



**Delaware River Main Stem and Channel Deepening Project  
Delaware Department of Natural Resources and Environmental Control  
Wetlands and Subaqueous Lands Permit Application**

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**ADDITIONAL DOCUMENTATION (On CD)**

**Reports**

- National Marine Fisheries Service. 2009. Deepening of the Delaware River Federal Navigation Channel Endangered Species Act Biological Opinion. July, 2009.
- Philadelphia District. 2009. Delaware River Main Stem and Channel Deepening Project Environmental Assessment. April, 2009.
- Philadelphia District. 2009. Delaware River Main Stem and Channel Deepening Project, Essential Fish Habitat Evaluation. January, 2009.
- Philadelphia District. 1997. Delaware River Main Channel Deepening Project, Final Supplemental Environmental Impact Statement. July, 1997.

Philadelphia District. 1996. Broadkill Beach, Delaware Interim Feasibility Study, Final Feasibility Report and Environmental Impact Statement. September, 1996.

Philadelphia District. 1992. The Delaware River Comprehensive Navigation Study, Main Channel Deepening Final Interim Feasibility Study and Environmental Impact Statement. February, 1992.

### **Biological Information**

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Random Motion LLC. 2005. Subtidal Pre-Construction *Sabellaria vulgaris* Monitoring Wetlands Delaware Bay at Broadkill Beach and Port Mahon Sand Placement Sites, and Kelly Island and Slaughter Beach Control Sites. Prepared for USACE, Philadelphia District. Sub Contract No. 003951.

Versar, Inc. 2005. Delaware River Adult and Juvenile Sturgeon Survey Winter 2005. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0068

Versar, Inc. 2005. Pre-Construction Horseshoe Crab Monitoring: Egg Island, New Jersey and Kelly Island, Delaware Wetland Restoration Areas. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0060.

Miller, D.C. 2004. Pre-Construction *Sabellaria vulgaris* Monitoring at Broadkill Beach and Port Mahon Sand Placement Sites, Kelly Island and Slaughter Beach (Control). Prepared for USACE, Philadelphia District.

Manomet Center for Conservation Sciences. 2002. Final Pre-Construction Shorebird Monitoring at Kelly Island Wetland Restoration Site, Port Mahon Environmental Restoration Site and Broadkill Beach Sand Placement Site, Spring 2001, Delaware River Main Channel Deepening Project. Prepared for USACE, Philadelphia District.

Miller, D.C. 2002. Final Pre-Construction *Sabellaria vulgaris* Baseline Monitoring at Broadkill Beach Sand Placement Site, Sussex County, Delaware. Prepared for USACE, Philadelphia District. Contract No. DACW61-01-P-0291.

Versar, Inc. 2002. Kelly Island Pre-Construction Monitoring Study in Delaware Bay. Prepared for USACE, Philadelphia District. Contract No. DACW61-95-D-0011 Task Order No. 0015.

Versar, Inc. 2002. Delaware River Main Channel Deepening Project Delaware Bay Winter Crab Survey 2002. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0028.

Weber, Richard G. 2002. Preconstruction Crab Egg Density Monitoring and Habitat Availability at Kelly Island, Port Mahon and Broadkill Beach Study Areas, Delaware. Prepared for USACE, Philadelphia District. Contract No. DACW61-01-P-0212.

Versar, Inc. 2001. Delaware River Main Channel Deepening Project Delaware Bay Winter Crab Survey 2000/2001. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0009.

Versar, Inc. 2001. Pre-Construction Oyster, Water Quality, and Sediment Monitoring Study for the Delaware River Main Channel Deepening Project 2000/2001. Prepared for USACE, Philadelphia District. Contract No. DACW61-95-D-0011 Task Order No. 0086.

### **Sediment and Water Quality Information**

Versar, Inc. 2009. Pedricktown North Confined Disposal Facility Analysis. Prepared for USACE, Philadelphia District. Contract No. W912BU-06-R-0006 Task Order No. 0040.

U.S. Army Engineer Research and Development Center. 2007. Salinity Re-validation of the Delaware Bay and River 3D Hydrodynamic Model with Applications to Assess the Impact of Channel Deepening, Consumptive Water Use, and Sea Level Change. Prepared for USACE, Philadelphia District.

Versar, Inc. 2007. Water Quality and Flow Monitoring at Pedricktown Dredged Material Disposal Facility January 2007. Prepared for USACE, Philadelphia District. Contract No. W912BU-06-D-0003.

Versar, Inc. 2006. Pedricktown North Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0076. RECEIVED

Versar, Inc. 2005. Delaware River, Philadelphia, Pennsylvania to New Castle, Delaware Chemical Analysis of Dredged River Sediments. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0067. MAR 22 2010 WETLANDS

Versar, Inc. 2005. Killcohook Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0076.

Versar, Inc. 2004. Killcohook Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0049.

Versar, Inc. 2003. Chemical Analysis of Maintenance Dredge Material from the Marcus Hook, Deepwater Point, and New Castle Navigational Ranges. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0045.

Versar, Inc. 2002. Pedricktown South Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0037.

Versar, Inc. 2002. Oldmans Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0007.

Versar, Inc. 2002. Pedricktown South Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0023.

Versar, Inc. 2001. Reedy Point South Water Quality Modeling. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0026.

Versar, Inc. 2001. Near-Field Water Quality Modeling of Dredging Operations. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0026.

Versar, Inc. 2001. PCB Mobilization During Dredging Operations and Sequestration by Upland Confined Disposal Facilities. Prepared for USACE, Philadelphia District. Contract No. DACW61-00-D-0009 Task Order No. 0026.

Versar, Inc. 2001. Killcohook Confined Disposal Facility Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-95-D-0011 Task Order No. 0079.

Versar, Inc. 2000. Pedricktown Confined Disposal Facility Contaminant Loading and Water Quality Analysis. Prepared for USACE, Philadelphia District. Contract No. DACW61-95-D-0011 Task Order No. 0057.

Versar. 1997. Delaware River Philadelphia to the Sea Project, High Resolution PCB Analysis of Channel Sediments. Prepared for the U.S. Army Corps of Engineers, Philadelphia District by Versar, Inc., Columbia, Maryland.

Black & Veatch Waste Science, Inc. 1996. Results of Berthing Area Vibracore Sampling Along the Delaware River from Beckett Street Terminal in Camden, NJ to Sun Oil Refinery in Marcus Hook, PA. Prepared for USACE, Philadelphia District. Contract No. DACW61-94-D-0013 Task Order Nos. 0005, 0006 & 0009.

Greeley-Polhemus Group, Inc. 1995. Delaware River Comprehensive Navigation Study – Main Channel Deepening Project Biological Effects Based Testing of Channel Sediments. Prepared for USACE, Philadelphia District. Contract No. DACW61-91-D-0009 Task Order No. 0029.

### **Monitoring Scopes of Work**

Delaware River Main Channel Deepening Project Confined Disposal Facility Water Quality Monitoring Reedy Point North and/or South.

Delaware River Main Channel Deepening Project Reedy Point North and/or South Confined Disposal Facility Chemical Analysis of Dredged Material.

Delaware River Main Channel Deepening Project Water Quality Monitoring at the ~~REPORT OF~~ Dredging Three Channel Locations Within State of Delaware Waters

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### **Construction Plans and Specifications**

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Philadelphia District. 2009. Dredging, Delaware River Philadelphia to the Sea PA, NJ and DE, w/Options for Deepening Construction Solicitation and Specifications. IFB W912BU-09-B-0005. 26 June 2009.

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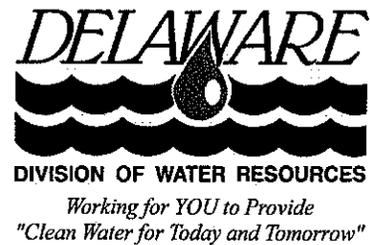
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**Wetlands and Subaqueous Lands Section**

**PERMIT APPLICATION FORM**

**For Subaqueous Lands and Wetlands Projects**

**State of Delaware  
Department of Natural Resources and Environmental  
Control  
Division of Water Resources  
Wetlands and Subaqueous Lands Section**



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**APPLICATION FOR APPROVAL OF**

APPLICATION FOR APPROVAL OF  
SUBAQUEOUS LANDS, WETLANDS, MARINA  
AND WATER QUALITY CERTIFICATION PROJECTS

*PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY*

**Application Instructions:**

1. Complete each section of this basic application and appropriate appendix as thoroughly and accurately as possible. Incomplete or inaccurate applications will be returned. For projects involving docks, piers or wetland walkways, please refer to the Guidance Document for Boat Docking Facilities and Wetland Walkways.
2. All applications must be accompanied by scaled site plans and cross-section plans that show the location and design details of the proposed project. Full construction plans should be submitted for major projects.
3. All applications must have an original signature page and proof of ownership or permitted land use agreement.
4. Submit an original and two (2) additional completed copies of the application (total of 3) with the appropriate application fee\* to: **Wetlands and Subaqueous Lands Section**

**DNREC  
89 Kings Highway  
Dover, Delaware 19901**

*\*Application fees are non-refundable regardless of the permit decision or application status.*

5. No construction may begin at the project site before written approval has been received from this office.

**Additional Information:**

1. For Tax Parcel Information:
 

New Castle County	395-5400
Kent County	736-2010
Sussex County	855-7878
2. Recorder of Deeds:
 

New Castle County	571-7550
Kent County	744-2314
Sussex County	855-7785
3. Approval may also be required from the Corps of Engineers for projects contained in a completed state application form. Applicants are strongly urged to contact the Corps for a determination of their permitting requirements. The contact number for the Regulator of the Day is (215) 656-6728.
4. For additional permit information, contact the Wetlands and Subaqueous Lands Section at (302)739-9943.

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## APPLICANT'S REVIEW BEFORE MAILING

DID YOU COMPLETE THE FOLLOWING?

<u>  X  </u>	Yes	BASIC APPLICATION
<u>  X  </u>	Yes	APPENDICES
<u>  X  </u>	Yes	VICINITY MAP
<u>  X  </u>	Yes	PLAN VIEW
<u>  X  </u>	Yes	ELEVATION OR SECTION VIEW
<u>  X  </u>	Yes	SIGNATURE PAGE (Page 3) with Agent Authorization if appropriate
<u>  *  </u>	Yes	COPY OF PROPERTY DEED & SURVEY
<u>  X  </u>	Yes	THREE (3) COMPLETE COPIES
<u>  *  </u>	Yes	LIST OF ADJACENT PROPERTY OWNERS (as per item #14A & B of this basic application form)
<u>  NA  </u>	Yes	APPROPRIATE APPLICATION FEE (Checks should be made payable to the State of Delaware)

Mail 3 complete copies of the application, with drawings to:

Department of Natural Resources and Environmental Control  
Division of Water Resources  
Wetlands and Subaqueous Lands Section  
89 Kings Highway, Dover, DE 19901  
(302) 739-9943

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\* Tax maps and list of property owners will be supplied when the temporary easements are acquired for placement of material at the Kelly Island and Broadkill Beach beneficial use sites.



**DELAWARE RIVER MAIN CHANNEL DEEPENING PROJECT**  
**(PENNSYLVANIA, NEW JERSEY, AND DELAWARE)**

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**Project Summary**

The Congressionally authorized project (Public Law 102-580, Section 101 (6) of WRDA 1992 and modified by Public Law 106-53, Section 308 of WRDA 1999) consists of a navigation channel extending from deep water in the Delaware Bay to Philadelphia Harbor, Pennsylvania and to Beckett Street Terminal, Camden, New Jersey, a distance of about 102.5 miles. The plan provides for modifying the existing Delaware River Federal Navigation Channel (Delaware River, Philadelphia to the Sea) from 40 to 45 feet below Mean Low Water (MLW).

Although the distance is 102.5 miles, it is conservatively estimated that 44 percent of the area of the channel is naturally deeper than 45 feet, and therefore requires no new work or future maintenance dredging. The project follows the existing 40-foot federal main shipping channel alignment. The existing authorized widths in the straight portions of the channel, ranging from 400 feet in Philadelphia Harbor to 1,000 feet in the bay, will not change. However, 12 of the existing 16 bends in the channel will be widened for safer navigation. In addition, the Marcus Hook Anchorage will be deepened to 45 feet. See Section 2.0 of the enclosed April 2009 Delaware River Main Stem and Channel Deepening Project Environmental Assessment for a complete description of the project.

To deepen the channel, approximately 16.0 million cubic yards of material must be removed during initial construction of the project. Of that amount, approximately 11.9 million cubic yards of sand, silt, and clay will be taken from the river portion of the project – the area from Philadelphia/Camden to the Upper Delaware Bay. About 77,000 cubic yards of rock will also be removed from the Marcus Hook area of the river. The material to be dredged from the river portion is slated for placement at existing federal upland Confined Disposal Facilities, or CDFs, in New Jersey and Delaware. The remaining 4.1 million cubic yards is primarily good quality sand from the Delaware Bay. The sand will be dredged and placed for beneficial use at Kelly Island, Delaware for wetland restoration and protection (a similar initiative at Egg Island Point, New Jersey has been deferred pending availability of sufficient sand). It will also be placed along the Delaware Bay coastline for shore protection at Broadkill Beach. The bulk of dredging will be performed by hopper and hydraulic pipeline dredges with a bucket dredge used for rock removal in the Marcus Hook area.

Annual maintenance dredging for the entire project will increase by approximately 860,000 cubic yards per year to approximately 4.3 million cubic yards. The current 40-foot channel requires approximately 3.5 million cubic yards in annual maintenance dredging.

To ensure that construction of the project does not impact the natural resources of the region, the Corps has set up pre-construction monitoring to establish baseline information that the Corps, DNREC and other state and federal agencies will use to track the ongoing effects of the project. Data has been collected on oysters, horseshoe crabs, shorebirds, blue crabs and sand builder worms. The monitoring will continue during and after project construction.

A Comprehensive Economic Reanalysis Report for the project was completed in December 2002 and a supplement to that report was completed in February 2004. The comprehensive reanalysis was subsequently followed by an Economic Update in April 2008. A second Economic Update, which was conducted as part of the ongoing budgeting process for the FY 2011 Federal Budget,

was completed in December 2009. As documented in this update, using a 2009 price level and the applicable FY 2010 Federal discount rate of 4 3/8%, a 5 year construction schedule, and a project life of 50 years, the total initial construction costs for deepening the federal navigation channel are \$265,627,000; the benefit-cost ratio is 1.35, and the net annual benefits are \$7,810,000

Project cost estimates include updates for disposal area preparation. The disposal area work consists of site clearing, raising dikes and constructing sluices. Construction schedules, disposal areas use schedule and all quantities for initial and maintenance cost estimates, including disposal area development were updated in estimating the cost of the project.

The present worth analysis of total project costs (initial and operation and maintenance) determined that average annual costs are equal to \$22,281,000. The project benefits quantified include the reduced cost of transportation realized through operational efficiencies (reduced lightering and lightloading), and the use of more efficient vessels. The design vessel for the channel will not change with the proposed deepening. The largest vessels in the Delaware River fleet are tankers that lighter in the lower bay at the naturally deep Big Stone Beach Anchorage. These tankers enter the bay currently with a maximum 55 foot sailing draft. With the deepened channel, these tankers will need to lighter less tonnage at the anchorage in order to reduce their sailing drafts prior to navigating upriver. For the other commodities, the charter market will allow a change in the vessel size from the 40 foot to 45 foot design draft class to more efficiently take advantage of a deepened channel. Reduced transportation costs result in reduced production and distribution costs and thereby increase the net value of the national output of goods and services. Average annual benefits are estimated to be \$30,091,000.

Reach C of the project is currently under construction and will be completed prior to a final decision on this permit application. This application provides a description of the entire project but does not request a State of Delaware Subaqueous Lands and Wetlands Permit for Reach C or Reaches AA and A, which are not in the territorial waters of the State of Delaware. The remaining work to take place within the State of Delaware, and for which a Subaqueous Lands and Wetlands Permit is requested, is as follows:

- Removal of approximately 1,598,700 cy of material from Delaware Bay (Reach E) by hopper dredge with placement at Broadkill Beach, DE;
- Removal of approximately 2,483,000 cy of material from Delaware Bay (Reach E) by hopper dredge with placement at Kelly Island, DE;
- Removal of approximately 2,051,100 cy of material from Reach D by hopper dredge with placement at the Federally owned Reedy Point South and Artificial Island confined disposal facilities (CDFs);
- Removal of approximately 2,600,000 cy of material from Reach B within Delaware State waters by hydraulic pipeline dredge with placement at the Federally owned Oldmans, Pedricktown North and Pedricktown South CDFs; and
- Removal of approximately 77,000 cy of rock from Reach B within Pennsylvania and Delaware State waters by a combination of blasting and bucket dredging with placement at the Federally owned Fort Mifflin CDF.

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Type of Auth:  SP  SL  WR  WQ  SA  SU  LA  MP  WA  EX   
 Permit #s: SP-07510 WE-07610  
 SPGP: 18  20  Individual Permit:  Nationwide Permit #: \_\_\_\_\_  
 Received Date: 3/22/10 Project Scientist: Laura M. Herr  
 Fee Received? Yes  No  Amt: \$\$ NA Receipt #: \_\_\_\_\_  
 Public Notice #: \_\_\_\_\_ Public Notice Dates: ON \_\_\_\_\_ OFF \_\_\_\_\_

**Section 3: Project Location (Continued)**

10. Name of Waterbody at Project Location: Delaware River Waterbody is a Tributary to: N/A

11. Is the waterbody: Tidal  Non-tidal

12. Is the project:  
 On public subaqueous lands?  On private subaqueous lands?  In wetlands?

If the project is on private subaqueous lands, indicate the name of the subaqueous lands owner:

(Written permission of the private subaqueous lands owner must be included with this application).

13. Present Zoning: Agricultural  Residential  Commercial  Industrial  Other

**Section 4: Miscellaneous**

14. A. List the name and complete mailing address of the immediately adjoining property owners on all sides of the project. (Attach additional sheets as necessary):

See Attached

B. For wetlands and marina projects, list the name and complete mailing address of each property owner within a 1000 foot radius of the project. (Attach additional sheets as necessary)

See Attached

15. Indicate the names of all representatives from DNREC and the Army Corps of Engineers who you have discussed the project with:

<u>Secretary O'Mara</u>	<u>Laura Herr</u>	<u>Roy Miller</u>
<u>David Small</u>	<u>Sarah Cooksey</u>	<u>Rick Greene</u>

A. Have you had a State Jurisdictional Determination performed on the property? Yes  No   
 B. Has the project been reviewed in a monthly Joint Permit Processing Meeting? Yes  No   
 If yes, what was the date of the meeting? \_\_\_\_\_

16. If there is any existing fill or structures in subaqueous lands at the project site, were the structures constructed or fill placed prior to 1969?  Yes  No - If no, provide a copy of any prior and/or current authorization(s) for projects at this site. If a copy is not available, provide the permit or lease number(s) if known.

N/A

17. Have you applied for or obtained a federal permit for the project from the Army Corps of Engineers? **RECEIVED**  
 N/A  Pending  Issued  Denied Date: \_\_\_\_\_  
 Type of permit: \_\_\_\_\_ Federal Permit or ID #: \_\_\_\_\_

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18. Have you applied for permits from other Sections within DNREC?

None    Pending    Issued    Denied   Date: \_\_\_\_\_   Permit or ID #: \_\_\_\_\_  
Type of permit (circle all that apply):   Septic   Well   NPDES   Storm Water

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14. A. List the name and complete mailing address of the immediately adjoining property owners on all sides of the project.

Federal Navigation Channel: N/A

Kelly Island Wetland Restoration: U.S. Fish and Wildlife Service, Bombay Hook National Wildlife Refuge, RD 1, Box 147, Smyrna, DE 19977

Broadkill Beach: Combination of private and public ownership. A list of owners will be obtained during the acquisition of temporary easements for placement of sand.

B. For wetlands and marina projects, list the name and complete mailing address of each property owner within a 1000 foot radius of the project.

Kelly Island Wetland Restoration

State of Delaware  
Dover, DE 19903

Delaware Chapter of the Nature Conservancy  
Attn: Mr. Jack Zankel  
260 Chapman Road, 201-D  
Newark, DE 19713

Port Mahon Oyster Company  
P.O. Box 365  
Little Creek, DE 19961

John Pleasanton  
RD# 3, Box 304  
Dover, DE 19903

Delaware Storage and Pipeline Company  
Box 313  
Dover, DE 19903

U.S. Fish and Wildlife Service  
Bombay Hook National Wildlife Refuge  
RD 1, Box 147  
Smyrna, DE 19977

Broadkill Beach

Combination of private and public ownership. A list of owners will be obtained during the acquisition of temporary easements for placement of sand.

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**Section 5: Signature Page**

**19. Agent Authorization:**

If you elect to complete this agent authorization section, all future correspondence to the Department may be signed by the duly authorized agent. In addition, the agent will become the primary point of contact for all correspondence from the Department.

I do not wish to authorize an agent to act on my behalf.

I wish to authorize an agent as indicated below.

I, Minas M. Arabatzis, hereby designate and authorize  
Name of Applicant  
Jerry J. Pasquale to act on my behalf in the processing  
Name of Agent

of this application and to furnish any information that is requested by the Department.

Authorized Agent's Name: Jerry J. Pasquale  
Mailing Address: U.S. Army Corps of Engineers Telephone #: (215) 656-6560  
100 Penn Square East Fax #: (215) 656-6543  
Philadelphia, PA 19107 E-mail: jerry.j.pasquale@usace.army.mil

**20. Agent Signature**

I hereby certify that the information on this form and on the attached plans is true and accurate to the best of my knowledge, I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

Jerry Pasquale 12 March 2010  
Agent's Signature Date

**21. Applicant's Signature:**

I hereby certify that the information on this form and on the attached plans is true and accurate to the best of my knowledge and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application. I grant permission to authorized Department representatives to enter upon the premises for inspection purposes during working hours.

[Signature] 12 March 2010  
Applicant's Signature Date  
Minas M. Arabatzis  
Print Name

**22. Contractor's Signature:**

I hereby certify that the information on this form and on the attached plans is true and accurate to the best of my knowledge, and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

\_\_\_\_\_  
Contractor Name Date

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DELAWARE DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL ("DNREC")

ENVIRONMENTAL PERMIT APPLICATION  
BACKGROUND STATEMENT

Pursuant to 7 Del. C. Chapter 79

**FILING STATUS:**

This Background Statement is being filed with DNREC because:

- 1. It is an initial application for a new permit (or permits) and the applicant company has not been issued any permits by DNREC in the previous five (5) years [See 7 Del. C. § 7902(a) and (b)];
- 2. It is required on an annual basis because the company has been designated a chronic violator pursuant to 7 Del. C. § 7904 [See 7 Del. C. § 7902(a)(7) and (b)(2)]; or
- 3. It is required on an annual basis as the applicant company has been found guilty, pled guilty or no contest to any crime involving violation of environmental standards which resulted in serious physical injury or serious harm to the environment as defined in 7 Del. C. § 7902(c) [See 7 Del. C. § 7902(a)(7) and (b)(2)].

<p>APPLICANT COMPANY'S NAME OR COMPANY'S NAME FILING STATEMENT</p>	<p>U.S. Army Corps of Engineers Philadelphia District</p>
<p>DATE OF APPLICATION OR DATE OF STATEMENT</p>	<p>12 March 2010</p>
<p>PERMIT(S) BEING APPLIED FOR OR STATEMENT FOR FILING STATUSES 2 OR 3</p>	<p><input type="checkbox"/> Permit Type(s) <u>Subaqueous Lands and Wetlands Permit</u></p> <p><input type="checkbox"/> Statement for filing Statuses 2 or 3—If filing under these statuses, attach a statement of the date of designation as Chronic Violator or the date of Conviction/Plea.</p>
<p>OTHER DNREC PERMITS HELD</p>	<p><input checked="" type="checkbox"/> N/A – No other permits held with DNREC</p> <p><input type="checkbox"/> List of all DNREC permits currently held with dates of issuance and expiration attached.</p>

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# ENVIRONMENTAL PERMIT APPLICATION BACKGROUND STATEMENT

**Please note:** Companies filing statements pursuant to Chapter 79 have the right to identify information to be afforded confidential status pursuant to 7 Del. C. § 7903(b) and the requirements set forth in Section 6, "Requests for Confidentiality" of the DNREC *Freedom of Information Act Regulation*.

PROVIDING ALL OF THE INFORMATION REQUESTED IN THIS FORM SATISFIES THE REQUIREMENTS OF 7 DEL. C. CHAPTER 79 ("ENVIRONMENTAL PERMIT APPLICATION BACKGROUND STATEMENT") UNLESS THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL ("DNREC") OR THE DELAWARE DEPARTMENT OF JUSTICE DETERMINES THAT ADDITIONAL SUBMISSIONS ARE NECESSARY. FAILURE TO PROVIDE THE INFORMATION REQUESTED OR PROVIDING ERRONEOUS INFORMATION IS GROUNDS FOR DENYING OR REVOKING AN ENVIRONMENTAL PERMIT/APPROVAL/LICENSE, AND FOR CIVIL AND/OR CRIMINAL PENALTIES.

**A.** (Authority – 7 Del. C. § 7902(a)(1&2) & § 7905) Attach a complete list (full names) of all current members of the applicant company's board of directors, all current corporate officers, all persons owning more than 20% of the applicant's stock or other resources, all subsidiary/affiliated companies with type of business performed, street addresses, all parent companies with addresses, all companies with which the applicant's company shares two or more members of the board of directors, and the name(s) of the person(s) serving as the applicant's local chief operating officer(s) with respect to each facility covered by the permit in question or for the statement required for filing Statuses 2 or 3. [Note: For companies that do not have a *facility* located in Delaware, no listing for the local chief operating officer(s) is required].

- Information attached
- Information attached, except for local chief operating officer as there is no facility located in the State of Delaware.

**B.** (Authority - 7 Del. C. § 7905) Please check one of the following selections below, showing type of ownership for the applicant/statement company:

- Proprietorship      List the state, county, book record and page number where the certificate is found (Attach hereto).
- Partnership            List the state, county, book record and page number where the certificate is found (Attach hereto).
- Corporation  
(LLCs included)        List the city, state, date of incorporation, corporation file number, current corporate standing, registered agent, and address of the registered agent (Attach hereto).
- Municipality
- Public Institution/  
Federal Government
- Other

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C. (Authority - 7 Del. C. § 7902(a)(3) & § 7905) Have any of the following been issued to or agreed to by the applicant/statement company, any employee, person, entity, or subsidiary/affiliated company, specified in response to Item A, for violation of any environmental statute, regulation, permit, license, approval, or order, regardless of the state in which it occurred, during the five years prior to the date of this application/statement

OFFENSE	YES	NO
Notice of Violation(s)		X
Administrative Order(s)		X
Administrative Penalty(ies)		X
Civil Action(s)		X
Civil Penalty(ies)		X
Civil and/or Administrative Settlement Agreement(s)		X
Permit/License/Approval Revocation		X
Arrest(s)		X
Conviction(s)		X
Criminal Penalty(ies)		X
Criminal Plea Bargain		X

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**D. (Authority - 7 Del. C. § 7902(a)(3), (a)(4) & § 7905)** If you answered “yes” to any of the actions listed in Item C above for the applicant company or any other person identified in Item A, attach a description of the incidents or events leading to the issuance of each action, regardless of the state in which it occurred, for the 5 years prior to the date of the statement, and the disposition of each action, what state the action/offense occurred in, and any actions that have been taken to correct the violations that led to such enforcement action.

- N/A
- Information attached

**E. (Authority - 7 Del. C. § 7902(a)(5) & § 7905)** Attach a description of any felony or other criminal conviction for a crime involving harm to the environment or violation of environmental standards of any person or entity identified in Item A above that resulted in a fine greater than \$1,000 or a sentence longer than 7 days, regardless of whether such fine or sentence was suspended.

- N/A
- Description attached

**F. (Authority - 7 Del. C. § 7902(a)(6) & § 7905)** Attach copies of any and all settlements of environmental claims involving the applicant, associated with actions identified in response to Item D above, whether or not such settlements were based on agreements where the applicant did not admit liability for the action.

- N/A
- Information attached

**Items for Filing Statuses 2 or 3 Only**

**G. (Authority - 7 Del. C. § 7902(a)(7) and § 7905)** If the applicant/statement company has been found guilty, pled guilty or no contest, to any crime involving violation of environmental standards which resulted in serious physical injury or serious harm to the environment attach a summary of the events involved and a copy of the disposition of the action (*See 7 Del. C. § 7902(c) for definitions of "serious physical injury" or "serious harm to the environment" before answering this question.*)

N/A

Yes – Information Attached.

**H. (Authority - 7 Del. C. § 7902(a)(8))** – If the applicant/statement company has been designated a chronic violator under 7 Del. C. § 7904, a detailed written report from an independent inspector who has inspected the applicant's premises for the purpose of detecting potential safety and environmental hazards to employees and the surrounding community. The Secretary may waive the duty to submit a detailed written report upon a showing of good cause by the applicant. A showing by the applicant that the acts which caused it to be designated as a chronic violator did not jeopardize public health shall constitute "good cause" under this paragraph.

**I. (Authority - 7 Del. C. § 7902(a)(7))** – If the applicant has been designated a chronic violation under § 7904 of this Title, **OR** has been found guilty or pled no contest to any crime involving violation of environmental standards which resulted in serious physical injury or serious harm to the environment, a statement made under oath by the applicant's local chief operating officer with respect to the facilities covered by the permit, stating that: (a) disclosures made by the applicant/reporting company under federal and state environmental statutes and regulations during the preceding calendar year have been, to the chief operating officer's knowledge, complete and accurate, and (b) that the facility has implemented policies, programs, procedures, standards or systems reasonably designated, in light of the size, scope, and nature of facility operations to detect deter and promptly correct any noncompliance with state environmental statutes and regulations. The statement filed pursuant to this paragraph shall include an acknowledgement by the affiant that intentionally false statements submitted in compliance with this paragraph constitute criminal perjury as defined at 11 Del. C. §§1221-1222.

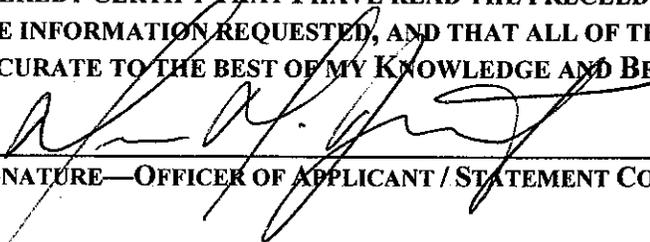
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STATE OF DELAWARE – DEPT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL  
**ENVIRONMENTAL PERMIT BACKGROUND STATEMENT**  
**CERTIFICATION**

I HEREBY CERTIFY THAT I HAVE READ THE PRECEEDING SUBMISSION, HAVE PROVIDED ALL OF THE INFORMATION REQUESTED, AND THAT ALL OF THE INFORMATION PROVIDED IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

  
SIGNATURE—OFFICER OF APPLICANT / STATEMENT COMPANY

DATE: 12 March 2010

NAME: MINAS M. ARABATZIS

TITLE: CHIEF, PLANNING DIVISION

COMPANY NAME: U.S. ARMY CORPS OF ENGINEERS

ADDRESS: 100 PENN SQUARE EAST  
PHILADELPHIA, PA 19107

TELEPHONE: (215) 656-6540

FAX NUMBER: (215) 656-6543

REGISTERED AGENT NAME: \_\_\_\_\_ **RECORDED**

ADDRESS: \_\_\_\_\_ **MAR 22 2010**

TELEPHONE: \_\_\_\_\_ **WETLANDS**

FAX NUMBER: \_\_\_\_\_

SWORN TO AND SUBSCRIBED

BEFORE ME THIS 12 DAY OF

MARCH, 2010.

  
NOTARY PUBLIC SIGNATURE (SEAL)

JOAN D. LIBERT  
PRINTED NAME OF NOTARY PUBLIC

PENNSYLVANIA PHILADELPHIA  
STATE / COUNTY

COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
JOHN D. LIBERT, Notary Public  
City of Philadelphia, Phila. County  
My Commission Expires May 7, 2010

MY COMMISSION EXPIRES ON: MAY 7, 2010

**DELAWARE RIVER MAIN CHANNEL DEEPENING PROJECT**

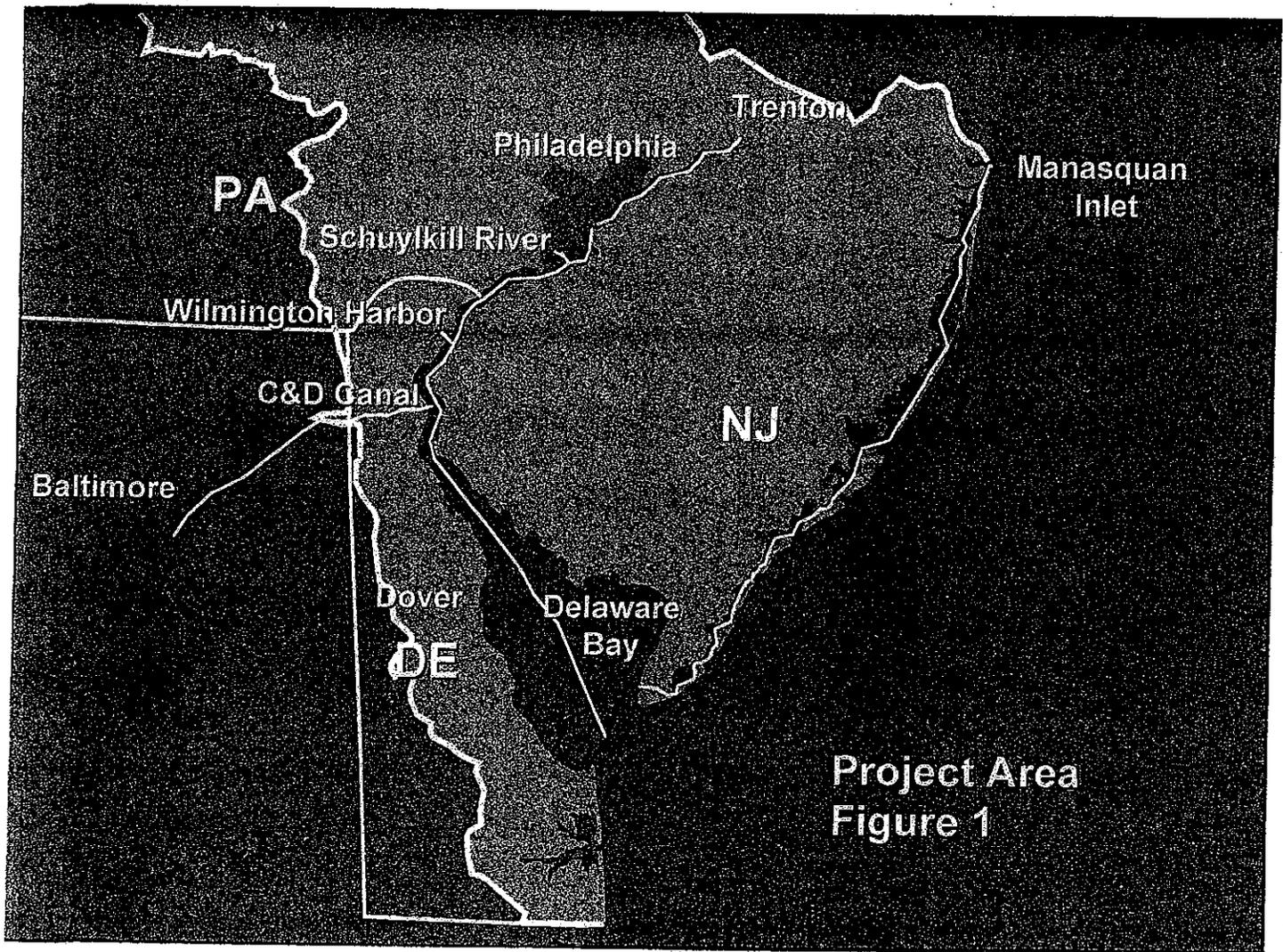
**FIGURES**

**U. S. Army Corps of Engineers, Philadelphia District**

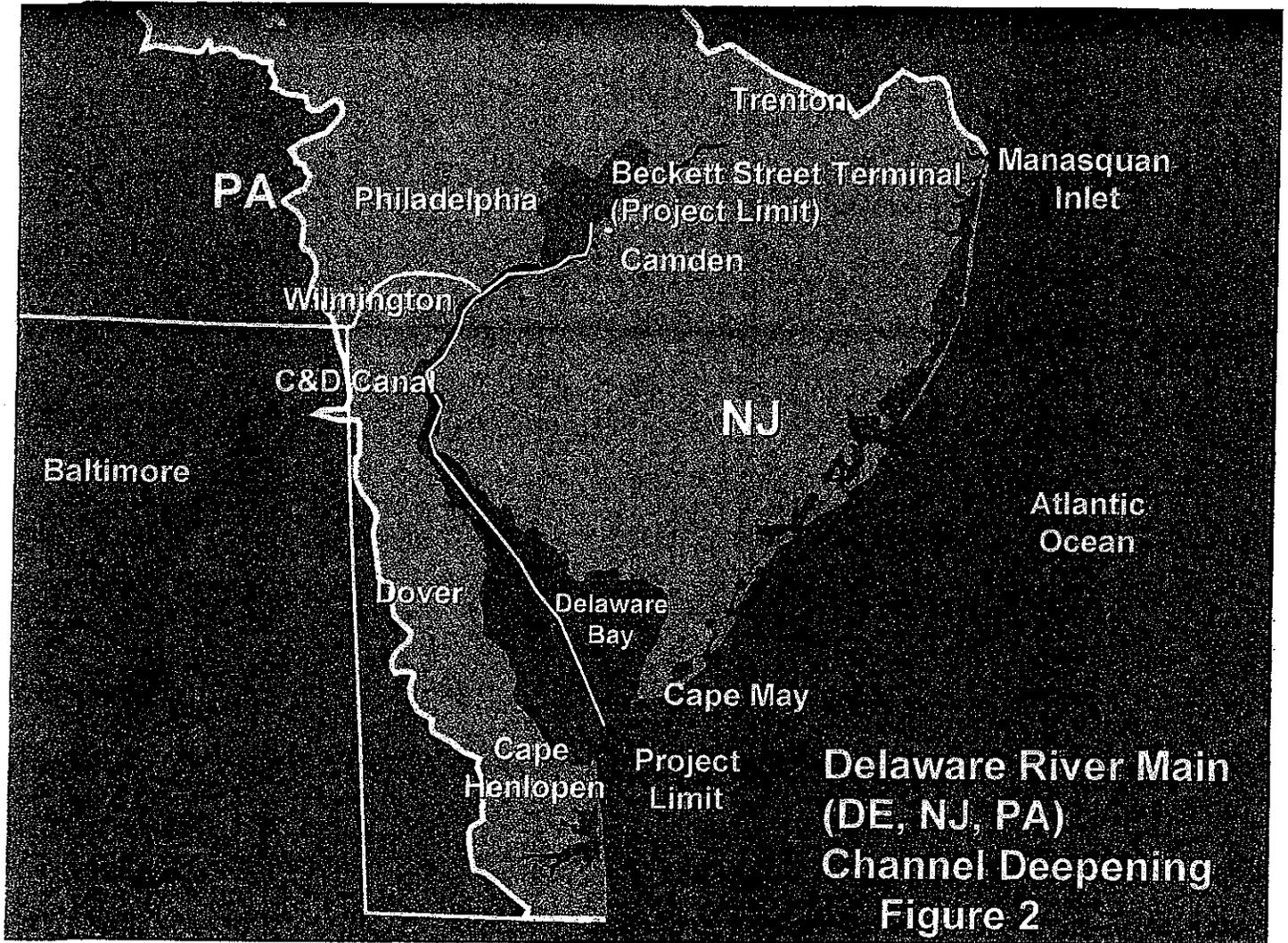
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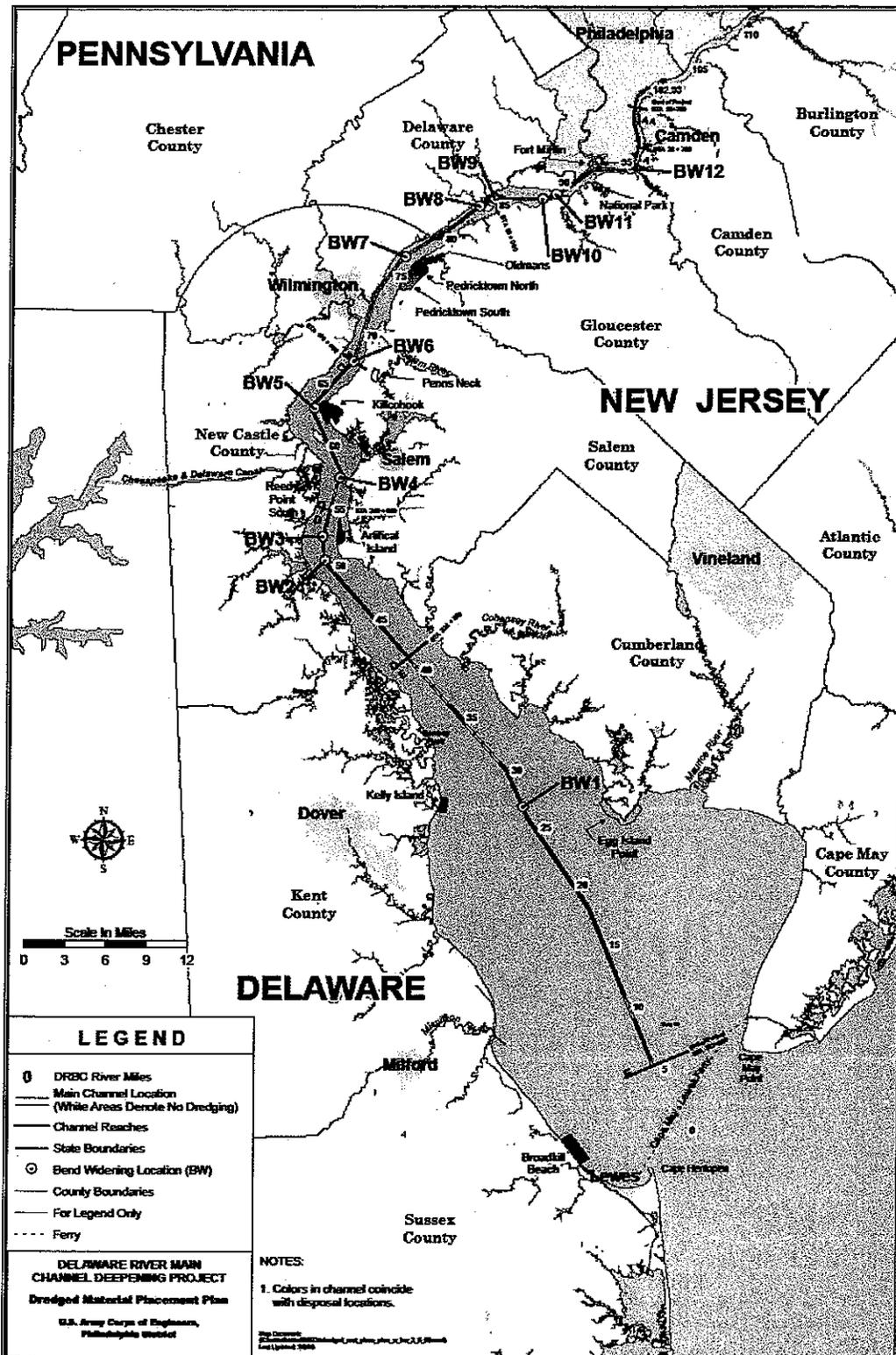
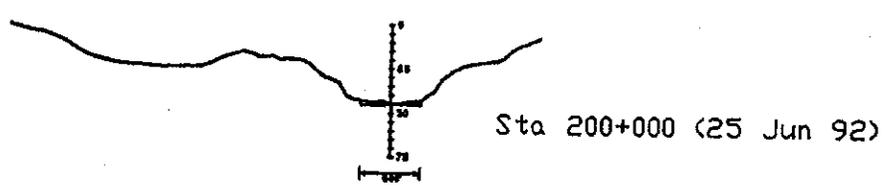
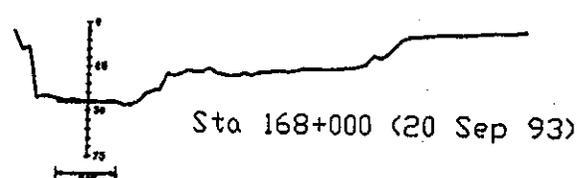
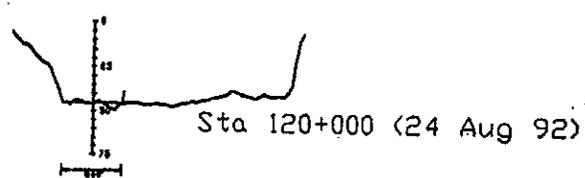
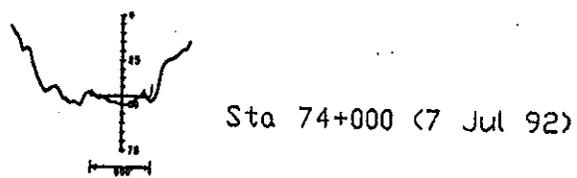
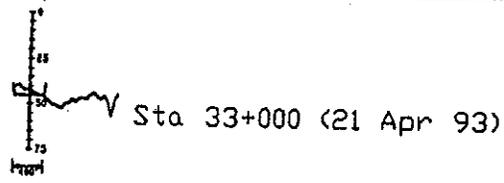


Figure 2-1. Delaware River Main Channel Deepening Project.

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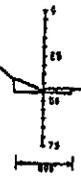


Horizontal: 1"=200'  
Vertical: 1"=80'

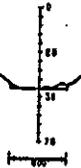
DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT  
Representative Cross Sections  
Sta 33+000 to Sta 200+000  
U.S. Army Corps of Engineers  
Philadelphia District  
Figure 4

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Sta 230+000 (16 Jul 93)

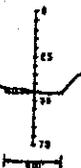


Sta 260+000 (19 Jul 93)



Horizontal: 1"=2000'  
Vertical: 1"=80'

Sta 300+000 (8-13 Jul 93)



Sta 352+000 (18 Nov 93)



DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT  
Representative Cross Sections  
Sta 200+000 to Sta 352+000

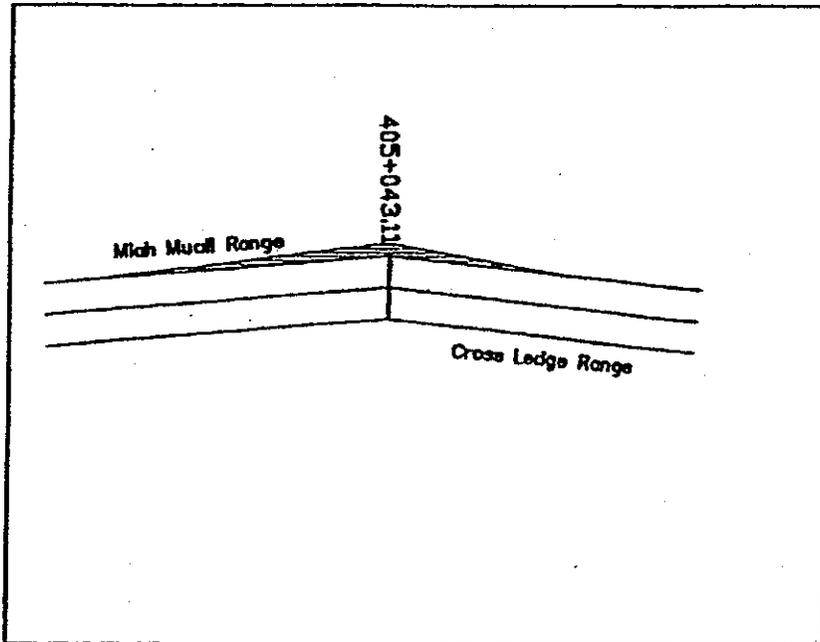
U.S. Army Corps of Engineers,  
Philadelphia District  
Figure 5.

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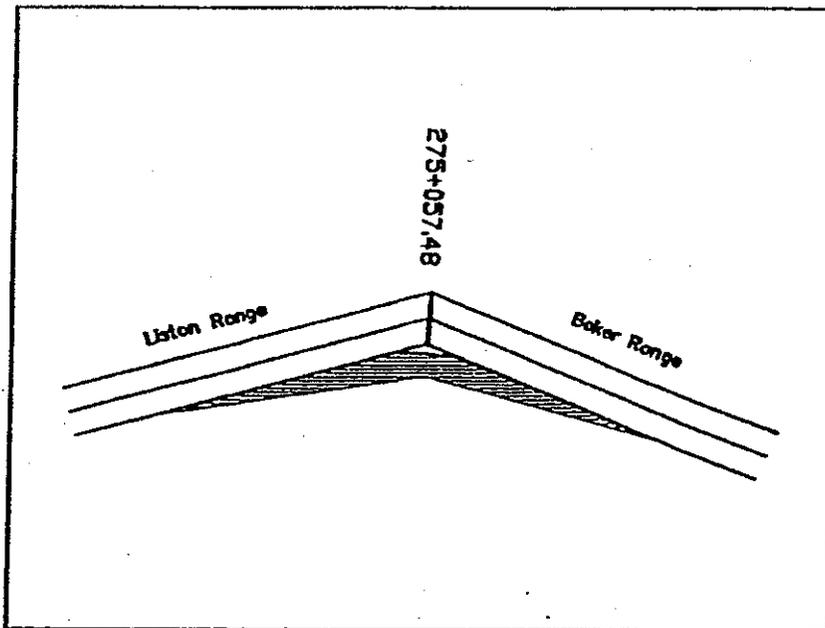
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MAH MUALL-CROSS LEDGE (BW1)



LISTON-BAKER (BW2)



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WETLANDS

 — Bend Widening

SCALE: 1"=3000'

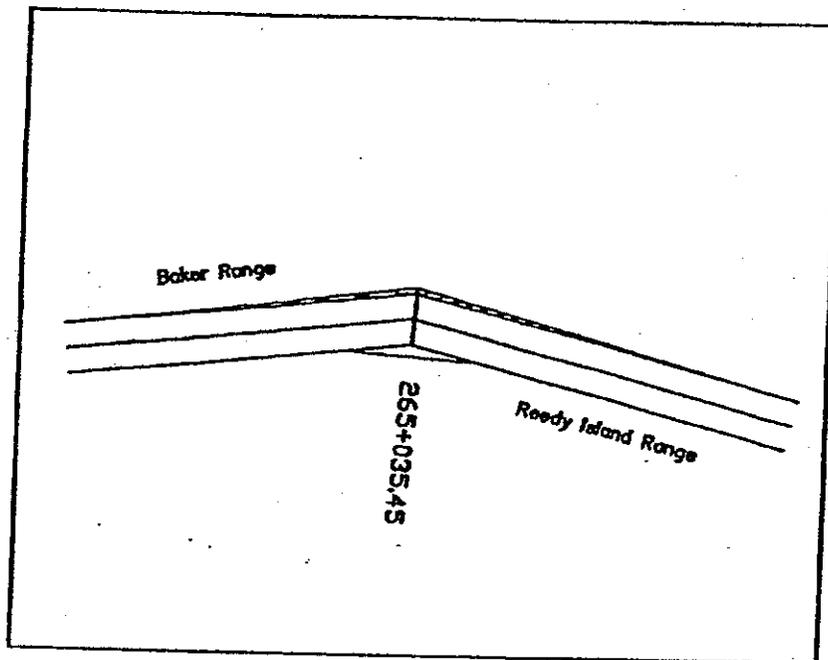
DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT

Bend Widening:  
Mah Muall-Cross Ledge  
Liston-Baker

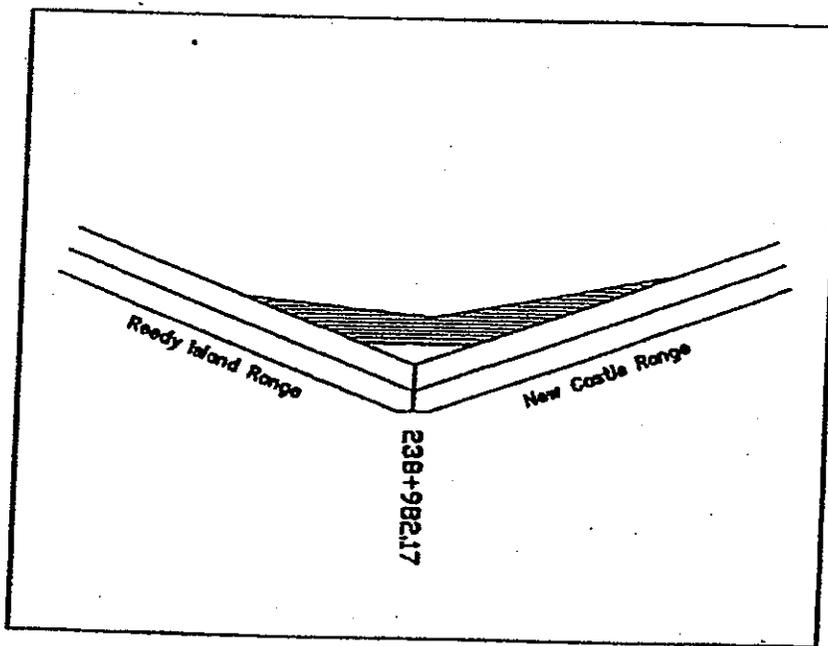
U.S. Army Corps of Engineers,  
Philadelphia District

Figure 6

BAKER-REEDY ISLAND (BW3)



REEDY ISLAND-NEW CASTLE (BW4)



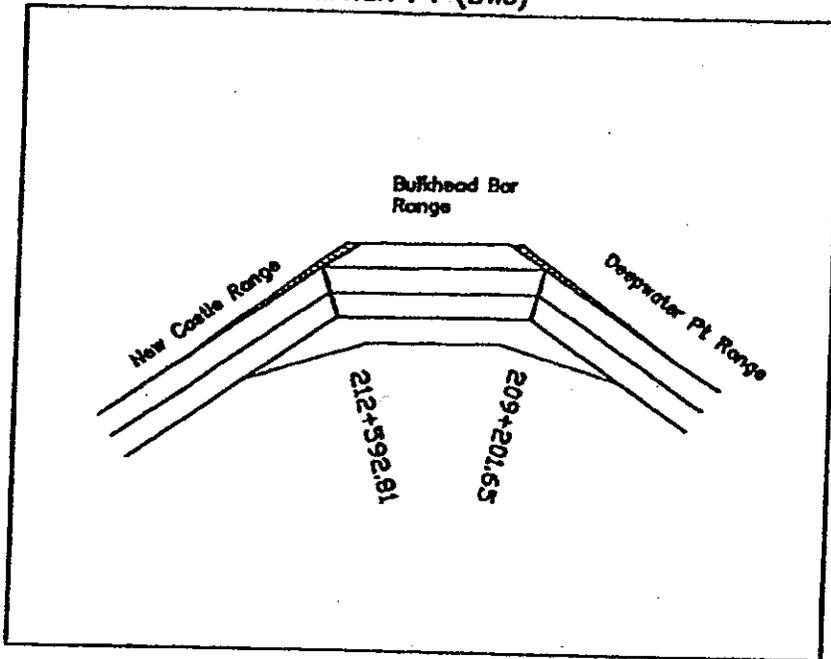
RECEIVED  
MAR 22 2010  
WETLANDS

 — Bend Widening

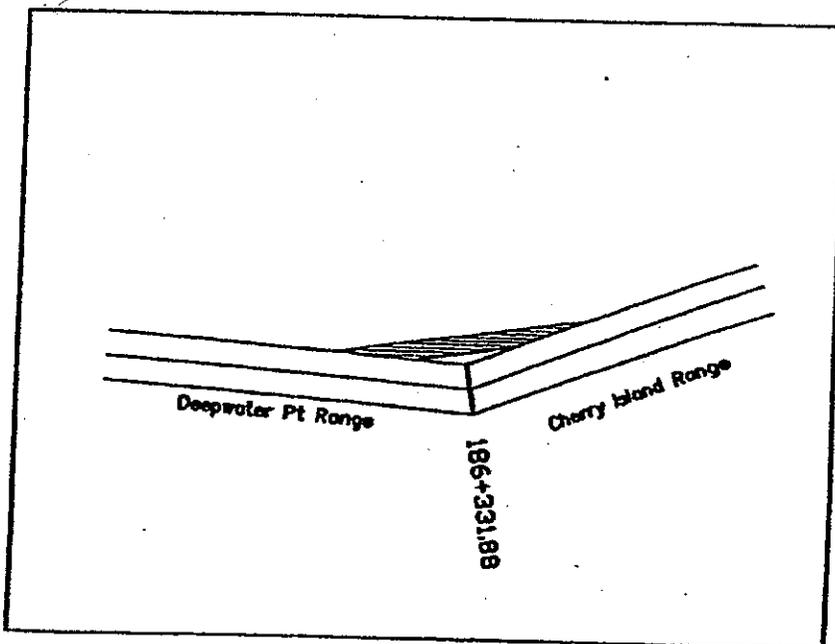
SCALE: 1"=3000'

DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT  
Bend Widening:  
Baker-Reedy Island  
Reedy Island-New Castle  
U.S. Army Corps of Engineers,  
Philadelphia District  
Figure 7

NEW CASTLE-BULKHEAD BAR AND  
BULKHEAD BAR-DEEPWATER PT (BW5)



DEEPWATER PT-CHERRY ISLAND (BW6)



 — Bend Widening

SCALE 1"=3000'

DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT

Bend Videnings:

New Castle-Bulkhead Bar-Deepwater Pt  
Deepwater Pt-Cherry Island

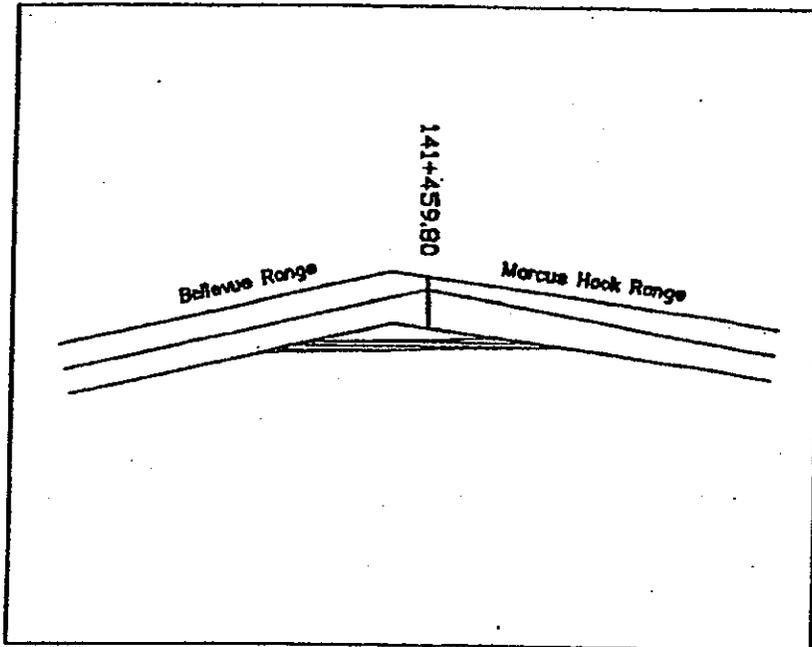
U.S. Army Corps of Engineers  
Philadelphia District

Figure 8

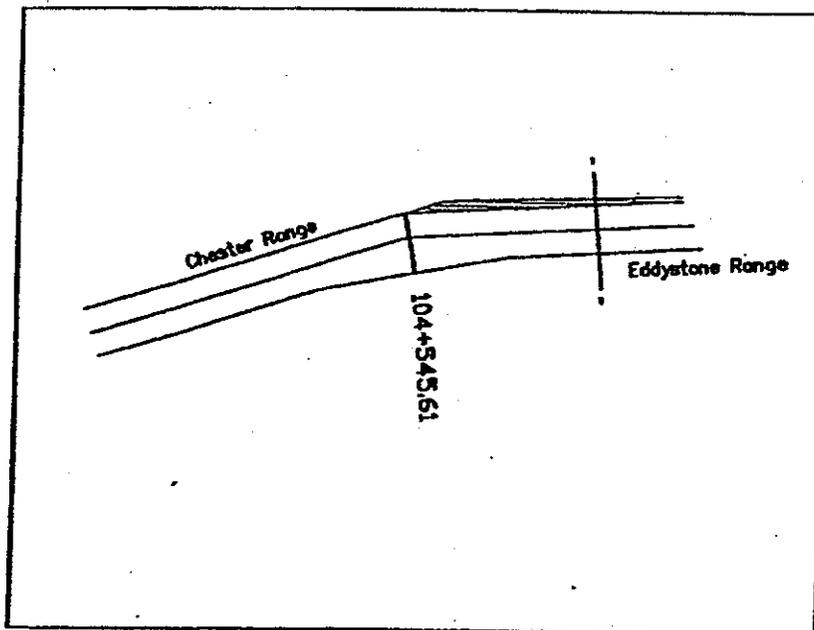
MAR 22 2010

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# BELLEVUE-MARCUS HOOK (BW7)



# CHESTER-EDDYSTONE (BW8)



 — Bend Widening

SCALE: 1"=3000'

DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT

Bend Widening:  
Bellevue-Marcus Hook  
Chester-Eddystone

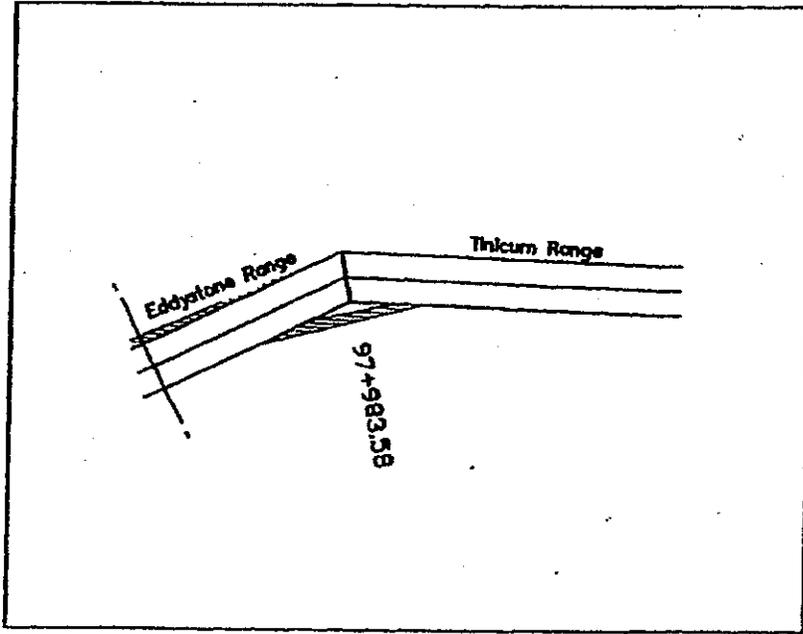
U.S. Army Corps of Engineers  
Philadelphia District

Figure 9 **RECEIVED**

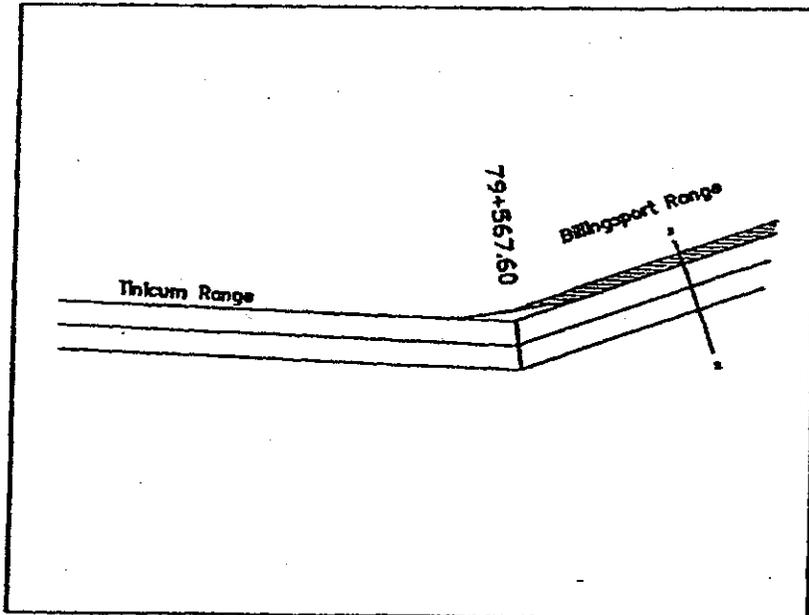
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EDDYSTONE-TINICUM (BW9)



TINICUM-BILLINGSPORT (BW10)



 -- Bend Widening

SCALE 1"=3000'

DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT

Bend Widening:  
Eddystone-Tinicum  
Tinicum-Billingsport

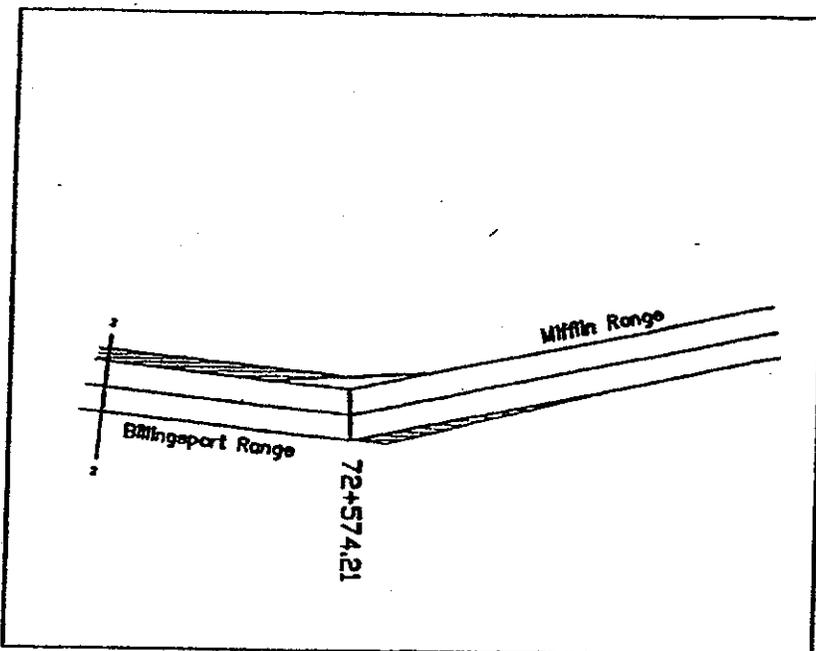
U.S. Army Corps of Engineers,  
Philadelphia District

Figure 10 RECL...ED

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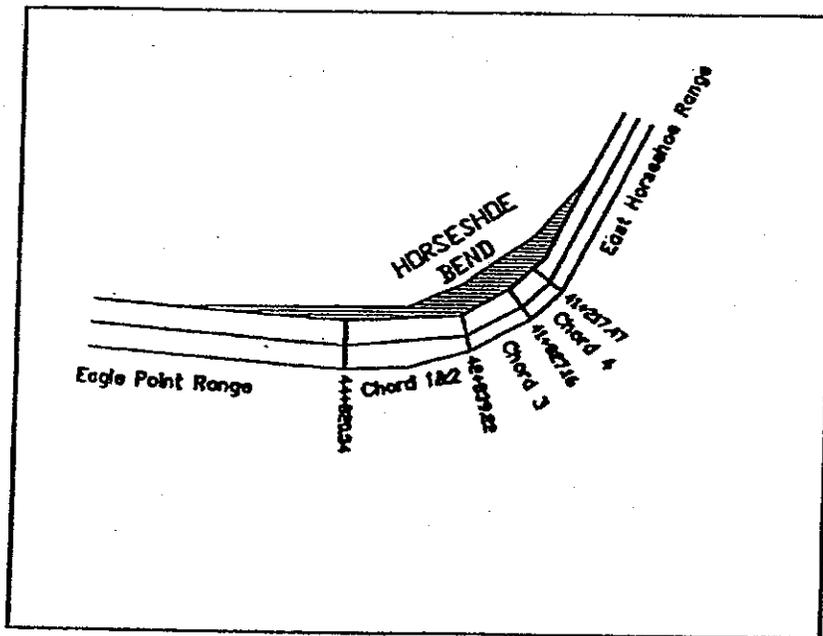
WETLANDS

BILLINGSPOURT-MIFFLIN (BW11)



HORSESHOE BEND (BW12)

(EAGLE POINT-CHORDS 1, 2, 3 & 4-EAST HORSESHOE)



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 Bend Widening

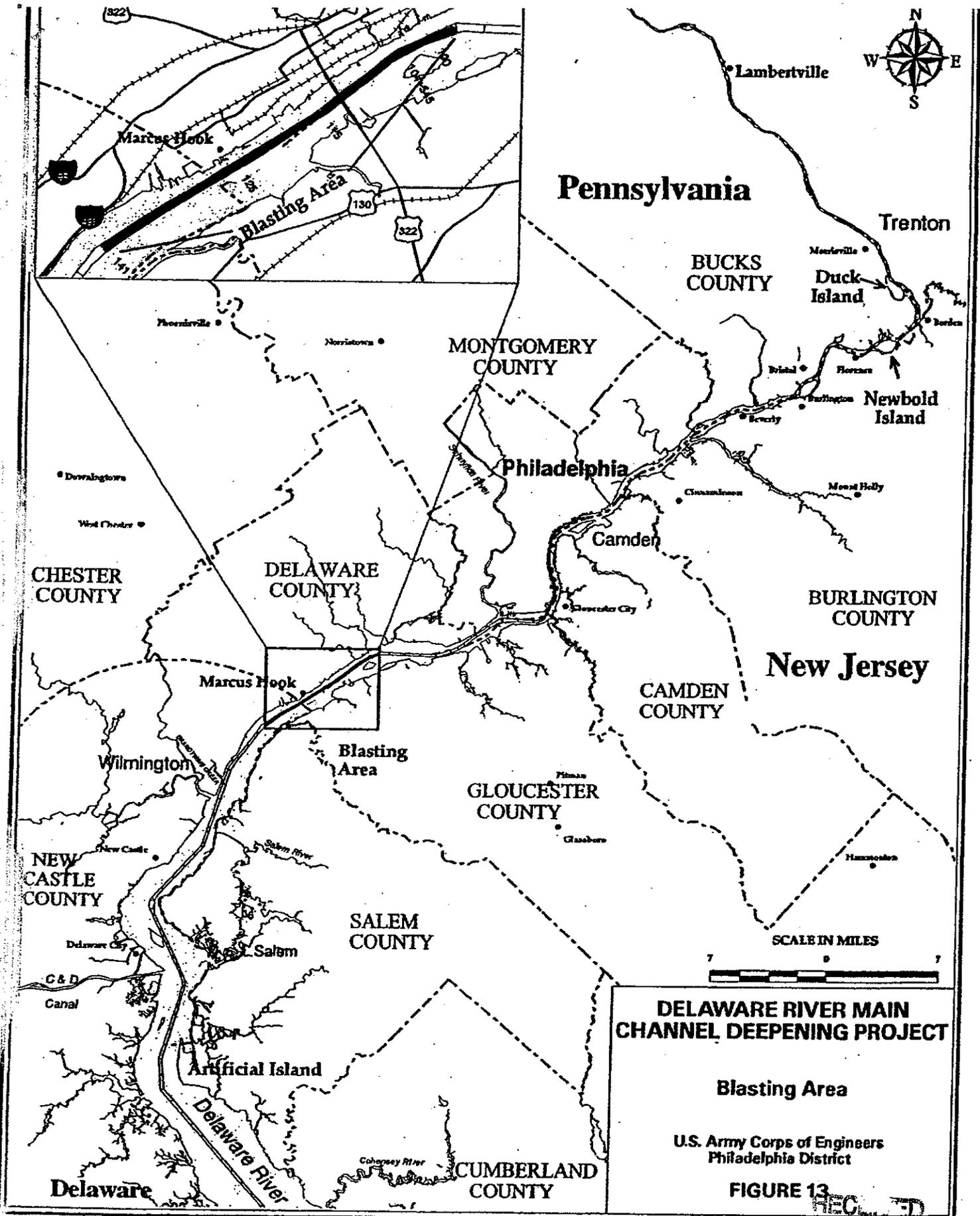
SCALE: 1"=300'

DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT

Bend Widening:  
Billingsport-Mifflin  
Horseshoe Bend

U.S. Army Corps of Engineers  
Philadelphia District

Figure 11



**DELAWARE RIVER MAIN CHANNEL DEEPENING PROJECT**

**Blasting Area**

U.S. Army Corps of Engineers  
Philadelphia District

FIGURE 13

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New Jersey

Pennsylvania

Existing bottom (40 ft Project)

Delaware River  
800 foot Channel Limit

Elev. 40.0 ft

Elev. 45.0 ft

Elev. 47.0 ft

Top of Rock

Top of Rock

Overburden to be Removed

Rock to be Removed

NOT TO SCALE

NOTE: Drawing is exaggerated in the vertical direction

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DELAWARE RIVER  
MAIN CHANNEL DEEPENING PROJECT  
ROCK EXCAVATION  
EXAMPLE CROSS SECTION  
U.S. Army Corps of Engineers  
Philadelphia District  
Figure 14