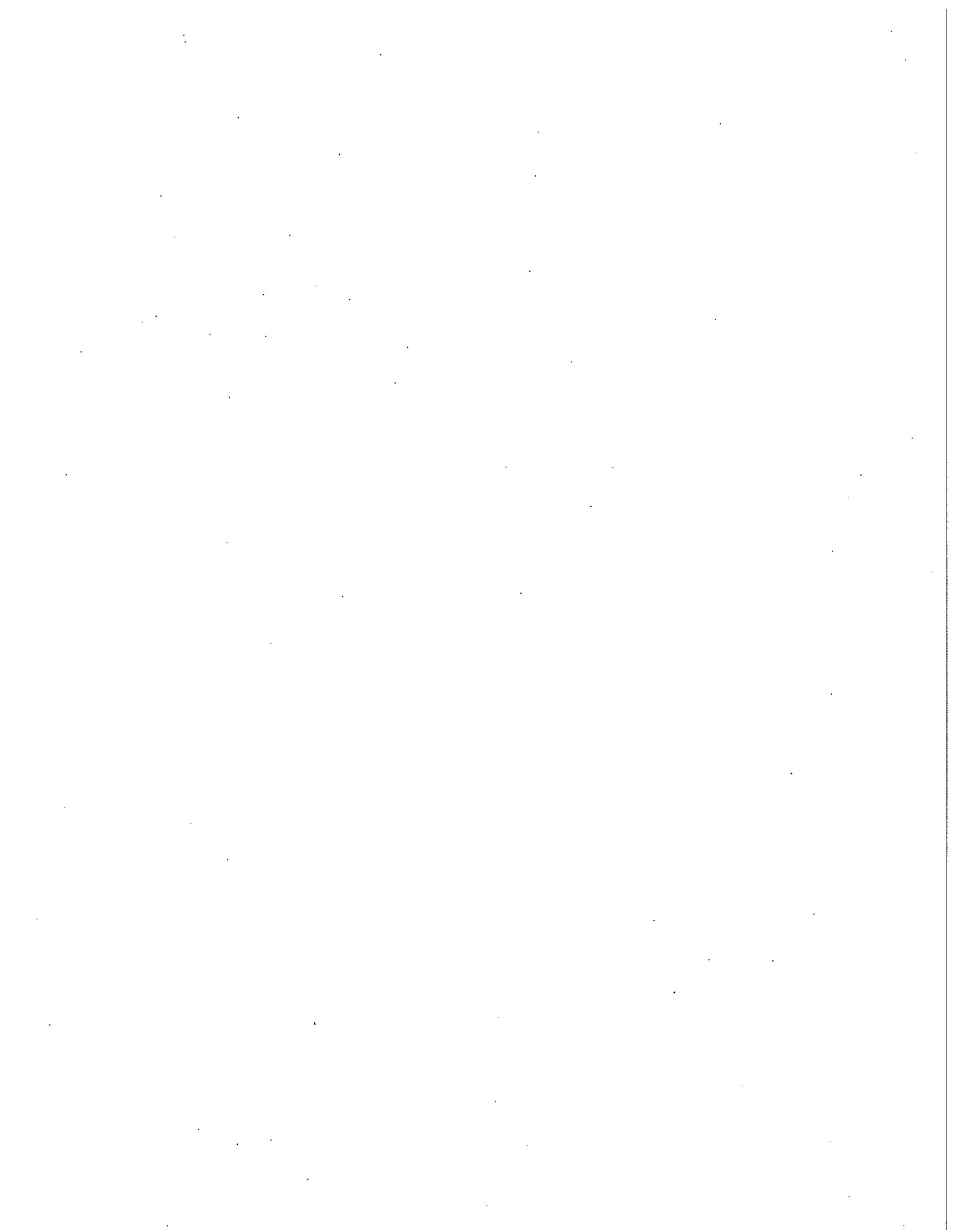
Material will be hydraulically dredged and transported via pipeline for mechanical dewatering to one of the proposed locations before being removed by truck to a permitted location at Monmouth County Landfill as fill. The dredge pipeline to the mechanical dewatering site will be floating except at channel crossings where it will be submerged to avoid a hazard or hindrance to navigation. The pipeline shall be marked as per USCG regulations.

The NJDOT Office of Maritime Resources conducted sediment sampling in May 2015 in preparation of maintenance dredging these channels. The sampling results indicate that the dredged material from this event (as delineated above) will need to be mechanically dewatered prior to beneficial use as landfill. Depending on target use, it may need to be amended with coarse grained material prior to placement. . Analysis of this data is provided in the Compliance Statement below. A copy of this data is provided within the Waterfront Development Permit application.

Permits Required:

**State:** Waterfront Development  
Water Quality Certificate  
Acceptable Use Determination  
Tidelands Dredging License

**Federal:** Department of the Army Individual Permit



Environmental Assessment and Compliance - Rules on Coastal Zone Management (NJAC 7:7E).

The following constitutes an environmental assessment of the proposed project and its compliance with the Rules on Coastal Zone Management (N.J.A.C. 7:7E). Only the rules applicable to the project are addressed below. Text of the rules is not included. A complete listing of all rules and text are available on-line at [http://www.nj.gov/dep/rules/rules/njac7\\_7e.pdf](http://www.nj.gov/dep/rules/rules/njac7_7e.pdf).

**SUBCHAPTER 3. SPECIAL AREAS**

**7:7E-3.2 Shellfish habitat**

According to the 1985 Shellfish Distribution Map (Appendix C), the Shark River Channel And Shark River Spur is located in shellfish habitat designated as high commercial value for hard clams. Maintenance dredging within shellfish habitat is conditionally acceptable, provided the disturbance to shellfish habitat is minimized to the greatest extent possible. The project is limited to the dimensions of the authorized channel and the minimum depth required for vessels currently using the channel. No expansion of the channel is proposed.

The shellfish growing water classification of the channel area to be dredged is classified as "special restricted" (see Appendix B). The proposed maintenance dredging project is not anticipated to result in the downgrading of the shellfish growing water classification.

The proposed maintenance dredging project is in compliance with this rule.

**7:7E-3.5 Finfish migratory pathways**

The proposed maintenance dredging project will not create any physical barriers to the movement of fish along finfish migratory pathways, and will not lower water quality to an extent that interferes with movement of fish along migratory pathways.

A temporary increase in turbidity is expected at the dredging site during active dredging, but generally hydraulic dredging reduces the generation of suspended sediment as compared to other dredging methods.

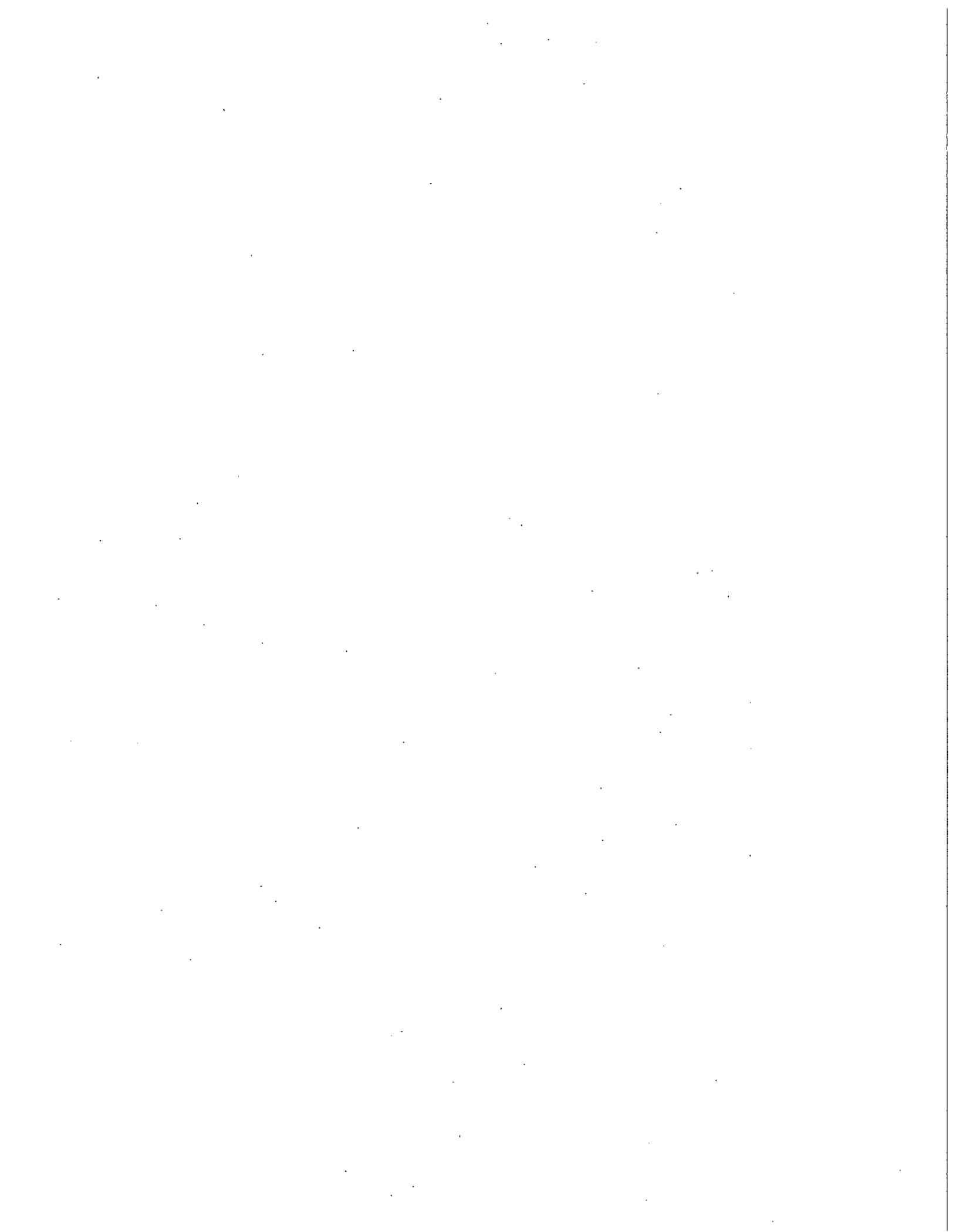
The proposed maintenance dredging project will comply with all recommended timing restrictions to minimize potential impacts to anadromous fish runs.

The proposed maintenance dredging project is in compliance with this rule.

**7:7E-3.6 Submerged vegetation habitat**

There is no known submerged aquatic vegetation habitat within the limits of the channel design or pipeline route. Therefore, no impact to submerged aquatic vegetation is anticipated.

The proposed maintenance dredging project is in compliance with this rule.



### **7:7E-3.7 Navigation channels**

The Shark River Channel and Shark River Spur are an existing navigation channels serving several marinas and recreational and commercial marine traffic. The maintenance dredging project proposes to restore the existing channel to the required project depth for vessels currently using the channel. The project is intended to restore adequate depth for safe navigation.

The dredging equipment may cause a temporary impediment to navigation. However, all vessels and pipelines shall be marked and/or lighted as required by U. S. Coast Guard requirements.

The project does not propose construction of any structures.

The proposed maintenance dredging project is in compliance with this rule.

### **7:7E-3.15 Intertidal and subtidal shallows**

Maintenance dredging of intertidal and subtidal shallows within the channel footprint is acceptable to maintain adequate water depths in accordance with N.J.A.C. 7:7E-4.6. The proposed maintenance dredging project is in compliance with the Maintenance Dredging Rule (N.J.A.C. 7:7E-4.6) (see below).

Maintenance dredging shall be limited to the authorized project depth and channel dimensions only. Therefore impacts to intertidal and subtidal shallows have been minimized to the maximum extent practicable.

The proposed maintenance dredging project is in compliance with this rule.

### **7:7E-3.36 Historic and archaeological resources**

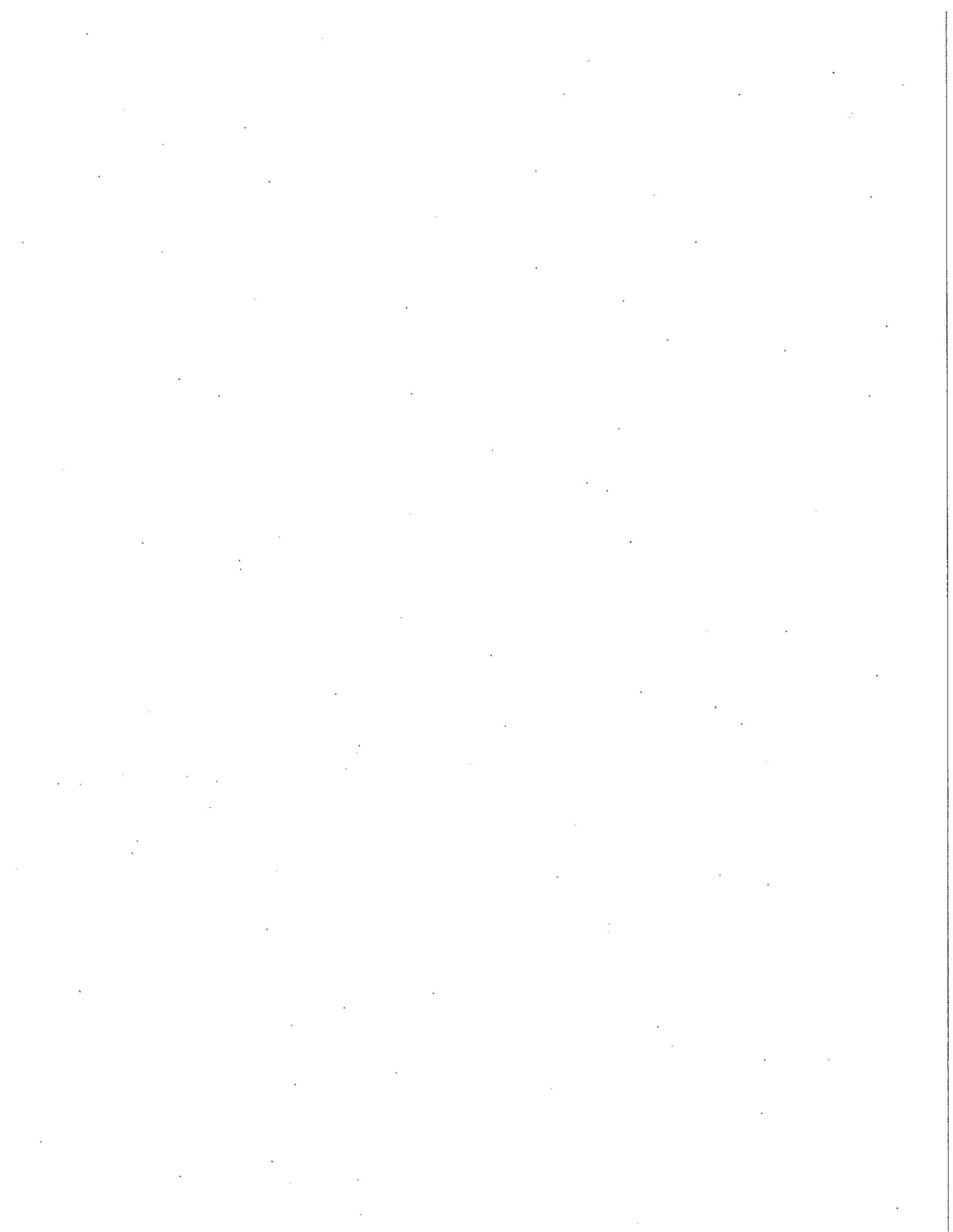
The project is maintenance dredging of an existing previously dredged navigation channel. The project is limited to the previously dredged channel dimensions. During the post-Superstorm Sandy debris scanning, a potential shipwreck was observed outside of the channel limits in the area shown in the plans on sheet 4 of 7. The 50-foot buffer extends into the channel area. This debris was not removed during the debris removal program and is likely still in place. However, due to the precision of hydraulic dredging, the proposed work is not anticipated to impact the potential resource. The contractor will be informed of the presence of the debris field and inspectors will be carefully monitoring the work activity. Should historic material be observed during dredging, SHPO will be contacted for direction. Additional information, in the form of side scan sonar of the debris field, has been previously provided to the Department, but can also be provided on request.

The proposed maintenance dredging project is in compliance with this rule.

### **7:7E-3.50 Lands and waters subject to public trust rights**

All lands and waters associated with this maintenance dredging project are subject to public trust rights. Public access is currently available and will continue to be provided in accordance with the public access rule (see discussion of public access rule below (N.J.A.C. 7:7E-8.11)).

The proposed maintenance dredging project is in compliance with this rule.



**SUBCHAPTER 4. GENERAL WATER AREAS**

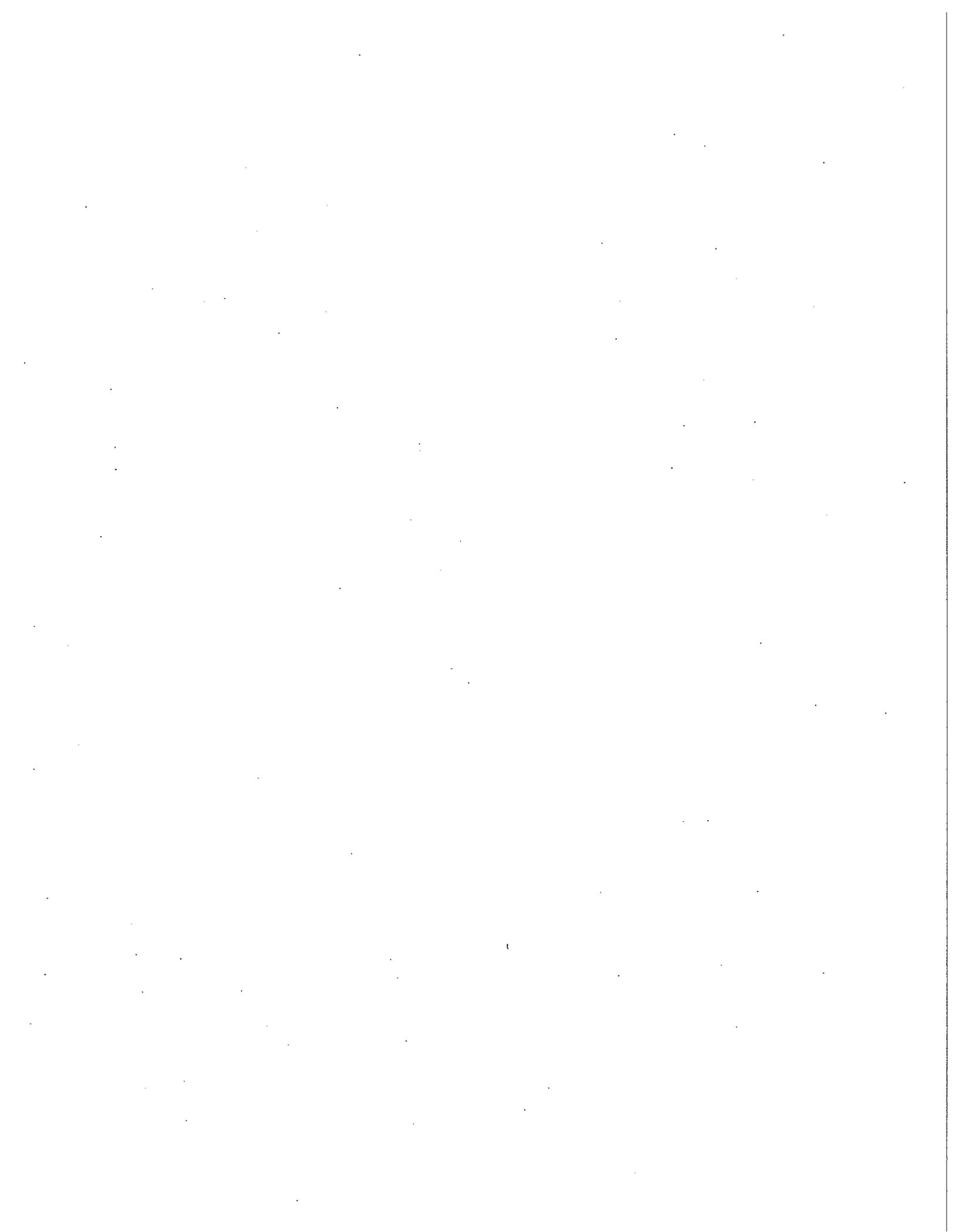
**7:7E-4.6 Maintenance dredging**

The proposed project is maintenance dredging of an existing, previously dredged State Channel. The project is limited to maintenance dredging to the authorized project depth and channel dimensions. The channel is currently used by several marinas and recreational and commercial marine vessels requiring the project depth. Dredged material comprised of sand and silt is proposed to be pumped to a site to be mechanically dewatered at the Belmar Marina between 1024-1044 River Road Belmar, NJ 07719 or 1701 New Jersey 35 Neptune City, NJ 07753 in Monmouth County. Maintenance dredging was last authorized by the State of New Jersey Department of Environmental Protection (NJDEP) in 1983, (Permit #83-0043-1).

The NJDEP Bureau of Coastal Engineering conducted sediment sampling in March 2015 in preparation of maintenance dredging the Shark River Channel and Shark River Spur. The sediment sampling results from this event met the Residential Direct Contact Soil Remediation Standards, with minor exceptions as noted. Sediment results indicate that the material is suitable for placement at a licensed Solid Waste landfill.

Post-storm sediment sampling was conducted in March 2015 to support this permit application for the proposed maintenance dredging event. The bulk sediment chemistry results from this event met the Residential Direct Contact Soil Remediation Standards with the exception of benzo(a)pyrene in one composite at 370 ppb.

ASI Job # 35-025		NJDEP Residential Direct Contact Soil Remediation Standards	PQL*	Unamended Sediment (Units:ug/kg)			Unamed Sedim (Units:u
				Comp A		Core 0:	
				20150288		20150:	
				7825460		78254	
Analyte Name	CAS No.	ug/kg (ppb)	ug/kg	Result	RL	Q	Result
Benidine	92-87-5	700	700	ND	5300	ND	ND
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	600	200	340	27		170
Benzo(a)pyrene	50-32-8	200	200	370	27		180
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	600	200	450	27		230
Benzo(g,h,i)perylene	191-24-2	380000000	200	220	27		120
Benzo(k)fluoranthene	207-08-9	6000	200	140	27		100
bis(2-Chloroethyl)ether	111-44-4	400	200	ND	53	ND	ND
Bis(2-chloroisopropyl) ether	39638-32-9	23000	200	ND	53	ND	ND
bis(2-Ethylhexyl)phthalate	117-81-7	35000	200	ND	270	ND	ND
Butyl benzyl phthalate	85-68-7	1200000	200	ND	270	ND	ND
Caprolactam	105-60-2	31000000	200	ND	270	ND	ND
Carbazole	86-74-8	24000	200	33	53	J	ND
Chrysene	218-01-9	62000	200	330	27		170

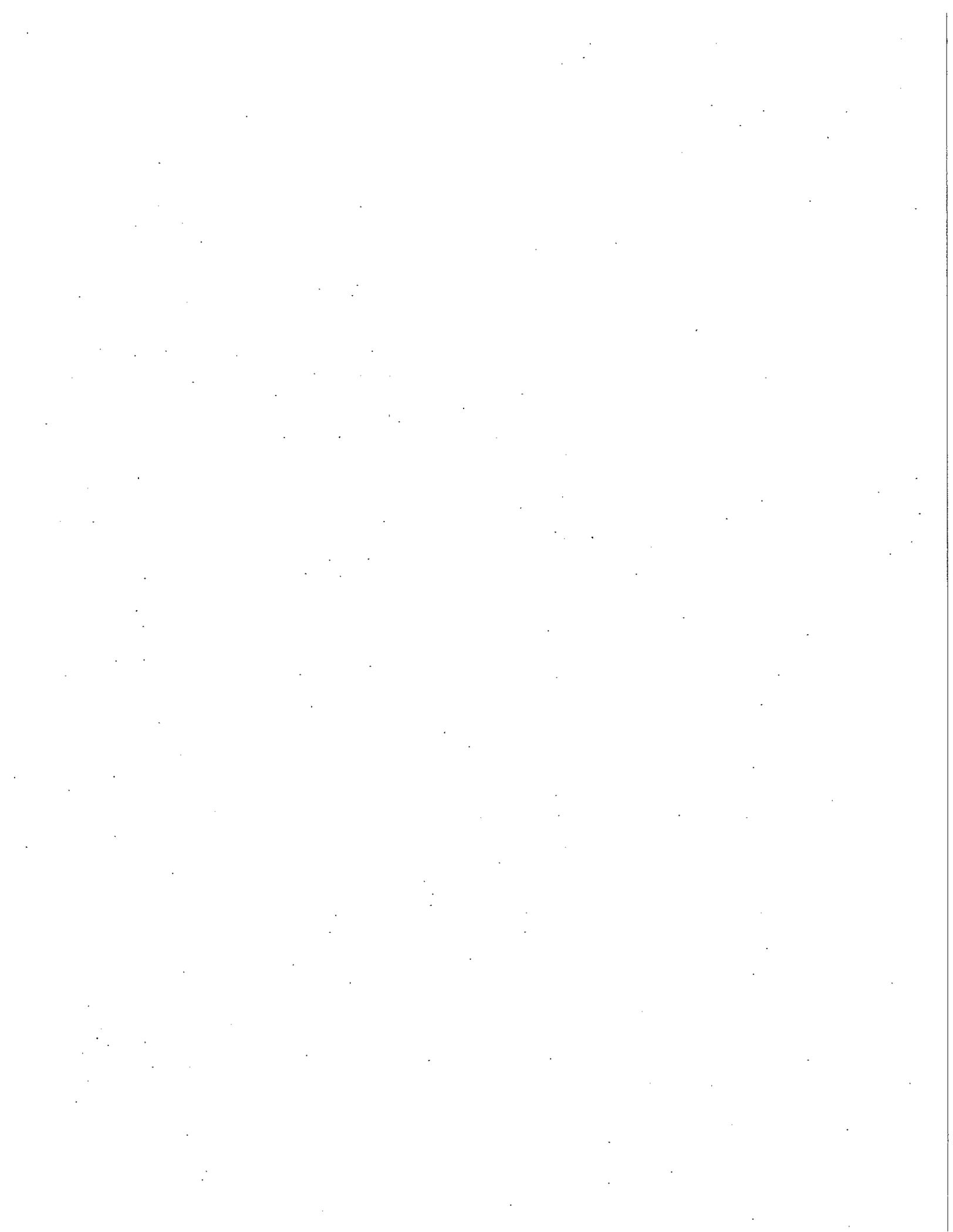


Dibenz(a,h)anthracene	53-70-3	200	200	63	27		20
	#N/A			#N/A	#N/A	#N/A	#N/A
Diethylphthalate	84-66-2	49000000	200	ND	270	ND	ND
Di-n-butylphthalate	84-74-2	6100000	200	ND	270	ND	ND
Di-n-octylphthalate	117-84-0	2400000	200	ND	270	ND	ND
Fluoranthene	206-44-0	2300000	200	500	27		290
Fluorene	86-73-7	2300000	200	43	27		27
Hexachloro-1,3-butadiene	87-68-3	6000	200	ND	53	ND	ND
Hexachlorobenzene	118-74-1	300	200	ND	27	ND	ND
Hexachlorocyclopentadiene	77-47-4	45000	200	ND	800	ND	ND
Hexachloroethane	67-72-1	35000	200	ND	270	ND	ND
Indeno(1,2,3-cd)pyrene	193-39-5	600	200	190	27		96
Isophorone	78-59-1	510000	200	ND	53	ND	ND
Naphthalene	91-20-3	6000	200	53	27		35
Nitrobenzene	98-95-3	31000	200	ND	53	ND	ND
N-Nitrosodimethylamine	62-75-9	700	700	ND	270	ND	ND
N-Nitroso-di-n-propylamine	621-64-7	200	200	ND	53	ND	ND
N-Nitrosodiphenylamine	86-30-6	99000	200	ND	53	ND	ND
Pentachlorophenol	87-86-5	3000	300	ND	270	ND	ND
Phenanthrene	85-01-8	N/A	200	270	27		150
Phenol	108-95-2	18000000	200	ND	53	ND	ND
Pyrene	129-00-0	1700000	200	540	27		290

Table 4a continued

Pesticide/Arochlor Analysis of Bulk Sedime

ASI Job # 35-025	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards	PQL*	Unamended Sediment (Units:ug/kg)			Unamer Sedim (Units:u
				Comp A			Core 0:
				20150288			20150:
				7825460			78254
Analyte Name	CAS No.	ug/kg (ppb)	ug/kg	Result <sup>1</sup>	RL	Q	Result
4,4'-DDD	72-54-8	3000	3	3.7	14	JP	32
4,4'-DDE	72-55-9	2000	3	ND	14	ND	ND
4,4'-DDT	50-29-3	2000	3	ND	14	ND	ND
Aldrin	309-00-2	40	2	7.4	6.6		ND
alpha-HCH (alpha-BHC)	319-84-6	100	2	ND	6.6	ND	ND
beta-HCH (beta-BHC)	319-85-7	400	2	ND	8	ND	39
Lindane (gamma-HCH) (gamma-BHC)	58-89-9	400	2	ND	6.6	V	ND
alpha-Chlordane	5103-71-9	200	2	ND	6.6	ND	ND
gamma-Chlordane	5103-74-2	200	2	ND	6.6	ND	ND
Chlordane	57-74-9	200	2	0.0		ND	0.0
Dieldrin	60-57-1	40	3	ND	14	ND	ND



Endosulfan I	959-98-8	470000	3	3.3	6.6	J	ND
Endosulfan II	33213-65-9	470000	3	ND	14	ND	ND
Endosulfan I and II (alpha and beta)	115-29-7	470000	3	3.3		J	0.0
Endosulfan sulfate	1031-07-8	470000	3	ND	14	ND	21
Endrin	72-20-8	23000	3	ND	14	ND	ND
Heptachlor	76-44-8	100	2	ND	6.6	V	ND
Heptachlor epoxide	1024-57-3	70	2	ND	6.6	V	26
Methoxychlor	72-43-5	390000	20	ND	53	ND	ND
Toxaphene	8001-35-2	600	200	ND	260	ND	ND
Arochlor-1016	12674-11-2	200	30	ND	27	ND	ND
Arochlor-1221	11104-28-2	200	30	ND	27	ND	ND
Arochlor-1232	11141-16-5	200	30	ND	27	ND	ND
Arochlor-1242	53469-21-9	200	30	ND	27	ND	ND
Arochlor-1248	12672-29-6	200	30	ND	27	ND	ND
Arochlor-1254	11097-69-1	200	30	15	27	J	ND
Arochlor-1260	11096-82-5	200	30	ND	27	ND	ND
<b>Total Arochlor(SUM)</b>	1336-36-3	200	30	15		J	0.0

A complete electronic copy of the sediment sampling results are provided within the permit application.

The project will comply with all recommended seasonal timing restrictions to minimize potential impact to aquatic resources.

The project is in compliance with this Rule.

## **SUBCHAPTER 6. GENERAL LOCATION RULES**

### **7:7E-6.2 Basic location rule**

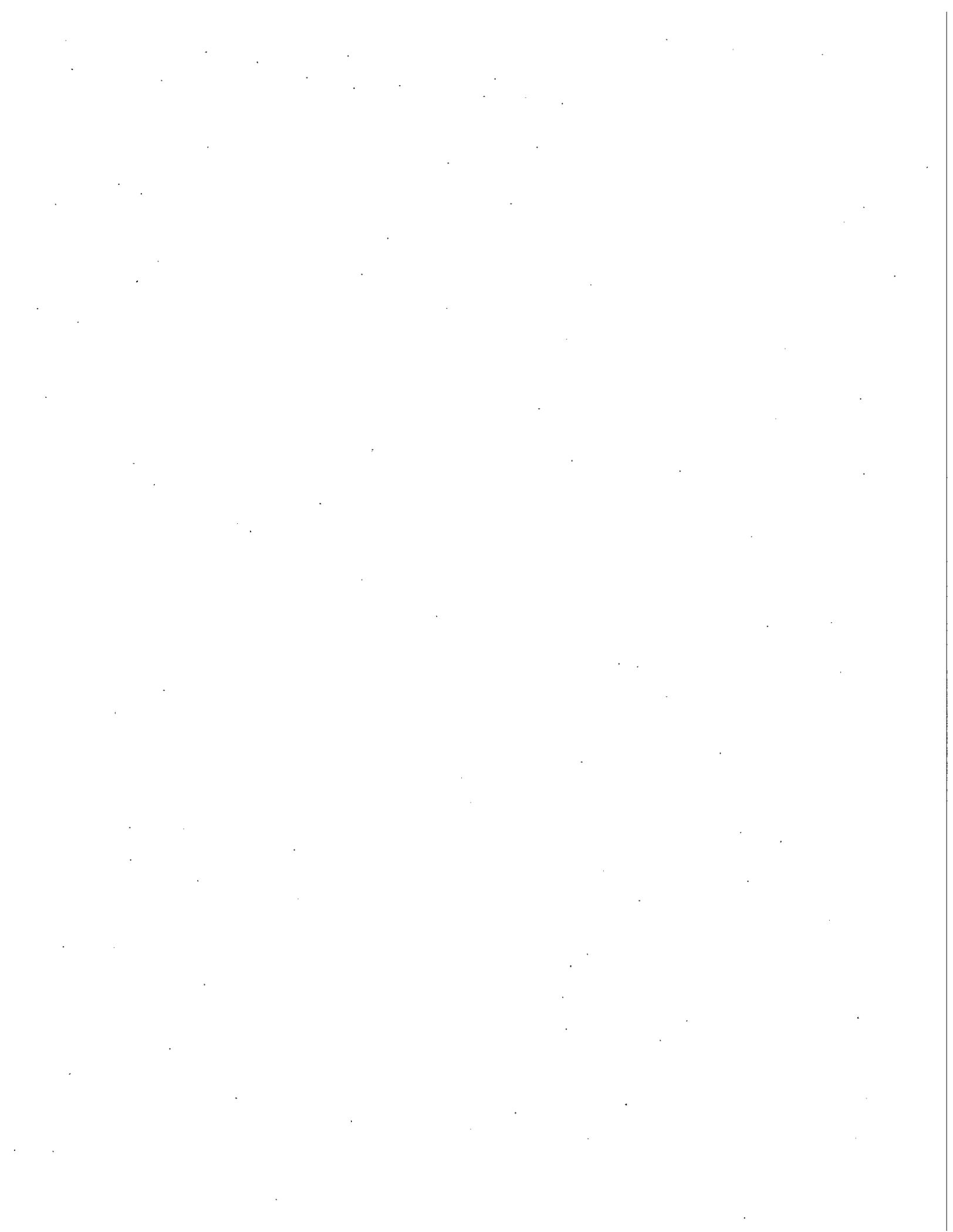
The project is a maintenance dredging project of an existing channel. No expansion or changes to the channel dimensions are proposed. Dredged material is proposed to be mechanically dewatered and sent to the Monmouth Country land fill as fill.

The project is in compliance with this Rule.

### **7:7E-6.3 Secondary impacts**

The project proposes maintenance dredging of an existing State Channel to authorized project depth. The channel serves several marinas and recreational marine traffic. No expansions of the channel design or service area are proposed. The project is not anticipated to have secondary impacts.

The project is in compliance with this Rule.



## **SUBCHAPTER 7. USE RULES**

### **7:7E-7.12 Dredged material placement on land**

The beneficial use of dredged material of appropriate quality and particle size for landfill cover is encouraged provided that the use is protective of human health, groundwater quality, and surface water quality, and manages ecological risks.

The material quality has been reviewed by the LSRP and determined to be compatible for the use as land fill at the Monmouth County Landfill.

The project is in compliance with this Rule.

## **SUBCHAPTER 8. RESOURCE RULES**

### **7:7E-8.2 Marine fish and fisheries**

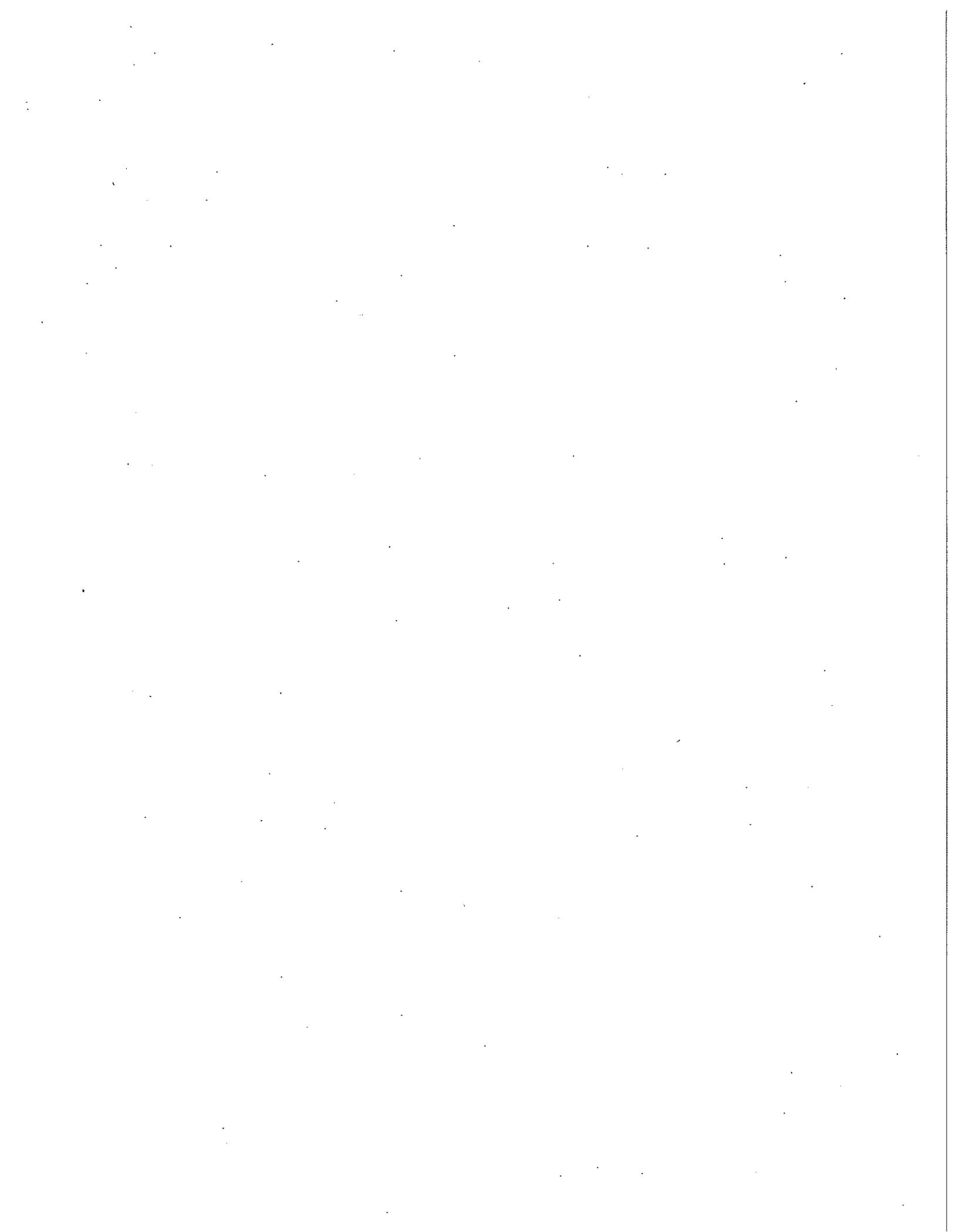
The project is limited to maintenance dredging of an existing channel. The proposed maintenance dredging project will comply with all recommended timing restrictions to minimize potential impacts to anadromous fish runs. No significant adverse impacts to marine fish or fisheries are anticipated.

The project is in compliance with this Rule.

### **7:7E-8.4 Water Quality**

A temporary increase in turbidity in the water column is expected at the dredging site during active hydraulic dredging, but generally hydraulic dredging reduces the generation of suspended sediment as compared to other dredging methods. The discharge from the mechanical dewatering process shall meet the Surface Water Quality Standards before it is returned to the receiving water body.

The project is in compliance with this Rule.



### **7:7E-8.8 Vegetation**

The project is in compliance with the submerged vegetation habitat rule (7:7E-3.6) above. There is no anticipated impact to terrestrial vegetation.

The project is in compliance with this Rule.

### **7:7E-8.11 Public access**

The project consists of improving an existing State channel for public navigation. Public access to the immediate work area may be temporarily restricted during construction. However, all existing public access shall be maintained for the project area.

The project is in compliance with this Rule.

### **7:7E-8.13 Buffers and compatibility of uses**

The project proposes maintenance dredging of an existing navigation channel. There are no proposed changes in use for the channel or surrounding area.

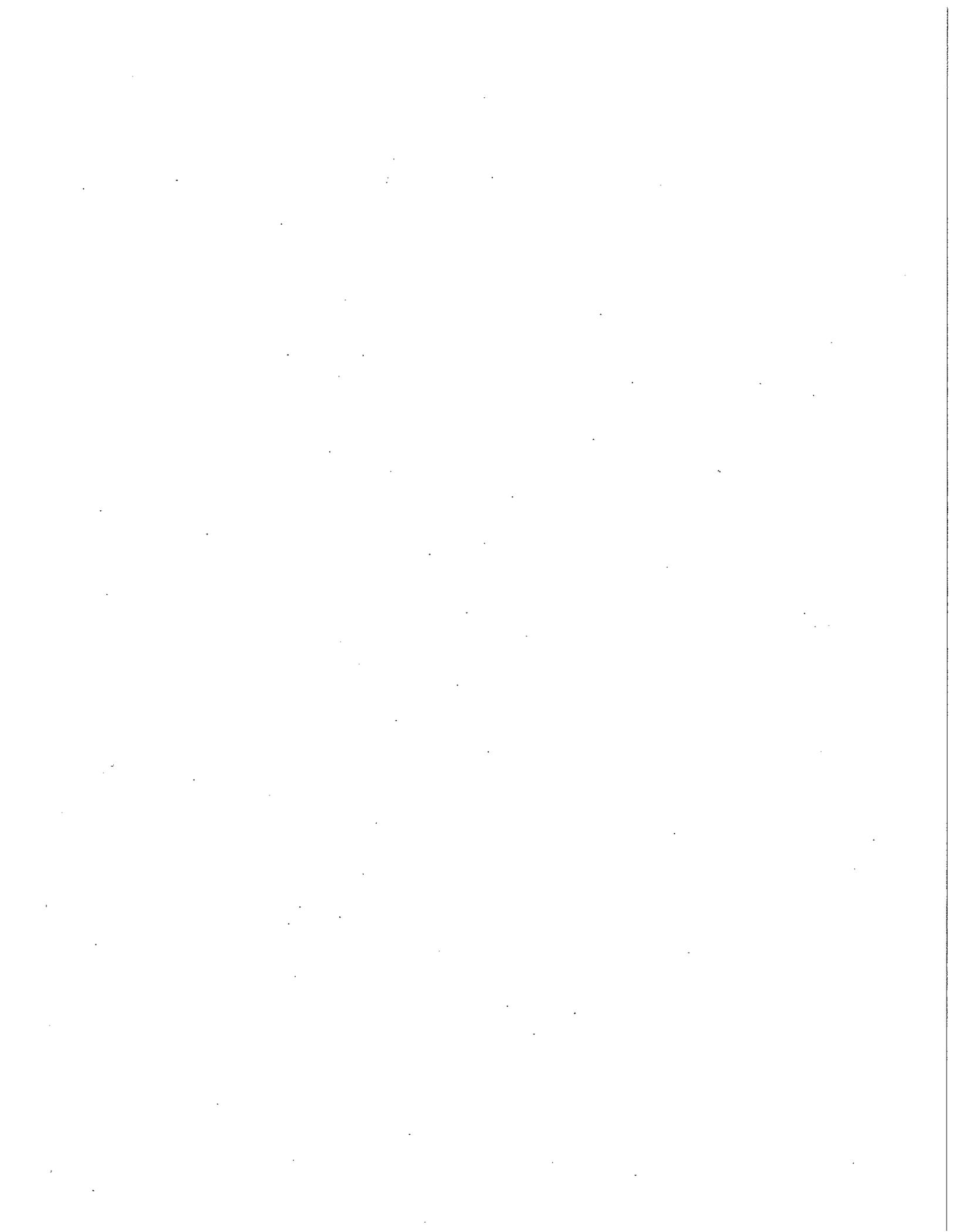
The proposed project is in compliance with this Rule.

### **Compliance Statement**

The proposed maintenance dredging project is in compliance with the applicable Rules on Coastal Zone Management (N.J.A.C. 7:7E) and is consistent with the eight basic coastal policies specified at N.J.A.C. 7:7E-1.1(c).

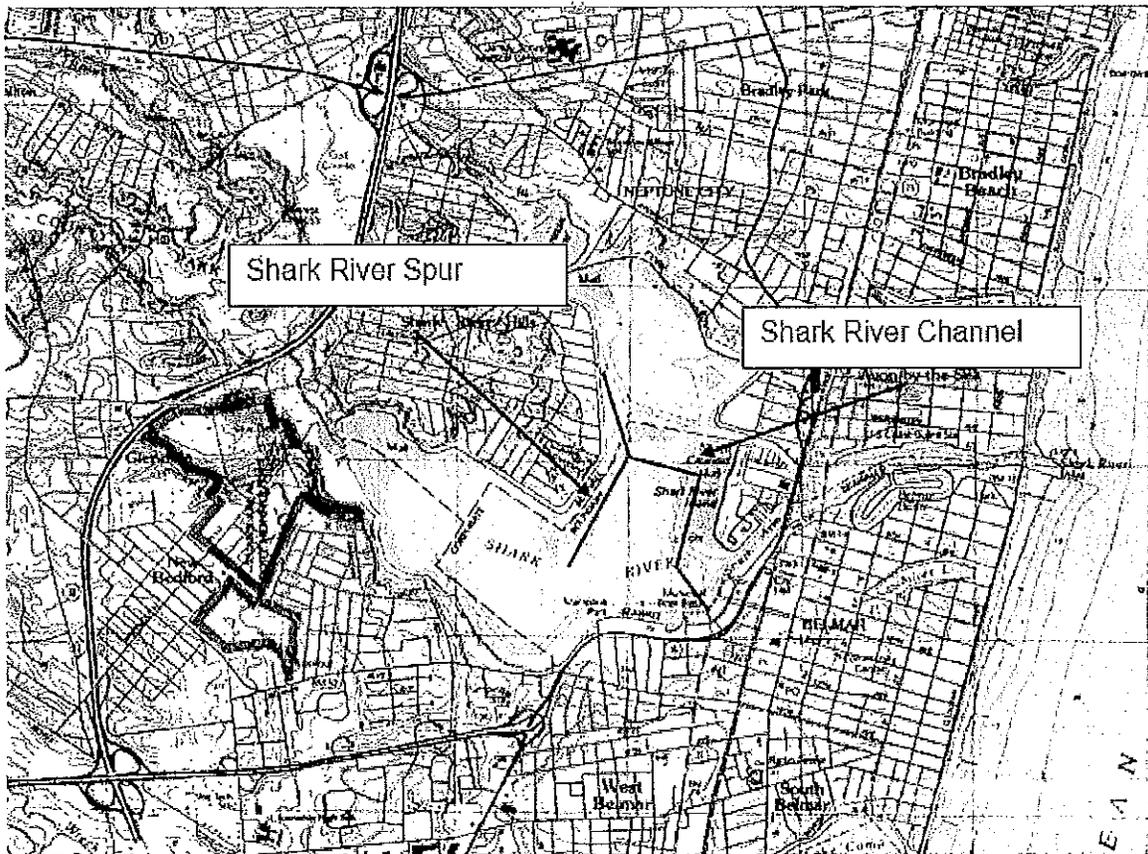
Based on the determination of compliance with the Coastal Zone Management Rules above, no significant environmental impacts are anticipated. All potential impacts have been minimized to the maximum extent practicable.

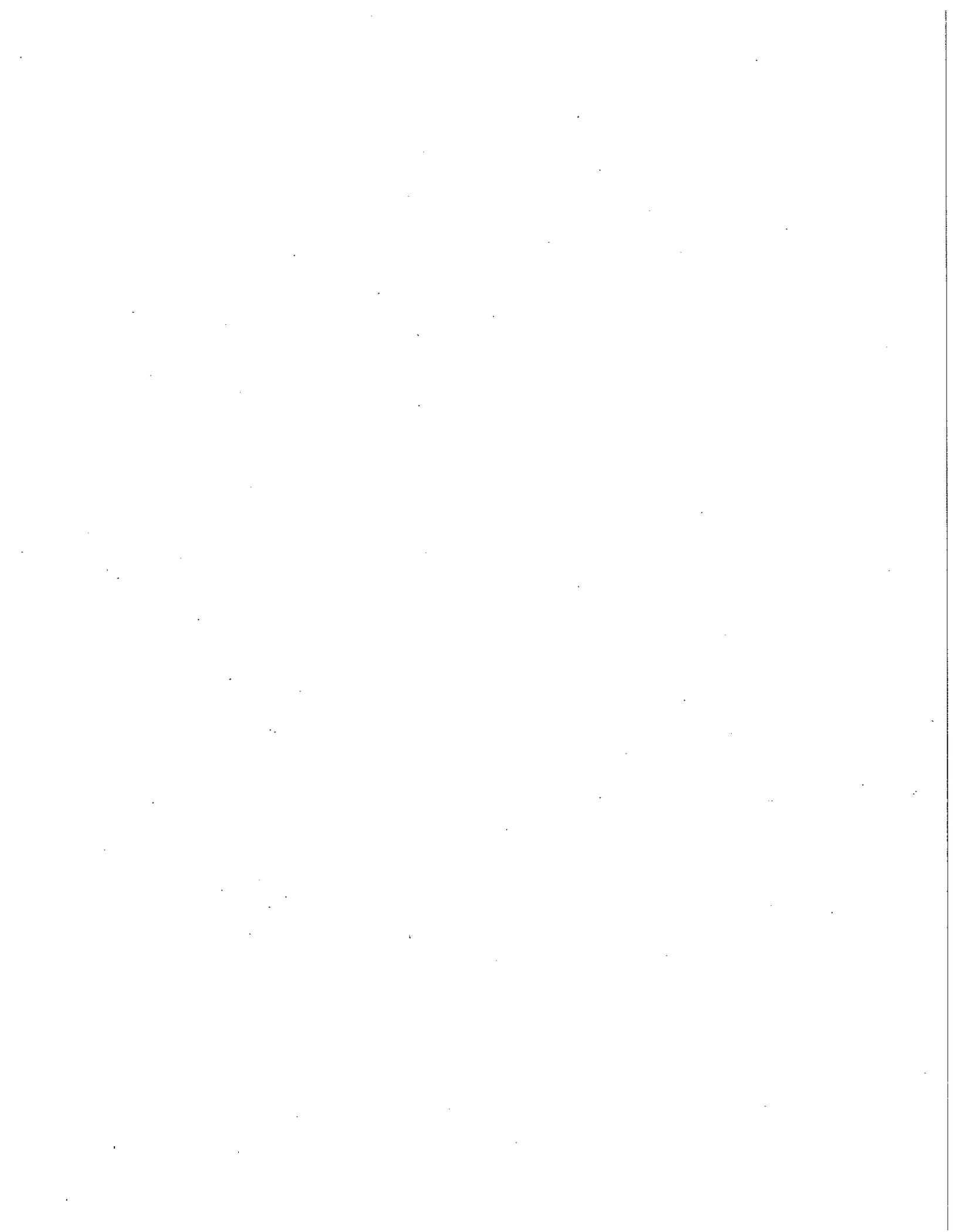
ATTACHMENTS



Appendix A

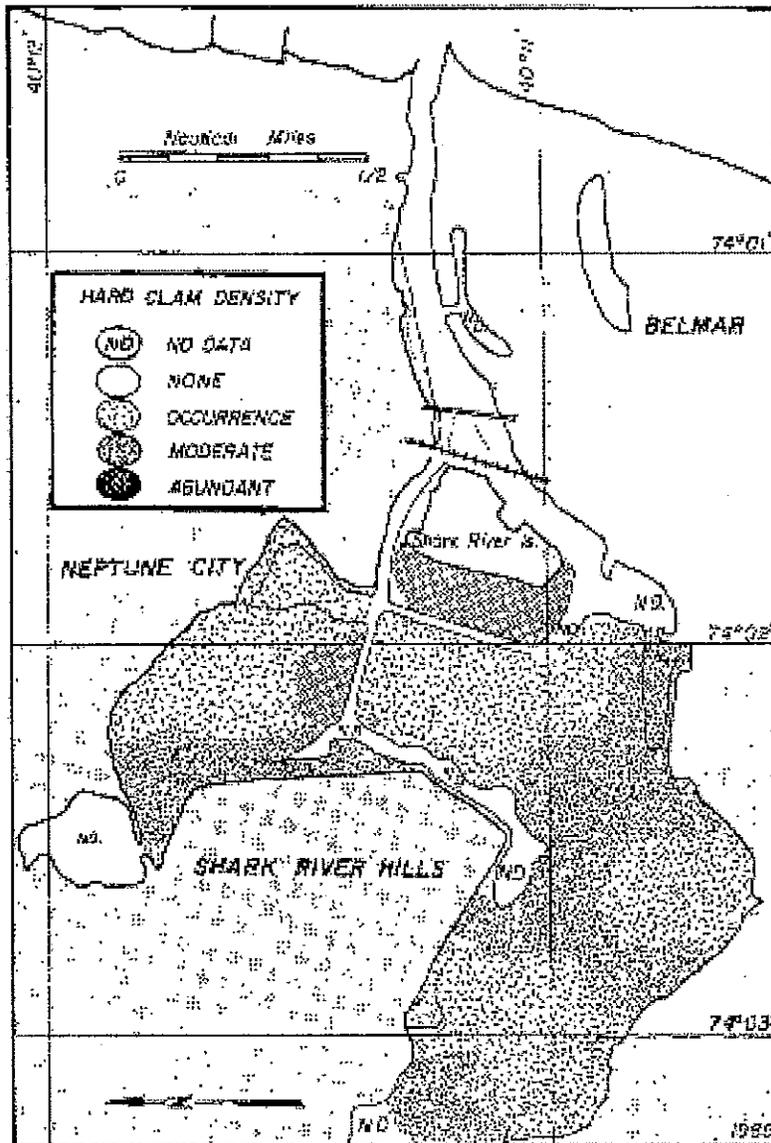
Shark River Channel and Shark River Spur(#38 and #039)  
Township of Neptune, Borough of Neptune City, and the Borough of Belmar  
Monmouth County  
Project Location Map

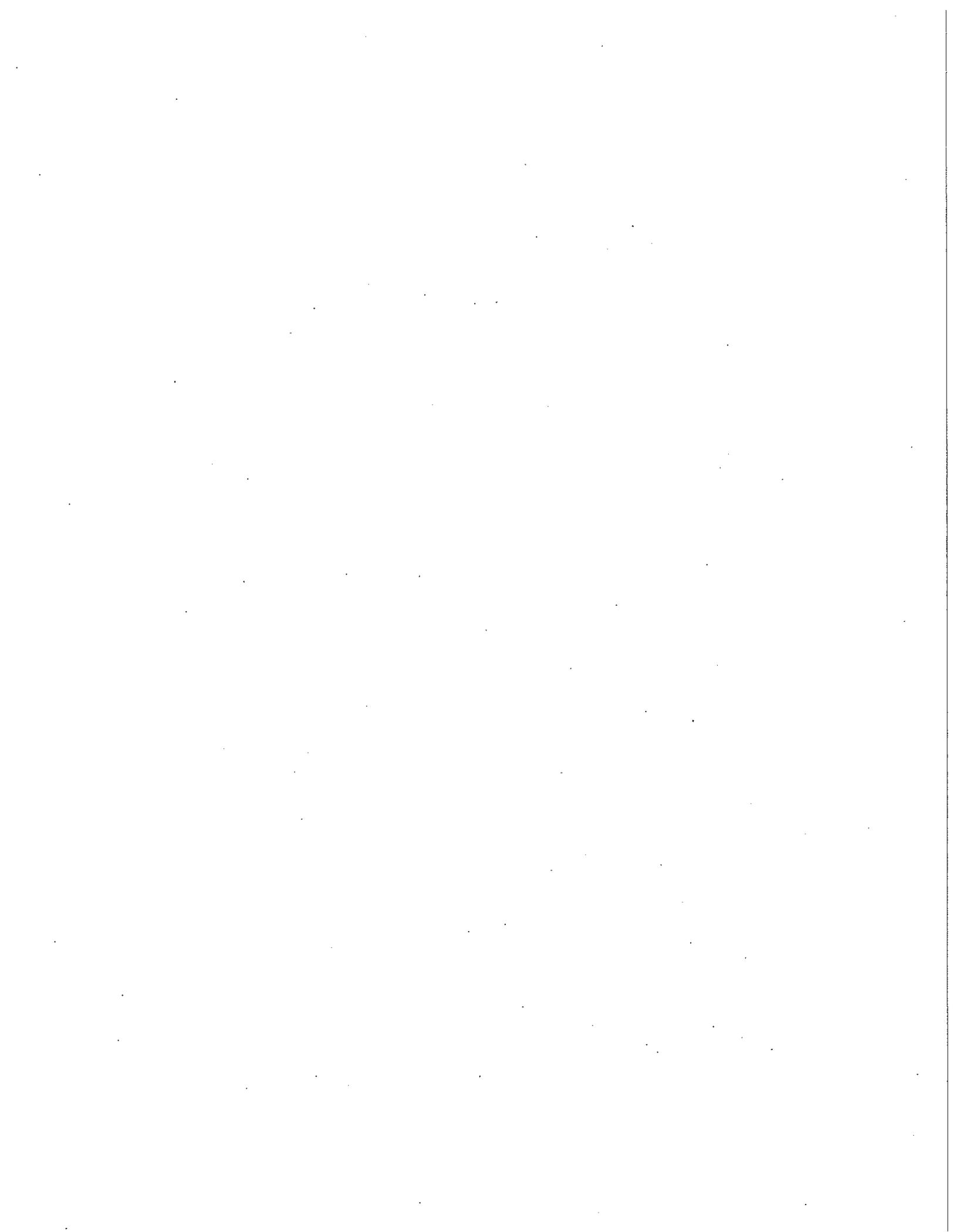




Appendix B

Shark River Channel (#038)  
Shark River Spur (#039)  
Hard Clam Classification Map



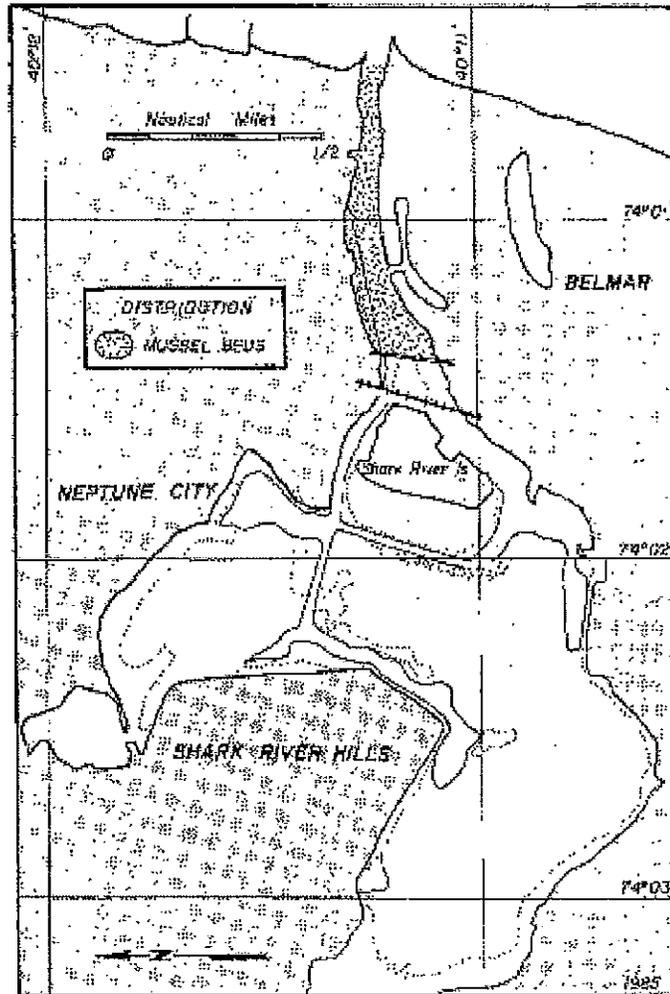


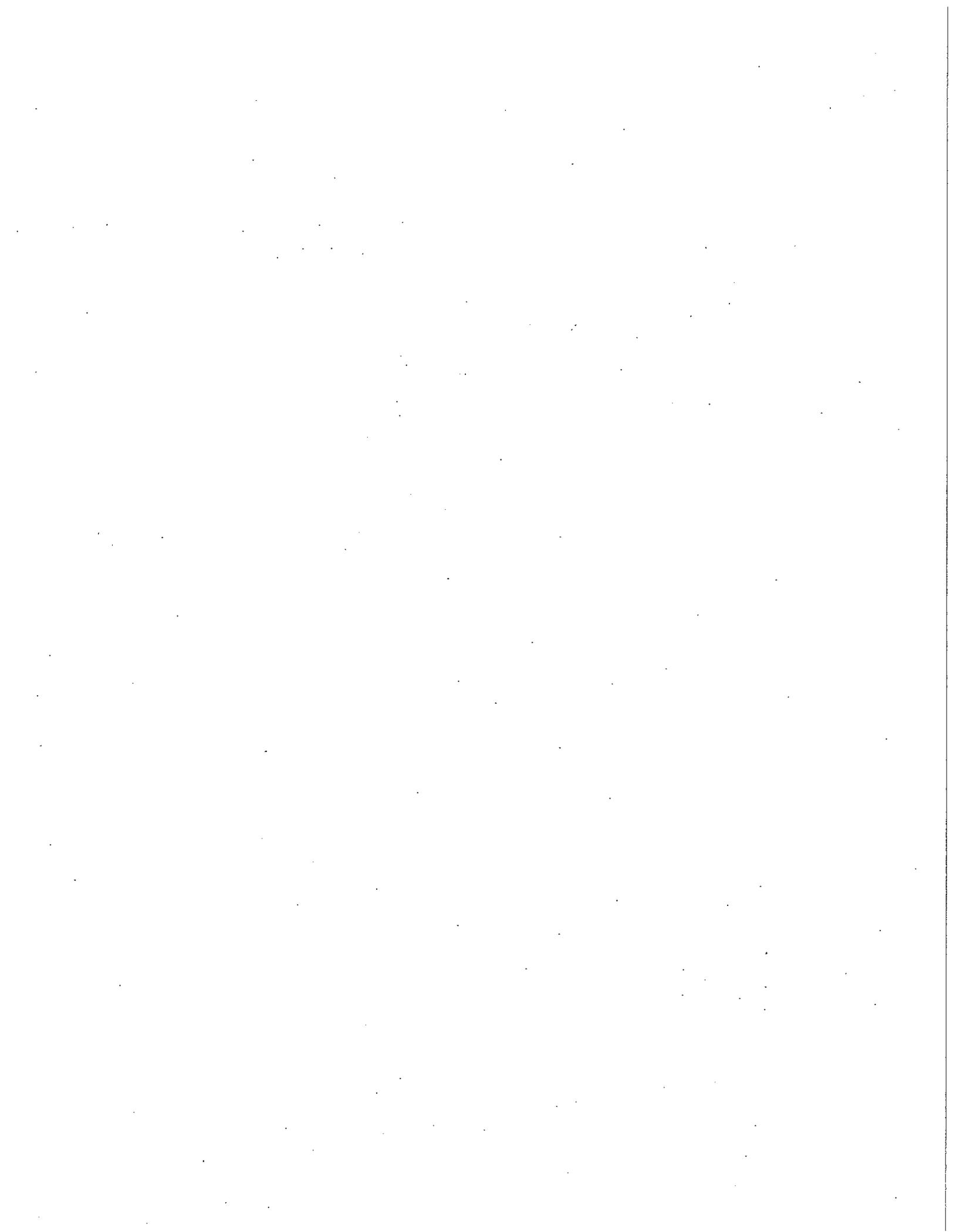
Appendix C

Shark River Channel (#038)

Shark River Spur (#039)

Mussel Bed Map (1963)



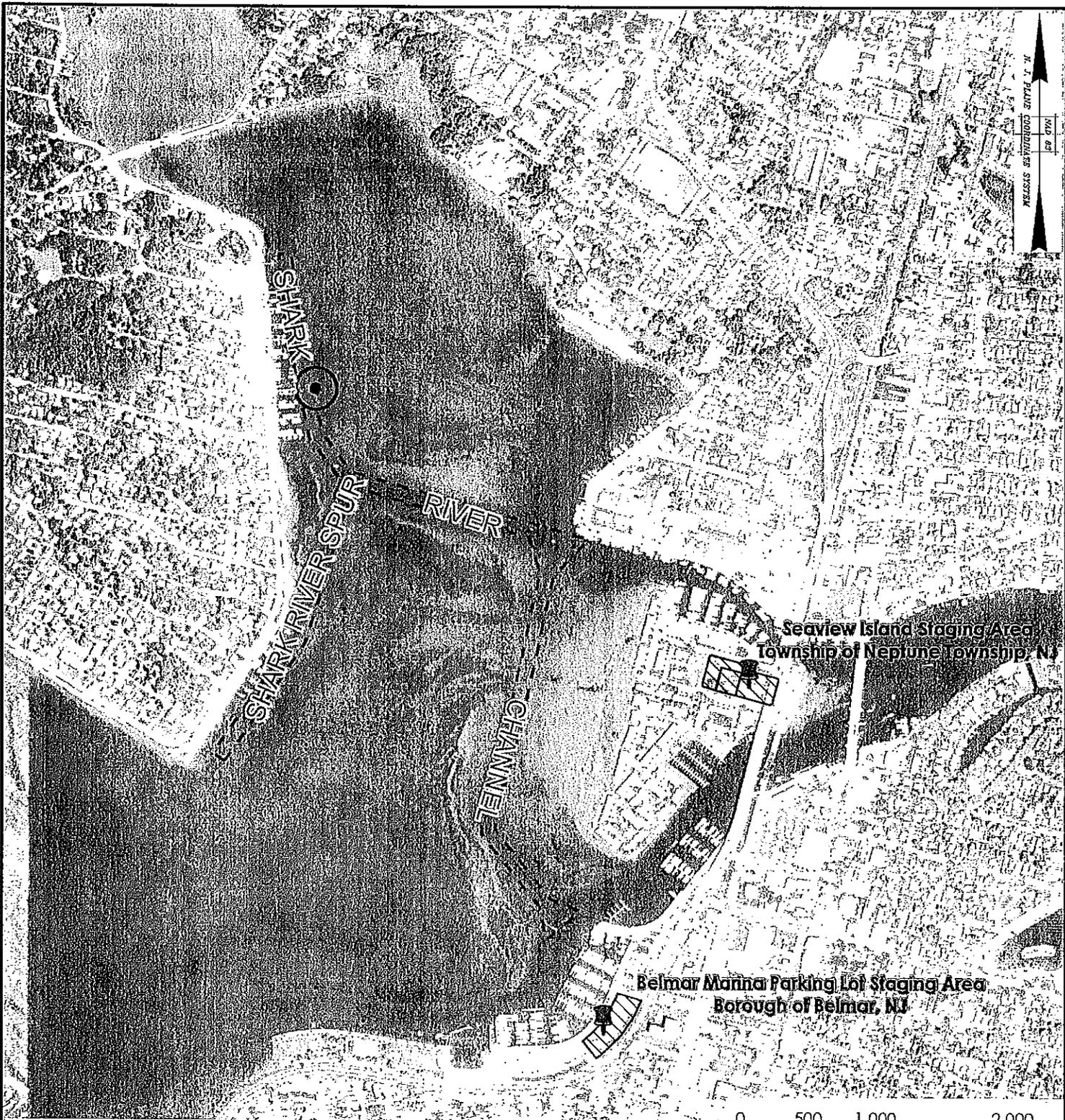
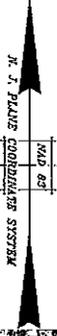


### Appendix D

## Shark River Channel (#038) Shark River Spur (#039) Shellfish Growing Water Classification







**LEGEND:**

-  Dredge Staging Site
-  Staging Site Parcel Boundary
-  Channel and Spur Limits
-  Historic Resources
-  Historic Resources Buffer

**NEW JERSEY DEPARTMENT OF TRANSPORTATION**

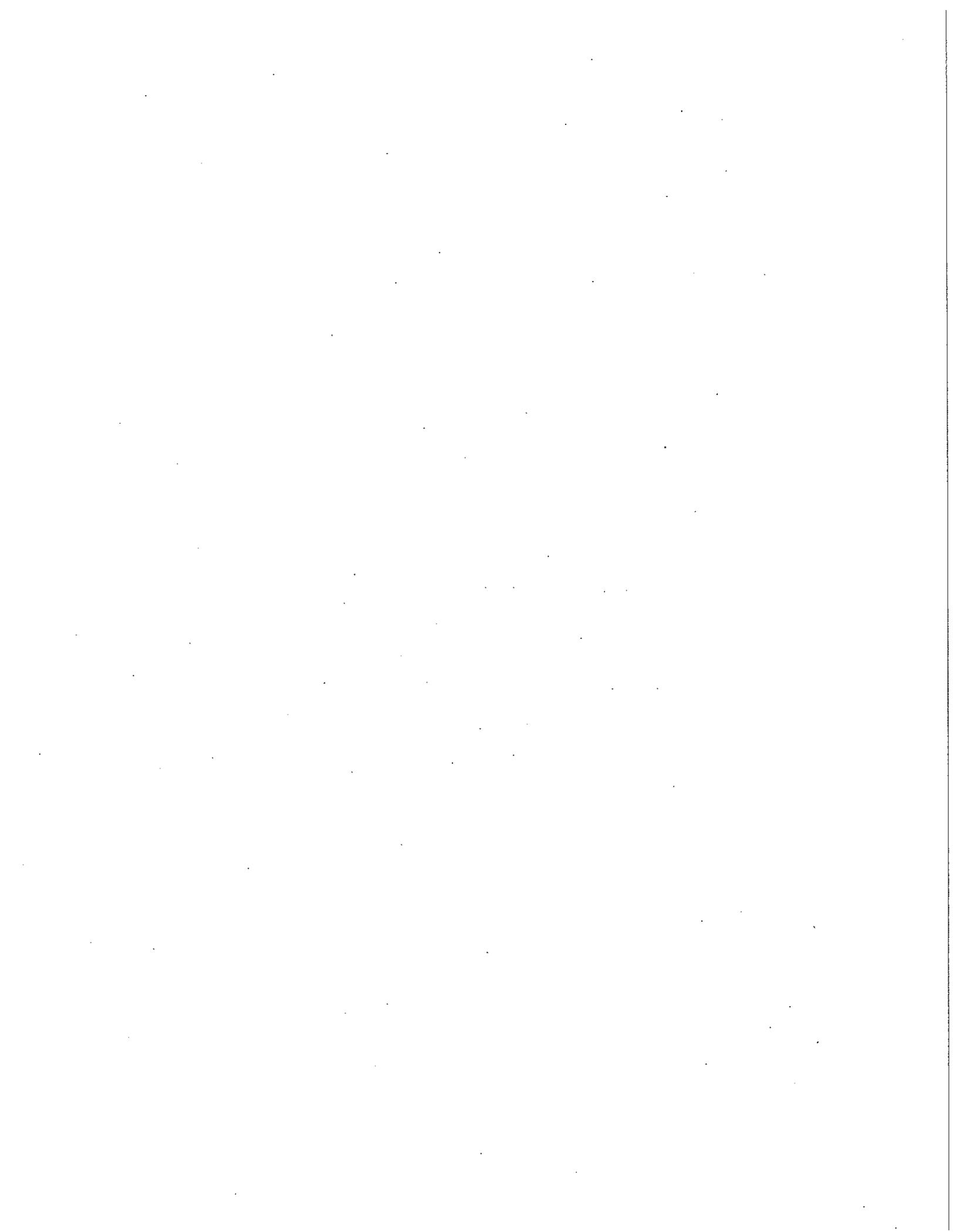
**SHARK RIVER CHANNEL AND SHARK RIVER SPUR HISTORIC RESOURCES MAP**

Township of Neptune Township, Borough of Neptune City, and Borough of Belmar  
Monmouth County, New Jersey

SCALE: 1" = 1000'

DATE: May 2015





# **Aqua Survey, Inc.**

Volume I

**Technical Report on the Sampling and Testing of Sediment  
From Shark River Channel and Shark River Spur**

**Prepared for:**

**Parsons Brinckerhoff  
2000 Lenox Drive, Third Floor  
Lawrenceville, NJ 08648**

**Issued:**

**May 6, 2015**

**ASI Job No. 35-025 ←**

*469 Point Breeze Road  
Flemington, NJ 08822*

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## Volume II

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## **Information Page**

### **Technical Report on the Sampling and Testing of Sediment From Shark River Channel and Shark River Spur**

#### **STUDY INITIATION DATE**

**March 23, 2015**

#### **STUDY COMPLETION DATE**

**May 6, 2015**

#### **PERFORMING LABORATORY**

**Aqua Survey, Inc.  
469 Point Breeze Road  
Flemington, New Jersey 08822**

#### **SPONSOR**

**Parsons Brinckerhoff  
2000 Lenox Drive, Third Floor  
Lawrenceville, NJ 08648**

#### **LABORATORY PROJECT ID**

**ASI Study No. 35-025**

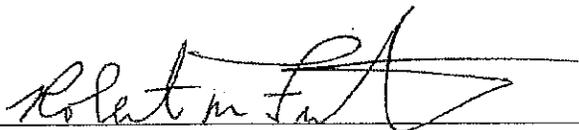
## Signature Page

### Technical Report on the Sampling and Testing of Sediment From Shark River Channel and Shark River Spur

Prepared for:

**Parsons Brinckerhoff**  
**2000 Lenox Drive, Third Floor**  
**Lawrenceville, NJ 08648**

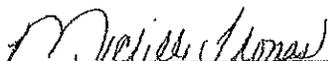
This report, as well as all records and raw data were audited and found to be an accurate reflection of the study. Copies of raw data will be maintained by Aqua Survey, Inc, 469 Point Breeze Road, Flemington, New Jersey, 08822.



Robert M. Fristrom  
Quality Assurance Officer

5/6/15

Date



Michelle Thomas  
Laboratory Manager

5/6/15

Date



Jon Doi, Ph.D.  
Executive Vice President

5-6-15

Date

## **I. INTRODUCTION**

The objective of this project was to collect and analyze sediment from Shark River and Shark River Spur (Channels 038 and 039), Monmouth County, New Jersey. This work was conducted in accordance with Appendix B, Attachment 1, of the technical manual entitled "The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters" (Dredging Manual), October 1997 and the SAP from NJOT dated February 27, 2015.

ASI performed all sampling and physical analyses of the sediments. Eurofins Lancaster Laboratories (ELL) of Lancaster, PA performed the chemical analyses of the sediment composites and the field blank.

## **II. CORRESPONDENCE**

The following pages provide relevant correspondence for this project.



# State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMIE FOX  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

February 27, 2015

Mr. Mark Davis  
Office of Dredging and Sediment Technology  
NJ Department of Environmental Protection  
401 East State Street  
Trenton, NJ 08625

Dear Mark:

The following sampling plan is based on the notes and diagram that was provided by Joel Pecchioli of the Office of Dredging and Sediment Technology via email on February 24 and 26, 2015. Please review the following for compliance with the current regulations and provide us with your response as to the adequacy of the testing approach for eventual inclusion in a dredging permit application.

The Shark River and Shark River Spur channels will be sampled to a project depth of 6 feet plus one foot below mean low water. Each core will be taken with a Vibracore device, following USACE sampling protocol for dredging projects. While the attached bathymetric plan shows approximate core locations, actual core locations will be recorded with GPS at the time of sampling. In general, cores should always be taken in the shallowest portion of the shoal; for this project, cores 1-5 should be 25 ft in from the south/east boundary of the channel, cores 6-8 should be 25 ft in from the north/west boundary, cores 9-10 should be taken mid-channel and 11-14 should be 25 feet from the south/west boundary.

Field observations of the type of sediment, stratification and depth of penetration will be performed and recorded at the time of sampling. If stratification layers greater than two feet are observed, strata will be stored separately and NJDEP will be contacted for further instruction.

Channel Number	Channel Name	Volume Range	Targeted Sample Depth	Composite Scheme
038	Shark River Channel	48,894 - 73,674 cyd	-7 MLW	Comp A: cores 1,2,3 Comp B: cores 4, 5 Comp C: cores 6,7,8 Comp D: cores 9,10
039	Shark River Spur	17,952 - 28,346 cyd	-7 MLW	Comp E; cores 11,12 13,14

Mark Davis  
Page Two  
February 27, 2015

In the Table is a summary of the channel samples, estimated volume range based on the 2013 surveys, targeted depth (max dredge depth), and compositing scheme that was previously provided by Mr. Pecchioli. Only cores of similar grain size should be composited. If grain size between cores targeted for composition varies by more than 20% upon visual inspection, please contact NJDEP for guidance.

The analytical approach for the sediment will be to analyze each core for grain size, percent moisture, and total organic carbon (TOC). Cores and strata (if present) should be homogenized prior to subsampling. An overnight grain size analysis will determine if a given core is at least 90% sand. If each core is less than 90% sand, then the compositing scheme listed will be followed. If each core is greater than 90% sand, no further analysis will be performed, other than the TOC and percent moisture. If a group of cores contains samples that are both over and under the 90% sand mark, then NJDEP will be consulted for guidance. Each composite prepared will be subjected to grain size by hydrometer method, TOC, and bulk sediment chemistry. No elutriates or site water analysis is required for this round of sampling. Target Analyte List will be as outlined in the NJDEP Dredging Manual (NJDEP, 1997), with detection limits appropriate for comparison to the Residential Soil Remediation Standards.

Please let me know if you have any questions, or if this reflects your understanding of our agreed sampling plan.

Sincerely,

W. Scott Douglas  
Project Manager  
NJDOT, Office of Maritime Resources

## Jon Doi

---

**From:** Joel Pecchioli <Joel.Pecchioli@dep.nj.gov>  
**Sent:** Thursday, March 26, 2015 3:36 PM  
**To:** Douglas, Scott; Jon Doi; Grenier, Jennifer J.; Lunemann, Matthew; Marano, Mike J.  
**Cc:** Mark Davis  
**Subject:** RE: Shark River grain size question ...

Yes -- I agree ...

---

**From:** Douglas, Scott [mailto:SCOTT.DOUGLAS@dot.nj.gov]  
**Sent:** Thursday, March 26, 2015 3:21 PM  
**To:** Jon Doi; Grenier, Jennifer J.; Lunemann, Matthew; Marano, Mike J.  
**Cc:** Joel Pecchioli; Mark Davis  
**Subject:** RE: Shark River grain size question ...

Sounds like a good plan Jon. I am copying Joel on this email. Joel, do you agree?

sd

---

**From:** Jon Doi [mailto:doi@aquasurvey.com]  
**Sent:** Thursday, March 26, 2015 3:19 PM  
**To:** Grenier, Jennifer J.; Lunemann, Matthew; Marano, Mike J.; Douglas, Scott  
**Subject:** Shark River grain size question ...

We did a Quick Sieve grain size analysis on 3 samples that made up Composite A, i.e., 038-1, 038-2 and 038-3. We did this, because we thought 038-3 might be over 20% different than 038-1 or 038-2. That was, in fact, the case. The grain size values for the 3 samples are:

038-1: 67.3% sand;  
038-2: 71.2% sand;  
038-3: 41.0% sand.

Do you want 038-1 and 038-2 composited together and 038-3 run as a discrete sample? Please advise. Thank you.

Take care,

Jon

---

Jon Doi, Ph.D.  
Principal/Executive Vice President  
**Aqua Survey, Inc.**  
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[doi@aquasurvey.com](mailto:doi@aquasurvey.com)  
[www.aquasurvey.com](http://www.aquasurvey.com)

### III. TEST ADMINISTRATION

#### A. Sponsor

Parsons Brinckerhoff  
2000 Lenox Drive, Third Floor  
Lawrenceville, NJ 08648

#### B. Testing Facilities

Aqua Survey, Inc.  
469 Point Breeze Road  
Flemington, NJ 08822

Eurofins Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17601

#### C. Dates of Experimentation

Date of Study Initiation: March 23, 2015  
Date of Study Completion: May 6, 2015

#### D. Study Participants

Jon Doi, Ph.D.	Executive Vice President
Thomas Dolce	Field Operations Manager
Robert Fristrom	Quality Assurance Officer
Elizabeth Horn	Scientist
Jim Karwacki	Field Operations Support
Kevin Sondag	Field Operations Specialist
Michelle Thomas	Laboratory Manager

### IV. MATERIALS AND METHODS

All sampling and testing were performed in accordance with Appendix B, Attachment 1 of the technical manual "The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters" (NJDEP Dredging Manual), October 1997, and the SAP from NJDOT dated February 27, 2015.

#### A. Sampling

Test sediment from fourteen locations and a field blank were collected from the Shark River by Aqua Survey personnel March 23 and 25, 2015.

The vessel used for sampling, the R/V Raritan, was positioned using a Trimble SPS 855 Differential Global Positioning System (DGPS). Sediment collection was performed using a Rossfelder P-3 vibracore with flexible plastic core liners. The project depth was 7 feet Mean Low Water (MLW) including 1 foot overdredge allowance.

The core samples were inspected and photographed, and the characteristics were recorded on Sediment Core Logs. All samples were assigned unique ASI sample numbers. All samples were received at ASI in Flemington, NJ under chain of custody on ice and stored at 2-4 °C.

The appendices contain all supporting documentation including ASI sediment core logs (Appendix A), photographs (Appendix B) chains of custody (Appendix C), sample use forms (Appendix D), percent moisture and grain size distribution raw data (Appendix E) and TOC raw data (Appendix F).

## **B. Homogenizing and Compositing**

Each of the fourteen core samples was carefully homogenized using a stainless steel mixer. This procedure followed the specific guidelines found on pages 9-11 and in Appendix A of the Dredging Manual and in ASI's standard operating procedure SOP/PRP/008. Samples were mixed until uniform in color and texture.

Using a #230 (62.5 micron) separation sieve, three (3) samples (038-1, 038-2 and 038-3) were analyzed for sand content based upon visual inspection. If samples that comprise a planned composite showed greater than 20% difference in sand content, the compositing scheme is altered to prevent dissimilar cores from being composited together. Results of the overnight sieve analysis for the three (3) samples were: 038-1: 67.3% sand; 038-2: 71.2% sand, and 038-3: 41.0%. As discussed with NJDOT and NJDEP, it was determined that one core, 038-3, was to be removed from compositing, and it was sent to the laboratory for full chemical analysis as a discrete sample. Five (5) composites were created from the cores. Complete sample identification numbers and the compositing scheme can be found in Table 2.

Sub-samples of each of the samples, both individual cores and composites, were reserved for the appropriate physical and chemical analyses. Subsamples of the composites were archived in the freezer.

## **C. Physical and Total Organic Carbon Analysis**

All samples, both individual cores and composites, were analyzed by ASI for percent moisture and grain size distribution in accordance with the

*Standard Test Method for Particle-Size Analysis of Soils*, Designation ASTM D422-63, reapproved 2002.

Total Organic Carbon (TOC) was also determined at ASI based on the guidance from EPA Office of Solids Waste and Emergency Response SW-846 Method No. 9060 (Volume IC, Chapter 5, Revision 0, 9/86). The instrument for this analysis was the Dohrmann TOC Boat Sampler, Model 183 (Serial number 98202003), which was connected to the Dohrmann Apollo 9000 TOC Analyzer.

See Appendix E for the grain size distribution and percent moisture raw data. TOC raw data and a standard reference material control chart can be found in Appendix F.

#### **D. Chemical Analyses**

Sub-samples of the composites and the field blank were transferred to ELL following chain-of-custody procedures. The samples were placed in jars and shipped in coolers with ice packs.

The laboratory was responsible for chemical analysis of the samples. The sediment composites and the field blank were analyzed for all the analytes listed at this location: [http://www.nj.gov/dep/srp/regs/rs/rs\\_appendix1.pdf](http://www.nj.gov/dep/srp/regs/rs/rs_appendix1.pdf), plus chromium speciation.

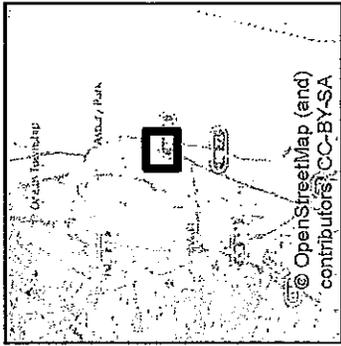
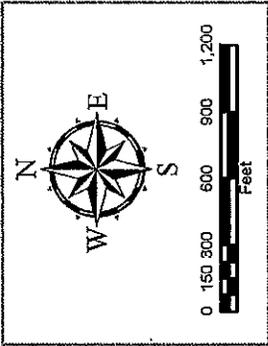
### **V. PHYSICAL AND CHEMICAL ANALYSIS RESULTS**

The grain size distribution, percent moisture, and total organic carbon for each core are shown in Table 3. The results of the chemical analyses of the sediment composites and the field blank are provided in Tables 4 and 5.



GBA  
Shark River  
Sample Locations - Map

ASI Project: 35-025  
Coordinate System:  
State Plane NAD 83  
New Jersey US Survey Foot



**asi**  
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Figure 1. Site Map

**Table 1 DGPS Coordinates**

Location	Northings	Eastings
038-1	491626.4	622801.4
038-2	492022.8	622483.9
038-3	492557.5	622600.4
038-4	493021.3	622701.3
038-5	493529.2	622859.7
038-6	494594.2	621557.0
038-7	494796.0	621363.1
038-8	495067.1	621253.3
038-9	495742.5	621104.6
038-10	496138.0	621058.3
039-11	494116.4	621355.4
039-12	493622.2	621228.0
039-13	492986.7	620882.9
039-14	492687.0	620620.6

**Table 2 Sample Identification and Compositing Scheme**

Sample Name	Sample ID	Composite
038-1	20150273	Composite A 20150288
038-2	20150274	
038-3	20150275	Discrete Sample Core 038-3
038-4	20150276	Composite B 20150289
038-5	20150277	
038-6	20150278	Composite C 20150290
038-7	20150279	
038-8	20150280	
038-9	20150281	Composite D 20150291
038-10	20150282	
039-11	20150283	Composite E 20150292
039-12	20150284	
039-13	20150285	
039-14	20150286	
Field Blank	20150287	

Table 3 Grain Size Distribution (USCS Classification), Percent Moisture and TOC

Sample ID	ASI ID #	% Gravel			% Sand			% Silt	% Clay	Cc	Cu	% Moisture	TOC ppm	% TOC of Dry Weight
		Coarse	Fine		Coarse	Medium	Fine							
038-1	20150273	0.0	0.2	0.2	0.2	0.7	58.8	24.7	15.4	12.18	66.92	34.5	14,790	1.48
038-2	20150274	0.0	0.1	0.1	0.4	65.2	65.2	20.6	13.6	8.81	37.11	34.8	11,203	1.12
Comp A	20150288	0.1	0.3	0.2	0.6	61.6	61.6	23.7	13.5	7.70	44.60	34.9	12,752	1.28
038-3	20150275	0.0	0.0	0.0	0.8	34.9	34.9	47.2	17.1	2.54	42.44	59.5	26,860	2.69
038-4	20150276	0.5	1.6	0.3	0.4	32.7	32.7	43.4	21.1	—	—	51.2	23,381	2.34
038-4	20150276 dup	0.2	0.4	0.0	0.4	33.6	33.6	44.0	21.4	—	—	—	—	—
038-4	20150276 trip	0.0	0.0	0.0	0.5	32.9	32.9	46.7	19.9	—	—	—	—	—
038-5	20150277	0.0	0.0	0.0	0.4	8.8	8.8	68.6	22.2	—	—	64.2	37,776	3.78
Comp B	20150289	0.0	0.0	0.1	0.4	24.4	24.4	60.8	14.3	4.83	36.98	56.5	27,511	2.75
038-6	20150278	0.0	0.0	0.0	0.5	59.2	59.2	25.4	14.9	6.66	54.42	38.9	14,385	1.44
038-7	20150279	0.0	0.0	0.0	0.2	17.7	17.7	59.9	22.2	—	—	60.1	31,149	3.11
038-8	20150280	0.0	0.0	0.0	0.1	7.4	7.4	73.8	18.7	—	—	64.4	36,148	3.61
Comp C	20150290	0.0	0.0	0.0	0.3	35.3	35.3	48.5	15.9	1.22	23.64	53.2	23,867	2.39
Comp C	20150290 dup	0.0	0.0	0.0	0.2	36.0	36.0	49.6	14.2	2.56	36.70	—	—	—
Comp C	20150290 trip	0.0	0.0	0.0	0.3	36.8	36.8	47.5	15.4	1.96	21.26	—	—	—
038-9	20150281	0.0	0.0	0.0	0.1	5.6	5.6	77.9	16.4	—	—	66.6	36,879	3.69
038-10	20150282	0.0	0.0	0.0	0.2	2.3	2.3	73.7	23.8	—	—	66.0	40,516	4.05
Comp D	20150291	0.0	0.0	0.0	0.1	4.1	4.1	76.4	19.4	—	—	66.2	38,509	3.85

61.6 + 1.2 = 62.8    23.7    13.5  
 24.9    60.8    14.3  
 35.6    48.5    15.9  
 4.2    76.4    19.4  
 11.5    68.6    19.9  
 27.8    55.6    16.6

Table 3 (continued) Grain Size Distribution (USCS Classification), Percent Moisture and TOC

Sample ID	ASI ID #	% Gravel			% Sand			% Silt	% Clay	Cc	Cu	% Moisture	TOC ppm	% TOC of Dry Weight
		Coarse	Fine		Coarse	Medium	Fine							
039-11	20150283	0.0	0.0	0.0	0.0	0.3	21.8	64.2	13.7	2.80	25.55	55.8	26,831	2.68
039-11	20150283 dup	0.0	0.0	0.0	0.0	0.2	21.6	62.9	15.3	2.14	21.22			
039-11	20150283 trip	0.0	0.0	0.0	0.0	0.2	18.9	66.1	14.8	1.44	14.42			
039-12	20150284	0.0	0.0	0.0	0.0	0.5	10.4	67.4	21.7	—	—	63.1	34,121	3.41
039-13	20150285	0.0	0.0	0.0	0.0	0.2	1.9	78.8	19.1	—	—	67.5	42,530	4.25
039-14	20150286	0.0	0.0	0.0	0.0	0.3	4.0	78.1	17.6	—	—	68.0	38,135	3.81
Comp E	20150292	0.0	0.0	0.0	0.0	0.3	11.2	68.6	19.9	1.53	23.96	62.9	35,087	3.51
Comp E	20150292 dup											62.9		
Comp E	20150292 trip											62.9		

*Procs 8*  
27.6  
55.6  
16.6

71.4 silt  
18.4 sand  
10.2

## Chemical Analysis Tables Information Page

### List of Data Qualifiers:

J = Estimated value; the result is less than the LOQ but greater than or equal to the MDL

ND = Not detected

P = Concentration difference between the primary and confirmation column > 40%. The lower result is reported.

V = Concentration difference between the primary and confirmation column > 100%. The reporting limit is raised due to this disparity and evident interference.

### Regulatory Standards:

Bulk Sediment Standards: Tables 1A and 1B, Residential Direct Contact Health Based Criteria and Soil Remediation Standards, N.J.A.C 7:26D Remediation Standards, June 2, 2008.

If the PQL for a specific analyte is greater than the most conservative health-based criterion then the PQL supersedes the criterion and is used as the Direct Contact Soil Remediation standard.

Note: Shaded values indicate that regulatory sediment or water criteria have been exceeded.

 Analyte value (ND) exceeds NJDEP Criterion

 Analyte value exceeds NJDEP Criterion



Table 4a continued Semivolatile Analysis of Bulk Sediment (NJDEP, Residential) (continued)

Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards ug/kg (ppb)	ug/kg	Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)	
				Result	RL	Result	RL	Result	RL
Benzo(a)anthracene (1,2-Benzanthracene)	92-87-5	700	700	5300	ND	8300	ND	8000	ND
Benzo(a)pyrene	56-55-3	600	200	27	340	170	43	180	41
Benzo(b)fluoranthene (3,4-Benzo fluoranthene)	50-32-8	200	200	27	370	180	43	180	41
Benzo(g,h,i)perylene	205-99-2	600	200	27	450	230	43	210	41
Benzo(k)fluoranthene	191-24-2	38000000	200	27	220	120	43	110	41
bis(2-Chloroethyl)ether	207-08-9	6000	200	27	140	100	43	97	41
Bis(2-chloroisopropyl) ether	111-44-4	400	200	27	ND	ND	83	ND	80
bis(2-Ethylhexyl)phthalate	39638-32-9	23000	200	27	ND	ND	83	ND	80
Butyl benzyl phthalate	117-81-7	35000	200	270	ND	ND	430	ND	410
Caprolactam	85-68-7	1200000	200	270	ND	ND	420	ND	400
Carbazole	105-60-2	31000000	200	270	ND	ND	420	ND	400
Chrysene	86-74-8	24000	200	33	33	ND	83	ND	80
Dibenz(a,h)anthracene	218-01-9	62000	200	330	27	170	43	160	41
Diethylphthalate	53-70-3	200	200	63	27	20	43	35	41
Di-n-butylphthalate	84-66-2	49000000	200	270	ND	ND	420	ND	400
Di-n-octylphthalate	84-74-2	6100000	200	270	ND	ND	420	ND	400
Fluoranthene	117-84-0	2400000	200	270	ND	ND	420	ND	400
Fluorene	206-44-0	2300000	200	500	27	290	43	250	41
Hexachloro-1,3-butadiene	86-73-7	2300000	200	43	27	27	43	21	41
Hexachlorobenzene	87-68-3	6000	200	53	ND	ND	83	ND	80
Hexachlorocyclopentadiene	118-74-1	300	200	27	ND	ND	43	ND	41
Hexachlorocyclopentadiene	77-47-4	45000	200	800	ND	1300	ND	1200	ND
Indeno(1,2,3-cd)pyrene	67-72-1	35000	200	270	ND	ND	420	ND	400
Isophorone	193-39-5	600	200	190	27	96	43	100	41
Naphthalene	78-59-1	510000	200	53	ND	ND	83	ND	80
Nitrobenzene	91-20-3	6000	200	53	27	35	43	39	41
N-Nitrosodimethylamine	98-95-3	31000	200	53	ND	ND	83	ND	80
N-Nitroso-di-n-propylamine	62-75-9	700	200	270	ND	ND	420	ND	400
N-Nitroso-diphenylamine	621-64-7	200	200	53	ND	ND	83	ND	80
Pentachlorophenol	86-30-6	99000	200	53	ND	ND	83	ND	80
Phenanthrene	87-86-5	3000	200	270	ND	ND	430	ND	410
Phenol	85-01-8	N/A	200	270	27	150	43	100	41
Pyrene	108-95-2	1800000	200	53	ND	ND	83	ND	80
	129-00-0	1700000	200	540	27	290	43	250	41

\* - Required Practical quantitation level, N.J.A.C. 7:26E-1.8. N/A - Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1.A.

Table 4a continued

Pesticide/Arochlor Analysis of Bulk Sediment (NJDEP, Residential)

ASI Job # 35-025	Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards ug/kg (ppb)	ug/kg	Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)											
					Comp A		Core 038-3		Comp B											
					Result <sup>1</sup>	RL	Q	RL	Q	Result	RL	Q								
				PQL*																
	4,4'-DDD	72-54-8	3000	3	3.7	14	JP	32	43	J	9.5	20	J	9.5	20	J				
	4,4'-DDE	72-55-9	2000	3	ND	14	ND	ND	43	ND	ND	20	ND	ND	20	ND				
	4,4'-DDT	50-29-3	2000	3	ND	14	ND	ND	43	ND	ND	20	ND	ND	20	ND				
	Aldrin	309-00-2	40	2	7.4	6.6		ND	21	ND	7.3	9.9	JP	7.3	9.9	JP				
	alpha-HCH (alpha-BHC)	319-84-6	100	2	ND	6.6	ND	ND	21	ND	ND	9.9	ND	ND	9.9	ND				
	beta-HCH (beta-BHC)	319-85-7	400	2	ND	8	ND	39	25	P	18	9.9	ND	18	9.9	ND				
	Lindane (gamma-HCH) (gamma-BHC)	58-89-9	400	2	ND	6.6	V	ND	21	ND	ND	9.9	ND	ND	9.9	ND				
	alpha-Chlordane	5103-71-9	200	2	ND	6.6	ND	ND	21	ND	ND	9.9	ND	ND	9.9	ND				
	gamma-Chlordane	5103-74-2	200	2	ND	6.6	ND	ND	21	ND	ND	9.9	ND	ND	9.9	ND				
	Chlordane	57-74-9	200	2	0.0	0.0	ND	0.0		ND	0.0		ND	0.0		ND				
	Dieldrin	60-57-1	40	3	ND	14	ND	ND	43	ND	ND	20	ND	ND	20	ND				
	Endosulfan I	959-98-8	470000	3	3.3	6.6	J	ND	21	V	ND	9.9	ND	ND	9.9	ND				
	Endosulfan II	33213-65-9	470000	3	ND	14	ND	ND	43	ND	ND	20	ND	ND	20	ND				
	Endosulfan I and II (alpha and beta)	115-29-7	470000	3	3.3		J	0.0		ND	0.0		ND	0.0		ND				
	Endosulfan sulfate	1031-07-8	470000	3	ND	14	ND	21	43	JP	ND	20	ND	ND	20	ND				
	Endrin	72-20-8	23000	3	ND	14	ND	ND	43	ND	ND	20	ND	ND	20	ND				
	Heptachlor	76-44-8	100	2	ND	6.6	V	ND	21	ND	ND	9.9	ND	ND	9.9	ND				
	Heptachlor epoxide	1024-57-3	70	2	ND	6.6	V	26	21	0	3.2	9.9	J	3.2	9.9	J				
	Methoxychlor	72-43-5	390000	20	ND	53	ND	ND	170	ND	ND	80	ND	ND	80	ND				
	Toxaphene	8001-35-2	600	200	ND	260	ND	ND	830	ND	ND	390	ND	ND	390	ND				
	Arochlor-1016	12674-11-2	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Arochlor-1221	11104-28-2	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Arochlor-1232	11141-16-5	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Arochlor-1242	53469-21-9	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Arochlor-1248	12672-29-6	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Arochlor-1254	11097-69-1	200	30	15	27	J	ND	42	ND	14	40	J	ND	40	J				
	Arochlor-1260	11096-82-5	200	30	ND	27	ND	ND	42	ND	ND	40	ND	ND	40	ND				
	Total Arochlor(SUM)	1336-36-3	200	30	15	27	J	0.0	42	ND	14	40	J	ND	40	J				

<sup>1</sup> When summing compounds, NDs are counted as zero.

\* = Required Practical quantitation level, N.I.A.C. 7:26E-1.8. N/A - Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1A.

Table 4a continued

Metals Analysis of Bulk Sediment (NJDEP, Residential)

Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards mg/kg (ppm)	PQL* mg/kg	Unamended Sediment (Units:mg/kg)		Unamended Sediment (Units:mg/kg)		Unamended Sediment (Units:mg/kg)			
				Result	RL	Q	Result	RL	Q	Result	RL
Aluminum	7429-90-5	78000	20	9790	31.9		12700	50.4	15800	46.2	
Antimony	7440-36-0	31	6	3.81	3.19		3.98	5.04	5.38	4.62	J
Arsenic**	7440-38-2	19	1	8.39	3.19		9.85	5.04	15.1	4.62	
Barium	7440-39-3	16000	20	30.4	0.797		39.6	1.26	54.8	1.16	
Beryllium	7440-41-7	16	0.5	0.907	0.797		1.11	1.26	1.27	1.16	J
Cadmium	7440-43-9	78	0.5	0.306	0.797		0.516	1.26	0.816	1.16	J
Cobalt	7440-48-4	1600	5	4.92	0.797		5.8	1.26	7.58	1.16	
Copper	7440-50-8	3100	3	25.0	1.59		34.5	2.52	66.4	2.31	
Lead	7439-92-1	400	1	26.4	2.39		26.0	3.78	59.0	3.470	
Manganese	7439-96-5	11000	2	139	0.797		183	1.26	252	1.16	
Mercury	7439-97-6	23	0.1	0.433	0.149		0.385	0.24	1.08	0.232	
Nickel	7440-02-0	1600	4	14.3	1.59		22.2	2.52	25.3	2.33	
Selenium	7782-49-2	390	4	2.08	3.19	J	2.29	5.04	2.97	4.62	J
Silver	7440-22-4	390	1	0.835	0.797		ND	1.26	1.71	1.16	
Thallium	7440-28-0	5	3	1.52	4.78	J	ND	7.56	2.21	7.00	J
Vanadium	7440-62-2	78	5	37.7	0.797		48.7	1.26	61.3	1.16	
Zinc	7440-66-6	23000	6	112	3.19		127	5.04	189	4.62	
Cyanide	57-12-5	1600	3	ND	0.780	ND	ND	1.20	ND	1.20	ND
Chromium, total	7440-47-3	N/A	N/A	51.8	2.39		57.7	3.78	86.4	3.47	
Hexavalent chromium	18540-29-9	N/A	N/A	ND	2.40	ND	ND	3.8	ND	3.60	ND
Trivalent chromium	16065-83-1	N/A	N/A	51.8	2.40		57.7	3.8	86.4	3.60	
% Moisture	MOIST	N/A	N/A	37.9			60.3		58.4		
% Solids	N/A	N/A	N/A	62.1			39.7		41.6		

\*\* Direct contact standard for arsenic is based on natural background.

\* = Required Practical quantitation level, N.J.A.C. 7:26E-1.8. N/A - Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1A.

Table 4b

Semivolatile Analysis of Bulk Sediment (NJDEP, Residential)

Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards ug/kg (ppb)	ug/kg	Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)	
				Comp C		Comp D		Comp E	
				Result	RL	Result	RL	Result	RL
ASI Job # 35-025			PQL*	7825462	20150290	20150291	7825463	20150292	7825464
1,1'-Biptyhenyl	92-52-4	3100000	200	ND	74	ND	100	ND	99
1,2,4-Trichlorobenzene	120-82-1	73000	5	ND	74	ND	100	ND	99
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	5300000	5	ND	74	ND	100	ND	99
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	5300000	5	ND	74	ND	100	ND	99
1,4-Dichlorobenzene (p-Dichlorobenzene)	105-46-7	5000	5	ND	74	ND	100	ND	99
1,2-Diphenylhydrazine	122-66-7	700	700	ND	74	ND	100	ND	99
2,4,5-Trichlorophenol	95-95-4	6100000	200	ND	74	ND	100	ND	99
2,4,6-Trichlorophenol	88-06-2	19000	200	ND	74	ND	100	ND	99
2,4-Dichlorophenol	120-83-2	180000	200	ND	74	ND	100	ND	99
2,4-Dimethylphenol	105-67-9	1200000	200	ND	74	ND	100	ND	99
2,4-Dinitrophenol	51-28-5	120000	300	ND	2200	ND	3000	ND	3000
2,4-Dinitrotoluene	121-14-2	700	200	ND	370	ND	500	ND	490
2,6-Dinitrotoluene	606-20-2	700	200	ND	74	ND	100	ND	99
2,4-Dinitrotoluene/2,6-Dinitrotoluene mix	25321-14-6	700	200	ND	370	ND	500	ND	490
2-Chlorophenol (o-chlorophenol)	95-57-8	310000	200	ND	74	ND	100	ND	99
2-Methylnaphthalene	91-57-6	230000	170	23	38	J	20	51	50
2-Methylphenol (o-Cresol)	95-48-7	310000	200	ND	74	ND	100	ND	99
2-Nitroaniline	88-74-4	39000	300	ND	74	ND	100	ND	99
3,3'-Dichlorobenzidine	91-94-1	1000	200	ND	740	ND	1000	ND	990
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	6000	300	ND	1100	ND	1500	ND	1500
4-Methylphenol (p-Cresol)	106-44-5	31000	200	53	74	J	ND	100	99
Acenaphthene	83-32-9	3400000	200	18	38	J	15	51	50
Acenaphthylene	208-96-8	N/A	200	36	38	J	27	51	50
Acetophenone	98-86-2	2000	200	ND	74	ND	100	ND	99
Anthracene	120-12-7	17000000	200	70	38		69	51	50
Atrazine	1912-24-9	210000	200	ND	370	ND	500	ND	490
Benzaldehyde	100-52-7	6100000	200	ND	370	ND	500	ND	490

\* When summing compounds, NDs are counted as zero.

Table 4b continued

Semivolatile Analysis of Bulk Sediment (NJDEP, Residential) (continued)

Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards ug/kg (ppb)	ug/kg	Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)											
				Comp C		Comp D		Comp E											
				Result	RL	Q	Result	RL	Q	Result	RL	Q							
ASI Job # 35-025			PQL*																
Benztidine	92-87-5	700	700	ND	7400	ND	ND	10000	ND	ND	9900	ND	ND	9900	ND				
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	600	200	160	38			51	120	50									
Benzo(a)pyrene	50-32-8	200	200	170	38			51	140	50									
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	600	200	210	38			51	180	50									
Benzo(g,h,i)perylene	191-24-2	38000000	200	120	38			51	110	50									
Benzo(k)fluoranthene	207-08-9	6000	200	88	38			51	81	50									
bis(2-Chloroethyl)ether	111-44-4	400	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Bis(2-chloroisopropyl) ether	39638-32-9	23000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
bis(2-Ethylhexyl)phthalate	117-81-7	35000	200	ND	380	ND	ND	510	ND	500	ND	ND	500	ND					
Butyl benzyl phthalate	85-68-7	1200000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Caprolactam	105-60-2	31000000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Carbazole	86-74-8	24000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Chrysene	218-01-9	62000	200	170	38			51	170	50									
Dibenz(a,h)anthracene	53-70-3	200	200	34.0	38			51	64	45	50	J	50	J					
Diethylphthalate	84-66-2	49000000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Di-n-butylphthalate	84-74-2	6100000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Di-n-octylphthalate	117-84-0	2400000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Fluoranthene	206-44-0	2300000	200	260	38			51	ND	200	50								
Fluorene	86-73-7	2300000	200	29.0	38			51	25	22	50	J	50	J					
Hexachloro-1,3-butadiene	87-68-3	6000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Hexachlorobenzene	118-74-1	300	200	ND	38	ND	ND	51	ND	50	ND	ND	50	ND					
Hexachlorocyclopentadiene	77-47-4	45000	200	ND	1100	ND	ND	1500	ND	1500	ND	ND	1500	ND					
Hexachloroethane	67-72-1	35000	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
Indeno(1,2,3-cd)pyrene	193-39-5	600	200	100	38			51	120	97	50								
Isophorone	78-59-1	510000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Naphthalene	91-20-3	6000	200	45	38			51	35	39	50	J	50	J					
Nitrobenzene	98-95-3	31000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
N-Nitrosodimethylamine	62-75-9	700	200	ND	370	ND	ND	500	ND	490	ND	ND	490	ND					
N-Nitroso-di-n-propylamine	621-64-7	200	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
N-Nitrosodiphenylamine	86-30-6	99000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Pentaachlorophenol	87-86-5	3000	200	ND	380	ND	ND	510	ND	500	ND	ND	500	ND					
Phenanthrene	85-01-8	N/A	200	160	38			51	94	82	50								
Phenol	108-95-2	18000000	200	ND	74	ND	ND	100	ND	99	ND	ND	99	ND					
Pyrene	129-00-0	1700000	200	290	38			51	230	190	50								

\* = Required Practical quantitation level, N.J.A.C. 7:26E-1.8. N/A - Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1.A.

Table 4b continued

Pesticide/Arochlor Analysis of Bulk Sediment (NJDEP, Residential)

Analyte Name	C.A.S. No.	NJDEP Residential Direct Contact Soil Remediation Standards ug/kg (ppb)	PQL* ug/kg	Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)		Unamended Sediment (Units:ug/kg)					
				Comp C		Comp D		Comp E					
				Result <sup>1</sup>	RL	Result	RL	Result	RL	Q			
4,4'-DDD	72-54-8	3000	3	19	32	19	17	26	J	16	25	J	
4,4'-DDE	72-55-9	2000	3	19	8	19	8.2	26	J	ND	25	ND	
4,4'-DDT	50-29-3	2000	3	19	ND	19	ND	26	V	ND	25	ND	
Aldrin	309-00-2	40	2	9.2	ND	9.2	ND	13	ND	ND	4.6	12	J,P
alpha-HCH (alpha-BHC)	319-84-6	100	2	9.2	ND	9.2	ND	13	ND	ND	12	ND	
beta-HCH (beta-BHC)	319-85-7	400	2	11	ND	11	ND	15	15	J,P	15	ND	
Lindane (gamma-HCH) (gamma-BHC)	58-89-9	400	2	26	9.2	9.2	P	25	13	P	ND	12	ND
alpha-Chlordane	5103-71-9	200	2	9.2	ND	9.2	ND	13	ND	ND	12	ND	
gamma-Chlordane	5103-74-2	200	2	9.2	ND	9.2	ND	13	ND	ND	12	ND	
Chlordane	57-74-9	200	2	0.0	ND	0.0	ND	0.0	ND	0.0	0.0	ND	
Dieldrin	60-57-1	40	3	19	ND	19	ND	26	ND	ND	25	ND	
Endosulfan I	959-98-8	470000	3	9.2	ND	9.2	V	13	V	ND	12	ND	
Endosulfan II	33213-65-9	470000	3	19	ND	19	ND	26	J	ND	25	ND	
Endosulfan I and II (alpha and beta)	115-29-7	470000	3	0.0	ND	0.0	ND	19	J	0.0	0.0	ND	
Endosulfan sulfate	1031-07-8	470000	3	37	19	19	ND	26	V	ND	25	ND	
Endrin	72-20-8	23000	3	19	ND	19	V	26	ND	ND	25	ND	
Heptachlor	76-44-8	100	2	46	ND	46	ND	13	ND	ND	12	ND	
Heptachlor epoxide	1024-57-3	70	2	16	9.2	9.2	P	13	V	4.0	12	J	
Methoxychlor	72-43-5	390000	20	74	ND	74	ND	100	ND	ND	100	ND	
Toxaphene	8001-35-2	600	200	370	ND	370	ND	500	ND	ND	490	ND	
Arochlor-1016	12674-11-2	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1221	11104-28-2	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1232	11141-16-5	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1242	53469-21-9	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1248	12672-29-6	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1254	11097-69-1	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Arochlor-1260	11096-82-5	200	30	38	ND	38	ND	52	ND	ND	51	ND	
Total Arochlor(SUM)	1336-36-3	200	30	0.0	0.0	0.0	ND	0.0	ND	0.0	0.0	ND	

<sup>1</sup> When summing compounds, NDs are counted as zero.

\* - Required Practical quantitation level, N.I.A.C. 7:26E-1.8. N/A - Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1.A.

Table 4b continued

Metals Analysis of Bulk Sediment (NJDEP, Residential)

Analyte Name	CAS No.	NJDEP Residential Direct Contact Soil Remediation Standards mg/kg (ppm)	PQL* mg/kg	Unamended Sediment (Units:mg/kg)		Unamended Sediment (Units:mg/kg)		Unamended Sediment (Units:mg/kg)	
				Result	RL	Result	RL	Result	RL
				Comp C 20150290		Comp D 20150291		Comp E 20150292	
Aluminum	7429-90-5	78000	20	15000	44.6	20300	59.8	19700	57.8
Antimony	7440-36-0	31	6	4.62	4.46	5.04	5.98	6.35	5.78
Arsenic**	7440-38-2	19	1	12.9	4.46	16.8	5.98	17.9	5.78
Barium	7440-39-3	16000	20	51.3	1.12	69.1	1.49	66.5	1.44
Beryllium	7440-41-7	16	0.5	1.26	1.12	1.45	1.49	1.54	1.44
Cadmium	7440-43-9	78	0.5	0.563	1.12	0.858	1.49	1.06	1.44
Cobalt	7440-48-4	1600	5	7.33	1.12	9.43	1.49	9.23	1.44
Copper	7440-50-8	3100	3	57.5	2.23	90.4	2.99	86.4	2.89
Lead	7439-92-1	400	1	48.7	3.35	77.3	4.48	75.3	4.33
Manganese	7439-96-5	11000	2	228	1.12	304	1.49	289	1.44
Mercury	7439-97-6	23	0.1	0.695	0.212	1.05	0.283	1.15	0.296
Nickel	7440-02-0	1600	4	24.3	2.19	34.9	3.02	31.9	2.89
Selenium	7782-49-2	390	4	2.54	4.46	3.28	5.98	3.1	5.78
Silver	7440-22-4	390	1	1.45	1.12	1.95	1.49	2.19	1.44
Thallium	7440-28-0	5	3	1.79	6.57	3.2	9.06	2.36	8.66
Vanadium	7440-62-2	78	5	59.9	1.12	73.7	1.49	74.1	1.44
Zinc	7440-66-6	23000	6	171	4.46	232	5.98	241	5.78
Cyanide	57-12-5	1600	3	ND	1.10	ND	1.50	ND	1.50
Chromium, total	7440-47-3	N/A	N/A	80.8	3.35	99.5	4.48	103	4.33
Hexavalent chromium	18540-29-9	N/A	N/A	ND	3.30	ND	4.60	ND	4.50
Trivalent chromium	16065-83-1	N/A	N/A	80.8	3.30	99.5	4.60	103	4.50
% Moisture	MOIST	N/A	N/A	55.2		67.2		66.7	
% Solids	N/A	N/A	N/A	44.8		32.8		33.3	

\*\* Direct contact standard for arsenic is based on natural background.

\* = Required Practical quantitation level, N.J.A.C. 7:26E-1.8. N/A = Not Applicable, no value on the NJDEP Residential Direct Contact Health Base Criteria and Soil Remediation Standards Table 1A.

Table 5 Semivolatile Analysis of Field Blank

Analyte	CAS No.	Field Blank (Units: ug/L)	
		Result	RL
1,1-Biphenyl	92-52-4	ND	1.0
1,2,4-Trichlorobenzene	120-82-1	ND	1.0
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ND	1.0
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	ND	1.0
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	ND	1.0
1,2-Diphenylhydrazine	122-66-7	ND	1.0
2,4,5-Trichlorophenol	95-95-4	ND	1.0
2,4,6-Trichlorophenol	88-06-2	ND	1.0
2,4-Dichlorophenol	120-83-2	ND	1.0
2,4-Dimethylphenol	105-67-9	ND	1.0
2,4-Dinitrophenol	51-28-5	ND	32
2,4-Dinitrotoluene	121-14-2	ND	5.0
2,6-Dinitrotoluene	606-20-2	ND	1.0
2,4-Dinitrotoluene/2,6-Dinitrotoluene mix	25321-14-6	ND	5.0
2-Chlorophenol (o-chlorophenol)	95-57-8	ND	1.0
2-Methylnaphthalene	91-57-6	ND	0.5
2-Methylphenol (o-Cresol)	95-48-7	ND	1.0
2-Nitroaniline	88-74-4	ND	1.0
3,3-Dichlorobenzidine	91-94-1	ND	5.0
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-32-1	ND	16
4-Methylphenol (p-Cresol)	106-44-5	ND	1.0
Acenaphthene	83-32-9	ND	0.50
Acenaphthylene	208-96-8	ND	0.50
Acetophenone	98-86-2	ND	1.0
Anthracene	120-12-7	ND	0.50
Atrazine	1912-24-9	ND	5.0
Benzaldehyde	100-52-7	ND	5.0

Table 5 continued Semivolatile Analysis of Field Blank (continued)

Analyte	CAS No.	Field Blank (Units: ug/L)	
		Result	RL
		Field Blank	
		20150287	
		7825465	
Benzidine	92-87-5	ND	64
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	ND	0.50
Benzo(a)pyrene	50-32-8	ND	0.50
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	ND	0.50
Benzo(g,h,i)perylene	191-24-2	ND	0.50
Benzo(k)fluoranthene	207-08-9	ND	0.50
Bis(2-Chloroethyl)ether	111-44-4	ND	1.0
Bis(2-chloroisopropyl) ether	39638-32-9	ND	1.0
Bis(2-Ethylhexyl)phthalate	117-81-7	ND	5.0
Butyl benzyl phthalate	85-68-7	ND	5.0
Caprolactam	105-60-2	ND	16
Carbazole	86-74-8	ND	1.0
Chrysene	218-01-9	ND	0.50
Dibenz(a,h)anthracene	53-70-3	ND	0.50
Diethylphthalate	84-66-2	ND	5.0
Di-n-butylphthalate	84-74-2	ND	5.0
Di-n-octylphthalate	117-84-0	ND	5.0
Fluoranthrene	206-44-0	ND	0.50
Fluorene	86-73-7	ND	0.50
Hexachloro-1,3-butadiene	87-68-3	ND	1.0
Hexachlorobenzene	118-74-1	ND	0.50
Hexachlorocyclopentadiene	77-47-4	ND	16
Hexachloroethane	67-72-1	ND	5.0
Indeno(1,2,3-cd)pyrene	193-39-5	ND	0.50
Isophorone	78-59-1	ND	1.0
Naphthalene	91-20-3	ND	0.50
Nitrobenzene	98-95-3	ND	1.0
N-Nitrosodimethylamine	62-75-9	ND	5.0
N-Nitroso-di-n-propylamine	621-64-7	ND	1.0
N-Nitrosodiphenylamine	86-30-6	ND	1.0
Pentachlorophenol	87-86-5	ND	5.0
Phenanthrene	85-01-8	ND	0.50
Phenol	108-95-2	ND	1.0
Pyrene	129-00-0	ND	0.50

Table 5 continued

Pesticide/Arochlor Analysis of Field Blank

ASI Job # 35-025	Analyte	CAS No.	Field Blank		Field Blank (Units: ug/L)
			Result	RL	
			Q	Q	
	4,4'-DDD	72-54-8	ND	0.017	ND
	4,4'-DDE	72-55-9	ND	0.017	ND
	4,4'-DDT	50-29-3	ND	0.017	ND
	Aldrin	309-00-2	ND	0.0083	ND
	alpha-HCH (alpha-BHC)	319-84-6	ND	0.0083	ND
	beta-HCH (beta-BHC)	319-85-7	ND	0.0083	ND
	Lindane (gamma-HCH) (gamma-BHC)	58-89-9	ND	0.0083	ND
	alpha-Chlordane	5103-71-9	ND	0.0083	ND
	gamma-Chlordane	76-44-8	ND	0.0083	ND
	Chlordane (alpha and gamma)	57-74-9	0.0		ND
	Dieldrin	60-57-1	ND	0.017	ND
	Endosulfan I	959-98-8	ND	0.0083	ND
	Endosulfan II	33213-65-9	ND	0.025	ND
	Endosulfan I and II (alpha and beta)	115-29-7	0.0		ND
	Endosulfan sulfate	1031-07-8	ND	0.017	ND
	Endrin	72-20-8	ND	0.017	ND
	Heptachlor	76-44-8	ND	0.0083	ND
	Heptachlor epoxide	1024-57-3	ND	0.0083	ND
	Methoxychlor	72-43-5	ND	0.083	ND
	Toxaphene	8001-35-2	ND	0.83	ND
	Arochlor-1016	12674-11-2	ND	0.41	ND
	Arochlor-1221	11104-28-2	ND	0.41	ND
	Arochlor-1232	11141-16-5	ND	0.41	ND
	Arochlor-1242	53469-21-9	ND	0.41	ND
	Arochlor-1248	12672-29-6	ND	0.41	ND
	Arochlor-1254	11097-69-1	ND	0.41	ND
	Arochlor-1260	11096-82-5	ND	0.41	ND
	Total Arochlor(SUM)	1336-36-3	0		ND

Table 5 continued

Metal Analysis of Field Blank

ASI Job # 35-025		Field Blank (Units: mg/L)	
		20150287	
		7825465	
Analyte	CAS No.	Result	RL
Aluminum	7429-90-5	0.0964	0.20
Antimony	7440-36-0	ND	0.02
Arsenic	7440-38-2	ND	0.002
Barium	7440-39-3	0.0065	0.005
Beryllium	7440-41-7	ND	0.005
Cadmium	7440-43-9	ND	0.005
Cobalt	7440-48-4	ND	0.005
Copper	7440-50-8	ND	0.010
Lead	7439-92-1	ND	0.001
Manganese	7439-96-5	ND	0.005
Mercury	7439-97-6	ND	0.0002
Nickel	7440-02-0	ND	0.01
Selenium	7782-49-2	ND	0.02
Silver	7440-22-4	ND	0.005
Thallium	7440-28-0	ND	0.0005
Vanadium	7440-62-2	ND	0.005
Zinc	7440-66-6	ND	0.02
Cyanide	57-12-5	ND	0.01
Chromium, total	7440-47-3	ND	0.015
Hexavalent Chromium	18540-29-9	ND	0.02
Trivalent Chromium	16065-83-1	ND	0.02



State of New Jersey

CHRIS CHRISTIE  
*Governor*

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Li Governor*

Division of Land Use Regulation  
Bureau of Tidelands Management  
P.O. Box 420 Code 501-02B  
Trenton, NJ 08625-0420  
Tel. # 609-777-0454  
Fax # 609-777-3656

FEB 5 2015

NJDOT Office of Maritime Resources  
PO BOX 837  
1035 Parkway Ave  
Trenton, NJ 08625

RE: NJDOT OFFICE OF MARITIME RESOURCES. New Dredging License application. Statewide. Atlantic City, Atlantic County

FILE: #0000-14-0005.1 TD1140001

Dear Applicant:

Please find the license document for the above-referenced dredging project enclosed with this correspondence.

The State of New Jersey may claim title to a portion of the property in-shore of the licensed area, and the state does not waive this claim by approving and issuing this license document.

Sincerely,

Ms. Madhu Guru, PE  
Assistant Director  
Bureau of Tidelands Management

MG/kd

FEB 12 2015



**REVOCABLE DREDGING LICENSE**  
**A Mineral Rights Agreement from the State of New Jersey**

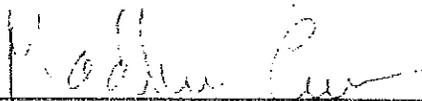
The Tidelands Resource Council in the Department of Environmental Protection, empowered under N.J.S.A. 13:1B-13 to approve licenses of lands owned by the State of New Jersey that are now or were formerly under tidewater, having due regard for the public interest, has approved a license to **NJDOT OFFICE OF MARITIME RESOURCES**, hereafter referred to as the licensee(s).

The licensee(s) has applied for the right to dredge an area of land under tidewater Statewide.

The license shall be in effect for twenty four (24) year from **MAY 7, 2014 TO MAY 7, 2038**. There will be no fee for this license.

This license may be revoked at any time and for any purpose deemed necessary and reasonable by the Tidelands Resource Council.

The licensee(s) may not further improve or develop the licensed area unless a permit, as per N.J.S.A. 12:5-3, and an additional license are obtained for that purpose. The licensee(s) may not appropriate the licensed area for exclusive use.



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Madhu Guru, Assistant Director  
Bureau of Tidelands Management  
Division of Land Use Regulation  
Department of Environmental Protection

2/5/2015

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Date

