Chesapeake Bay Baseline Data Acquisition Appendix VI: Dredging and Spoil Disposal

Chesapeake Research Consortium, Incorporated

University of Maryland, Center for Environmental and Estuarine Studies

Virginia Institute of Marine Science

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APPENDIX VI
DREDGING AND SPOIL DISPOSAL

A Report
under EPA Contract No. 68-01-3994

August 1978

Chesapeake Research Consortium, Incorporated

prepared by

University of Maryland,
Center for Environmental and Estuarine Studies

and

Virginia Institute of Marine Science
CHESAPEAKE BAY BASELINE DATA ACQUISITION

DREDGING AND SPOIL DISPOSAL

Contract No. 68-01-3994

between

U. S. Environmental Protection Agency

and

Chesapeake Research Consortium, Incorporated

August 1978

Chesapeake Research Consortium, Incorporated

1419 Forest Drive, Suite 207
Annapolis, Maryland 21403
(301) 263-0884

The Johns Hopkins University
University of Maryland
Smithsonian Institution
Virginia Institute of Marine Science
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INTRODUCTION

This report forms one of several appendices which are the body of the Chesapeake Bay Baseline Data Acquisition Final Report. These appendices are as follows:

Appendix I. A Chesapeake Bay Directory
Appendix II. Submerged Aquatic Vegetation
Appendix III. Toxics in the Chesapeake Bay
Appendix IV. Eutrophication
Appendix V. Shellfish Bed Closures
Appendix VI. Dredging and Spoil Disposal
Appendix VII. Modification of Fisheries
Appendix VIII. Hydrologic Modifications
Appendix IX. Wetlands Alteration
Appendix X. Effects of Boating and Shipping on Water Quality
Appendix XI. Shoreline Erosion

This report comprises three sections as follows:

Annex I. contains scientists presently engaged in research in this field.
Annex II. is an indexed listing of data files pertinent to the Chesapeake Bay and adjacent coastal states.

Annex III. summarizes the monitoring efforts as derived from Annex II.

The source material for appendices IV-XI includes minimal material based on interviews, field work and verification. Efforts were directed to determining researchers and their activities from "A Chesapeake Bay Directory" only. For each of the eight subject areas, a key word list was also formulated and the respective pertinent data files compiled from the Environmental Data Base Directory. These files served as the primary source for the monitoring programs section.
ANNEX I

Directory of Researchers

Dredging and Spoil Disposal
This "Directory of Researchers" contains a listing of scientists who are presently working in this field, their affiliations and their specific research activities. The information was compiled from "A Chesapeake Bay Directory" by A. McErlean et al. which was published as a partial fulfillment of this contract.

For researchers and research activities in other national and international areas the reader is referred to the "International Directory of Marine Scientists," issued by the Food and Agriculture Organization of the United Nations in 1977. Copies of this directory are available at the following locations:

EPA Region III
Chesapeake Bay Program Office
Curtis Building
6th and Walnut Streets
Philadelphia, PA 19106

Chesapeake Research Consortium
1419 Forest Drive
Suite 207
Annapolis, MD 21403

University of Maryland, Center for Environmental and Estuarine Studies
ATTN: Karen Rutledge
P. O. Box 775
Horn Point Rd.
Cambridge, MD 21613

Virginia Institute of Marine Science
ATTN: Thomas Lochen
Gloucester Point, VA 23062
ANNEX I

Directory of Researchers
Dredging and Spoil Disposal

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<th>Research Interests</th>
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<td>Water quality criteria for aquatic life - Chesapeake Bay.</td>
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<td>Boon, J. D., III</td>
<td>Virginia Institute of Marine Science</td>
<td>Littoral processes, hydrodynamics of coastal inlets.</td>
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<td>Byrne, R. J.</td>
<td>Virginia Institute of Marine Science</td>
<td>Beach erosion studies, sediment processes.</td>
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<td>Estuarine ecology of benthic invertebrates - Chesapeake Bay.</td>
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<td>Ecology of marine benthic invertebrates.</td>
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Diaz, R. J.  
Virginia Institute of Marine Science  
Invertebrate ecology.

Gross, M. G.  
Chesapeake Bay Institute, The Johns Hopkins University  
Sediments and wastes in coastal and ocean environments - Chesapeake Bay.

Gucinski, H.  
Anne Arundel Community College  
Ocean dumping.

Haven, D. S.  
Virginia Institute of Marine Science  
Physiology of mollusks - Chesapeake Bay.

Hedgepeth, M. Y.  
Virginia Institute of Marine Science  
Ichthyology.

Hiegel, M. H.  
Chesapeake Biological Laboratory, University of Maryland  
Benthic invertebrates - Chesapeake Bay.

Hoffman, J. F.  
United States Naval Academy  
Pollution of the water column over dredge disposal areas.

Hugget, R. J.  
Virginia Institute of Marine Science  
Heavy metals, pesticides, oil pollution, water quality criteria - Chesapeake Bay.

Johnston, M.  
Horn Point Environmental Laboratories, University of Maryland  
Recolonization patterns in areas altered by dredging and spoil disposal - Chesapeake Bay.

Kennedy, V. S.  
Horn Point Environmental Laboratories, University of Maryland  
Benthic ecology - Chesapeake Bay.

Kraeuter, J. N.  
Virginia Institute of Marine Science  
Invertebrate ecology.

Lee, H.  
Horn Point Environmental Laboratories, University of Maryland  
Benthic ecology - Chesapeake Bay.
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Woodin, S.
The Johns Hopkins University

Ziegler, J. M.
Virginia Institute of Marine Science

Benthic ecology.

Erosion, nearshore circulation.
ANNEX II

Data Files

Dredging and Spoil Disposal
ANNEX II

Data Files

Part A

Data Files

Dredging and Spoil Disposal
The data files included in this section are arranged by EDBD accession number. This number should be used in inquiries to EDBD or in specific citations of files. However, for the purposes of this report, these files were assigned unique page numbers.

Files of areas adjacent to the Chesapeake Bay such as North Carolina, Delaware, New Jersey and Pennsylvania have been included when encountered.
THE ENCLOSED LISTING IS A SELECTION OF FILE DESCRIPTIONS FROM THE ENDex SYSTEM. ITS PURPOSE IS TO GUIDE USERS WITH REQUIREMENTS FOR HISTORICAL ENVIRONMENTAL DATA TO HOLDERS OF THESE DATA.

THIS OUTPUT WAS SELECTED FROM THE ENTIRE FILE BASED ON CERTAIN CRITERIA SPECIFIED BY THE USER. THESE CRITERIA ARE REPEATED BELOW:

EDBD

THE OUTPUT IS IN TWO PARTS. FIRST IS A LISTING OF ALL THE EDBD'S SELECTED, PRINTED IN ID NUMBER ORDER. AT THE BACK OF EACH OUTPUT MAY BE A CROSS-INDEX, LISTING SUCH THINGS AS WHICH FILE DESCRIPTIONS DESCRIBE DATA COLLECTED ON EACH PLATFORM TYPE, OR WHICH FILE DESCRIPTIONS HAVE DATA IN EACH GRID LOCATOR. THIS SECTION WILL VARY DEPENDING ON THE REQUIREMENTS OF THE USER. THE ID NUMBER IS IN THE UPPER LEFT CORNER OF EACH FILE DESCRIPTION. THE FOLLOWING IS AN EXPLANATION OF FIELDS ON EACH PAGE.

FILE NAME -- TOP CENTER OF PAGE. IDENTIFIED BY DATA HOLDER. ALSO, TIME RANGE OF DATA COLLECTION.

PROJECTS -- LIST OF PROJECTS UNDER WHICH DATA CONTAINED IN FILES MAY HAVE BEEN COLLECTED.

GENERAL GEOGRAPHIC AREA -- BEGINS WITH CONTINENT OR OCEAN IN WHICH DATA WERE COLLECTED AND DESCRIBES SMALLER AND SMALLER AREAS TO GIVE USER A GENERAL AREA OF DATA COLLECTION.

ABSTRACT -- CONTAINS GENERAL INFORMATION ABOUT WHY THE DATA WERE COLLECTED AND WHERE, METHODS OF ANALYSIS AND PERTINENT CONCLUSIONS.

DATA AVAILABILITY -- CONTAINS RESTRICTIONS ON DATA USE, IF BLANK IT MEANS THERE ARE NO KNOWN RESTRICTIONS.

PLATFORM TYPES -- LIST OF TYPES OF PLATFORMS (IF ANY) USED TO COLLECT DATA.

ARCHIVE MEDIA -- MEDIA ON WHICH DATA ARE STORED AND A ROUGH ESTIMATE OF THE SIZE OF THE FILE.

FUNDING -- ORGANIZATION FUNDING THE DATA COLLECTION (IF KNOWN).

INVENTORY -- WHEN DETAILED INFORMATION ON STATION LOCATIONS, COUNTS OF OBSERVATIONS/SAMPLES, ETC. ARE AVAILABLE, IT WILL BE DENOTED HERE.

PUBLICATIONS -- PUBLICATIONS RESULTING FROM THIS DATA SET (LIST IS SOMETIMES CONDENSED).

CONTACT -- NAME, ADDRESS AND PHONE NUMBER OF PERSON TO CONTACT TO OBTAIN FURTHER INFORMATION OR ACTUAL COPIES OF DATA.

GRID LOCATOR -- A SERIES OF NUMBERS USED TO MAKE GEOGRAPHIC RETRIEVAL POSSIBLE ON A COMPUTER. LATITUDE AND LONGITUDE ARE COMBINED INTO A SINGLE NUMBER. THE WORLD METEOROLOGICAL ORGANIZATION (WMO) CODE IS USED TO IDENTIFY AREAS WHERE DATA WERE COLLECTED. THIS MAY BE A 4, 6, 8, OR 10 DIGIT NUMBER DEPENDING ON WHETHER THE DATA HOLDER CHOSE TO IDENTIFY AREAS DOWN TO 10-DEGREE SQUARES OF LATITUDE AND LONGITUDE OR TO 1-DEGREE, 10-MINUTE, OR 1-MINUTE SQUARES.

FOR A 4-DIGIT GRID LOCATOR THE NUMBERS ARE AS FOLLOWS:

DIGIT 1 -- QUADRANT OF WORLD: 1=NE, 3=SE, 5=SW, 7=NW.

DIGIT 2 -- TENS DIGIT OF LATITUDE.

DIGITS 3/4 -- HUNDREDS AND TENS DIGITS OF LONGITUDE.

THUS 7408 WOULD BE THE 10-DEGREE SQUARE OF WHICH THE POINT 40N AND 08W IS THE LOWER RIGHT HAND CORNER.

FOR A SIX DIGIT NUMBER, DIGITS 5 AND 6 REPRESENT THE UNITS DIGITS OF LATITUDE AND LONGITUDE. THUS 740825 WOULD IDENTIFY THE 1-DEGREE SQUARE OF 42N AND 085W.

WITH AN 8-DIGIT NUMBER, 74082534 REPRESENTS THE SQUARE AT 42-DEGREES, 30-MINUTES NORTH AND 085-DEGREES, 40-MINUTES WEST, OR 10-MINUTE SQUARE.

PARAMETER IDENTIFICATION SECTION -- THIS PORTION OF THE FILE DESCRIPTION CONTAINS A LIST OF PARAMETERS MEASURED, THE SPHERE IT WAS MEASURED IN, THE METHODS USED AND THE UNITS OF MEASUREMENT. IN ADDITION, SUCH INFORMATION AS THE NUMBER OF MEASUREMENTS OF EACH PARAMETER AND THE FREQUENCY (IF REGULARLy SPACED) ARE REPORTED. A SPECIALIZED ENDEX VOCABULARY IS AVAILABLE DEFINING THE PARAMETER, SPHERE, AND METHOD TERMS USED.

QUESTIONS CONCERNING THIS OUTPUT SHOULD BE RELAYED TO THE NODC OCEANOGRAPHIC SERVICES BRANCH (202) 634-7500 OR TO THE DATA INDEX BRANCH (202) 634-7298.
PROJECTS:

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, U.S., CHESAPEAKE BAY, COASTAL, MARYLAND, EASTERN SHORE

ABSTRACT:
EXTENSIVE DATA BASE ON 19 CHANNELIZED STREAMS INCLUDING WATER CHEMISTRY, DYNTHOS, AND FISHES. COMPARISONS ACROSS STREAMS BASED UPON TIME SINCE CHANNELIZED, DETERMINATION OF RECOVERY TIME AND SEQUENCE OF BICHA AND CHEMICAL FACTORS.

DATA AVAILABILITY:
WITH REQUEST AND COST OF DUPLICATION

PLATFORM TYPES:

ARCHIVE MEDIA:
DATA SHEETS
2 STANDARD FILE DRAWERS

FUNDING:
BSFW DINGELL-JOHNSON ACT AND MARYLAND DNR, PROJECT MD F 74 R

INVENTORY:

PUBLICATIONS:

CONTACT:
W.R. CARTER 301-267-5361
MARYLAND DEPARTMENT OF NATURAL RESOURCES
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND USA 21401

GRID LOCATOR (LAT):
730785 730786 730796

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EVALUATION OF CHANNELIZATION EFFECTS ON AQUATIC HABITAT (CONT.)
DATA COLLECTED: JANUARY 1966 TO DECEMBER 1968

PROJECTS:
- SPOIL DISPOSAL IN UPPER CHESAPEAKE BAY

GENERAL GEOGRAPHIC AREA:
- NORTH ATLANTIC, U.S., CHESAPEAKE BAY

ABSTRACT:
To determine the effects on the benthos of channel dredging and overboard spoil disposal, stations in the Upper Chesapeake Bay were bottom sampled for benthic animals and sediment.

(DATA AVAILABLE IN REPORTS TO BUREAU OF SPORT FISHERIES AND WILDLIFE, U.S. DEPARTMENT OF THE INTERIOR. SPECIES DIVERSITY, BIOMASS, CALCULATIONS PRESENTED IN FINAL REPORT)

DATA AVAILABILITY:

PLATFORM TYPES:
- FIXED STATION

ARCHIVE MEDIA:
- REPORTS: DATA SHEETS
- SEVERAL REPORTS AND SEVERAL FILES OF DATA SHEETS

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
- M. E. T. PFITZENMEYER 301 326 4281
- CHESAPEAKE BIOLOGICAL LABORATORY
- CHESAPEAKE, MARYLAND, USA 20688

GRID LOCATOR (LAT): 730796

PARAMETER IDENTIFICATION SECTION:

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<td>YMD</td>
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29 UPPER BAY STATIONS, 30 DREDGE DISPOSAL AREA STATIONS, UPPER BAY STATIONS SAMPLED QUARTERLY BEGINNING JAN 1966: DISPOSAL AREA STATIONS SAMPLED
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<td>OBS</td>
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<td>NUMBER OF INDIVIDUALS</td>
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<td>OBS</td>
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<td>SELECTED STATIONS</td>
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<td>WATER</td>
<td>THERMISTOR</td>
<td>DEGREES CENTIGRADE</td>
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<td>OBS</td>
<td>SURFACE</td>
<td>SELECTED STATIONS</td>
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PROJECTS:
SPOIL DISPOSAL IN UPPER CHESAPEAKE BAY

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, U.S., CHESAPEAKE BAY

ABSTRACT:
PHYTOPLANKTON PRODUCTIVITY, CHLOROPHYLL A, AND LIGHT TRANSPARENCY WERE MEASURED AT 29 STATIONS IN THE UPPER CHESAPEAKE BAY FOR TWO YEARS. OBJECTIVES WERE TO ASCERTAIN ANY DIRECT CROSS EFFECTS OF DREDGING AND SPOIL DISPOSAL ON PHYTOPLANKTON AND TO PROVIDE BACKGROUND DATA FOR PREDICTION OF EFFECTS OF FUTURE DISPOSAL.

(DATA AVAILABLE IN NUMEROUS REPORTS TO BUREAU OF SPORT FISHERIES AND WILDLIFE, U.S. DEPARTMENT OF THE INTERIOR)

DATA ACCESSIBILITY:

ARCHIVE MEDIA:
REPORTS: DATA SHEETS
SEVERAL REPORTS AND SEVERAL FILES OF DATA SHEETS

FUNDING:

INVENTORY:

PUBLICATIONS:

NAME: DAVID A. FLEMER
ADDRESS: 301 326 4281
CHESAPEAKE BIOLOGICAL LABORATORY
SOLOMONS, MARYLAND USA 20688

PARAMETER IDENTIFICATION SECTION:

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<td>Submariner Photometer Used</td>
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<td>EARTH</td>
<td>STATION TIME YMD</td>
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<td>Compared to Photometer Values</td>
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<td>LIGHT ATTENUATION</td>
<td>WATER</td>
<td>IN SITU TRANSMISSOMETER COEFFICIENTS</td>
<td>2400 OBS</td>
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<td></td>
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<td>One shallow water and channel station in each transect</td>
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<td>WATER</td>
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<td>BIWEEKLY</td>
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<td>HEIGHT/DEPTH</td>
<td>REMARKS</td>
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<td>----------------------------------------------</td>
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<tr>
<td>CHLOROPHYLL A</td>
<td>WATER</td>
<td>FLUOROMETRY</td>
<td>MG PER M3</td>
<td>5000 OBS</td>
<td>BIWEEKLY</td>
<td>SURFACE TO BOTTOM</td>
<td>FROM APRIL 1966 TO AUGUST 1967 SURFACE AND THREE METER INTERVALS TO BOTTOM</td>
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**PROJECTS:**
SPOIL DISPOSAL IN UPPER CHESAPEAKE BAY

**GENERAL GEOGRAPHIC AREA:**
NORTH ATLANTIC, U.S., CHESAPEAKE BAY

**ABSTRACT:**
TEMPERATURE, SALINITY AND PARTICULATE MATTER OBSERVATIONS WERE OBTAINED AT BIWEEKLY INTERVALS FROM TWENTY-EIGHT STATIONS IN UPPER CHESAPEAKE BAY FOR USE IN MEASURING THE SOURCES AND FATE OF SUSPENDED MATERIALS. INTENSIVE SAMPLING WAS CONDUCTED IN PERIODS OF DREDGED SPOIL DISPOSAL. (IN ADDITION TO BEING CONDUCTED BY COEURS OF ENGINEERS FROM DEPTH SURVEYS 4 AND 180 DAYS AFTER COMPLETION OF DISPOSAL IN DUMPING AREA, 1966)

**DATA AVAILABILITY:**

**PLATFORM TYPES:**
FIXED STATION

**ARCHIVE MEDIA:**
REPORTS
SEVERAL REPORTS AND FILES OF DATA SHEETS

**FUNDING:**

**INVENTORY:**

**PUBLICATIONS:**

**CONTACT:**
ROBERT B. SIGGS  301 326 4281
CHESAPEAKE BIOLOGICAL LABORATORY
NATURAL RESOURCES INSTITUTE
SOLOMONS MARYLAND USA 20588

**GRID LOCATOR (LAT):**
73.796

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<td></td>
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<td>YMD</td>
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<td>THREE METER INTERVALS, SURFACE TO BOTTOM AT EACH STATION</td>
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<td>TITRATION</td>
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<td>2500 OBS</td>
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<td>THREE METER</td>
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<tr>
<td>NAME</td>
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<tr>
<td>PARTICULATE</td>
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<td>INTERVALS, SURFACE TO BOTTOM AT EACH STATION</td>
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<td>OPTICAL AND ELECTRICAL</td>
<td>Percent Transmission</td>
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<td>1 AND 3 METER DEPTHS</td>
<td>THREE METER INTERVALS SURFACE TO BOTTOM; 0.2 U FILTER USED</td>
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SAMPLES PUMPED CONTINUOUSLY FROM TWO DEPTHS WHILE VESSEL STEAMED ACROSS BIJOYED TRANSECTS. LIGHT TRANSMISSION MEASURED AT 30 SECOND INTERVALS. THIS WAS DONE DURING TWO PERIODS OF DREDGED SPOIL DISCHARGE.
ZOOPLANKTON

DATA COLLECTED: AUGUST 1966 TO JULY 1968

PROJECTS:
- SPOIL DISPOSAL, UPPER CHESAPEAKE BAY

REGIONAL GEOGRAPHIC AREA:
- NORTH ATLANTIC, U.S., CHESAPEAKE BAY, COVE POINT TO TURKEY POINT

ABSTRACT:
STANDING CROPS OF ZOOPLANKTON WERE MEASURED AT NINE STATIONS IN THE NORTHERN CHESAPEAKE BAY. DATA WAS GATHERED TO DESCRIBE BIOTA AND ECOLOGICAL DYNAMICS OF THE REGION AND TO DETERMINE GROSS EFFECTS OF DREDGING AND OVERBOARD SPOIL DISPOSAL. (DATA AVAILABLE IN NUMEROUS REPORTS TO BUREAU OF SPORT FISHERIES AND WILDLIFE, U.S. DEPARTMENT OF THE INTERIOR IN ADDITION TO OBLIQUE TOWS. MACROPLANKTON SAMPLING AND VERTICAL DISTRIBUTION TOWS WERE CARRIED OUT DURING PARTS OF THE STUDY)

DATA AVAILABILITY:

PLATFORM TYPES:
- FIXED STATION

ARCHIVE MEDIA:
- REPORTS: DATA SHEETS
- SEVERAL REPORTS AND SEVERAL FILES OF DATA SHEETS

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
FRANK GOODWYN, JR
301 326 4281
CHESAPEAKE BIOLOGICAL LABORATORY
NATURAL RESOURCES INSTITUTE
SOLOMONS MARYLAND USA 20688

GRID LOCATOR (LAT):
730786 730796

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<td>STATIONS ARE ALONG THE MIDDLE OF THE BAY FROM COVE POINT TO TURKEY POINT</td>
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<td>OBLIQUE TOWS FROM BOTTOM TO SURFACE USING 5 INCH CLARKE-BUMPUS</td>
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<td>MONTHLY</td>
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FISH EGGS AND LARVAE
DATA COLLECTED: MAY 1966 TO NOVEMBER 1968

PROJECTS:
SPOIL DISPOSAL IN UPPER CHESAPEAKE BAY

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, U.S., CHESAPEAKE BAY

ABSTRACT:
EGGS, LARVAE AND JUVENILES OF ESTUARINE FISHES WERE SAMPLED BIWEEKLY, AT FOURTEEN UPPER CHESAPEAKE BAY STATIONS, OVER A TWO YEAR PERIOD. THE PURPOSE OF THE INVESTIGATION WAS TO DESCRIBE ORGANISM ABUNDANCE, DISTRIBUTION AND MOVEMENT AND TO MONITOR ANY POSSIBLE EFFECTS OF DREDGING AND SPOIL DISPOSAL ACTIVITIES.

DATA AVAILABILITY:

PLATFORM TYPES:
FIXED STATION

ARCHIVE MEDIA:
REPORTS; DATA SHEETS

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
WILLIAM L DOVEL 301 326 4281
CHESAPEAKE BIOLOGICAL LABORATORY
NATURAL RESOURCES INSTITUTE
SOLOMONS MARYLAND USA 20688

GRID LOCATOR (LAT):
730796 730795

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<td>DEG C</td>
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<td>THOUSAND</td>
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<td>NUMBER OF</td>
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<td></td>
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<td>BIWEEKLY</td>
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DATA COLLECTED: AUGUST 1955 TO JULY 1968

PROJECTS:
SPIL DISPOSAL IN UPPER CHESAPEAKE BAY

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, U.S., CHESAPEAKE BAY

ABSTRACT:
TEN STATIONS IN THE UPPER CHESAPEAKE BAY WERE SAMPLED MONTHLY BY OTTER TRawl TO DETERMINE COMPOSITION OF ADULT FISH FAUNA, AND TO DETERMINE ANY GROSS BENEFIT TO FISH BIOTA BY DREDGING OR SPIL DISPOSAL ACTIVITIES.

DATA AVAILABLE IN NUMEROUS REPORTS TO BUREAU OF SPORT FISHERIES AND WILDLIFE. DATA INCLUDED FROM PERIODIC DRIFT AND ANCHOR GILL NETTING.

DATA AVAILABILITY:

PLATFORM TYPES:
FIXED STATION

ARCHIVE MEDIA:
REPORTS; DATA SHEETS; SEVERAL REPORTS

FUNDING:
U.S. BUREAU OF SPORT FISHERIES AND WILDLIFE

INVENTORY:

PUBLICATIONS:

CONTACT:
DOUG RITCHIE 301 326 4281 X20
CHESAPEAKE BIOLOGICAL LABORATORY
SOLOMONS MARYLAND USA 20688

GRID LOCATOR (LAT):
730796 730795

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PROJECTS:

GENERAL GEOGRAPHIC AREA:
U.S., Coastal, North Atlantic, Chesapeake Bay, Virginia, Hampton Roads

ABSTRACT:

The effect on oyster culture (Crassostrea virginica) of dredging for a bridge-tunnel in the Chesapeake Bay. One of 2 stations were sampled biweekly for 48 months. Data appears in VIMS Special Scientific Report No. 12.

DATA AVAILABILITY:

Open File, Cost of Reproduction

PLATFORM TYPES:

Ship

ARCHIVE MEDIA:

Reports

VIMS Special Scientific Report No. 12 for 10 stations

FUNDING:

Inventory:

Publications:

VIMS Special Scientific Report No. 12

CONTACT:

Librarian 703-642-2111
Virginia Institute of Marine Science
Gloucester Point Virginia USA 23062

GRID LOCATOR (LAT): 730766

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PROJECTS:

GENERAL GEOGRAPHIC AREA:
U.S., COASTAL, NORTH ATLANTIC, CHESAPEAKE BAY, VIRGINIA, YORK RIVER, TASKINAS CREEK

ABSTRACT:

BIOMASS AND ANNUAL YIELD PER ACRE, SPECIES DETERMINATION AND TIDE LENGTH WERE RECORDED FOR BENTHIC PLANTS IN THE TASKINAS CREEK, VIRGINIA DURING OCTOBER 1972. WATER SAMPLES WERE ANALYZED FOR SALINITY AND TOTAL ORGANIC CARBON, AND THE WATER TRANSPORT RATE OF THE CREEK WAS MEASURED. THE RESULTS OF THE STUDY ARE AVAILABLE ON DATA SHEETS FROM VIMS, ALONG WITH COMMENTS ON WILDLIFE USAGE.
(DATA CONTAINS COMMENTS ON WILDLIFE USAGE)

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
DATA SHEETS
62 OBS

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
KENNETH MARCELLUS 703-642-2111
VIRGINIA INSTITUTE OF MARINE SCIENCE
GLOUCESTER POINT VIRGINIA USA 23062

GRID LOCATOR (LAT):
730776

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- **Infrared Hourly Cycles Sampled**
- **Spectrometry Samples Per Tidal Cycle**
- **Salinity Water Conductivity Samples Per 63 Fourteen Tidal Cycles Sampled**
- **Water Transport Water Impellor Meter Cubic Meters Per Tidal Cycle**
PROJECT'S:

GENERAL GEOGRAPHIC AREA:
U.S. COASTAL, NORTH ATLANTIC, CHEAPENBAY, VIRGINIA - HAMPTON ROADS

ABSTRACT:
SURVEY ON THE OCCURRENCE AND ABUNDANCE OF FOUILING ORGANISMS, OBTAINED IN DREDGE SAMPLES AND IN BENTHOS TEST PLATES IN THE HAMPTON ROADS AREA. ANNOTATED LIST OF SPECIES AND TAXONOMIC IDENTIFICATION INCLUDED.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
65 PAGES

FUNDING:

INVENTORY:

PUBLICATIONS:
SEASONAL OCCURRENCE OF EPIFAUNA ON TEST PANELS IN HAMPTON ROADS, VIRGINIA. 1967. INT J OCEANOL LIMNOL 1 (3) 149-164. VIMS THESIS, D R CALDER, 1966

CONTACT:
LIBRARIAN 804-642-2111
VIRGINIA INSTITUTE OF MARINE SCIENCE
GLOUCESTER POINT VIRGINIA USA 23062

GRID LOCATOR (LAT): 7 30776 730776

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A QUANTITATIVE STUDY OF BENTHIC FAUNA IN CAY, CHESAPEAKE BAY WITH EMPHASIS ON ANIMAL-SEDIMENT RELATIONSHIPS

DATA COLLECTED: JULY 1, 1961 TO APRIL 1963

RECEIVED: JULY 31, 1973

PROJECTS:

GENERAL GEOGRAPHIC AREA:
U.S., COASTAL NORTH ATLANTIC, LOWER CHESAPEAKE BAY, VIRGINIA

ABSTRACT:
QUANTITATIVE ANALYSIS AND SURVEY OF THE BENTHIC FAUNA IN LOWER CHESAPEAKE BAY IN THE AREA OF A DREDGING AND DUMPING OPERATION BY THE U.S. ARMY, CORPS OF ENGINEERS. EMPHASIS ON ANIMAL-SEDIMENT TYPE RELATIONSHIPS.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
40 PAGES; 349 SEDIMENT SAMPLES FROM 305 STATIONS PROCESSED.

FUNDING:

INVENTORY:

PUBLICATIONS:
VIMS THESIS, R.B. STONE, 1963

CONTACT:
LIBRARIAN 804-642-2111
VIRGINIA INSTITUTE OF MARINE SCIENCE
GLOUCESTER POINT VIRGINIA USA 23062

GRID LOCATOR (LATI):
730775 730775

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PROJECTS:

GENERAL GEOGRAPHIC AREA:
U.S. COASTAL, NORTH ATLANTIC, LOWER CHESAPEAKE BAY, VIRGINIA, LYNnhaven Bay, Elizabeth River

ABSTRACT:
SURVEY OF HYDROGRAPHIC AND BIOLOGICAL PARAMETERS OF LOWER CHESAPEAKE BAY, LYNNHEVEN BAY AND ELIZABETH RIVER, VA. DATA COLLECTED IN CONJUNCTION WITH CONTRACT FOR CONTRACTORS AND LAND DEVELOPERS

DATA AVAILABILITY:
ON APPROVAL FROM CONTRACTOR

PLATFORM TYPES:

ARCHIVE MEDIA:
DATA SHEETS
200 STATIONS

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
PAUL KIRK 804-489-
OLD DOMINION UNIVERSITY
INSTITUTE OF OCEANOGRAPHY
NORFOLK VIRGINIA USA 23508

CPTO LOCATOR (LAT):
730776 730775 730766

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| COUNT OF MICROBIOTA | WATER | VISUAL CULTURE GROWTH (MPN) | 14 OBS | SURFACE AND BOTTOM | LYNNHAVEN AREA |
|---|---|---|---|---|---|---|

| ORTHOPHOSPHATE | WATER | SPECTROPHOTOMETRY MILLIGRAMS PER LITER | 14 OBS | SURFACE AND BOTTOM | LYNNHAVEN AREA |
|---|---|---|---|---|---|---|

| NITRATE | WATER | SPECTROPHOTOMETRY MILLIGRAMS PER LITER | 14 OBS | SURFACE AND BOTTOM | LYNNHAVEN AREA |
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A STUDY OF THE EFFECTS OF DREDGING AND DREDGE SPOIL DISPOSAL ON THE MARINE ENVIRONMENT

DATA COLLECTED: JUNE 1961 TO APRIL 1963

RECEIVED: AUGUST 27, 1973

PROJECTS:

GENERAL GEOGRAPHIC AREA:
U.S. COASTAL, NORTH ATLANTIC, CHESAPEAKE BAY, VIRGINIA

ABSTRACT:
INTENSIVE SURVEY OF SEDIMENTS AND BENTHIC ANIMALS IN THE AREA OF THE RAPPAHANNOCK SHOAL AND SOIL DISPOSAL LOCATION IN CHESAPEAKE BAY. SOME LIMITED SAMPLING IN YORK SPIT CHANNEL. SEDIMENT ANALYSIS IS COUPLED WITH A SURVEY OF BENTHIC FAUNA AND RELATED TO FEEDING TYPES, SUBSTRATE, HABITAT, SIZE, ABUNDANCE AND FREQUENCY OF ENCOUNTER. COMPARISON OF IN CHANNEL AND OUT CHANNEL SAMPLING DATA INCLUDED ALONG WITH COMMENTS AS TO THE EFFECT OF SPOIL DEPOSITION ON BENTHIC FAUNA. COMMENTS AS TO SEASONAL VARIATION OF BENTHIC FAUNA AND EFFECTS OF DREDGING INCLUDED.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
116 PAGES

FUNDING:
CORPS OF ENGINEERS, U.S. ARMY, CONTRACT NO DA-44-110-CIVENG-61-181

INVENTORY:

PUBLICATIONS:
VIMS SPECIAL REPORT IN APPLIED MARINE SCIENCE AND OCEAN ENGINEERING, NO 8, 1967

CONTACT:
LIBRARIAN 804-642-2111
VIRGINIA INSTITUTE OF MARINE SCIENCE
GLOUCESTER POINT VIRGINIA USA 23062

GRID LOCATOR (LAT):
730776 730775

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- **ASV**
- **P**
- **M**
PROJECTS:
- ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
- NORTH ATLANTIC, U.S., CHESAPEAKE BAY, CHESAPEAKE AND DELAWARE CANAL

ABSTRACT:
- SURVEY OF MACROINVERTEBRATES IN THE VICINITY OF THE C AND D CANAL CONDUCTED ON A QUARTERLY SAMPLING SCHEDULE. 19 STATIONS Sampled with 3 replicate grabs per visit using a 0.1 SQUARE METER VAN VEEEN GRAB. SPECIES, COUNTS, BIOMASS, AND COMMUNITY ANALYSIS DATA REPORTED.
( NRI Reference number 73-113 )

DATA AVAILABILITY:
- WRITTEN REQUEST

PLATFORM TYPES:
- SHIP

ARCHIVE MEDIA:
- REPORTS
- 40 PAGE REPORT

FUNDING:
- U.S. ARMY CORPS OF ENGINEERS DAWC-61-71-C-0062

INVENTORY:

PUBLICATIONS:
- APPENDIX 3 OF REPORT FILED BY PROJECT TITLE WITH PHILADELPHIA OFFICE OF CORPS AND AT CBL.

CONTACT:
- HAYES T. FITZENMEYER 301 326 4281
- CHESAPEAKE BIOLOGICAL LABORATORY
- SOLOMONS MARYLAND USA 20688

GRID LOCATOR (LAT):
- 730795

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VAN VEEEN GRAB

0.1 VAN VEEEN GRAB, 3
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19 MORONE
SAXATILIS, 108 M. AMERICANA, 35 Ictalurus
catus, and 10 PERCA FLAVESCENS TAKEN IN MARCH THROUGH MAY
PROJECTS:
ASSATEAGUE ECOLOGICAL STUDIES

GENERAL: GEOGRAPHIC AREA:
NORTH ATLANTIC, U.S., DELMARVA PENINSULA, CHINCOTEAGUE BAY, SINEPUXENT BAY

ABSTRACT:
DESCRIPTIVE SURVEY OF BENTHIC COMMUNITIES IN CHINCOTEAGUE AND SINEPUXENT BAYS CONDUCTED IN 1969. 139 STATIONS OCCUPIED WITH 3 REPPLICATE SAMPLES PER STATION. DEPTH, SEDIMENT TYPE, AND BIOLOGICAL MATERIAL REPORTED FOR EACH STATION. MORE INTENSIVE SAMPLING PERFORMED IN AREAS OF DREDGE BORROW PITS.
(ANALYSES BY KLAUS DROBECK, NRI REFERENCE 446, UNIVERSITY OF MARYLAND)

DATA AVAILABILITY:
WRITTEN REQUEST

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
PART 6 OF 300 PAGE REPORT

FUNDING:
NATIONAL PARKS SERVICE CONTRACT NUMBER 14-10-5-950-36

INVENTORY:

PUBLICATIONS:

CONTACT:
LIBRARIAN 301 326 4281
CHESAPEAKE BIOLOGICAL LABORATORY
SOLOMONS MARYLAND USA 20688

GRID LOCATOR (LAT):
730785

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ABSTRACT:

The purpose of this study was to evaluate the gross (community disruption, mortality) biological effects of dredging and overboard spoil disposal in the Breakwater Harbor, Lewes, Delaware, on benthic marine invertebrates. The study consisted of three aspects: 1) physical oceanography and aerial photography, 2) marine geology, and 3) marine biology. Specific objectives were: 1) to determine the relatively short-term dispersion of spoils from dredging, and 2) to determine the short-term biological effect of spoil disposal from dredging. There were 103 stations within the study area which were sampled three times: December 1971, March 1972 and June 1972. The parameters determined in the study area are current speed and direction, species determination and count of benthic animals, salinity, temperature, dissolved oxygen, Eh, size analysis of sediments, biomass of benthic animals and Secchi disc depth.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS

The data occurs in a report which is 231 pages in length.

FUNDING:
NOAA OFFICE OF SEA GRANT NO. 2-35223

INVENTORY:

PUBLICATIONS:
MAURER, D., ET. AL., 1974, EFFECT OF SPOIL DISPOSAL ON BENTHIC COMMUNITIES NEAR THE MOUTH OF DELAWARE BAY, COLLEGE OF MARINE STUDIES, UNIVERSITY OF DELAWARE, 231 PP.

CONTACT:
DR. DON MAURER 302-738-2569
COLLEGE OF MARINE STUDIES, UNIVERSITY OF DELAWARE
NEWARK, DELAWARE USA 19711

GRID LOCATOR (LAT):
730785

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1 AND 2 METERS BELOW SURFACE DONE ON JANUARY 6 AND 7, 1972
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**PROJECTS:**

**GENERAL GEOGRAPHIC AREA:**
NORTH AMERICA, U.S., NORTH CAROLINA, COASTAL

**ABSTRACT:**
BIOLOGICAL REPORTS WHICH DETERMINE EFFECTS OF BUILDING AND DREDGING PROJECTS ON COASTAL MARSH LANDS, ESTUARINE BOTTOMS, TIDELANDS AND STATE-OWNED LAKES OF NORTH CAROLINA. AERIAL PHOTOGRAPHY IS USED TO MONITOR ANY BUILDING OR DREDGING PERMIT VIOLATIONS.

**DATA AVAILABILITY:**
NO RESTRICTIONS

**PLATFORM TYPES:**
SHIP; AIRCRAFT

**ARCHIVE MEDIA:**
REPORTS
ONE 35 PAGE REPORT

**FUNDING:**

**INVENTORY:**

**PUBLICATIONS:**

**CONTACT:**
JAMES T. BROWN 919 726 7021
NORTH CAROLINA DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
DIVISION OF COMMERCIAL AND SPORTS FISHERIES P.O. BOX 769
MOOREHEAD CITY NORTH CAROLINA USA 28557

**GRID LOCATOR (LAT):**
730738 730729 730745 730747 730755 730756 730765

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PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A YEAR LONG STUDY OF THE PRODUCTION AND DISTRIBUTION OF FISH EGGS AND LARVAE IN THE CHESAPEAKE AND DELAWARE CANAL WAS CONDUCTED. STUDY OBSERVED HYDROGRAPHIC DATA AS WELL AS THE FECUNDITY OF SOME TWENTY SPECIES OF FISH. (DATA CONTAINED IN APPENDIX 1)

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
ONE 143 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:

CONTACT:
ROBERT K. JOHNSON 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
730795

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PRODUCTION AND DISTRIBUTION OF STRIPED BASS EGGS
DATA COLLECTED: MARCH 1971 TO DECEMBER 1972

PROJECTS:
- ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
- NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A TWO YEAR STUDY OF THE PRODUCTION AND DISTRIBUTION OF STRIPED BASS EGGS IN THE CHESAPEAKE AND DELAWARE CANAL WAS CONDUCTED. PARAMETERS INCLUDE FECUNDITY, COUNTS AND IDENTIFICATION OF ADULTS CAPTURED.
(DATA CONTAINED IN APPENDIX II)

DATA AVAILABILITY:

PLATFORM TYPES:
- SHIP

ARCHIVE MEDIA:
- REPORTS
  - ONE 40 PAGE REPORT

FUNDING:
- ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:

CONTACT:
ROBERT K. JOHNSON 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
730795

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ABSTRACT:
A TWENTY-ONE MONTH BIOLOGICAL SURVEY OF THE CHESAPEAKE AND DELAWARE CANAL AND ITS APPROACHES WAS CONDUCTED. PARAMETERS INCLUDE COUNT AND SPECIES DETERMINATION OF ORGANISMS PRESENT AS WELL AS BIOMASS OF SELECTED STATIONS. HYDROGRAPHIC DATA WAS TAKEN FOR EACH OF THE STATIONS. (DATA CONTAINED IN APPENDIX IV)

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVAL MEDIA:
REPORTS
ONE 44 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

CONTACT:
MALCOLM H. TAYLOR 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
73°795

PARAMETER IDENTIFICATION SECTION:

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**PROJECTS:**

- ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

**GENERAL GEOGRAPHIC AREA:**

NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

**ABSTRACT:**

A STUDY TO DETERMINE THE STATUS OF THE BLUE CRAB POPULATION IN THE CHESAPEAKE AND DELAWARE REGION WAS CONDUCTED. PARAMETERS OBSERVED WERE COUNT, SEX DETERMINATION AND LENGTH/WEIGHT RATIOS OF CRABS AND HYDROGRAPHIC DATA.

(Data contained in Appendix V)

**DATA AVAILABILITY:**

**PLATFORM TYPES:**

SHIP

**ARCHIVE MEDIA:**

- REPORTS
- CHE 11 PAGE REPORT

**FUNDING:**

ARMY CORPS OF ENGINEERS

**INVENTORY:**

**PUBLICATIONS:**

**CONTACT:**

STEPHEN D. SULKIN 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):

730795

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PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A TALENT NINE MONTH SURVEY OF THE FISH IN THE DELAWARE PORTION OF THE CHESAPEAKE AND DELAWARE CANAL WAS CONDUCTED. PARAMETERS INCLUDE COUNT AND SPECIES DETERMINATION OF EACH CATCH, HYDROGRAPHIC DATA AND LENGTH/WEIGHT RATIOS OF FISH CAUGHT AT SELECTED STATIONS. 33 SPECIES OF FISH WERE CAPTURED DURING THE SAMPLING PERIOD.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
ONE 75 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:
DATA CONTAINED IN APPENDIX VII, HYDROGRAPHIC AND ECOLOGICAL EFFECTS OF ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

CONTACT:
MALCOLM H. TAYLOR 302 738 2842
UNIVERSITY OF DELAWARE
COLLEGE OF MARINE STUDIES
LEES DELAWARE USA 19958

GRID LOCATOR (LAT):
730795

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FISH SURVEY IN THE MARYLAND PORTION OF THE CHESAPEAKE AND DELAWARE CANAL
DATA COLLECTED: DECEMBER 1970 TO MAY 1973
RECEIVED: DECEMBER 01, 1975
DATA COLLECTED: DECEMBER 1970 TO MAY 1973

PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A TWENTY-NINE MONTH SURVEY OF THE FISH IN THE MARYLAND PORTION OF THE CHESAPEAKE AND DELAWARE CANAL WAS CONDUCTED. PARAMETERS INCLUDE COUNT AND SPECIES DETERMINATION OF EACH CATCH, HYDROGRAPHIC DATA, AND LENGTH/WEIGHT RATIOS OF FISH CAUGHT. A TOTAL OF 43 SPECIES WERE CAUGHT.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
ONE 28 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:
DATA CONTAINED IN APPENDIX VI, HYDROGRAPHIC AND ECOLOGICAL EFFECTS OF ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

CONTACT:
DOUGLAS E. RITCHIE JR. 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
730795

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**PELAGIC FISH TEMPERATURE**  WASTE  REVERSING THERMOMETER  10 STATIONS MONTHLY

**SALINITY**  WASTE  CONDUCTIVITY  10 STATIONS MONTHLY

**TEMPERATURE**  AIR  MERCURY THERMOMETER  10 STATIONS MONTHLY
PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A TWENTY-SIX MONTH FISH TAGGING STUDY TO DETERMINE THE MOVEMENTS OF FISH IN THE CHESAPEAKE AND DELAWARE CANAL WAS CONDUCTED. TWO TYPES OF TAGS WERE USED: THE CARLIN TAG WAS APPLIED TO SMALL FISH (LESS THAN 1 FOOT) AND THE PETERSEN DISC TAG WAS USED FOR LARGER FISH. MIGRATION STUDIES WERE ALSO CONDUCTED WITH THE USE OF ULTRASONIC TRANSMITTERS.

DATA AVAILABILITY:

PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
ONE 56 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:
DATA CONTAINED IN APPENDIX VIII, HYDROGRAPHIC AND ECOLOGICAL EFFECTS OF ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

CONTACT:
DOUGLAS E. RITCHIE, JR. 301 454 0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
79° 795

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PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELAWARE AND MARYLAND

ABSTRACT:
A TWENTY FIVE MONTH TAGGING STUDY TO DETERMINE HOW FISH USE THE CHESAPEAKE AND DELAWARE CANAL IN THEIR MIGRATIONS AND MOVEMENTS WAS CONDUCTED. THE PURPOSE WAS TO GAIN SOME KNOWLEDGE OF THE GEOGRAPHIC DISTRIBUTION OF FISH THAT SPENT SOME PART OF THEIR LIFE CYCLE IN THE CANAL AREA. THE PRIMARY TARGET SPECIES WAS THE AMERICAN SHAD, ALOS A SAPIDISSIMA. A TOTAL OF 13 SPECIES WERE TAGGED.

DATA AVAILABILITY:
PLATFORM TYPES:
SHIP

ARCHIVE MEDIA:
REPORTS
ONE 45 PAGE REPORT

FUNDING:
ARMY CORPS OF ENGINEERS

INVENTORY:

PUBLICATIONS:
DATA CONTAINED IN APPENDIX IX, HYDROGRAPHIC AND ECOLOGICAL EFFECTS OF ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

CONTACT:
RONALD W. SMITH 301-454-0100
UNIVERSITY OF MARYLAND
NATURAL RESOURCES INSTITUTE
COLLEGE PARK MARYLAND USA 20740

GRID LOCATOR (LAT):
730795

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ENVIRONMENTAL IMPACT STATEMENT ON CONSTRUCTION AND OPERATION OF A DREDGED SPOIL DISPOSAL AREA IN LOGAN TOWNSHIP, GLOUCESTER CO., N.J.
DATA COLLECTED: 1971 TO 1971
RECEIVED: MARCH 27, 1975

PROJECTS:

GENERAL GEOGRAPHIC AREA:
NORTH AMERICA, U.S., NEW JERSEY, GLOUCESTER COUNTY, LOGAN TOWNSHIP, COASTAL

ABSTRACT:
THIS REPORT IS AN ASSESSMENT OF ENVIRONMENTAL CHANGE THAT WOULD BE LIKELY TO RESULT FROM THE USE OF THE SITE FOR DISPOSAL OF DREDGE SPOILS. THE DATA ARE ALL EITHER FAUNAL INVENTORY OR WATER QUALITY DATA.
(REPORT FILED TO N.J. E.P.A., JOHN FITCH PLAZA, TRENTON, N.J. ON BEHALF OF AMERICAN DREDGING CO., 12 S. 12TH ST. PHILA, PA. 19107)

DATA AVAILABILITY:
AT COST OF REPRODUCTION

PLATFORM TYPES:
FIXED STATION

ARCHIVE MEDIA:
REPORTS
110 PAGES

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
DR. JAMES A. SCHMID 215 647 3110
JACK MCCORMICK AND ASSOCIATES
860 WATERLOO RD.
DEVON PENNSYLVANIA USA 19333

GRID LOCATOR (LAT):
73079541 73079542

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PROJECTS:

GENERAL GEOGRAPHIC AREA:

NORTH AMERICA, U.S., NEW JERSEY, DELAWARE RIVER, GLouceSTER COUNTY, WEST TERTOFRD TOWNSHIP

ABSTRACT:

IN PUTTING TOGETHER AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED CONSTRUCTION OF THE GATX CORPORATION'S TERMINAL FACILITY ON THE DELAWARE RIVER NEAR WEST TERTOFRD TOWNSHIP, N. JERSEY, THE US ARMY CORPS OF ENGINEERS COMPILED DATA BASELINE SURVEYS FROM 1952 TO THE PRESENT. AN OVERALL ASSESSMENT OF PRESENT TOPOGRAPHY, HYDROLOGY, ECOSYSTEMS, WATER AND AIR QUALITY, AND CLIMATE WAS MADE IN RELATIONSHIP TO THE EFFECTS OF THE PROPOSED ACTION.

DATA AVAILABILITY:

AVAILABLE UPON REQUEST FROM US ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT.

PLATFORM TYPES:

FIXED STATION

ARCHIVE MEDIA:

REPORTS 2.0 PAGES

FUNDING:


INVENTORY:

PUBLICATIONS:

CONTACT:

ROY DENMARK 215 597 2944
US ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
2ND AND CHESTNUT STREETS
PHILADELPHIA PENNSYLVANIA USA 19106

GRID LOCATOR (LAT):

7307955112

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SPECIES DETERMINATION LAND KEY QUALITATIVE: 1 OBS SURFACE
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PROJECTS:

GENERAL GEOGRAPHIC AREA:
NORTH AMERICA, COASTAL PLAIN, U.S., MARYLAND, QUEEN ANNE COUNTY

ABSTRACT:
A STUDY OF VEGETATIVE REHABILITATION OF THREE DISTURBED MARSHES IN QUEEN ANNE COUNTY, MARYLAND IS BEING CONDUCTED. ALL SUBMERGENT AND EMERGENT PLANTS TO 3 FOOT WATER DEPTH AT THREE DISTURBED AREAS, AND 52 STATIONS PER DISTURBED AREA ARE BEING STUDIED. SAMPLES ARE TAKEN EARLY AND LATE SUMMER.

DATA AVAILABILITY:

PLATFORM TYPES:
- FIXED STATION

ARCHIVE MEDIA:
- DATA SHEETS
- ONE NOTEBOOK

FUNDING:
MD DEPT OF NATURAL RESOURCES

INVENTORY:

PUBLICATIONS:

CONTACT:
JAMES R. GOLDBERRY, DIRECTOR 301 267 5195
MARYLAND WILDLIFE ADMINISTRATION, DEPARTMENT OF NATURAL RESOURCES
TAWES STATE BUILDING
ANNAPOLIS MARYLAND USA 21401

GRID LOCATOR (LAT):
7307960200

PARAMETER IDENTIFICATION SECTION:

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PROJECTS:

GENERAL GEOGRAPHIC AREA:
NORTH AMERICA, COASTAL PLAIN, U.S., MARYLAND, QUEEN ANN, SOMERSET, WACOMICO, AND DORCHESTER COUNTY

ABSTRACT:
A STUDY OF VEGETATIVE REHABITATION OF 6 SPOIL SITES ON THE BAY SIDE OF THE EASTERN SHORE, MARYLAND IS BEING CONDUCTED. REHABITATION STUDY OF 6 SPOIL SITES CONSISTS OF ONE CROSS TRANSECT AT EACH SITE. SAMPLES ARE TAKEN EVERY 50 FEET ALONG TRANSECT ARM. VEGETATIONAL APPEARANCE AND SPECIES LIST FOR BOTH SUPER AND INTER-TIDAL SAMPLES ARE NOTED.

DATA AVAILABILITY:

PLATFORM TYPES:
FIXED STATION

ARCHIVE MEDIA:
DATA SHEETS
ONE NOTEBOOK

FUNDING:
MD DEPT OF NATURAL RESOURCES

CONTACT:
JAMES R. GOLDBERRY, DIRECTOR 301 267 5195
MARYLAND WILDLIFE ADMINISTRATION, DEPARTMENT OF NATURAL RESOURCES
TAWES STATE BUILDING
ANAPOLIS MARYLAND USA 21401

GRID LOCATOR (LAT):
73077555 7307961050

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CONTACT:
JAMES R. GOLDBERRY, DIRECTOR 301 267 5195
MARYLAND WILDLIFE ADMINISTRATION, DEPARTMENT OF NATURAL RESOURCES
TAWES STATE BUILDING
ANAPOLIS MARYLAND USA 21401

GRID LOCATOR (LAT):
73077555 7307961050

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ECOLOGICAL STUDIES IN THE VICINITY OF THE PROPOSED SUMMIT POWER STATION. VOLUME 1: FISHES

DATA COLLECTED: JANUARY 1974 TO DECEMBER 1974

RECEIVED: AUGUST 12, 1976

PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELMARVA PENINSULA, CHESAPEAKE AND DELAWARE CANAL

ABSTRACT:
DATA COLLECTED ON THE FISHES PRESENT IN THE CHESAPEAKE AND DELAWARE CANAL AND ADJACENT WATERS OF THE DELAWARE AND ELK RIVERS DURING THE 1974 ECOLOGICAL STUDY OF THE AQUATIC ENVIRONMENT IN THE VICINITY OF THE PROPOSED SUMMIT POWER PLANT ARE PRESENTED IN THIS REPORT. THE DATA WERE GATHERED IN 325 HAULS OF A 16-FOOT TRAWL, 83 HAULS OF A 10-FOOT TRAWL, 358 SEINE COLLECTIONS, 70 GILLNET SETS, AND 70 DAYS OF CREEL CENSUS. SPECIES IDENTIFICATIONS AND DISTRIBUTIONS ARE PRESENTED ON A BIWEEKLY BASIS IN ORDER TO OBTAIN INFORMATION ON SEASONAL CHANGES IN POPULATION STRUCTURE. STOMACH ANALYSES OF SEVERAL SPECIES OF FISH ARE ALSO GIVEN ON A SEASONAL BASIS. LENGTH-FREQUENCY DISTRIBUTIONS AND CALCULATED GROWTH RATES OF PROMINENT SPECIES ARE INCLUDED, AS ARE THE RESULTS OF TAGGING STUDIES AND FECUNDITY STUDIES OF EEL PRODUCTION. DATA ON WATER DEPTH, SALINITY, CONDUCTIVITY, TEMPERATURE, DISSOLVED OXYGEN GAS, PH, SECCHI DISK DEPTH, AND Tidal PHASE, OBTAINED DURING ALL SAMPLING EVENTS OF FISH, ARE LIKewise AVAILABLE IN THE REPORT.

DATA AVAILABILITY:
UPON REQUEST AND PERMISSION OF DELMARVA POWER AND LIGHT COMPANY

PLATFORM TYPES:
SHIPS: FIXED STATION

ARCHIVE MEDIA:
REPORTS
327 PAGES

FUNDING:
DELMARVA POWER AND LIGHT COMPANY

INVENTORY:

PUBLICATIONS:
INTERPRETIVE REPORT 1974 BY Ichthyological Associates FOR United Engineers AND Constructors INC., CLIENT: DELMARVA POWER AND LIGHT COMPANY

CONTACT:
HUDSON Hoen 302 429 3205
DELMARVA POWER AND LIGHT COMPANY
800 KING STREET
WILMINGTON DELAWARE USA 19899

GRID LOCATOR (LAT):
73079534
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PROJECTS:
ENLARGEMENT OF THE CHESAPEAKE AND DELAWARE CANAL

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC, COASTAL, U.S., DELMARVA PENINSULA, CHESAPEAKE AND DELAWARE CANAL

ABSTRACT:
DATA COLLECTED ON THE PLANKTONIC AND BENTHIC ORGANISMS FOUND IN THE CHESAPEAKE AND DELAWARE CANAL AND ADJACENT WATERS DURING THE 1974 ECOLOGICAL STUDY OF THE AQUATIC ENVIRONMENT IN THE VICINITY OF THE PROPOSED SUMMIT POWER STATION ARE PRESENTED IN REPORT FORM. SPECIES DETERMINATIONS AND DISTRIBUTIONS OF PHYTOPLANKTON, ZOOPLANKTON AND BENTHIC ORGANISMS ARE GIVEN IN ORDER TO OBTAIN INFORMATION ABOUT DAILY AND SEASONAL CHANGES IN POPULATION STRUCTURE. VITALITY STUDIES ON THE ZOOPLANKTON ARE INCLUDED. THE RESULTS OF A COMPREHENSIVE ANALYSIS OF THE PHYSICAL/ChemICAL ENVIRONMENT IN THE CANAL WATERS DURING THE BIOLOGICAL SAMPLING PROGRAM ARE ALSO AVAILABLE. MEASURED PARAMETERS INCLUDE COLIFORM COUNTS, NUTRIENTS, PIGMENTS, HEAVY METALS, OIL AND GREASE, TEMPERATURE, SALINITY, DISSOLVED OXYGEN GAS, PH, TURBIDITY AND TRANSPARENCY, HARDNESS, TOTAL ALKALINITY, CARBONATE ALKALINITY, SULFATE, TOTAL DISSOLVED SOLIDS, SUSPENDED SOLIDS, TOTAL PHOSPHORUS, DISSOLVED PHOSPHORUS, NITRATE-NITROGEN, NITRITE-NITROGEN, AMMONIA, ORGANIC NITROGEN, MAGNESIUM, CALCIUM AND TOTAL SILICA.

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DELMARVA POWER AND LIGHT COMPANY
800 KING STREET
WILMINGTON DELAWARE USA 19899

GRID LOCATOR (LAT):
73079533
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<td>Chromium</td>
<td>Sediment</td>
<td>Atomic absorption</td>
<td>UG/KG</td>
<td>5 OBS</td>
<td>Monthly</td>
<td>Surface</td>
<td>5 stations; July: 1 sample per OBS</td>
</tr>
<tr>
<td>Nickel</td>
<td>Sediment</td>
<td>Atomic absorption</td>
<td>UG/KG</td>
<td>5 OBS</td>
<td>Monthly</td>
<td>Surface</td>
<td>5 stations; July: 1 sample per OBS</td>
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### Parameter Identification Section:

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<th>Method</th>
<th>Units</th>
<th>Data Amount</th>
<th>Frequency</th>
<th>Height/Depth</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Lead</td>
<td>Sediment</td>
<td>Atomic Absorption UG/KG</td>
<td>Spectrometry</td>
<td>5</td>
<td>OBS</td>
<td>MONTHLY</td>
<td>5 STATIONS; JULY: 1 SAMPLE PER OBS</td>
</tr>
<tr>
<td>Zinc</td>
<td>Sediment</td>
<td>Atomic Absorption UG/KG</td>
<td>Spectrometry</td>
<td>5</td>
<td>OBS</td>
<td>MONTHLY</td>
<td>5 STATIONS; JULY: 1 SAMPLE PER OBS</td>
</tr>
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<td>Iron</td>
<td>Sediment</td>
<td>Atomic Absorption UG/KG</td>
<td>Spectrometry</td>
<td>5</td>
<td>OBS</td>
<td>MONTHLY</td>
<td>5 STATIONS; JULY: 1 SAMPLE PER OBS</td>
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<td>Mercury</td>
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<td>Atomic Absorption UG/KG</td>
<td>Spectrometry</td>
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<td>OBS</td>
<td>MONTHLY</td>
<td>5 STATIONS; JULY: 1 SAMPLE PER OBS</td>
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<td>Count of Microbiota</td>
<td>Water</td>
<td>Visual</td>
<td>Colonies Per</td>
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<td>SURFACE, BOTTOM</td>
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<td>MG/M³</td>
<td>4</td>
<td>STATIONS</td>
<td>MONTHLY</td>
<td>SURFACE, BOTTOM</td>
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<tr>
<td>Total Phaeophyti</td>
<td>Water</td>
<td>Fluorometry</td>
<td>MG/M³</td>
<td>4</td>
<td>STATIONS</td>
<td>MONTHLY</td>
<td>SURFACE, BOTTOM</td>
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<tr>
<td>Count of Phytoplankton</td>
<td>Water</td>
<td>Filtration</td>
<td>Species Per</td>
<td>560</td>
<td>OBS</td>
<td>JANUARY, FEBRUARY, NOVEMBER, DECEMBER, MARCH-OCTOBER, MONTHLY</td>
<td>SURFACE, BOTTOM</td>
</tr>
<tr>
<td>Species Determination</td>
<td>Water</td>
<td>Key</td>
<td>Species Per M³</td>
<td>560</td>
<td>OBS</td>
<td>JANUARY, FEBRUARY, NOVEMBER, DECEMBER, MARCH-OCTOBER, MONTHLY</td>
<td>SURFACE, BOTTOM</td>
</tr>
<tr>
<td>Count of Zooplankton</td>
<td>Water</td>
<td>Fixed, Stained, Aliquot</td>
<td>Species Per M³</td>
<td>560</td>
<td>OBS</td>
<td>JANUARY, FEBRUARY, NOVEMBER, DECEMBER, MARCH-OCTOBER, MONTHLY</td>
<td>SURFACE, BOTTOM</td>
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- **Remarks**: 5-10TH MESH NET USED IN SAMPLING.
### Parameter Identification Section:

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<td>Species Determination of Zooplankton</td>
<td>Water</td>
<td>Key</td>
<td>Species per M³</td>
<td>560</td>
<td>March - October</td>
<td>Surface, Bottom</td>
<td>DAY SAMPLING</td>
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<td>Mortality of Zooplankton</td>
<td>Water</td>
<td>Visual</td>
<td>Percent of total individus dead per species</td>
<td>16</td>
<td>Monthly</td>
<td>Surface, Bottom</td>
<td>2 STATIONS; 1 SAMPLE PER OBS; MARCH, JULY, SEPTEMBER, NOVEMBER</td>
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<tr>
<td>Species Determination of Benthic Animals</td>
<td>Bottom</td>
<td>Key</td>
<td>Species per sample</td>
<td>135</td>
<td>Monthly</td>
<td>Surface, Bottom</td>
<td>5 STATIONS; 3 SAMPLES PER OBS; APRIL - NOVEMBER; 523 CM2 PONAR SAMPLER</td>
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<tr>
<td>Count of Benthic Animals</td>
<td>Bottom</td>
<td>Microscope</td>
<td>Numbers per species per sample</td>
<td>135</td>
<td>Monthly</td>
<td>Surface, Bottom</td>
<td>5 STATIONS; 3 SAMPLES PER OBS; APRIL - NOVEMBER; 523 CM2 PONAR SAMPLER</td>
</tr>
<tr>
<td>Reactive Phosphate</td>
<td>Water</td>
<td>Colorimetry</td>
<td>UG/L</td>
<td>72</td>
<td>Monthly</td>
<td>Surface, Bottom</td>
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</tbody>
</table>

*Note: OBS stands for observations.*
ANNEX II

Data Files

Part B

Data File Index - Listed by Key Word

Dredging and Spoil Disposal
This index contains an alphabetical listing by key word of the
data files in this annex. After some key words is a number or series
of numbers which reference the page numbers of the particular file(s)
within this report. Most of the files are referenced by more than one
key word. Underlined numbers indicate files generated after January

The key words which do not reference any relevant files are
included to indicate the extent of the file search.
ANNEX II

Part B
Data File Index Listed by Key Word

Dredging and Spoil Disposal

2,4-D (sediment) - herbicide
none

2,4-D (suspended)
none

2,4-D (water)
none

2,4-D in bio material (bottom)
none

2,4-D in bio material (water)
none

2,4,5-T (sediment) - herbicide
none

2,4,5-T (suspended)
none

2,4,5-T (water)
none

2,4,5-T in bio material (sediment)
none

2,4,5-T in bio material (suspended)
none

2,4,5-T in bio material (water)
none

ABS
use surfactants

acaraben
use chlorobenzilate

aldrin (sediment) - insecticide
none

aldrin (water)
  none

aldrin in bio material (bottom)
  none

aldrin in bio material (water)
  none

aliphatic hydrocarbons (dissolved)
  none

aliphatic hydrocarbons (sediment)
  none

aliphatic hydrocarbons (water)
  none

aliphatic hydrocarbons in bio material (water)
  none

alpha B.H.C.
  use lindane

ametryne (water) - herbicide
  none

ammonia (dissolved)
  none

ammonia (interstitial)
  none

ammonia (sediment)
  none

ammonia (water)
  none

amphibol (sediment) - asbestos
  none

amphibol (water)
  none

antimony (dissolved)
  none
antimony (sediment)
   none

antimony (water)
   none

antimony in bio material (bottom)
   none

antimony in bio material (water)
   none

aromatic hydrocarbons (dissolved)
   none

aromatic hydrocarbons (suspended)
   none

aromatic hydrocarbons (water)
   none

aromatic hydrocarbons in bio material (water)
   none

arsenic (dissolved)
   none

arsenic (sediment)
   none

arsenic (suspended)
   none

arsenic (water)
   none

arsenic in bio material (bottom)
   none

arsenic in bio material (water)
   none

asbestos
   use amphibol. chrysotile.

atrazine (water) - herbicide
   none

atrazine in bio material (bottom)
   none
atrazine in bio material (water)
none

benthic animals
use biological condition, biomass, community structure analysis (bottom), count, developmental stage, diversity index, growth studies, migration, mortality, sex determination, species determination, taxonomic list, volume determination, weight

benthic plants
use biological condition, biomass, community structure analysis (bottom), count, developmental stage, diversity index, growth studies, mortality, taxonomic list, volume determination, weight, yield

benzopyrene (water)
none

beryllium (dissolved)
none

beryllium (sediment)
none

beryllium (suspended)
none

beryllium (water)
none

beryllium in bio material (bottom)
none

beryllium in bio material (water)
none

beta B.H.C.
use lindane

B.H.C. (sediment) - insecticide
none

B.H.C. (water)
none

B.H.C. in bio material (water)
none
biological condition of benthic animals (bottom)
  21

biological condition of benthic plants (bottom)
none

biomass of benthic animals (bottom)
  29, 34, 38, 45

biomass of benthic plants (bottom)
none

biomass of benthic plants (land)
  23

burrowers
  use benthic animals

cadmium (dissolved)
none

cadmium (interstitial)
none

cadmium (sediment)
none

cadmium (suspended)
none

cadmium (water)
  69

cadmium in bio material (bottom)
none

cadmium in bio material (sediment)
none

cadmium in bio material (water)
none

captan (water) - fungicide
  none

caracide
  use chlorobenside

carbaryl (sediment) - pesticide
  none
carbaryl (water)  
   none

carbofuran (water) - insecticide  
   none

carbon tetrachloride (water)  
   none

C.D.E.C. (water) - herbicide  
   none

cerium -144 (sediment)  
   none

cesium -137 (sediment)  
   none

cesium -137 (water)  
   none

chlordane (sediment) - insecticide  
   none

chlordane (water)  
   none

chlordane in bio material (bottom)  
   none

chlordane in bio material (water)  
   none

chlorinated hydrocarbons (sediment) - pesticides  
   none

chlorinated hydrocarbons (water)  
   none

chlorinated hydrocarbons in bio material (water)  
   none

chlorine (sediment)  
   none

chlorine (water)  
   none

chlorine in bio material (bottom)  
   none
<table>
<thead>
<tr>
<th>Substance</th>
<th>Category</th>
<th>Value</th>
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<tbody>
<tr>
<td>Chlorine in bio material (water)</td>
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<tr>
<td>Chlorobenside (water) - pesticide</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chlorobenzilate (water) - insecticide</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chloroform (water)</td>
<td>none</td>
<td></td>
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<tr>
<td>Chromium (dissolved)</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chromium (interstitial)</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chromium (sediment)</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Chromium (suspended)</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chromium (water)</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Chromium in bio material (bottom)</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chromium in bio material (sediment)</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Chromium in bio material (water)</td>
<td>none</td>
<td></td>
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<tr>
<td>Chrysotile (water) - asbestos</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Commercial fisheries activities (bottom)</td>
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<tr>
<td>Community diversity</td>
<td>Use diversity index</td>
<td></td>
</tr>
<tr>
<td>Community structure analysis (bottom)</td>
<td>6, 27, 31, 34, 36</td>
<td></td>
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<tr>
<td>Condition</td>
<td>Use biological condition</td>
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copper (dissolved)  
none

copper (interstitial)  
none

copper (sediment)  
none

copper (suspended)  
none

copper (water)  
none

copper in bio material (bottom)  
none

copper in bio material (sediment)  
none

copper in bio material (water)  
none

count of benthic animals (bottom)  
6, 9, 25, 27, 29, 31, 34, 36, 38, 45, 47, 65, 69

count of benthic plants (bottom)  
6, 36, 40, 61, 63

count of demersal fish (water)  
6, 19

count of pelagic fish (water)  
6, 17, 19, 42, 44, 49, 51, 53, 55, 65

count of phytoplankton (water)  
69

count of zooplankton (water)  
15, 17, 69

cyanide (sediment)  
none

cyanide (water)  
none

cyanide in bio material (water)  
none
dacthal (water) - herbicide
  none

DCPA
  use dacthal

DDA (sediment) - insecticide
  none

DDA (water)
  none

DDA in bio material (water)
  none

DDD (sediment) - insecticide
  none

DDD (water)
  none

DDD in bio material (bottom)
  none

DDD in bio material (water)
  none

DDE (sediment) - insecticide
  none

DDE (water)
  none

DDE in bio material (bottom)
  none

DDE in bio material (water)
  none

DDT (dissolved) - insecticide
  none

DDT (sediment)
  none

DDT (water)
  none

DDT in bio material (bottom)
  none
DDT in bio material (water)
none

delta B.H.C.
use lindane

demersal fish
use count, mortality, species determination

detergents (water)
none

developmental stage of benthic animals (bottom)
none

developmental stage of benthic plants (bottom)
none

diazinon (sediment) - pesticide
none

diazinon (water)
none

diazinon in bio material (bottom)
none

diazinon in bio material (water)
none

dicamba (water) - herbicide
none

dicamba in bio material (water)
none

dichlorane (water) - herbicide
none

dicofol (sediment) - insecticide
none

dicofol (water)
none

dieldrin (dissolved) - insecticide
none

dieldrin (sediment)
none
dieldrin (water)  
none

dieldrin in bio material (bottom)  
none

dieldrin in bio material (water)  
none

dilan (water) - insecticide  
none

dilan in bio material (bottom)  
none

dimethoate (water) - insecticide  
none

dinitrophenol (water) - herbicide  
none

dinitrophenol in bio material (water)  
none

diquat (water) - herbicide  
none

diquat in bio material (water)  
none

distribution  
use community structure analysis (bottom), count, species determination

diuron (water) - herbicide  
none

diversity index of benthic animals (bottom)  
34

diversity index of benthic plants (bottom)  
none

dylox  
use trichlorfon

dyrene (water) - fungicide  
none
endosulfan
  use thiodan

endrin (sediment)
  none

endrin (water)
  none

endrin in bio material (bottom)
  none

endrin in bio material (water)
  none

epsilon B.H.C.
  use lindane

ethion (sediment) - pesticide
  none

ethion (water)
  none

fish
  use demersal, pelagic

folpet (water) - fungicide
  none

fuel oil (water)
  none

fungicide
  use captan, dyrene, folpet

furadan
  use carbofuran

gamma B.H.C.
  use lindane

gasoline (water)
  none

grease
  use oils

growth studies of benthic animals (bottom)
  none
growth studies of benthic plants (bottom)
  none

guthion (water) - pesticide
  none

guthion in bio material (water)
  none

heavy metals
  use cadmium, copper, lead, mercury, nickel, zinc

heptachlor (sediment) - insecticide
  none

heptachlor (water)
  none

heptachlor epoxide (sediment) - insecticide
  none

heptachlor epoxide (water)
  none

heptachlor epoxide in bio material (bottom)
  none

heptachlor epoxide in bio material (water)
  none

heptachlor in bio material (bottom)
  none

heptachlor in bio material (water)
  none

herbicide
  use 2,4-D, 2,4,5-T, ametryne, atrazine, CDEC, dacthal, dicamba, dichlorone, dinitrophenol, diquat, diuron, hexachlorobenzene, neburon, paraquat, silvex, simazine, trifluralin

hexachlorobenzene (water) - herbicide
  none

hexachlorobenzene in bio material (water)
  none

hydrocarbons (dissolved)
  none
hydrocarbons (sediment)  
none

hydrocarbons (suspended)  
none

hydrocarbons (water)  
none

hydrocarbons in bio material (bottom)  
none

hydrocarbons in bio material (water)  
none

index of dispersion  
use community structure analysis

index of diversity  
use diversity index

index of dominance  
use community structure analysis

index of evenness  
use community structure analysis

index of species association  
use community structure analysis

index of species equatability  
use community structure analysis

Index of richness  
use community structure analysis

index of species similarity  
use community structure analysis

insecticide  
use aldrin, BHC, carbofuran, chlordane, chlorobenzilate, DDA, DDD, DDE, DDT, dicofol, dieldrin, dilan, dimethoate, heptachlor, heptachlor epoxide, kepone, lindane, methoxychlor, perthane, phosdrin, ronnel, tedion, thimet, thiodan, toxaphene, trichlorfon

kelthane  
use dicofol

kepone (water) - insecticide  
none
kerosene (water)  none
land use (land)  59
lead (dissolved)  none
lead (interstitial)  none
lead (sediment)  69
lead (suspended)  none
lead (water)  69
lead in bio material (bottom)  none
lead in bio material (water)  none
lead -210 (water)  none
light attenuation (water)  6, 11, 45, 49, 57, 69
light scattering coefficient (water)  none
light transmission
   use light attenuation
lindane (sediment) - insecticide  none
lindane (water)  none
lindane in bio material (bottom)  none
lindane in bio material (water)  none

-92-
lubricating oil (water)
none

malathion (sediment) - pesticide
none

malathion (water)
none

malathion in bio material (bottom)
none

malathion in bio material (water)
none

MBAS
use surfactants

mercury (dissolved)
none

mercury (interstitial)
none

mercury (sediment)
69

mercury (suspended)
none

mercury (water)
69

mercury in bio material (bottom)
none

mercury in bio material (water)
none

methoxychlor (sediment) - insecticide
none

methoxychlor (water)
none

methoxychlor in bio material (water)
none

methoxy DDT
use methoxychlor

-93-
<table>
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<td>methyl mercapturine</td>
<td>in bio material</td>
<td>none</td>
</tr>
<tr>
<td>methylparathion</td>
<td>(sediment) - pesticide</td>
<td>none</td>
</tr>
<tr>
<td>methylparathion</td>
<td>(water)</td>
<td>none</td>
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<tr>
<td>methyltrithion</td>
<td>(sediment) - pesticide</td>
<td>none</td>
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<tr>
<td>methyltrithion</td>
<td>(water)</td>
<td>none</td>
</tr>
<tr>
<td>mevinphos</td>
<td>use phosdrin</td>
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<td>migration study of benthic animals</td>
<td>(bottom)</td>
<td>none</td>
</tr>
<tr>
<td>mirex</td>
<td>(sediment) - pesticide</td>
<td>none</td>
</tr>
<tr>
<td>mirex</td>
<td>(water)</td>
<td>none</td>
</tr>
<tr>
<td>mirex</td>
<td>in bio material</td>
<td>none</td>
</tr>
<tr>
<td>mortality of benthic animals</td>
<td>(bottom)</td>
<td>21</td>
</tr>
<tr>
<td>mortality of benthic plants</td>
<td>(bottom)</td>
<td>none</td>
</tr>
<tr>
<td>mortality of demersal fish</td>
<td>(water)</td>
<td>none</td>
</tr>
<tr>
<td>mortality of pelagic fish</td>
<td>(water)</td>
<td>none</td>
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<tr>
<td>mortality of phytoplankton</td>
<td>(water)</td>
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</tr>
<tr>
<td>mortality of zooplankton</td>
<td>(water)</td>
<td>69</td>
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neburon (water) - herbicide
  none

nephelometry
  use light scattering coefficient (water)

nickel (dissolved)
  none

nickel (interstitial)
  none

nickel (sediment)
  69

nickel (suspended)
  none

nickel (water)
  69

nickel in bio material (bottom)
  none

nickel in bio material (sediment)
  none

nickel in bio material (water)
  none

oil degradation (sediment)
  none

oil degradation (water)
  none

oil slick coverage (water)
  none

oil slick occurrence (sediment)
  none

oil slick occurrence (water)
  none

oils (sediment)
  69

oils (water)
  69
oils in bio material (bottom)
none

oils in bio material (water)
none

ortho-para DDD
use DDD

ortho-para DDE
use DDE

ortho-para DDT
use DDT

para-para DDD
use DDD

para-para DDE
use DDE

para-para DDT
use DDT

paraquat (water) - herbicide
none

parathion (sediment)
none

parathion (water)
none

parathion in bio material (bottom)
none

parathion in bio material (water)
none

particulate matter
13

PCB
use polychlorinated biphenyls

pelagic fish
use count, mortality, species determination

perthane (water) - insecticide
none
pesticide
  use carbaryl, chlorinated hydrocarbons, chlorobenside, diazinon, ethion, guthion, malathion, methylparathion, methyltrichion, mirex, trithion

phenols (dissolved)
  none

phenols (sediment)
  none

phenols (water)
  none

phenols in bio material (water)
  none

phorate
  use thimet

phosdrin (water) - insecticide
  none

phytoplankton
  use count, mortality, species determination

polychlorinated biphenyls (sediment)
  none

polychlorinated biphenyls (water)
  none

polychlorinated biphenyls in bio material (bottom)
  none

polychlorinated biphenyls in bio material (water)
  none

population
  use count

radium -226 (water)
  none

radium -228 (water)
  none

rank analysis
  use community structure analysis
ronnel (water) - insecticide
  none

ruthenium -106 (sediment)
  none

selenium (dissolved)
  none

selenium (sediment)
  none

selenium (water)
  none

selenium in bio material (bottom)
  none

selenium in bio material (water)
  none

sevin
  use carbaryl

sex determination of benthic animals (bottom)
  47, 65

silver (dissolved)
  none

silver (interstitial)
  none

silver (sediment)
  none

silver (suspended)
  none

silver (water)
  none

silver in bio material (bottom)
  none

silver in bio material (water)
  none

silvex (sediment) - herbicide
  none
silvex (water)
    none

simazine (water) - herbicide
    none

soap
    use detergents

species determination of benthic animals (bottom)
    9, 21, 25, 27, 29, 31, 34, 36, 38, 45, 47, 69

species determination of benthic plants (bottom)
    36, 40, 61, 63

species determination of demersal fish (water)
    6, 19, 40

species determination of pelagic fish (water)
    6, 17, 19, 40, 42, 44, 49, 51, 53, 55, 59, 65

species determination of phytoplankton (water)
    69

species determination of zooplankton (water)
    15, 17, 39, 69

surfactants (water)
    none

tar balls (water)
    none

taxonomic list of benthic animals (bottom)
    6, 31

taxonomic list of benthic plants (bottom)
    none

TDE
    use DDD

tedion (water) - insecticide
    none

telodrin (sediment)
    none

telodrin (water)
    none
tetradifon
  use tedion

thallium (sediment)
  none

thallium (water)
  none

thallium in bio material (water)
  none

thimet (water) - insecticide
  none

thiodan (sediment) - insecticide
  none

thiodan (water)
  none

thorium -228 (water)
  none

total 2,4-D
  use 2,4-D

total 2,4,5-T
  use 2,4,5-T

toxaphene (sediment) - insecticide
  none

toxaphene (water)
  none

transparency
  use light attenuation

toxaphene in bio material (bottom)
  none

toxaphene in bio material (water)
  none

toxins in bio material (bottom)
  none

toxins in bio material (water)
  none
trichlorfon (water) - insecticide
  none

trifluralin in bio material (bottom) - herbicide
  none

trifluralin in bio material (water)
  none

trithion (sediment) - pesticide
  none

trithion (water)
  none

turbidity
  use light attenuation, light scattering coefficient (water)

vegadex
  use CDEC

volume determination of benthic animals (bottom)
  none

volume determination of benthic plants (bottom)
  none

weight of benthic animals (bottom)
  none

weight of benthic plants (bottom)
  6

yield of benthic plants (bottom)
  none

zinc (dissolved)
  none

zinc (interstitial)
  none

zinc (sediment)
  69

zinc (suspended)
  none

zinc (water)
  69

-101-
zinc in bio material (bottom)
none

zinc in bio material (sediment)
none

zinc in bio material (water)
none

zooplankton
use count, mortality, species determination
ANNEX III

Monitoring Programs

Dredging and Spoil Disposal
The monitoring programs identified for this report form three categories, as follows:

Continuous monitoring programs presently active in the Chesapeake Bay - 5 files.

Continuous monitoring programs initiated after January 1967 that have operated five (5) years or longer, but are presently not operational - 0 files.

Continuous monitoring programs initiated prior to January 1967 that have operated ten (10) years or longer and are presently not operational - 1 file.

The programs are arranged by date of initiation, earliest first.
DATA COLLECTED: JANUARY 1952 TO JANUARY 1973

MONITORING PROJECTS:
    GATX CORPORATION PROPOSED TERMINAL FACILITY ON THE DELAWARE RIVER

GENERAL GEOGRAPHIC AREA:
    NORTH ATLANTIC OCEAN, COASTAL, U.S., NEW JERSEY, DELAWARE RIVER, GLOUCESTER COUNTY,
    WEST DEPTFORD TOWNSHIP

ABSTRACT:
    IN PUTTING TOGETHER AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED CONSTRUCTION
    OF THE GATX CORPORATION'S TERMINAL FACILITY ON THE DELAWARE RIVER NEAR WEST DEPTFORD
    TOWNSHIP, NEW JERSEY, THE U.S. ARMY CORPS OF ENGINEERS COMPiled DATA BASELINE SURVEYS
    FROM 1952 TO THE PRESENT. AN OVERALL ASSESSMENT OF LOCAL TOPOGRAPHY, HYDROLOGY,
    ECOSYSTEMS, WATER AND AIR QUALITY, AND CLIMATE WAS MADE IN RELATIONSHIP TO THE
    EFFECTS OF THE PROPOSED ACTION.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
    ROY DENMARK  215-297-2944
    U.S. ARMY CORPS OF ENGINEERS
    PHILADELPHIA DISTRICT
    2nd AND CHESNUT STREETS
    PHILADELPHIA, PENNSYLVANIA, USA 19106

GRID LOCATOR:
    COMPLETE FILE DESCRIPTION LOCATED IN ANNEX II, PAGE 59.
DATA COLLECTED: JANUARY 1970 TO PRESENT

MONITORING PROJECTS:
- Biological reports for permit applications to alter marshlands, estuarine bottoms, tidelands and state-owned lakes of North Carolina

GENERAL GEOGRAPHIC AREA:
- North Atlantic Ocean, coastal, U.S., North Carolina

ABSTRACT:
- Biological reports which determine effects of building and dredging projects on coastal marshlands, estuarine bottoms, tidelands and state-owned lakes.
- Aerial photography is used to monitor any building or dredging permit violations.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
- James T. Brown 919-726-7021
  Division of Commercial and Sports Fisheries
  North Carolina Department of Natural and Economic Resources
  P.O. Box 769
  Moorehead City, North Carolina, USA 28557

GRID LOCATOR:
DATA COLLECTED: JANUARY 1972 TO PRESENT

MONITORING PROJECTS:
SPOILED WETLANDS RECOVERY STUDY

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC OCEAN, COASTAL, U.S., MARYLAND, QUEEN ANN COUNTY

ABSTRACT:
A STUDY OF VEGETATIVE REHABILITATION OF THREE DISTURBED MARSHES IN QUEEN ANN COUNTY, MARYLAND IS BEING CONDUCTED. ALL SUBMERGENT AND EMERGENT PLANTS TO 3 FOOT WATER DEPTH AT THREE DISTURBED AREAS AND 52 STATIONS PER DISTURBED AREA ARE BEING STUDIED. SAMPLES ARE TAKEN EARLY AND LATE SUMMER.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
JAMES R. GOLDBERRY, DIRECTOR 301-267-5195
MARYLAND WILDLIFE ADMINISTRATION
DEPARTMENT OF NATURAL RESOURCES
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND, USA 21401

GRID LOCATOR:
COMPLETE FILE DESCRIPTION LOCATED IN ANNEX II, PAGE 61.
DATA COLLECTED: JUNE 1972 TO PRESENT

MONITORING PROJECTS:
  ENVIRONMENTAL CONSULTATION—WETLANDS, LYNNHAVEN AREA OF LOWER CHESAPEAKE BAY
  AND ELIZABETH RIVER

GENERAL GEOGRAPHIC AREA:
  NORTH ATLANTIC OCEAN, COASTAL, U.S., LOWER CHESAPEAKE BAY, VIRGINIA, LYNNHAVEN
  BAY, ELIZABETH RIVER

ABSTRACT:
  SURVEY OF HYDROGRAPHIC AND BIOLOGICAL PARAMETERS OF LOWER CHESAPEAKE BAY, LYNNHAVEN
  BAY AND ELIZABETH RIVER, VA. DATA COLLECTED IN CONJUNCTION WITH CONTRACT WORK FOR
  CONTRACTORS AND LAND DEVELOPERS.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
  PAUL KIRK  804-489-6000
  INSTITUTE OF OCEANOGRAPHY
  OLD DOMINION UNIVERSITY
  NORFOLK, VIRGINIA, USA  23508

GRID LOCATOR:
  COMPLETE FILE DESCRIPTION LOCATED IN ANNEX II, PAGE 29.
DATA COLLECTED: JULY 1973 TO PRESENT

MONITORING PROJECTS:
   EVALUATION OF CHANNELIZATION EFFECTS ON AQUATIC HABITAT

GENERAL GEOGRAPHIC AREA:
   NORTH ATLANTIC OCEAN, COASTAL, U.S., CHESAPEAKE BAY, MARYLAND, EASTERN SHORE

ABSTRACT:
   EXTENSIVE DATA BASE ON 19 CHANNELIZED STREAMS INCLUDING WATER CHEMISTRY, BENTHOS AND FISHES. COMPARISONS ACROSS STREAMS BASED UPON TIME SINCE CHANNELIZED. DETERMINATION OF RECOVERY TIME AND SEQUENCE OF BIOTA AND CHEMICAL FACTORS.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
   W.R. CARTER  301-269-5361
   MARYLAND DEPARTMENT OF NATURAL RESOURCES
   TAWES STATE OFFICE BUILDING
   ANNAPOLIS, MARYLAND, USA  21401

GRID LOCATOR:
   COMPLETE FILE DESCRIPTION LOCATED IN ANNEX II, PAGE 6.
DATA COLLECTED: JANUARY 1974 TO PRESENT

MONITORING PROJECTS:
SPOIL STUDIES ON THE EASTERN SHORE OF MARYLAND

GENERAL GEOGRAPHIC AREA:
NORTH ATLANTIC OCEAN, COASTAL, U.S., MARYLAND, QUEEN ANN, SOMERSET, WACOMICO AND DORCHESTER COUNTIES

ABSTRACT:
A STUDY OF VEGETATIVE REHABILITATION OF 6 SPOIL SITES ON THE BAY SIDE OF THE EASTERN SHORE, MARYLAND IS BEING CONDUCTED. REHABILITATION STUDY OF 6 SPOIL SITES CONSISTS OF ONE CROSS TRANSECT AT EACH SITE. SAMPLES ARE TAKEN EVERY 50 FEET ALONG TRANSECT ARM. VEGETATIONAL APPEARANCE AND SPECIES LIST FOR BOTH SUPER AND INTER-TIDAL SAMPLES ARE NOTED.

DATA AVAILABILITY:

PLATFORM TYPE:

ARCHIVE MEDIA:

FUNDING:

INVENTORY:

PUBLICATIONS:

CONTACT:
JAMES R. GOLDBERRY, DIRECTOR 301-267-5195
MARYLAND WILDLIFE ADMINISTRATION
DEPARTMENT OF NATURAL RESOURCES
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND, USA 21401

GRID LOCATOR:
COMPLETE FILE DESCRIPTION LOCATED IN ANNEX II, PAGE 63.