SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY OF MARYLAND, VIRGINIA, AND THE DISTRICT OF COLUMBIA. HYDROLOGIC DATA REPORT, MAY, 1978 TO NOVEMBER, 1981.

U.S. GEOLOGICAL SURVEY
Open-File Report 82—694

Prepared as part of a continuing study of the Potomac River estuary

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By James E. Paschal, Jr., Darin R. Miller, Nancy C. Bartow, and Virginia Carter

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1982

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to:

Chief Hydrologist
430 National Center
U.S. Geological Survey WRD
Reston, Virginia 22092

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ABSTRACT

As part of a comprehensive interdisciplinary study of the tidal Potomac River and Estuary, the U.S. Geological Survey studied the distribution and abundance of submersed aquatic vegetation from 1978 to 1981. Sites were chosen throughout the tidal river and estuary.

The plant species were identified; distribution and abundance of submersed aquatic vegetation were determined at the sites; and volumes, biomass-volume equivalents, and representative stem lengths were measured. Substrate types were identified, and particle size distribution, bottom nutrients, organic carbon, and heavy metals were measured at numerous sites. Water quality parameters that were measured included temperature, conductivity, salinity, secchi depth, photosynthetically active radiation, pH, chlorophyll a, nutrient concentrations, and epiphyte biomass. Experiments were performed in the field and in the laboratory to evaluate factors that would potentially affect distribution and abundance of aquatic macrophytes. For example, plants were suspended in cages and planted in exclosures, and transplant success was determined.

ACKNOWLEDGEMENTS

We thank G. Michael Haramis and his assistants of the U.S. Fish and Wildlife Service.

We appreciate the information and cooperation from people working and living along the Potomac River including Dr. and Mrs. Woody, Pete Cissell, the Natural Resources Police, the commercial and sports fishermen, and the captain of the Sinbad.

SYMBOLS AND CONVERSIONS

Symbols and conversion factors of the dimensions used in this paper are shown in Table A-1.

INTRODUCTION

In 1977, the U.S. Geological Survey began a comprehensive interdisciplinary study of the tidal Potomac River and Estuary in Maryland, Virginia, and the District of Columbia. The study included extensive water quality sampling, along with studies of geology, bathymetry, sedimentation, hydrodynamics, geochemistry of bottom sediments, transport of dissolved and suspended material, oxygen demand during low-flow conditions, bacterial and phytoplankton dynamics, benthic community structure, and submersed aquatic vegetation. This study blends specific Geological Survey research with a river-quality assessment (RQA) study of an estuarine environment. The overall goal of the combined effort is to understand the major aspects of hydrodynamic, chemical, and biological processes; and their interaction in a tidal river-estuarine system (Blanchard and Hahl, 1981, p. 2).

In 1978, the U.S. Geological Survey and the Migratory Bird Habitat Research Laboratory of the U.S. Fish and Wildlife Service (FWS) began a cooperative study of the distribution and abundance of submersed aquatic vegetation (SAV) in the riverine and estuarine environments of the tidal Potomac River. The Geological Survey and FWS performed cooperative surveys of SAV during 1978, and 1979. The Geological Survey continued its surveys through 1980 and 1981, and performed experiments in the lab and field to identify factors affecting the distribution and abundance of SAV. The objectives of the SAV study were:

1. To document the present distribution and abundance of SAV in the tidal Potomac River and Estuary.

2. To compare the present distribution of SAV with the historic distribution.
3. To identify factors responsible for the present distribution of SAV.
4. To determine implications of the present distribution and abundance of SAV to water quality and riverine and estuarine ecology.

The purpose of this report is to present all of the data collected during the SAV study.

The Potomac River forms most of the border between Maryland and Virginia, and is the second largest tributary in terms of drainage area and discharge entering Chesapeake Bay. It drains about 3.8×10^6 ha (14,700 sq mi), and contributes about 18 percent of the total freshwater discharge to the bay (Pritchard, 1952). The Potomac River enters the western side of Chesapeake Bay between Point Lookout and Smith Point (fig. 1). The tidal section of the river extends 183 km (99 nmi) from the mouth at the bay to the Chain Bridge in Washington, D.C., and is divided into three salinity-related zones for the purposes of the Potomac Estuary Study:

1. The tidal river above Quantico, Va., where the water is fresh except in extremely dry years, and the net flow is directed seaward at all depths.
2. The transition zone between Quantico, Va., and U.S. Highway 301 Bridge where salinity is generally low except during drought (0.5 ppt to 18 ppt ocean-derived salts), and extensive saltwater-freshwater mixing occurs.

3. The lower estuary (5.0 ppt to 18 ppt ocean-derived salts) which exhibits internal circulation with reverse bottom flow, strong tidal currents, moderate vertical stratification, and longitudinal variation in salinity (Elliot, 1976; Wilson, 1977).

The tidal Potomac River and Estuary generally have a deep channel flanked on either side by wide shallow flats or shoals. The mean depth of the tidal river and estuary is about 6 m. Emergent wetlands (marshes) are found in most of the tributaries of the main river and along the shore of the main river.

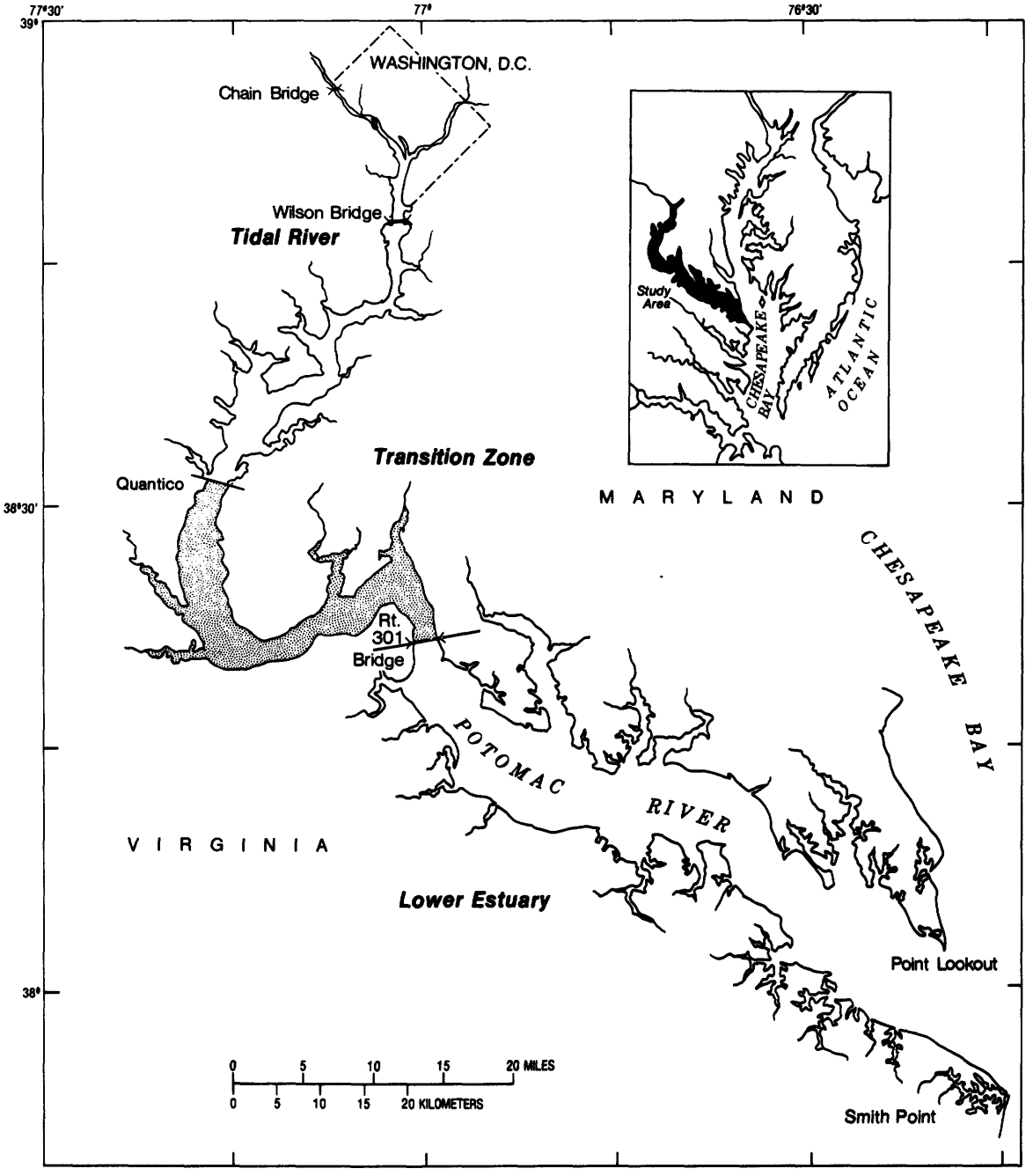


Figure 1. The Tidal Potomac River and Estuary

Survey of Submersed Aquatic Vegetation

In 1978, 132 transects in four regions of Maryland which included six tributaries were sampled intensively for SAV: (1) the Piscataway - Mattawoman Creeks in the tidal river (fig. 2); (2) Nanjemoy Creek - Port Tobacco River region in the transition zone (fig. 3); (3) the Wicomico River region in the upper estuary (fig. 4); and (4) the St. Marys River region in the lower estuary (fig. 4). The Wicomico River, which receives substantial fresh-water runoff, retains a fresh-water to salt-water gradient; it is also divided into tidal river, transition zone, and estuary. The St. Marys River, perhaps better described as an embayment, receives little fresh water and is essentially iso-saline. Five sites in Washington, D.C. were sampled in the summer of 1978, but were not resampled in following years (not shown in Figures 2 to 4).

In 1979, sampling was repeated on the 132 transects of the Maryland side of the river, and was extended to 108 transects in five regions of Virginia which included six tributaries: (1) the Gunston Cove region in the tidal river (fig. 2); (2) the Aquia - Potomac Creeks region in the transition zone (fig. 3); and (3) the Upper Machodoc Creek region (fig. 3), (4) the Nomini Bay region (fig. 4), and (5) the Yeocomico River region in the lower estuary (fig. 4).

In 1980 and 1981, only the Maryland side of the river was sampled because the 1979 survey indicated that SAV was similarly distributed on both sides of the river. In 1980, only 103 of the original 132 Maryland transects were resurveyed; 29 of the transect sites in the Mattawoman Creek, the Piscataway Creek, and the associated main river were not

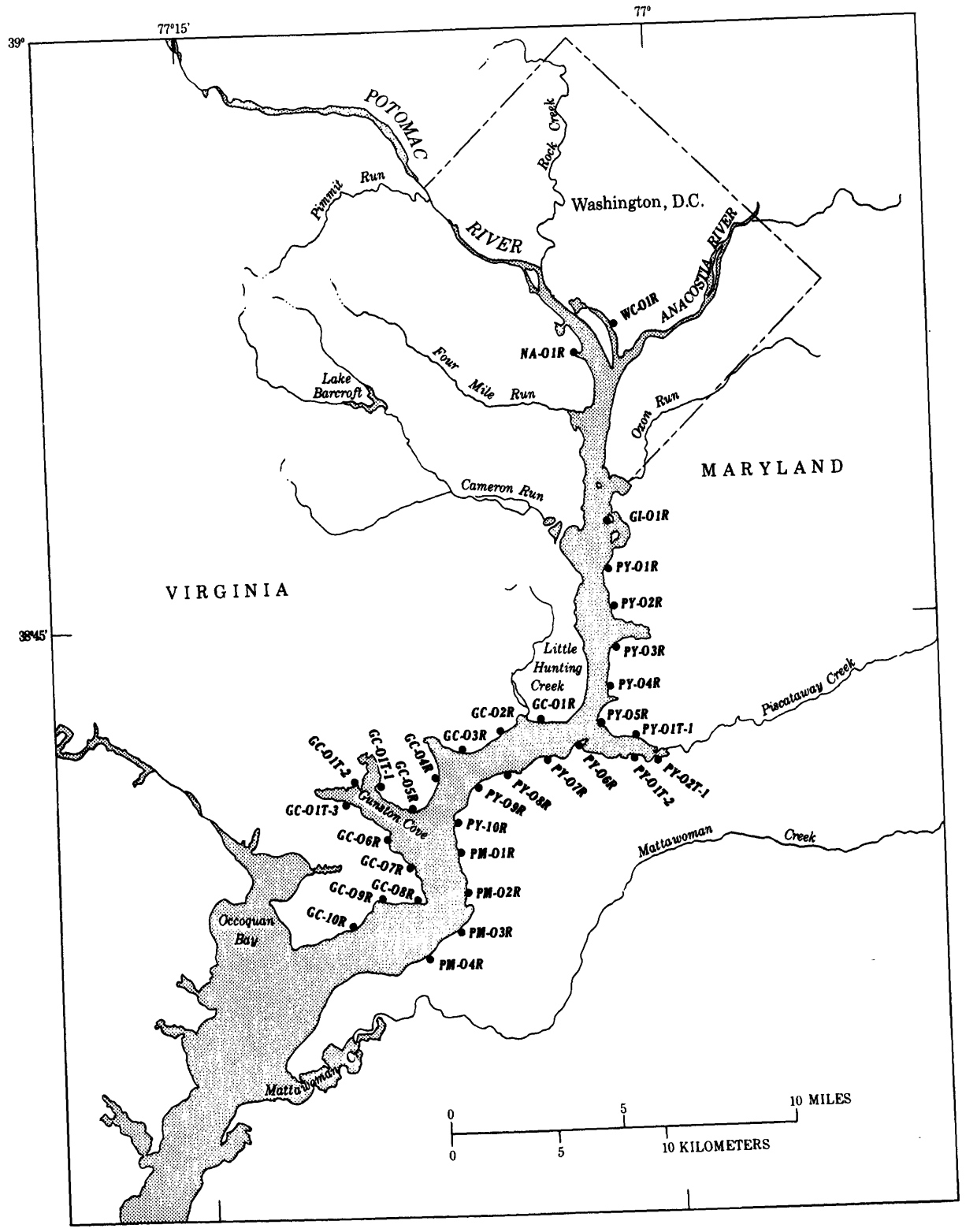


Figure 2. Location of vegetation sampling transects in the Tidal Potomac River above Mattawoman Creek.

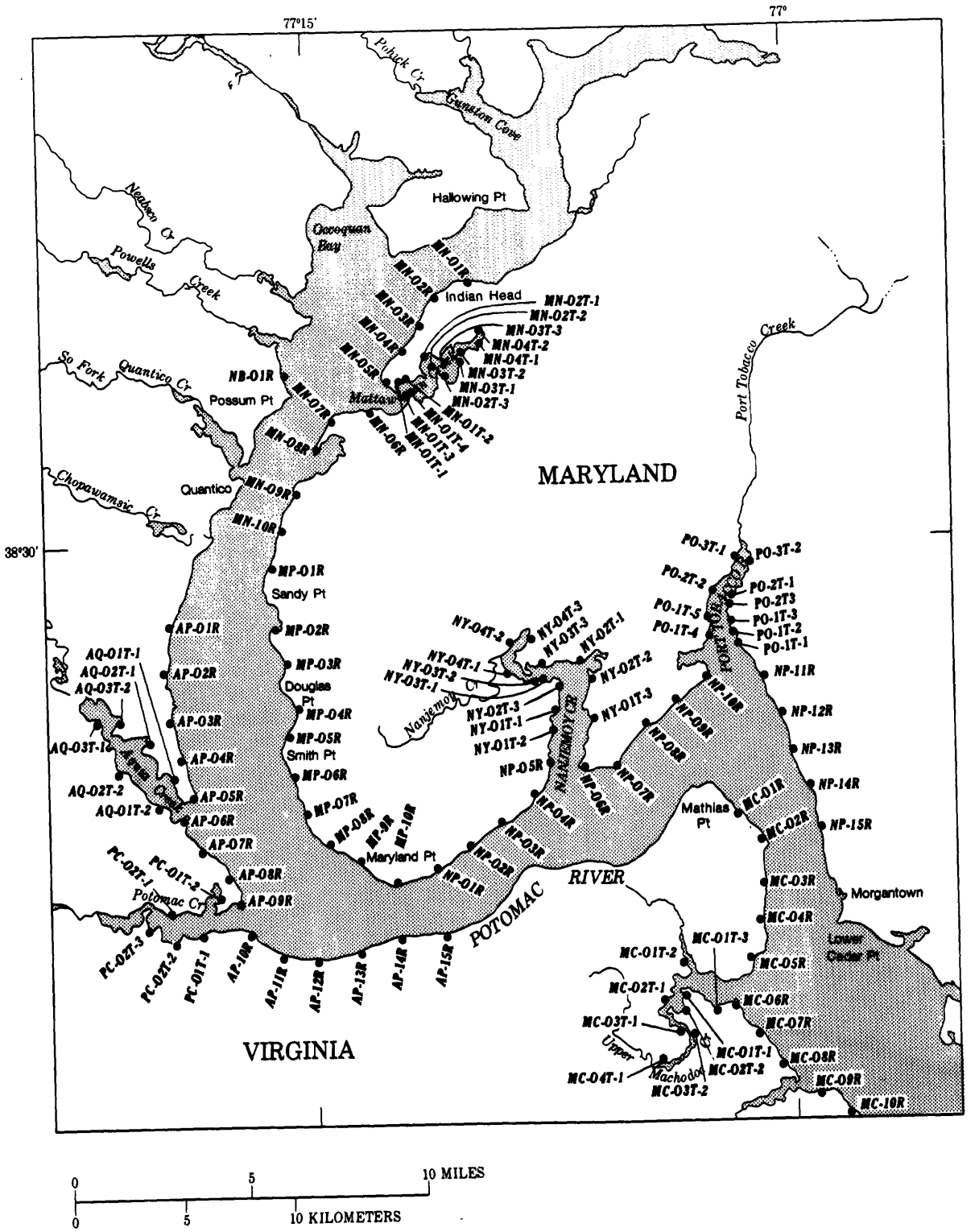


Figure 3. Location of vegetation sampling transects from Mattawoman Creek to Upper Machodoc Creek.

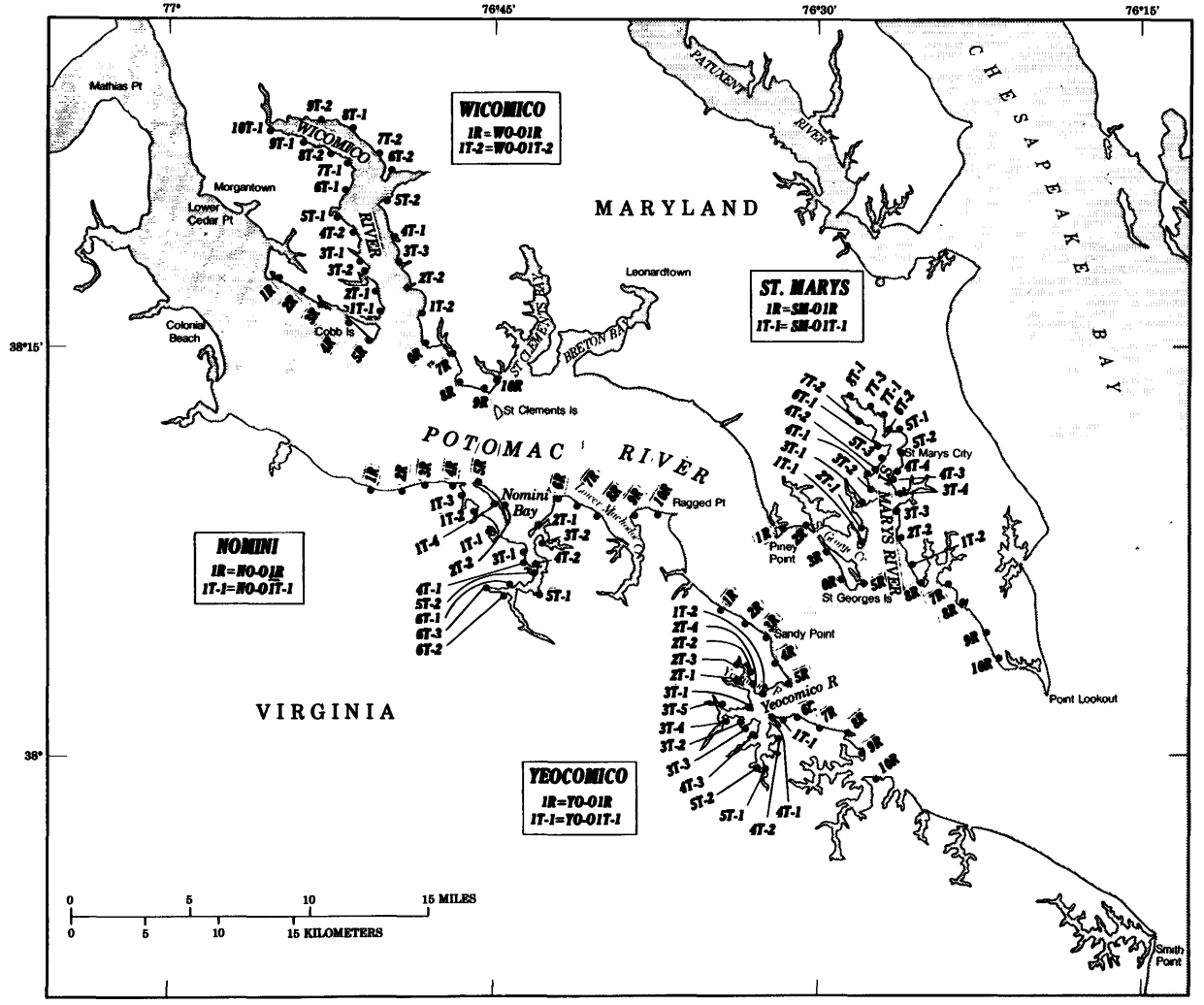


Figure 4. Location of vegetation sampling transects from the Wicomico River to Point Lookout.

resampled because there was no indication of SAV growth on those transects during 1978 or 1979. Sixteen new transects were established: one in Washington Channel, four between Piscataway and Mattawoman Creeks, one 5 km up the tributary from the mouth of the Mattawoman Creek, and 10 in the transition zone from below Quantico, Va. to around Maryland Point, Md. During 1981, the original 132 Maryland transects and the 16 Maryland transects established in 1980 were resampled.

Starting on either side of the tributary mouths, transect sites were chosen at 1.85-km intervals (1-nmi intervals) along the Potomac River for 7.40 km (4 nmi) (figs. 2 to 4). Because of more variable shorelines within the tributaries, a minimum of two and a maximum of five transects were selected at each 1.85 km-interval (1 nmi-interval) along the tributaries to include representative shoreline features and related exposures. Sampling was discontinued in tributaries when the water was too shallow for boats or where only a narrow channel remained between emergent wetlands.

River kilometers (rkm) were measured from the mouth of the Potomac whereas tributary kilometers (also as rkm) were measured from the mouth of the tributary. Codes for the transects in figures 2 through 4 show location and the river- or tributary-mile for each location. For example, MN-01T-2 is Mattawoman Creek, one nmi up the tributary from the mouth, second transect; NP-06R is between Nanjemoy Creek and the Port Tobacco River, on the edge of the main river.

Samples were collected during spring (May-June), summer (July-August), and fall (September-October) of 1978, 1980, and 1981. During 1979, samples were collected only during spring and fall because

of the additional work involved with sampling the Virginia side of the river. During the summer of 1981, samples were collected only on transects that had previously had three or more species present. Additionally, a survey was made of the previously unsampled shoreline to complete the distribution study of SAV.

Locations of transects were marked on nautical charts, and transects were temporarily established by placing a rope with buoys perpendicular to the shoreline. Most transects (distance transects) had stations at 0.5 m, 15 m, and then at 15-m intervals from shore. During 1978, transects were usually terminated at 2.5 m depth at high tide, 2.0 m at low tide, or when 300 m of linear distance from the high tide mark on the beach was reached. From 1979 to 1981, sampling of distance transects was modified to terminate at five stations (60 m) from shore where no vegetation was present or at two stations (30 m) beyond the last vegetated station. Where water depth exceeded 2.0 m depth at 60 m of linear distance, samples were taken at four distances from shore (0.5-m depth, 1.0-m depth, 1.5-m depth, and 2.0-m depth) (depth transects). Measurements of water depth were not adjusted for tidal stage.

All stations were sampled three times using modified oyster tongs (Sincock and others, 1965, p. 26; Kerwin and others, 1976; and Davis and Brinson, 1976) with blades welded across the teeth to facilitate biting into the sediment to collect rooted plants. The area sampled with each grab was about 930 cm^2. The sampler retained all above-ground plant biomass and most of the below-ground biomass. Modified oyster tongs were well suited for quantitative sampling because the areal coverage of the study was large and high turbidity precluded the use of SCUBA.

Species of SAV were identified, and live, wet volumes per grab of each species were determined. Taxonomic nomenclature follows Hotchkiss (1950, 1967), Radford and others (1964), and Wood (1967). A species list for the Potomac River is shown in table B-1, species found at each transect during each season are shown in table B-2, total volumes of SAV at each transect during each season are shown in table B-3, and volumes of each species at each station during each season are shown in tables B-4 through B-15.

Relative occurrence of vegetated transects, stations, and grabs for the regions of the river is shown in tables B-16 and B-17. More stations were sampled in 1978 than are shown in table B-16; to make results comparable with other years, stations past the last two unvegetated stations are omitted. The distribution of submersed aquatic vegetation during the study is shown in figure B-1.

To obtain volume to biomass equivalents for each species, 10 to 12 samples of each available species were collected from the river at different seasons. Wet weight (most of the water shaken off) and dry weight (oven dried at 110^0 C for two hours) were measured for specific volumes of each species. Dry weight to volume equivalents are shown in table B-18. Total biomass per m^2 at each transect during each season is shown in table B-19.

Factors Affecting the Distribution and Abundance of Submersed Aquatic Vegetation

During the study, substrate and water quality factors were measured to evaluate their potential effects on the distribution and abundance of SAV.

While sampling SAV, substrate samples were collected with tongs, and the substrates were characterized for sand, silt, or clay components (table C-1). Samples were collected at both transect locations and at other sites (figures 5 to 7) to determine particle sizes and concentrations of nutrients; they were collected with a plexiglass tube or with post hole diggers, and were sent to the U.S. Geological Survey Central Laboratories in Denver and Atlanta for analysis of (1) particle size distribution (table C-2), (2) nutrient concentrations (table C-3), (3) heavy metal concentrations (table C-4), and (4) carbon concentrations (table C-5).

Salinity, pH, conductivity, and temperature for each year (Tables C-6 to C-9) were measured at selected transect sites by using an industrial RS 5-3 Induction Salinometer[1] and a YSI Model 33 SCT meter (conductivity was not corrected for temperature); pH was measured with an X-rite field meter. Water transparency was measured with a black and white secchi disc (table C-10).

During 1981, photosynthetically active radiation (PAR) of 400-700 nm wavelengths was measured at selected sites with a LICOR 185B quantum radiometer-photometer. An underwater sensor with a 3 m cable was used;

[1]The use of trade names in this report is for identification purposes only, and does not constitute endorsement by the U.S. Geological Survey.

and light energy in microeinsteins per square meter per second ($uE/m^2/s$) was measured above the water surface, just below the surface, and at 20-cm increments from the surface to the bottom. At some of the selected sites, water samples were collected to analyze chlorophyll a. Light energy and chlorophyll a concentrations in water are shown in table C-11.

During 1981, epiphytes were collected in the river to evaluate their potential effects on SAV distribution and abundance. Artificial substrates were made from strips of transparent polyvinyl lay-flat tubing 27 cm long, 3 cm wide, and 0.04 mm thick, and sealed at both ends. Three artificial substrates were tied to a piece of galvanized wire mesh that was in turn fastened to a cinder block. A small piece of styrofoam was attached to each strip for flotation. Twice during spring and summer, and once during fall, cinder blocks with substrates were placed at each of nine sites in the river. The substrates were left at various sites for about 2 weeks, and then were returned and placed in plastic bags filled with river water. Three samples were taken from each strip by using a paper punch, and the three samples were placed together in a 15-ml vial of acetone for chlorophyll a and phaeophytin analysis (table C-12). In the lab, light transmittance through colonized strips was measured with the LICOR photometer (table C-13), and then epiphytes were scraped from one side of the polyvinyl strip. The scrapings were used to determine dry weight and ash weight (also table C-12).

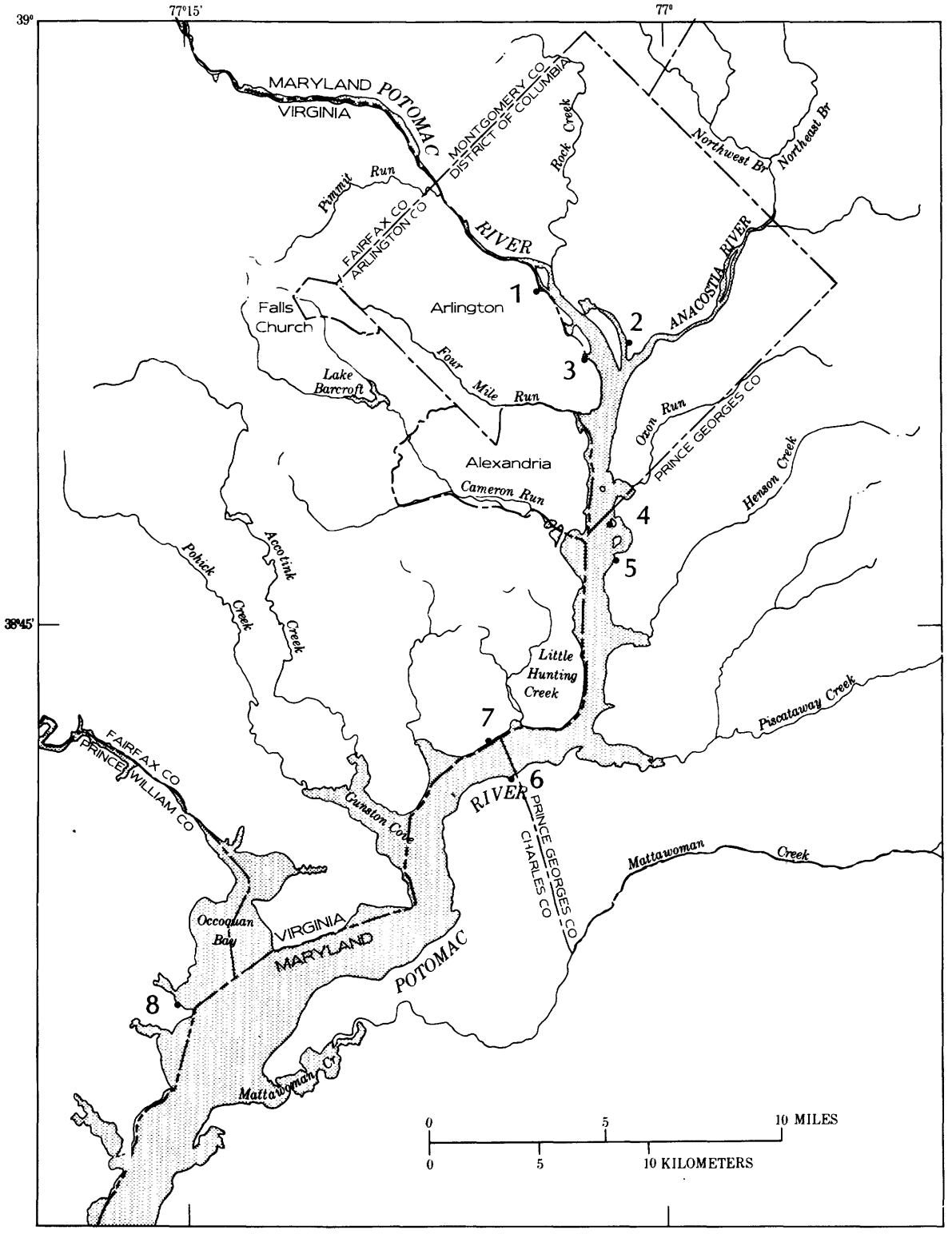


Figure 5. Location of sampling sites for sediment characteristics in the Tidal Potomac River above Mattawoman Creek.

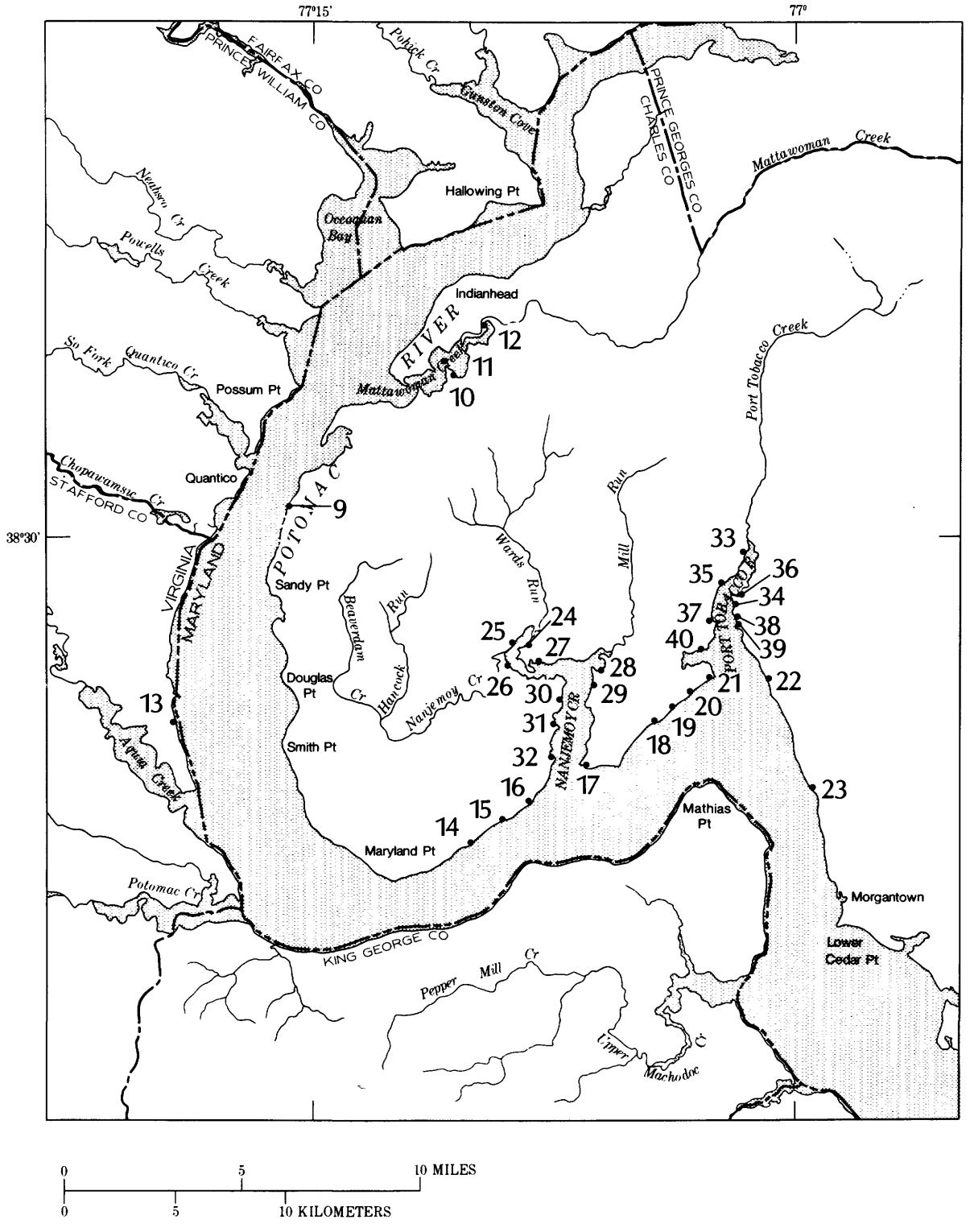


Figure 6. Location of sampling sites for sediment characteristics between Mattawoman Creek and Upper Machodoc Creek.

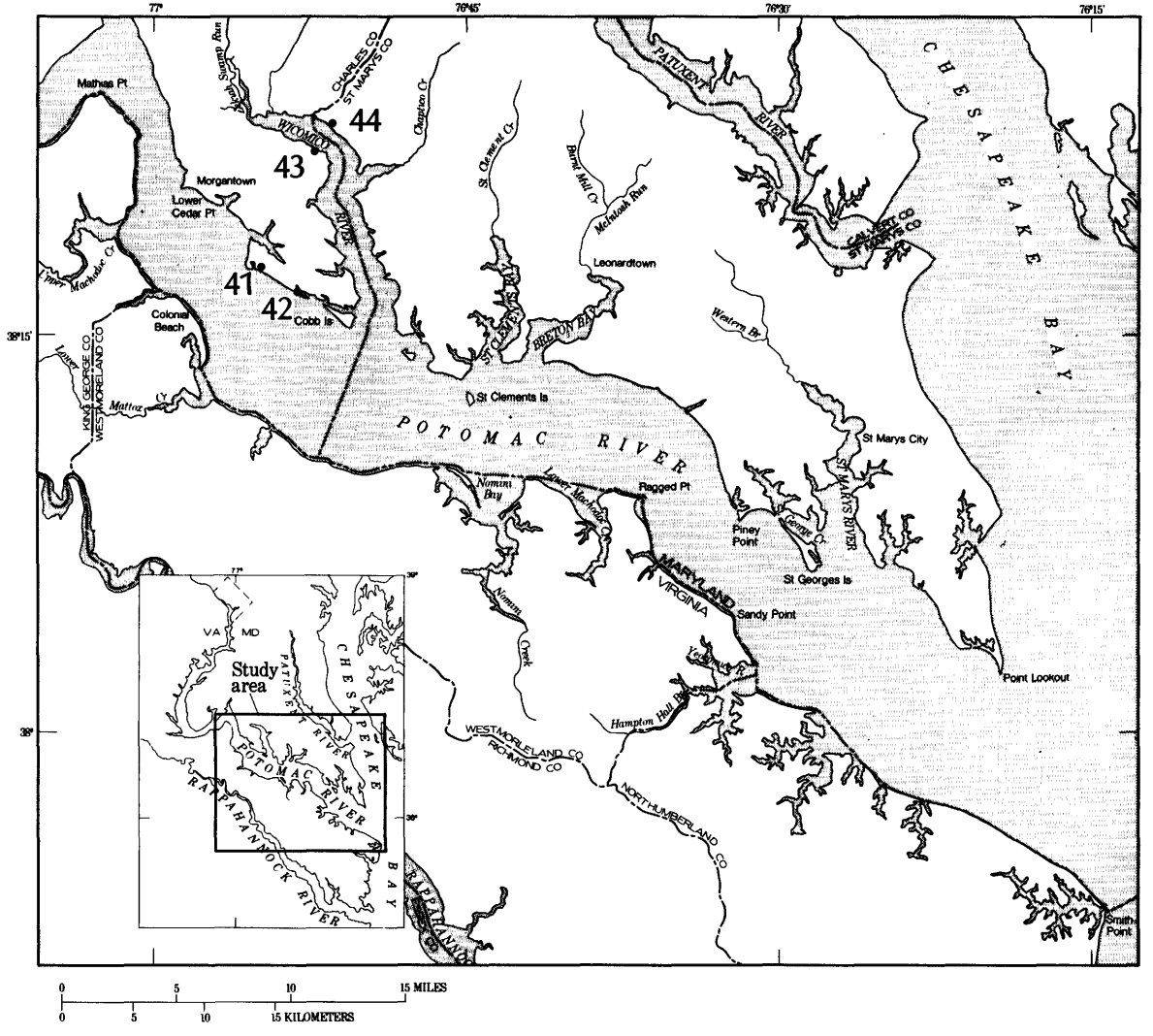


Figure 7. Location of sampling sites for sediment characteristics between the Wicomico River and Point Lookout.

Transplants of Submersed Aquatic Vegetation

Transplant experiments were conducted in the tidal river to determine if SAV could survive in areas devoid of natural beds of vegetation (fig. 8). In 1980 and 1981, SAV was planted at several sites between Alexandria and Quantico. Sites where water depth, historic presence of SAV, substrate type, and exposure indicated that SAV might survive (table D-1). Sprigs and plugs (blocks of substrate containing whole plants) of Vallisneria americana were removed from beds in the Port Tobacco River (fig. 3) with a post hole digger. Sprigs were washed, placed in plastic bags with river water, and transported in coolers; plugs were placed intact in coolers for transport. Sprigs were planted by hand in the substrate at each selected site. Plugs were planted at the same sites (1981 only) by digging a shallow trench and placing individual plugs in the trench. More below-ground biomass was retained with the plugs. Particle size distribution and nutrient concentration of substrates at the sites were determined (tables C-2 and C-3). Exposure and fetch were measured on U.S. Department of Commerce 1:80,000 scale navigation charts (table D-1).

During 1980 and 1981, exclosures were placed around selected transplanted beds to test for potential effects of predation on the survival of SAV in the tidal river. Three types of exclosures were constructed: (1) fully exclosed on four sides and the top, (2) fully exclosed on four sides with top open, and (3) exclosed on three sides with top open (fig. 9). Exclosures were made of wood and 13-mm hardware cloth, and were held in place in the river with heavy metal fence posts. The bottom edge of the hardware cloth was placed about 15 cm below the surface of the substrate to discourage burrowing predators. During the

winter of 1980-81, the exclosures were badly damaged by ice, so during December of 1981, exclosures were removed and fence posts were left at the sites to mark locations of the beds of SAV. Growth of SAV at the transplant sites is given in table D-2.

During 1979, 1980, and 1981, cages with SAV were suspended in the different salinity zones of the river. Cylindrical cages about 35 cm by 15 cm were constructed with a framework of fence wire and a covering of plastic mesh. The cages were fixed to float about 20 cm below the surface of the water. Sprigs of Ceratophyllum demersum (coontail), a floating species without roots, were collected from Nanjemoy Creek, sprigs of Potamogeton crispus (curly pondweed) were collected from the Port Tobacco River, and sprigs of Elodea canadensis were collected from the tributary across from Mount Vernon, Virginia. Sprigs were placed in plastic bags filled with river water, and were transported in coolers. In 1979, Ceratophyllum demersum sprigs were measured volumetrically and placed in the cages, and in 1980 and 1981, 20-cm lengths of each of the three species were placed in the cages. The cages were inspected and the plants were remeasured at intervals during the growing season. Total lengths of Ceratophyllum demersum left in cages for 1-month intervals during 1980 are shown in table D-3.

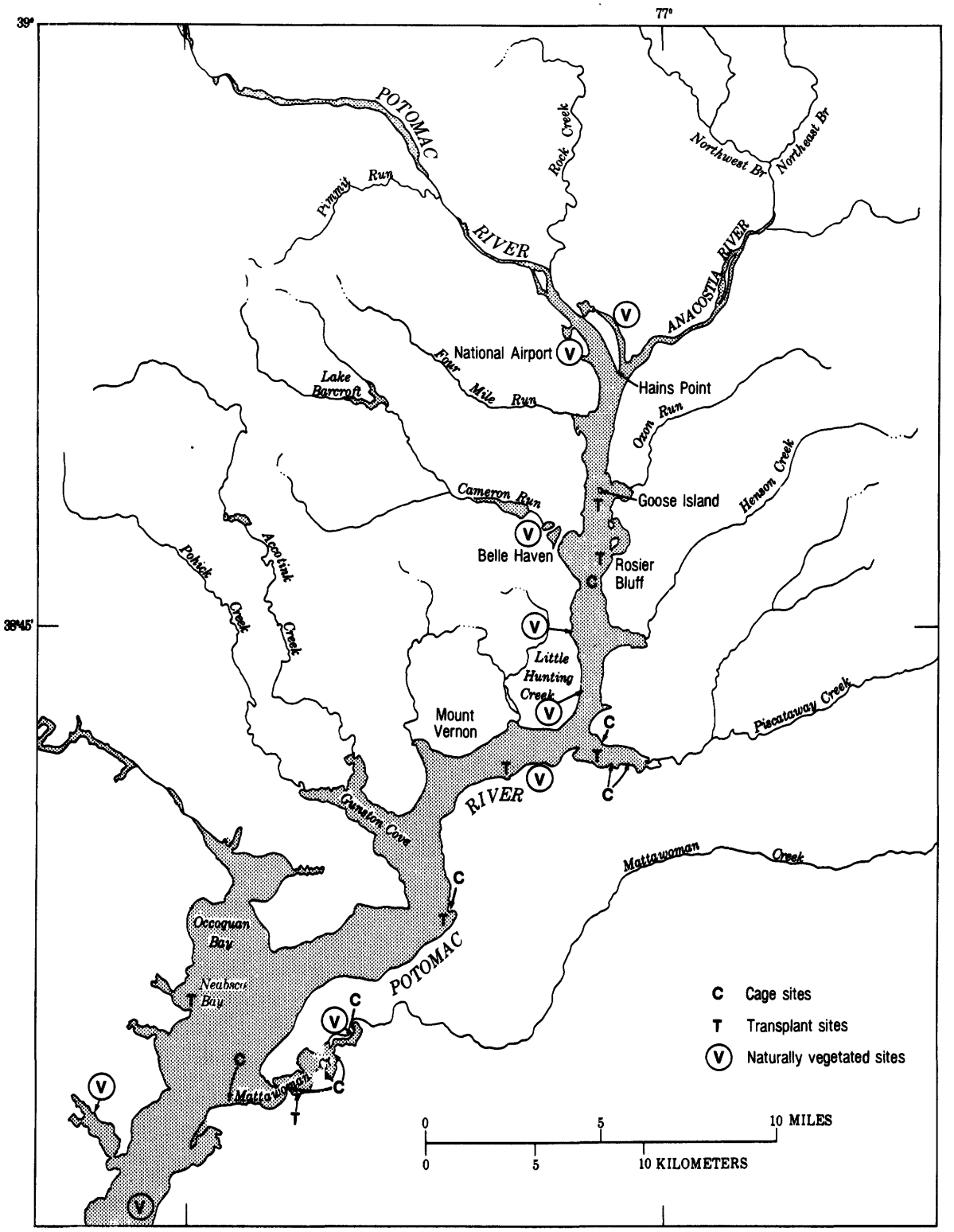
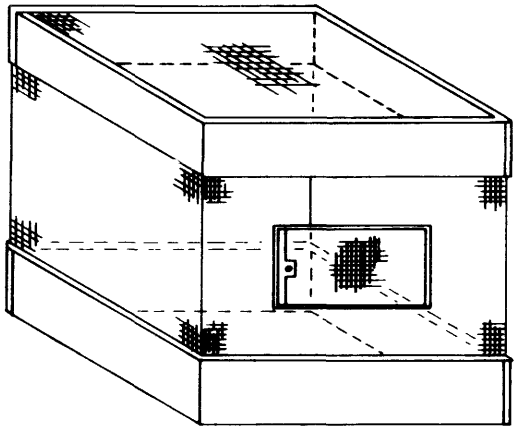
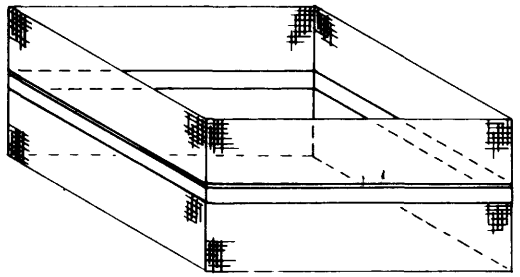


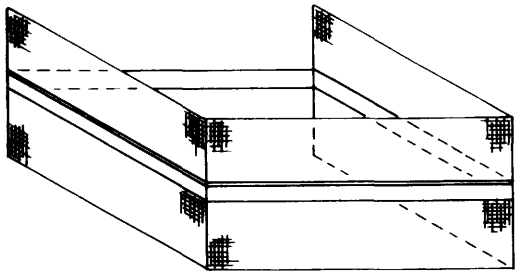
Figure 8. Location of transplant sites and caging experiments in the Tidal Potomac River.



FULL EXCLOSURE
WITH TOP



TOPLESS EXCLOSURE



3 - SIDED EXCLOSURE

Figure 9. Design of exclosures for experimental transplants in the Tidal Potomac River.

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Appendix A. Aids for Using the Data

Table A-1. Symbols and conversions

Symbol	Meaning	Conversion
C	Temperature in degrees Celsius	F = 9/5(C) + 32
cm	Length in centimeters	inch = 2.54 cm
cm^2	Area in square centimeters	square inch = 6.45 cm^2
ha	Area in hectares	square mile = 259 ha square meter = 0.0001 ha
km	Length in kilometers	statute mile = 1.61 km nautical mile = 1.85 km
m	Length in meters	foot = 0.30 m
m^2	Area in square meters	square foot = 0.09 m^2
ml	Volume in milliliters	cubic centimeter = 1 ml
mm	Length in millimeters	inch = 25.4 mm
nm	Length in nanometers	meter = 1 x 10^9 nm
nmi	Length in nautical miles	statute mile = 1.15 nmi kilometer = 0.54 nmi
PAR	Photosynthetically active radiation (400-700 nm waveband). Measured in microeinsteins per square meter per second ($uE/m^2/s$)	full sunlight is approximately 2,000 $uE/m^2/s$ foot candle = 1.78 x 10^{-21} uE
pH	Measure of acidity and alkalinity where pH = 7 is neutral	-
ppt	Concentration in parts per thousand	milligrams per liter is approximately = 1 ppt
rkm	Distance from the mouth of the river or tributary in kilometers	nautical mile = 1.85 rkm
SAV	Submersed aquatic vegetation	-
ug/g	Concentration in micrograms per gram	gram = 1 x 10^6 ug
uMHOS	Resistance in micromhos. A measure of the amount of dissolved ions present in water	part per thousand is approximately 1,500 uMHOS at 25^o C

Appendix B. Submersed Aquatic Vegetation Data

Table B-1. List of submersed aquatic plants found in the Tidal Potomac River and Estuary

(Taxonomy follows Hotchkiss (1950, 1967) unless otherwise noted)

Family	Species	Common Name
Characeae[1] (muskgrass family)	Chara braunii Gm.	Muskgrass
	Chara zeylanica Km. ex Wild	
Najadaceae (pondweed family)	Potamogeton perfoliatus L.	Redhead-grass
	Potamogeton pectinatus L.	Sago pondweed
	Potamogeton crispus L.	Curly pondweed
	Potamogeton pusillus L.	Slender pondweed
	Ruppia maritima L.	Widgeongrass
	Zannichellia palustris L.	Horned pondweed
	Najas guadalupensis (Spreng.) Morong	Southern naiad
	Najas gracillima Magnus[3]	Naiad
Hydrocharitaceae (frogbit family)	Vallisneria americana Michx.	Wildcelery
	Elodea canadensis (Michx.) Planch.	Common elodea
	Egeria densa Planch.[2,3]	water-weed
Ceratophyllaceae (coontail family)	Ceratophyllum demersum L.	Coontail
Haloragidaceae (watermilfoil family)	Myriophyllum spicatum L.	Eurasian watermilfoil

[1]Keyed from Wood (1967).

[2]Keyed from Radford and others (1974).

[3]Found during shoreline survey, not on formal transects.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MC-01R	176.9									VALL		VALL
MN-10R	124.2		VALL CERAT	VALL			VALL					
MN-04T-2	6.8						P PUSI VALL	VALL CERAT				
MP-02R	119.6											ELODEA
MP-03R	118.0						P PECT VALL			P PECT VALL		
MP-04R	116.9						P CRIS VALL					
MP-05R	115.3						VALL					
MP-09R	106.2						P PERF VALL	P PECT VALL		P PERF VALL		
MP-10R	103.6						VALL	VALL MYRIO NAJAS				
MP-01R	101.6	VALL	VALL		VALL RUPPIA	VALL	VALL	VALL	VALL	VALL		VALL
MP-02R	99.5	P PECT VALL	VALL	P PERF VALL	VALL RUPPIA	VALL	VALL	VALL	VALL	VALL	P PERF VALL CERAT	VALL
MP-03R	97.8	P CRIS VALL	VALL	P PERF VALL CERAT	VALL	VALL	P CRIS VALL	P CRIS P PERF VALL	P PERF VALL	VALL	VALL	
MP-04R	96.3	P CRIS VALL	P CRIS P PERF VALL	P CRIS P PERF P PECT VALL	P PERF ZANN VALL	P PERF VALL ELODEA CHARA	P CRIS P PERF VALL	P PERF VALL	P PERF VALL	P PERF VALL	P PERF VALL	P PERF VALL
MP-05R	95.0	P CRIS ZANN VALL	P CRIS VALL	VALL	P CRIS P PERF ZANN VALL	P PERF VALL	P CRIS ZANN VALL	PCRIS P PERF VALL	VALL CERAT MYIO	PCRIS P PERF ZANN VALL	P PERF VALL	

*SEE FIGURES 2-3

P PERF=POTAMOGETON PERFOLIATUS ZANN=ZANNICHELLIA PALUSTRIS P PUSI=POTAMOGETON PUSILLUS
P PECT=POTAMOGETON PECTINATUS NAJAS=NAJAS GUADALUPENSIS VALL=VALLISNERIA AMERICANA
CERAT=CERATOPHYLLUM DEMERSUM ELODEA=ELODEA CANADENSIS P CRIS=POTAMOGETON CRISPUS
MYRIO=MYRIOPHYLLUM SPICATUM RUPPIA=RUPPIA MARITIMA CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
					MYRIC							
NP-06R	94.0	P CRIS VALL	P CRIS P PERF P PECT VALL	P PERF VALL	P CRIS P PERF P PECT ZANN VALL	F PERF	P PERF P PECT ZANN VALL	P PERF F PECT VALL	P PERF VALL	P CRIS P PERF P PECT ZANN VALL	P PERF P PECT VALL	P PERF
NP-07R	92.1	P CRIS VALL	VALL	VALL	ZANN	VALL	VALL RUPPIA	VALL	VALL	ZANN VALL	VALL	
NP-08R	90.1	P PERF VALL	P PERF P PECT VALL	P PERF P PECT VALL	P CRIS ZANN VALL	F PERF VALL RUPPIA	P PERF ZANN VALL	P PERF P PECT VALL	P PECT VALL	ZANN VALL	P PERF P PECT VALL	
NP-09R	88.3	P PERF VALL	P PECT VALL	P PERF VALL RUPPIA NAJAS	P CRIS P PERF ZANN VALL	VALL RUPPIA	P PERF ZANN VALL RUPPIA	P PERF P PECT VALL RUPPIA	P PERF VALL RUPPIA	P CRIS P PERF ZANN VALL	P PERF P PECT VALL RUPPIA	P PERF P PECT
NP-10R	87.6	P PERF VALL	P PERF P PECT VALL	P PERF VALL	P PERF VALL		P CRIS P PERF P PECT VALL	P PERF P PECT VALL	P PERF P PECT VALL	P PERF VALL RUPPIA	P PERF VALL	
NP-11R	87.3	P PERF VALL	P PERF P PECT VALL	P PERF P PECT VALL	P PERF VALL	F PERF VALL CERAT	P PERF P PECT	P PERF P PECT VALL	P PERF P PECT VALL	P PERF P PECT	P PERF P PECT VALL RUPPIA	P PERF P PECT VALL
NP-14R	84.3	P PERF	P PECT			P PERF	P PERF		P PERF			
NP-15R	82.5								VALL			
NY-01T-1	2.2	ZANN								ZANN		
NY-01T-3	2.1	P PECT	P CRIS P PECT		P CRIS P PECT		P PECT	VALL				
NY-02T-1	4.5							MYRIO				
NY-02T-2	3.9	VALL										
NY-02T-3	3.2				ZANN	CERAT MYRIC				ZANN		

*SEE FIGURE 3

P PERF=POTAMOGETON PERFOLIATUS
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CERAT=CERATOPHYLLUM DEMERSUM
MYRIO=MYRIOPHYLLUM SPICATUM
ZANN=ZANNICHELLIA PALUSTRIS
NAJAS=NAJAS GUADALUPENSIS
ELODEA=ELODEA CANADENSIS
RUPPIA=RUPPIA MARITIMA
P PUSI=POTAMOGETON PUSILLUS
VALL=VALLISNERIA AMERICANA
P CRIS=POTAMOGETON CRISPUS
CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NY-03T-3	5.5		P CRIS CERAT		P CRIS CERAT MYRIO	CERAT MYRIO	P CRIS CERAT MYRIO	P CRIS VALL CERAT	CERAT MYRIO	ZANN CERAT	CERAT	CERAT
NY-04T-2	8.0						MYRIO	MYRIO				
NY-04T-3	8.0	CHARA	MYRIO					VALL	MYRIO			MYRIO
PO-01T-1	1.6	VALL	P PERF VALL	P CRIS P PERF VALL	P PERF VALL	P PERF VALL MYRIO	VALL	P PERF VALL	P PERF VALL	P PERF VALL	P PERF VALL RUPPIA	
PO-01T-2	2.0	P PERF VALL	P PERF VALL	P PERF VALL	VALL	VALL	VALL	P PERF VALL	VALL			
PO-01T-3	2.1	P PERF VALL	VALL	P PERF VALL	VALL		VALL		VALL	P CRIS P PERF		
PO-01T-4	2.3					MYRIO						
PO-01T-5	2.4	ZANN VALL RUPPIA	P PUSI VALL RUPPIA MYRIO CHARA	P CRIS VALL RUPPIA ELODEA MYRIO	P CRIS P PUSI ZANN VALL RUPPIA MYRIO CHARA	P PERF VALL RUPPIA MYRIO	P PUSI VALL MYRIO	P CRIS P PUSI VALL	P PERF VALL RUPPIA MYRIO	P PERF ZANN VALL	VALL RUPPIA	VALL
PO-02T-1	3.6	P CRIS	P CRIS P PERF ZANN RUPPIA CHARA		P CRIS ZANN MYRIO CHARA		ZANN VALL RUPPIA CHARA	VALL	VALL	ZANN VALL	VALL	
PO-02T-2	4.1	VALL	P CRIS VALL	P PERF VALL	VALL MYRIO	P PERF VALL MYRIO	VALL	VALL	P PERF VALL	P PERF ZANN VALL	P PERF VALL	VALL
PO-02T-3	3.4	P PERF VALL RUPPIA	P PUSI P PECT VALL RUPPIA CHARA	P PERF VALL	P PERF ZANN VALL	P PERF VALL MYRIO	P PERF VALL	P PERF VALL	P PERF VALL RUPPIA	P PERF VALL	P PERF VALL	

*SEE FIGURE 3

P PERF=POTAMOGETON PERFOLIATUS
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ZANN=ZANNICHELLIA PALUSTRIS
NAJAS=NAJAS GUADALUPENSIS
ELODEA=ELODEA CANADENSIS
RUPPIA=RUPPIA MARITIMA
P PUSI=POTAMOGETON PUSILLUS
VALL=VALLISNERIA AMERICANA
P CRIS=POTAMOGETON CRISPUS
CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
PO-03T-1	5.8		P PERF VALL	VALL	P PUSI ZANN VALL ELODEA MYRIC	MYRIC	VALL RUPPIA CHARA	P PERF VALL MYRIO	VALL MYRIO	VALL MYRIO	P PERF VALL	
PO-03T-2	5.7								VALL			
WO-01R	67.7		RUPPIA	RUPPIA	RUPPIA	P PERF RUPPIA	RUPPIA	RUPPIA	ZANN	ZANN		
WO-03R	63.8		RUPPIA									
WO-06R	56.8		RUPPIA		ZANN		ZANN RUPPIA					
WO-07R	55.1	ZANN			ZANN			P PERF RUPPIA		ZANN		
WO-09R	52.0	RUPPIA										
WO-10R	51.1						RUPPIA		ZANN			
WO-01T-1	1.2	RUPPIA			RUPPIA		ZANN	ZANN		ZANN		
WO-01T-2	2.1		RUPPIA				P PECT ZANN RUPPIA					
WO-02T-1	3.3	ZANN RUPPIA		RUPPIA	ZANN		ZANN			ZANN		
WO-02T-2	3.9	ZANN VALL RUPPIA					ZANN					
WO-03T-1	6.0						RUPPIA	RUPPIA				
WO-03T-2	5.4	ZANN RUPPIA	ZANN RUPPIA		ZANN		ZANN	P PERF ZANN RUPPIA				
WO-05T-1	9.7	ZANN RUPPIA	RUPPIA		ZANN NAJAS	RUPPIA	ZANN RUPPIA	ZANN RUPPIA NAJAS	ZANN	ZANN		

*SEE FIGURES 3-4

P PERF=POTAMOGETON PERFOLIATUS
P PECT=POTAMOGETON PECTINATUS
CERAT=CERATOPHYLLUM DEMERSUM
MYRIO=MYRIOPHYLLUM SPICATUM
ZANN=ZANNICHELLIA PALUSTRIS
NAJAS=NAJAS GUADALUPENSIS
ELODEA=ELODEA CANADENSIS
RUPPIA=RUPPIA MARITIMA
P PUSI=POTAMOGETON PUSILLUS
VALL=VALLISNERIA AMERICANA
P CRIS=POTAMOGETON CRISPUS
CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-05T-2	9.6						RUPPIA	RUPPIA		ZANN		
WO-06T-1	11.1	ZANN			ZANN NAJAS		ZANN	NAJAS	ZANN			
WO-06T-2	12.1	ZANN			ZANN		ZANN			ZANN		
WO-07T-1	12.6	ZANN			ZANN		ZANN	RUPPIA		ZANN		
WO-07T-2	12.9		P PERF	P PERF RUPPIA	P PERF	P PERF RUPPIA	ZANN NAJAS	P PERF VALL RUPPIA NAJAS		ZANN VALL	P PERF	
WO-08T-1	15.3	P PERF ZANN RUPPIA CHARA NAJAS	P PERF ZANN RUPPIA NAJAS	P PERF RUPPIA NAJAS	P PERF RUPPIA MYRIO CHARA NAJAS	P PERF RUPPIA NAJAS	P PUSI P PERF ZANN RUPPIA MYRIO CHARA NAJAS	P PERF RUPPIA MYRIO NAJAS	P CRIS ZANN	P PERF ZANN	P PERF ZANN RUPPIA	
WO-09T-1	16.9	ZANN CHARA			ZANN CHARA		P PUSI ZANN CHARA			ZANN		
WO-10T-1	18.8				ZANN CHARA		ZANN VALL CHARA	MYRIO		ZANN		
SM-07R	18.0				RUPPIA							
SM-02T-2	3.4	RUPPIA	RUPPIA									
SM-03T-1	5.5		RUPPIA	RUPPIA					RUPPIA			
SM-03T-4	6.1	RUPPIA			ZANN		ZANN					
SM-04T-2	8.3	ZANN					ZANN					
SM-04T-3	7.4	ZANN	RUPPIA		ZANN		ZANN					
SM-05T-3	9.0				ZANN		ZANN					
SM-06T-2	10.4	ZANN			ZANN		ZANN					

*SEE FIGURE 4

P PERF=POTAMOGETON PERFOLIATUS
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NAJAS=NAJAS GUADALUPENSIS
ELODEA=ELODEA CANADENSIS
RUPPIA=RUPPIA MARITIMA
P PUSI=POTAMOGETON PUSILLUS
VALL=VALLISNERIA AMERICANA
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CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
SM-08T-1	14.8	ZANN			ZANN							
AP-03R	116.1				P PERF VALL	VALL						
AP-05R	113.6				P PECT VALL	VALL						
PC-02T-2	3.1				CERAT							
MC-01R	84.6				VALL	P PERF VALL						
MC-02R	82.9				P PERF VALL P PECT VALL	VALL						
MC-04R	78.9				P PERF VALL	P PERF VALL						
MC-06R	76.7				P PERF VALL	P PERF						
MC-09R	71.4					VALL						
MC-01T-1	2.1				P CRIS	VALL						
MC-01T-2	2.8				P CRIS ZANN	VALL						
MC-01T-3	1.0				P CRIS P PUSI P PERF VALL	P PERF VALL						
MC-02T-1	2.9				P CRIS							
MC-02T-2	2.5				ZANN							
MC-03T-1	4.5				ZANN							
MC-03T-2	4.9				ZANN							
NO-01T-1	2.8				ZANN							
NO-01T-3	0.4				ZANN							

*SEE FIGURES 3-4

P PERF=POTAMOGETON PERFOLIATUS ZANN=ZANNICHELLIA PALUSTRIS P PUSI=POTAMOGETON PUSILLUS
P PECT=POTAMOGETON PECTINATUS NAJAS=NAJAS GUADALUPENSIS VALL=VALLISNERIA AMERICANA
CERAT=CERATOPHYLLUM DEMERSUM ELODEA=ELODEA CANADENSIS P CRIS=POTAMOGETON CRISPUS
MYRIO=MYRIOPHYLLUM SPICATUM RUPPIA=RUPPIA MARITIMA CHARA=CHARA SPP.

TABLE B-2. SPECIES OF SUBMERSED AQUATIC PLANTS FOUND IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NO-01T-4	0.9				ELODEA	ELODEA						
NO-03T-1	3.9				ZANN							
NO-05T-1	6.6				ZANN							
NO-06T-1	6.9				P PUSI ZANN							
NO-06T-2	7.4				P PUSI ZANN RUPPIA							
NO-06T-3	7.5				P PUSI ZANN							
YO-02T-3	4.9				ZANN							
YO-04T-1	2.1				ZANN							
YO-05T-1	4.5				ZANN							

*SEE FIGURE 4

P PERF=POTAMOGETON PERFOLIATUS
P PECT=POTAMOGETON PECTINATUS
CERAT=CERATOPHYLLUM DEMERSUM
MYRIO=MYRIOPHYLLUM SPICATUM
ZANN=ZANNICHELLIA PALUSTRIS
NAJAS=NAJAS GUADALUPENSIS
ELODEA=ELODEA CANADENSIS
RUPPIA=RUPPIA MARITIMA
P PUSI=POTAMOGETON PUSILLUS
VALL=VALLISNERIA AMERICANA
P CRIS=POTAMOGETON CRISPUS
CHARA=CHARA SPP.

TABLE 6-3. TOTAL SEASONALLY-SAMPLED VOLUMES OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY (VOLUMES IN MILLILITERS)

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WC-01R	176.9											1600
MA-10R	124.2		550	75			6					
MA-041-2	6.8						157	548				
MP-02R	119.6											2
MP-03R	118.0						6			18		
MP-04R	116.9						162					
MP-05R	115.3						27					
MP-09R	106.2						107	32		77		
MP-10R	103.6						2	922				
NP-01R	101.6	2	10		35	4	2	262	34	6		4
NP-02R	99.5	6	90	62	164	525	12	261	144	9	1014	4
NP-03R	97.8	66	230	142	16	165	52	285	114	6	8	
NP-04R	96.3	28	3913	1114	806	779	22	436	516	22	904	152
NP-05R	95.0	230	178	228	639	515	196	133	2663	70	204	
NP-06R	94.0	20	967	593	1529	4	355	306	82	69	519	2
NP-07R	92.1	12	16	27	9	8	6	64	15	35	10	
NP-08R	90.1	229	538	1309	176	81	56	334	683	28	698	
NP-09R	88.3	415	139	1880	304	59	77	327	660	167	189	457
NP-10R	87.6	127	779	865	320		125	53	91	102	109	
NP-11R	87.3	236	1210	1928	154	39	359	616	1886	238	3245	740
NP-14R	84.3	83	782			360	504		22			
NP-15R	82.5								360			
NY-011-1	2.2	2								4		
NY-011-3	2.1	367	231		122		72	5				

*SEE FIGURES 2-9

TABLE B-3. TOTAL SEASONALLY-SAMPLED VOLUMES OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY (VOLUMES IN MILLILITERS)

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NY-02I-1	4.5							52				
NY-02I-2	3.9	2										
NY-02I-3	3.2				6	27				9		
NY-03I-3	5.5		898		352	1411	101	3489	324	591	931	146
NY-04I-2	8.0						2	10				
NY-04I-3	8.2	14	31					55	4			4
PG-01I-1	1.6	6	655	675	32	36	18	4	217	37	52	
PG-01I-2	2.0	64	914	1282	7	4	4	7	2			
PG-01I-3	2.1	41	127	982	4		3		2	144		
PG-01I-4	2.3					2						
PG-01I-5	2.4	12	191	1605	131	1437	79	170	906	29	541	6
PG-02I-1	3.6	2	38		10		71	20	283	9	232	
PG-02I-2	4.1	4	723	1542	263	70	24	134	255	26	791	16
PG-02I-3	3.4	206	448	999	245	8	76	169	436	171	826	
PG-03I-1	5.7		564	447	230	44	102	328	660	289	325	16
PG-03I-2	5.7								40			
MG-01R	67.7		11	6	15	358	28	236	256	33		
MG-03R	63.6		2									
MG-06R	56.8		2		15		61					
MG-07R	55.1	2			6			56		6		
MG-09R	52.0	4										
MG-10R	51.1						6		2			
MG-01I-1	1.2	2			8		218	149		39		
MG-01I-2	2.1		4				82					

*SEE FIGURES 3-4

TABLE B-3. TOTAL SEASONALLY-SAMPLED VOLUMES OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY (VOLUMES IN MILLILITERS)

TRANSECT*	RIVER MI	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WD-02T-1	3.3	39		9	188		356			98		
WD-02T-2	3.9	10					2					
WD-03T-1	6.0						2	5				
WD-03T-2	5.4	18	6		4		125	38				
WD-05T-1	9.7	20	2		82	52	46	222	132	49		
WD-05T-2	9.6						27	10		2		
WD-06T-1	11.1	26			250		309	15	8			
WD-06T-2	12.1	92			39		219			46		
WD-07T-1	12.6	112			13		154	130		198		
WD-07T-2	12.9		3	32	430	15	212	110		30	2	
WD-08T-1	15.3	236	1474	3061	325	913	539	1154	588	31	47	
WD-09T-1	16.9	63			45		508			171		
WD-10T-1	18.8				6		10	2		210		
SP-07R	18.0				30							
SP-02T-2	3.4	60	18									
SP-03T-1	5.5		116	7					9			
SP-03T-4	6.1	30			1335		837					
SP-04T-2	8.3	14					5					
SP-04T-3	7.4	9	4		87		13					
SP-05T-3	9.0				459		4					
SP-06T-1	10.8	12										
SP-06T-2	10.4	33			21		4					
SP-08T-1	14.8	131			2							

*SEE FIGURE 4

TABLE B-3. TOTAL SEASONALLY-SAMPLED VOLUMES OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY (VOLUMES IN MILLILITERS)

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
AP-03R	116.2				690	188						
AP-05R	113.6				107	77						
PC-02T-2	3.2				2							
MC-01R	84.6				43	513						
MC-02R	82.9				107	76						
MC-03R	80.8				1181	385						
MC-04R	78.9				780	10						
MC-06R	76.7				230	20						
MC-09R	71.4					15						
MC-011-1	2.2				4	143						
MC-011-2	2.8				14	516						
MC-011-3	1.0				573	951						
MC-021-1	2.9				90							
MC-021-2	2.6				2							
MC-031-1	4.5				24							
MC-031-2	4.9				2							
NC-011-1	2.8				2							
NC-011-3	0.4				7							
NC-011-4	0.9				235	6330						
NC-031-1	3.9				12							
NC-051-1	6.6				4							
NC-061-1	6.9				36							
NC-061-2	7.4				33							
NC-061-3	7.5				283							

*SEE FIGURES 3-4

TABLE B-3. TOTAL SEASONALLY-SAMPLED VOLUMES OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY (VOLUMES IN MILLILITERS)

TRANSECT*	RIVER KM	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
YC-021-3	4.9				6							
YC-041-1	6.1				2							
YC-051-1	4.5				2							

*SEE FIGURE 4

TABLE B-4. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON CRISPUS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-04R	116.9	5						2					
NP-03R	97.8	15	17						40				
		30	45										
		45						20					
NP-04R	96.3	15	4	2	5			2					
		30	4										
		45	10										
NP-05R	95.0	5	68										
		15									4		
		30	2	34		2							
		45	10	19		2							
		60	2			2		77					
		75	68			12		49	2				
		90	6			215		27	2				
		105	2			5							
NP-06R	94.0	5		2									
		15				2							
		30									2		
		45	2	62									
NP-07R	92.2	90	2										
NP-08R	90.1	30				10							
NP-09R	88.3	60									2		
		90				2							
NP-10R	87.6	15						2					

*SEE FIGURE 3

TABLE B-4. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON CRISPUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NY-01T-3	2.2	.5		16		.2							
NY-03T-3	5.6	.5				.2			2				
		15						2					
		30		730		.4							
		45				13							
		60				.50							
		75				14							
		105				.30							
PO-01T-1	1.6	.5			.5								
PO-01T-3	2.2	.5									2		
PO-01T-5	2.4	.5			.5				5				
		15				.2			7				
PO-02T-1	3.6	.5		.30		.2							
		7.5	2										
PO-02T-2	4.2	.5		7									
PO-03T-1	5.8	.5		108	2	.4							
		15		270		.4			12				
		30				.2							
		45				.2							
		60				.4							
WO-08T-1	15.3	.5								30			
		15								45			
		30								22			
		45								15			

*SEE FIGURES 3-4

TABLE B-4. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON CRISPUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MC-01T-1	2.2	15				.4							
MC-01T-2	2.8	5				2							
		15				1C							
MC-01T-3	1.0	15				32							
		30				2							
MC-02T-1	3.0	15				9C							

*SEE FIGURE 3

TABLE B-5. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PULSILLUS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MN-041-2	6.8	5						7					
PO-011-5	2.4	5		2					12				
		15				2		2	17				
PO-021-3	3.5	5		2									
PO-031-1	5.8	5										4	
		15										4	
		30				2							
		45				5							
		60				37							
		75				4							
WO-081-1	15.3	120						2					
WO-091-1	17.0	60						15					
NO-061-1	6.9	5				15							
NO-061-2	7.4	5				2							
		30				2							
NO-061-3	7.6	15				27							
		30				95							
		45				60							
MC-011-3	1.0	15				57							
		30				90							

*SEE FIGURES 3-4

TABLE B-6. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PERFOLIATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-09R	106.3	15						60			75		
NP-02R	99.5	5			2								
		15										215	
		30										32	
NP-03R	97.8	5			20								
		15							30	42			
NP-04R	96.3	5					2	2					
		15		1010					64		20	350	27
		30		1285		538				2		380	101
		45		1405	295	205				140		2	6
		60				17						6	
		75					2						
NP-05R	95.0	15				370							
		30					10		54				
		45									30	5	
		60										2	
NP-06R	94.0	15		75	102	62		102				272	
		30		505		845	4	21	2	31		115	
		45		2		575		175	271	25		15	2
		60			2								
		90									2		
		105									15		
NP-08R	90.1	5		8									
		15	34		2				2				

*SEE FIGURE 3

TABLE B-6. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PERFOLIATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-08R	90.1	30			390							2	
		45	166	11	5		2	2				385	
NP-09R	88.3	5			332								2
		15			15	120				4	2	103	2
		30	128		12	2		11	45	2	4		2
		45	66		6				2	2			2
		60	158		24			2	5	12	4	2	7
		75	8		5	35		2		22	27		
		90							27				
		120				5							
NP-10R	87.6	15								2			
		45		4								107	
		60		32	161	140		2	27	12			
		75		90	47	115		21			38		
		90			4	12			2		27		
		105	32	331	245						11		
		120		123	8	9					10		
		135			85								
NP-11R	87.3	5		398	2						3	15	
		15	174	166	690				4			4	57
		30	35	331	830	40			57	410	32	945	4
		45	10	6	500	82	30	168	122	217	85	820	420
		60			20	2	5	24		290	29	617	212
		75						164		610	77		

*SEE FIGURE 3

TABLE B-6. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PERFOLIATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-14R	84.3	15	83				.360	.504		22			
PO-01I-1	1.6	.5									4		
		15		1435	.33		10		2	83	85		
		30				.6						2	
		60					.2						
PO-01I-2	2.0	5	.35	460	192				5				
PO-01I-3	2.2	.5			.27						142		
		15	35										
PO-01I-5	2.4	15					2			2	10		
PO-02I-1	3.6	.5		2									
PO-02I-2	4.2	.5			2							662	
		15					.5			10	22	2	
PO-02I-3	3.5	.5	200		975			52	95			700	
		15			2	155	2		60	228	165	45	
		30				17							
PO-03I-1	5.8	.5						21				60	
		15		.2					91				
WO-01R	67.7	15					4						
WO-07R	55.2	.5							2				
WO-03I-2	5.4	60							2				
WO-07I-2	12.9	.5			.28								
		15		.3			10		15				
		30				430						2	
WO-08I-1	15.3	.5		37	230				47				

*SEE FIGURES 3-4

TABLE B-6. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PERFOLIATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WC-081-1	15.3	15	14	22	95	2	2	17	150		9	12	
		30					2		17				
		135						2					
AP-03R	116.2	15				2							
MC-01R	84.6	45					7						
		75					3						
MC-02R	82.9	45				40							
		60				2							
MC-03R	80.8	45				2							
		60				15							
		75				285	5						
		90				635	5						
		105				330							
		120				127							
MC-04R	78.9	15				140							
		30				345	2						
		45				4							
MC-06R	76.7	15					14						
		30				130	2						
		45					4						
MC-011-3	1.0	5					10						
		15				70	2						

*SEE FIGURES 3-4

TABLE B-7. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PECTINATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MP-03R	118.1	15						2					
		30									2		
MP-09R	106.3	15							5				
NP-02R	99.5	5	2										
NP-04R	96.3	15			2								
NP-06R	94.0	5		240									
		15						24	13				
		30										10	
		45				7		2			35		
		60							2		2		
		90						17					
NP-08R	90.1	5		4									
		15			3				261	380			
		30		376								285	
		45		68								20	
NP-09R	88.3	5											30
		15		2					85			45	115
		30		2					65			12	100
		45		53									177
		60		2									20
		75		36									
		90		4									
NP-10R	87.6	15						90		67			
		45		8									

*SEE FIGURE 3

TABLE B-7. SEASONALLY-SAMPLED VOLUMES OF POTAMOGETON PECTINATUS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
		90							2				
NP-10R	87.3	5										2	
		15		165									
		30			290						8	2	
		45			2			3	2	44	2	80	7
		60							4	95	2	147	
NP-14R	84.3	5		2									
		15		780									
NY-01T-3	2.2	5	387	215		120		72					
PO-02I-3	3.5	5		365									
PO-03I-1	5.8	15								2			
WO-01T-2	2.2	15						78					
AP-05R	113.6	15				2							
MC-03R	80.8	120				70							

*SEE FIGURES 3-4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-04R	96.3	45				.2							
NP-05R	95.0	15	42					.6			16		
		30	10			1.0					2		
		45	4								.5		
		60									.3		
		75				.2							
		90	2										
NP-06R	94.0	15				7					2		
		30						4			7		
NP-07R	92.2	15				.2					.9		
		30				7					.4		
		45									.2		
		90									.2		
		105									2		
		120									.2		
		135									.2		
		150									.2		
NP-08R	90.1	30				.2					.2		
		45						.2					
		60						.2					
		75				.4		.4					
		90						.2					
NP-09R	88.3	5				.2							
		15				.2							

*SEE FIGURE 3

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-09R	88.3	30				2		2			29		
		45				7		4			46		
		60				2					23		
		75									4		
		90									2		
		120									4		
NY-011-1	2.3	5	2								2		
		15									2		
NY-021-3	3.2	5				6					9		
NY-031-3	5.6	15									10		
		30									10		
		45									2		
PO-011-5	2.4	5	6								7		
		15				2					6		
PO-021-1	3.6	5		2									
		15				2		2			4		
PO-021-2	4.2	15									2		
PO-021-3	3.5	5				2							
PO-031-1	5.8	5				2					89		
		15				2					152		
		30									2		
		45									2		
		60				2							
WO-01R	67.7	5								83			

*SEE FIGURES 3-4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-01R	67.7	15								56	4		
		30								31	9		
		45								45	4		
		60								83	6		
		75								12	4		
		90								6	6		
WO-06R	56.9	5						11					
		15				.4		22					
		30				.9		19					
		45				.2		.3					
		60						.2					
		75						.2					
WO-07R	55.2	.5				.2							
		15									.6		
		60				.2							
		75		2									
		90				.2							
WO-10R	51.1	15								.2			
WO-01T-1	1.2	.5						.4			.6		
		15						84	62		31		
		30						99	40				
		45						12	45		2		
		60						33	2				
		75						.9					

*SEE FIGURE 4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-01T-1	1.2	90						4					
		120						.8					
		150						.3					
		165						.2					
WO-01T-2	2.2	90						.2					
WO-02T-1	3.3	.5	6					38					
		15	2			16		44			.5		
		30	11			41		73			4		
		45	2			10		32			17		
		60				.6		22			6		
		75				22		32			4		
		90				32		12			31		
		105				53		85			19		
		120				34		44			.2		
		135				12		17			4		
		150				.2		.6			.4		
		165						.9			.2		
		180						.2					
WO-02T-2	3.9	45						.2					
		90	2										
		165	2										
		180	2										
WO-03T-2	5.4	5	6	4				47					
		15	4			.4		62					

*SEE FIGURE 4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WQ-03T-2	5.4	30	2					10	25				
		45						2					
		60						2					
		75						2					
WQ-05T-1	9.7	5						13	7	68	45		
		15				14		25	2	49	4		
		30				4		2		15			
		60				4							
		90	4										
		105	2			2							
		120				11							
		135	2			6							
		150				13							
		165				4							
		180	4			6							
		210				6							
		225				2							
		240				6							
		270				2							
WQ-05T-2	9.6	45									2		
WQ-06T-1	11.1	5	4					4					
		15				18		50		2			
		30	2			45		40		6			
		45	2			37		50					

*SEE FIGURE 4

TABLE 8-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-06T-1	11.1	60	2			70		51					
		75	4			70		38					
		90				12		31					
		105				6		34					
		120						12					
		150	2										
		165	4										
		180	2										
		195	4										
WO-06T-2	12.1	5	90			130		48			30		
		15	2			19		84			6		
		30						87			6		
		45									4		
WO-07T-1	12.7	5	22			19		53			122		
		15	90			14		99			74		
		30						12					
WO-07T-2	12.9	5									12		
		15						43			12		
		30						44					
		45						53			14		
		60						45			2		
		75						6			2		
		90						19			4		
		105									2		

*SEE FIGURE 4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-081-1	15.3	.5	8					.2	63	4	4		
		15	8					.6	4	9			
		30	4					.2	87	7			
		45	6						60	2			
		60	8	.2					77				
		75	4						73				
		90	12					.4	112				
		120						.2					
		135						.2					
		150						.4					
WO-091-1	17.0	.5	4					.9		110			
		15	15			.2		97		55			
		30	10					50		4			
		45						7		.2			
WO-101-1	18.8	5				.4		6		.8			
		15								135			
		30								65			
		45								.2			
SM-031-4	6.1	30				.5		.2					
		45				180		20					
		60				600		47					
		75				550		153					
		90						15					
SM-041-2	8.3	15	4					.5					

*SEE FIGURE 4

TABLE B-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 SUMMER	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
SW-04T-2	8.3	30	10											
SW-04T-3	7.4	15	8			2			11					
		30	1			85			2					
SW-05T-3	9.1	15							2					
		30				350			2					
		45				109								
SW-06T-1	10.8	30	12											
SW-06T-2	10.5	15	9											
		30	24			19			14					
		45				2								
SW-08T-1	14.8	5	49											
		15	65											
		30	5			2								
		45	12											
NO-01T-1	2.8	5				2								
NO-01T-3	0.5	15				7								
NO-03T-1	3.9	5				6								
		15				6								
NO-05T-1	6.7	5				4								
NO-06T-1	6.9	5				17								
		15				4								
NO-06T-2	7.4	5				17								
		15				6								
NO-06T-3	7.6	5				40								

*SEE FIGURE 4

TABLE 3-8. SEASONALLY-SAMPLED VOLUMES OF ZANNICHELLIA PALUSTRIS IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NO-061-3	7.6	15				85							
		30				27							
		45				9							
YO-021-3	4.9	5				6							
YO-041-1	2.2	30				2							
YO-051-1	4.6	15				2							
MC-011-2	2.8	5				2							
MC-021-2	2.6	15				2							
MC-031-1	4.5	5				4							
		15				20							
MC-031-2	4.9	5				2							

*SEE FIGURES 3-4

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WC-01R	177.0	15											840
		30											760
MP-03R	118.1	15						.4			.2		
		30									10		
		45									.4		
MP-04R	116.9	.5						100					
MP-05R	115.3	15						35					
		30						.2					
MP-09R	106.3	15						47	.27		.2		
MP-10R	103.6	15						.2	470				
		30							267				
		45							185				
MN-10R	124.3	15		.353				.4					
		30		195	75			2					
MN-04T-2	6.8	.5						150	522				
NP-01R	101.6	15	2	10		.2			68	2			2
		30						.2	192	32			2
		45				.27	4		2				
		60				.2					.6		
NP-02R	99.5	.5			.60								
		15				.30	112				7	117	4
		30	4	.5		40		.2	171	65		.300	
		45		75		.92	203	6	25	40		165	
		60		10			210	.4	65	39	.2	18	

*SEE FIGURES 2-3

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-02R	99.5	75										165	
NP-03R	97.8	5		58	10					4			
		15	4	170	110	2	155	4	141	12		4	
		30		2		14	10	24	74	24	4		
		45						4		17		2	
		60								15	2	2	
NP-04R	96.3	5					57						
		15		6	165		75	14	70	180	2	109	
		30	6	4		7	105	4	302	29		19	14
		45	2	17	262	2	14			125		2	4
		60	2	84	270	7	40			40		19	
		75		100	115	30	150					17	
		90					330						
NP-05R	95.0	5								247			
		15			28	2					2	22	
		30	4	45	23	5		8		217		35	
		45		80	2	32	60	27	54	342	4	70	
		60	6		175	20	70	2	12	112	4	55	
		75	4			45	260		9	405			
		90					115			150		15	
		105								67			
		120								5			
		135								120			
		150								25			

*SEE FIGURE 3

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-05R	95.0	165								65			
NP-06R	94.0	15		8	39							37	
		30	16	30					4			12	
		45	2	31				2	2	22		40	
		60		12	195	4			6		2	18	
		75			55			4		2	2		
		90				15		4	6	2			
		105				12							
NP-07R	92.2	5							2				
		15	4		2		4						
		30	6	10					26				
		45		2					32	15	4	10	
		60		2	6		4	2	2		4		
		75		2	2								
		90			2			2	2				
		120			15								
		165									2		
NP-08R	90.1	15	8	8	345		15		2	2			
		30	13		77	100	2	9	42	92	8	4	
		45			285	12	20	10	2	167	6	2	
		60	6		180	30	35	9		40			
		75	2		18	20	5	6		2			
		90			4			6	25		12		
		105		2				4					

*SEE FIGURE 3

TABLE 8-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-08R	90.1	120		55									
		135		6									
NP-09R	88.3	5			49								
		15	23	4	17	15	2		6	6		2	
		30		10	123			2		37	5	2	
		45	28	2	158			10	27	62			
		60		10	205	82	4	27	27	71	6		
		75		6	82	14	6	11	32	65	2		
		90	4	6	4	20	6		2	92	3		
		105		2	2	2			2	25	4		
		120				22							
NP-10R	87.6	15						4					
		45				2						2	
		60								2			
		75	4	2						6			
		90	47	83	180	10			2	2			
		105	2		2	7		2			4		
		120	40	17	73	4		2			6		
		135	2	87	60	19		2					
		150		2							2		
		165				2							
NP-11R	87.3	5	17		190	10						2	
		15			4	15			290			555	3
		30		152		5			72	46		39	37

*SEE FIGURE 3

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-10R	87.3	45							65	174		4	
		60					2						
NP-15R	82.5	15								360			
NY-01T-3	2.2	15							5				
NY-02T-2	3.9	15	2										
NY-03T-3	5.6	15							2				
NY-04T-3	8.2	15							55				
PO-01T-1	1.6	15						6					
		15	6	220	827	2	14	6	2	134	8		
		30			10	84		6				48	
		45					6						
		60					2						
PO-01T-2	2.0	5	25	59	570				2	2			
		15	4	395	520	7	4	4					
PO-01T-3	2.2	15		127	955			3					
		15	4			2				2			
		30	2										
		60				2							
PO-01T-5	2.4	5		27	69		32		27			2	
		15	2		125	85	24	30	102	488	4	495	
		30			2		320	17		207	2	38	2
		45				14							4
PO-02T-1	3.6	15						27					
		15						38	18	283	5	232	

*SEE FIGURE 3

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
PO-02I-1	3.6	30							2				
PO-02I-2	4.2	5	4	710	1120	4	2	4				45	4
		15		6	420	210	47	20	134	245	2	75	4
		30				47	6					7	4
		45											4
PO-02I-3	3.5	5	2	77	22			4				19	
		15				6	2	20	14	110	6	60	
		30				65	2					2	
PO-03I-1	5.8	5		184	445			36	7			72	
		15				142	2	17	164	654		175	14
		30				4	2		2		40	10	2
		45									2		
		75				2							
PO-03I-2	5.7	5								40			
WO-02I-2	3.9	90	2										
WO-07I-2	12.9	5									2		
		15							2				
WO-10I-1	18.8	5						2					
AP-03R	116.2	15				220	14						
		30				70	38						
		45				110	120						
		60				40	4						
		75				150	2						
		90				12	4						

*SEE FIGURES 3-4

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
AP-03R	116.2	105				12	4						
		120				72							
		135				2							
AP-05R	113.6	15				105	77						
MC-01R	84.6	30					202						
		45				14	140						
		60				4	111						
		75				35	50						
MC-02R	82.9	45				30	61						
		60				35	9						
		75				10							
MC-03R	80.8	5					2						
		45				82	42						
		60				35	182						
		75				4	11						
		90				34	25						
		105					109						
		120				2	4						
		135				60							
MC-04R	78.9	15				160							
		30				135	8						
		45				6							
MC-06R	76.7	45				90							
		60				10							

*SEE FIGURE 3

TABLE B-9. SEASONALLY-SAMPLED VOLUMES OF VALLISNERIA AMERICANA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MC-09R	71.4	30					15						
MC-01T-1	2.2	5					77						
		15					56						
		30					10						
MC-01T-2	2.8	5					140						
		15					370						
MC-01T-3	1.0	5					602						
		15				.295	205						
		30				.27	132						

*SEE FIGURE 3

TABLE B-10. SEASONALLY-SAMPLED VOLUMES OF RUPPIA MARITIMA IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-01R	101.6	15				2							
		45				2							
NP-02R	99.5	45				2							
NP-07R	92.2	105						2					
NP-08R	90.1	60					2						
NP-09R	88.3	5			790								
		15					41	6		230		23	
		30			52					20			
		45			2				2	4			
		60								2			
		75								4			
NP-10R	87.6	45									2		
		60									2		
NP-11R	87.3	45										13	
PO-01T-1	1.6	30										2	
PO-01T-5	2.4	5		123	340		50					2	
		15	4		2		4			2		4	
		45				2							
PO-02T-1	3.6	5		2				2					
PO-02T-3	3.5	5	2	2									
		15								98			
		30	2										
PO-03T-1	5.8	5						26					
WO-01R	67.7	5		4			165		7				

*SEE FIGURES 3-4

TABLE B-10. SEASONALLY-SAMPLED VOLUMES OF RUPPIA MARITIMA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-01R	67.7	15		7	2	5	125	4	96				
		30			2	2	62	10	30				
		45				2		10	15				
		60					2		28				
		75						2	40				
		90			2				15				
		105						2	5				
WO-03R	63.9	15		2									
WO-06R	56.9	60						2					
		105		2									
WO-07R	55.2	5							45				
		30							5				
		45							4				
WO-09R	52.0	75	2										
		135	2										
WO-10R	51.1	5						2					
		15						2					
		30						2					
WO-011-1	1.2	15				4							
		30				2							
		45	2			2							
WO-011-2	2.2	60						2					
		75		2									
		90		2									

*SEE FIGURE 4

TABLE B-10. SEASONALLY-SAMPLED VOLUMES OF RUPPIA MARITIMA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-02T-1	3.3	15			7								
		60	4		2								
		75	4										
		90	4										
		105	2										
		135	2										
		165	2										
WO-02T-2	3.9	120	2										
WO-03T-1	6.1	5						2					
		15							5				
WO-03T-2	5.4	5		2									
		30	2										
		45	4						7				
		60							4				
WO-05T-1	9.7	5							55				
		15					2		125				
		30					50	2	20				
		45						2					
		60						2					
		120	2										
		135		2									
		165	6										
WO-05T-2	9.6	30						20					
		45						5	6				

*SEE FIGURE 4

TABLE B-10. SEASONALLY-SAMPLED VOLUMES OF RUPPIA MARITIMA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WO-05T-2	9.6	60						2	2				
		75							2				
WO-07T-1	12.7	5							30				
		15							20				
		45							80				
WO-07T-2	12.9	5			4								
		15					5		12				
		30							69				
		45							10				
WO-08T-1	15.3	5	12	315	418		195	10	455			2	
		15	9	200	830	155	320	2	75			29	
		30	12	62	605	16	62	2	265				
		45	9	505	760	72	110	20	32				
		60	8	95	570	29	55	9	19				
		75	8	17	140		70	8	20				
		90	9	12			75		6				
		105						4					
		120	4					4					
		135	8										
		150	2										
		180	2										
SP-07R	18.0	5				30							
SP-02T-2	3.5	180	56	18									
		195	4										

*SEE FIGURE 4

TABLE B-10. SEASONALLY-SAMPLED VOLUMES OF RUPPIA MARITIMA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
SM-03T-1	5.6	5		60	7								
		15		56						9			
SM-03T-4	6.1	5	30										
SM-04T-3	7.4	15		4									
NG-06T-2	7.4	5				2							
		15				4							

*SEE FIGURE 4

TABLE B-11. SEASONALLY-SAMPLED VOLUMES OF ELODEA CANADENSIS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MP-02R	119.7	45											2
NP-04R	96.3	5					2						
PO-01T-5	2.4	5			.37								
PO-03T-1	5.8	60				.4							
		75				.2							
NO-01T-4	1.0	5					160						
		15				.50	3480						
		30				.75	6180						
		45				.45	1580						
		60				.65	2930						

*SEE FIGURES 3-4

TABLE B-12. SEASONALLY-SAMPLED VOLUMES OF CERATOPHYLLUM DEMERSUM IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 SUMMER	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MA-10R	124.3	30		2										
MA-04T-2	6.8	5								2				
NP-02R	99.5	15											2	
NP-03R	97.8	5			2									
NP-05R	95.0	45									2			
		75									2			
		105									2			
NP-10R	89.6	45						2						
NY-02T-3	3.2	30						2						
NY-03T-3	5.6	5		2		80	6	2	2060	2		200		
		15		8		120	350	31	1425			675		9
		30		158		22	150	37		270		92		135
		45				2	4	16			47	4		2
		60				4	10	4			405			
		75				1	2				104			
		90									13			
		105						2						
		135						2						
PC-02T-2	3.1	60				2								

*SEE FIGURE 3

TABLE B-13. SEASONALLY-SAMPLED VOLUMES OF MYRIOPHYLLUM SPICATUM IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 SUMMER	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MN-04T-2	6.8	5								20				
NP-05R	95.0	5									215			
		15									230			
		30									150			
		45									87			
		60									27			
		75				15					2			
		90									97			
		105									72			
		135									20			
		150									2			
NY-02T-1	4.5	5								45				
		15								7				
NY-02T-3	3.2	5					85							
NY-03T-3	5.6	5									12			
		15					155							
		30					355		2		40			
		45					192							
		60					185							
		75				2	2							
		90							3					
NY-04T-2	8.0	5							2	10				
NY-04T-3	8.2	5		31							4			
		75												2

*SEE FIGURE 3

TABLE B-13. SEASONALLY-SAMPLED VOLUMES OF MYRIOPHYLLUM SPICATUM IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NY-04T-3	8.2	105											2
PO-01T-1	1.6	45					2						
PO-01T-4	2.3	60					2						
PO-01T-5	2.4	5		31	285	2	420			4			
		15		6	800	16	444	19		188			
		30					135	11		15			
		45				8	6						
PO-02T-1	3.6	60				2							
PO-02T-2	4.2	15				2	10						
PO-02T-3	3.5	15					2						
PO-03T-1	5.8	5									2		
		15				2			2	4			
		30					40		50				
		60				2							
		105				2							
WO-08T-1	15.3	5							2				
		15				2		4	4				
		30						2	12				
		90				2							
		120							2				
WO-10T-1	18.8	5							2				

*SEE FIGURES 3-4

TABLE B-14. SEASONALLY-SAMPLED VOLUMES OF CHARA SPP. IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
NP-04R	96.3	15					2						
NY-04T-3	8.2	15	12										
		30	2										
PO-01T-5	2.4	.5		.2									
		15				.2							
PO-02T-1	3.6	.5		2		.2		2					
		15				.2							
PO-02T-3	3.5	.5		2									
PO-03T-1	5.8	15						.2					
WO-08T-1	15.3	.5	9					.4					
		15	5			.6		.6					
		30	6			55		111					
		45	9			.4		92					
		60	8			.4		80					
		75	8			.4		60					
		90	4			.4		11					
		105						17					
		120						8					
		135						.2					
WO-09T-1	17.0	5	5			.33		96					
		15	15			.2		90					
		30	8			.6		95					
		45	6			.2		45					
		60						4					
WO-10T-1	18.8	5				.2		.2					

*SEE FIGURES 3-4

TABLE 8-15. SEASONALLY-SAMPLED VOLUMES OF NAJAS GLACAULPENSIS IN THE TIDAL POTOMAC RIVER AND ESTUARY
(VOLUME IN MILLILITERS, DISTANCE FROM SHORE IN METERS)

TRANSECT*	RIVER KM	DIST FROM SHORE	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MN-04T-2	6.8	15							4				
NP-09R	88.3	15			2								
WO-05T-1	9.7	15							4				
		15							7				
		30							2				
		75				2							
WO-06T-1	11.1	15				2							
		30							15				
WO-07T-2	12.9	60						2	2				
WO-08T-1	15.3	15	4	47	5		4	4	9				
		15		11	6	4	12	6	17				
		30	8	60	2	4	2	2	4				
		45	8	65		2	2	4	4				
		60		22					2				
		75	8				2	4	6				
		90	12	2				2					
		105						6	4				
		120						6	2				
		135						4					
		165						2					

*SEE FIGURES 3-4

Table B-16. Relative occurrence of vegetated transects, stations and grabs for the Maryland regions of the Tidal Potomac River and Estuary

(Relative occurrence as number vegetated/total number; 1978 data normalized to data of other years)

Salinity Zones/ Study Areas	Sampling Unit	1978			1979		1980			1981		
		Spring	Summer	Fall	Spring	Fall	Spring	Summer	Fall	Spring	Summer[2]	Fall
Tidal River												
Roosevelt Island	transects	-	0/5	-	-	-	-	-	-	-	-	-
and National	stations	-	0/17	-	-	-	-	-	-	-	-	-
Airport	grabs	-	0/51	-	-	-	-	-	-	-	-	-
Washington	transects	-	-	-	-	-	-	1/1	-	1/1	-	1/1
Channel	stations	-	-	-	-	-	-	3/4	-	1/3	-	2/4
WC-01R	grabs	-	-	-	-	-	-	4/12	-	1/9	-	6/12
Piscataway-	transects	0/34	1/34	1/1[1]	0/34	0/34	1/5[1]	-[1]	-[1]	0/34	-	0/34
Mattawoman	stations	0/146	1/160	1/5[1]	0/156	0/158	2/20[1]	-	-	0/162	-	0/167
Creeks region	grabs	0/438	3/480	2/15[1]	0/468	0/474	3/60[1]	-	-	0/486	-	0/501
Mattawoman	transects	-	-	-	-	-	1/1	1/1	-	0/1	-	1/1
MN-4T-2	stations	-	-	-	-	-	1/2	1/4	-	0/2	-	3/4
	grabs	-	-	-	-	-	3/6	3/12	-	0/6	-	7/12
Pomonkey	transects	-	-	-	-	-	0/4	0/4	-	0/4	-	0/4
Creek	stations	-	-	-	-	-	0/20	0/19	-	0/20	-	0/20
	grabs	-	-	-	-	-	0/60	0/57	-	0/60	-	0/60

[1]The region was not totally resampled because there was no indication of SAV growth in previous seasons.

[2]Only transects which previously had three or more species were sampled.

Table B-16. Relative occurrence of vegetated transects, stations and grabs for the Maryland regions of the Tidal Potomac River and Estuary - continued

(Relative occurrence as numbers vegetated/total number; 1978 data normalized to data of other years)

Salinity Zones/ Study Areas	Sampling Unit	1978			1979		1980			1981		
		Spring	Summer	Fall	Spring	Fall	Spring	Summer	Fall	Spring	Summer[2]	Fall
Transition Zone												
Maryland Point	transects	-	-	-	-	-	5/10	3/10	-	3/10	-	1/10
	stations	-	-	-	-	-	6/47	5/47	-	6/50	-	1/51
	grabs	-	-	-	-	-	11/141	12/141	-	6/150	-	1/153
Nanjemoy Creek-Port Tobacco River region	transects	22/37	22/37	19/37	22/37	20/37	23/37	24/37	24/37	21/37	17/17	11/37
	stations	59/199	68/203	60/192	87/221	59/213	70/223	62/209	67/218	74/227	53/108	30/198
	grabs	123/597	157/609	132/576	193/663	125/639	150/669	137/627	164/654	140/681	119/324	60/594
Transition Zone and Estuary												
Wicomico River region	transects	12/30	7/30	4/30	14/30	4/30	18/30	11/30	4/30	11/30	2/8	0/30
	stations	56/212	18/178	12/159	60/181	14/151	95/209	43/172	20/158	49/174	3/39	0/150
	grabs	103/636	34/534	26/477	135/543	36/453	213/627	82/516	53/474	98/522	6/117	0/450
Estuary												
St. Marys River region	transects	7/31	3/31	1/31	6/31	0/31	5/31	0/31	1/31	1/31	-	0/31
	stations	14/154	4/159	1/141	11/140	0/150	11/158	0/141	1/149	1/147	-	0/153
	grabs	24/462	7/477	1/423	25/420	0/450	20/474	0/423	3/447	0/441	-	0/459

[1]The region was not totally resampled because there was no indication of SAV growth in previous seasons.

[2]Only transects which previously had three or more species were sampled.

Table B-17. Relative occurrence of vegetated transects, stations and grabs for the Maryland and Virginia regions of the Tidal Potomac River and Estuary, 1979

Salinity Zones/ Study Areas	Sampling Unit	Sampling Period	
		Spring	Fall
Maryland Regions:			
Tidal River			
Piscataway-Mattawoman Creeks region	transects	0/34	0/34
	stations	0/156	0/158
	grabs	0/468	0/474
Transition Zone			
Nanjemoy-Port Tobacco region	transects	22/37	20/37
	stations	87/221	59/213
	grabs	193/663	125/639
Transition Zone and Estuary			
Wicomico River region	transects	14/30	4/30
	stations	60/181	14/151
	grabs	135/543	36/453
Estuary			
St. Marys River region	transects	6/31	0/31
	stations	11/140	0/150
	grabs	25/420	0/450
Total for Maryland Regions	transects	42/132	24/132
	stations	158/684	73/672
	grabs	353/2052	161/2016
Virginia Regions:			
Tidal River			
Gunston Cove region	transects	0/13	0/13
	stations	0/64	0/65
	grabs	0/192	0/195
Transition Zone			
Aquia and Potomac Creeks region	transects	3/26	2/26
	stations	11/139	8/129
	grabs	26/417	19/387
Transition Zone and Estuary			
Upper Machodoc Creek region	transects	12/18	9/18
	stations	31/103	26/98
	grabs	63/309	60/294
Estuary			
Nomini Bay region	transects	8/25	1/25
	stations	18/117	5/120
	grabs	45/351	13/360
Yeocomico River region	transects	3/26	0/26
	stations	3/115	0/114
	grabs	5/345	0/342
Total for Virginia Regions	transects	26/108	12/108
	stations	63/538	39/526
	grabs	139/1614	92/1578

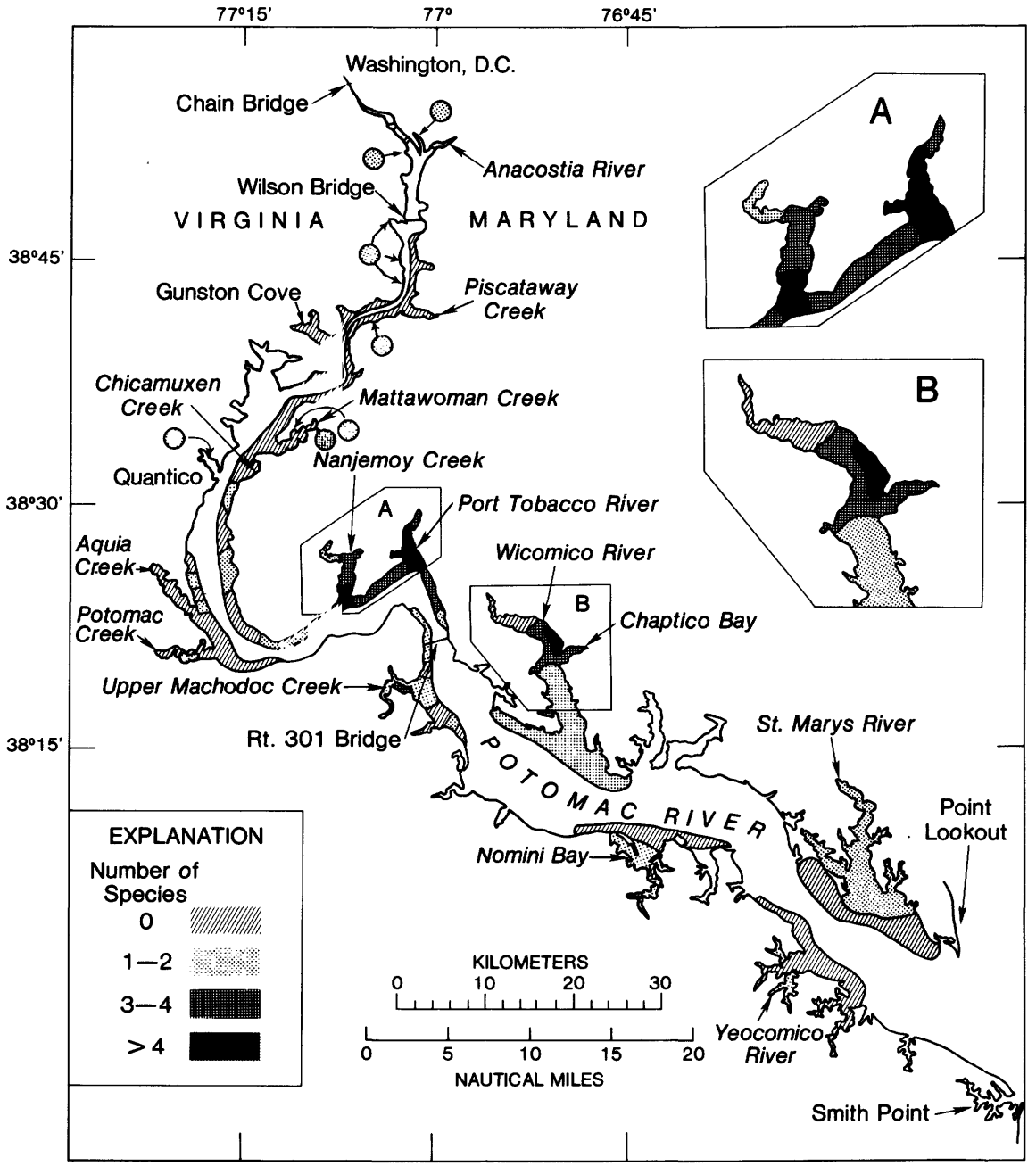

Figure B-1. Distribution of submersed aquatic vegetation in the Tidal Potomac River and Estuary.

Table B-18. Dry weight to volume equivalents of submersed aquatic plants in the Tidal Potomac River and Estuary, 1980

(Equivalents in grams per milliliter)

Species	Number of samples	Mean	95 percent confidence interval	Standard error of the mean
Potamogeton perfoliatus (spring)	14	0.08	0.065 - 0.090	0.006
Potamogeton pectinatus (spring)	12	0.08	0.073 - 0.097	0.006
Potamogeton crispus (spring)	9	0.06	0.057 - 0.073	0.004
(summer with winter buds)	17	0.12	0.106 - 0.126	0.005
Vallisneria americana (spring)	13	0.05	0.035 - 0.063	0.007
(summer)	13	0.09	0.076 - 0.108	0.007
Ruppia maritima (summer)	12	0.10	0.78 - 0.116	0.009
Myriophyllum spicatum (spring)	11	0.05	0.045 - 0.060	0.003
Zannichellia palustris (summer)	9	0.10	0.093 - 0.116	0.005
Najas gracillima (summer)	8	0.06	0.054 - 0.068	0.003
Ceratophyllum demersum (spring)	18	0.06	0.055 - 0.067	0.003
Chara spp. (summer)	10	0.11	0.095 - 0.129	0.008
Elodea canadensis (summer)	6	0.06	0.057 - 0.069	0.002
Egeria densa (summer)	11	0.06	0.048 - 0.079	0.007

TABLE B-19. TOTAL SEASONAL BIOMASS PER SQUARE METER OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY
(BIOMASS IN GRAMS OF DRY WEIGHT)

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TRANSECT*	RIVER KILOMETER	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
WC-01R-	176.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	175.3
MN-10R-	124.2	0.0	22.6	2.7	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
MN-04T-2	6.8	0.0	0.0	0.0	0.0	0.0	8.1	88.3	0.0	0.0	0.0	124.3
MP-02R-	119.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MP-03R-	118.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	1.2	0.0	0.0
MP-04R-	116.9	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0
MP-05R-	115.3	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
MP-09R-	106.2	0.0	0.0	0.0	0.0	0.0	8.7	3.4	0.0	7.4	0.0	0.0
MP-10R-	103.6	0.0	0.0	0.0	0.0	0.0	0.1	75.7	0.0	0.0	0.0	0.0
NP-01R-	101.6	0.1	0.3	0.0	1.4	0.3	0.1	21.5	3.7	0.4	0.0	0.4
NP-02R-	99.5	0.4	3.0	5.1	7.6	34.5	0.4	17.2	9.5	0.3	54.0	0.4
NP-03R-	97.8	4.0	18.9	22.9	1.0	18.1	2.4	30.9	7.2	0.4	0.5	0.0
NP-04R-	96.3	1.0	127.9	59.2	38.5	36.5	1.4	47.0	41.1	1.6	45.0	11.3
NP-05R-	95.0	6.8	14.6	15.0	22.6	24.1	5.3	6.0	61.9	6.9	9.5	0.0
NP-06R-	94.0	0.9	28.8	25.1	55.4	0.4	14.7	12.9	3.6	2.5	31.1	0.1
NP-07R-	92.1	0.3	0.3	1.0	1.1	0.5	0.2	3.0	1.2	0.9	0.8	0.0
NP-08R-	90.1	10.6	16.0	59.4	5.6	4.4	1.5	14.3	35.1	0.8	51.0	0.0
NP-09R-	88.3	16.5	4.2	90.6	8.4	3.0	3.0	12.4	28.1	6.0	11.4	26.7
NP-10R-	87.6	4.4	16.8	26.4	7.4	0.0	3.5	1.2	3.8	2.6	6.4	0.0
NP-11R-	87.3	16.8	36.1	114.1	8.3	2.8	17.5	39.1	93.2	11.6	194.1	43.5
NP-14R-	84.3	8.1	45.7	0.0	0.0	35.1	49.1	0.0	2.1	0.0	0.0	0.0
NP-15R-	82.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.4	0.0	0.0	0.0
NY-01T-1	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
NY-01T-3	2.1	37.7	8.5	0.0	11.8	0.0	7.0	0.5	0.0	0.0	0.0	0.0
NY-02T-1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
NY-02T-2	3.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NY-02T-3	3.2	0.0	0.0	0.0	1.1	1.7	0.0	0.0	0.0	1.1	0.0	0.0
NY-03T-3	5.5	0.0	69.2	0.0	9.1	46.1	2.2	254.9	23.0	19.0	51.0	8.0
NY-04T-2	8.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.0
NY-04T-3	8.2	5.6	5.7	0.0	0.0	0.0	0.0	6.0	0.2	0.0	0.0	0.1
PO-01T-1	1.6	0.4	245.7	73.5	2.2	2.2	1.1	0.4	22.8	3.3	5.7	0.0
PO-01T-2	2.0	5.2	94.5	138.1	0.4	0.4	0.2	0.7	0.2	0.0	0.0	0.0
PO-01T-3	2.1	3.8	13.9	321.7	0.2	0.0	0.3	0.0	0.2	13.9	0.0	0.0
PO-01T-4	2.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PO-01T-5	2.4	1.3	15.5	96.5	6.3	81.8	4.9	18.3	89.2	2.9	59.3	0.4
PO-02T-1	3.6	0.1	3.2	0.0	0.6	0.0	4.7	2.2	31.0	0.8	25.4	0.0
PO-02T-2	4.1	0.2	59.4	168.9	16.0	7.1	1.5	14.7	27.8	2.5	78.6	1.8
PO-02T-3	3.4	30.1	67.0	146.3	21.3	0.8	6.5	16.6	46.2	16.4	81.4	0.0
PO-03T-1	5.8	0.0	46.3	36.7	6.1	2.2	8.7	32.3	108.1	24.4	34.8	1.8
PO-03T-2	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0
WO-01R-	67.7	0.0	0.3	0.3	1.2	26.1	1.3	10.8	13.4	1.7	0.0	0.0
WO-03R-	63.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WO-06R-	56.8	0.0	0.0	0.0	1.4	0.0	3.7	0.0	0.0	0.0	0.0	0.0
WO-07R-	55.1	0.1	0.0	0.0	0.3	0.0	0.0	5.1	0.0	0.7	0.0	0.0
WO-09R-	52.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WO-10R-	51.1	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.0	0.0
WO-01T-1	1.2	0.2	0.0	0.0	0.7	0.0	6.6	10.9	0.0	3.6	0.0	0.0
WO-01T-2	2.1	0.0	0.1	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0

SEE FIGURES 2-4

TABLE B-19. TOTAL SEASONAL BIOMASS PER SQUARE METER OF SUBMERSED AQUATIC VEGETATION IN THE TIDAL POTOMAC RIVER AND ESTUARY - CON
(BIOMASS IN GRAMS OF DRY WEIGHT)

TRANSECT*	RIVER KILOMETER	1978 SPRING	1978 SUMMER	1978 FALL	1979 SPRING	1979 FALL	1980 SPRING	1980 SUMMER	1980 FALL	1981 SPRING	1981 SUMMER	1981 FALL
MO-02T-1	3.3	1.3	0.0	0.7	6.9	0.0	10.8	0.0	0.0	3.0	0.0	0.0
MO-02T-2	3.9	1.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
MO-03T-1	6.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.0	0.0	0.0
MO-03T-2	5.4	1.6	0.3	0.0	0.5	0.0	7.6	2.7	0.0	0.0	0.0	0.0
MO-05T-1	9.7	0.6	0.1	0.0	1.6	6.3	3.4	26.4	16.1	6.0	0.0	0.0
MO-05T-2	9.6	0.0	0.0	0.0	0.0	0.0	2.0	0.6	0.0	0.2	0.0	0.0
MO-06T-1	11.1	0.7	0.0	0.0	11.4	0.0	12.5	1.1	1.0	0.0	0.0	0.0
MO-06T-2	12.1	16.8	0.0	0.0	7.1	0.0	26.7	0.0	0.0	4.2	0.0	0.0
MO-07T-1	12.6	20.4	0.0	0.0	2.4	0.0	18.7	11.9	0.0	23.9	0.0	0.0
MO-07T-2	12.9	0.0	0.1	3.2	41.9	1.6	11.0	7.7	0.0	1.3	0.2	0.0
MO-08T-1	15.3	7.4	56.0	182.0	16.8	47.1	16.9	43.9	30.1	2.7	5.4	0.0
MO-09T-1	16.9	8.1	0.0	0.0	4.5	0.0	39.3	0.0	0.0	15.6	0.0	0.0
MO-10T-1	18.8	0.0	0.0	0.0	0.8	0.0	1.1	0.1	0.0	19.2	0.0	0.0
SM-07R-	18.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SM-02T-2	3.4	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SM-03T-1	5.5	0.0	3.5	1.3	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
SM-03T-4	6.1	5.5	0.0	0.0	81.2	0.0	14.4	0.0	0.0	0.0	0.0	0.0
SM-04T-2	8.3	2.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
SM-04T-3	7.4	1.6	0.5	0.0	15.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0
SM-05T-3	9.0	0.0	0.0	0.0	83.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0
SM-06T-2	10.4	6.0	0.0	0.0	2.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0
SM-08T-1	14.8	12.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AP-03R-	116.1	0.0	0.0	0.0	12.6	7.6	0.0	0.0	0.0	0.0	0.0	0.0
AP-05R-	113.6	0.0	0.0	0.0	6.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0
PC-02T-2	3.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-01R-	84.6	0.0	0.0	0.0	1.3	28.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-02R-	82.9	0.0	0.0	0.0	4.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
PC-04R-	78.9	0.0	0.0	0.0	49.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
PC-06R-	76.7	0.0	0.0	0.0	11.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0
PC-09R-	71.4	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
PC-01T-1	2.1	0.0	0.0	0.0	0.2	15.7	0.0	0.0	0.0	0.0	0.0	0.0
PC-01T-2	2.8	0.0	0.0	0.0	1.0	55.9	0.0	0.0	0.0	0.0	0.0	0.0
PC-01T-3	1.0	0.0	0.0	0.0	42.8	104.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-02T-1	2.9	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-02T-2	2.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-03T-1	4.5	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PC-03T-2	4.9	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-01T-1	2.8	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-01T-3	0.4	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-01T-4	0.9	0.0	0.0	0.0	17.2	1046.5	0.0	0.0	0.0	0.0	0.0	0.0
AO-03T-1	3.9	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-05T-1	6.6	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-06T-1	6.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-06T-2	7.4	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AO-06T-3	7.5	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YO-02T-3	4.9	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YO-04T-1	2.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YO-05T-1	4.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SEE FIGURES 3-4

Appendix C. Substrate and Water Quality Data

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY
(DISTANCE FROM SHORE AND DEPTH IN METERS)

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
WC-01R- -01	1.2	5	SILT	SAND				YES
WC-01R- -02	1.2	15	SILT	SAND				YES
WC-01R- -03	1.4	30	SILT					YES
WC-01R- -04	2.3	45	SILT					NO
PY-01R- -01	0.5	15	SAND					NO
PY-01R- -02	0.8	30	SAND			SAND	SILT	NO
PY-01R- -03	1.0	45	SAND	SILT		SAND		NO
PY-01R- -04	1.3	60	SAND	SILT				NO
PY-01R- -05	2.0	75	SAND	SILT	CLAY			NO
PY-01R- -06	2.5	90	COBB	PEBB				NO
PY-02R- -01	0.5	5	COBB	GRAV				NO
PY-02R- -02	1.0	15	SAND			SAND	SILT	NO
PY-02R- -03	1.2	30	SAND			SAND	SILT	NO
PY-02R- -04	1.3	45	SAND	SILT				NO
PY-02R- -05	1.3	60	SAND			SAND	SHEL	NO
PY-02R- -06	1.3	75	SAND			SAND		NO
PY-02R- -07	1.3	90	SAND	SILT		SAND	SILT	NO
PY-02R- -08	1.3	105	SAND	SILT		SAND	SILT	NO
PY-02R- -09	1.4	120	SAND	SILT		SAND	SILT	NO
PY-02R- -10	1.5	135	SAND	SILT		SAND		NO
PY-02R- -11	1.5	150	SAND			SAND	SILT	NO
PY-02R- -12	2.3	165	SILT	SAND				NO
PY-03R- -01	0.5	5	COBB	SAND		SAND	SILT	NO
PY-03R- -02	1.3	15	SAND	SILT				NO
PY-03R- -03	1.5	30	SAND	SILT				NO
PY-03R- -04	2.0	40	SAND	SILT				NO
PY-03R- -05	2.5	45	SAND	SILT				NO
PY-04R- -01	0.5	2	COBB	PEBB	GRAV			NO
PY-04R- -02	1.0	5	COBB	GRAV	PEBB			NO
PY-04R- -03	1.5	15	SAND	SILT		COBB		NO
PY-04R- -04	1.8	30	SAND	SILT		GRAV		NO
PY-04R- -05	2.0	45	SILT	SAND				NO
PY-04R- -06	2.5	60	SILT	SAND	SHEL			NO
PY-05R- -01	0.5	5	GRAV	PEBB	SAND			NO
PY-05R- -02	0.9	15	SAND					NO
PY-05R- -03	1.1	30	SAND	SILT		SILT	SAND	NO
PY-05R- -04	1.6	45	SAND	SILT		CLAY		NO
PY-05R- -05	2.7	60	SILT	SAND				NO
PY-06R- -01	0.8	15	SAND					NO
PY-06R- -02	1.0	30	SAND	SILT				NO
PY-06R- -03	1.3	45	SAND	SILT				NO
PY-06R- -04	1.3	60	SILT	SAND				NO
PY-06R- -05	1.5	75	CLAY	SILT				NO
PY-06R- -06	1.5	90	CLAY	SILT				NO
PY-06R- -07	1.5	105	CLAY	SILT				NO
PY-07R- -01	1.0	15	PEBB	SILT	SAND	COBB		NO

*SEE FIGURE 2

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
CETR=CETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
PY-07R- -02	1.0	30	SILT	SAND	CLAY			NO
PY-07R- -03	1.3	45	SILT	SAND	CLAY			NO
PY-07R- -04	1.5	60	SAND	SILT				NO
PY-07R- -05	1.5	75	SAND	SILT		SAND		NO
PY-07R- -06	1.8	90	SILT	SAND		CLAY		NO
PY-07R- -07	1.8	105	CLAY	SILT				NO
PY-07R- -08	1.8	120	CLAY	SILT				NO
PY-07R- -09	2.3	135	CLAY	SILT				NO
PY-08R- -01	0.5	15	SAND	PEBB				NO
PY-08R- -02	0.8	30	SAND	PEBB				NO
PY-08R- -03	1.0	45	SAND	SILT				NO
PY-08R- -04	1.0	60	SILT	SAND				NO
PY-08R- -05	1.3	75	SILT	SAND				NO
PY-08R- -06	1.5	90	SILT	CLAY				NO
PY-08R- -07	1.5	105	CLAY	SILT				NO
PY-08R- -08	1.5	120	CLAY	SILT				NO
PY-08R- -09	1.5	135	SILT	CLAY				NO
PY-08R- -10	1.5	150	SILT	CLAY				NO
PY-08R- -11	1.5	165	CLAY	SILT				NO
PY-08R- -12	1.5	180	CLAY	SILT				NO
PY-08R- -13	1.5	195	SILT	CLAY				NO
PY-08R- -14	1.8	210	CLAY	SILT				NO
PY-08R- -15	1.8	225	CLAY	SILT				NO
PY-08R- -16	1.8	240	CLAY	SILT				NO
PY-09R- -01	0.5	15	SAND	PEBB				NO
PY-09R- -02	1.0	30	SAND	PEBB				NO
PY-09R- -03	1.3	45	SILT	SAND	PEBB			NO
PY-09R- -04	1.5	60	SILT	SAND				NO
PY-09R- -05	1.8	75	SILT	SAND		CLAY		NO
PY-09R- -06	1.8	90	SILT	SAND		CLAY		NO
PY-09R- -07	1.8	105	CLAY	SILT				NO
PY-09R- -08	2.0	120	CLAY	SILT				NO
PY-10R- -01	1.0	15	SAND	SILT	PEBB			NO
PY-10R- -02	1.3	30	SAND	SILT				NO
PY-10R- -03	1.3	45	SAND	SILT				NO
PY-10R- -04	1.5	60	SAND	SILT				NO
PY-10R- -05	1.5	75	SAND	SILT				NO
PY-10R- -06	1.5	90	SILT	SAND				NO
PY-10R- -07	1.5	105	CLAY	SILT		CLAY	SILT	NO
PY-10R- -08	1.8	120	CLAY	SILT				NO
PY-01T-1-01	0.5	5	COBB	PEBB				NO
PY-01T-1-02	1.0	15	SAND	SILT	PEBB			NO
PY-01T-1-03	1.3	30	CLAY	SILT	OOZE			NO
PY-01T-1-04	1.4	45	CLAY	SILT	OOZE			NO
PY-01T-2-01	0.5	5	PEBB	GRAV	COBB			NO
PY-01T-2-02	1.0	15	COBB	GRAV				NO

*SEE FIGURE 2

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

OCBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
PY-01T-2-03	1.6	30	CLAY	SILT	OOZE			NO
PY-01T-2-04	1.6	45	OOZE	SILT	CLAY			NO
PY-02T-1-01	0.5	15	SAND	SILT				NO
PY-02T-1-02	0.7	30	SAND	SILT				NO
PY-02T-1-03	0.8	45	SAND	SILT				NO
PY-02T-1-04	1.2	60	SAND	SILT				NO
PY-02T-1-05	0.9	75	SAND	SILT				NO
PY-02T-1-06	0.8	90	SAND	SILT		SAND	SILT	NO
PY-02T-1-07	0.8	105	SAND	SILT		SAND	SILT	NO
PY-02T-1-08	0.8	120	SAND	SILT				NO
PY-02T-1-09	0.8	135	SAND	SILT				NO
PY-02T-1-10	0.8	150	SAND	SILT				NO
PY-02T-1-11	0.8	165	SAND	SILT				NO
PY-02T-1-12	0.9	180	SAND	SILT				NO
PY-02T-1-13	1.0	195	SILT	SAND				NO
PY-02T-1-14	1.0	210	SILT	SAND				NO
PY-02T-1-15	1.0	225	CLAY	SILT				NO
PY-02T-1-16	1.0	240	SILT	OOZE				NO
PY-02T-1-17	1.0	255	CLAY	SILT	OOZE			NO
PY-02T-1-18	1.5	270	COBB					NO
PM-01R- -01	0.5	5	SAND	GRAV				NO
PM-01R- -02	1.0	15	SAND					NO
PM-01R- -03	1.0	30	SAND					NO
PM-01R- -04	1.1	45	SAND					NO
PM-01R- -05	1.3	60	SAND					NO
PM-02R- -01	0.5	5	COBB					NO
PM-02R- -02	1.1	15	COBB					NO
PM-02R- -03	1.4	30	SAND	SILT				NO
PM-02R- -04	1.4	45	SAND					NO
PM-02R- -05	1.5	60	SAND					NO
PM-03R- -01	0.8	5	SAND	GRAV				NO
PM-03R- -02	1.0	15	COBB	SAND				NO
PM-03R- -03	1.2	30	SAND					NO
PM-03R- -04	1.3	45	SAND					NO
PM-03R- -05	1.3	60	SAND					NO
PM-04R- -01	0.7	5	COBB	PEBB				NO
PM-04R- -02	1.1	15	COBB					NO
PM-04R- -03	1.4	30	SAND					NO
PM-04R- -04	1.4	45	SAND					NO
PM-04R- -05	1.6	60	SAND					NO
MN-01R- -01	0.5	5	COBB					NO
MN-01R- -02	1.0	15	SAND	SILT				NO
MN-01R- -03	1.5	30	SAND			SAND	SILT	NO
MN-01R- -04	1.8	45	SILT			SILT		NO
MN-01R- -05	2.4	60	SILT			SILT		NO
MN-02R- -01	0.5	5	COBB					NO

*SEE FIGURES 2-3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
MA-02R- -02	1.0	10	SAND				NO
MA-02R- -03	1.2	15	SAND				NO
MA-02R- -04	1.5	30	SAND		SAND	SILT	NO
MA-02R- -05	2.5	45	SAND		SAND	SILT	NO
MA-03R- -01	0.5	5	COBB				NO
MA-03R- -02	1.0	15	SAND	SILT	CLAY		NO
MA-03R- -03	1.5	30	SAND	SILT			NO
MA-03R- -04	2.0	40	SAND	SILT			NO
MA-04R- -01	0.8	15	SAND				NO
MA-04R- -02	1.0	30	SAND	SILT			NO
MA-04R- -03	1.0	45	SAND	SILT			NO
MA-04R- -04	1.0	60	SAND	SILT			NO
MA-04R- -05	1.0	75	SAND	SILT			NO
MA-04R- -06	1.3	90	SAND				NO
MA-04R- -07	1.5	105	SAND				NO
MA-04R- -08	1.5	120	SAND				NO
MA-04R- -09	1.5	135	SAND				NO
MA-04R- -10	1.8	150	SAND	SILT			NO
MA-04R- -11	2.3	165	SAND	SILT			NO
MA-04R- -12	2.5	180	CLAY	SILT			NO
MA-05R- -01	0.7	15	COBB				NO
MA-05R- -02	1.5	30	SAND	SILT			NO
MA-05R- -03	1.5	45	SAND	SILT			NO
MA-05R- -04	1.8	60	SAND	SILT			NO
MA-05R- -05	1.8	75	SAND	SILT			NO
MA-05R- -06	2.0	90	SAND	SILT			NO
MA-05R- -07	2.3	105	SAND	SILT			NO
MA-06R- -01	0.5	15	SAND				NO
MA-06R- -02	0.8	30	SAND				NO
MA-06R- -03	0.8	45	SAND				NO
MA-06R- -04	0.9	60	SAND				NO
MA-06R- -05	1.0	75	SAND				NO
MA-06R- -06	1.0	90	SAND				NO
MA-06R- -07	1.0	105	SAND				NO
MA-06R- -08	1.0	120	SAND				NO
MA-06R- -09	1.0	135	SAND	SILT			NO
MA-06R- -10	1.0	150	SAND				NO
MA-06R- -11	1.3	165	SAND				NO
MA-06R- -12	1.3	180	SAND				NO
MA-06R- -13	2.2	195	SAND	SILT			NO
MA-06R- -14	2.5	210	SAND	SILT	SAND	SILT	NO
MA-07R- -01	0.5	4	COBB				NO
MA-07R- -02	1.0	8	COBB				NO
MA-07R- -03	1.5	12	GRAV				NO
MA-07R- -04	1.8	15	SILT	SAND	SAND		NO
MA-07R- -05	2.2	30	SILT	SAND	SILT	SAND	NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
MA-08R- -01	0.7	10	COBB					NO
MA-08R- -02	1.3	15	SAND	SHEL				NO
MA-08R- -03	1.5	20	SAND	COBB				NO
MA-08R- -04	2.0	30	SAND	SILT				NO
MA-09R- -01	0.5	5	SAND	PEBB	GRAV			NO
MA-09R- -02	1.0	10	SAND	SILT	SHEL			NO
MA-09R- -03	1.5	15	SAND	SILT				NO
MA-09R- -04	1.8	30	SAND	SILT				NO
MA-09R- -05	2.0	45	SILT			SAND	SILT	NO
MA-09R- -06	2.3	60	SILT			CLAY	SILT	NO
MA-10R- -01	0.5	5	SAND	PEBB				NO
MA-10R- -02	1.0	15	SAND					YES
MA-10R- -03	1.1	30	SAND					NO
MA-10R- -04	1.3	45	SAND					NO
MA-10R- -05	1.3	60	SAND	SILT		SAND		NO
MA-10R- -06	1.3	75	SAND	SILT		SAND	SILT	NO
MA-10R- -07	1.5	90	SAND	SILT		SAND	SILT	NO
MA-10R- -08	1.6	105	SILT			SAND	SILT	NO
MA-10R- -09	1.8	120	SILT			SAND	SILT	NO
MA-10R- -10	2.0	135	SILT	SAND				NO
MA-01T-1-01	0.8	15	SAND	SILT				NO
MA-01T-1-02	1.3	30	CLAY	SILT				NO
MA-01T-1-03	1.3	45	CLAY	SILT	OOZE			NO
MA-01T-1-04	1.3	60	CLAY	SILT				NO
MA-01T-1-05	1.3	75	CLAY	SILT				NO
MA-01T-1-06	1.3	90	CLAY	SILT				NO
MA-01T-2-01	0.8	15	CLAY	SAND				NO
MA-01T-2-02	1.0	30	CLAY	SAND				NO
MA-01T-2-03	1.3	45	CLAY	SILT				NO
MA-01T-2-04	1.5	60	CLAY	SILT				NO
MA-01T-3-01	0.5	5	COBB	GRAV				NO
MA-01T-3-02	1.0	10	COBB	GRAV				NO
MA-01T-3-03	1.3	15	SAND	SILT	SHEL			NO
MA-01T-3-04	1.4	30	SAND	SILT				NO
MA-01T-3-05	1.6	45	SAND	SILT				NO
MA-01T-3-06	2.1	60	SILT	SAND		SILT	SAND	NO
MA-01T-3-07	2.2	75	SILT	CLAY	OOZE			NO
MA-01T-3-08	2.3	90	SILT	SAND				NO
MA-01T-3-09	2.3	105	SILT	SAND	SHEL			NO
MA-01T-3-10	2.3	120	SILT	SAND				NO
MA-01T-3-11	2.4	135	CLAY					NO
MA-01T-4-01	0.5	5	SAND	PEBB	GRAV			NO
MA-01T-4-02	1.0	15	SAND	PEBB				NO
MA-01T-4-03	1.4	30	SAND	SILT	DETR			NO
MA-01T-4-04	1.5	45	SAND	SILT	DETR			NO
MA-01T-4-05	1.6	60	SILT	SAND	OOZE	SILT	CLAY	NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
MN-01T-4-06	1.7	75	SILT	SAND	OOZE	SILT	CLAY		NO
MN-02T-1-01	0.7	5	SAND	SILT	CLAY				NO
MN-02T-1-02	1.0	10	SAND	SILT	PEBB				NO
MN-02T-1-03	1.5	15	SAND	SILT	CLAY				NO
MN-02T-1-04	1.5	20	SAND	SILT	CLAY				NO
MN-02T-1-05	1.3	30	CLAY	SILT					NO
MN-02T-2-01	0.8	15	DETR						NO
MN-02T-2-02	1.0	30	DETR						NO
MN-02T-2-03	1.3	45	DETR			SILT	CLAY		NO
MN-02T-2-04	1.3	60	CLAY	SILT	DETR				NO
MN-02T-2-05	1.3	75	CLAY	SILT	OOZE				NO
MN-02T-2-06	1.3	90	CLAY	SILT					NO
MN-02T-3-01	0.5	5	SAND						NO
MN-02T-3-02	0.8	15	SAND						NO
MN-02T-3-03	1.0	30	SAND						NO
MN-02T-3-04	1.6	45	SAND						NO
MN-02T-3-05	2.1	60	SAND	SILT		SAND	SILT		NO
MN-03T-1-01	0.8	15	SAND	SILT					NO
MN-03T-1-02	1.0	30	SAND	SILT					NO
MN-03T-1-03	1.5	45	SAND	SILT					NO
MN-03T-1-04	1.8	60	CLAY	SILT					NO
MN-03T-1-05	2.0	75	CLAY	SILT	DETR				NO
MN-03T-2-01	0.5	5	SAND			SAND			NO
MN-03T-2-02	1.0	15	SAND						NO
MN-03T-2-03	1.3	30	CLAY	SILT	OOZE				NO
MN-03T-2-04	1.5	45	CLAY	SILT	OOZE				NO
MN-03T-3-01	0.5	5	SAND			SAND			NO
MN-03T-3-02	1.0	15	SAND						NO
MN-03T-3-03	1.3	30	SILT			SILT	SAND	OOZE	NO
MN-03T-3-04	1.0	45	SILT			OOZE	SILT	CLAY	NO
MN-04T-1-01	0.5	2	SAND	SILT	DETR				NO
MN-04T-1-02	1.0	5	CLAY	SILT	OOZE				NO
MP-01R- -01	0.4	5	COBB						NO
MP-01R- -02	1.1	15	SAND			SILT			NO
MP-01R- -03	1.6	30	SAND			SILT			NO
MP-01R- -04	2.1	45	SILT						NO
MP-02R- -01	0.3	5	COBB						NO
MP-02R- -02	1.1	15	COBB						NO
MP-02R- -03	2.0	30	SILT						NO
MP-03R- -01	0.3	5	COBB						NO
MP-03R- -02	0.7	15	SAND						YES
MP-03R- -03	0.7	30	SAND						NO
MP-03R- -04	1.0	45	SAND						NO
MP-03R- -05	1.0	60	SAND						NO
MP-04R- -01	0.2	5	COBB						YES
MP-04R- -02	0.5	15	SILT	SAND					NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

OOBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER	SUBSTRATE** LOWER LAYER	VEGETATED?
MP-04R- -03	0.7	30	SILT SAND		NO
MP-04R- -04	0.7	45	SILT SAND		NO
MP-04R- -05	0.9	60	SILT SAND		NO
MP-05R- -01	0.3	5	PEBB		NO
MP-05R- -02	0.5	15	SAND		YES
MP-05R- -03	1.3	30	SAND PEBB		YES
MP-05R- -04	2.0	45	SAND		NO
MP-05R- -05	2.3	60	SAND		NO
MP-06R- -01	0.5	5	PEBB		NO
MP-06R- -02	1.0	15	SAND		NO
MP-06R- -03	1.2	30	SAND	CLAY	NO
MP-06R- -04	1.4	45	SAND	CLAY	NO
MP-06R- -05	1.4	60	SAND SILT		NO
MP-07R- -01	0.7	5	COBB		NO
MP-07R- -02	1.1	15	SILT	SAND	NO
MP-07R- -03	1.2	30	SILT	SAND	NO
MP-07R- -04	1.2	45	SILT	SAND	NO
MP-07R- -05	1.3	60	SILT	SAND	NO
MP-08R- -01	0.7	5	COBB		NO
MP-08R- -02	1.2	15	SAND SILT		NO
MP-08R- -03	1.5	30	SAND SILT		NO
MP-08R- -04	1.7	45	SAND SILT		NO
MP-08R- -05	2.1	60	SAND SILT		NO
MP-09R- -01	0.4	5	SAND SILT		NO
MP-09R- -02	0.6	15	SAND SILT		YES
MP-09R- -03	0.9	30	SAND SILT		NO
MP-09R- -04	1.0	45	SAND SILT		NO
MP-09R- -05	0.0	60	SAND		NO
MP-10R- -01	0.4	5	PEBB		NO
MP-10R- -02	0.7	15	SAND GRAV		YES
MP-10R- -03	0.8	30	SILT SAND		NO
MP-10R- -04	0.9	45	SILT	SAND	NO
MP-10R- -05	1.0	60	SILT	SAND	NO
NP-01R- -01	0.5	15	SAND		NO
NP-01R- -02	0.6	30	SAND SILT		YES
NP-01R- -03	0.8	45	SAND SILT		NO
NP-01R- -04	0.8	60	SAND SILT		NO
NP-01R- -05	0.8	75	SAND SILT		NO
NP-01R- -06	0.8	90	SAND SILT		NO
NP-01R- -07	1.0	105	SAND SILT		NO
NP-01R- -08	1.0	120	SILT		NO
NP-01R- -09	1.3	135	SILT	CLAY SILT	NO
NP-01R- -10	1.3	150	SILT	CLAY SILT	NO
NP-01R- -11	1.5	165	SILT	CLAY SILT	NO
NP-01R- -12	1.5	180	SILT DETR		NO
NP-02R- -01	0.3	15	SAND		NO

*SEE FIGURE 3

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TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
NP-02R- -02	0.5	30	SAND					NO
NP-02R- -03	0.5	45	SILT	SAND				YES
NP-02R- -04	0.7	60	SAND	SILT				YES
NP-02R- -05	0.8	75	SAND	SILT				YES
NP-02R- -06	0.9	90	SILT	SAND				NO
NP-02R- -07	0.9	105	SILT			CLAY		NO
NP-02R- -08	1.0	120	SILT			CLAY		NO
NP-02R- -09	1.0	135	SILT			CLAY		NO
NP-02R- -10	1.0	150	SILT			CLAY		NO
NP-02R- -11	1.0	165	SILT			CLAY		NO
NP-02R- -12	1.0	180	SILT			CLAY		NO
NP-03R- -01	0.5	15	SAND	SILT	PEBB			YES
NP-03R- -02	0.8	30	SAND	SILT		CLAY		YES
NP-03R- -03	0.8	45	SAND	SILT				YES
NP-03R- -04	1.5	60	CLAY	SILT				NO
NP-03R- -05	1.5	75	CLAY	SILT				NO
NP-03R- -06	1.5	90	CLAY	SILT				NO
NP-04R- -01	0.5	15	SAND	SILT	CLAY			NO
NP-04R- -02	0.5	30	SAND	SILT				YES
NP-04R- -03	0.5	45	SAND	SILT				YES
NP-04R- -04	0.7	60	SAND	SILT				YES
NP-04R- -05	0.8	75	SAND	SILT				YES
NP-04R- -06	0.8	90	SAND	SILT				YES
NP-04R- -07	1.3	105	CLAY	SILT				NO
NP-04R- -08	1.5	120	CLAY	SILT				NO
NP-04R- -09	1.5	135	CLAY	SILT				NO
NP-04R- -10	1.5	150	CLAY	SILT				NO
NP-04R- -11	1.5	165	CLAY	SILT	OOZE			NO
NP-05R- -01	0.5	5	SAND					NO
NP-05R- -02	0.7	15	SAND					NO
NP-05R- -03	0.8	30	SAND					YES
NP-05R- -04	1.1	45	SAND					YES
NP-05R- -05	1.1	60	OOZE					NO
NP-05R- -06	1.3	75	OOZE					NO
NP-06R- -01	0.5	5	SAND					YES
NP-06R- -02	0.7	15	SAND					YES
NP-06R- -03	0.8	30	SAND					YES
NP-06R- -04	0.9	45	SAND					YES
NP-06R- -05	1.2	60	SAND					YES
NP-06R- -06	1.2	75	SAND					NO
NP-06R- -07	1.3	90	SAND					NO
NP-06R- -08	1.6	105	SAND	SHEL				NO
NP-06R- -09	1.7	120	SAND	SILT				NO
NP-06R- -10	1.8	135	SAND	SILT				NO
NP-06R- -11	1.8	150	SAND	SILT		SAND	SILT	NO
NP-06R- -12	2.0	165	SAND	SILT		SILT	SAND	NO

*SEE FIGURE 3

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TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
NP-07R- -01	0.5	5	SAND					NO
NP-07R- -02	0.8	15	SAND					NO
NP-07R- -03	0.8	30	SAND					YES
NP-07R- -04	0.9	45	SAND					YES
NP-07R- -05	1.0	60	SAND	SILT				YES
NP-07R- -06	1.1	75	SAND	SILT				YES
NP-07R- -07	1.3	90	SAND	SILT				NO
NP-07R- -08	1.3	105	SAND	SILT		SAND	SILT	NO
NP-07R- -09	1.4	120	SILT	SAND		SILT	SAND	NO
NP-07R- -10	1.5	135	SAND	SILT				NO
NP-07R- -11	1.4	150	SAND	SILT				NO
NP-07R- -12	1.4	165	SAND	SILT				NO
NP-07R- -13	1.4	180	SAND	SILT				NO
NP-07R- -14	1.4	195	SAND	SILT				NO
NP-07R- -15	1.4	210	SILT	SAND		SAND	SILT	NO
NP-07R- -16	1.4	225	SILT	SAND		SILT	SAND	NO
NP-07R- -17	1.5	240	SILT	SAND		SILT	SAND	NO
NP-07R- -18	1.5	255	SILT	SAND		SILT	SAND	NO
NP-07R- -19	1.5	270	SAND	SILT				NO
NP-07R- -20	1.5	285	SAND	SILT				NO
NP-07R- -21	1.6	300	SILT	SAND		SILT	SAND	NO
NP-08R- -01	0.5	5	SAND					YES
NP-08R- -02	0.7	15	SAND					YES
NP-08R- -03	0.7	30	SAND					YES
NP-08R- -04	0.7	45	SAND					YES
NP-08R- -05	0.8	60	SAND			SAND		NO
NP-08R- -06	0.9	75	SAND			SAND		NO
NP-08R- -07	0.9	90	SAND	SILT		SAND	SILT	NO
NP-08R- -08	1.0	105	SAND	SILT		SAND	SILT	YES
NP-08R- -09	1.1	120	SAND	SILT		SAND	SILT	YES
NP-08R- -10	1.1	135	SAND	SILT		SAND	SILT	YES
NP-08R- -11	1.3	150	SILT	SAND		SILT	SAND	NO
NP-08R- -12	1.4	165	SILT	SAND	OOZE			NO
NP-09R- -01	0.5	15	SAND					NO
NP-09R- -02	0.6	30	SAND					YES
NP-09R- -03	0.7	45	SAND					YES
NP-09R- -04	0.7	60	SAND					YES
NP-09R- -05	0.7	75	SAND					YES
NP-09R- -06	0.8	90	SAND					YES
NP-09R- -07	0.8	105	SAND					YES
NP-09R- -08	1.0	120	SAND					YES
NP-09R- -09	1.4	135	SAND	SILT				NO
NP-09R- -10	1.8	150	SILT	SAND		SILT	SAND	NO
NP-09R- -11	1.8	165	SILT	SAND		SILT	SAND	NO
NP-09R- -12	2.0	180	SILT					NO
NP-10R- -01	0.5	5	SILT			SAND		NO

*SEE FIGURE 3

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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
NP-10R- -02	0.5	15	SAND			SAND		NO
NP-10R- -03	0.6	30	SAND			SAND		NO
NP-10R- -04	0.7	45	SAND			SAND		YES
NP-10R- -05	0.7	60	SAND			SAND		YES
NP-10R- -06	0.7	75	SAND			SAND		YES
NP-10R- -07	0.8	90	SAND			SAND		YES
NP-10R- -08	0.8	105	SAND			SAND		YES
NP-10R- -09	0.8	120	SAND			SAND		YES
NP-10R- -10	0.8	135	SAND			SAND		YES
NP-10R- -11	0.9	150	SAND			SAND		YES
NP-10R- -12	1.0	165	SAND					NO
NP-10R- -13	1.3	180	SAND	SILT				NO
NP-10R- -14	1.5	195	SAND	SILT				NO
NP-10R- -15	1.8	210	SILT	SAND				NO
NP-10R- -16	1.8	225	SILT	SAND				NO
NP-11R- -01	0.5	5	SAND					YES
NP-11R- -02	0.5	15	SAND					YES
NP-11R- -03	0.7	30	SAND					YES
NP-11R- -04	0.8	45	SAND					YES
NP-11R- -05	0.8	60	SAND					NO
NP-11R- -06	0.9	75	SAND					NO
NP-11R- -07	1.1	90	SAND	SILT				NO
NP-11R- -08	1.4	105	SILT	SAND				NO
NP-11R- -09	1.5	120	SAND	SILT				NO
NP-11R- -10	1.6	135	SILT	SAND		SAND	SILT	NO
NP-11R- -11	1.7	150	SILT	SAND	SHEL	SILT		NO
NP-11R- -12	1.7	165	SILT	SAND		SILT	SAND	NO
NP-12R- -01	0.5	5	SAND	SHEL				NO
NP-12R- -02	0.7	15	SAND					NO
NP-12R- -03	0.7	30	SAND	SHEL				NO
NP-12R- -04	1.0	45	SAND	SHEL	SILT			NO
NP-12R- -05	1.1	60	SAND	SILT	SHEL			NO
NP-12R- -06	1.2	75	SAND	SILT	SHEL			NO
NP-12R- -07	1.2	90	SAND	SILT	SHEL			NO
NP-12R- -08	1.3	105	SAND	SILT	SHEL			NO
NP-12R- -09	1.4	120	SILT	SAND	SHEL			NO
NP-12R- -10	1.5	135	SILT	SAND	SHEL			NO
NP-12R- -11	1.5	150	SILT	SAND	SHEL			NO
NP-12R- -12	1.6	165	SILT	SAND	SHEL			NO
NP-12R- -13	1.5	180	SILT	SAND	SHEL			NO
NP-12R- -14	1.6	195	SILT	SAND	SHEL			NO
NP-12R- -15	1.7	210	SILT	SAND	SHEL			NO
NP-13R- -01	0.5	15	SAND	PEBB	GRAV			NO
NP-13R- -02	1.2	30	SILT	SAND				NO
NP-13R- -03	1.4	45	SILT	SAND				NO
NP-13R- -04	1.5	60	SILT			SAND	SILT	NO

*SEE FIGURE 3

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TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
NP-13R- -05	1.5	75	SILT			SAND	SILT	NO
NP-13R- -06	1.6	90	SILT			SAND	SILT	NO
NP-13R- -07	1.7	105	SILT			SAND	SILT	NO
NP-13R- -08	1.8	120	SILT			SAND	SILT	NO
NP-13R- -09	2.0	135	SILT			SAND	SILT	NO
NP-14R- -01	0.5	5	SAND					YES
NP-14R- -02	0.8	15	SAND					YES
NP-14R- -03	1.2	30	SILT			SAND	SILT	NO
NP-14R- -04	1.5	45	SILT			SAND	SILT	NO
NP-14R- -05	1.7	60	SILT			SAND	SILT	NO
NP-14R- -06	1.8	75	SILT	SAND				NO
NP-14R- -07	2.0	90	SILT			SILT	SAND	NO
NP-15R- -01	0.5	5	COBB	PEBB	GRAV			NO
NP-15R- -02	1.0	10	COBB					NO
NP-15R- -03	1.5	15	COBB	PEBB	GRAV			NO
NP-15R- -04	2.0	20	SILT	SAND				NO
NY-01T-1-01	0.5	5	SAND	SILT				NO
NY-01T-1-02	0.7	15	SAND	SILT				NO
NY-01T-1-03	0.9	30	SILT	SAND		SILT	SAND	NO
NY-01T-1-04	1.0	45	SILT	SAND		SILT	SAND	NO
NY-01T-1-05	1.1	60	OOZE			OOZE		NO
NY-01T-1-06	1.1	75	OOZE			OOZE		NO
NY-01T-2-01	0.5	5	SILT	SAND		SILT	SAND	NO
NY-01T-2-02	1.0	10	OOZE			OOZE		NO
NY-01T-2-03	1.5	15	OOZE			OOZE		NO
NY-01T-3-01	0.5	5	SAND			SAND		YES
NY-01T-3-02	0.8	15	SAND	SILT				NO
NY-01T-3-03	0.8	30	SAND	SILT				NO
NY-01T-3-04	0.8	45	SAND	SILT				NO
NY-01T-3-05	0.9	60	SAND	SILT				NO
NY-01T-3-06	1.0	75	SILT	SAND				NO
NY-01T-3-07	1.2	90	SILT	SAND		SILT	SAND	NO
NY-01T-3-08	1.3	105	SILT	SAND				NO
NY-01T-3-09	1.4	120	OOZE					NO
NY-01T-3-10	1.5	135	OOZE					NO
NY-02T-1-01	0.5	15	SAND					NO
NY-02T-1-02	0.7	15	SAND					NO
NY-02T-1-03	1.0	30	SAND	SILT		SAND	SILT	NO
NY-02T-1-04	1.3	45	OOZE					NO
NY-02T-1-05	1.3	60	OOZE					NO
NY-02T-2-01	0.5	5	SAND			CLAY		NO
NY-02T-2-02	0.6	15	SAND					NO
NY-02T-2-03	0.7	30	SAND					NO
NY-02T-2-04	0.8	45	SAND					NO
NY-02T-2-05	1.0	60	SAND	SILT				NO
NY-02T-2-06	1.1	75	SAND	SILT				NO

*SEE FIGURE 3

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CETR=CETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
NY-02T-2-07	1.3	90	OOZE					NO
NY-02T-2-08	1.4	105	OOZE					NO
NY-02T-3-01	0.5	5	SAND					NO
NY-02T-3-02	0.8	15	SAND					NO
NY-02T-3-03	1.0	30	OOZE					NO
NY-02T-3-04	1.1	45	OOZE					NO
NY-03T-1-01	0.5	5	SAND	PEBB				NO
NY-03T-1-02	0.9	15	SAND	SILT				NO
NY-03T-1-03	1.0	30	SAND	SILT				NO
NY-03T-1-04	1.5	45	SAND	SILT				NO
NY-03T-1-05	2.0	60	OOZE					NO
NY-03T-2-01	0.5	5	SAND			SAND		NO
NY-03T-2-02	0.8	15	SAND			SAND		NO
NY-03T-2-03	1.0	17	SAND			SAND		NO
NY-03T-2-04	1.5	19	SAND	SILT		SILT	SAND	NO
NY-03T-2-05	2.0	22	SAND	SHEL				NO
NY-03T-3-01	0.5	5	DETR					YES
NY-03T-3-02	0.6	15	DETR					YES
NY-03T-3-03	0.7	30	DETR					YES
NY-03T-3-04	0.7	45	OOZE					NO
NY-03T-3-05	0.7	60	OOZE			OOZE		NO
NY-03T-3-06	0.8	75	OOZE					NO
NY-04T-1-01	0.2	5	SAND	SILT		SAND	SILT	NO
NY-04T-1-02	0.5	15	OOZE			OOZE		NO
NY-04T-1-03	0.7	30	OOZE			OOZE		NO
NY-04T-2-01	0.2	5	SAND	SILT				NO
NY-04T-2-02	0.8	15	OOZE			OOZE		NO
NY-04T-2-03	0.8	30	OOZE			OOZE		NO
NY-04T-3-01	0.4	5	SILT	SAND		SILT	SAND	YES
NY-04T-3-02	0.5	15	OOZE			OOZE		NO
NY-04T-3-03	0.5	30	OOZE			OOZE		NO
PC-01T-1-01	1.0	15	SAND	GRAV	PEBB			NO
PC-01T-1-02	1.5	30	SILT	SAND				YES
PC-01T-1-03	1.5	45	SILT	SAND	SHEL	CLAY		NO
PC-01T-1-04	2.0	60	SILT	SAND	SHEL	CLAY		NO
PC-01T-2-01	0.8	15	SAND					YES
PC-01T-2-02	1.0	30	SAND					YES
PC-01T-2-03	1.5	45	SAND	SILT	SHEL			NO
PC-01T-2-04	2.0	60	CLAY	SILT	SHEL			NO
PC-01T-2-05	2.3	75	CLAY	SILT	DETR			NO
PC-01T-3-01	1.0	15	PEBB	SAND				YES
PC-01T-3-02	1.8	30	CLAY	SILT				NO
PC-01T-3-03	2.3	45	CLAY	SILT	DETR			NO
PC-01T-3-04	2.5	60	CLAY	SILT				NO
PC-01T-3-05	2.5	75	CLAY	SILT				NO
PC-01T-4-01	1.0	15	PEBB					NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
PC-01T-4-02	1.8	30	PEBB	SHEL					NO
PC-01T-4-03	2.0	45	SILT			CLAY	SILT		NO
PC-01T-4-04	2.1	60	SILT			CLAY	SILT		NO
PC-01T-5-01	0.5	15	CLAY	SILT					YES
PC-01T-5-02	0.9	30	SILT			CLAY	SILT		YES
PC-01T-5-03	1.0	45	SILT			CLAY	SILT	DETR	NO
PC-01T-5-04	1.3	60	SILT			CLAY	SILT	DETR	NO
PC-01T-5-05	1.3	75	SILT			CLAY	SILT	DETR	NO
PC-01T-5-06	1.4	90	SILT			CLAY	SILT	DETR	NO
PC-02T-1-01	0.5	15	SAND	SILT					YES
PC-02T-1-02	1.0	30	SAND	SILT					NO
PC-02T-1-03	1.1	45	SILT	SHEL		CLAY	SILT		NO
PC-02T-1-04	1.3	60	SILT	DETR		CLAY	SILT		NO
PC-02T-1-05	1.3	75	SILT	DETR		CLAY	SILT		NO
PC-02T-1-06	1.3	90	SILT	DETR		CLAY	SILT		NO
PC-02T-2-01	0.8	15	SAND	SILT					YES
PC-02T-2-02	1.0	30	SAND	SILT					YES
PC-02T-2-03	1.1	45	SAND	SILT					NO
PC-02T-2-04	1.5	60	SAND	SILT					NO
PC-02T-2-05	1.8	75	CLAY	SILT	SHEL				NO
PC-02T-2-06	2.0	90	CLAY	SILT	SHEL				NO
PC-02T-3-01	0.5	15	SAND	SILT					YES
PC-02T-3-02	1.5	30	SILT	SAND					NO
PC-02T-3-03	2.0	45	SHEL	CLAY	SILT				NO
PC-02T-3-04	2.3	60	CLAY	SILT					NO
PC-03T-1-01	0.5	15	SILT	CLAY					YES
PC-03T-1-02	0.5	30	SILT	CLAY					YES
PC-03T-1-03	0.6	45	SILT			CLAY	SILT		NO
PC-03T-1-04	0.8	60	SILT			CLAY	SILT		NO
PC-03T-1-05	0.8	75	SILT			CLAY	SILT		NO
PC-03T-1-06	0.8	90	SILT			CLAY	SILT		NO
PC-03T-2-01	0.5	15	CLAY	SILT					NO
PC-03T-2-02	1.0	30	CLAY	SILT	SHEL				NO
PC-03T-2-03	1.0	45	CLAY	SILT					NO
PC-03T-2-04	1.0	60	CLAY	SILT					NO
PC-03T-2-05	1.3	75	CLAY	SILT					NO
PC-03T-2-06	1.3	90	DETR	CLAY	SILT				NO
WC-01R- -01	0.8	15	SAND	SILT					YES
WC-01R- -02	0.8	30	SAND	SILT					YES
WC-01R- -03	0.8	45	SAND	SILT					NO
WC-01R- -04	0.8	60	SAND	SILT					NO
WC-01R- -05	0.8	75	SAND	SILT					NO
WC-01R- -06	0.8	90	SAND	SILT					NO
WC-01R- -07	0.8	105	SAND	SILT					NO
WC-01R- -08	0.8	120	SAND	SILT					NO
WC-01R- -09	0.8	135	SAND	SILT					NO

*SEE FIGURES 3-4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
WC-01R- -10	0.9	150	SAND	SILT			NO
WC-01R- -11	1.0	165	SAND	SILT			NO
WC-01R- -12	1.0	180	SAND	SILT			NO
WC-01R- -13	1.0	195	SAND	SILT			NO
WC-01R- -14	1.0	210	SAND	SILT			NO
WC-01R- -15	1.0	225	SAND	SILT			NO
WC-01R- -16	1.1	240	SAND	SILT			NO
WC-01R- -17	1.3	255	SAND	SHEL			NO
WC-01R- -18	2.0	270	SAND				NO
WC-02R- -01	0.5	15	SAND	PEBB			NO
WC-02R- -02	0.5	30	PEBB	GRAV	SHEL	CLAY	NO
WC-02R- -03	0.5	45	SAND	PEBB			NO
WC-02R- -04	0.8	60	PEBB	SAND			NO
WC-02R- -05	0.9	75	PEBB	SHEL			NO
WC-02R- -06	1.0	90	SAND	PEBB	SHEL		NO
WC-02R- -07	1.0	105	SHEL	SAND			NO
WC-02R- -08	1.0	120	SHEL	SAND			NO
WC-02R- -09	1.0	135	SHEL	SAND			NO
WC-02R- -10	1.3	150	SHEL	SAND			NO
WC-02R- -11	1.3	165	SAND				NO
WC-02R- -12	1.3	180	SAND				NO
WC-02R- -13	1.3	195	SAND				NO
WC-02R- -14	1.3	210	SAND				NO
WC-02R- -15	1.5	225	SAND				NO
WC-02R- -16	1.5	240	SAND				NO
WC-02R- -17	1.5	255	SAND	SHEL			NO
WC-02R- -18	1.5	270	SAND				NO
WC-02R- -19	1.8	285	SAND				NO
WC-02R- -20	1.8	300	SAND				NO
WC-03R- -01	0.5	15	SAND	SILT			NO
WC-03R- -02	0.5	30	SILT	SAND			YES
WC-03R- -03	0.8	45	SAND	PEBB			NO
WC-03R- -04	0.8	60	SAND	PEBB			NO
WC-03R- -05	1.0	75	SAND	PEBB	SHEL		NO
WC-03R- -06	1.0	90	SAND				NO
WC-03R- -07	1.0	105	SAND				NO
WC-03R- -08	1.0	120	SAND				NO
WC-03R- -09	1.0	135	SAND				NO
WC-03R- -10	1.0	150	SAND				NO
WC-03R- -11	1.0	165	SAND				NO
WC-03R- -12	1.0	180	SAND				NO
WC-03R- -13	1.0	195	SAND				NO
WC-03R- -14	1.2	210	SAND				NO
WC-03R- -15	1.2	225	SAND				NO
WC-03R- -16	1.3	240	SAND				NO
WC-03R- -17	1.3	255	SAND				NO

*SEE FIGURE 4

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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
MC-03R- -18	1.3	270	SAND				NO
MC-03R- -19	1.4	285	SAND				NO
MC-03R- -20	1.4	300	SAND				NO
MC-04R- -01	0.5	15	PEBB	SHEL			NO
MC-04R- -02	0.5	30	PEBB				NO
MC-04R- -03	0.8	45	PEBB				NO
MC-04R- -04	0.8	60	SAND	SHEL PEBB	CLAY		NO
MC-04R- -05	1.0	75	SAND		CLAY		NO
MC-04R- -06	1.0	90	SAND		CLAY		NO
MC-04R- -07	1.0	105	SAND	SHEL	CLAY	COBB	NO
MC-04R- -08	1.0	135	SAND		CLAY		NO
MC-04R- -09	1.0	150	SHEL	SAND	CLAY		NO
MC-04R- -10	1.3	165	SHEL	SAND PEBB			NO
MC-04R- -11	1.5	180	SAND				NO
MC-04R- -12	1.5	195	SAND				NO
MC-04R- -13	1.5	210	SAND				NO
MC-04R- -14	1.5	225	SAND				NO
MC-04R- -15	1.5	240	SAND				NO
MC-04R- -16	1.5	255	SAND				NO
MC-04R- -17	1.5	270	SAND				NO
MC-04R- -18	1.8	285	SAND				NO
MC-04R- -19	1.8	300	SAND				NO
MC-05R- -01	0.8	15	PEBB		CLAY		NO
MC-05R- -02	0.8	30	SAND		CLAY		NO
MC-05R- -03	0.8	45	SAND		CLAY		NO
MC-05R- -04	0.9	60	SAND	PEBB	CLAY		NO
MC-05R- -05	1.0	75	SAND		PEBB		NO
MC-05R- -06	1.0	90	SAND		CLAY		NO
MC-05R- -07	1.0	105	SAND	PEBB			NO
MC-05R- -08	1.0	120	SAND	PEBB			NO
MC-05R- -09	1.0	135	SAND	SHEL	CLAY		NO
MC-05R- -10	1.3	150	SAND	DETR			NO
MC-05R- -11	1.4	165	SAND				NO
MC-05R- -12	1.4	180	SAND	PEBB			NO
MC-05R- -13	1.4	195	SHEL	SAND			NO
MC-05R- -14	1.4	210	SHEL	SAND			NO
MC-05R- -15	1.5	225	SAND		CLAY		NO
MC-05R- -16	1.5	240	SAND		CLAY		NO
MC-05R- -17	1.5	255	SAND				NO
MC-05R- -18	1.5	270	SAND				NO
MC-05R- -19	1.5	285	SAND				NO
MC-05R- -20	1.5	300	SAND				NO
MC-06R- -01	0.5	5	SHEL		CLAY		NO
MC-06R- -02	0.8	15	SAND	SHEL	CLAY		NO
MC-06R- -03	0.9	30	SAND		CLAY		NO
MC-06R- -04	1.0	45	SAND		CLAY		NO

*SEE FIGURE 4

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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
MD-06R- -05	1.0	60	SAND	SHEL		CLAY		NO
MD-06R- -06	1.0	75	SAND			CLAY		NO
MD-06R- -07	1.0	90	SAND			CLAY		NO
MD-06R- -08	1.0	105	SAND			CLAY		YES
MD-06R- -09	1.0	120	SAND					NO
MD-06R- -10	1.0	135	SAND					NO
MD-06R- -11	1.0	150	SAND					NO
MD-06R- -12	1.0	165	SAND					NO
MD-06R- -13	1.0	180	SAND					NO
MD-06R- -14	1.0	195	SAND					NO
MD-06R- -15	1.1	210	SAND					NO
MD-06R- -16	1.2	225	SAND					NO
MD-06R- -17	1.3	240	SAND					NO
MD-06R- -18	1.3	255	SAND					NO
MD-06R- -19	1.4	270	SAND					NO
MD-06R- -20	1.5	285	SAND					NO
MD-06R- -21	1.7	300	SAND					NO
MD-07R- -01	0.5	5	COBB	SHEL	SAND	CLAY		NO
MD-07R- -02	0.5	15	SAND	SHEL				NO
MD-07R- -03	0.6	30	SHEL			SAND		NO
MD-07R- -04	0.7	45	SHEL	SAND		CLAY		NO
MD-07R- -05	0.8	60	SAND					NO
MD-07R- -06	0.8	75	COBB	SAND				NO
MD-07R- -07	0.9	90	SAND					NO
MD-07R- -08	1.1	105	SAND					NO
MD-07R- -09	1.2	120	SAND					NO
MD-07R- -10	2.0	135	SILT	SAND		CLAY	SHEL	NO
MD-07R- -11	2.4	150	SILT	SAND		CLAY	SHEL	NO
MD-08R- -01	0.5	5	SAND	COBB				NO
MD-08R- -02	0.7	15	SAND	CLAY				NO
MD-08R- -03	0.8	30	SAND	COBB		CLAY		NO
MD-08R- -04	0.8	45	SAND			CLAY		NO
MD-08R- -05	0.8	60	SAND			CLAY		NO
MD-08R- -06	1.0	75	SAND			CLAY	SHEL	NO
MD-08R- -07	1.0	90	SAND			CLAY	SHEL	NO
MD-08R- -08	1.2	105	SAND			SHEL		NO
MD-08R- -09	1.3	120	SAND	SHEL				NO
MD-08R- -10	1.6	135	SAND	SHEL				NO
MD-08R- -11	1.8	150	SHEL					NO
MD-09R- -01	0.5	5	SAND					NO
MD-09R- -02	0.8	15	SAND					NO
MD-09R- -03	0.8	30	SAND	SHEL	PEBB			NO
MD-09R- -04	0.8	45	SAND	SHEL	PEBB			NO
MD-09R- -05	0.9	60	SAND	SHEL	PEBB			NO
MD-09R- -06	0.9	75	SAND	SHEL	PEBB			NO
MD-09R- -07	0.9	90	SAND	SHEL	PEBB			NO

*SEE FIGURE 4

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GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
WC-09R- -08	0.9	105	SAND	SHEL	PEBB				NO
WC-09R- -09	0.9	120	SAND	SHEL	PEBB				NO
WC-09R- -10	1.0	135	SAND						NO
WC-09R- -11	1.0	150	SAND						NO
WC-09R- -12	1.0	165	SAND						NO
WC-09R- -13	1.0	180	SAND						NO
WC-09R- -14	1.0	195	SAND						NO
WC-09R- -15	1.0	210	SAND						NO
WC-09R- -16	1.0	225	SAND						NO
WC-09R- -17	1.0	240	SAND						NO
WC-09R- -18	1.0	255	SAND						NO
WC-09R- -19	1.1	270	SAND						NO
WC-09R- -20	1.1	285	SAND						NO
WC-09R- -21	1.2	300	SAND						NO
WC-10R- -01	0.4	15	SAND						NO
WC-10R- -02	0.5	30	SAND	SHEL					NO
WC-10R- -03	0.5	45	SAND						NO
WC-10R- -04	0.5	60	SAND						NO
WC-10R- -05	0.5	75	SAND						NO
WC-10R- -06	0.5	90	SAND						NO
WC-10R- -07	0.6	105	SAND						NO
WC-10R- -08	0.6	120	SAND						NO
WC-10R- -09	0.6	135	SAND	SILT					NO
WC-10R- -10	0.6	150	SAND	SILT					NO
WC-10R- -11	0.7	165	SAND	SILT					NO
WC-10R- -12	0.8	180	SAND	SILT					NO
WC-10R- -13	0.8	195	SAND	SILT					NO
WC-10R- -14	0.8	210	SAND	SILT					NO
WC-10R- -15	0.8	225	SAND	SILT					NO
WC-10R- -16	0.8	240	SAND						NO
WC-10R- -17	0.8	255	SAND						NO
WC-10R- -18	1.1	270	SAND						NO
WC-10R- -19	1.8	285	SAND	SILT					NO
WC-10R- -20	2.0	300	SAND	SILT					NO
WC-011T-1-01	0.3	15	SAND	SILT					NO
WC-011T-1-02	0.3	30	SAND	SILT					NO
WC-011T-1-03	0.5	45	SAND	SILT					NO
WC-011T-1-04	0.5	60	SAND	SILT					NO
WC-011T-1-05	0.5	75	SAND	SILT					NO
WC-011T-1-06	1.0	90	SAND	SILT					NO
WC-011T-2-01	0.5	5	COBB						NO
WC-011T-2-02	0.7	15	COBB	SAND	PEBB				NO
WC-011T-2-03	0.8	30	SAND	SHEL		CLAY			NO
WC-011T-2-04	1.0	45	SAND			CLAY	SHEL		NO
WC-011T-2-05	1.0	60	SAND			CLAY	SHEL		NO
WC-011T-2-06	1.0	75	SAND			CLAY	SHEL		YES

*SEE FIGURE 4

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TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
MG-01T-2-07	1.0	90	SAND			CLAY	SHEL	YES
MG-01T-2-08	1.0	105	SAND			CLAY	SHEL	NO
MG-01T-2-09	1.1	120	SAND			CLAY	SHEL	NO
MG-01T-2-10	1.1	135	SAND			CLAY	SHEL	NO
MG-01T-2-11	1.2	150	SAND			CLAY	SHEL	NO
MG-01T-2-12	1.3	165	SAND			CLAY	SHEL	NO
MG-01T-2-13	1.5	180	SAND			CLAY	SHEL	NO
MG-01T-2-14	2.0	195	SAND			CLAY	SHEL	NO
MG-01T-2-15	2.5	210	SAND			CLAY	SHEL	NO
MG-02T-1-01	0.3	15	CLAY	SILT				NO
MG-02T-1-02	0.5	30	SAND	SILT				NO
MG-02T-1-03	0.5	45	SAND	SILT				NO
MG-02T-1-04	0.5	60	SAND	SILT				YES
MG-02T-1-05	0.5	75	SAND	SILT				NO
MG-02T-1-06	0.5	90	SAND	SILT				NO
MG-02T-1-07	0.5	105	SAND	SILT				YES
MG-02T-1-08	0.5	120	SAND	SILT				NO
MG-02T-1-09	0.8	135	SAND	SILT				NO
MG-02T-1-10	0.8	150	SAND	SILT				NO
MG-02T-1-11	0.8	165	SAND	SILT				NO
MG-02T-1-12	0.8	180	SAND	SILT				NO
MG-02T-1-13	0.8	195	SAND	SILT				NO
MG-02T-2-01	0.8	5	PEBB	GRAV	SAND			NO
MG-02T-2-02	1.0	10	SHEL	SAND	GRAV			NO
MG-02T-2-03	1.0	15	SAND	SHEL				NO
MG-02T-2-04	1.0	30	SAND	SHEL				NO
MG-02T-2-05	1.0	45	SAND	SHEL				NO
MG-02T-2-06	1.0	60	SAND	SHEL				NO
MG-02T-2-07	1.1	75	SAND	SHEL				NO
MG-02T-2-08	1.2	90	SAND	SHEL				NO
MG-02T-2-09	1.2	105	SAND	SHEL				NO
MG-02T-2-10	1.2	120	SAND	SHEL				NO
MG-02T-2-11	1.2	135	SAND	SHEL				NO
MG-02T-2-12	1.2	150	SAND	SHEL				NO
MG-02T-2-13	1.3	165	SAND	SHEL				NO
MG-02T-2-14	1.3	180	SAND	SHEL				NO
MG-02T-2-15	1.4	195	SAND	SHEL				NO
MG-02T-2-16	1.5	210	SAND	SHEL				NO
MG-02T-2-17	1.6	225	SAND	SHEL				NO
MG-02T-2-18	1.9	240	SAND	SHEL				NO
MG-02T-2-19	2.2	255	SAND	SILT				NO
MG-02T-2-20	2.5	270	SILT	SAND				NO
MG-03T-1-01	0.5	15	SAND	SILT				NO
MG-03T-1-02	0.5	30	SAND	SILT				NO
MG-03T-1-03	0.8	45	SAND	SILT				NO
MG-03T-1-04	0.8	60	SAND	SILT				NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
MD-03T-1-05	0.8	75	SAND	SILT				NO
MD-03T-1-06	1.0	90	SAND	SILT				NO
MD-03T-1-07	1.0	105	SAND	SILT				NO
MD-03T-1-08	1.3	120	SAND	SILT				NO
MD-03T-1-09	2.0	135	SILT	SAND	CLAY			NO
MD-03T-1-10	2.0	150	SHEL	CLAY				NO
MD-03T-1-11	2.3	165	SHEL	CLAY	SILT			NO
MD-03T-2-01	0.3	15	SAND	SILT	SHEL	CLAY		YES
MD-03T-2-02	0.3	30	SAND	SILT	SHEL			NO
MD-03T-2-03	0.4	45	SAND	SILT	SHEL			NO
MD-03T-2-04	0.5	60	SILT			SAND	SILT	NO
MD-03T-2-05	0.8	75	SAND	CLAY	SILT			NO
MD-03T-2-06	1.0	90	SILT			SAND	CLAY	NO
MD-03T-2-07	1.1	105	CLAY	SILT	SAND			NO
MD-03T-2-08	1.5	120	CLAY	SILT				NO
MD-03T-2-09	1.5	135	CLAY	SILT				NO
MD-03T-2-10	1.6	150	CLAY	SILT	DETR			NO
MD-03T-3-01	0.5	5	COBB	PEBB				NO
MD-03T-3-02	1.0	10	PEBB	COBB				NO
MD-03T-3-03	1.6	15	SAND	SHEL				NO
MD-03T-3-04	1.8	30	SAND	SHEL				NO
MD-03T-3-05	1.8	45	SAND	SHEL				NO
MD-03T-3-06	1.8	60	SAND	SHEL				NO
MD-03T-3-07	1.9	75	COBB	SHEL	SAND			NO
MD-03T-3-08	2.2	90	PEBB	SHEL				NO
MD-03T-3-09	2.5	105	SAND					NO
MD-04T-1-01	0.5	5	PEBB	SAND				NO
MD-04T-1-02	1.0	15	PEBB					NO
MD-04T-1-03	1.1	30	PEBB	GRAV	SAND			NO
MD-04T-1-04	1.4	45	SHEL	SAND	PEBB			NO
MD-04T-1-05	1.6	60	SAND	SHEL				NO
MD-04T-1-06	1.7	75	SAND	SILT	CLAY			NO
MD-04T-1-07	1.7	90	SAND	SILT	CLAY			NO
MD-04T-1-08	1.8	105	SAND	SILT	CLAY			NO
MD-04T-1-09	1.8	120	SAND	SILT	CLAY			NO
MD-04T-1-10	1.8	135	SAND	SILT	CLAY			NO
MD-04T-1-11	1.9	150	SAND	SILT	CLAY			NO
MD-04T-1-12	2.0	165	SAND	SILT	CLAY			NO
MD-04T-1-13	2.0	180	SAND	SILT	CLAY			NO
MD-04T-1-14	2.1	195	SAND	SILT	CLAY			NO
MD-04T-1-15	2.1	210	SAND	SILT	CLAY			NO
MD-04T-1-16	2.1	225	SAND	SILT	CLAY			NO
MD-04T-1-17	2.2	240	SAND	SILT	CLAY			NO
MD-04T-2-01	0.8	15	PEBB			SAND		NO
MD-04T-2-02	0.9	30	SAND	SILT				NO
MD-04T-2-03	1.0	45	SAND	SILT	SHEL			NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
MC-041-2-04	1.0	60	SAND	SILT					NO
MC-041-2-05	1.1	75	SAND	SILT					NO
MC-041-2-06	1.3	90	SAND	SILT					NO
MC-041-2-07	1.5	105	SAND	SILT		CLAY			NO
MC-041-2-08	2.0	120	SILT			CLAY	SILT		NO
MC-041-2-09	2.5	135	SILT			CLAY	SILT		NO
MC-051-1-01	0.4	15	SAND	SILT		CLAY			NO
MC-051-1-02	0.7	30	SILT	CLAY		SAND	SILT		NO
MC-051-1-03	0.8	45	SAND	SILT					NO
MC-051-1-04	1.0	60	SAND	SILT	DETR				NO
MC-051-1-05	1.3	75	SILT			SAND	SILT	SHEL	NO
MC-051-1-06	1.4	90	SILT			CLAY	SILT		NO
MC-051-1-07	1.4	105	SILT			CLAY	SILT		NO
MC-051-1-08	1.3	120	SILT			CLAY	SILT		NO
MC-051-1-09	1.2	135	SAND	SILT	SHEL				NO
MC-051-1-10	1.1	150	SAND	SILT	SHEL				YES
MC-051-1-11	1.0	165	SAND	SILT	SHEL				NO
MC-051-1-12	1.0	180	SHEL						NO
MC-051-2-01	0.5	5	SAND	PEBB	COBB				NO
MC-051-2-02	1.0	10	SILT			SILT	SAND		NO
MC-051-2-03	1.2	15	SILT			SAND	SILT		NO
MC-051-2-04	1.3	30	SILT			SAND	SILT		NO
MC-051-2-05	1.3	45	SILT			SAND	SILT		NO
MC-051-2-06	1.3	60	SILT			SAND	SILT		NO
MC-051-2-07	1.3	75	SILT			SAND	SILT		NO
MC-051-2-08	1.3	90	SILT			SAND	SILT		NO
MC-051-2-09	1.4	105	SILT			SAND	SILT		NO
MC-051-2-10	1.5	120	SILT			SAND	SILT		NO
MC-051-2-11	1.5	135	SILT			SAND	SILT		NO
MC-051-2-12	1.6	150	SILT			SAND	SILT		NO
MC-051-2-13	1.8	165	SILT			SAND	SILT		NO
MC-051-2-14	2.1	180	SAND	SILT		SAND	SILT		NO
MC-051-2-15	2.3	195	SAND	SILT		SAND			NO
MC-051-2-16	2.5	210	SAND	SILT		SAND	SILT		NO
MC-061-1-01	0.8	15	SAND	SILT					NO
MC-061-1-02	0.8	30	SAND	SILT					NO
MC-061-1-03	0.9	45	SAND	SILT					NO
MC-061-1-04	1.0	60	SAND	SILT					NO
MC-061-1-05	1.0	75	SAND	SILT					NO
MC-061-1-06	1.3	90	SILT			CLAY	SILT		NO
MC-061-1-07	1.5	105	SILT			CLAY	SILT		NO
MC-061-1-08	1.8	120	SILT			CLAY	SILT		NO
MC-061-1-09	1.9	135	SILT			CLAY	SILT		NO
MC-061-1-10	2.0	150	SILT			CLAY	SILT		NO
MC-061-2-01	0.5	5	PEBB	SAND					NO
MC-061-2-02	1.0	10	SILT	SAND		CLAY			NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
CETA=CETACEAN

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
MC-061-2-03	1.2	15	SILT			CLAY	SILT		NO
MC-061-2-04	1.4	30	SILT			CLAY	SILT		NO
MC-071-1-01	0.5	15	SAND	SILT		CLAY			NO
MC-071-1-02	1.0	30	SILT			CLAY	SILT		NO
MC-071-1-03	1.0	45	SILT			CLAY	SILT	SHEL	NO
MC-071-1-04	1.3	60	SILT			CLAY	SILT	SHEL	NO
MC-071-1-05	1.3	75	SILT			CLAY	SILT	SHEL	NO
MC-071-1-06	1.3	90	SILT			CLAY	SILT	SHEL	NO
MC-071-2-01	0.5	5	PEBB	COBB					NO
MC-071-2-02	1.0	15	SILT			SAND	SILT		YES
MC-071-2-03	1.2	30	GRAV	SHEL	COBB				NO
MC-071-2-04	1.4	45	SHEL	PEBB	SAND				NO
MC-071-2-05	1.7	60	SHEL	COBB	SILT				NO
MC-071-2-06	1.8	75	SHEL	COBB	SILT				NO
MC-071-2-07	2.0	90	SILT			SILT	SAND		NO
MC-071-2-08	2.2	105	SILT	SHEL		SILT	SAND		NO
MC-071-2-09	2.3	120	SHEL	SILT		SILT	SAND		NO
MC-071-2-10	2.4	135	SAND			SAND	SILT		NO
MC-081-1-01	0.8	15	SAND	SILT					YES
MC-081-1-02	0.9	30	SAND	SILT					YES
MC-081-1-03	1.0	45	SAND	SILT					YES
MC-081-1-04	1.0	60	SAND	SILT					YES
MC-081-1-05	1.0	75	SAND	SILT					YES
MC-081-1-06	1.2	90	CLAY						YES
MC-081-1-07	1.3	105	SAND	SILT					YES
MC-081-1-08	1.3	120	SILT			CLAY	SILT		NO
MC-081-1-09	1.3	135	CLAY	SILT	SHEL				NO
MC-081-1-10	1.3	150	CLAY	SILT	SHEL				NO
MC-081-1-11	1.3	165	CLAY	SILT	SHEL				NO
MC-081-2-01	1.0	15	PEBB	SHEL					NO
MC-081-2-02	1.5	30	SILT			CLAY	SILT	SHEL	NO
MC-081-2-03	1.5	45	SILT			CLAY	SILT	SHEL	NO
MC-081-2-04	1.5	60	SILT			CLAY	SILT	SHEL	NO
MC-081-2-05	1.6	75	SILT			SILT	CLAY	SHEL	NO
MC-081-2-06	1.8	90	SILT			SILT	CLAY	SHEL	NO
MC-091-1-01	0.9	15	SAND	SILT					NO
MC-091-1-02	1.0	30	SAND	SILT					NO
MC-091-1-03	1.3	45	SAND	SILT		SILT	CLAY		NO
MC-091-1-04	1.4	60	SILT			SILT	CLAY		NO
MC-091-1-05	1.5	75	SILT			SILT	CLAY	SHEL	NO
MC-091-1-06	1.5	90	SILT			SILT	CLAY	SHEL	NO
MC-091-2-01	1.5	15	CLAY	SILT	SAND				NO
MC-091-2-02	1.5	30	CLAY	SILT	SAND				NO
MC-091-2-03	1.6	45	CLAY	SILT	SHEL				NO
MC-091-2-04	1.6	60	CLAY	SILT	OOZE				NO
MC-091-2-05	1.8	75	CLAY	SILT	SHEL				NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
WC-10T-1-01	1.0	15	SAND	SILT					NO
WC-10T-1-02	1.2	30	SILT	SAND					NO
WC-10T-1-03	1.5	45	CLAY	SILT	SAND				NO
WC-10T-1-04	1.5	60	CLAY	SILT					NO
WC-10T-1-05	1.5	75	CLAY	SILT					NO
WC-10T-1-06	1.7	90	CLAY	SILT					NO
SM-01R- -01	0.5	2	SAND	PEBB					NO
SM-01R- -02	1.0	5	SAND	PEBB					NO
SM-01R- -03	1.5	10	SAND	GRAV					NO
SM-01R- -04	2.0	20	SAND	GRAV					NO
SM-02R- -01	0.5	5	SAND	SILT	PEBB				NO
SM-02R- -02	0.8	15	SILT	SAND		CLAY	PEBB		NO
SM-02R- -03	0.9	30	CLAY	SILT					NO
SM-02R- -04	1.0	45	SILT			CLAY	PEBB	SHEL	NO
SM-02R- -05	1.0	60	SILT	PEBB	SHEL				NO
SM-02R- -06	1.0	75	SILT	SAND					NO
SM-02R- -07	1.0	90	SILT	SAND					NO
SM-02R- -08	1.0	105	SILT	SAND					NO
SM-02R- -09	1.0	120	SILT	SAND					NO
SM-02R- -10	1.0	135	SILT	SAND					NO
SM-02R- -11	1.0	150	SILT	SAND					NO
SM-02R- -12	1.1	165	SILT	SAND					NO
SM-02R- -13	1.2	180	SILT	SAND					NO
SM-02R- -14	1.2	195	SILT	SAND					NO
SM-02R- -15	1.2	210	SILT	SAND					NO
SM-02R- -16	1.2	225	SILT	SAND					NO
SM-02R- -17	1.3	240	SILT	SAND					NO
SM-02R- -18	1.3	255	SILT	SAND					NO
SM-02R- -19	1.3	270	SILT	SAND					NO
SM-02R- -20	1.4	285	SILT	SAND					NO
SM-02R- -21	1.3	300	SILT	SAND					NO
SM-02R- -22	1.4	315	SILT	SAND					NO
SM-02R- -23	1.5	330	SILT	SAND					NO
SM-02R- -24	1.5	345	SILT	SAND					NO
SM-02R- -25	1.5	360	SILT	SAND					NO
SM-02R- -26	1.5	375	SILT	SAND					NO
SM-02R- -27	1.5	390	SAND	SILT					NO
SM-02R- -28	1.6	405	SAND	SILT					NO
SM-02R- -29	1.6	420	SAND	SILT					NO
SM-02R- -30	1.6	435	SAND	SILT					NO
SM-02R- -31	1.8	450	SAND	SILT					NO
SM-02R- -32	2.0	465	SAND	SILT					NO
SM-03R- -01	1.0	15	CLAY	SHEL	SAND				NO
SM-03R- -02	1.0	30	CLAY	SHEL	SAND				NO
SM-03R- -03	1.1	45	CLAY	SHEL	SAND				NO
SM-03R- -04	1.0	60	CLAY	SHEL	SAND				NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
SM-03M- -05	1.1	75	SAND					NO
SM-03M- -06	1.3	90	SAND					NO
SM-03M- -07	1.3	105	SAND					NO
SM-03M- -08	1.4	120	SHEL	SAND				NO
SM-03M- -09	1.4	135	SHEL	SAND				NO
SM-03M- -10	1.4	150	SAND					NO
SM-03M- -11	1.5	165	SAND					NO
SM-03M- -12	1.5	180	SAND	SILT				NO
SM-03M- -13	1.6	195	SAND					NO
SM-03M- -14	1.5	210	SAND					NO
SM-03M- -15	1.8	225	SAND					NO
SM-03M- -16	2.0	240	SAND					NO
SM-03M- -17	2.5	255	SAND					NO
SM-03M- -18	2.5	270	SAND					NO
SM-04M- -01	0.5	15	CLAY	SAND				NO
SM-04M- -02	1.0	30	CLAY	SAND				NO
SM-04M- -03	1.5	45	CLAY	SAND				NO
SM-04M- -04	1.5	60	CLAY	SAND				NO
SM-04M- -05	1.5	75	CLAY	SAND				NO
SM-04M- -06	1.5	90	CLAY	SAND				NO
SM-04M- -07	1.7	105	SAND			CLAY		NO
SM-04M- -08	1.9	120	SAND			CLAY		NO
SM-04M- -09	2.1	135	SAND			CLAY		NO
SM-04M- -10	2.3	150	SAND			CLAY		NO
SM-05M- -01	0.5	15	CLAY					NO
SM-05M- -02	1.0	30	CLAY					NO
SM-05M- -03	1.0	45	SAND			CLAY		NO
SM-05M- -04	1.3	60	SAND					NO
SM-05M- -05	1.3	75	SAND	SILT		CLAY		NO
SM-05M- -06	1.5	90	CLAY					NO
SM-05M- -07	1.5	105	SAND	SILT				NO
SM-05M- -08	1.5	120	SAND	SILT				NO
SM-05M- -09	1.5	135	SAND	SILT				NO
SM-05M- -10	1.5	150	SAND	SILT				NO
SM-05M- -11	1.5	165	SAND	SILT				NO
SM-05M- -12	1.5	180	SAND	SILT				NO
SM-05M- -13	1.5	195	SAND	SILT				NO
SM-05M- -14	1.5	195	SAND	SILT				NO
SM-05M- -15	1.5	210	SAND	SILT				NO
SM-05M- -16	1.5	225	SAND	SILT				NO
SM-05M- -17	1.5	240	SAND	SILT				NO
SM-05M- -18	1.5	255	SAND	SILT				NO
SM-05M- -19	1.5	270	SAND	SILT				NO
SM-05M- -20	1.5	285	SAND	SILT				NO
SM-05M- -21	1.5	300	SAND	SILT				NO
SM-06M- -01	0.5	15	SAND	SHEL	COBB	CLAY		NO

*SEE FIGURE 4

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COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
SM-06R- -02	0.7	30	SAND	SHEL	COBB	CLAY		NO
SM-06R- -03	0.8	45	SAND	SHEL	COBB	CLAY		NO
SM-06R- -04	0.8	60	SAND	SHEL	COBB	CLAY		NO
SM-06R- -05	0.9	75	SAND	SHEL	COBB	CLAY		NO
SM-06R- -06	1.0	90	SAND	SHEL	COBB	CLAY		NO
SM-06R- -07	1.0	105	SAND	SHEL	COBB	CLAY		NO
SM-06R- -08	1.0	120	SAND	SHEL	COBB	CLAY		NO
SM-06R- -09	1.3	135	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -10	1.5	150	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -11	1.5	165	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -12	1.5	180	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -13	1.5	195	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -14	1.8	210	PEBB	SAND	SHEL	CLAY		NO
SM-06R- -15	1.8	225	SAND	SILT				NO
SM-06R- -16	1.8	240	SAND	SILT				NO
SM-06R- -17	1.8	255	SAND	SILT				NO
SM-06R- -18	1.8	270	SAND	SILT				NO
SM-06R- -19	1.8	285	SAND	SILT				NO
SM-06R- -20	1.8	300	SAND	SILT				NO
SM-07R- -01	0.5	15	SAND					NO
SM-07R- -02	0.8	30	SAND					NO
SM-07R- -03	0.8	45	SAND	SILT				NO
SM-07R- -04	0.8	60	SAND	SILT				NO
SM-07R- -05	0.8	75	SAND	SILT				NO
SM-07R- -06	0.8	90	SAND	SILT				NO
SM-07R- -07	0.8	105	SAND	SILT				NO
SM-07R- -08	0.8	120	SAND	SILT				NO
SM-07R- -09	0.9	135	SAND	SILT				NO
SM-07R- -10	0.9	150	SAND	SILT				NO
SM-07R- -11	0.9	165	SAND	SILT				NO
SM-07R- -12	0.9	180	SAND	SILT				NO
SM-07R- -13	1.0	195	SAND	SILT				NO
SM-07R- -14	1.1	210	SAND	SILT				NO
SM-07R- -15	1.1	225	SAND	SILT				NO
SM-07R- -16	1.1	240	SAND	SILT				NO
SM-07R- -17	1.1	255	SAND	SILT				NO
SM-07R- -18	1.3	270	SAND	SILT				NO
SM-07R- -19	1.4	285	SAND	SILT				NO
SM-07R- -20	1.5	300	SAND	SILT				NO
SM-08R- -01	0.5	15	SAND			CLAY		NO
SM-08R- -02	0.5	30	SAND			CLAY		NO
SM-08R- -03	0.6	45	SAND			CLAY		NO
SM-08R- -04	0.7	60	SAND			CLAY		NO
SM-08R- -05	0.7	75	SAND			CLAY		NO
SM-08R- -06	0.8	90	SAND			CLAY		NO
SM-08R- -07	1.0	105	SAND			CLAY		NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
CETA=CETACEANS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
SM-08R- -08	1.2	120	SAND			CLAY		NO
SM-08R- -09	1.2	135	SAND			CLAY		NO
SM-08R- -10	1.2	150	SAND			CLAY		NO
SM-08R- -11	1.2	165	SAND			CLAY		NO
SM-08R- -12	1.3	180	SAND			CLAY		NO
SM-08R- -13	1.3	195	SAND			CLAY		NO
SM-08R- -14	1.3	210	SAND			CLAY		NO
SM-08R- -15	1.3	225	SAND			CLAY		NO
SM-08R- -16	1.3	240	SAND			CLAY		NO
SM-08R- -17	1.3	255	SAND			CLAY		NO
SM-08R- -18	1.3	270	SAND			CLAY		NO
SM-08R- -19	1.3	285	SAND			CLAY		NO
SM-08R- -20	1.3	300	SAND			CLAY		NO
SM-09R- -01	1.3	15	SAND			CLAY		NO
SM-09R- -02	1.3	30	SAND			CLAY		NO
SM-09R- -03	1.4	45	SAND			CLAY		NO
SM-09R- -04	1.5	60	SAND			CLAY		NO
SM-09R- -05	1.6	75	SAND			CLAY		NO
SM-09R- -06	1.6	90	SAND			CLAY		NO
SM-09R- -07	1.8	105	SAND			CLAY		NO
SM-09R- -08	1.8	120	SAND			CLAY		NO
SM-09R- -09	1.9	135	SAND			CLAY		NO
SM-09R- -10	2.0	150	SAND			CLAY		NO
SM-10R- -01	0.5	15	CLAY	SHEL				NO
SM-10R- -02	1.0	30	CLAY	SHEL				NO
SM-10R- -03	1.5	45	CLAY	SHEL				NO
SM-10R- -04	2.0	60	CLAY	SHEL				NO
SM-10R- -05	2.0	75	CLAY	SHEL				NO
SM-10R- -06	2.0	90	CLAY	SHEL				NO
SM-10R- -07	2.0	105	CLAY	SHEL				NO
SM-10R- -08	2.0	120	CLAY	SHEL				NO
SM-01T-1-01	0.5	5	SAND	COBB	PEBB			NO
SM-01T-1-02	0.5	15	SAND	COBB	PEBB			NO
SM-01T-1-03	0.6	30	SAND			CLAY	PEBB	NO
SM-01T-1-04	0.7	45	SAND			SAND		NO
SM-01T-1-05	0.8	60	SAND			SAND	CLAY	NO
SM-01T-1-06	0.8	75	SAND			SAND		NO
SM-01T-1-07	0.9	90	SAND			SAND	SHEL	NO
SM-01T-1-08	0.9	105	SAND			SAND		NO
SM-01T-1-09	0.9	120	SAND			SAND		NO
SM-01T-1-10	1.0	135	SHEL	CLAY		SAND		NO
SM-01T-1-11	1.1	150	SHEL	SAND		CLAY		NO
SM-01T-1-12	1.1	165	SAND			SAND		NO
SM-01T-1-13	1.1	180	SAND			SAND		NO
SM-01T-1-14	1.3	195	SAND			SAND		NO
SM-01T-1-15	1.3	210	SAND			SAND		NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
SM-01T-1-16	1.3	235	SAND		SAND		NO
SM-01T-1-17	1.3	250	SAND		SAND		NO
SM-01T-1-18	1.4	265	SAND		SAND	SHEL	NO
SM-01T-1-19	1.4	280	SAND		SAND	SHEL	NO
SM-01T-1-20	1.4	295	SAND		SAND	SHEL	NO
SM-01T-2-01	0.5	15	CLAY				NO
SM-01T-2-02	0.6	30	CLAY				NO
SM-01T-2-03	0.6	45	CLAY	SAND			NO
SM-01T-2-04	0.6	60	CLAY				NO
SM-01T-2-05	0.8	75	SAND		CLAY		NO
SM-01T-2-06	0.8	90	SAND	SILT	CLAY		NO
SM-01T-2-07	1.0	105	SAND		CLAY		NO
SM-01T-2-08	1.0	120	SAND	SHEL	CLAY		NO
SM-01T-2-09	1.0	135	SAND	SHEL	CLAY		NO
SM-01T-2-10	1.0	150	SAND	SHEL	CLAY		NO
SM-01T-2-11	1.0	165	SAND				NO
SM-01T-2-12	1.0	180	SAND				NO
SM-01T-2-13	1.1	195	SAND				NO
SM-01T-2-14	1.1	210	SAND				NO
SM-01T-2-15	1.1	225	SAND				NO
SM-01T-2-16	1.1	240	SAND				NO
SM-01T-2-17	1.1	255	SAND				NO
SM-01T-2-18	1.1	270	SAND				NO
SM-01T-2-19	1.1	285	SAND				NO
SM-01T-2-20	1.5	300	SAND				NO
SM-02T-1-01	0.4	5	SAND	DETR			NO
SM-02T-1-02	0.5	15	SAND		SAND		NO
SM-02T-1-03	0.6	30	OOZE		OOZE		NO
SM-02T-1-04	0.7	45	SILT	SAND			NO
SM-02T-1-05	0.6	60	SILT	SAND	SILT	SAND	NO
SM-02T-1-06	0.6	75	SILT	SAND	SILT	SAND	NO
SM-02T-1-07	0.6	90	SAND		SAND		NO
SM-02T-1-08	0.6	105	SAND		SAND		NO
SM-02T-1-09	0.6	120	SAND		SAND		NO
SM-02T-1-10	0.8	135	SAND		SAND		NO
SM-02T-1-11	0.7	150	SAND		SAND		NO
SM-02T-1-12	0.9	165	SAND		SAND		NO
SM-02T-1-13	1.0	180	SAND		SAND		NO
SM-02T-1-14	1.0	195	SAND	SILT	SAND	SILT	NO
SM-02T-1-15	1.4	210	SAND	SILT	SAND	SILT	NO
SM-02T-1-16	2.5	225	OOZE				NO
SM-02T-2-01	0.5	15	SAND	COBB			NO
SM-02T-2-02	0.6	30	SAND	COBB			NO
SM-02T-2-03	0.6	45	SAND	COBB			NO
SM-02T-2-04	0.8	60	SAND	COBB			NO
SM-02T-2-05	0.8	75	SAND				NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
SM-02T-2-06	1.0	90	SAND			CLAY			NO
SM-02T-2-07	1.0	105	SAND			CLAY			NO
SM-02T-2-08	1.0	120	SAND						NO
SM-02T-2-09	1.0	135	SAND			CLAY			NO
SM-02T-2-10	1.0	150	CLAY	SHEL					NO
SM-02T-2-11	1.0	165	SAND						NO
SM-02T-2-12	1.0	180	SAND	SILT					NO
SM-02T-2-13	1.0	195	SAND	SILT					YES
SM-02T-2-14	1.0	210	SAND	SILT					NO
SM-02T-2-15	1.1	225	SAND	SILT					NO
SM-02T-2-16	1.5	240	SAND	SILT					NO
SM-02T-2-17	1.6	255	SAND	SILT					NO
SM-02T-2-18	1.6	270	SAND	SILT					NO
SM-02T-2-19	1.6	285	SAND	SILT					NO
SM-02T-2-20	1.6	300	SAND	SILT					NO
SM-03T-1-01	0.4	5	SAND			SAND			YES
SM-03T-1-02	0.4	15	SAND			SAND			YES
SM-03T-1-03	0.4	30	SAND			SAND			NO
SM-03T-1-04	0.6	45	SAND	SILT		SAND	SILT		NO
SM-03T-1-05	0.5	60	SAND	SILT		SAND	SILT		NO
SM-03T-1-06	0.5	75	SAND	SILT		SAND	SILT		NO
SM-03T-1-07	0.5	90	SAND	SILT		SAND	SILT		NO
SM-03T-1-08	0.5	105	SAND	SILT		SAND	SILT		NO
SM-03T-1-09	0.6	120	SAND	SILT		SAND	SILT		NO
SM-03T-1-10	0.6	135	SAND	SILT		SAND	SILT		NO
SM-03T-1-11	0.7	150	SAND	SILT		SAND	SILT		NO
SM-03T-1-12	0.8	165	SAND	SILT		SAND	SILT		NO
SM-03T-1-13	0.9	180	SAND	SILT		SAND	SILT		NO
SM-03T-1-14	1.5	195	SAND						NO
SM-03T-2-01	0.5	5	SAND	SILT		SAND	SILT		NO
SM-03T-2-02	0.8	15	SAND	SILT	GRAV				NO
SM-03T-2-03	0.8	30	SAND	SILT					NO
SM-03T-2-04	1.0	45	SAND	SILT	SHEL	SAND	SILT		NO
SM-03T-2-05	1.1	60	SAND	SILT	SHEL				NO
SM-03T-2-06	1.4	75	SAND	SILT	SHEL				NO
SM-03T-2-07	1.6	90	SAND	SILT	SHEL	SAND	SILT		NO
SM-03T-2-08	2.0	105	SAND	SILT					NO
SM-03T-2-09	2.5	120	SAND	SILT	SHEL	SAND	SILT		NO
SM-03T-3-01	0.8	15	PEBB						NO
SM-03T-3-02	1.0	30	PEBB	SHEL					NO
SM-03T-3-03	1.1	45	SAND	SHEL					NO
SM-03T-3-04	1.6	60	SAND						NO
SM-03T-3-05	1.6	75	SHEL						NO
SM-03T-3-06	2.0	90	SHEL						NO
SM-03T-4-01	0.5	5	SAND	SILT	PEBB				NO
SM-03T-4-02	0.8	15	SAND	SILT	PEBB				NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECUNDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY -- CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
SM-03T-4-03	0.8	30	SAND	SILT		SAND	SILT		NO
SM-03T-4-04	0.8	45	SILT	SAND		SAND	SILT		NO
SM-03T-4-05	0.9	60	SAND	SILT		SAND	SILT		NO
SM-03T-4-06	0.9	75	SAND	SILT		SAND	SILT		NO
SM-03T-4-07	1.1	90	SAND	SILT					NO
SM-03T-4-08	2.0	105	SAND	SILT					NO
SM-03T-4-09	2.0	120	SHEL						NO
SM-04T-1-01	0.5	5	PEBB	GRAV					NO
SM-04T-1-02	1.0	15	SAND	SILT	SHEL				NO
SM-04T-1-03	1.1	30	SAND	SILT					NO
SM-04T-1-04	1.2	45	SAND	SILT	SHEL				NO
SM-04T-1-05	1.4	60	SAND	SILT	SHEL	SAND	SILT		NO
SM-04T-1-06	1.8	75	SAND	SHEL					NO
SM-04T-1-07	2.5	90	SAND	SILT	PEBB				NO
SM-04T-2-01	0.5	5	PEBB	GRAV	SAND				NO
SM-04T-2-02	1.0	20	SILT	SAND	DETR				NO
SM-04T-2-03	1.5	25	SILT	SAND	SHEL				NO
SM-04T-2-04	2.0	30	SHEL	DETR	SILT				NO
SM-04T-3-01	0.5	5	SAND	PEBB	GRAV				NO
SM-04T-3-02	1.0	15	SHEL	SILT	SAND				YES
SM-04T-3-03	1.2	30	SILT	SAND					NO
SM-04T-3-04	1.6	45	SILT	SAND	SHEL				NO
SM-04T-3-05	2.0	60	SHEL						NO
SM-04T-4-01	0.5	5	PEBB	GRAV	SAND				NO
SM-04T-4-02	1.0	10	PEBB	GRAV	SAND	SAND	SILT		NO
SM-04T-4-03	1.5	20	SHEL	SAND	SILT				NO
SM-04T-4-04	2.0	35	SHEL						NO
SM-04T-4-05	2.5	45	SHEL						NO
SM-05T-1-01	0.5	5	COBB	GRAV	SAND				NO
SM-05T-1-02	1.0	15	SAND	SILT		SAND	SILT		NO
SM-05T-1-03	1.2	30	SAND	SILT		SAND	SILT		NO
SM-05T-1-04	1.5	45	SAND	SILT	SHEL	SAND	SILT		NO
SM-05T-1-05	1.8	60	SHEL	SAND	SILT				NO
SM-05T-1-06	2.0	75	SAND	SILT	SHEL	SAND	SILT		NO
SM-05T-2-01	0.5	5	SAND	GRAV	PEBB				NO
SM-05T-2-02	1.0	10	SAND	PEBB					NO
SM-05T-2-03	1.5	15	SAND	PEBB	SHEL				NO
SM-05T-2-04	2.0	20	SAND	SHEL					NO
SM-05T-2-05	2.5	30	SHEL	DETR					NO
SM-05T-3-01	0.5	8	SAND	PEBB	GRAV				NO
SM-05T-3-02	1.0	20	SAND	SILT	SHEL				NO
SM-05T-3-03	1.5	30	SAND			SAND	SILT	SHEL	NO
SM-05T-3-04	2.0	40	SAND	SILT	SHEL				NO
SM-06T-1-01	0.5	10	PEBB	SAND	SHEL				NO
SM-06T-1-02	1.0	30	SHEL	PEBB	SAND				NO
SM-06T-1-03	1.5	40	SAND	SILT					NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
SM-061-1-04	2.0	50	SHEL	SAND	SILT				NO
SM-06T-1-05	2.5	60	SAND	SILT	SHEL				NO
SM-06T-2-01	0.5	5	PEBB	GRAV	SAND				NO
SM-06T-2-02	1.0	15	SAND	SILT	SHEL				NO
SM-061-2-03	1.2	30	SILT	SAND		SILT	SAND		NO
SM-061-2-04	1.7	45	SILT	SAND					NO
SM-06T-2-05	2.0	55	SILT	SAND					NO
SM-071-1-01	0.5	7	GRAV	PEBB	SAND				NO
SM-071-1-02	1.0	15	SHEL	PEBB	SAND				NO
SM-071-1-03	1.5	18	PEBB	SHEL	SAND				NO
SM-071-1-04	2.0	20	SHEL	SILT	SAND				NO
SM-071-2-01	0.5	8	SAND	SILT	SHEL				NO
SM-071-2-02	1.0	15	SILT	SAND	SHEL				NO
SM-07T-2-03	1.5	30	SHEL	SAND	SILT				NO
SM-07T-2-04	2.0	38	SILT	OOZE					NO
SM-071-3-01	0.5	8	SHEL						NO
SM-071-3-02	1.0	15	COBB	SHEL					NO
SM-071-3-03	1.5	30	SAND	SILT	SHEL				NO
SM-07T-3-04	2.0	35	SHEL	SAND	SILT				NO
SM-081-1-01	0.5	5	SILT	SAND					NO
SM-081-1-02	1.0	15	SILT	PEBB					NO
SM-081-1-03	1.0	30	SILT	OOZE					NO
SM-081-1-04	0.5	45	SILT	OOZE					NO
SM-081-1-05	0.4	60	SILT	SAND					NO
SM-08T-1-06	0.4	75	SILT	SAND					NO
SM-081-1-07	0.4	90	SILT	SAND					NO
GC-01R- -01	0.6	10	COBB	SAND					NO
GC-01R- -02	0.7	15	SAND	SILT					NO
GC-01R- -03	0.8	30	SAND	SILT					NO
GC-01R- -04	0.8	45	SAND	SILT					NO
GC-01R- -05	0.9	60	SAND	SILT					NO
GC-02R- -01	0.5	8	SAND						NO
GC-02R- -02	0.9	15	SAND	SILT					NO
GC-02R- -03	1.2	30	SILT						NO
GC-02R- -04	1.3	45	SILT	CLAY					NO
GC-02R- -05	1.3	60	SILT	CLAY					NO
GC-03R- -01	0.4	15	SAND						NO
GC-03R- -02	0.5	30	SAND						NO
GC-03R- -03	0.7	45	SAND						NO
GC-03R- -04	0.9	60	SAND						NO
GC-04R- -01	0.5	5	SAND	SILT					NO
GC-04R- -02	1.0	7	SAND	SILT	SHEL				NO
GC-04R- -03	1.5	12	SILT	SAND					NO
GC-04R- -04	1.8	15	SILT	SAND	DETR				NO
GC-04R- -05	2.5	30	SILT	SAND		CLAY			NO
GC-05R- -01	0.7	10	SAND						NO

*SEE FIGURES 4,2

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

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GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER	VEGETATED?
GC-05R- -02	0.8	15	SAND				NO
GC-05R- -03	1.0	30	SAND	SILT			NO
GC-05R- -04	1.4	45	CLAY	SILT	SAND		NO
GC-05R- -05	1.8	60	SILT	SAND			NO
GC-06R- -01	0.5	10	SAND				NO
GC-06R- -02	0.8	15	SAND	SILT			NO
GC-06R- -03	0.9	30	SAND	SILT			NO
GC-06R- -04	1.2	45	SAND	SILT			NO
GC-06R- -05	1.2	60	SAND	SILT			NO
GC-07R- -01	0.5	10	COBB				NO
GC-07R- -02	0.8	15	SAND				NO
GC-07R- -03	0.9	30	SAND				NO
GC-07R- -04	1.0	45	SAND				NO
GC-07R- -05	1.1	60	SAND				NO
GC-08R- -01	0.5	5	SAND	SILT			NO
GC-08R- -02	0.5	15	SAND	SILT			NO
GC-08R- -03	0.7	30	SAND	SILT			NO
GC-08R- -04	0.8	45	SAND	SILT			NO
GC-08R- -05	1.0	60	SAND	SILT			NO
GC-09R- -01	0.6	10	SAND				NO
GC-09R- -02	0.8	15	SILT	SAND			NO
GC-09R- -03	1.0	30	SAND	SILT			NO
GC-09R- -04	1.2	45	SAND	SILT			NO
GC-09R- -05	1.5	60	SILT				NO
GC-10R- -01	0.6	10	GRAV				NO
GC-10R- -02	0.8	15	SAND	SILT			NO
GC-10R- -03	1.0	30	SAND	SILT			NO
GC-10R- -04	1.0	45	SAND	SILT			NO
GC-10R- -05	1.0	60	SAND	SILT			NO
GC-01T-1-01	0.6	5	GRAV				NO
GC-01T-1-02	1.6	15	SILT	DETR			NO
GC-01T-1-03	1.9	30	DETR	SILT			NO
GC-01T-1-04	1.9	45	SILT				NO
GC-01T-1-05	1.4	60	SILT				NO
GC-01T-2-01	0.5	5	GRAV				NO
GC-01T-2-02	1.3	15	GRAV	SAND			NO
GC-01T-2-03	1.5	30	SILT	DETR			NO
GC-01T-2-04	1.5	45	SILT	DETR			NO
GC-01T-2-05	1.4	60	SILT	DETR			NO
GC-01T-3-01	0.7	10	GRAV	SAND	SILT		NO
GC-01T-3-02	0.9	15	SILT	SAND			NO
GC-01T-3-03	1.0	30	GRAV				NO
GC-01T-3-04	1.6	45	DETR	SILT	SAND		NO
GC-01T-3-05	1.5	60	SILT				NO
AP-01R- -01	0.5	10	SAND	PEBB			NO
AP-01R- -02	0.5	15	COBB				NO

*SEE FIGURES 2-3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
AP-01R- -03	0.6	30	COBB				NO
AP-01R- -04	0.8	45	SAND				NO
AP-01R- -05	0.8	60	SAND				NO
AP-02R- -01	0.5	10	DETR	SHEL			NO
AP-02R- -02	0.5	15	DETR	SHEL	COBB		NO
AP-02R- -03	0.6	30	DETR				NO
AP-02R- -04	0.8	45	DETR				NO
AP-02R- -05	0.9	60	SAND		CLAY		NO
AP-03R- -01	0.4	10	SAND	COBB			NO
AP-03R- -02	0.5	15	SAND				YES
AP-03R- -03	0.6	30	SAND				YES
AP-03R- -04	0.7	45	SAND				YES
AP-03R- -05	0.7	60	SAND				YES
AP-03R- -06	0.7	75	SAND				YES
AP-03R- -07	0.7	90	SAND				YES
AP-03R- -08	0.8	105	SAND				YES
AP-03R- -09	0.8	120	SAND				YES
AP-03R- -10	0.8	135	SAND				YES
AP-03R- -11	0.9	150	SAND				NO
AP-03R- -12	0.9	165	SAND				NO
AP-04R- -01	0.5	5	SAND				NO
AP-04R- -02	0.6	15	SAND		CLAY		NO
AP-04R- -03	0.7	30	SAND		CLAY		NO
AP-04R- -04	0.8	45	SAND				NO
AP-04R- -05	0.8	60	SAND				NO
AP-05R- -01	0.5	5	SAND	COBB			NO
AP-05R- -02	0.7	15	SAND				YES
AP-05R- -03	0.8	30	SAND	PEBB			NO
AP-05R- -04	0.8	45	SAND	PEBB			NO
AP-05R- -05	1.0	60	SAND	SILT	SHEL		NO
AP-06R- -01	0.6	10	SAND				NO
AP-06R- -02	0.8	15	SAND				NO
AP-06R- -03	1.0	30	SAND				NO
AP-06R- -04	1.1	45	SAND	SHEL			NO
AP-06R- -05	1.3	60	SAND	SILT			NO
AP-07R- -01	0.5	10	SAND				NO
AP-07R- -02	1.0	15	SAND				NO
AP-07R- -03	1.3	30	SAND				NO
AP-07R- -04	1.4	45	SAND				NO
AP-07R- -05	1.6	60	SAND				NO
AP-08R- -01	0.5	5	COBB				NO
AP-08R- -02	0.8	15	COBB				NO
AP-08R- -03	1.5	30	COBB				NO
AP-08R- -04	1.7	45	SAND				NO
AP-08R- -05	1.8	60	SAND	SILT			NO
AP-09R- -01	0.5	5	SAND	GRAV			NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER	VEGETATED?
AP-09R- -02	0.7	15	PEBB	SAND	SHEL		NO
AP-09R- -03	0.9	30	SAND	PEBB	SHEL		NO
AP-09R- -04	1.2	45	SAND	SILT			NO
AP-09R- -05	1.3	60	SAND				NO
AP-10R- -01	0.5	5	SAND	PEBB			NO
AP-10R- -02	0.6	15	SAND				NO
AP-10R- -03	1.0	30	SAND				NO
AP-10R- -04	1.0	45	SAND				NO
AP-10R- -05	1.1	60	SAND				NO
AP-11R- -01	1.0	15	SAND				NO
AP-11R- -02	1.2	30	COBB	SAND			NO
AP-11R- -03	1.4	45	SAND				NO
AP-11R- -04	1.6	60	SAND	SILT			NO
AP-12R- -01	0.5	1	SAND	PEBB			NO
AP-12R- -02	0.8	15	SAND	PEBB			NO
AP-12R- -03	0.8	30	SAND				NO
AP-12R- -04	1.1	45	SAND				NO
AP-12R- -05	1.1	60	SAND	SILT	SHEL		NO
AP-13R- -01	0.5	10	COBB				NO
AP-13R- -02	0.7	15	COBB				NO
AP-13R- -03	1.3	30	COBB				NO
AP-13R- -04	1.5	45	SAND	SILT			NO
AP-13R- -05	1.7	60	SAND	SILT	GRAV		NO
AP-14R- -01	0.5	7	GRAV				NO
AP-14R- -02	1.2	15	SAND	GRAV			NO
AP-14R- -03	1.7	30	SAND	SILT			NO
AP-14R- -04	1.7	45	SAND	SILT	SHEL		NO
AP-14R- -05	1.7	60	SILT	SAND	SHEL		NO
AP-15R- -01	0.5	8	SAND	PEBB			NO
AP-15R- -02	1.0	15	SAND	PEBB			NO
AP-15R- -03	1.5	20	SAND	PEBB			NO
AP-15R- -04	1.9	30	SILT	SAND			NO
AP-15R- -05	2.1	45	SILT	CLAY			NO
AP-15R- -06	2.1	60	SILT	CLAY	SHEL		NO
AG-01T-1-01	0.5	8	SAND				NO
AG-01T-1-02	0.6	15	SAND				NO
AG-01T-1-03	0.8	30	SAND				NO
AG-01T-1-04	1.1	45	SAND				NO
AG-01T-1-05	1.4	60	SAND				NO
AG-01T-2-01	0.5	8	SAND				NO
AG-01T-2-02	0.5	15	SAND				NO
AG-01T-2-03	0.7	30	SILT	SAND			NO
AG-01T-2-04	0.9	45	SILT				NO
AG-01T-2-05	1.0	60	SILT				NO
AG-02T-1-01	0.5	1	DETR				NO
AG-02T-1-02	0.8	15	DETR				NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
AG-02T-1-03	0.9	30	DETR						NO
AG-02T-1-04	1.0	45	DETR						NO
AG-02T-1-05	1.0	60	DETR						NO
AG-02T-2-01	0.5	1	SAND	DETR					NO
AG-02T-2-02	0.8	15	SILT						NO
AG-02T-2-03	0.9	30	SILT						NO
AG-02T-2-04	0.9	45	SILT						NO
AG-02T-2-05	1.0	60	SILT						NO
AG-03T-1-01	0.7	1	SAND	SILT					NO
AG-03T-1-02	0.9	15	SILT	SAND					NO
AG-03T-1-03	1.0	30	SILT	SAND					NO
AG-03T-1-04	1.1	45	SILT	SAND	CLAY				NO
AG-03T-1-05	1.1	60	SILT						NO
AG-03T-2-01	0.5	5	SAND						NO
AG-03T-2-02	0.9	15	SILT						NO
AG-03T-2-03	1.0	30	SILT						NO
AG-03T-2-04	1.0	45	SILT						NO
AG-03T-2-05	1.1	60	SILT						NO
PC-01T-1-01	0.5	5	SAND						NO
PC-01T-1-02	0.7	15	SAND	SILT					NO
PC-01T-1-03	0.9	30	SAND	SILT					NO
PC-01T-1-04	1.0	45	SAND	SILT					NO
PC-01T-1-05	1.1	60	SAND	SILT					NO
PC-01T-2-01	0.5	5	SAND	DETR					NO
PC-01T-2-02	0.6	15	SILT	SAND					NO
PC-01T-2-03	0.7	30	SILT						NO
PC-01T-2-04	0.8	45	SILT	DETR					NO
PC-01T-2-05	0.8	60	SILT						NO
PC-02T-1-01	0.7	5	SAND						NO
PC-02T-1-02	1.0	15	SAND						NO
PC-02T-1-03	1.2	30	SAND						NO
PC-02T-1-04	1.2	45	SILT						NO
PC-02T-1-05	1.2	60	SILT						NO
PC-02T-2-01	0.6	5	SAND	SILT					NO
PC-02T-2-02	0.7	15	SILT	SAND					NO
PC-02T-2-03	0.8	30	SILT	SAND					NO
PC-02T-2-04	0.8	45	SAND	SILT					NO
PC-02T-2-05	0.9	60	SAND	SILT					YES
PC-02T-2-06	0.9	75	SAND	SILT					NO
PC-02T-2-07	1.0	90	SILT	SAND					NO
PC-02T-3-01	0.5	5	SAND						NO
PC-02T-3-02	0.9	15	SILT	SAND					NO
PC-02T-3-03	1.0	30	SILT						NO
PC-02T-3-04	1.1	45	SILT						NO
PC-02T-3-05	1.1	60	SILT						NO
MC-01R- -01	0.5	10	GRAV	SAND	SHEL				NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER		VEGETATED?
MC-01R- -02	0.7	15	DETR	COBB	SAND			NO
MC-01R- -03	0.9	30	SAND	SHEL				NO
MC-01R- -04	1.0	45	SAND					YES
MC-01R- -05	1.0	60	SAND					YES
MC-01R- -06	1.0	75	SAND					YES
MC-01R- -07	1.0	90	SAND					NO
MC-01R- -08	1.0	105	SAND					NO
MC-02R- -01	0.5	10	COBB	CLAY				NO
MC-02R- -02	0.6	15	COBB	SAND				NO
MC-02R- -03	0.7	30	SAND	COBB		CLAY		NO
MC-02R- -04	0.7	45	SAND					YES
MC-02R- -05	0.9	60	SAND	SILT				YES
MC-02R- -06	0.9	75	SAND					YES
MC-02R- -07	1.0	90	SAND					NO
MC-02R- -08	1.0	105	SAND	COBB	SHEL			NO
MC-03R- -01	0.5	10	DETR	SILT				NO
MC-03R- -02	0.5	15	SILT	SAND				NO
MC-03R- -03	0.6	30	SILT			SILT	SAND	NO
MC-03R- -04	0.6	45	SAND	SILT				YES
MC-03R- -05	0.6	60	SAND	SILT				YES
MC-03R- -06	0.6	75	SAND	SILT				YES
MC-03R- -07	0.7	90	SAND	SILT				YES
MC-03R- -08	0.7	105	SAND	SILT				YES
MC-03R- -09	0.9	120	SAND	SILT				YES
MC-03R- -10	0.8	135	SAND	SILT				YES
MC-03R- -11	0.9	150	SAND	SILT				NO
MC-03R- -12	1.0	165	SAND	SILT				NO
MC-04R- -01	0.5	5	SAND					NO
MC-04R- -02	0.6	15	SAND					YES
MC-04R- -03	0.7	30	SAND					YES
MC-04R- -04	0.7	45	SAND					YES
MC-04R- -05	0.8	60	SAND					NO
MC-04R- -06	0.8	75	SAND					NO
MC-05R- -01	0.5	5	COBB	GRAV				NO
MC-05R- -02	0.7	15	COBB	SAND				NO
MC-05R- -03	0.8	30	COBB					NO
MC-05R- -04	1.0	45	COBB					NO
MC-05R- -05	1.0	60	COBB					NO
MC-06R- -01	0.7	10	PEBB					NO
MC-06R- -02	1.0	15	SAND	SILT	SHEL			NO
MC-06R- -03	1.0	30	SAND	SILT				YES
MC-06R- -04	1.0	45	SAND	SILT				YES
MC-06R- -05	1.1	60	SAND	SILT				YES
MC-06R- -06	1.1	75	SAND	SILT				YES
MC-06R- -07	1.1	90	SAND	SILT				YES
MC-07R- -01	0.5	10	COBB	SAND				YES

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
MC-07R- -02	0.8	15	COBB	SAND			YES
MC-07R- -03	1.1	30	SAND	PEBB	SILT		YES
MC-07R- -04	1.3	45	PEBB	SAND	SILT		YES
MC-07R- -05	1.4	60	SAND	SILT			YES
MC-08R- -01	0.5	5	PEBB				YES
MC-08R- -02	0.7	15	PEBB	SAND			YES
MC-08R- -03	1.0	30	SAND				YES
MC-08R- -04	1.3	45	SAND	COBB			YES
MC-08R- -05	1.4	60	COBB				YES
MC-09R- -01	0.4	6	COBB				YES
MC-09R- -02	0.9	15	COBB	SAND			YES
MC-09R- -03	1.2	30	COBB	SAND			YES
MC-09R- -04	1.3	45	COBB				YES
MC-09R- -05	1.7	60	COBB				YES
MC-10R- -01	0.5	5	COBB				YES
MC-10R- -02	0.6	15	COBB				YES
MC-10R- -03	1.5	30	COBB				YES
MC-01T-1-01	0.5	3	SAND				NO
MC-01T-1-02	1.1	15	SAND	SILT			YES
MC-01T-1-03	1.9	30	SAND	SILT			NO
MC-01T-1-04	2.2	45	SILT				NO
MC-01T-1-05	2.2	60	SILT				NO
MC-01T-2-01	0.5	5	DETR	SAND			YES
MC-01T-2-02	0.9	15	SILT				YES
MC-01T-2-03	1.1	30	SILT				NO
MC-01T-2-04	1.1	45	SILT				NO
MC-01T-2-05	1.2	60	SILT				NO
MC-01T-3-01	0.5	5	SAND	GRAV			NO
MC-01T-3-02	0.7	15	SAND	SILT			YES
MC-01T-3-03	0.9	30	SAND	SILT			YES
MC-01T-3-04	1.1	45	SAND	SILT			NO
MC-01T-3-05	1.3	60	SAND	SILT			NO
MC-02T-1-01	0.5	5	DETR	SILT	SAND		NO
MC-02T-1-02	0.8	15	DETR	SILT	SAND		YES
MC-02T-1-03	1.0	30	SILT				NO
MC-02T-1-04	1.1	45	SILT				NO
MC-02T-1-05	1.2	60	SILT	SHEL			NO
MC-02T-2-01	0.5	5	SILT	SAND			NO
MC-02T-2-02	0.7	15	SILT	SAND			YES
MC-02T-2-03	0.9	30	SILT	SAND			NO
MC-02T-2-04	1.1	45	SILT	SAND			NO
MC-02T-2-05	1.3	60	SILT				NO
MC-03T-1-01	0.5	5	SILT	SAND			YES
MC-03T-1-02	0.7	15	SILT	SAND			YES
MC-03T-1-03	1.7	30	SILT	SAND			NO
MC-03T-1-04	2.8	45	SILT	SAND			NO

*SEE FIGURE 3

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER	VEGETATED?
MC-031-2-01	0.5	5	DETR	SILT	SAND		YES
MC-031-2-02	0.9	15	DETR	SILT	SAND		NO
MC-031-2-03	1.0	30	SILT				NO
MC-031-2-04	1.1	45	SILT				NO
MC-031-2-05	1.5	60	SILT				NO
MC-041-1-01	0.6	5	SAND	SILT			NO
MC-041-1-02	1.4	15	SAND	SILT			NO
MC-041-1-03	1.1	30	SILT				NO
MC-041-1-04	1.1	45	SILT				NO
MC-041-1-05	1.2	60	SILT				NO
MC-01R- -01	0.5	10	DETR				NO
MC-01R- -02	1.3	15	SAND	DETR		CLAY	NO
MC-01R- -03	1.3	30	SAND				NO
MC-01R- -04	1.4	45	PEBB				NO
MC-01R- -05	1.5	60	SAND				NO
MC-02R- -01	0.5	15	SAND	PEBB			NO
MC-02R- -02	1.1	30	SAND	PEBB			NO
MC-02R- -03	1.4	45	SAND				NO
MC-02R- -04	1.4	60	SAND				NO
MC-03R- -01	0.5	10	COBB	SAND	PEBB		NO
MC-03R- -02	0.7	15	PEBB				NO
MC-03R- -03	0.9	30	SAND			CLAY	NO
MC-03R- -04	1.3	45	SAND				NO
MC-03R- -05	1.5	60	CLAY				NO
MC-04R- -01	0.5	10	SAND	PEBB			NO
MC-04R- -02	0.6	15	COBB	SHEL	SAND		NO
MC-04R- -03	1.1	30	COBB	PEBB	CLAY		NO
MC-04R- -04	2.1	45	SAND			CLAY	NO
MC-04R- -05	2.1	60	SAND	PEBB			NO
MC-05R- -01	0.4	10	SAND				NO
MC-05R- -02	1.0	15	SAND				NO
MC-05R- -03	1.2	30	SAND			CLAY	NO
MC-05R- -04	1.2	45	SAND			CLAY	NO
MC-05R- -05	1.3	60	SAND			CLAY	NO
MC-06R- -01	0.9	5	CLAY	COBB			NO
MC-06R- -02	1.2	15	SAND			CLAY	NO
MC-06R- -03	1.3	30	SAND			CLAY	NO
MC-06R- -04	1.3	45	SAND	COBB		CLAY	NO
MC-06R- -05	1.3	60	SHEL			SAND	NO
MC-07R- -01	0.5	10	COBB				NO
MC-07R- -02	0.8	15	COBB				NO
MC-07R- -03	1.0	30	SAND	PEBB			NO
MC-07R- -04	1.3	45	SAND	COBB			NO
MC-07R- -05	1.4	60	COBB	COBB			NO
MC-08R- -01	0.4	15	PEBB				NO
MC-08R- -02	0.9	30	COBB				NO

*SEE FIGURES 3-4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
NO-08R- -03	1.3	45	SAND			CLAY			NO
NO-08R- -04	1.5	60	SAND	SHEL					NO
NO-09R- -01	0.5	5	COBB						NO
NO-09R- -02	0.8	15	COBB						NO
NO-09R- -03	1.4	30	SHEL						NO
NO-09R- -04	1.7	45	SHEL	CLAY					NO
NO-09R- -05	0.0	60	COBB	CLAY					NO
NO-10R- -01	0.5	8	SAND	PEBB	COBB				NO
NO-10R- -02	1.2	15	SAND	SHEL	PEBB				NO
NO-10R- -03	1.6	30	SAND			CLAY			NO
NO-10R- -04	1.7	45	SAND	COBB		CLAY			NO
NO-10R- -05	1.6	60	SAND			CLAY			NO
NO-01T-1-01	0.7	2	SILT	CLAY	DETR				YES
NO-01T-1-02	1.0	15	SILT						NO
NO-01T-1-03	1.1	30	SILT						NO
NO-01T-1-04	1.1	45	SILT						NO
NO-01T-1-05	1.1	60	SILT						NO
NO-01T-2-01	0.7	2	SHEL						NO
NO-01T-2-02	1.0	15	SILT	SAND					NO
NO-01T-2-03	1.1	30	SAND	SILT					NO
NO-01T-2-04	1.2	45	SAND	SILT					NO
NO-01T-2-05	1.3	60	SAND	SILT					NO
NO-01T-3-01	0.6	1	SAND						NO
NO-01T-3-02	1.2	15	SILT	SAND					YES
NO-01T-3-03	1.6	30	SILT	CLAY					NO
NO-01T-3-04	1.8	45	SILT						NO
NO-01T-4-01	0.5	8	SAND	PEBB					NO
NO-01T-4-02	1.3	15	SAND						YES
NO-01T-4-03	1.3	30	SILT	SAND	CLAY				YES
NO-01T-4-04	1.4	45	SILT	CLAY					YES
NO-01T-4-05	1.3	60	SILT	CLAY					YES
NO-02T-1-01	1.0	15	SAND						NO
NO-02T-1-02	1.2	30	SAND						NO
NO-02T-1-03	1.2	45	SAND						NO
NO-02T-1-04	1.0	60	SAND						NO
NO-02T-2-01	0.7	10	SAND						NO
NO-02T-2-02	1.2	15	SAND						NO
NO-02T-2-03	1.6	30	SAND						NO
NO-02T-2-04	1.7	45	SAND						NO
NO-02T-2-05	1.8	60	SAND						NO
NO-03T-1-01	0.6	5	SILT						YES
NO-03T-1-02	0.9	15	SILT						YES
NO-03T-1-03	1.5	30	CLAY	SILT	SHEL				NO
NO-03T-1-04	1.6	45	SILT			CLAY	SILT	CLAY	NO
NO-03T-2-01	0.7	5	SAND	PEBB					NO
NO-03T-2-02	1.3	15	SAND	SILT					NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER		VEGETATED?
NG-031-2-03	1.5	30	SAND	SILT			NO
NG-031-2-04	2.1	45	SILT	SAND			NO
NG-04T-1-01	0.5	10	SAND	SILT			NO
NG-04T-1-02	0.8	15	SAND	SILT			NO
NG-04T-1-03	0.9	30	SAND	SILT			NO
NG-04T-1-04	1.1	45	SAND	SILT			NO
NG-041-1-05	2.1	60	CLAY	SILT			NO
NG-04T-2-01	0.5	5	SAND	GRAV			NO
NG-041-2-02	1.0	15	SAND	SILT			NO
NG-041-2-03	1.0	30	SAND	SILT			NO
NG-04T-2-04	1.2	45	SAND	SILT			NO
NG-04T-2-05	1.3	60	SAND	SILT			NO
NG-05T-1-01	0.5	5	SAND	SILT	PEBB		YES
NG-05T-1-02	0.8	15	SAND	SILT			NO
NG-05T-1-03	1.1	30	SAND	SILT			NO
NG-05T-1-04	1.4	45	SAND	SILT			NO
NG-05T-1-05	1.8	60	SAND	SILT			NO
NG-05T-2-01	0.5	5	SILT	DETR			NO
NG-05T-2-02	0.7	15	SILT	DETR			NO
NG-05T-2-03	1.0	30	CLAY	SILT	DETR		NO
NG-05T-2-04	1.2	45	CLAY	SILT			NO
NG-05T-2-05	1.2	60	CLAY	SILT			NO
NG-06T-1-01	0.3	15	SILT	DETR			YES
NG-06T-1-02	0.5	30	SILT	DETR			YES
NG-06T-1-03	0.7	45	SILT	DETR			NO
NG-06T-1-04	0.9	60	SILT	DETR			NO
NG-06T-2-01	0.4	8	SAND	SILT	PEBB		YES
NG-06T-2-02	0.7	15	SAND	SILT			YES
NG-06T-2-03	1.4	30	CLAY	SILT			YES
NG-06T-2-04	1.8	45	CLAY	SILT			NO
NG-06T-2-05	1.9	60	CLAY	SILT			NO
NG-06T-3-01	0.5	15	CLAY	SILT			YES
NG-06T-3-02	0.5	30	CLAY	SILT			YES
NG-06T-3-03	0.7	45	CLAY	SILT			YES
NG-06T-3-04	0.6	60	CLAY	SILT			YES
YG-01T-1-01	0.5	10	COBB	SAND			NO
YG-01T-1-02	0.8	15	PEBB	SAND			NO
YG-01T-1-03	0.8	30	COBB	SAND			NO
YG-01T-1-04	0.9	45	COBB	SHEL	SAND		NO
YG-01T-1-05	1.0	60	SAND				NO
YG-01T-2-01	0.5	1	SAND	SILT	SHEL		NO
YG-01T-2-02	0.6	15	SILT	SAND			NO
YG-01T-2-03	0.6	30	SILT	SAND			NO
YG-01T-2-04	0.6	45	SILT	SAND			NO
YG-01T-2-05	0.7	60	SILT	SAND			NO
YG-02T-1-01	0.5	3	SILT	SAND			NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER	VEGETATED?
YO-02T-1-02	1.0	15	SILT	SAND	SHEL		NO
YO-02T-1-03	2.5	30	SILT	CLAY	SHEL		NO
YO-02T-1-04	2.0	22	SILT	CLAY	SHEL		NO
YO-02T-1-05	1.5	18	SILT	SAND	SHEL		NO
YO-02T-2-01	0.5	5	SHEL	SAND	CLAY		NO
YO-02T-2-02	1.2	15	SHEL				NO
YO-02T-2-03	1.5	27	SHEL	SAND	SILT		NO
YO-02T-2-04	2.0	30	SILT	SHEL			NO
YO-02T-2-05	2.3	45	SILT				NO
YO-02T-2-06	2.3	60	SILT	SHEL			NO
YO-02T-3-01	0.6	1	SILT	SAND			YES
YO-02T-3-02	1.2	15	SHEL	SILT			NO
YO-02T-3-03	1.7	30	SILT	SHEL			NO
YO-02T-3-04	1.7	45	SILT	SHEL			NO
YO-02T-3-05	1.8	60	SILT				NO
YO-02T-4-01	0.5	5	SAND	SHEL			NO
YO-02T-4-02	1.0	10	SAND	SILT	SHEL		NO
YO-02T-4-03	1.5	25	SHEL				NO
YO-02T-4-04	2.0	40	SHEL	SILT			NO
YO-02T-4-05	2.5	60	SHEL				NO
YO-03T-1-01	0.5	10	SAND				NO
YO-03T-1-02	0.8	15	DETR	SILT	SAND		NO
YO-03T-1-03	1.5	20	DETR	SILT	CLAY		NO
YO-03T-1-04	2.0	25	SILT	CLAY	DETR		NO
YO-03T-2-01	0.5	10	SAND				NO
YO-03T-2-02	0.6	15	SAND				NO
YO-03T-2-03	0.8	30	SAND				NO
YO-03T-2-04	1.0	45	SAND				NO
YO-03T-2-05	1.4	60	SAND				NO
YO-03T-3-01	0.5	5	SAND				NO
YO-03T-3-02	1.0	20	SAND	SILT	SHEL		NO
YO-03T-3-03	1.5	35	SAND				NO
YO-03T-3-04	2.0	50	SILT				NO
YO-03T-4-01	1.0	15	SAND				NO
YO-03T-4-02	1.2	20	SAND				NO
YO-03T-4-03	1.5	25	SAND	SILT	DETR		NO
YO-03T-4-04	2.5	35	SAND	SILT	DETR		NO
YO-03T-5-01	0.6	5	SAND	GRAV			NO
YO-03T-5-02	1.0	10	SAND	SILT			NO
YO-03T-5-03	1.5	20	SAND	SILT	SHEL		NO
YO-04T-1-01	0.5	15	SAND				NO
YO-04T-1-02	1.0	30	SAND				NO
YO-04T-1-03	1.5	45	SILT	SAND			NO
YO-04T-1-04	2.0	60	SILT	CLAY			YES
YO-04T-2-01	0.6	10	SHEL	SAND			NO
YO-04T-2-02	0.7	15	SAND	SILT	SHEL		NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

COBB=COBBLES PEBB=PEBBLES
GRAV=GRAVEL SHEL=SHELLS
DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER			SUBSTRATE** LOWER LAYER			VEGETATED?
YC-04T-2-03	0.7	30	SAND	SILT					NO
YC-04T-2-04	1.7	45	SILT	DETR					NO
YC-04T-2-05	2.2	60	SILT	CLAY					NO
YC-04T-3-01	0.5	5	SILT	SAND					NO
YC-04T-3-02	1.0	10	SAND	SILT	CLAY				NO
YC-04T-3-03	1.5	13	SILT	CLAY					NO
YC-05T-1-01	0.5	5	SAND	GRAV					NO
YC-05T-1-02	0.9	15	SAND						YES
YC-05T-1-03	1.5	0	SHEL	0					NO
YC-05T-2-01	0.5	5	SAND						NO
YC-05T-2-02	1.0	15	SAND	SILT					NO
YC-05T-2-03	1.5	20	SAND	SILT					NO
YC-05T-2-04	2.0	25	SHEL	SAND	SILT				NO
YC-01R- -01	0.5	5	SAND						NO
YC-01R- -02	0.8	15	SAND						NO
YC-01R- -03	0.9	30	COBB	SHEL					NO
YC-01R- -04	1.0	45	SHEL	COBB					NO
YC-01R- -05	1.1	60	SAND	COBB					NO
YC-02R- -01	0.5	5	SAND	GRAV					NO
YC-02R- -02	0.8	15	SAND						NO
YC-02R- -03	1.0	30	SAND						NO
YC-02R- -04	1.4	45	SAND	SHEL					NO
YC-02R- -05	0.0	60	SAND	SHEL					NO
YC-03R- -01	0.5	5	PEBB	SAND					NO
YC-03R- -02	1.1	15	SAND			CLAY			NO
YC-03R- -03	1.5	30	SAND			CLAY	SILT		NO
YC-03R- -04	1.7	45	SAND			CLAY	SILT		NO
YC-03R- -05	2.0	60	SAND			CLAY	SILT		NO
YC-04R- -01	0.5	1	SAND	PEBB					NO
YC-04R- -02	1.1	15	SAND	PEBB					NO
YC-04R- -03	1.1	30	SAND	SHEL					NO
YC-04R- -04	1.4	45	SAND	SHEL					NO
YC-04R- -05	1.4	60	SAND						NO
YC-05R- -01	0.5	5	SAND	COBB		CLAY			NO
YC-05R- -02	0.6	15	SAND			CLAY			NO
YC-05R- -03	0.8	30	SAND			CLAY			NO
YC-05R- -04	0.8	45	SAND	SILT		CLAY			NO
YC-05R- -05	0.9	60	SAND	SILT		CLAY			NO
YC-06R- -01	0.3	15	SAND			CLAY			NO
YC-06R- -02	0.4	30	SAND			CLAY			NO
YC-06R- -03	0.5	45	SAND			CLAY			NO
YC-06R- -04	0.6	60	SAND			CLAY			NO
YC-07R- -01	0.7	15	SHEL	COBB					NO
YC-07R- -02	0.9	30	SAND						NO
YC-07R- -03	0.9	45	SAND						NO
YC-07R- -04	1.0	60	SAND						NO

*SEE FIGURE 4

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DETR=DETRITUS

TABLE C-1. SUBSTRATE TYPES IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

STATION*	DEPTH	DIST. FROM SHORE	SUBSTRATE** UPPER LAYER		SUBSTRATE** LOWER LAYER	VEGETATED?
YC-08R- -01	0.8	15	GRAV	SAND	CLAY	NO
YC-08R- -02	1.0	30	SAND	GRAV	CLAY	NO
YC-08R- -03	1.0	45	SAND		CLAY	NO
YC-08R- -04	1.0	60	SAND		CLAY	NO
YC-09R- -01	0.7	15	COBB	SAND		NO
YC-09R- -02	1.0	30	SAND			NO
YC-09R- -03	0.9	45	SHEL	COBB		NO
YC-09R- -04	1.0	60	SAND	SHEL		NO
YC-10R- -01	0.4	15	SAND	COBB	CLAY	NO
YC-10R- -02	0.6	30	SAND			NO
YC-10R- -03	0.7	45	SAND			NO
YC-10R- -04	0.6	60	SAND			NO

*SEE FIGURE 4

** PRIMARY CONSTITUENT, SECONDARY CONSTITUENT, ETC.

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DETR=DETRITUS

Table C-2. Particle size distribution of sediments in the Tidal Potomac River and Estuary

(Gravel, less than 2mm; Sand, less than 2mm and greater than 0.062mm; Silt, less than 0.062mm and greater than 0.004mm; Clay, less than 0.004mm)

Site number[1]	Site[1]	River kilometer	Date	Depth (m)	Distance from shore (m)	Vegetated	Percent gravel	Percent sand	Percent silt	Percent clay
2	Washington Channel (WC-1R)	177	0581	-	-	Yes	10.2	37.6	34.5	17.7
4	Goose Island (GI-1R)	172	0580	-	-	No	-	42.2	57.8	-
4	do	172	0481	-	-	No	0	14.7	66.8	18.5
5	Rosier Bluff (PY-1R)	166	0481	-	-	No	0	93.9	3.8	2.3
6	Elodea Cove (PY-8R)	154	0580	-	-	No	-	96.2	3.8	-
6	do	154	0481	-	-	No	0	80.8	14.3	5.0
7	Mount Vernon	154	0580	-	-	No	-	60.0	40.0	-
8	Neabsco Bay (NB-1R)	135	0781	-	-	No	1.8	65.2	23.3	11.5
9	MN-10R	124	0878	-	-	Yes	0	92.6	1.86	5.54
10	MN-2T-3	3	0580	-	-	No	-	98.1	1.9	-
11	MN-2T-1	3	0580	-	-	No	-	10.9	89.1	-
11	Marsh Island	3	0481	-	-	No	0	85.8	9.5	4.7
12	MN-4T-2	7	0880	-	-	Yes	-	92.0	8.0	-
12	MN-4T-2	7	0481	-	-	Yes	14.3	73.2	6.3	6.2
13	AP-3R	116	0781	-	-	Yes	0	84.4	11.1	4.5

[1]See Figures 5 and 6.

Table C-2. Particle size distribution of sediments in the Tidal Potomac River and Estuary - continued

(Gravel, less than 2mm; Sand, less than 2mm and greater than 0.062mm; Silt, less than 0.062mm and greater than 0.004mm; Clay, less than 0.004mm)

Site number[1]	Site[1]	River kilometer	Date	Depth (m)	Distance from shore (m)	Vegetated	Percent gravel	Percent sand	Percent silt	Percent clay
14	NP-2R	100	0878	-	30	Yes	0	80.8	13.56	5.64
14	do	100	0878	-	60	Yes	0	89.3	9.06	1.64
14	do	100	0878	-	75	Yes	0	74.2	3.36	22.44
15	NP-3R	98	0878	-	15	Yes	8.22	66.82	27.14	6.04
15	do	98	0878	-	30	Yes	0.7	73.22	14.14	12.64
15	do	98	0878	-	45	Yes	0	88.8	5.36	5.84
15	do	98	0878	-	60	Yes	0	74.38	17.98	7.64
15	do	98	0878	-	75	No	0	58.98	26.28	14.74
15	do	98	0878	-	90	No	0	39.68	35.38	24.94
16	NP-4R	96	0878	-	105	No	0	63.26	15.2	21.54
17	NP-6R	94	0779	-	-	Yes	0	94.9	0.4	4.6
17	do	94	0481	-	-	Yes	0	92.8	4.3	2.9
18	NP-8R	90	0878	-	-	Yes	0	87.8	10.46	1.74
31	NY-1T-3	2	0481	-	-	No	0	19.1	52.4	28.4
32	NP-5R	95	0779	-	-	Yes	0	10.1	61.5	28.6

[1]See Figure 6.

Table C-2. Particle size distribution of sediments in the Tidal Potomac River and Estuary - continued

(Gravel, less than 2mm; Sand, less than 2mm and greater than 0.062mm· Silt, less than 0.062mm and greater than 0.004mm; Clay, less than 0.004mm)

Site number[1]	Site[1]	River kilometer	Date	Depth (m)	Distance from shore (m)	Vegetated	Percent gravel	Percent sand	Percent silt	Percent clay
18	NP-8R	90	0878	-	-	Yes	0	89.1	5.96	4.94
19	NP-8R/9R	89	0878	-	-	Yes	0	93.33	1.8	4.86
20	NP-9R	88	0878	-	-	Yes	0	94.72	0.94	4.34
21	NP-10R	88	0878	0.75	-	Yes	0	91.86	2.19	5.96
22	NP-11R	87	0878	-	-	Yes	0	83.2	4.76	12.04
23	NP-14R	84	0878	-	-	Yes	0	75.26	15.2	9.54
24	NY-4T-3	8	0779	-	-	Yes	0	49.3	34.8	15.8
25	NY-4T-2	8	0779	-	-	No	0	15.8	52.6	31.7
26	NY-4T-1	7	0779	-	-	No	0	81.3	14.1	4.6
27	NY-3T-3	6	0779	-	-	Yes	0	18.9	42.5	38.6
27	do	6	0481	-	-	Yes	0	27.1	41.8	31.1
28	NY-2T-1	5	0779	-	-	Yes	0	80.4	12.4	7.2
29	NY-2T-2	4	0779	-	-	No	0	20.7	49.3	30.0
30	NY-2T-3	3	0779	-	-	No	0	91.8	3.1	5.2
31	NY-1T-2	2	0779	-	-	No	0.3	70.3	19.5	10.1

[1]See Figure 6.

Table C-2. Particle size distribution of sediments in the Tidal Potomac River and Estuary - continued

(Gravel, less than 2mm; Sand, less than 2mm and greater than 0.062mm; Silt, less than 0.062mm and greater than 0.004mm; Clay, less than 0.004mm)

Site number[1]	Site[1]	River kilometer	Date	Depth (m)	Distance from shore (m)	Vegetated	Percent gravel	Percent sand	Percent silt	Percent clay
33	PO-3T-1	6	0878	-	-	Yes	0	19.8	53.96	26.2
33	do	6	0481	-	-	Yes	0	63.4	29.5	7.1
34	PO-2T-3	3	0878	-	-	Yes	0	78.2	11.96	9.84
35	PO-2T-2	4	0878	-	15	Yes	0	92.5	1.16	6.33
36	PO-2T-1	4	0878	-	-	Yes	0	59.9	24.96	17.14
37	PO-1T-5	2	0878	0.5	15	Yes	0	55.46	36.5	8.03
38	PO-1T-2	2	0878	-	30	Yes	0	95.3	2.3	2.4
38	do	2	0580	-	-	Yes	1.1	90.54	3.02	6.44
39	PO-1T-1	2	0378	-	-	No	0	73.6	13.86	12.5
40	Goose Creek	1	0480	-	-	Yes	-	64.4	35.6	-
41	WO-1R	68	0878	0.75	30	Yes	0	93.5	4.14	2.34
41	do	68	0878	-	-	Yes	0	74.0	15.5	10.5
42	WO-3R	64	0878	-	-	No	0	70.5	30.0	4.3
43	WO-8T-2	15	0878	-	15	Yes	0	77.8	7.56	14.64
43	do	15	0878	-	30	No	0	75.16	16.47	8.38

[1]See Figures 6 and 7.

Table C-2. Particle size distribution of sediments in the Tidal Potomac River and Estuary - continued

(Gravel, less than 2mm; Sand, less than 2mm and greater than 0.062mm; Silt, less than 0.062mm and greater than 0.004mm; Clay, less than 0.004mm)

Site number[1]	Site[1]	River kilometer	Date	Depth (m)	Distance from shore (m)	Vegetated	Percent gravel	Percent sand	Percent silt	Percent clay
43	do	15	0878	-	45	No	0	78.96	14.8	6.24
43	do	15	0878	-	60	Yes	0	67.49	24.8	7.7
43	do	15	0878	-	75	No	0	82.7	10.86	6.44
44	WO-8T-1	15	0878	-	105	Yes	0	61.6	21.4	17.0
44	do	15	0878	-	120	Yes	0	45.44	38.82	15.74
44	do	15	0878	-	135	Yes	0.4	51.1	28.2	20.7
44	do	15	0878	-	150	Yes	1.72	39.26	32.0	28.74

[1]See Figure 7.

Table C-3. Nutrient concentrations of bottom sediments in the Tidal Potomac River and Estuary

(Results in milligrams per kilogram)

Site number[1]	Site[1]	River km	Date	Vegetated	Total[2] as N	Ammonia plus organic as N	Nitrite plus nitrate as N	Ammonia as N	Nitrite as N	Phosphorus as P	Total phosphorus
2	Washington Channel (WC-1R)	181	0481	Yes	1,910	1,900	5.7	41	0.6	220	-
2	do	181	0481	Yes	843	840	2.5	23	0.5	170	-
2	do	181	0481	Yes	672	670	2.0	23	0.4	150	-
3	National Airport (NA-1R)	176	0481	Yes	2,600	2,600	1.9	73	0.6	270	-
3	do	176	0481	Yes	1,200	1,200	3.0	14	0.6	140	-
3	do	176	0481	Yes	873	870	2.6	14	0.6	170	-
4	Goose Island (GI-1R)	172	0780	No	2,400	-	-	-	-	-	440
4	do	172	0481	No	3,300	3,300	3.1	34	0.5	470	-
4	do	172	0481	No	802	800	1.9	31	0.4	260	-
4	do	172	0481	No	2,300	2,300	3.2	45	0.6	380	-
5	Rosier Bluff (PY-1R)	166	0481	No	734	730	3.7	11	0.4	130	-
5	do	166	0481	No	443	440	2.8	4.3	0.4	110	-
5	do	166	0481	No	602	600	2.2	5.7	0.4	140	-
6	Elodea Cove (PY-8R)	154	0780	No	11,100	-	-	-	-	-	260
6	do	154	0880	No	760	-	-	-	-	-	220

[1]See Figure 5.

[2]Total nitrogen computed by addition of all nitrogen species (total nitrogen from titration); done at USGS Central Laboratory.

[3]In cove north of this site.

Table C-3. Nutrient concentrations of bottom sediments in the Tidal Potomac River and Estuary - continued

(Results in milligrams per kilogram)

Site number[1]	Site[1]	River km	Date	Vegetated	Total[2] as N	Ammonia plus organic as N	Nitrite plus nitrate as N	Ammonia as N	Nitrite as N	Phosphorus as P	Total phosphorus
6	Elodea Cove (PY-8R)	154	0481	No	1,100	1,100	1.8	22	0.4	290	-
6	do	154	0481	No	1,400	1,400	2.3	26	0.5	340	-
6	do	154	0481	No	662	660	1.8	25	0.5	180	-
7	Mount Vernon	154	0780	No	2,700	-	-	-	-	-	750
8	Neabsco Bay (NB-1R)	135	0481	No	280(280)	280	0	13	0	200	-
8	do	135	0481	No	191(210)	190	1.2	54	0	200	-
8	do	135	0481	No	202(180)	190	12	17	0	420	-
10	MN-2T-3	3	0580	No	2,300	-	-	-	-	-	91
11	MN-2T-1	3	0580	No	13,100	-	-	-	-	-	520
11	Marsh Island	3	0481	No	2,510	2,500	6.9	17	1.3	130	-
11	do	3	0481	No	3,510	3,500	7.1	12	0.5	170	-
11	do	3	0481	No	1,200	1,200	3.0	19	0.5	150	-
12	MN-4T-2	7	0880	Yes	480	-	-	-	-	-	26
12	do	7	0880	Yes	1,200	-	-	-	-	-	26
12	do	7	0481	Yes	3,400	3,400	2.8	18	1.2	140	-

[1] See Figures 5 and 6.

[2] Total nitrogen computed by addition of all nitrogen species (total nitrogen from titration); done at USGS Central Laboratory.

[3] In cove north of this site.

Table C-3. Nutrient concentrations of bottom sediments in the Tidal Potomac River and Estuary - continued

(Results in milligrams per kilogram)

Site number[1]	Site[1]	River km	Date	Vegetated	Total as N[2]	Ammonia plus organic as N	Nitrite plus nitrate as N	Ammonia as N	Nitrite as N	Phosphorus as P	Total phosphorus
12	MN-4T-2	7	0481	Yes	2,000	2,000	1.9	9.4	1.2	89	-
12	do	7	0481	Yes	282	280	2.2	10	0.4	70	-
13	AP-3R	116	0781	Yes	481(610)	480	1.1	81	0	100	-
13	do	116	0781	Yes	280(280)	280	0	13	0	200	-
17	NP-6R	94	0481	Yes	626	610	16	8.1	0.5	170	-
17	do	94	0481	Yes	483	480	2.8	7.2	0.4	89	-
17	do	94	0481	Yes	852	850	1.7	11	0.4	88	-
27	NY-3T-3	6	0481	Yes	16,700	16,700	6.1	85	0.4	240	-
27	do	6	0481	Yes	14,500	14,500	9.9	181	2.0	400	-
27	do	6	0481	Yes	23,000	23,000	5.8	219	2.6	420	-
40	Goose Creek	1	0580	Yes	4,900	-	-	-	-	-	440
-	PO-3T-2[3]	6	0481	Yes	662	660	2.1	17	0.5	240	-
-	do	6	0481	Yes	1,360	1,360	1.7	14	0.4	200	-
-	do	6	0481	Yes	1,880	1,880	2.0	37	0.5	230	-

[1]See Figure 6.

[2]Total nitrogen computed by addition of all nitrogen species (total nitrogen from titration); done at USGS Central Laboratory.

[3]In cove north of this site.

Table C-4 Heavy metal concentrations of sediments in the Tidal Potomac River and Estuary

(Concentrations in micrograms per gram)

Site number	Site[1]	River km	Date	Vegetated	Arsenic	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Selenium	Zinc
4	Goose Island (GI-1R)	172	0580	No	-	-	-	-	-	-	40	860	-	-	90
-	PY-1T-2	2	0580	No	-	-	-	-	-	-	40	410	-	-	170
-	PY-2T-1	3	0580	No	-	-	-	-	-	-	10	44	-	-	18
6	Elodea Cove (PY-8R)	154	0580	No	-	-	-	-	-	-	∠10	11	-	-	22
7	Mount Vernon	154	0580	No	-	-	-	-	-	-	20	430	-	-	76
8	Neabsco Bay (NB-1R)	135	0781	No	-	-	-	-	-	-	10	120	-	-	14
8	do	135	0781	No	-	-	-	-	-	-	10	120	-	-	9
10	MN-2T-3	3	0580	No	-	-	-	-	-	-	∠10	43	-	-	13
11	MN-2T-1	3	0580	No	-	-	-	-	-	-	40	290	-	-	59
12	MN-4T-2	7	0880	Yes	-	-	-	-	-	-	∠10	9	-	-	3.9
13	AP-3R	116	0781	Yes	-	-	-	-	-	-	10	65	-	-	14
13	do	116	0781	Yes	-	-	-	-	-	-	10	90	-	-	20
17	NP-6R	94	0779	Yes	0	∠10	∠10	∠10	∠10	4,800	∠10	70	0.09	0	20
17	do	94	0779	Yes	0	∠10	∠10	∠10	∠10	3,900	10	90	0.10	0	20

[1] See Figures 5 and 6.

Table C-4 . Heavy metal concentrations of sediments in the Tidal Potomac River and Estuary - continued

(Concentrations in micrograms per gram)

Site number	Site[1]	River km	Date	Vegetated	Arsenic	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Selenium	Zinc
17	NP-6R	94	0580	Yes	-	-	-	-	-	-	10	120	-	-	15
17	do	94	0580	Yes	-	-	-	-	-	-	∠10	43	-	-	11
-	NY-1T-3	2	0580	Yes	-	-	-	-	-	-	∠10	55	-	-	14
-	do	2	0580	Yes	-	-	-	-	-	-	∠10	120	-	-	15
24	NY-4T-3	8	0779	Yes	2	∠10	20	20	20	20,000	20	260	0.32	0	80
24	do	8	0779	Yes	0	∠10	∠10	20	∠10	13,000	20	180	0.20	0	60
25	NY-4T-2	8	0779	Yes	0	∠10	20	10	10	20,000	20	240	0.14	0	70
25	do	8	0779	Yes	0	∠10	20	30	20	24,000	30	320	0.31	0	100
25	do	8	0779	Yes	-	-	-	-	-	-	40	180	-	-	55
26	NY-4T-1	7	0779	No	0	∠10	∠10	∠10	∠10	2,000	∠10	40	0.08	0	10
26	do	7	0779	No	0	∠10	∠10	∠10	∠10	5,000	∠10	60	0.17	0	20
27	NY-3T-3	6	0779	Yes	4	∠10	20	∠10	30	29,000	30	380	0.51	0	110
27	do	6	0779	Yes	5	∠10	30	∠10	30	31,000	40	710	0.46	0	160
28	NY-2T-1[2]	4	0779	Yes	0	∠10	10	20	10	16,000	20	240	0.15	0	80

[1]See Figure 6.

[2]Just north of this site.

Table C-4 . Heavy metal concentrations of sediments in the Tidal Potomac River and Estuary - continued

(Concentrations in micrograms per gram)

Site number	Site[1]	River km	Date	Vegetated	Arsenic	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Selenium	Zinc
28	NY-2T-1	4	0779	Yes	0	∠10	10	20	10	16,000	20	190	0.23	0	60
29	NY-2T-2	4	0779	No	0	∠10	10	10	10	20,000	∠10	170	0.13	0	40
29	do	4	0779	No	0	∠10	∠10	10	∠10	13,000	10	120	0.18	0	20
30	NY-2T-3	3	0779	No	0	∠10	∠10	10	∠10	1,900	∠10	60	0.16	0	10
30	do	3	0779	No	0	∠10	∠10	10	∠10	7,500	∠10	230	0.17	0	50
31	NY-1T-2	2	0580	No	-	-	-	-	-	-	20	290	-	-	98
31	do	2	0580	No	-	-	-	-	-	-	∠10	350	-	-	97
31	NY-1T-2	2	0779	No	0	∠10	∠10	∠10	∠10	5,700	10	160	0.18	0	40
31	do	2	0779	No	0	∠10	∠10	∠10	∠10	2,900	10	90	0.14	0	20
32	NP-5R	95	0779	Yes	5	∠10	20	20	20	19,000	20	550	0.66	0	150
32	do	95	0779	Yes	0	∠10	20	10	20	20,000	20	700	0.36	0	150
40	Goose Creek	1	0580	Yes	-	-	-	-	-	-	∠10	-	-	-	48

[1]See Figure 6.

Table C-5. Carbon concentrations in sediments in the Tidal Potomac River and Estuary

(Concentrations in grams per kilogram)

Site number[1]	Site[1]	River km	Date	Vegetated	Inorganic carbon	Organic carbon	Total carbon
4	Goose Island (GI-1R)	172	0579	No	1.5	15	16
5	Rosier Bluff (PY-1R)	166	0579	No	0	1.4	1.4
-	PY-2T-1	3	0579	No	0	5.6	5.6
6	Elodea Cove (PY-8R)	154	0580	No	0	4.3	4.3
7	Mount Vernon	154	0780	No	0.3	13	13
8	Neabsco Bay (NB-1R)	135	0781	No	0	0	0
8	do	135	0781	No	0	2.5	2.5
-	MN-1T-4	2	0579	No	0	55	55
-	do	2	0579	No	0	59	59
10	MN-2T-3	3	0579	No	0	1.9	1.9
10	do	3	0580	No	0	6.0	6.0
11	MN-2T-1	3	0580	No	0.1	28	28
12	MN-4T-2	7	0880	Yes	0	12	12
12	do	7	0880	Yes	0	3.8	3.8
13	AP-3R	116	0781	Yes	0	3.0	3.0
13	do	116	0781	Yes	0	2.7	2.7
40	Goose Creek	1	0580	Yes	0	3.0	3.0

[1]See Figures 5 and 6.

TABLE C-6. WATER QUALITY DATA, 1978, TIDAL POTOMAC RIVER AND ESTUARY
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
PY-01R	166.0	0525	6.8		00200	21.5	0801	7.3	00.6	00900	27.9					
PY-03R	162.0						0801		00.6	00800	26.9					
PY-05R	158.7	0525	6.9		00180	21.9	0801	7.6	00.0	00325						
PY-06R	157.9	0526	7.5		00170	20.6	0801		00.5	00900	27.4					
PY-07R	156.0						0801		00.5	00900	27.6					
PY-08R	154.2						0801		00.5	00900	27.7					
PY-09R	152.2						0801		00.5	00900	27.5					
PY-10R	149.2	0526	7.5		00170	24.1	0801	8.3	00.5	00850	27.4					
PY-01T-1	2.0	0525	8.6		00150	21.8										
PY-02T-1	3.0						0801	6.8	00.0	00170	22.5					
MN-01R	141.0	0601	7.1		00210	25.0	0802	8.3	00.5	00800	28.4					
MN-05R	133.1	0601	7.3		00170	22.9	0802	9.3	00.0	00250	28.0					
MN-06R	131.9	0530	7.2		00155	23.4										
MN-10R	124.2	0531	7.1		00160	22.3	0802	9.1	00.0	00280	28.0	1012	8.7	00.3	00900	20.0
MN-01T-1	1.6	0530	7.3		00155	27.4	0802		00.5	00800	27.4					
MN-02T-1	3.3						0802		00.4	00700	27.5					
MN-02T-2	3.0	0530	7.1		175	26.4										
MN-02T-3	3.3						0802	6.8	00.0	00240	27.0					
MN-03T-1	4.3	0531	6.8		00150	24.0										
MN-04T-1	6.8	0530	6.3		00120	26.4	0802		00.4	00650	25.6					
NP-01R	101.6	0606	8.3	00.3	00300	27.1	0807	8.0	01.1	02000	27.6	0926		04.1	06800	23.9
												1002	7.8	4.0	7000	22.0
NP-02R	99.5						0807		01.1	02000	28.4	1002	8.3	4.3	7000	22.0
NP-03R	97.8											1002	7.8	4.8	8000	23.0
NP-04R	96.3											1002	8.4	5.2	8800	23.0

*SEE FIGURES 2-3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-6. WATER QUALITY DATA, 1978, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
NP-05R	95.0	0605	9.2		00700	26.9						1002	8.1	5.3	9000	22.5
NP-06R	94.0											0926		05.1	08100	22.2
												1002	8.3	5.0	8000	21.0
NP-07R	92.1											1002	7.6	6.2	10000	22.0
NP-10R	87.6						0809		03.5	06750	29.0	0925		06.4	10300	23.8
NP-11R	87.2	0526	8.3	00.3	00500	23.8	0809		03.5	07000	29.0					
NP-15R	82.5	0606	7.6	02.5	04100	21.8	0808	8.0	4.4	7700	28.8	0927		08.3	13700	24.5
NY-01T-1	2.2	0605	9.1		00500	25.9	0807		03.0	04800	28.0	1002	8.4	5.0	8200	22.0
							0808	8.0	3.1	5400	28.9					
NY-02T-1	4.5						0806		02.0	03700	29.0	1002	8.5	04.5	7300	21.2
NY-02T-2	3.9	0605	8.6		00350	23.8										
NY-03T-1	5.4	0605	6.8		00230	24.5	0807		01.8	03300	29.2	1002	8.3	3.8	6200	21.0
NY-04T-1	7.0	0605	6.8			26.9	0807		01.6	02800		1002	8.1	3.1	5000	21.0
NY-04T-3	8.2						0807	8.0	1.5	2100	25.8	0929		03.3	05000	20.2
PO-01T-1	1.6	0523	9.3	00.4	00600	24.8	0806	8.3	03.3	05800	29.0					
PO-01T-2	2.0	0523		00.4	00500	24.6										
PO-01T-3	2.1	0523	9.3	00.5	00750	24.8										
PO-01T-4	2.3	0523		00.7	01000	25.0										
PO-01T-5	2.4	0523	9.0	00.5	00700	24.2						0928		06.2	09500	21.7
PO-02T-1	3.6	0525	8.5	00.1	00100	23.1	0808	8.3	02.8	05000	28.9	0928		05.8	09000	22.2
PO-02T-2	4.1	0525		00.4	00650	24.2										
PO-02T-3	3.4	0525		00.4	00670	25.6										
PO-03T-1	5.7	0526	8.3	00.1	00100	23.2										
PO-03T-2	5.7						0808	7.8	01.7	03200	28.6					
WO-01R	67.7	0530	8.5	02.2	03400	22.3	0814		06.3	11300	30.7					

*SEE FIGURES 3-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-6. WATER QUALITY DATA, 1978, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	RM	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-02R	65.9											1005		12.9	19100	20.4
WO-03R	63.8	0530	8.8	01.8	03000	23.4										
WO-04R	62.0	0530		02.0	03200	24.8										
WO-05R	60.2											1005		15.0	21400	20.0
WO-06R	56.8	0602	8.8													
WO-09R	52.0						0816		06.8	12000	28.5					
WO-10R	51.1	0602	8.8				0816	8.5	07.5	13200	28.6	1003		11.5	17500	21.2
WO-01I-1	1.2											1005		10.0	15800	20.5
WO-01I-2	2.1						0815	8.5	07.0	12000	28.0					
WO-02I-1	3.3	0530 0608	8.3 8.3	04.0 4.6	06600 7500	23.9 23.2						1005		10.0	15500	20.5
WO-02I-2	3.9	0531	8.8	03.8	06000	22.5										
WO-03I-1	6.0	0531 0608	8.3	03.6 4.7	06000 7600	22.4 23.7						1005		10.0	15500	20.0
WO-03I-2	5.4	0531		03.7	06100	23.9										
WO-03I-3	5.4	0531		03.8	06100	22.8										
WO-04I-1	7.0	0608		4.7	7700	23.6	0815	8.5	07.0	12250	29.0	1005		9.3	14500	20.0
WO-04I-2	7.7	0601	8.0													
WO-05I-1	9.7	0608	7.5	4.5	7500	24.2						1005		9.2	14500	19.5
WO-06I-1	11.1	0608		4.0	6700	24.7						1005		8.8	13500	20.0
WO-06I-2	12.1	0601	8.3				0814	7.5	04.8	09000	29.0					
WO-07I-1	12.6	0608	7.3	3.1	5200	25.2						1005		8.0	13700	19.5
WO-08I-1	15.3	0601 0608	7.3	2.7	4500	25.4						1002 1005		09.0 8.0	13800 12500	21.4 19.0
WO-08I-2	14.6	0602	7.0													

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-6. WATER QUALITY DATA, 1978, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-09T-1	16.9	0608	7.1	1.6	2700	25.8						1005		7.0	11000	19.0
WO-10T-1	18.8	0602	6.8									1005		6.0	9200	18.5
		0608	7.0	0.7	1100	25.8										
SM-01R	29.1	0608	8.5	06.5	10400	22.6	0726	8.4	08.0	14500	27.0	1011	8.0	13.0	19300	19.5
SM-02R	27.7	0608	8.5	06.6	10400	22.9										
SM-03R	25.8	0608		06.4	10200	23.0										
SM-04R	23.9	0608		06.4	10000	22.8										
SM-05R	22.8	0608		06.8	11000	23.1						1011	8.2	13.4	20000	19.5
SM-06R	19.7	0608	8.5	06.7	10800	23.0										
SM-07R	18.0	0608		06.9	11200	23.2										
SM-08R	16.3	0608		06.7	10900	23.4						1010	8.5	13.5	19000	20.0
SM-09R	13.9	0608	8.5	06.8	10800	22.8										
SM-10R	12.8	0608		06.9	11000	23.2	0726	8.3	10.5	17900	27.6	1010	8.4	13.5	19000	18.5
SM-01T-1	3.0	0606	8.3				0727	8.6	09.8	17000	26.0	1011	8.0	13.5	20000	19.0
		0608	8.3	06.7	10700	23.1										
SM-01T-2	1.2	0608	8.3	6.7	10900	23.9	0727	8.5	10.6	17700	27.5	1010	8.5	13.5	19500	20.0
SM-02T-1	4.1	0608	8.3	06.7	10900	23.9	0727	8.6	09.5	16500	26.0	1011	8.0	13.4	20000	19.0
SM-02T-2	3.4	0606	8.5													
SM-03T-1	5.5	0605	8.5	07.2	11700	23.4	0727	8.8	09.7	16900	26.0	1011	8.0	13.2	19700	20.0
SM-03T-2	6.5	0605	8.5													
SM-03T-3	5.1						0727	8.4	10.7	18200	28.1					
SM-03T-4	6.1	0606	8.5													
SM-04T-1	7.7	0605	8.5	07.3	11800	23.3	0727	8.4	09.9	17300	27.0	1011	7.9	13.2	19500	19.5
		0608	8.5													
SM-04T-2	8.3	0605	8.5													
SM-05T-1	10.3	0608	8.5	07.9	12800	23.9	0726	8.4	09.5	16900	27.0	1011	7.9	12.9	19200	19.5

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-6. WATER QUALITY DATA, 1976, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
SM-05T-2	9.1	0606	8.5													
SM-06T-1	10.8	0606		07.9	12800	24.0	0726	8.4	09.4	18000	27.0	1011	7.8	12.8	19000	19.5
SM-07T-1	12.4	0606	8.5	07.3	12200	25.0	0726	8.5	08.8	15500	27.0	1011	7.7	12.5	18300	19.0
SM-07T-2	13.3	0606	8.5				0726	7.5	08.0	15000	30.0					
SM-07T-3	13.1						0726	7.3	05.6	09500	25.0					
SM-08T-1	14.8	0606		07.1	11900	25.9						1011	7.6	10.5	15500	19.0

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-7. WATER QUALITY DATA, 1979, TIDAL POTOMAC RIVER AND ESTUARY
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
PY-01R	166.0	0530		0.5	700	18.5										
PY-02R	163.9											0911		0.0	170	22.0
PY-05R	158.7											0911		0.0	115	23.0
PY-10R	149.2											0911		0.0	188	25.0
PY-02T-1	3.0											0911		0.0	162	23.0
PN-01R	141.0											0912		0.0	162	23.0
PN-05R	133.1											0912		0.0	165	23.0
PN-06R	131.9	0531		0.6	800	21.1										
PN-10R	124.2	0531		0.5	700	21.4						0924		0.0	122	19.8
PN-04T-1	6.8											0919		0.0	95	23.0
NP-01R	101.6	0606		2.0	3200	23.5										
NP-06R	94.0											1012		0.0	150	15.0
NP-09R	88.3											1012		0.0	157	14.5
NP-10R	87.6											1012		0.0	140	18.0
NP-15R	82.5	0607		1.8	2900	24.5						1011		0.0	375	15.0
NY-04T-1	7.0											1012		0.0	78	12.0
NY-04T-2	8.0	0604		0.1	485	22.0										
PO-03T-1	5.7	0605		0.1	485	22.0										
PO-03T-2	5.7											1011		0.0	45	10.0
WO-01R	67.7											1004		3.6	5800	20.5
WO-05R	60.2	0607		3.2	4650	24.0										
WO-06R	56.8											1004		3.4	5800	22.0
												1004		4.6	7200	21.4
WO-10R	51.1	0607		4.3	8000	25.7						1004		6.0	9800	22.3
WO-01T-2	2.1											1003		5.6	9000	21.4

*SEE FIGURES 2-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-7. WATER QUALITY DATA, 1979, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-02T-2	3.9											1003		5.1	8100	21.4
WO-04T-1	7.0											1003		5.5	8900	21.5
WO-08T-1	15.3											1003		3.0	4900	21.8
WO-09T-2	16.7	0608		1.5	3100	26.0										
WO-10T-1	18.8											1003		1.0	1600	21.5
SM-01R	29.1	0613		7.0	11000	21.0										
SM-02R	27.7											1001		7.2	1190	22.8
SM-10R	12.8	0613		7.8	12250	21.5						1002		9.6	14900	21.0
SM-01T-1	3.0											1002		7.2	11900	22.8
SM-01T-2	1.2	0613		9.0	14400	22.8										
SM-03T-1	5.5											1002		10.8	17400	23.0
SM-03T-3	5.1	0613		7.9	12700	23.8										
SM-04T-2	8.3											1002		10.7	17100	23.0
SM-05T-1	10.3											1002		10.2	16300	22.8
SM-06T-2	10.4	0613		6.8	10900	23.8										
SM-07T-3	13.1											1002		8.8	14000	21.8
SM-08T-1	14.8											1002		1.5	2100	21.8
GC-01R	156.1	0626		0.0	250	24.0						0911		0.0	195	25.0
GC-05R	149.1	0626		0.0	235	23.5						0911		0.0	170	23.0
GC-09R	141.1	0626		0.0	210	23.0						0912		0.0	180	23.0
GC-01T-1	2.3	0626		0.0	215	24.0										
GC-01T-3	2.7											0912		0.0	162	22.0
AP-06R	112.9											0917		0.0	195	24.0
AP-10R	108.7											0917		0.0	185	22.0

*SEE FIGURES 2-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-7. WATER QUALITY DATA, 1979, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
AP-15R	103.0											0913		0.0	355	25.0
AQ-01T-1	1.3	0627		0.0	185	26.0										
AQ-03T-1	5.7	0627		0.0	122	23.0						0917		0.0	120	24.0
PC-01T-2	2.1	0627		0.0	190	24.0										
PC-02T-1	3.1	0627		0.3	160	21.5										
PC-02T-3	4.1											0917		0.0	100	22.0
MC-01R	84.6											0924		1.5	2700	21.5
MC-06R	76.7											0925		2.1	3400	18.2
MC-10R	69.7	0621		02.5	4000	22.0						0925		2.3	3600	18.5
MC-04T-1	6.4	0621		1.0	1700	23.0						0925		0.2	600	18.5
NO-01R	55.4	0620		2.5	4600	26.0						0918		3.2	5800	25.3
NO-10R	37.6	0620		5.5	9100	23.0						0917		7.2	12300	23.5
NO-01T-1	2.8	0620		4.2	7000	23.0						0918		5.0	8300	24.5
NO-01T-2	1.4	0620		4.0	6500	22.5										
NO-02T-1	2.0											0918		5.1	8700	23.9
NO-03T-1	3.9											0918		6.0	10200	24.8
NO-03T-2	2.8											0917		6.0	10300	24.1
NO-04T-1	3.8											0918		5.8	9800	24.2
NO-04T-2	4.8	0614		4.5	7500	24.6										
NO-05T-1	6.6											0918		5.0	8300	24.0
NO-05T-2	5.2	0614		4.5	7500	25.0										
NO-06T-1	6.9											0918		4.3	7200	23.5
NO-06T-2	7.4	0614		4.1	6800	26.4										
YO-02T-1	3.9	0613		06.3	11000	25.0										

*SEE FIGURE 3-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-7. WATER QUALITY DATA, 1979, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING				SUMMER				FALL			
		DATE	PH	SAL	COND	TEMP	DATE	PH	SAL	COND	TEMP	DATE	PH	SAL	COND	TEMP
YO-02T-3	4.9	0613		06.2	11000	23.5						0919		9.7	16000	23.8
YO-03T-5	4.7	0613		07.4	12300	23.1						0919		8.8	14800	24.2
YO-05T-2	4.4											0919		9.0	15100	24.0
YO-01R	29.4	0614		4.8	8000	22.0						0918		7.8	13200	25.0
YO-05R	22.5	0614		5.2	9000	22.0										
YO-10R	14.3	0614		8.1	12600	23.0						1002		8.2	12800	20.5

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WC-01R	176.9	0415		0.0	360	15.5	0826		0.0	360						
GI-01R	172.2											1014		0.0	410	16.0
PY-01R	166.0	0606		0.0	180	23.0	0710		0.0	305		0912		0.0	370	26.0
		0626		0.0	145	25.0	0809		0.0	340	32.0	1014		0.0	385	15.0
							0813		0.0	350						
PY-05R	158.7						0710		0.0	285		0912		0.0	340	26.0
							0809		0.0	350	35.0					
							0813		0.0	300						
PY-06R	157.9	0606		0.0	205	23.0										
PY-08R	154.3						0707		0.0	220	20.0	1014		0.0	320	15.0
							0738		0.0	450	26.5					
PY-01T-1	2.1	0606		0.0	215	23.0	0809		0.0	260	32.0	0912		0.0	365	26.0
PY-01T-2	2.3	0522		0.0	210	24.0	0710		0.0	290		0912		0.0	340	26.0
		0606		0.0	187	23.0	0809		0.0	300	31.5					
		0606		0.0	200	22.0	0813		0.0	350						
		0618		0.0	300	22.5										
		0626		0.0	120	26.0										
PM-01R	147.9	0603		0.0	185	25.0	0820		0.0	300						
PM-02R	146.0	0603		0.0	185	24.0	0820		0.0	300						
PM-03R	144.1	0603		0.0	185	24.0	0820		0.0	250						
PM-04R	142.7	0603		0.0	185	24.0										
MN-05R	133.2											1017		0.5	1030	15.0
MN-06R	131.9	0630		0.0	150	25.0	0710		0.0	260		0912		0.5	60	26.5
							0809		0.0	300						
							0813		0.0	300						
MN-07R	130.4	0630		0.0	160	25.0										
MN-08R	128.6	0630		0.0	220	25.0										
MN-09R	126.8	0631		0.0	165	25.0										
MN-10R	124.2	0630		0.0	185	25.0										
MN-01T-2	1.7	0429		0.0	120	16.0										

*SEE FIGURES 2-3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
MN-01T-4	1.6	0606		0.0	310	25.0	0710		0.0	235		0912		0.5	750	25.5
							0809		0.0	250	27.0					
							0813		0.0	280						
MN-02T-3	3.3	0522		0.0	150	21.0	0710		0.0	220		0912		0.5	750	26.0
		0606		0.0	165	22.0	0809		0.0	200	25.0	1017		0.5	1080	15.0
		0626		0.0	215	26.5										
MN-03T-1	4.4	0606		0.0	200	22.5	0710		0.0	238		0911		0.2	720	24.0
		0626		0.0	190	25.0	0813		0.0	275						
MN-03T-3	3.6						0809		0.0	250	30.0					
							0813		0.0	250						
MN-04T-1	6.9						0710		0.0	185		0911		0.3	60	25.0
							0809		0.0	350	30.5	1017		0.3	850	15.0
							0813		0.0	300						
							0822		0.0	400						
MP-01R	122.6	0603		0.0	185	23.5	0823		2.0	3200						
MP-02R	119.6	0603		0.0	200	24.0	0823		3.0	5500						
MP-03R	118.0	0603		0.0	190	23.5	0823		3.0	5000						
MP-04R	116.9	0701		0.0	650	26.0	0823		3.5	5000						
MP-05R	115.3	0701		0.5	1150	26.0	0813		1.5	2900						
MP-06R	112.9	0701		0.5	1000	30.0	0813		2.0	3200						
MP-07R	110.8	0701		1.0	185	28.0	0813		3.0	3800						
MP-08R	108.8	0701		1.0	2200	26.0	0813		3.5	5500						
MP-09R	106.2	0701		2.0	3000	26.0	0813		3.0	5500						
MP-10R	103.6	0701		2.0	3300	27.0	0813		3.5	7000						
NP-01R	101.6	0529		0.5	1100	27.0	0724		3.0	5800	27.5	1006		5.0	8000	18.0
NP-02R	99.5	0529		0.8	1250	26.0	0724		4.0	7600	28.0	1006		5.0	8000	19.0
NP-03R	97.8	0529		1.5	2250	25.0	0724		4.2	8000	28.0	1006		7.2	10000	20.0
NP-04R	96.3						0709		4.0	1500	26.0	1006		6.2	9500	19.0
							0724		4.2	8000	28.0					

*SEE FIGURE 3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
NP-05R	95.0	0529		1.0	1850	22.0	0724		4.5	8500	29.0	1006		8.0	13000	20.0
		0604		1.0	1900	25.5	0822		7.0	12000						
NP-06R	94.0	0403		0.4	700	10.0	0722		4.0	8500	32.0	0924		7.0	11500	22.5
		0521		1.9	3500	19.0										
		0529		2.0	2200	25.0										
NP-07R	92.1	0529		2.0	3500	26.0	0722		4.0	8800	32.0	0924		7.0	13500	23.0
NP-08R	90.0	0529		1.0	2450	25.0	0722		5.0	11000	30.0					
NP-09R	88.3	0403		3.0	2000	9.5	0722		5.5	10000	27.0	0924		8.2	13800	24.0
		0529		1.8	3200	27.0										
NP-10R	87.6	0403		2.3	2500	12.0	0709		5.0	8600	29.0	0924		8.2	13000	23.0
		0527		2.0	3100	22.0	0722		5.5	10000	29.0					
		0604		3.0	4700	25.0										
NP-11R	87.2						0722		4.5	7000	30.0	0923		8.4	14500	26.5
NP-12R	86.7						0722		5.0	10000	30.0					
NP-13R	86.0						0722		5.0	10000	30.0	0923		8.0	14000	25.5
NP-14R	84.3						0722		5.5	10500	29.0					
NP-15R	82.5	0527		2.0	3400	20.0	0722		6.0	11000	28.0	0923		8.3	14500	26.0
NY-01T-1	2.2	0529		1.0	1800	24.0						1006		7.0	11000	18.0
NY-01T-2	1.6	0521		1.5	2300	21.0						0911		7.2	11800	24.0
		0529		0.3	750	24.0										
NY-01T-3	2.1	0403		0.8	1200	13.0	0709		3.8	6100	25.0					
		0521		1.5	2700	20.0	0723		3.5	6500	27.0					
		0701		0.5	1100	26.0										
NY-02T-1	4.5	0529		0.3	750	24.0						1006		7.0	10000	18.0
NY-02T-2	3.9	0529		0.5	1100	26.0	0822		5.5	10000		0911		6.2	10000	22.0
NY-02T-3	3.2	0521		1.0	1500	20.0	0723		3.0	6000	29.0					
NY-03T-1	5.4											1008		6.0	8500	16.5
NY-03T-2	5.8	0527		1.1	1980	19.0	0723		3.9	7500	28.5					
		0529		0.0	380	23.0										

*SEE FIGURE 3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
NY-03T-3	5.5	0403		0.0	330	13.5	0714		2.5	5100	30.0	0911		5.5	9000	23.0
		0428		0.2	455	14.0	0822		4.0	8000						
		0521		0.0	345	18.0										
		0604		0.1	600	25.0										
		0701		2.0	3150	26.0										
NY-04T-1	7.0	0529		2.0	200	22.0						1008		4.5	8000	17.0
NY-04T-2	8.0						0783		3.0	6200	28.0					
NY-04T-3	8.2	0529		0.0	700	22.0						0911		5.0	8000	22.0
PO-01T-1	1.6	0527		2.0	2850	23.0	0722		5.5	10000	30.0	0923		8.3	14900	26.5
PO-01T-2	2.0	0403		2.5	2100	12.5	0709		5.1	8500	29.0					
		0604		1.8	3000	25.0	0709		5.0	8000	29.0					
		0618		4.5	7500	22.5										
PO-01T-4	2.3											0923		8.5	14800	26.0
PO-01T-5	2.4											0924		7.2	12000	23.0
PO-02T-2	4.1	0403		1.0	1325	15.0	0701		4.5	8000	26.0	0911		8.0	13400	23.5
		0527		1.5	2750	22.0										
PO-02T-3	3.4						0701		4.0	7500	26.0	0923		7.5	15000	27.0
							0722		5.0	11000	33.0					
PO-03T-1	5.7	0604		1.5	2750	26.0						0924		8.0	13000	23.0
PO-03T-2	5.7	0604		1.0	1500	26.0	0709		4.5	5200	30.0	1017		8.0	8700	17.5
		0609		4.5	6000	28.0	0714		4.0	8000	30.0					
		0618		3.0	4500	21.5	0722		4.0	8500	30.0					
							0728		3.7	7000	27.5					
WO-01R	67.7	0617		8.0	13000	23.0	0730		8.5	16000	28.0	1008		9.0	17000	19.0
							0731		9.0	15500	29.0					
							0827		8.0	16000						
WO-02R	65.9	0617		7.5	12500	23.0	0730		8.5	16200	28.5	1008		10.0	17000	21.0
WO-03R	63.8	0617		8.0	13000	23.0	0730		9.0	16400	28.5	1008		10.0	17000	21.0
WO-04R	62.0	0617		7.5	12500	23.0	0730		9.3	17000	29.0	1008		9.0	16000	21.0
WO-05R	60.2	0617		8.0	13000	22.5	0730		10.0	17000	28.0	1008		10.8	18800	19.5
WO-06R	56.8	0617		8.5	14500	23.5	0730		10.0	17250	29.0	1007		12.0	17000	18.0

*SEE FIGURES 3-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-07R	55.1	0617		8.0	14000	24.0	0730		10.0	17000	30.0	1007		11.0	17000	17.0
WO-08R	53.8	0617		8.0	14000	24.0	0730		9.8	17800	30.0	1007		11.6	17000	17.0
WO-09R	52.0	0617		8.0	14000	24.0	0730		9.5	18000	30.0	1007		11.0	18500	18.0
WO-10R	51.1	0617		9.5	16000	24.0	0730		10.0	18000	30.0	1007		12.0	19000	18.0
WO-01T-1	1.2	0617		8.5	14000	23.0	0730		9.7	17200	28.0					
WO-01T-2	2.1						0730		10.0	18200	30.0	1008		12.0	19000	20.0
WO-02T-1	3.3	0617		8.3	14000	23.5	0730		9.5	17200	28.0					
WO-02T-2	3.9						0730		9.3	16500	27.0	1007		12.5	18000	18.0
WO-03T-1	6.0	0617		8.0	13500	23.5	0730		10.0	17000	29.0					
WO-03T-2	5.4						0730		10.0	17000	29.0					
WO-03T-3	5.4						0730		9.5	16900	26.5	1007		12.5	18500	19.0
WO-04T-1	7.0	0617		8.0	13200	24.0	0730		11.0	15900	28.0	1007		12.0	18000	18.0
WO-04T-2	7.7						0730		10.0	17000	28.5					
WO-05T-1	9.7	0617		7.0	12500	25.0	0730 0731 0827		10.0 8.5 11.0	16500 16000 19000	30.0 30.0					
WO-05T-2	9.6						0730		10.0	17300	28.0	1007		11.3	16500	18.0
WO-06T-1	11.1	0617		7.0	12000	25.0	0730		10.0	17000	30.5					
WO-06T-2	12.1						0730		9.5	17000	29.5	1007		12.6	16000	17.0
WO-07T-1	12.6	0617		6.0	10000	25.0	0731		8.0	15000	31.0					
WO-07T-2	12.9						0731		8.2	15000	29.0	1007		11.5	16000	17.0
WO-08T-1	15.3	0617		7.0	8000	25.0	0731 0827		8.0 10.5	14300 18500	28.0					
WO-08T-2	14.6						0731		7.5	13500	31.0	1007		12.0	16000	18.0
WO-09T-1	16.9	0617		5.0	9000	25.0	0731		6.5	12200	31.0					
WO-09T-2	16.7						0731		7.0	13000	29.0	1007		11.5	16000	18.0

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-10T-1	18.8	0617		2.0	4000	25.0	C731		5.0	9000	30.0	1007		10.0	14000	17.0
SM-01R	29.1	0617		11.0	16500	20.0	0729		10.5	20000	28.0	1009		12.0	22000	19.0
SM-02R	27.7	0617		11.0	17000	20.0	0729		10.5	20000	28.5	1009		12.0	27000	19.0
SM-03R	25.8	0617		11.0	17000	20.0	0729		10.5	20000	28.5	1008		12.5	22000	18.5
SM-04R	23.9	0617		11.0	17000	20.0	0729		11.0	20000	28.0	1008		12.5	22000	19.0
SM-05R	22.8	0617		11.0	16000	20.0	0729		11.0	20000	29.5	1008		12.5	22000	19.0
SM-06R	19.7	0617		11.5	17500	20.0	0729		11.0	20500	29.0	1009		16.2	23000	20.0
SM-07R	18.0	0617		12.0	17500	20.0	0729		11.0	21500	29.0	1009		12.5	22000	18.0
SM-08R	16.3	0617		12.0	17500	20.0	0729		13.0	24800	31.0	1009		12.5	22000	18.0
SM-09R	13.9	0617		12.0	18000	20.0	0729		11.5	23500	30.0	1009		12.0	21000	18.0
SM-10R	12.8	0617		12.0	18000	20.0	0729		11.0	21500	32.0	1009		17.0	21000	20.0
SM-01T-1	3.0	0617		11.0	17000	20.0	0729		11.2	20500	28.5	1009		12.0	22000	20.0
SM-02T-1	4.1	0617		11.0	17000	21.0						1008		13.0	23000	10.0
SM-02T-2	3.4						0729		11.5	20500	28.0					
SM-03T-1	5.5	0617		11.0	17000	22.0						1009		12.5	22000	19.0
SM-03T-2	6.5						0729		12.0	20500	29.5	1009		12.5	22000	19.0
SM-04T-1	7.7	0617		11.0	17000	22.0	0729		11.5	20500	28.0	1009		16.0	22000	19.0
SM-04T-3	7.4	0617 0625		11.0 10.0	17000 17000	21.0 24.5	C714		12.0	19800	24.0					
SM-05T-1	10.3	0617		11.0	17000	22.0										
SM-05T-2	9.1						0729		11.8	20500	28.5					
SM-05T-3	9.0											1009		15.0	23000	21.0
SM-06T-1	10.8	0617		11.0	17000	22.0	0729		11.0	20000	28.5	1009		15.0	21000	20.0
SM-07T-1	12.4	0617 0625		10.5 10.0	16000 17500	21.0 25.0	C714		11.2	19000	26.0					

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-8. WATER QUALITY DATA, 1980, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER	SPRING				SUMMER				FALL			
	KM	DATE	PH	SAL	COND	TEMP	DATE	PH	SAL	COND	TEMP	DATE	PH	SAL	COND	TEMP
SM-07T-2	13.3						0729		7.5	13000	28.0	1009		10.5	20000	20.0
SM-07T-3	13.1						0729		9.5	18500	28.0					
SM-08T-1	14.8	0617		10.0	15000	22.0	0729		7.5	14000	27.5	1009		14.0	19000	21.0
NO-01T-4	0.9						0827		8.5	15000						

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
RI-01R	180.6						0806		0.0	340	25.0					
NA-01T-1	176.3	0425		0.0	174	15.0										
		0428		0.0	290	16.0										
		0506		0.0	210	18.5										
GI-01R	172.2	0422		0.0	190	15.0	0721		0.0	345	25.0					
		0425		0.0	170	14.0										
		0428		0.0	210	17.5										
		0506		0.0	210	17.5										
		0506		0.0	220	20.0										
		0513		0.0	218	20.0										
		0513		0.0	230	22.0										
		0521		0.0	215	17.0										
		0625		0.0	270	28.0										
MC-01R	176.9	0422		0.0	170	16.0	0714		0.0	300	26.0	1020		0.0	280	14.0
		0425		0.0	130	14.0										
		0428		0.0	200	17.0										
		0506		0.0	200	18.0										
		0513		0.0	220	21.0										
		0521		0.0	215	17.5										
		0527		0.0	200	23.0										
		0610		0.0	210	25.5										
PY-01R	166.0	0422		0.0	170	15.0	0721		0.0	235	25.0	0928		0.0	370	19.0
		0425		0.0	180	14.0	0805		0.0	350	25.0	1020		0.1	335	14.0
		0425		0.0	175	14.0										
		0428		0.0	210	17.5										
		0506		0.0	235	20.0										
		0506		0.0	240	16.0										
		0513		0.0	230	21.5										
		0513		0.0	242	20.5										
		0521		0.0	240	17.5										
		0625		0.0	260	29.0										
PY-02R	163.9											0928		0.0	365	19.0
PY-03R	162.0	0527		0.0	230	24.0						0928		0.4	370	16.0
PY-04R	160.4	0527		0.0	225	23.0						0928		0.4	380	19.0
PY-05R	158.7	0528		0.0	330	17.5						0928		0.2	380	19.0
PY-06R	157.9	0528		0.0		18.0						0928		0.5	380	20.0
PY-07R	156.0	0528		0.0	230	18.0						0928		0.5	390	19.0

*SEE FIGURE 2 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
PY-08R	154.2	0422		0.0	150	16.0	0710		0.0	250	25.0	0928		0.5	390	19.5
		0425		0.0	150	13.0	0721		0.0	250	27.0	1009		0.0	1500	20.0
		0428		0.0	185	18.3	0806		0.0	390	25.0					
		0506		0.0	210	20.0										
		0506		0.0	210	18.5										
		0513		0.0	230	26.0										
		0514		0.0	218	18.0										
		0521		0.0	215	18.5										
		0528		0.0	243	17.5										
		0625		0.0	240	30.0										
PY-09R	152.2	0528		0.0	220	17.5						0928		0.5	430	19.5
PY-10R	149.2											0928		0.5	445	19.5
PY-01T-1	2.0	0528		0.0	260	17.0						0928		0.0	375	19.0
PY-02T-1	3.0											0928		0.0	405	19.5
PM-01R	147.9											0928		0.5	500	19.0
PM-02R	146.0	0529		0.0	220	23.0						0928		1.0	650	19.5
PM-03R	144.1	0529			220	25.5						0928		1.0	700	19.5
PM-04R	142.7	0529			220	24.0						0928		0.8	700	19.0
PN-01R	141.0											0928		1.0	900	14.0
PN-02R	139.1	0529		0.0	220	22.0						1013		2.5	3500	15.0
PN-03R	138.0	0529		0.0	220	22.0										
PN-04R	134.4	0528		0.0	220	22.0						1013		3.5	5000	15.0
PN-05R	133.1	0529		0.0	225	22.0										
PN-06R	131.9	0529			235	25.0										
PN-07R	130.4	0601		0.0	225	23.0						1013		4.0	6000	15.0
PN-08R	128.6	0601		0.0	230	22.0										
PN-10R	124.2											1013		5.0	8000	15.0
PN-01T-3	1.5	0528			200	22.0						1007		1.2	2000	
PN-01T-4	2.1	0529		0.0	225	22.0										

*SEE FIGURES 2-3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
MN-02T-2	3.0	0422		0.0	310	16.0						1007		1.5	1900	20.5
MN-02T-3	3.3	0529		0.0	220	25.0										
MN-03T-1	4.3											0929		1.8	2300	19.0
MN-03T-2	4.5	0529		0.0	210	25.0										
MN-03T-3	4.5											1007		1.0	1900	17.0
MP-01R	122.6	0601		0.0	270	21.0										
MP-03R	118.0											1013		8.0	11500	14.0
MP-04R	116.9	0601		0.8	1500	21.0						1013		8.0	11000	14.0
MP-07R	110.8											1013		8.0	12000	14.0
MP-08R	108.8											1013		8.0	12000	14.0
MP-10R	103.6											1013		8.0	11500	13.0
NP-01R	101.6											1005		7.0	11300	19.0
NP-02R	99.5						0730		7.5	12000	25.0					
NP-03R	97.8						0730		8.0	12000	27.0					
NP-04R	96.3						0730		7.5	12000	25.0					
NP-05R	95.0						0730		7.5	10000	25.0					
NP-06R	94.0	0421		4.0	6000	21.0	0730		7.0	9500	21.0	1005		8.5	13000	19.0
		0430		7.2	10000	17.0	0817		8.3	15000	25.0					
		0512		6.5	10000	19.0										
		0520		6.0	9000	17.5										
		0610		3.0	6000	25.0										
NP-08R	90.0	0609		5.3	9200	25.0										
NP-09R	88.3											1005		11.0	16500	19.0
NP-10R	87.6	0602		6.3	9900	20.5										
NP-11R	87.2	0602		6.8	11000	21.2	0805		10.0	16500	30.0					
NP-12R	86.7	0602		6.6	10500	21.5						1005		12.0	17000	18.0

*SEE FIGURE 3 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
NP-13R	86.0	0602		6.5	10600	22.0										
NP-14R	84.3	0602			13700	18.0										
NP-15R	82.5	0602		10.5	15200	17.5						1005		12.0	18000	18.0
NY-01T-3	2.1	0609		4.0	7000	27.0						1007		9.5	13500	16.5
NY-02T-1	4.5	0609		4.5	8000	27.0						1005		9.0	13000	22.0
NY-02T-3	3.2											1007		10.0	14500	17.0
NY-03T-2	5.8											1007		8.5	11500	16.0
NY-03T-3	5.5	0421		5.0	7000	20.0	0714		5.0	8500	28.0					
		0520		5.2	7200	17.0	0730		4.5	8000	20.0					
		0609		4.0	8000	27.0	0817		6.2	11200	24.0					
		0610		4.0	7000	26.0										
NY-04T-1	7.0	0609		4.2	8000	27.0										
NY-04T-2	8.0											1007		7.8	11000	17.0
PO-01T-1	1.6	0602		6.8	11100	21.2	0805		9.5	17000	28.0					
PO-01T-2	2.0	0602		6.7	10800	21.5										
PO-01T-3	2.1	0602		6.3	10100	21.0						1005		13.5	17500	
PO-01T-4	2.3	0602		6.2	10000	21.5						1005		13.0	17000	18.0
PO-01T-5	2.4	0602		6.0	10000	20.5	0805		9.5	16500	25.0					
PO-02T-1	3.6	0602		6.0	9500	19.0										
PO-02T-2	4.1	0602		5.2	8500	21.9						1005		11.0	25000	17.0
PO-02T-3	3.4	0602		6.2	10000	21.0	0805		9.0	11500	27.5					
PO-03T-1	5.7	0602		4.8	7900	22.0	0805		7.5	14500	30.0					
PO-03T-2	5.7	0421		5.5	9000	20.0										
		0430		5.5	9000	20.0										
		0512		6.5	10000	19.0										
		0602		5.8	9300	21.9										
		0606		6.5	10000	19.0										
NO-01R	67.7	0520		8.0	14000	16.0	0715		12.0	13500	25.0	1005		13.0	17000	22.0

*SEE FIGURES 3-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
		0610		9.5	16000	23.0	0729		13.0	20500		1014		15.0	20000	14.0
		0612		8.0	13000	24.0	0817		13.5	23000						
MO-02R	65.9	0612		9.5	16000	24.0						1014		15.0	19000	14.0
MO-03R	63.8	0612		10.0	16500	24.0						1014		15.0	19500	14.0
MO-04R	62.0	0612		10.0	16500	23.0						1014		15.0	20000	14.5
MO-05R	60.2	0612		11.0	19000	24.0						1014		12.3	21000	13.8
MO-06R	56.8	0612		11.0	17000	24.0						1014		17.5	23000	13.5
MO-07R	55.1	0612		10.5	17500	25.0						1014		20.0	23000	13.5
MO-08R	53.8	0612		10.2	17200	24.0						1014		17.0	23000	14.0
MO-09R	52.0	0612		11.0	18200	24.0						1014		15.5	21000	13.5
MO-10R	51.1	0612		12.5	20800	24.0										
MO-01T-1	1.2											1014		16.0	22000	13.0
MO-01T-2	2.1	0612		11.0	19000	25.0										
MO-02T-1	3.3	0520		11.0	17500	16.5	0729		14.0	22500	14.0	1014		15.5	21500	14.5
		0608		10.5	19200	26.0	0817		12.5	21000	23.0					
		0610		10.2	18000	24.0										
MO-02T-2	3.9	0608		11.0	20000	27.0										
MO-03T-1	6.0											1014		15.5	21500	16.0
MO-03T-2	5.4	0608		10.5	19200	28.0	0729		13.5	24000	19.0					
MO-03T-3	5.4	0608		10.0	20000	29.0										
MO-04T-1	7.0	0608		11.0	20000	28.0						1015		18.0	21000	12.0
MO-04T-2	7.7	0608		11.0	19000	27.0										
MO-05T-1	9.7	0608		11.0	18000	27.0	0729		13.5	22500	25.0	1014		16.5	21000	16.0
MO-05T-2	9.6	0608		11.5	21500	25.0										
MO-06T-1	11.1	0608		9.0	15500	26.0						1014		16.0	21000	15.0
MO-06T-2	12.1	0608		10.2	17000	25.0										

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
WO-07T-1	12.6	0608		11.0	18000	25.0						1014		16.0	21000	14.5
WO-07T-2	12.9	0608		10.5	17800	25.0	0725		14.0	22000	26.0					
WO-08T-1	15.3	0606		10.0	16500	25.0	0725		13.0	21500	27.5					
WO-08T-2	14.6	0608		10.0	16000	25.0						1014		15.0	20000	15.0
WO-09T-1	16.9	0608		8.0	13800	24.0	0725		12.0	20000	25.0	1014		14.5	19500	15.0
WO-09T-2	16.7	0608		9.6	16000	24.0										
WO-10T-1	18.8	0608		8.0	13800	25.0						1014		14.0	18500	14.0
SM-01R	29.1											0930		19.5	27000	19.0
SM-02R	27.7											0930		18.5	26000	19.5
SM-03R	25.8											0930		19.5	27300	18.5
SM-04R	23.9	0605		13.5	21400	24.0						0930		19.0	26800	20.0
SM-06R	19.7	0605		14.5	23000	23.5						0930		20.0	27500	18.0
SM-07R	18.0	0605		14.5	23200	24.0						0930		20.0	27800	18.5
SM-08R	16.3	0605		15.0	23000	24.0						0930		23.2	27000	20.0
SM-09R	13.9	0605		14.5	23500	24.0						0930		23.0	26500	17.0
SM-10R	12.8	0605		14.7	23000	23.0						0930		19.0	27500	19.0
SM-01T-1	3.0	0605		14.2	22800	23.0						0930		20.7	27200	19.0
SM-01T-2	1.2											0930		18.5	27000	20.0
SM-02T-1	4.1	0605		14.5	23000	24.0						0930		20.0	27300	19.0
SM-03T-2	6.5											0930		21.5	26500	19.0
SM-03T-4	6.1	0605		14.0	23500	24.0										
SM-04T-1	7.7											1001		20.0	24000	19.5
SM-04T-3	7.4	0605		14.5	23000	24.0						1001		17.5	26500	21.0
SM-04T-4	7.8											1001		17.5	26500	21.0

*SEE FIGURE 4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-9. WATER QUALITY DATA, 1981, TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SALINITY IN PARTS PER THOUSAND, CONDUCTIVITY IN MICROMHOS, AND TEMPERATURE IN DEGREES CELSIUS)

TRANSECT*	RIVER KM	SPRING DATE	PH	SAL	COND	TEMP	SUMMER DATE	PH	SAL	COND	TEMP	FALL DATE	PH	SAL	COND	TEMP
SM-05T-1	10.3											1001		16.0	21000	22.0
SM-05T-2	9.1											1001		17.0	26000	21.0
SM-05T-3	9.0	0604		14.5	23500	25.0										
SM-06T-1	10.8											1001		25.5	25000	20.0
SM-06T-2	10.4	0604		14.5	23200	24.0										
SM-07T-1	12.4	0604		14.0	23000	24.0						1001		15.5	25000	21.0
SM-07T-3	13.1											1001		16.5	25000	21.0
SM-08T-1	14.8	0604		9.5	17500	28.0						1001		11.5	18000	21.0
NB-01R	134.5	0428		0.0	198	21.0	0714		0.0	390	28.0	1002		1.0	1320	17.0
		0506		0.0	197	19.0	0721		0.5	800	28.0					
		0513		0.0	210	19.0										
		0513		0.0	223	22.0										
		0521		0.0	235	21.0										
		0610		0.0	240	27.0										
		0625		0.0	340	30.0										
AP-03R	116.1						0721		3.0	4500	26.0					

*SEE FIGURES 3-4 SAL=SALINITY COND=CONDUCTIVITY TEMP=TEMPERATURE

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY
(SECCHI DEPTH IN CENTIMETERS)

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
WC-01R	176.9													0828	55			0422	79	0714	113		
																		0425	72				
																		0428	76				
																		0506	66				
																		0513	83				
																		0521	82				
																		0610	72				
																		0622	60				
																		0630	100				
NA-01T-1	176.31															1014	61	0428	35				
																		0506	74				
GI-01R	172.24																	0422	55	0721	63		
																		0425	50				
																		0428	30				
																		0506	45				
																		0506	53				
																		0513	63				
																		0513	32				
																		0622	43				
																		0630	45				
PY-01R	166.0	0525	51	0801	64			0530	60			0606	57	0721	77	1014	85	0422	69	0721	72		
												0626	48	0809	45			0425	49	0805	49		
														0813	58			0425	50				
																		0428	49				
																		0506	81				
																		0506	40				
																		0513	66				
																		0521	66				
																		0625	50				
																		0630	92				
PY-02R	163.9									0911	24											0928	56
PY-03R	162.0							0530	45	0911	27							0527	29				
PY-04R	160.4							0530	50	0911	25							0527	74			0928	73
PY-05R	158.7	0525	63	0801	68			0530	45	0911	24			0710	53			0528	71			0928	48
														0809	35								
														0813	65								
PY-06R	157.9	0526	51					0530	53	0911	31	0606	45					0528	103			0928	45
PY-07R	156.0			0801	61			0530	51	0911	20							0528	74			0928	42

*SEE FIGURE 2 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SECCHI DEPTH IN CENTIMETERS)

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
PY-08R	154.2			0801	58			0530	38	0911	24			0728	40	1014	85	0425 0428 0506 0506 0514 0528 0625 0630	38 96 50 57 74 74 63 52	0721 0806	85 55	0928 1020	63 89
PY-09R	152.2			0801	66			0530	46	0911	28							0528	58			0928	50
PY-10R	149.2	0526	52	0801	58			0530	41	0911	31											0928	39
PY-01T-1	2.0	0525	42							0911	31	0606	30	0809	35			0528	50			0928	35
PY-01T-2	2.3			0801	21			0530	35			0522 0606 0606 0618 0626	55 39 38 48 32	0710 0809 0813	45 36 48			0528	50				
PY-02T-1	3.0			0801	14					0911	40											0928	34
PM-01R	147.9											0603	48	0820	40			0528	50			0928	30
PM-02R	146.0											0603	50	0820	45			0529	44			0928	30
PM-03R	144.1											0603	52	0820	41			0529	69				
PM-04R	142.7											0603	58					0529	63			0928	35
MN-01R	141.0	0601	52	0802	69					0912	34											0928	33
MN-02R	139.1							0530	36	0912	30							0529	55				
MN-03R	138.0							0530	43	0912	31							0529	51				
MN-04R	134.4							0530	43	0912	33							0528	56				
MN-05R	133.1	0601	36	0802	48					0912	35					1017	46	0529	54				
MN-06R	131.9	0530	44					0531	51	0912	41	0630	35	0710 0809 0813	49 48 34			0529	50				
MN-07R	130.4							0531	42	0924	64	0630	43					0601	49				

*SEE FIGURES 2-3 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SECCHI DEPTH IN CENTIMETERS)

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
MN-08R	128.6									0924	60							0601	38				
MN-09R	126.8							0531	43	0924	59	0631	39										
MN-10R	124.2	0531	42	0802	53	1012	46	0531	44	0924	54	0630	29										
MN-01T-1	1.6	0530	34	0802	38			0530	60	0912	39												
MN-01T-2	1.7							0530	60			0429	45										
MN-01T-3	1.5							0530	60	0912	47							0528	52			1007	36
MN-01T-4	1.6							0530	70			0606	35	0710 0809 0813	47 46 33			0529	51				
MN-02T-1	3.3			0802	33			0530	50														
MN-02T-2	3.0	0530	36					0530	45	0919	48											1007	32
MN-02T-3	3.3			0802	37			0531	42	0919	47	0522 0606 0626	50 33 35	0710 0809	39 35	1017	45	0529	49				
MN-03T-1	4.3	0531	42	0802	41			0531	43			0606 0626	29 35	0710 0813	40 30							0929	33
MN-03T-2	4.5							0531	47	0919	46							0529	47				
MN-03T-3	3.6							0531	47	0919	24			0809 0813	50 33							1007	38
MN-04T-1	6.8	0530	32	0802	33			0531	50	0919	45	0603	48	0710 0809 0813	50 50 64	1017	55						
MP-01R	122.6											0603	100					0601	40				
MP-02R	119.6											0603	67										
MP-04R	116.9											0701	44					0601	39				
MP-05R	115.3													0813	50								
MP-06R	112.9											0701	64	0813	41			0603	36				
MP-07R	110.8											0701	46	0813	53								

*SEE FIGURE 3 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED
(SECCHI DEPTH IN CENTIMETERS)

TRANSECT*	RIVER KM	1978 SPRING DATE	SEC	1978 SUMMER DATE	SEC	1978 FALL DATE	SEC	1979 SPRING DATE	SEC	1979 FALL DATE	SEC	1980 SPRING DATE	SEC	1980 SUMMER DATE	SEC	1980 FALL DATE	SEC	1981 SPRING DATE	SEC	1981 SUMMER DATE	SEC	1981 FALL DATE	SEC
MP-08R	108.8											0701	46	0813	55			0603	31				
MP-09R	106.2											0701	33	0813	37			0603	27				
MP-10R	103.6											0701	27	0813	42			0603	33				
NP-01R	101.6	0606	24	0807	25	0926 1002	53 37			1012	33	0529	50			1006	51					1005	30
NP-02R	99.5			0807	28	1002	41	0606	36	1012	29	0529	43			1006	51						
NP-03R	97.8					1002	46	0606	36	1004	38	0529	47			1006	47	0603	31				
NP-04R	96.3					1002	50			1012	37			0709	46	1006	52	0603	32	0730	39		
NP-05R	95.0	0605	39			1002	47					0529 0604	50 24			1006	48			0730	53		
NP-06R	94.0					0926 1002	66 42			1012	37	0403 0521 0529	28 37 48	0722	39	0924	57	0421 0512 0520 0609 0610	33 50 40 48 46	0817	43	1005	40
NP-07R	92.1					1002	52	0606	43	1012	31	0529	49	0722	23	0924	42	0602	47				
NP-08R	90.0									1012	38			0722	41	0923	62	0609	35				
NP-09R	88.3									1012	46	0529	43			0924	50	0602	46			1005	30
NP-10R	87.6			0809	19	0925	64			1012	33	0527	42	0709 0722	24 34	0924	49	0602	41				
NP-11R	87.2	0526	34	0809	21			0607	46			0527	71	0722	52	0923	52			0805	40		
NP-12R	86.7							0607	48			0527	47	0722	46	0923	48	0602	60			1005	75
NP-13R	86.0													0722	47	0923	53	0602	49			1005	75
NP-14R	84.3							0607	38					0722	47	0923	48	0602	54			1005	110
NP-15R	82.5	0606	50	0808	56	0927	140	0607	41	1011	50			0722	82	0923	81	0602	102			1005	93
NY-01T-1	2.2	0605	32	0807 0808	28 28	1002	51	0604	39			0529	41			1006	44						

*SEE FIGURE 3 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
NY-01T-2	1.6											0521 0529	41 47										
NY-01T-3	2.1							0604	44	1012	44	0403 0521 0701	41 47 29									1007	30
NY-02T-1	4.5			0808	28	1002	50	0604	45			0529	47			1006	42	0609	53			1005	38
NY-02T-2	3.9	0605	32									0529	29	0822	33								
NY-02T-3	3.2									1012	37	0521	50									1007	35
NY-03T-1	5.4	0605	34	0807	30	1002	46	0604	43	1012	49	0529	32			1008	37						
NY-03T-2	5.8	0605	47					0604	47	1012	50	0527 0529	33 32*										
NY-03T-3	5.5							0604	46	1012	53	0403 0701	49 34	0714 0822	30 34			0421 0520 0609 0610	41 54 53 57	0714 0817	28 35		
NY-04T-1	7.0	0605	34	0807	30	1002	40	0604	42	1012	56	0521 0529	33 33			1008	43	0609	55				
NY-04T-2	8.0							0604	46			0529	33									1007	35
NY-04T-3	8.2			0807	10	0929	58	0604	44			0529	33										
PO-01T-1	1.6	0523	35	0808	58			0605	52			0527	43			0923	48	0602	60	0805	53		
PO-01T-2	2.0							0605	67			0403 0604 0618	44 24 56	0709 0709	39 40			0602	50				
PO-01T-3	2.1	0523	37					0605	58			0527	48					0602	62			1005	32
PO-01T-4	2.3							0605	54			0527	42			0923	52	0602	40			1005	50
PO-01T-5	2.4	0523	37					0605	67			0527	45					0602	35	0805	66		
PO-02T-1	3.6			0808	58	0928	58	0605	42			0527	36					0602	45				
PO-02T-2	4.1	0525	50					0605	49			0403 0527	19 45					0602	43			1005	32

*SEE FIGURE 3 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
PO-02T-3	3.4							0605	57			0527	50	0701 0722	30 50	0923	50	0602	49	0805	63		
PO-03T-1	5.7	0526	51					0605	42			0604	22			0924	48	0602	66	0805	52		
PO-03T-2	5.7			0808	43			0605	46	1011	50	0604 0609 0618	25 29 38	0709 0714 0722	32 35 38	1017	50	0421 0430 5012 0602 0606	58 50 42 50 42				
NO-01R	67.7			0814	100			0607	50	1004	104	0617	117	0730 0731 0827	92 109 140	1008	129	0610 0612 0630	50 85 79	0729 0817	49 66	1005 1014	111 111
NO-02R	65.9					1005	163	0607	50	1004	46	0617	124	0730	126	1008	145	0612	91			1014	118
NO-03R	63.8							0607	46	1004	38	0617	118	0730	178	1008	112	0612	92			1014	137
NO-04R	62.0							0607	52			0617	104	0730	71	1008	127	0612	63			1014	136
NO-05R	60.2					1005	152	0607	50			0617	102	0730	57	1008	150	0612	73			1014	111
NO-06R	56.8	0602	57							1004 1004	124 41	0617	62	0730	81	1007	88	0612	97			1014	96
NO-07R	55.1	0602	64									0617	85	0730	53	1007	88	0612	63			1014	101
NO-08R	53.8											0617	75	0730	56	1007	97	0612	79			1014	95
NO-09R	52.0			0816	68					1004	69	0617	96	0730	71	1007	91	0612	85			1014	142
NO-10R	51.1	0602	80	0816	59	1003	107	0607	63	1004	99	0617	81	0730	72	1007	200	0612	72			1014	94
NO-01T-1	1.2					1005	86	0607	42			0617	97	0730	72							1014	96
NO-01T-2	2.1			0815	72					1003	64	0611	90	0730	89	1008	160	0612	94				
NO-02T-1	3.3	0530 0608	70 66			1005	66	0607	50	1003	64	0617	80	0730	51			0520 0608 0610 0630	137 88 62 85	0817	82	1014	86
NO-02T-2	3.9	0531	60					0607	51	1003	53			0730	74	1007	87	0608	68				
NO-03T-1	6.0	0531 0608	45 71			1005	64	0607	50	1003	58	0617	63	0730	69							1014	132

*SEE FIGURES 3-4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
WO-03T-2	5.4	0531	39					0607	58	1003	58			0730	43			0608	65	0729	67		
WO-03T-3	5.4	0531	43									0611	83	0730	76	1007	78	0608	65				
WO-04T-1	7.0	0601 0608	46 71	0815	67	1005	61			1003	46	0617	55	0730	74	1007	72	0608	64			1015	106
WO-04T-2	7.7	0601	50					0607	47	1003	58	0612	55	0730	127			0608	70			1014	84
WO-05T-1	9.7	0601 0608	47 66			1005	81	0607	60	1003	43	0617	54	0730 0731 0827	61 49 50			0608	70	0729	53	1014	93
WO-05T-2	9.6	0601	42											0730	43	1007	50	0608	73				
WO-06T-1	11.1	0608	53			1005	61	0607	42	1003	43	0617	52	0730	64			0608	63			1014	93
WO-06T-2	12.1	0601	44											0730	52	1007	43	0608	49				
WO-07T-1	12.6	0608	46			1005	61			1003	48	0617	51	0731	56			0608	79			1014	92
WO-07T-2	12.9							0608	41			0611	60	0731	66	1007	45	0608	69	0729	50		
WO-08T-1	15.3	0601 0608	39 45			1002 1005	61 53	0608	46	1003	41	0617	48	0731 0827	67 50			0608	92	0729	50		
WO-08T-2	14.6	0602	49					0608	50	1003	48	0612	47	0731	71	1007	60	0608	59			1014	82
WO-09T-1	16.9	0608	35			1005	61	0608	59			0617	49	0731	72			0608	51	0729	50	1014	74
WO-09T-2	16.7							0608	42			0611	50	0731	61	1007	50	0608	64				
WO-10T-1	18.8	0602 0608	40 39			1005	56	0608	46	1003	43	0617	40	0731	57	1007	62	0608	49			1014	53
SM-01R	29.1	0608	126	0726	56	1011	198	0613	124			0617	142			1009	180	0605	167			0930	177
SM-02R	27.7	0608	126					0613	102	1001	102	0617	134			1009	171	0605	165			0930	190
SM-03R	25.8	0608	123					0613	110			0617	97			1008	152					0930	147
SM-04R	23.9	0608	126					0613	120			0617	116			1008	210	0605	139			0930	144
SM-05R	22.8	0608	124			1011	193					0617	103	0729	118	1008	164						
SM-06R	19.7	0608	125									0617	136			1009	97	0605	111			0930	178

*SEE FIGURE 4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
SM-07R	18.0	0608	116									0617	165			1009	93	0605	125			0930	204
SM-08R	16.3	0608	92									0617	198			1009	94					0930	160
SM-09R	13.9	0608	122					0613	135	1002	122	0617	210			1009	63					0930	144
SM-10R	12.8	0608	114	0728	94	1010	213	0613	175	1002	112	0617	192			1009	72	0605	142			0930	163
SM-01T-1	3.0	0606 0608	140 122	0727	92	1011	188			1002	102	0617	147	0729	136	1009	146	0605	119			0930	140
SM-01T-2	1.2	0608	71	0727	114			0613	145			0610	142									0930	140
SM-02T-1	4.1	0608	71	0727	86	1011	183					0617	119			1008	113	0605	95			0930	135
SM-02T-2	3.4	0606	116											0729	123								
SM-03T-1	5.5	0605	103	0727	66	1011	196			1002	127	0617	112			1009	137						
SM-03T-2	6.5	0605	130					0612	117			0609	107	0729	147	1009	137					0930	146
SM-03T-3	5.1			0727	135	1011	168	0613	116														
SM-03T-4	6.1	0606	185															0605	130				
SM-04T-1	7.7	0605 0608	96 135	0727	135	1011	201					0617	135	0729	140	1009	178					1001	190
SM-04T-2	8.3	0605	150					0612	117	1002	150	0609	114										
SM-04T-3	7.4											0609 0617 0625	132 135 96					0605	96			1001	130
SM-05T-1	10.3	0608	170	0726	136	1011	152	0613	107	1002	86	0617	131									1001	160
SM-05T-2	9.1	0606	155					0613	122					0729	155								
SM-05T-3	9.0							0612	81			0609	134			1009	149	0604	110				
SM-06T-1	10.8	0608	154	0726	122	1011	168					0617	117	0729	142	1009	80					1001	170
SM-06T-2	10.4							0613	122			0609	111					0604	93				
SM-07T-1	12.4	0608	145	0726	92	1011	130	0612	86			0617 0625	104 109									1001	130

*SEE FIGURE 4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
SM-07T-2	13.3	0606	130	0726	56							0608	77			1009	78						
SM-07T-3	13.1			0726	43			0612	97	1002	89	0609	106	0729	99							1001	100
SM-08T-1	14.8	0608	104			1011	51	0612	56	1002	41	0617	72			1009	68	0604	69			1001	90
GC-01R	156.1							0626	47	0911	27												
GC-02R	154.2									0911	27												
GC-03R	152.4							0626	49														
GC-04R	151.1							0626	46	0911	30												
GC-05R	149.1							0626	50	0911	27												
GC-06R	147.9									0912	22												
GC-07R	146.7							0626	48	0912	25												
GC-08R	143.0							0626	43	0912	27												
GC-09R	141.1							0626	59	0912	38												
GC-10R	139.5							0626	45	0912	35												
GC-01T-1	2.3							0626	55	0912	29												
GC-01T-2	2.8							0626	54	0912	31												
GC-01T-3	2.7									0912	34												
NB-01R	134.5																	0428 0506 0513 0513 0610 0622	38 24 32 25 50 37	0714	28		
AP-01R	119.3									0924	45												
AP-02R	117.5							0627	51														
AP-03R	116.1									0917	42												
AP-04R	115.3									0917	46												

*SEE FIGURES 2-4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
AP-05R	113.6							0627	64	0917	47												
AP-06R	112.9									0917	43												
AP-07R	111.2							0627	66	0900	51												
AP-08R	110.6									0900	43												
AP-09R	109.8									0917	51												
AP-10R	108.7							0627	61	0917	47												
AP-11R	107.8									0913	48												
AP-12R	106.8							0627	56	0913	42												
AP-13R	105.2							0627	46	0913	42												
AP-14R	103.8									0913	45												
AP-15R	103.0							0627	46	0913	50												
AQ-01T-1	1.3							0627	60	0917	37												
AQ-01T-2	1.3							0627	60	0917	47												
AQ-02T-1	3.7									0917	50												
AQ-02T-2	3.8							0627	56	0917	47												
AQ-03T-1	5.7							0627	46	0917	50												
PC-01T-1	2.0							0627	50	0917	40												
PC-01T-2	2.1							0627	60	0918	42												
PC-02T-1	3.1							0627	49	0917	46												
PC-02T-2	3.1									0917	53												
PC-02T-3	4.1									0917	48												
PC-01R	84.6							0628	43	0924	49												
PC-03R	80.8							0628	38	0924	48												

*SEE FIGURE 3 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 SUMMER DATE	1979 SUMMER SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
PC-04R	78.9							0628	52																
PC-05R	78.1							0628	50																
PC-06R	76.7							0621	46			0925	70												
PC-07R	74.9							0621	50			0925	50												
PC-08R	73.1							0621	52																
PC-09R	71.4							0621	42																
PC-10R	69.7							0621	43			0925	62												
PC-01T-1	2.1											0925	51												
PC-01T-2	2.8											0925	63												
PC-01T-3	1.0							0628	48			0925	61												
PC-02T-1	2.9							0621	46																
PC-02T-2	2.5							0621	45			0925	57												
PC-03T-1	4.5							0621	43																
PC-03T-2	4.9							0621	46			0925	61												
PC-04T-1	6.4							0621	47			0925	62												
NO-01R	55.4							0620	45			0918	51												
NO-03R	53.3											0918	38												
NO-04R	51.7											0917	79												
NO-06R	44.7											0917	86												
NO-07R	43.0											0917	110												
NO-10R	37.6							0620	86			0917	74												
NO-01T-1	2.8							0626	65			0918	130												
NO-01T-2	1.4							0626	50							0827	72								
NO-01T-4	0.9							0626	60																

*SEE FIGURES 3-4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
NO-02T-1	2.0									0918	76												
NO-02T-2	0.8									0917	64												
NO-03T-1	3.9									0918	61												
NO-03T-2	2.8							0620	56														
NO-04T-1	3.8									0918	56												
										0918	51												
NO-04T-2	4.8							0614	40	0918	41												
NO-05T-1	6.6									0918	56												
NO-05T-2	5.2							0614	35	0918	43												
NO-06T-1	6.9									0918	51												
NO-06T-2	7.4							0614	42														
YO-02T-1	3.9							0613	85														
YO-02T-3	4.9							0613	68	0919	38												
YO-03T-2	3.3									0919	76												
YO-03T-5	4.7							0613	79	0919	76												
YO-05T-2	4.4									0919	66												
YO-01R	29.4							0614	93	0918	86												
YO-02R	27.6							0614	100	0918	97												
YO-03R	25.7							0614	96	0918	91												
YO-04R	24.3							0614	87														
YO-05R	22.5							0614	91														
YO-06R	21.1							0614	100	1002	99												
YO-07R	19.2									1002	94												
YO-08R	17.6									1002	107												

*SEE FIGURE 4 SEC=SECCHI DEPTH

TABLE C-10. WATER TRANSPARENCY DATA IN THE TIDAL POTOMAC RIVER AND ESTUARY - CONTINUED

TRANSECT*	RIVER KM	1978 SPRING DATE	1978 SPRING SEC	1978 SUMMER DATE	1978 SUMMER SEC	1978 FALL DATE	1978 FALL SEC	1979 SPRING DATE	1979 SPRING SEC	1979 FALL DATE	1979 FALL SEC	1980 SPRING DATE	1980 SPRING SEC	1980 SUMMER DATE	1980 SUMMER SEC	1980 FALL DATE	1980 FALL SEC	1981 SPRING DATE	1981 SPRING SEC	1981 SUMMER DATE	1981 SUMMER SEC	1981 FALL DATE	1981 FALL SEC
YO-09R	15.7									1002	102												
YO-10R	14.3							0614	86	1002	86												

*SEE FIGURE 4 SEC=SECCHI DEPTH

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		CHLOROPHYLL-A
					DEPTH	ENERGY	DEPTH	ENERGY	
WC-01R-	177	2	0415		AIR	1750			
					SURFACE	1500			
					25	1100			
					50	600			
					75	.375			
					100	200			
					115	175			
					125	135			
					150	78			
					175	.52			
					200	.30			
					225	17			
					230	14			
WC-01R-	177	2	0422		AIR	1700			
					SURFACE	1000			
					10	800			
					20	700			
					30	600			
					40	.500			
					50	400			
					60	.300			
					70	300			
					80	.300			
					90	200			
					100	200			
					110	100			
					120	100			
					130	100			
					140	.80			
					150	.50			
					160	.50			
					170	.50			
					180	.50			
					190	.30			
					200	.25			
WC-01R-	177	2	0425	CL SU BR			AIR	650	
							SURFACE	400	
							20	250	
							40	160	
							60	120	
							70	80	

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
WC-01R-	177	2	0428	SU	AIR	1500			
					SURFACE	1100			
					10	1000			
					20	800			
					30	650			
					40	550			
					50	450			
					60	350			
					70	300			
					80	225			
					90	200			
					100	160			
					110	140			
					120	110			
					130	90			
WC-01R-	177	2	0506		AIR	300			
					SURFACE	225			
					20	150			
					40	95			
					60	35			
					80	22			
					100	24			
					120	14			
					140	10			
					160	6.5			
					180	4.2			
					200	3.0			
					220	1.8			
WC-01R-	177	2	0506		AIR	65			
					SURFACE	53			
					20	28			
					40	18			
					60	12.5			
					80	7.2			
					100	4.5			
					120	2.8			
					140	1.8			
					160	1.2			
					180	0.8			
					200	0.6			
					220	0.4			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
WC-01R-	177	2	0513		AIR	1300			
					SURFACE	950			
					20	650			
					40	400			
					60	265			
					80	180			
					100	110			
					120	85			
					140	55			
					160	40			
					180	25			
					200	13			
WC-01R-	177	2	0521		AIR	1100			
					SURFACE	1000			
					20	630			
					40	525			
					60	350			
					80	250			
					100	165			
					120	115			
					140	80			
					160	45			
					180	30			
WC-01R-	177	2	0622	SU CL WI	AIR	460			28.6
					SURFACE	250			
					20	150			
					40	90			
					60	40			
					80	25			
					100	15			
					120	11			
					140	7			
					160	5			
WA-01R-	176	3	0425	CL SU BR	AIR	700			
					SURFACE	425			
					20	300			
					40	180			
					60	115			
					80	65			
					100	45			
					120	27			
					140	18			
					160	11			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
NA-01R-	176	3	0425	CL SU BR	180	7			
					200	5			
NA-01R-	176	3	0428	SU CL BR	SURFACE	1010			
					10	750			
					20	650			
					30	600			
					40	550			
					50	450			
					60	400			
					70	275			
					80	230			
					90	200			
					100	160			
					110	110			
					120	80			
					130	100			
					140	80			
NA-01R-	176	3	0506	CL	AIR	350	AIR	390	
					SURFACE	300	SURFACE	350	
					20	160	10	270	
					40	125	20	210	
					60	60	30	180	
					80	40	40	170	
					100	28			
					120	20			
					140	12			
					160	8			
					180	6.5			
					200	4.5			
					220	4.0			
					240	3.2			
					260	2.3			
					280	1.8			
					300	1.2			
GI-01R-	172	4	0415	WI	AIR	1650			
					SURFACE	1300			
					25	200			
					50	55			
					75	10			
					100	1.4			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
GI-01R-	172	4	0422	SU CL WI	AIR	1650			
					SURFACE	1500			
					10	1200			
					20	1000			
					30	850			
					40	700			
					50	550			
					60	450			
					70	400			
GI-01R-	172	4	0425	CL SU WI	AIR	550			
					SURFACE	500			
					20	350			
					40	160			
					60	65			
					80	35			
					100	19.5			
					120	11			
GI-01R-	172	4	0428		AIR	1500			
					SURFACE	1000			
					10	800			
					20	400			
					30	250			
					40	150			
					50	80			
					60	45			
					70	25			
					80	13			
GI-01R-	172	4	0506		AIR	550	AIR	430	
					SURFACE	525	SURFACE	400	
					20	280	20	220	
					40	150	40	120	
					60	80	60	55	
					80	40	80	31	
					100	20	100	22	
					120	10	120	12	
					140	5	140	11	
					160	3			
					180	1.6			
					200	0.7			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
GI-01R	172	4	0506	CL	AIR	110			
					SURFACE	63			
					20	44			
					40	22			
					60	12			
					80	6			
					100	3.5			
					120	2.1			
					140	1.3			
					160	0.8			
					180	0.6			
					200	0.5			
GI-01R-	172	4	0513	SU	AIR	1300	AIR	1660	
					SURFACE	1000	SURFACE	1500	
					20	500	20	550	
					40	375	40	155	
					60	100	60	55	
					80	45			
					100	22			
					120	11			
GI-01R-	172	4	0521		AIR	1600	AIR	1500	
					SURFACE	1600	SURFACE	1500	
					20	1200	20	1000	
					40	850	40	740	
					60	530	60	450	
					80	340	80	300	
					100	225	100	190	
					120	150			
					140	90			
					160	53			
					180	35			
					200	24			
					213	16			
GI-01R-	172	4	0622	CL WI	AIR	145			24.8
					SURFACE	80			
					20	42			
					40	25			
					60	11			
					80	5.5			
					100	3.0			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
PY-01R-	166	05	0415	WI	AIR	1550			
					SURFACE	1100			
					25	650			
					50	300			
					75	125			
					100	65			
					112	30			
PY-01R-	166	05	0422	CL	AIR	1500			
					SURFACE	1100			
					10	850			
					20	600			
					30	450			
					40	400			
					50	350			
					60	650			
					70	200			
					80	150			
					90	100			
					100	65			
PY-01R-	166	05	0425	SU BR	AIR	1750			
					SURFACE	1600			
					20	1000			
					40	550			
					60	300			
					80	160			
					100	90			
					120	45			
					140	25			
PY-01R-	166	05	0425	CL SU WI	AIR	1600			
					SURFACE	1200			
					20	450			
					40	200			
					60	110			
					80	50			
					100	35			
					120	9			
PY-01R-	166	05	0428		AIR	1600			
					SURFACE	1400			
					10	1100			
					20	750			
					30	700			
					40	500			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		CHLOROPHYLL-A
					DEPTH	ENERGY	DEPTH	ENERGY	
PY-01R-	166	05	0428		50	450			
					60	350			
					70	280			
					80	200			
					90	160			
					100	110			
					110	100			
					120	70			
					130	50			
					140	35			
					150	32			
					160	20			
PY-01R-	166	05	0506	SU	AIR	1200			
					SURFACE	950			
					20	660			
					40	500			
					60	300			
					80	130			
					100	84			
PY-01R-	166	05	0506	CL	AIR	500			
					SURFACE	440			
					20	240			
					40	120			
					60	60			
					80	35			
					100	21			
					120	11			
					140	6.5			
					160	4.8			
					180	2.2			
					200	1.3			
PY-01R-	166	05	0506		AIR	120	AIR	105	
					SURFACE	100	SURFACE	66	
					20	42	10	45	
					40	20			
					60	11			
					80	6			
					100	2.5			
					120	1.5			
					140	0.7			
					160	0.4			
					180	0.3			
					200	0.15			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
PY-01R-	166	5	0506		220	0.1			
PY-01R-	166	5	0513		AIR	1740	AIR	1800	
					SURFACE	1600	SURFACE	1500	
					20	1200	20	1200	
					40	700			
					60	450			
					80	250			
					100	150			
					120	90			
					140	80			
					160	40			
					180	20			
					200	14			
PY-01R-	166	5	0513		AIR	850	AIR	850	
					SURFACE	850	SURFACE	600	
					20	650	20	390	
					40	350	40	240	
					60	245	60	150	
					80	155	80	85	
					100	90			
					120	50			
					140	38			
					160	29			
					180	18			
					200	10			
					201	8			
PY-01R-	166	5	0521		AIR	1750	AIR	1700	
					SURFACE	1300	SURFACE	1150	
					20	950	20	900	
					40	675	40	610	
					60	460	60	430	
					80	310	80	290	
					100	225			
					120	140			
					140	90			
					160	70			
					180	48			
					245	13			
PY-01R-	166	5	0622	CL WI			AIR	34	23.2

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
PY-06R-	154	6	0415	WI	AIR	1100			
					SURFACE	950			
					25	500			
					50	250			
					75	110			
					100	53			
PY-06R-	154	6	0422	SU	AIR	1600			
					SURFACE	1200			
					10	800			
					20	650			
					30	550			
					40	400			
					50	350			
					60	250			
					70	150			
					80	110			
					90	100			
					100	90			
					110	60			
PY-06R-	154	6	0425	SU CL WI	AIR	700			
					SURFACE	600			
					20	300			
					40	150			
					60	50			
					80	11			
					100	5			
PY-06R-	154	6	0428		AIR	1450			
					SURFACE	1400			
					10	1200			
					20	900			
					30	800			
					40	700			
					50	400			
					60	350			
					70	275			
					80	200			
					90	150			
					100	150			
					110	95			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		CHLOROPHYLL-A
					DEPTH	ENERGY	DEPTH	ENERGY	
PY-08R-	154	6	0506		AIR	690	AIR	650	
					SURFACE	520	SURFACE	450	
					20	300	20	340	
					40	160	40	250	
					60	110	60	170	
					80	62	70	130	
					100	38			
					120	21			
					140	12			
					160	7			
					170	4			
PY-08R-	154	6	0506	CL	AIR	190	AIR	230	
					SURFACE	110	SURFACE	180	
					20	78	20	100	
					40	56	30	70	
					60	39			
					80	22			
					100	13			
					120	5.7			
PY-08R-	154	6	0513		AIR	1650	AIR	1660	
					SURFACE	1575	SURFACE	1600	
					20	1375	20	1200	
					40	1000	40	970	
					60	750	50	800	
					80	475			
					100	310			
					120	200			
					140	115			
					160	95			
					180	69			
					200	45			
PY-08R-	154	6	0514	SU	AIR	1150	AIR	1150	
					SURFACE	1300	SURFACE	1150	
					20	750	20	790	
					40	550	40	600	
					60	375	50	500	
					80	250			
					100	130			
					120	83			
					140	64			
					160	35			
					180	24			
					200	15			

*SEE FIGURE 2

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
PY-08R-	154	6	0521		AIR	1750	AIR	1840	
					SURFACE	1750	SURFACE	1700	
					20	1300	20	1400	
					40	850	40	1150	
					60	550	60	730	
					80	280			
					100	180			
					120	110			
					140	.60			
					160	.43			
					180	25			
					200	13			
MN-02T-2	3	11	0416		AIR	1750			
					SURFACE	1600			
					25	650			
					50	.300			
					75	120			
					100	.50			
					110	.20			
MN-02T-2	3	11	0422	SU CL	AIR	1700			
					SURFACE	1300			
					10	750			
					20	.500			
					30	400			
					40	.300			
					50	200			
					60	100			
					70	100			
					80	.60			
					90	.50			
					100	.30			
					110	.20			
					120	15			
					130	10			
MN-04T-2	7	12	0416	SU BR	AIR	1800			
					SURFACE	1400			
					25	900			
					50	.550			
					75	.300			
					100	162			
					125	.90			
					150	.50			

*SEE FIGURES 2-3

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
MN-04T-2	7	12	0416	SU BR	175	.30			
					200	15			
					225	7.5			
NP-06R-	94	17	0416		AIR	800			
					SURFACE	600			
					25	300			
					50	140			
					75	60			
					100	17			
					125	8			
					135	4			
NP-06R-	94	17	0421		AIR	1700			
					SURFACE	1200			
					10	850			
					20	550			
					30	450			
					40	350			
					50	300			
NP-06R-	94	17	0430	CL RA			AIR	100	
							SURFACE	85	
							20	45	
NP-06R-	94	17	0512	CL BR	AIR	205			
					SURFACE	150			
					20	85			
					40	50			
					60	30			
					80	17			
					90	14			
NP-06R-	90	18	0609	CL	AIR	275			
					SURFACE	150			
					20	75			
					40	30			
					60	25			
					80	11			
					100	5.5			
					120	3.2			
					140	1.7			
					160	0.9			

*SEE FIGURE 3

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
NP-14R-	84	23	0430	CL SU	AIR	1550			
					SURFACE	1350			
					20	900			
					40	450			
					60	180			
					80	120			
					100	70			
					120	45			
NP-14R-	84	23	0430	CL RA	AIR	425			
					SURFACE	200			
					20	95			
					40	45			
					60	28.5			
					80	23			
					100	14			
					120	9.5			
NY-04T-1	7	26	0609		AIR	1350			
					SURFACE	1000			
					20	810			
					40	390			
					60	220			
					80	105			
NY-03T-3	6	27	0416		AIR	865			
					SURFACE	600			
					13	300			
					25	170			
					50	55			
					75	40			
					100	16.4			
					110	8			
NY-03T-3	6	27	0421		AIR	1600			
					SURFACE	1100			
					10	900			
					20	700			
					30	550			
					40	450			
NY-03T-3	6	27	0609		AIR	1600			
					SURFACE	1300			
					20	550			
					40	350			
					60	220			

*SEE FIGURE 3

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
NY-03T-3	6	27	0609		80	150			
					100	150			
					120	80			
					140	.55			
					160	.40			
					180	.25			
					200	20			
NY-02T-1	5	28	0609		AIR	1850			
					SURFACE	320			
					20	200			
					40	100			
					60	.55			
					80	.35			
					100	15			
					120	7			
					140	.3			
PO-03T-2	6	-	0416	WI	AIR	1050			
					SURFACE	800			
					25	400			
					50	150			
					75	55			
					80	28			
PO-03T-2	6	-	0421		AIR	1350			
					SURFACE	1275			
					10	1000			
					20	850			
					30	650			
					40	550			
					50	450			
PO-03T-2	6	-	0430	SU CL	AIR	700			
					SURFACE	475			
					20	250			
					40	137			
					60	75			
					80	.55			
PO-03T-2	6	-	0512		AIR	750			
					SURFACE	600			
					20	340			
					40	185			
					60	.55			
					80	28			

*SEE FIGURE 3

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
PO-03T-2	6	-	0512		90	15			
PO-03T-2	6	-	0512	CL SU BR	AIR	750			
					SURFACE	650			
					20	325			
					40	155			
					60	75			
					80	40			
					90	14.5			
WO-04T-1	7	--	0608		AIR	1600			
					SURFACE	1200			
					20	1100			
					40	800			
					60	600			
					80	380			
					100	300			
					120	240			
					140	180			
					160	120			
					180	75			
					200	45			
					220	33			
					240	20			
WO-06T-1	11	--	0608		AIR	1750			
					SURFACE	1700			
					20	1200			
					40	1000			
					60	700			
					80	500			
					100	360			
					120	260			
					140	210			
					160	130			
					180	75			
					200	45			
					220	25			
WO-07T-1	13	--	0608		AIR	1550			
					SURFACE	1450			
					20	1200			
					40	900			
					60	650			
					80	450			
					100	300			

*SEE FIGURES 3-4 + CL=CLOUDY WI=WINDY BR=BREEZE SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
WD-07T-1	13	--	0608		120	250			
					140	160			
					160	120			
					180	90			
					200	50			
					220	25			
					240	12			
WO-08T-1	15	44	0608		AIR	1500			
					SURFACE	1300			
					20	950			
					40	700			
					60	500			
					80	330			
					100	230			
					120	160			
					140	98			
					150	80			
WO-09T-1	17	--	0608		AIR	1400			
					SURFACE	1300			
					20	900			
					40	520			
					60	210			
					80	120			
					100	73			
					120	30			
					140	15			
WO-10T-1	19	--	0608		AIR	1270			
					SURFACE	1000			
					20	630			
					40	330			
					60	160			
					80	85			
					100	50			
					120	30			
					140	14			
SM-01R-	29	--	0605		AIR	1400			
					SURFACE	1300			
					20	1100			
					40	900			
					60	850			
					80	800			
					100	600			

*SEE FIGURE 4

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		
					DEPTH	ENERGY	DEPTH	ENERGY	CHLOROPHYLL-A
SM-01R-	29	-	0605		120	.540			
					140	.420			
					160	.350			
					180	.300			
					200	.650			
					220	.210			
					240	.180			
					260	.150			
					280	.130			
					.300	.120			
					.320	.100			
					.340	.90			
					.360	.75			
					.380	.65			
					400	.55			
					.420	.50			
					.440	.43			
					460	.35			
					480	.30			
					.500	.25			
					.520	.23			
					.540	.20			
					.560	.15			
					.580	.12			
					600	.8			
SM-04R-	24	-	0605		AIR	1250			
					SURFACE	1100			
					20	.750			
					40	.600			
					60	.470			
					80	.440			
					100	.380			
					120	.290			
					140	.270			
					160	.220			
					180	.170			
					200	.150			
					.220	.135			
					240	.110			
					260	.100			
					280	.85			
					.300	.73			
					.320	.62			
					.340	.53			
					.360	.45			

*SEE FIGURE 4

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP DEPTH	DEEP ENERGY	SHALLOW DEPTH	SHALLOW ENERGY	CHLOROPHYLL-A
SM-04R-	24	-	0605		380	.37			
					400	.35			
SM-07R-	18	-	0605		AIR	1900			
					SURFACE	1700			
					20	1300			
					40	1100			
					60	900			
					80	750			
					100	650			
					120	.520			
					140	470			
					160	400			
					180	350			
					200	.280			
					220	250			
					240	210			
					260	170			
					280	140			
					300	110			
					320	.95			
					340	72			
					360	.58			
					380	.50			
SM-10R-	13	-	0605		AIR	1800			
					SURFACE	1500			
					20	1400			
					40	1100			
					60	800			
					80	750			
					100	600			
					120	.500			
					140	440			
					160	.390			
					180	350			
					200	240			
					220	210			
					240	180			
					260	150			
					280	130			
SM-01T-1	3	-	0605		AIR	1200			
					SURFACE	1100			
					20	1000			
					40	700			

*SEE FIGURE 4

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		
					DEPTH	ENERGY	DEPTH	ENERGY	CHLOROPHYLL-A
SM-01T-1	3	-	0605		60	650			
					80	500			
					100	450			
					120	420			
					140	340			
					160	300			
					180	250			
					200	210			
					220	205			
					240	190			
					260	155			
					280	140			
					300	120			
					320	100			
					340	88			
					360	77			
					380	65			
					400	57			
					420	50			
					440	42			
					460	35			
					480	30			
					500	27			
					520	20			
					540	16			
					560	14			
					580	12			
					600	10			
SM-04T-3	7	-	0605		AIR	1800			
					SURFACE	1600			
					20	1500			
					40	1200			
					60	1050			
					80	900			
					100	700			
					120	600			
					140	460			
					160	350			
					180	310			
					200	270			
					220	240			
					240	215			
					260	190			
					280	150			
					300	140			

*SEE FIGURE 4

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		
					DEPTH	ENERGY	DEPTH	ENERGY	CHLOROPHYLL-A
SM-04T-3	7	--	0605		320	110			
					340	105			
					360	92			
					380	75			
					400	64			
					420	52			
					440	42			
					460	38			
					480	32			
					500	15			
SM-06T-2	10	--	0604		AIR	1800			
					SURFACE	1500			
					20	1050			
					40	950			
					60	750			
					80	600			
					100	450			
					120	380			
					140	320			
					160	280			
					180	250			
					200	200			
					220	170			
					240	140			
					260	120			
					280	105			
					300	90			
					320	78			
					340	64			
					360	52			
					380	40			
					400	30			
					420	29			
					440	18			
					460	14			
					480	12			
					500	9			
SM-07T-1	12	--	0604		AIR	1500			
					SURFACE	1900			
					20	1100			
					40	900			
					60	750			
					80	600			
					100	550			

*SEE FIGURE 4

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		CHLOROPHYLL-A
					DEPTH	ENERGY	DEPTH	ENERGY	
SM-07T-1	12	-	0604		120	450			
					140	300			
					160	650			
					180	200			
					200	150			
					220	120			
					240	100			
					260	90			
					280	85			
					300	70			
NB-01R-	135	8	0428		AIR	1200			
					SURFACE	900			
					10	650			
					20	400			
					30	250			
					40	160			
					50	70			
					60	60			
					70	40			
					80	20			
					90	13			
					100	10			
NB-01R-	135	8	0506	CL	AIR	175	AIR	200	
					SURFACE	138	SURFACE	160	
					20	43	20	66	
					40	18	40	30	
					60	8	60	18	
					80	3.4			
					100	1.7			
					120	0.8			
NB-01R-	135	8	0513		AIR	1550	AIR	1400	
					SURFACE	1010	SURFACE	1350	
					20	500	20	450	
					40	120	30	250	
					60	35			
					70	15			
					80	9			
NB-01R-	135	8	0513		AIR	1850	AIR	1500	
					SURFACE	1100	SURFACE	1350	
					20	390	20	400	
					40	165	40	140	
					60	47	45	95	
					80	13			

*SEE FIGURES 3-4 + CL=CLOUDY WI=WINDY BR=BREEZE SU=SUNNY RA=RAINY

TABLE C-11. LIGHT ENERGY AND CHLOROPHYLL-A IN THE TIDAL POTOMAC RIVER AND ESTUARY, 1981 - CONTINUED
(DEPTH IN CENTIMETERS; LIGHT ENERGY IN MICROEINSTEINS PER SQUARE METER PER SECOND;
CHLOROPHYLL-A IN MICROGRAMS PER SQUARE CENTIMETER, CORRECTED FOR PHEOPHYTIN)

SITE*	RKM	SITE NO.*	DATE	WEATHER+	DEEP		SHALLOW		CHLOROPHYLL-A
					DEPTH	ENERGY	DEPTH	ENERGY	
NB-01R-	135	8	0513		100	3.5			
					120	1.0			
NB-01R-	135	8	0521		AIR	1700	AIR	1700	
					SURFACE	1500	SURFACE	1550	
					20	1000	20	750	
					40	450	40	500	
					60	250			
					80	100			
					100	50			
					120	25			
					140	10			
NB-01R-	135	8	0603	CL	AIR	351	AIR	180	
					SURFACE	325	SURFACE	120	
					20	120	20	51	
					40	55	40	82	
					60	30			
					80	13			
					100	6.5			
					120	3.1			
					140	1.4			
NB-01R-	135	8	0616		AIR	1700			
					SURFACE	1650			
					20	670			
					40	230			
					60	75			
					80	30			
					90	19			
NB-01R-	135	8	0622	SU	AIR	1100	AIR	1700	112.5
					SURFACE	700	SURFACE	1800	
					20	350	20	730	
					40	210	40	280	
					60	180	60	125	
					80	82			
					100	15			
					120	8			
NB-01R-	135	8	0701	CL			AIR	750	4.1
							SURFACE	200	
							20	25	
							40	1.5	

*SEE FIGURE 3

+ CL=CLOUDY WI=WINDY BR=BREEZE
SU=SUNNY RA=RAINY

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
2	Washington Channel (WC-1R)	177	06/10/81	yes	5.97	2.48	3.49	6.3
2	do	177	06/10/81	yes	7.08	2.73	4.35	4.0
2	do	177	06/10/81	yes	6.15	1.81	4.34	8.4
2	do	177	07/01/81	yes	10.56	4.89	5.67	15.0
2	do	177	07/01/81	yes	5.52	1.77	3.75	21.5
2	do	177	07/01/81	yes	13.61	7.08	6.53	22.7
2	do	177	07/14/81	yes	5.30	1.62	3.68	6.0
2	do	177	07/14/81	yes	5.01	1.44	3.57	5.9
2	do	177	07/14/81	yes	4.38	1.19	3.19	8.0
2	do	177	08/17/81	yes	2.62	0.52	2.10	3.1
2	do	177	08/17/81	yes	2.37	0.88	1.49	4.2
2	do	177	08/17/81	yes	4.14	2.52	1.62	6.2
2	do	177	10/20/81	yes	0.11	0.00	0.11	0.8
2	do	177	10/20/81	yes	0.26	0.03	0.23	0.4
2	do	177	10/20/81	yes	0.14	0.00	0.14	1.1
2	do	177	10/20/81	yes	0.65	0.24	0.41	1.4
2	do	177	10/20/81	yes	0.55	0.05	0.50	2.0
2	do	177	10/20/81	yes	0.31	0.00	0.31	1.0
4	Goose Island (GI-1R)	172	06/10/81	no	3.13	2.42	0.71	0.7
4	do	172	06/10/81	no	3.32	2.10	1.22	1.9
4	do	172	06/10/81	no	3.76	2.58	1.18	2.3

[1]See Figure 2.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary continued

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
4	Goose Island (GI-1R)	172	07/01/81	no	3.80	2.41	1.39	2.5
4	do	172	07/01/81	no	2.67	1.38	1.29	7.0
4	do	172	07/01/81	no	4.28	3.13	1.15	2.3
5	Rosier Bluff (PY-1R)	166	07/01/81	no	29.78	21.80	7.98	17.9
5	do	166	07/01/81	no	29.13	21.62	7.51	28.6
5	do	166	07/01/81	no	44.05	35.86	8.19	32.1
5	do	166	10/20/81	no	0.42	0.13	0.29	1.9
5	do	166	10/20/81	no	1.70	1.25	0.45	0.9
5	do	166	10/20/81	no	1.96	1.47	0.49	0.4
5	do	166	10/20/81	no	2.53	1.83	0.70	0.8
5	do	166	10/20/81	no	1.51	0.93	0.58	1.1
5	do	166	10/20/81	no	2.35	0.93	1.42	1.3
6	Elodea Cove (PY-8R)	154	06/10/81	no	10.68	3.82	6.86	13.0
6	do	154	06/10/81	no	8.10	2.48	5.62	11.2
6	do	154	06/10/81	no	6.14	2.26	3.88	15.1
6	do	154	07/01/81	no	18.77	10.53	8.24	28.3
6	do	154	07/01/81	no	13.43	7.12	6.31	25.7
6	do	154	07/01/81	no	12.92	5.72	7.20	21.7
6	do	154	10/20/81	no	2.00	0.95	1.05	3.1
6	do	154	10/20/81	no	2.38	2.00	0.38	4.0
6	do	154	10/20/81	no	2.19	1.61	0.58	3.2

[1]See Figure 2.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary continued

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
6	Elodea Cove (PY-8R)	154	10/20/81	no	1.00	0.65	0.35	3.4
6	do	154	10/20/81	no	0.63	0.36	0.27	6.4
6	do	154	10/20/81	no	1.35	0.00	1.35	3.0
8	Neabsco Creek (NB-1R)	135	06/10/81	no	2.35	1.43	0.92	0.4
8	do	135	06/10/81	no	3.48	2.20	1.28	1.2
8	do	135	06/10/81	no	4.34	2.80	1.54	0.8
8	do	135	07/01/81	no	12.09	6.15	5.94	1.8
8	do	135	07/01/81	no	7.73	4.53	3.20	1.3
8	do	135	07/01/81	no	10.37	7.28	3.09	0.7
8	do	135	10/20/81	no	0.07	0.	0.07	0.1
8	do	135	10/20/81	no	0.08	0.03	0.05	0.0
8	do	135	10/20/81	no	2.15	1.45	0.70	0.3
8	do	135	10/20/81	no	0.50	0.11	0.39	0.0
8	do	135	10/20/81	no	0.44	0.44	0.00	0.0
8	do	135	10/20/81	no	0.56	0.45	0.11	0.0
17	NP-6R	94	06/10/81	yes	5.71	4.60	1.11	2.4
17	do	94	06/10/81	yes	11.84	10.44	1.40	1.6
17	do	94	06/10/81	yes	9.68	8.32	1.36	1.5
17	do	94	07/01/81	yes	12.07	10.22	1.85	0.4
17	do	94	07/01/81	yes	7.01	4.88	2.13	3.6
17	do	94	07/01/81	yes	11.37	8.62	2.75	7.4

[1]See Figures 2 and 3.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary continued

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
17	NP-6R	94	08/17/81	yes	54.11	45.08	9.03	2.9
17	do	94	08/17/81	yes	46.41	35.34	11.07	3.2
17	do	94	08/17/81	yes	31.92	22.75	9.17	4.3
17	do	94	10/20/81	yes	5.82	5.29	0.53	6.5
17	do	94	10/20/81	yes	8.14	7.05	1.09	3.7
17	do	94	10/20/81	yes	7.78	6.79	0.99	6.6
17	do	94	10/20/81	yes	0.10	0.	0.10	0.4
17	do	94	10/20/81	yes	2.40	1.88	0.52	1.3
17	do	94	10/20/81	yes	7.32	6.60	0.72	4.2
27	NY-3T-3[2]	6	06/10/81	yes	70.79	56.21	14.58	3.1
27	do	6	06/10/81	yes	67.86	54.15	13.71	1.7
27	do	6	06/10/81	yes	57.65	45.26	12.39	2.8
27	do	6	07/14/81	yes	8.62	5.48	3.14	0.8
27	do	6	07/14/81	yes	14.13	8.33	5.80	0.2
27	do	6	07/14/81	yes	6.80	4.22	2.58	0.6
27	do	6	08/17/81	yes	4.23	2.77	1.46	0.3
27	do	6	08/17/81	yes	2.71	2.14	0.57	0.1
27	do	6	08/17/81	yes	6.80	5.17	1.63	0.2
27	do	6	10/20/81	yes	0.02	0.	0.02	0.02
27	do	6	10/20/81	yes	0.	0.	0.	0.04
27	do	6	10/20/81	yes	0.	0.	0.	0.01

[1]See Figure 3.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary continued

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
27	NY-3T-3[2]	6	10/20/81	yes	0.	0.	0.	0.03
27	do	6	10/20/81	yes	0.28	0.21	0.07	0.01
27	do	6	10/20/81	yes	0.	0.	0.	0.05
27	NY-3T-3	6	06/10/81	yes	14.08	7.47	6.61	1.6
27	do	6	06/10/81	yes	33.54	23.80	9.74	0.4
27	do	6	06/10/81	yes	64.63	50.60	14.03	0.3
27	do	6	07/01/81	yes	33.20	21.73	11.47	0.2
27	do	6	07/01/81	yes	9.74	6.28	3.46	0.1
27	do	6	07/01/81	yes	32.44	19.76	12.68	0.4
41	WO-1R	68	06/10/81	yes	3.12	2.27	0.85	1.5
41	do	68	06/10/81	yes	42.56	38.43	4.13	5.4
41	do	68	06/10/81	yes	7.84	5.91	1.93	2.0
41	do	68	07/01/81	yes	107.38	66.86	40.52	10.5
41	do	68	07/01/81	yes	192.44	148.64	43.80	6.5
41	do	68	07/01/81	yes	149.25	97.57	51.68	12.7
41	do	68	07/14/81	yes	74.25	59.42	14.83	10.0
41	do	68	07/14/81	yes	44.16	35.86	8.30	8.3
41	do	68	07/14/81	yes	81.08	65.32	15.76	8.4
41	do	68	08/17/81	yes	93.85	79.53	14.32	13.3
41	do	68	08/17/81	yes	114.43	88.40	26.03	4.7
41	do	68	08/17/81	yes	18.93	14.08	4.85	6.6

[1]See Figures 3 and 4.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-12. Biomass per square centimeter of epiphytes and epiphyte - chlorophyll-a in the Tidal Potomac River and Estuary continued

(Mass of epiphytes in grams, chlorophyll-a in micrograms corrected for phaeophytin)

Site number[1]	Site[1]	River km	Date	Vegetated	Dry weight	Ash weight	Organic weight	Chlorophyll a
-	WO-2T-1	3	06/10/81	yes	-	-	-	5.3
-	do	3	06/10/81	yes	-	-	-	2.1
-	do	3	06/10/81	yes	40.24	35.38	4.86	8.6
-	do	3	07/01/81	yes	77.84	59.09	18.75	9.8
-	do	3	07/01/81	yes	25.42	18.83	6.59	5.9
-	do	3	07/01/81	yes	20.05	15.20	4.85	10.5
-	do	3	08/17/81	yes	126.90	110.04	16.86	7.4
-	do	3	08/17/81	yes	68.44	58.66	9.78	2.8
-	do	3	08/17/81	yes	56.01	47.55	8.46	8.2
-	do	3	10/20/81	yes	5.35	4.42	0.93	4.7
-	do	3	10/20/81	yes	18.30	16.52	1.78	2.8
-	do	3	10/20/81	yes	17.43	15.95	1.48	3.6
-	do	3	10/20/81	yes	40.73	38.76	1.97	7.7
-	do	3	10/20/81	yes	23.25	21.71	1.54	4.7
-	do	3	10/20/81	yes	11.53	10.49	1.04	7.4

[1]See Figure 4.

[2]0.3 meters deep. All other sites are approximately 0.5 meters deep (at mean low tide).

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
2	Washington Channel (WC-1R)	177	061081	yes	1750	400	790	1050
2	do	177	061081	yes	1750	400	775	980
2	do	177	061081	yes	1750	620	620	1225
2	do	177	070181	yes	27.0	5.3	15.3	18.5
2	do	177	070181	yes	27.0	5.7	4.3	15.5
2	do	177	070181	yes	27.0	2.8	7.7	6.8
2	do	177	102081	yes	16.5	14.4	14.4	14.6
2	do	177	102081	yes	16.5	14.7	13.9	13.6
2	do	177	102081	yes	16.5	14.0	13.0	13.2
2	do	177	102081	yes	16.5	14.8	14.8	14.0
2	do	177	102081	yes	16.5	14.3	14.7	14.9
2	do	177	102081	yes	16.5	14.6	15.0	15.6

[1]See Figures 2 and 5.

[2]Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3]0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
4	Goose Island (GI-1R)	172	061081	no	1650	650	920	830
4	do	172	061081	no	1650	900	1300	1225
4	do	172	061081	no	1650	510	800	925
4	do	172	070181	no	27.0	13.3	16.8	19.8
4	do	172	070181	no	27.0	10.0	19.5	20.0
4	do	172	070181	no	27.0	11.0	13.8	17.8
5	Rosier Bluff (PY-1R)	166	070181	no	26.0	1.8	0.5	4.4
5	do	166	070181	no	26.0	0.9	0.7	3.6
5	do	166	070181	no	26.0	1.1	0.8	7.3
5	do	166	102081	no	16.0	15.7	11.5	14.6
5	do	166	102081	no	16.0	9.1	14.7	15.2
5	do	166	102081	no	16.0	13.2	13.3	13.7

[1] See Figures 2 and 5.

[2] Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3] 0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
5	Rosier Bluff (PY-1R)	166	102081	no	16.0	12.6	10.7	13.4
5	do	166	102081	no	16.0	12.8	10.5	15.2
5	do	166	102081	no	16.0	13.9	10.6	13.5
6	Elodea Cove (PY-8R)	154	061081	no	1600	360	310	570
6	do	154	061081	no	1600	340	570	610
6	do	154	061081	no	1600	710	640	980
6	do	154	070181	no	26.0	1.6	2.5	3.8
6	do	154	070181	no	26.0	9.0	7.2	8.0
6	do	154	070181	no	26.0	3.4	4.4	6.4
6	do	154	102081	no	15.8	11.1	8.3	13.7
6	do	154	102081	no	15.8	12.6	11.3	14.2
6	do	154	102081	no	15.8	13.6	13.2	12.7

[1]See Figures 2 and 5.

[2]Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3]0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
6	Elodea Cove (PY-8R)	154	102081	no	15.8	11.0	12.4	13.6
6	do	154	102081	no	15.8	12.3	14.6	14.2
6	do	154	102081	no	15.8	11.4	11.0	13.4
8	Neabsco Creek (NB-1R)	135	061081	no	635	555	440	415
8	do	135	061081	no	635	380	370	410
8	do	135	061081	no	635	510	390	425
8	do	135	070181	no	26.0	8.6	25.0	7.4
8	do	135	070181	no	26.0	17.3	22.3	11.3
8	do	135	070181	no	26.0	8.5	13.8	12.5
8	do	135	102081	no	16.0	15.9	15.7	15.6
8	do	135	102081	no	16.0	15.7	16.0	15.5
8	do	135	102081	no	16.0	12.8	12.1	14.5

[1] See Figures 3 and 6.

[2] Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3] 0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
8	Neabsco Creek (NB-1R)	135	102081	no	16.0	13.4	15.0	14.0
8	do	135	102081	no	16.0	15.2	14.9	14.3
8	do	135	102081	no	16.0	15.1	14.7	15.4
17	Blossom Point	94	061081	yes	2050	900	2100	800
17	do	94	061081	yes	2050	800	1150	2000
17	do	94	061081	yes	2050	1900	1800	1550
17	do	94	070181	yes	26.0	12.4	8.2	7.8
17	do	94	070181	yes	26.0	15.3	14.2	15.3
17	do	94	070181	yes	26.0	10.5	12.0	14.9
17	do	94	102081	yes	15.3	11.2	10.0	12.6
17	do	94	102081	yes	15.3	3.2	10.0	11.2
17	do	94	102081	yes	15.3	1.8	9.3	12.0

[1] See Figures 3 and 6.

[2] Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3] 0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
17	Blossom Point	94	102081	yes	15.3	11.3	12.6	13.5
17	do	94	102081	yes	15.3	8.1	10.0	13.4
17	do	94	102081	yes	15.3	4.7	13.0	12.3
27	NY-3T-3[3]	6	061081	yes	1925	250	200	280
27	do	6	061081	yes	1925	300	620	200
27	do	6	061081	yes	1925	260	240	275
27	do	6	102081	yes	15.3	15.1	14.2	15.0
27	do	6	102081	yes	15.3	15.5	15.3	14.7
27	do	6	102081	yes	15.3	14.6	15.0	14.4
27	do	6	102081	yes	15.3	14.7	13.8	13.5
27	do	6	102081	yes	15.3	13.4	14.5	14.3
27	do	6	102081	yes	15.3	14.9	15.0	13.9

[1] See Figures 3 and 6.

[2] Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3] 0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
27	NY-3T-3	6	061081	yes	1975	1200	850	1300
27	do	6	061081	yes	1975	1025	1200	1075
27	do	6	061081	yes	1975	900	650	850
27	do	6	070181	yes	26.0	1.5	1.2	9.7
27	do	6	070181	yes	26.0	11.4	9.1	11.2
27	do	6	070181	yes	26.0	1.8	3.2	12.1
41	WO-1R	68	061081	yes	2330	870	1600	950
41	do	68	061081	yes	2330	750	800	530
41	do	68	061081	yes	2330	975	1150	1300
41	do	68	070180	yes	26.0	0.5	0.6	3.0
41	do	68	070181	yes	26.0	2.4	1.9	0.9
41	do	68	070181	yes	26.0	1.7	1.8	1.3

[1] See Figures 4 and 7.

[2] Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3] 0.3 meters deep. All other sites are approximately 0.5 meters deep at mean low tide.

Table C-13. Transmittance of light through clear plastic strips and epiphyte-colonized strips - continued

(Transmission in microeinsteins per square meter per second)

Site number[1]	Site	River kilometer	Date	Vegetated	Clear strip[2]	Colonized strip		
						top	middle	bottom
-	WO-2T-1	3	061080	yes	2260	95	570	245
-	do	3	070280	yes	26.0	0.3	20.8	23.3
-	do	3	070280	yes	26.0	3.0	19.0	5.5
-	do	3	070280	yes	26.0	5.5	10.5	0.7
-	do	3	102181	yes	15.7	9.5	10.9	14.7
-	do	3	102181	yes	15.7	11.1	5.4	11.3
-	do	3	102181	yes	15.7	8.7	9.6	9.3
-	do	3	102181	yes	15.7	14.2	11.6	2.7
-	do	3	102181	yes	15.7	7.4	6.6	3.8
-	do	3	102181	yes	15.7	11.4	10.6	9.4

[1]See Figure 4.

[2]Sunlight transmittance through clear strip varied with the cloud cover and the turbidity of the water.

[3]0.3 meters deep. All other sties are approximately 0.5 meters deep at mean low tide.

Appendix D. Transplant Data

Table D-1. Characteristics of intensive study sites in the Tidal Potomac River and Estuary

(Fetch measured in kilometers; salinity measured in parts per thousand)

Site number[1]	Site[1]	Vegetated	Fetch	Exposure	Description	Salinity range
2	Washington Channel (WC-01R)	yes	3.4	southwest and south	well protected on three sides	∠0.5
4	Goose Island (GI-01R)	no	12.0	west, north and south	exposed on three sides	∠0.5
5	Rosier Bluff (PY-01R)	no	7.4	northwest	somewhat exposed on three sides	∠0.5
6	Elodea Cove (PY-08R)	no	2.6	west	well protected on three sides	∠0.5
8	Neabsco Bay (NB-01R)	no	13.5	northeast	some protection on three sides	0-1.0
17	NP-6R	yes	12.4	southwest	exposed on three sides	0-8.5
27	NY-3T-3	yes	2.6	southeast	well protected on three sides	0-8.5

[1]See Figure 8.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary

Site number[1]	Site	Date	Full exclosures with plugs	Full exclosures with sprigs	Topless exclosures with sprigs	Three-sided exclosures with sprigs	No exclosures with plugs	No exclosures with sprigs
4	Goose Island (GI-1R)	071580	-	50 planted	-	-	-	50 planted
4	do	072180	-	5 plants left	-	-	-	nipped off
4	do	080680	-	plants present	-	-	-	no plants
4	do	101480	-	thick growth	-	-	-	no plants
4	do	051281	50 to 100 plants and tubers planted	-	-	-	50 to 100 plants and tubers planted	-
4	do	061681	plants tall	50 planted	50 planted	50 planted	plants tall, but growth only between the stakes	50 planted
4	do	072181	doing well, 100 cm tall	doing well, 100 cm tall	fair growth, 20 cm tall	few plants, 20 cm tall	no plants	no plants
4	do	080981	doing well, 40 cm tall, non-flowered stalks	doing well, 40 cm tall	25 plants, nipped off, 1 cm tall, rhizomes and roots present	about 15 plants, nipped off	no plants	no plants
4	do	081181	plants 40 cm tall	plants 40 cm tall	plants 2 cm tall	-	-	-

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary - continued

Site number[1]	Site	Date	Full exclosures with plugs	Full exclosures with sprigs	Topless exclosures with sprigs	Three-sided exclosures with sprigs	No exclosures with plugs	No exclosures with sprigs
4	Goose Island (GI-1R)	100981	good growth, 1/2 of exclosure is full, 30 cm tall	robust leaves, 3/4 of exclosure is full, 30 cm tall	sparse growth, 8 cm tall	no plants	no plants	no plants
5	Rosier Bluff (PY-1R)	052280	-	-	-	-	-	50 planted
5	do	062680	-	-	-	-	-	no plants
5	do	071680	-	62 planted	-	-	-	70 planted
5	do	072180	-	-	-	-	-	nipped off above roots
5	do	080980	-	look like they did when planted	-	-	-	no plants
5	do	101480	-	thick growth	-	-	-	no plants
5	do	050181	50 to 100 plants and tubers planted	-	-	-	50 to 100 plants and tubers planted	-
5	do	061681	plants tall	50 planted	50 planted	50 planted	plants short	50 planted

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary - continued

Site number[1]	Site	Date	Full exclosures with plugs	Full exclosures with sprigs	Topless exclosures with sprigs	Three-sided exclosures with sprigs	No exclosures with plugs	No exclosures with sprigs
5	Rosier Bluff (PY-1R)	070881	doing very well, spreading to outside of exclosure, 60 cm tall	doing very well, 45 cm tall 1980 patch[2] 70 cm tall	doing very well, 55 cm tall	doing well, small patch next to stake, 32 cm tall	doing well, small patch next to stake, 25 cm tall	fair, small patch, 35 cm tall
5	do	080581	doing well, spreading	doing well, spreading 1980 patch[2] spreading	doing well	doing well	doing well	doing well
5	do	100981	full of stubbles, cage door open	luxurious plants 1980 patch[2] full of nubs	full of stubbles	1/2 full of stubbles	full of stubbles	a few stubbles
-	Piscataway	052280	-	-	-	-	-	50 planted
-	do	060680	-	-	-	-	-	no plants
-	do	062680	-	-	-	-	-	no plants
6	Elodea Cove (PY-8R)	072880	-	60 planted	-	-	-	74 planted

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary - continued

Site number[1]	Site	Date	Full exclosures with plugs	Full exclosures with sprigs	Topless exclosures with sprigs	Three-sided exclosures with sprigs	No exclosures with plugs	No exclosures with sprigs
6	Elodea Cove (PY-8R)	082080	-	3/4 of exclosure full	-	-	-	3/4 of the plants still there
6	do	101480	-	doing very well	-	-	-	doing very well
6	do	050181	50 to 100 plants and tubers planted	-	-	-	about 100 plants and tubers planted	-
6	do	061681	plants long	50 planted	50 planted	50 planted	plants short	50 planted
6	do	071481	doing very well, 100 cm tall	doing very well, thick, 90 cm tall	20 cm tall	5 cm tall	few plants, 10 cm tall	no plants
6	do	080681	doing well, spreading	doing well, spreading 1980 patch has 40 plants, 50 cm tall[2]	doing well, same height as plants in exclosure	-	few plants, 50 cm tall	very few plants, 30 cm tall
6	do	100981	doing well, spreading, door ajar	doing very well, spreading, door ajar	doing very well, 16 cm tall, spreading	doing well, 16 cm tall, spreading	fair	no plants

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary - continued

Site number[1]	Site	Date	Full exclosures with plugs	Full exclosures with sprigs	Topless exclosures with sprigs	Three-sided exclosures with sprigs	No exclosures with plugs	No exclosures with sprigs
-	Pomonkey Creek	052280	-	-	-	-	-	50 planted
-	do	062680	-	-	-	-	-	no plants
8	Neabsco Bay (NB-1R)	051381	50 to 100 plants and tubers planted	-	-	-	50 to 100 plants and tubers planted	-
8	do	061681	doing well	50 planted	50 planted	50 planted	doing well	50 planted
8	do	071481	doing well, all in the middle of the exclosure, 60 cm tall, epiphytes	about 20 plants, 20 cm tall	doing well, 60 cm tall, slimy with epiphytes	no plants	only three leaves extend to surface, 20 plants lying down, 10 to 30 cm tall, epiphytes	one stubble, no roots left on it
8	do	082581	few plants, plants lying down, 20 cm tall	few plants, plants lying down, 30 cm tall	few plants, plants lying down, 20-50 cm tall	no plants	no plants	no plants
8	do	102181	fair to poor, short plants	no plants	no plants	no plants	no plants	no plants
10	MN-2T-3	052280	-	-	-	-	-	50 planted

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-2. Submersed aquatic vegetation at transplant exclosure sites in the Tidal Potomac River and Estuary - continued

Site number[1]	Site	Date	exclosures with plugs	exclosures with sprigs	exclosures with sprigs	exclosures with sprigs	exclosures with plugs	exclosures with sprigs
10	MN-2T-3	060680	-	-	-	-	-	no plants
10	do	062680	-	-	-	-	-	no plants

[1]See Figure 8.

[2]Patches fully exclosed in 1980, no exclosure in 1981.

Table D-3. Total lengths of Ceratophyllum demersum in suspended cage experiments in the Tidal Potomac River, 1980

(Lengths in centimeters. Initial length of plants for each cage was 100 centimeters)

Site[1]	July to August		August to September		September to October	
	Number of cages	Mean length per cage	Number of cages	Mean length per cage	Number of cages	Mean length per cage
Piscataway Creek	24	845	24	205	24	112
Pomonkey Creek	6	23	-	-	-	-
Mattawoman Creek	30	69	36	20	30	25
Nanjemoy Creek	30	194	24	31	24	85
Port Tobacco River	30	184	-	-	-	-

[1]See Figure 8.

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