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## Fairfax County Tidal Marsh Inventory Including City of Alexandria and Arlington County

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# FAIRFAX COUNTY TIDAL MARSH INVENTORY

Including City of Alexandria and Arlington County

Special Report No. 108 in Applied Marine Science and Ocean Engineering

Damon G. Doumlele  
G.M. Silberhorn, Project Leader



VIRGINIA INSTITUTE OF MARINE SCIENCE

Gloucester Point, Virginia 23062

Dr. William J. Hargis, Jr., Director

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FAIRFAX COUNTY  
TIDAL MARSH INVENTORY

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## Introduction

This publication is the ninth in a series of marsh inventory reports compiled by the Wetlands Research Section, Virginia Institute of Marine Science. The eight previously published reports are listed on page 12.

Under Section 62. 1-13.4 of the Virginia Wetlands Act, the Virginia Institute of Marine Science is obligated to inventory the tidal wetlands of the Commonwealth. This inventory program is designed to assist wetlands boards and other local, state and federal agencies which have responsibilities in managing wetlands. Its results are also of interest to scientists and other concerned citizens.

A recently published study, Guidelines for Activities Affecting Virginia Wetlands, Silberhorn, Dawes and Barnard, 1974, VIMS SRAMSOE No. 46, will be helpful in the utilization of this report. Excerpts from the above document are included in the following text, explaining marsh vegetation types and their evaluation.

The recommendations submitted in the above publication have been adopted and promulgated by the Virginia Marine Resources Commission in booklet form. Titled Wetlands Guidelines, it may be obtained from VMRC, 2401 West Avenue, Newport News, Virginia 23607.

It is our desire that this inventory report and the marsh guidelines study will be useful to those concerned with this valuable resource.

## Methods

Aerial photographs and topographic maps (U.S.G.S.) were consulted in order to obtain wetland locations and patterns of marsh vegetation. Marsh community zones and patterns were substantiated by ground truth methods, including observations on foot, by boat and by low level overflights.

Acreages and wetland boundaries were also estimated by these methods.

Marshes one quarter of an acre or larger are designated by number. Many marshes smaller than one quarter acre (usually narrow fringing marshes) are designated by the same symbol (shaded) as the larger marshes on the section maps. Small marshes (less than one acre) are exaggerated and are not indicated to scale. Information such as individual marsh acreage, plant community percentage and acreage, marsh type and other observations are recorded in tabular form. Plant community percentages are recorded to the nearest percent, and acreages to the nearest tenth of an acre. In those instances where an individual plant species is estimated to amount to less than 0.5 percent or 0.05 acre, the symbol (-) is used to indicate a trace amount. In unusual situations where an individual marsh is estimated to contain 50 percent or more of a species that is not listed as a marsh type, the closest applicable marsh type is used. For example, a marsh which is judged to contain 60 percent Wild Rice would be listed as Type XI (Freshwater Mixed).

This inventory report is organized into eight sections. Each section attempts to describe one creek-marsh drainage system or significant length of shoreline within Fairfax County, Alexandria and Arlington County. All of the tidal wetlands found in these areas are located along the Potomac River or within a number of tidal creeks which empty into the Potomac River. These sections are illustrated in the Reference Map to Wetlands Sections found elsewhere in this report.



## Marsh Types and Evaluation

For a better understanding of what is meant by marsh types, some background information is required. The personnel of the Wetlands Research Section have classified twelve different common marsh types in Virginia, based on vegetational composition. These marsh types have been evaluated according to certain values and are recorded in the Guidelines report. The following is a brief outline of the wetland types and their evaluation as found in that publication:

"It is recognized that most wetlands areas, with the exception of the relatively monospecific cordgrass marshes of the Eastern Shore, are not homogenously vegetated. Most marshes are, however, dominated by a major plant. By providing the manager with the primary values of each community type and the means of identification he then has a useful and convenient tool for weighing the relative importance of each marsh parcel. In Virginia, many wetlands management problems involve only a few acres or a fraction of an acre. The identification of plant communities permits the manager to evaluate both complete marshes and subareas within a marsh.

"Each marsh type may be evaluated in accordance with five general values. These are:

"1. Production and detritus availability. Previous VIMS reports have discussed the details of marsh production and the role of detritus which results when the plant material is washed into the water column. The term "detritus" refers to plant material which decays in the aquatic system and forms the basis of a major marine food web. The term "production" refers to the amount of plant material which is produced by the various types of marsh plants. Vegetative production of the major species has been measured and marshes have been rated in accordance with their average levels of productivity. If the production is readily available to the marine food web as detritus, a wetlands system is even more important than one of equal productivity where little detritus results. Availability of detritus is generally a function of marsh elevation and total flushing, with detritus more available to the aquatic environment in the lower, well-flushed marshes.

"2. Waterfowl and wildlife utilization. Long before marshes were discovered to be detritus producers, they were known as habitats for various mammals and marsh birds and as food sources for migratory waterfowl. Some marsh types, especially mixed freshwater marshes, are more valuable because of diversity of the vegetation found there.

"3. Erosion buffer. Erosion is a common coastal problem. Marshes can be eroded, but some, particularly the more saline types, are eroded much more slowly than adjacent shores which are unprotected by marsh. This buffering quality is derived from the ability of the vegetation to absorb or dissipate wave energy by establishing a dense root system which stabilizes the substrate. Generally, freshwater species are less effective than saltwater plants in this regard.

"4. Water quality control. The dense growth of some marshes acts as a filter, trapping upland sediment before it reaches waterways and thus protecting shellfish beds and navigation channels from siltation. Marshes can also filter out sediments that are already in the water column. The ability of marshes to filter sediments and maintain water clarity is of particular importance to the maintenance of clam and oyster production. Excessive sedimentation can reduce the basic food supply of shellfish through reduction of the photic zone where algae grows. It can also kill shellfish by clogging their gills. Additionally marshes can assimilate and degrade pollutants through complex chemical processes, a discussion of which is beyond the scope of this paper...."

"5. Flood buffer. The peat substratum of some marshes acts as a giant sponge in receiving and releasing water. This characteristic is an effective buffer against coastal flooding, the effectiveness of which is a function of marsh type and size.

"Research and marsh inventory work accomplished by VIMS personnel indicate that 10 species of marsh vegetation tend to dominate many marshes, the dominant plant depending on water salinity, marsh elevation, soil type and other factors. The term "dominant" is construed to mean that at least 50% of the vegetated surface of a marsh is covered by a single species. Brackish and freshwater marshes often have no clearly dominant species of vegetation. These marshes are considered to be highly valuable in environmental terms."

### Marsh Types and Their Environmental Contributions

(Edited from Guidelines for Activities Affecting Virginia Wetlands)

#### Type I Saltmarsh Cordgrass Community

- a. Average yield 4 tons per acre per annum. (Optimum growth up to 10 tons per acre.)
- b. Optimum availability of detritus to the marine environment.
- c. Roots and rhizomes eaten by waterfowl and stems used in muskrat lodge construction. Also serves as nesting material for various birds.
- d. Deterrent to shoreline erosion.
- e. Serves as sediment trap and assimilates flood waters.

#### Type II Saltmeadow Community

- a. 1-3 tons per acre per annum.
- b. Food (seeds) and nesting areas for birds.
- c. Effective erosion deterrent.
- d. Assimilates flood waters.
- e. Filters sediments and waste material.

Type III Black Needlerush Community

- a. 3-5 tons per acre per annum.
- b. Highly resistant to erosion.
- c. Traps suspended sediments but not as effective as Type II.
- d. Somewhat effective in absorbing flood waters.

Type IV Saltbush Community

- a. 2 tons per acre per annum or less
- b. Nesting area for small birds and habitat for a variety of wildlife.
- c. Effective trap for flotsam.

Type V Big Cordgrass Community

- a. 3-6 tons per acre per annum.
- b. Detritus less available than from Type I.
- c. Habitat for small animals and used for muskrat lodges.
- d. Effective erosion buffer.
- e. Flood water assimilation.

Type VI Cattail Community

- a. 2-4 tons per acre per annum.
- b. Habitat for birds and utilized by muskrats.
- c. Traps upland sediments.

Type VII Arrow Arum-Pickerel Weed Community

- a. 2-4 tons per acre per annum.
- b. Detritus readily available to marine environment.
- c. Seeds eaten by wood ducks.
- d. Susceptible to erosion from wave action and boat wakes, particularly in winter months.

Type VIII Reed Grass Community

- a. 4-6 tons per acre per annum.
- b. Little value to wildlife except for cover.
- c. Invades marshes and competes with more desirable species.
- d. Deters erosion on disturbed sites.

Type IX Yellow Pond Lily Community

- a. Less than 1 ton per acre per annum.
- b. Cover and attachment site for aquatic animals and algae.
- c. Feeding territory for fish.

Type X Saltwort Community

- a. Less than 0.5 tons per acre per annum.
- b. Little value to aquatic or marsh animals.

Type XI Freshwater Mixed Community

- a. 3-5 tons per acre per annum.
- b. High diversity of wildlife.
- c. High diversity of wildlife foods.
- d. Often associated with fish spawning and nursery grounds.
- e. Ranks high as a sediment trap and nursery grounds.

Type XII Brackish Water Mixed Community

- a. 3-4 tons per acre per annum.
- b. Wide variety of wildlife foods and habitat.
- c. Deterrent to shoreline erosion.
- d. Serves as sediment trap and assimilates flood waters.
- e. Known spawning and nursery grounds for fish.

## Evaluation of Wetland Types

(From Guidelines for Activities Affecting Virginia Wetlands)

For management purposes, the twelve types of wetlands identified above are grouped into five classifications based on the estimated total environmental value of an acre of each type.

Group One:                      Saltmarsh Cordgrass (Type I)  
   Arrow Arum-Pickerel Weed (Type VII)  
   Freshwater Mixed (Type XI)  
   Brackish Water Mixed (Type XII)

Group One marshes have the highest values in productivity and wildfowl and wildlife utility and are closely associated with fish spawning and nursery areas. They also have high value as erosion inhibitors, are important to the shellfish industry and valued as natural shoreline stabilizers. Group One marshes should be preserved.

Group Two:                      Big Cordgrass (Type V)  
   Saltmeadow (Type II)  
   Cattail (Type VI)

Group Two marshes are of only slightly lesser value than Group One marshes. The major difference is that detritus produced in these marshes is less readily available to the marine environment due to higher elevations and consequently less tidal action to flush the detritus into adjacent waterways. Group Two marshes have very high values in protecting water quality and acting as buffers against coastal flooding. These marshes should also be preserved, but if development in wetlands is considered to be justified it would be better to alter Group Two marshes than Group One marshes.

Group Three:

Yellow Pond Lily (Type IX)  
Black Needlerush (Type III)

The two marshes in the Group Three category are quite dissimilar in properties. The yellow pond lily marsh is not a significant contributor to the food web but it does have high values to wildlife and waterfowl. Black needlerush has little wildlife value but it ranks high as an erosion flood buffer. Group Three marshes are important though their total values are less than Group One and Two marshes. If development in wetlands is considered necessary, it would be better to alter Group Three marshes than Groups One or Two.

Group Four:

Saltbush (Type IV)

The saltbush community is valued primarily for the diversity and bird nesting area it adds to the marsh ecosystem. To a lesser extent it acts as an erosion buffer. Group Four marshes should not be unnecessarily disturbed but it would be better to concentrate necessary development in these marshes rather than disturb any of the marshes in the preceding groups.

Group Five:

Saltwort (Type X)  
Reedgrass (Type VIII)

Based on present information Group Five marshes have few values of any significance. While Group Five marshes should not be unreasonably disturbed, it is preferable to develop in these marshes than in any other types.

For a better understanding of Virginia's Wetlands in general, the Wetlands Act of 1972 and marsh types and their evaluation, the following publications are recommended:

Coastal Wetlands of Virginia  
Interim Report No. 3  
Guidelines for Activities  
Affecting Virginia's Wetlands  
Special Report in Applied Marine  
Science and Ocean Engineering No. 46  
Gene M. Silberhorn, George M. Dawes,  
Thomas A. Barnard, Jr., June 1974  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062

Local Management of Wetlands  
Environmental Considerations  
Special Report in Applied Marine  
Science and Ocean Engineering No. 35  
Kenneth Marcellus, George M. Dawes,  
Gene Silberhorn, June 1973  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062

Coastal Wetlands of Virginia Interim Report No. 2  
Special Report in Applied Marine  
Science and Ocean Engineering No. 27  
Kenneth Marcellus, July 1972  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062



Coastal Wetlands of Virginia Interim Report  
Special Report in Applied Marine  
Science and Ocean Engineering No. 10  
Marvin Wass and Thomas Wright, December 1969  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062

Laws of Virginia Relating to Wetlands  
and Subaqueous Waters  
Virginia Marine Resources Commission  
2401 West Avenue,  
Newport News, Virginia 23607

Wetlands Guidelines  
Virginia Marine Resources Commission  
2401 West Avenue  
Newport News, Virginia 23607



Published Tidal Marsh Inventories

Lancaster County

Mathews County

Northumberland County

Stafford County

Prince William County

King George County

City of Hampton

York County and Town of Poquoson

Available from: Library  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062

## MARSH PLANTS

### Common Names and Scientific Names as Found in the Data Tables

Arrow Arum	<u>Peltandra virginica</u> (L.) Kunth
Arrowhead	<u>Sagittaria latifolia</u> Willd.
Beggar Ticks	<u>Bidens</u> spp.
Big Cordgrass	<u>Spartina cynosuroides</u> (L.) Roth
Burreed*	<u>Sparganium</u> sp.
Buttonbush	<u>Cephalanthus occidentalis</u> L.
Cardinal Flower*	<u>Lobelia cardinalis</u> L.
Cattail	
common	<u>Typha latifolia</u> L.
narrow-leaved	<u>Typha angustifolia</u> L.
Common Threesquare	<u>Scirpus americanus</u> Pers.
Dodder*	<u>Cuscuta</u> sp.
Duckweed*	<u>Lemna</u> sp.
Jewelweed*	<u>Impatiens capensis</u> Meerb.
Marsh Hibiscus	<u>Hibiscus moscheutos</u> L.
Pickeral Weed	<u>Pontederia cordata</u> L.
Reedgrass	<u>Phragmites australis</u> (Cav.) Trin. ex Steud.
Rice Cutgrass	<u>Leersia oryzoides</u> (L.) Sw.
River Bulrush	<u>Scirpus fluviatilis</u> (Torr.) Gray

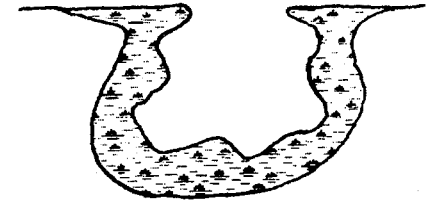
\* Marsh species not included in the Virginia Wetlands Act of 1972

Sedge*	<u>Carex stricta</u> Lam.
Smartweed	<u>Polygonum punctatum</u> Ell.
Soft Rush, Giant Bulrush, or Softstem Bulrush	<u>Scirpus validus</u> Vahl.
Spikerush	<u>Eleocharis</u> spp.
Swamp Milkweed*	<u>Asclepias incarnata</u> L.
Swamp Rose*	<u>Rosa palustris</u> Marsh.
Sweetflag	<u>Acorus calamus</u> L.
Switchgrass	<u>Panicum virgatum</u> L.
Tearthumb Halberd-leaved Arrow-leaved	<u>Polygonum arifolium</u> L. <u>Polygonum sagittatum</u> L.
Water Dock	<u>Rumex verticillatus</u> L.
Water Hemp	<u>Amaranthus cannabinus</u> (L.) J.D. Sauer
Water Willow*	<u>Justicia ovata</u> (Walt.) Lindau
Wild Rice	<u>Zizania aquatica</u> L.
Woolgrass*	<u>Scirpus cyperinus</u> (L.) Kunth
Yellow Pond Lily	<u>Nuphar luteum</u> (L.) Sibthorp & Smith

## Glossary of Descriptive Terms

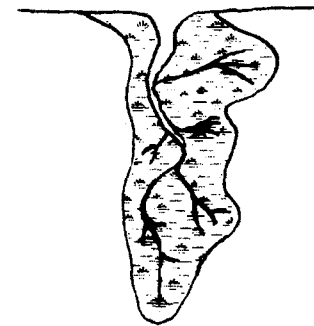
cove marsh

a marsh contained within a concavity or recessed area on a shoreline; the marsh vegetation is usually found surrounding a central, open-water pond, and tidal flushing is permitted through an inlet.



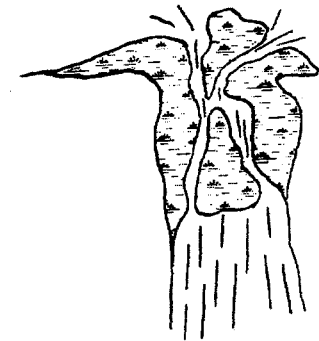
creek or  
embayed marsh

a marsh occupying a drowned creek valley; in many large creek marshes the salinity decreases headward; this type of marsh may be divided for inventory purposes into sections if significant changes in the plant community occur along its length.



delta marsh

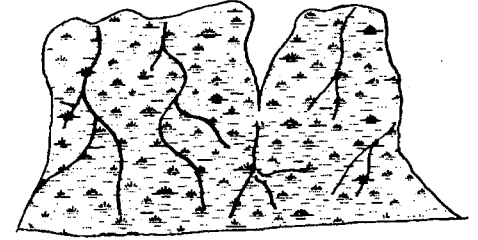
a marsh found growing on sediment deposited at the mouth of a tidal creek; tidal exchange through the creek mouth is usually restricted to narrow channels by the marsh.



## Glossary of Descriptive Terms

extensive marsh

a large marsh where the length and depth or width are roughly comparable; most extensive marshes are drained by many tidal channels and creeks which have little freshwater input.



fringe marsh

a marsh which borders along a section of shoreline and generally has a much greater length than width or depth.



high marsh

the marsh surface is at an elevation of mean high water or above; it is usually inundated less than twice daily by tidal action.

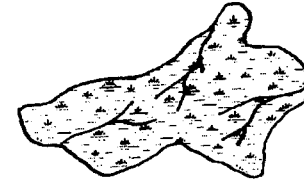
low marsh

the marsh surface is at an elevation below mean high water; it is usually inundated twice daily by tidal action.

## Glossary of Descriptive Terms

marsh island

an isolated marsh surrounded on all sides by open water; interior portions of the marsh may contain trees scattered at highest elevations



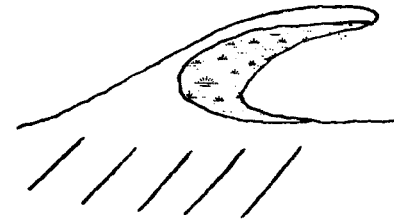
pocket marsh

a marsh contained within a small, essentially semi-circular area on a shoreline.



point or spit  
marsh

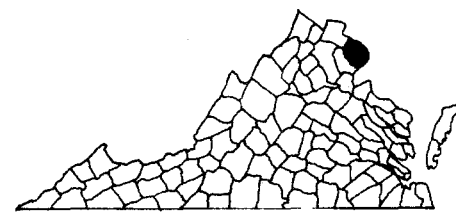
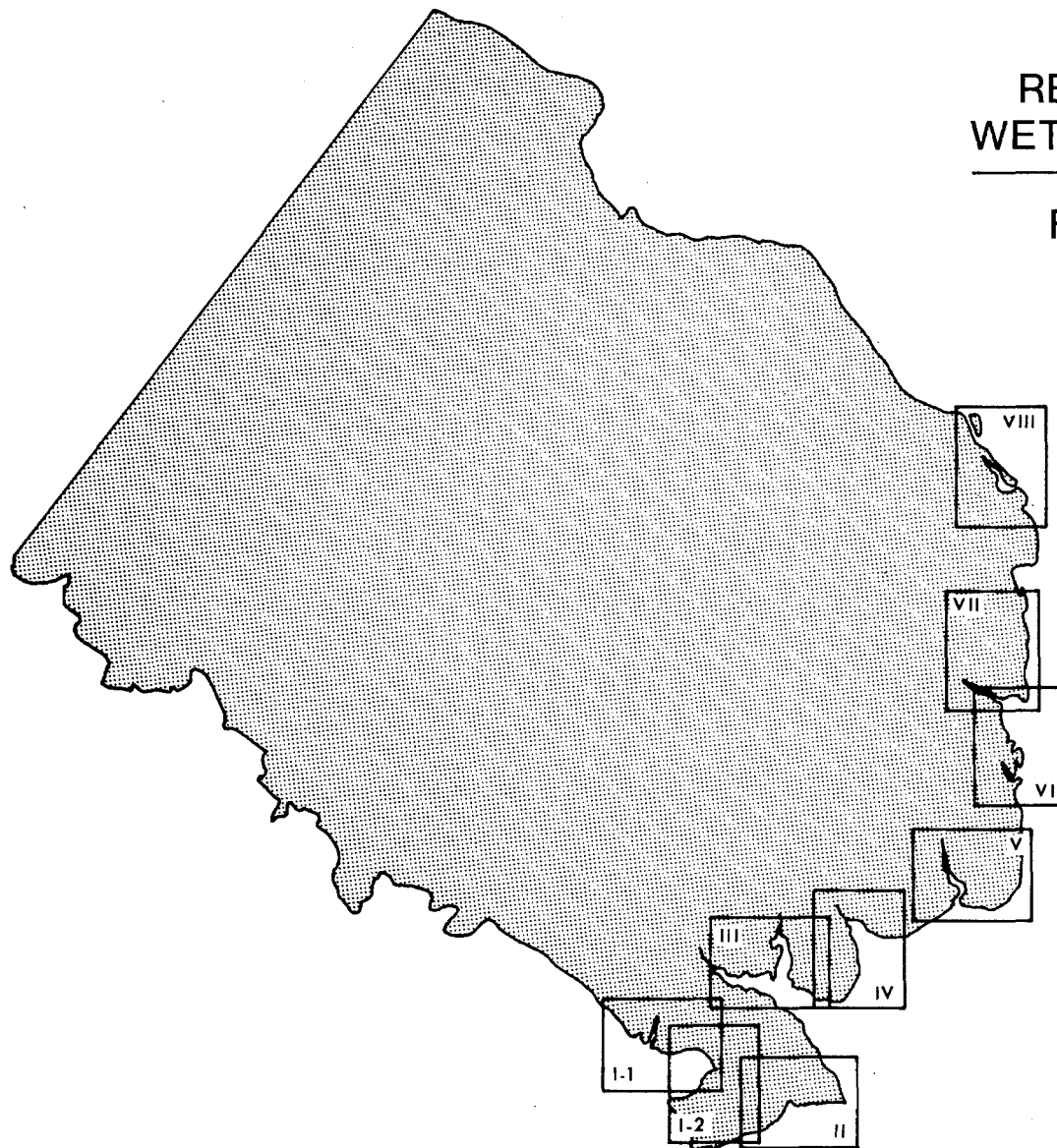
a marsh which extends from the uplands in the form of a point or spit; its development is usually influenced by tidal currents that form a sand berm behind which the marsh forms.



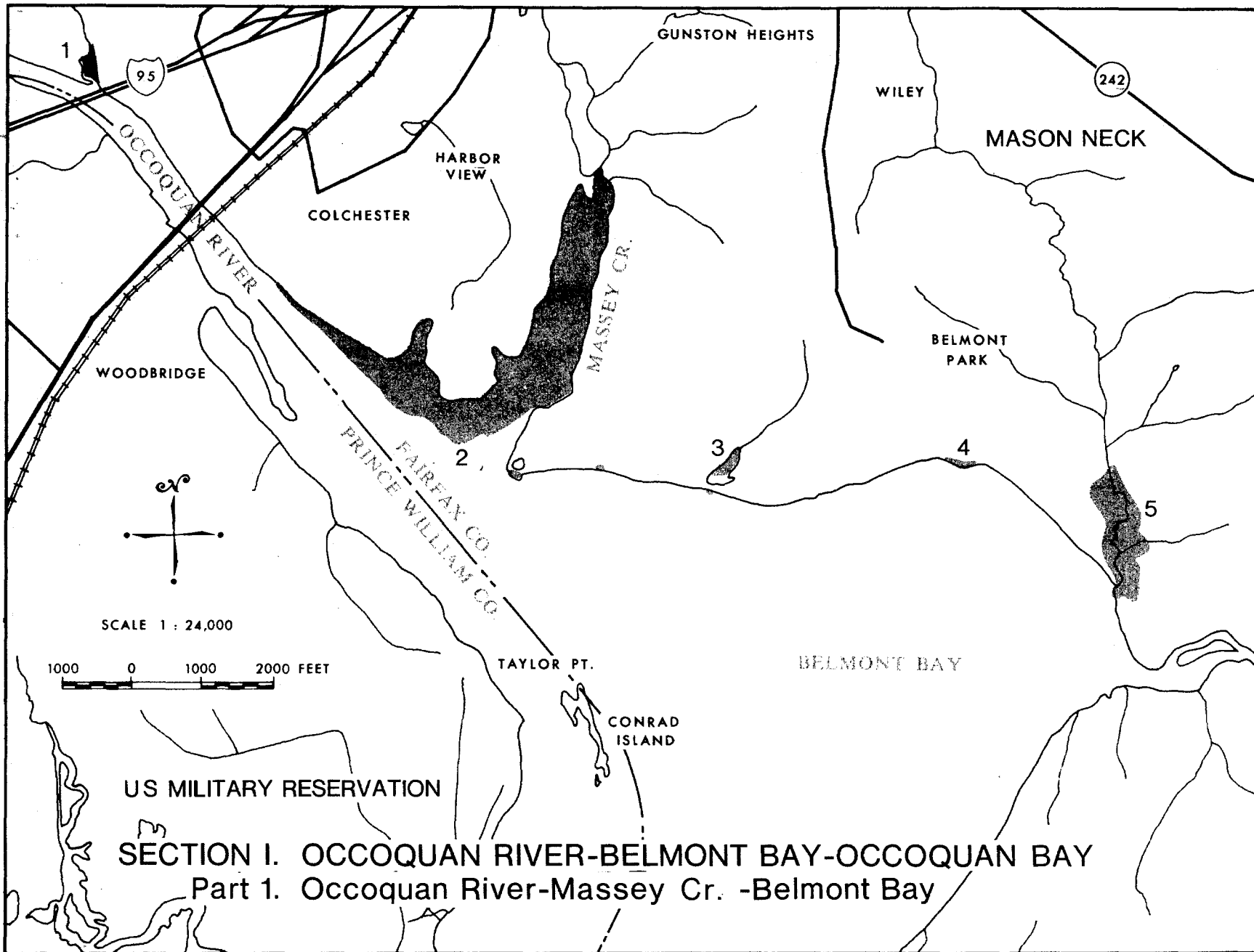


REFERENCE MAP  
WETLAND SECTIONS

Fairfax County



INDEX MAP



**SECTION I. OCCOQUAN RIVER-BELMONT BAY-OCCOQUAN BAY**  
**Part 1. Occoquan River-Massey Cr. -Belmont Bay**

## SECTION I

### Occoquan River - Belmont Bay - Occoquan Bay

The Occoquan River marks the southern boundary of Fairfax County, and only those marshes within the county line are described here.

The marshes found along this river and its tributaries are probably less affected by human activity than marshes elsewhere in the county. The Massey Creek and Kanes Creek marshes are notable in that they contain extensive stands of Wild Rice, Zizania aquatica, a very valuable food source for waterfowl. American Lotus, Nelumbo lutea, has also been reported from Kanes Creek, although it was not observed during this inventory. These marshes, together with the other marshes in this section, are mostly of the very productive Freshwater Mixed (Type XI) and Arrow Arum-Pickerel Weed (Type VII) community types, making them important in the marine detritus food web. In addition, the tidal creeks of this section, as well as the other marsh-creek systems of the upper tidal Potomac, are highly valuable as spawning and nursery grounds for such fishes as American and Hickory Shad, Blueback Herring, Alewife, Striped Bass, and White Perch.

The typical zonation pattern in these marshes, and in other freshwater tidal marshes as well, is as follows: The lowest regions (near mean low water and below) are commonly dominated by Yellow Pond Lily, Nuphar luteum. On U.S.G.S. topographic maps these regions often occupy the areas marked "Tidal Flats", since in the winter months the only parts of the plants remaining are the subterranean rootstocks. Very often, especially if the soil is sandy, the dominant plant in this zone is Common Threesquare, Scirpus americanus. At adjacent higher elevations (the intertidal zone) are found mainly Arrow Arum, Peltandra virginica and Pickerel Weed, Pontederia cordata, sometimes mixed with other species. At slightly higher elevations are usually found a mixture of species (Type XI community), and at the highest elevations (the marsh-upland border) are found many species such as Cattail, Typha sp., Marsh Hibiscus, Hibiscus moscheutos, and such shrubs as Marsh Rose, Rosa palustris and Buttonbush, Cephalanthis occidentalis.

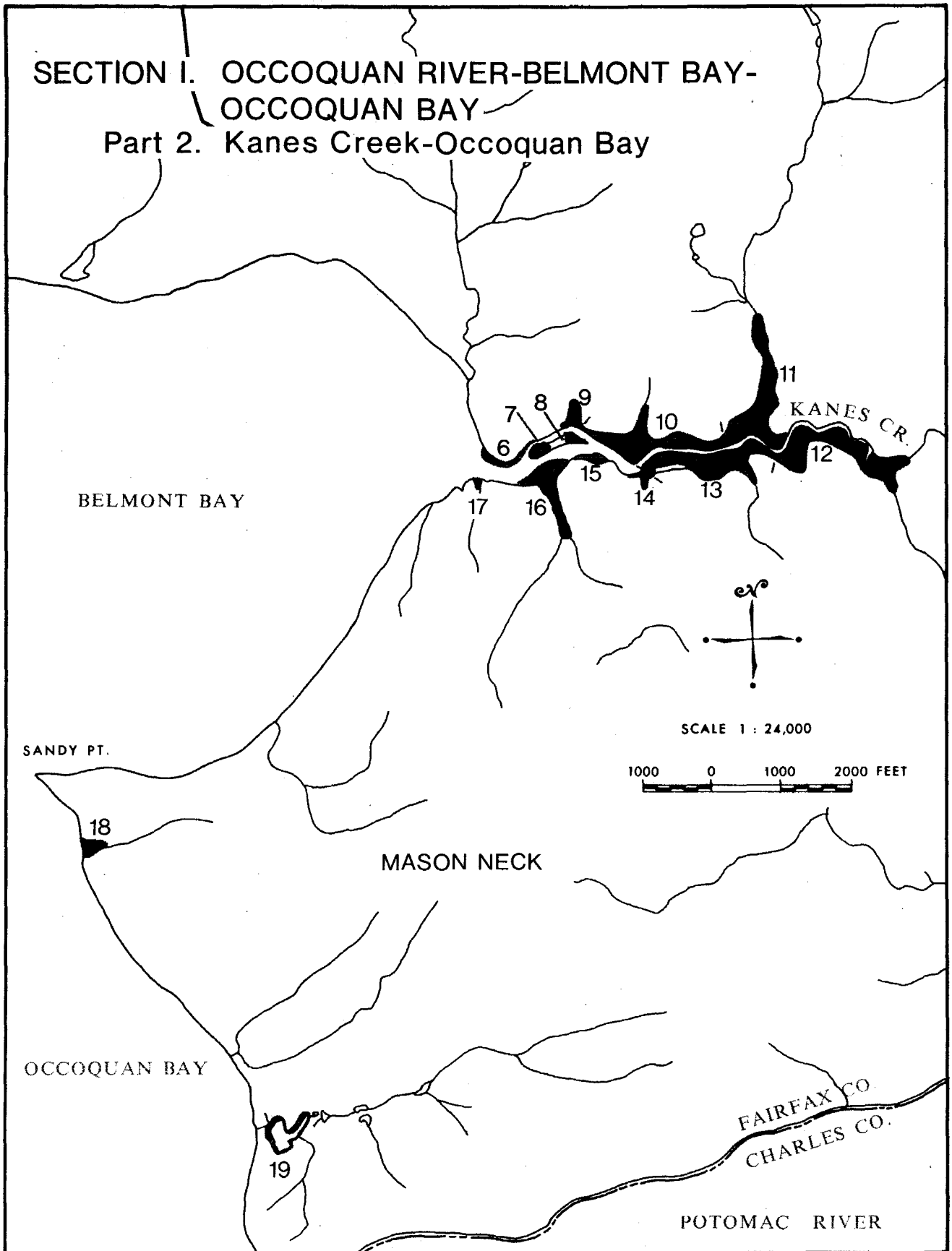
Section I. Occoquan River - Belmont Bay - Occoquan Bay  
 Part I. Occoquan River - Massey Creek - Belmont Bay

#	Marsh Location	Total Acres		Pickeral Weed-Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
1	Occoquan River	3	%	30	30	10				10	20																	Creek marsh; pond lily at lower elevations	XI
			acres	0.9	0.9	0.3				0.3	0.6																		
2	Massey Creek	96	%	40	32	1				1	2		22											2				Large creek marsh; channel is dredged and has boat slips.	XI
			acres	38.4	30.7	1.0				1.0	1.9		21.1												1.9				
3	Belmont Bay	3	%		100																							Pond lily marsh on a man-made tidal pond.	IX
			acres		3.0																								
4	Belmont Bay	1	%	40																	60							Fringe marsh.	XI
			acres	.4																			.6						
5	Belmont Bay	20	%	40	5	10	1		1	1	-	1						1		40					-	-		Low, diverse creek marsh	XI
			acres	8.0	1.0	2.0	0.2		0.2	0.2	-	0.2		0.2					0.2		8.0					-	-		
	Total Section I Part I	123	%	39	29	3	-		-	1	2		17					-		6	-			2	-	-			
			acres	47.7	35.6	3.3	0.2		0.2	1.5	2.5		21.3						0.2		8.0	0.6			1.9	-	-		

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

SECTION I. OCCOQUAN RIVER-BELMONT BAY-  
OCCOQUAN BAY

Part 2. Kanes Creek-Occoquan Bay



Section I. Occoquan River - Belmont Bay - Occoquan Bay

Part 2. Kanes Creek - Occoquan Bay

#	Marsh Location	Total Acres		Pickrel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
6	Kanes Creek	3	%	55	40													5										Wide fringing marsh of low elevation.	VII
			acres	1.6	1.2															0.1									
7	Kanes Creek	2	%	100																								Marsh island of low elevation.	VII
			acres	2.0																									
8	Kanes Creek	1	%	60	40																							Marsh island of low elevation.	VII
			acres	0.6	0.4																								
9	Kanes Creek	3	%	55	40													5										Pocket marsh; pond lily at lower elevations.	VII
			acres	1.6	1.2															0.1									
10	Kanes Creek	14	%	80	10								10															Low marsh; scattered stands of wild rice.	VII
			acres	11.2	1.4										1.4														
11	Kanes Creek	11	%	40	20	-			-	-		10	30															Creek marsh; scattered stands of wild rice.	XI
			acres	4.4	2.2								1.1	3.3															
12	Kanes Creek	13	%	40	10	-							50		-													Creek marsh; wild rice very abundant at higher elevations.	XI
			acres	5.2	1.3	-								6.5		-													
13	Kanes Creek	12	%	100	-																							Low marsh nearly completely dominated by arrow arum.	VII
			acres	12.0	-																								

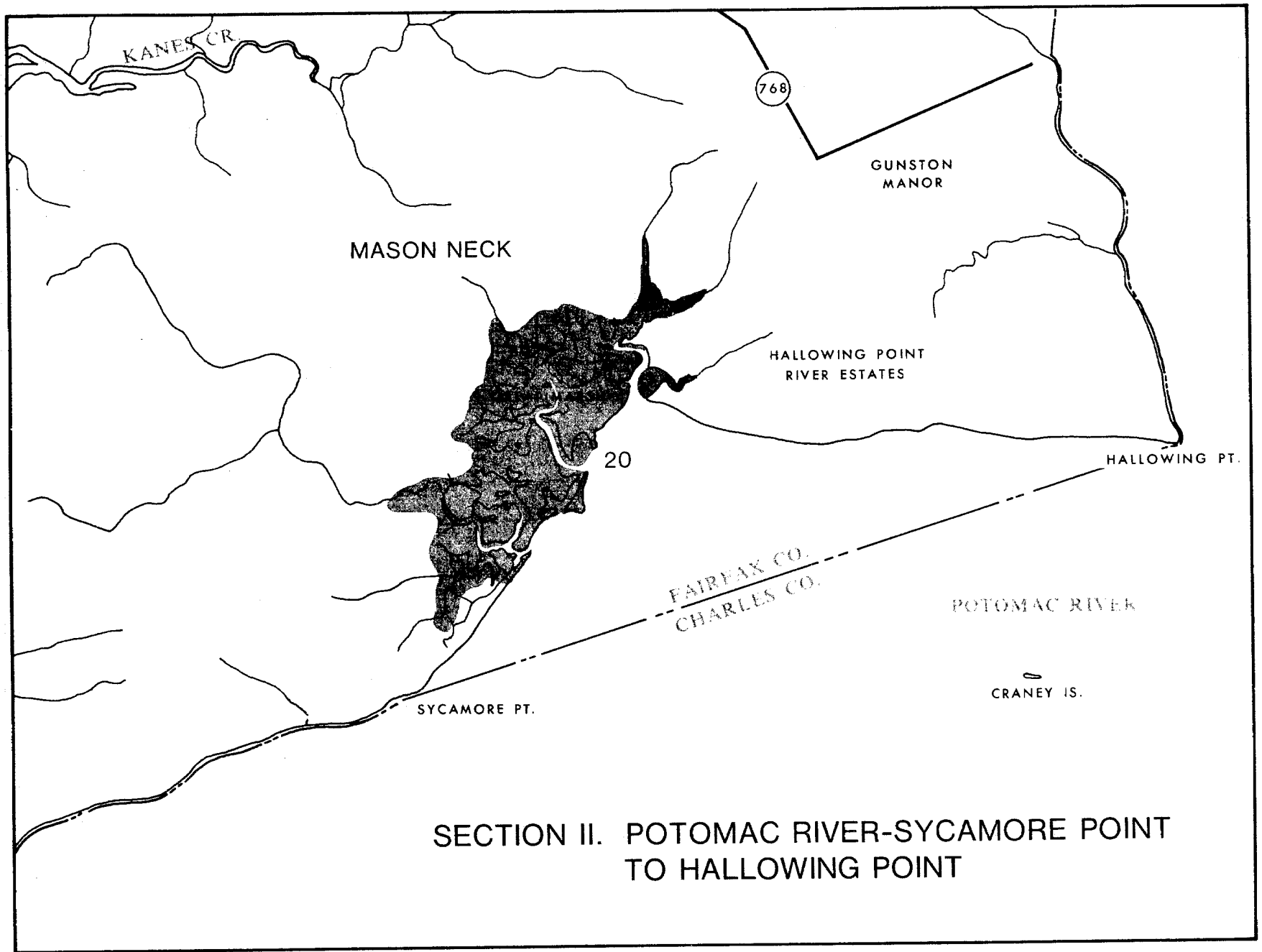
a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Carduus Flower g- Duckweed h- Beggar Ticks

Section I. Occoquan River - Belmont Bay - Occoquan Bay

Part 2. Kanes Creek - Occoquan Bay

#	Marsh Location	Total Acres	Pickeral Weed-Arrow Arum		Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Teatthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Butreed	Others	Observations	Marsh Type
			%	acres																									
14	Kanes Creek	1	%	25		75																						Pocket marsh; arrow arum at lower elevations, cattail at higher.	VI
			acres	0.2		0.8																							
15	Kanes Creek	2	%	100																								Broad fringe dominated by arrow arum.	VII
			acres	2.0																									
16	Kanes Creek	8	%	65	30	5																						Creek marsh; lower portion dominated by pond lily, arrow arum and cattail at higher elevations.	VII
			acres	5.2	2.4	0.4																							
17	Kanes Creek	1	%			100																						Creek marsh dominated by cattail.	VI
			acres			1.0																							
18	Occoquan Bay	2	%			100																						Creek marsh dominated by cattail	VI
			acres			2.0																							
19	Occoquan Bay	5	%	80	20																							Low marsh fringing a man-made tidal pond.	VII
			acres	4.0	1.0																								
Total Section I Part 2		78	%	64	14	5				-	-	1	14		-														
			acres	50.0	11.1	4.2					-	-	1.1	11.2		0.2													
Total Section I		201	%	49	23	4	-			-	1	1	-	16		-				4	-			1	-	-			
			acres	97.7	46.7	7.5	0.2				0.2	1.5	2.5	1.1	32.5		-			0.4		8.0	0.6		1.9	-	-		

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



SECTION II. POTOMAC RIVER-SYCAMORE POINT  
TO HALLOWING POINT



## SECTION II

### Potomac River - Sycamore Point to Hallowing Point

The Potomac River shoreline of Mason Neck contains only one marsh, Great Marsh, which is somewhat protected from wave action by being situated in a cove. This marsh covers 176 acres, making it presently the largest marsh in Fairfax County. The areas bordering directly on the river have eroded somewhat, but the marsh is essentially the same as it was in 1937, as noted from aerial photographs.

Much of Great Marsh is dominated by Cattail, but Arrow Arum and Pickerel Weed are nearly as common, particularly in the intertidal zone. Areas represented as water on U.S.G.S. topographic maps are often overgrown with Yellow Pond Lily, thus necessitating the use of recent aerial photographs for mapping purposes. Extensive stands of Wild Rice are found, but so are significant amounts of the less desirable Reedgrass, Phragmites australis.

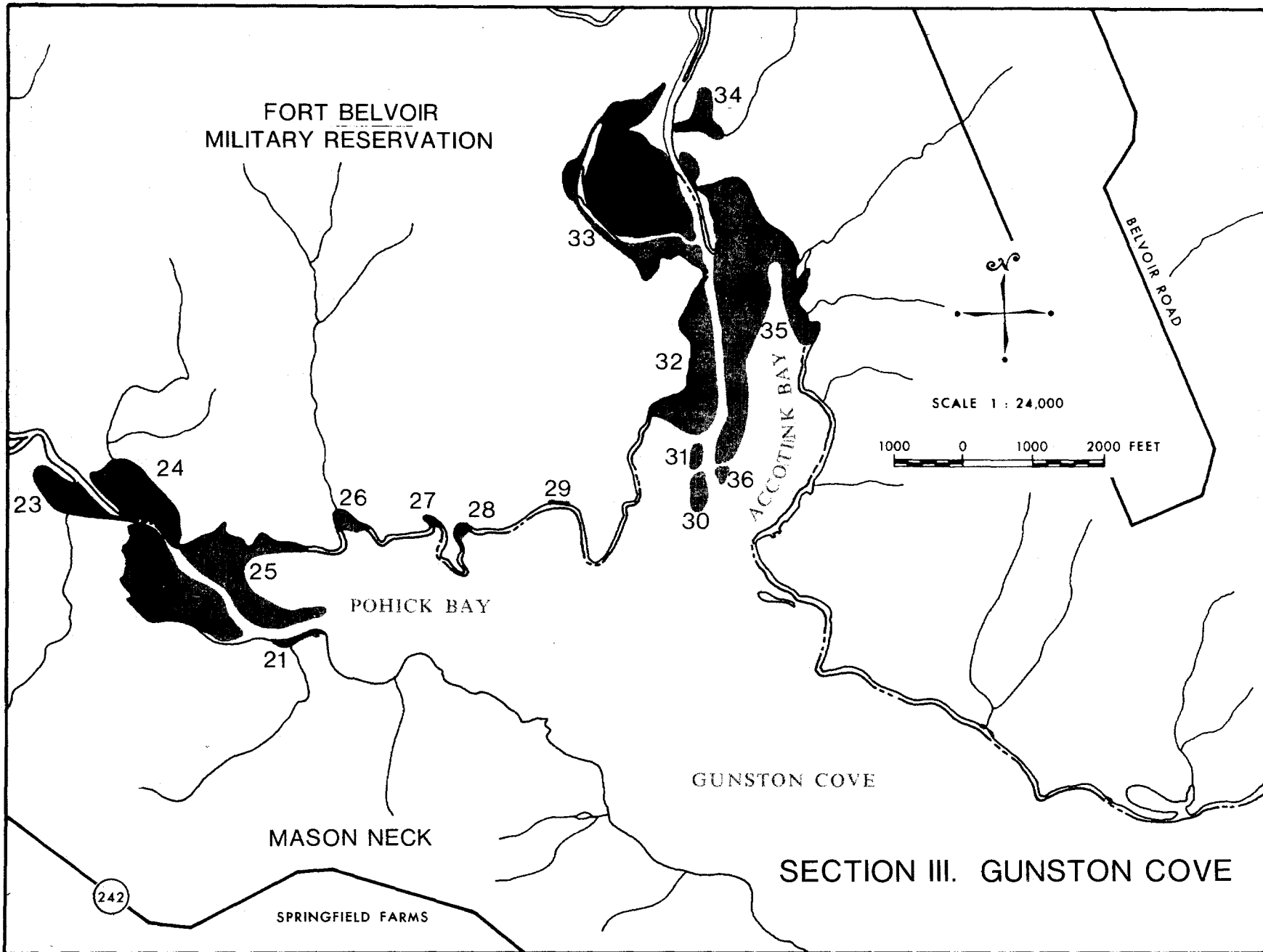
Because of the wide diversity of plants, the marsh is considered a Type XI (Freshwater Mixed) community and is thus very valuable as a nesting and feeding area for waterfowl, as evidenced by its status as a U.S. wildfowl preserve administered by the U.S. Fish and Wildlife Service.



Section II. Potomac River - Sycamore Point to Hallowing Point

#	Marsh Location	Total Acres		Pickeral Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type	
20	Great Marsh	176	%	35	10	40	-			-	-		10		-		-	-	5								a, - b, -	See Text	XI	
			acres	61.6	17.6	70.4	-			-	-			17.6		-		-	-	8.8										a, - b, -
	Total Section II	176	%	35	10	40	-			-	-		10		-		-	-	5								a, - b, -			
			acres	61.6	17.6	70.4	-			-	-			17.6		-		-	-	8.8								a, - b, -		

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



### SECTION III

#### Gunston Cove

Gunston Cove proper contains few marshes; most are located on its two main tributaries, Pohick and Accotink creeks. These marshes, which comprise twenty-seven percent of the total marsh acreage of Fairfax County, have been moderately disturbed by man in that channels have been dredged and the spoil has been deposited along the banks. These spoil banks have subsequently been vegetated with a diverse flora composed of both marsh and weedy species. In addition, a sewage treatment plant is located farther upstream on Pohick Creek, and a septic odor was detected along the downstream reaches. Because of the proximity of a public boat ramp, there is light boating activity in the vicinity of these marshes, especially in the warmer months. Any detrimental effects on the marshes due to erosion was not noticed, however.

Upland development has contributed significant amounts of sediment to Accotink Creek, the specific impacts of which cannot be predicted at this time. If continued unchecked, there are bound to be adverse impacts on fish spawning and nursery areas, on tidal flushing within the marsh, and on recreational boating in Gunston Cove.

Most of the marshes of Gunston Cove are of the valuable Freshwater Mixed and Arrow Arum-Pickerel Weed community types (Types XI and VII) and are therefore valuable as nursery grounds for anadromous fishes such as American Shad and Striped Bass, and as feeding grounds for waterfowl. There are also significant amounts of Cattail and River Bulrush, Scirpus fluviatilis, which together provide habitats for birds and are also utilized by muskrats.

Section III. Gunston Cove

#	Marsh Location	Total Acres		Pickerel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
21	Pohick Creek	2	%	50	50																							Low marsh dominated by pond lily and pickerel weed - arrow arum. Many fish seen jumping in this area.	XI
			acres	1.0	1.0																								
22	Pohick Creek	33	%	40				10			20		30	-												c,-	Low spoil bank along shoreline giving rise to many upland species mixed with marsh flora.	XI	
			acres	13.2				3.3			6.6		9.9	-															c,-
23	Pohick Creek	9	%	80	5				10			5															High marsh with spoil bank from dredged creek channel.	VII	
			acres	7.2	0.4				0.9			0.4																	
24	Pohick Creek	17	%	5	5	-			10			80															High marsh with extensive stands of river bulrush.	XI	
			acres	0.8	0.8				1.7			13.6																	
25	Pohick Creek	24	%	40	30				10			20															High marsh with spoil bank from dredged creek channel	XI	
			acres	9.6	7.2				2.4			4.8																	
26	Pohick Bay	2	%	80								20															Creek marsh with pond lily dominating the lower portion.	VII	
			acres	1.6								0.4																	
27	Pohick Bay	1	%	70	30																						Pocket marsh with pond lily dominating lower elevations.	VII	
			acres	0.7	0.3																								
28	Pohick Bay	1	%	30	70																						Pocket marsh with pond lily along the shoreline and at lower elevations.	IX	
			acres	0.3	0.7																								

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

Section III. Gunston Cove

#	Marsh Location	Total Acres		Pickereel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
29	Pohick Bay	0.5	%		100																							Pond lily fringe.	IX
			acres		0.5																								
30	Accotink Creek	2	%		100																							Low marsh island; pond lily.	IX
			acres		2.0																								
31	Accotink Creek	1	%		100																						Low marsh island; pond lily.	IX	
			acres		1.0																								
32	Accotink Creek	23	%	60	10	5	-			5		20															High marsh with dredge spoil along creek bank; many ducks observed in area.	VII	
			acres	13.8	2.3	1.2	-		1.2		4.6																		
33	Accotink Creek	63	%	10	10	20				-	10	20	-	10		20	-	-									Very diverse high marsh; creek water contains much upland sediment.	XI	
			acres	6.3	6.3	12.6			-	6.3	12.6	-	6.3		12.6	-	-												
34	Accotink Creek	6	%	-		90	10																				High cattail marsh; creek water very clear.	VI	
			acres	-		5.4	0.6																						
35	Accotink Creek	62	%	30		70																					Spoil bank along edge of creek; cattail at higher elevations.	VI	
			acres	18.6		43.4																							
36	Accotink Creek	1	%		100																						Low pond lily island with scattered pickereel weed.	IX	
			acres		1.0																								

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

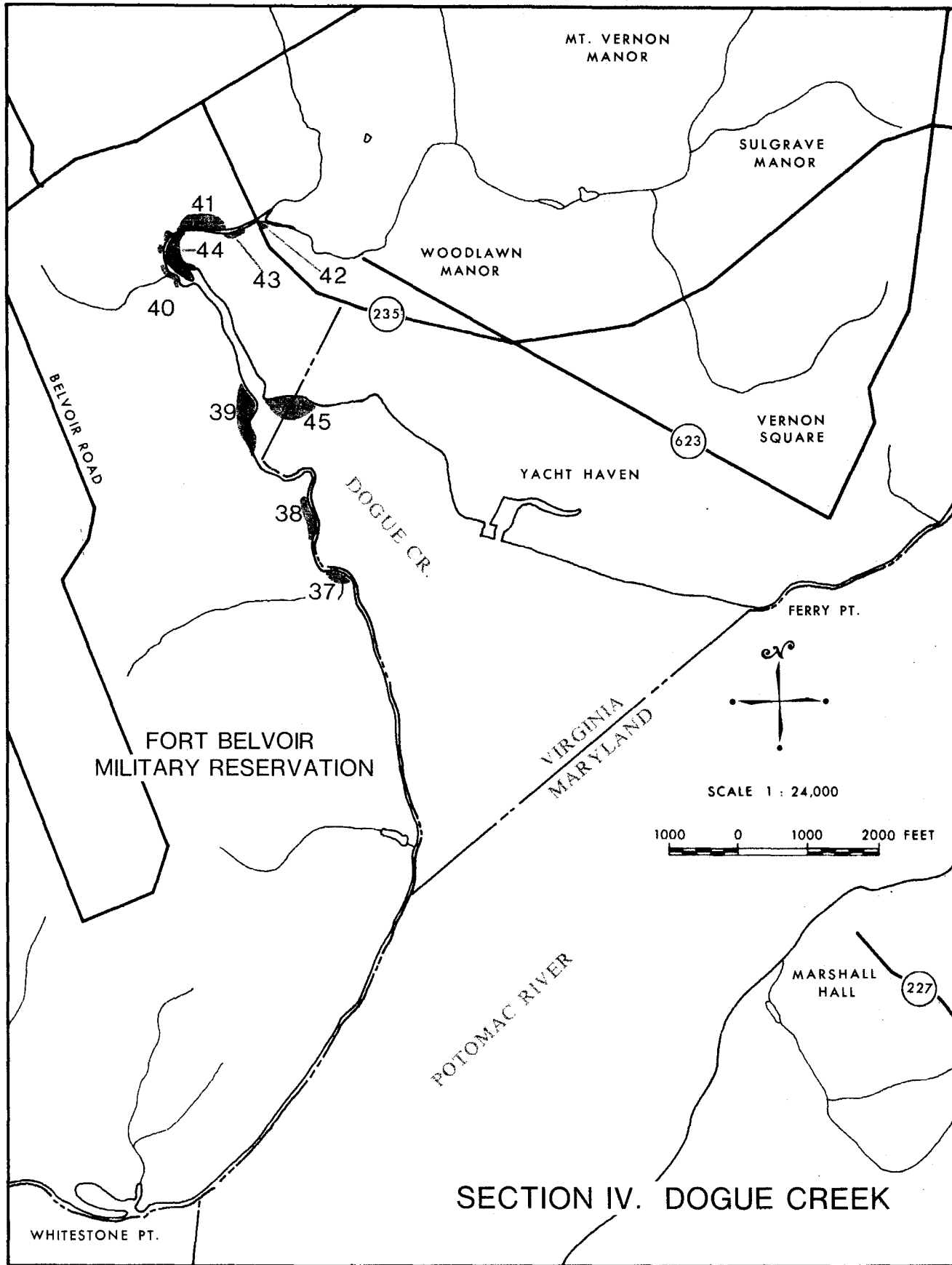




Section III. Gunston Cove

#	Marsh Location	Total Acres	%		Pickerei Weed-Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type	
			Total Section III	2475																											
					30	9	25	-	1	2	-	5	15	4	2		5	-	-	-	-	-	-	-	-	-	-	-	-		
					73.1	23.5	62.6	0.6	3.3	5.0	1.2	12.9	36.4	9.9	6.3		12.6	-	-	-	-	-	-	-	-	-	-	-			
					acres																										

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



## SECTION IV

### Dogue Creek

The shoreline of the middle section of Dogue Creek has been altered by filling and bulkheading, and thus no marshes are found there except a few small fringes. Developments on the creek include a public boat ramp and marina, and a sewage treatment plant farther upstream.

Most of the marshes of this creek are of low elevation, and therefore the dominant plant is Yellow Pond Lily. In the upstream marshes are found unusually high amounts of Rice Cutgrass, Leersia oryzoides, and Jewelweed, Impatiens capensis; these marshes appear to be higher in elevation and more diverse, thus producing a variety of waterfowl foods.

Section IV. Dogue Creek

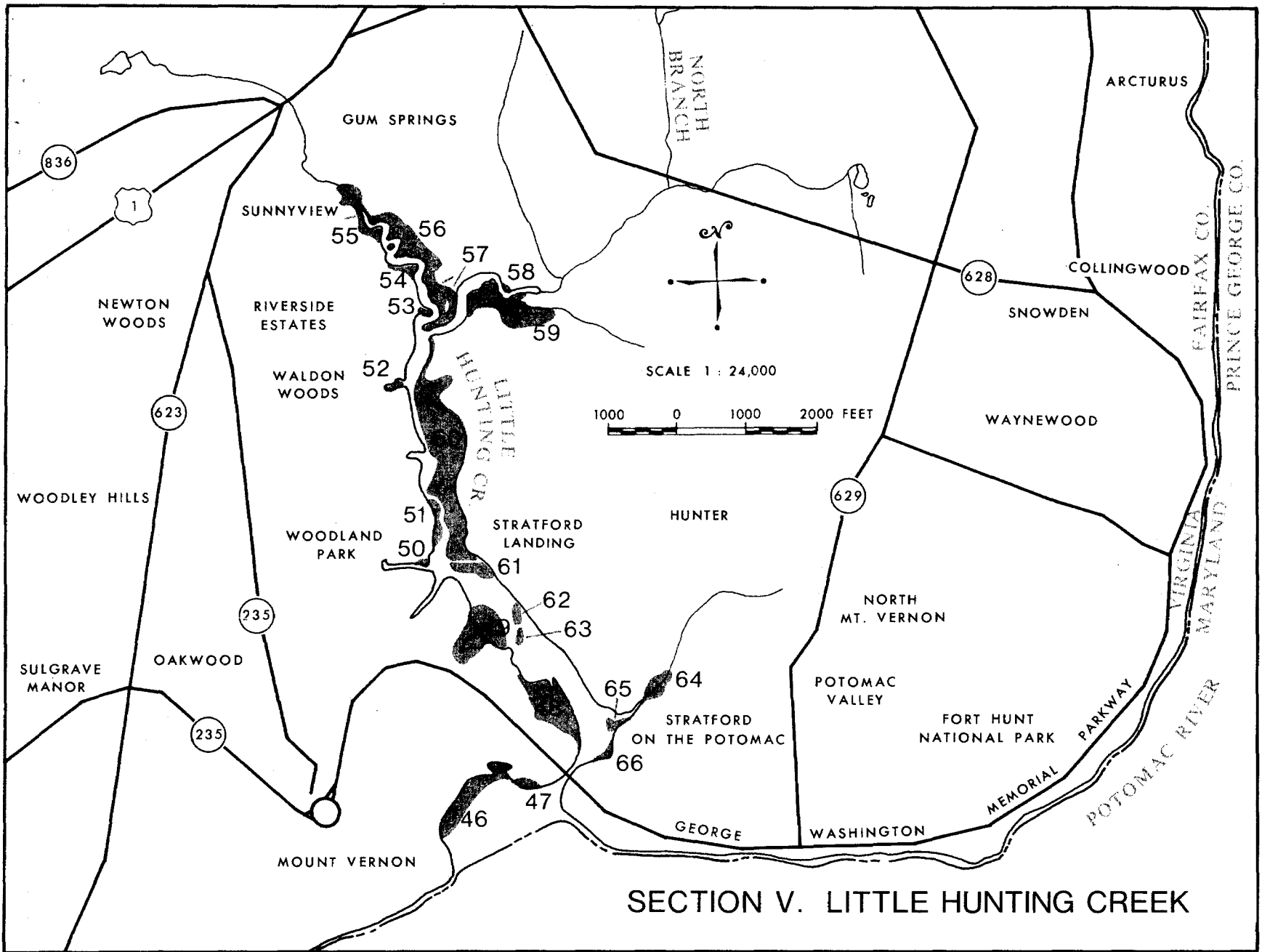
#	Marsh Location	Total Acres		Pickeral Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
37	Dogue Creek	1	%		90							5								5		-						Low creek marsh.	IX
			acres		0.9								-									-		-					
38	Dogue Creek	1	%	5	90	5																						Low fringe marsh.	IX
			acres	-	0.9	-																							
39	Dogue Creek	7	%	-	100														-									Low marsh; reedgrass grow- ing on spoil bank.	IX
			acres	-	7.0																-								
40	Dogue Creek	1	%	50	50		-																					Low fringe marsh.	XI
			acres	0.5	0.5		-																						
41	Dogue Creek	5	%	3	2		40	5		-	50																	High marsh dominated by jewelweed and rice cut- grass.	XI
			acres	0.2	0.1		2.0	0.2		-	2.5																		
42	Dogue Creek	1	%	50	30		10				10																	Low marsh with pond lily at lowest elevations.	VII
			acres	0.5	0.3		0.1					0.1																	
43	Dogue Creek	1	%	10	10		40				30													10				Diverse pocket marsh; water hemp common.	XI
			acres	0.1	0.1		0.4					0.3													0.1				
44	Dogue Creek	5	%	10	10		40				30													10				Very diverse marsh with pond lily and duck weed at lowest elevations.	XI
			acres	0.5	0.5		2.0					1.5													0.5				

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

Section IV, Dogue Creek

#	Marsh Location	Total Acres	%		Pickeral Weed-Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type			
			acres	acres																													
45	Dogue Creek	6				100																									Low pond lily marsh.	IX	
	Total Section IV	28	acres	acres	1.8	16.3	-	4.5	0.2	-	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	2						

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



SECTION V. LITTLE HUNTING CREEK

## SECTION V

### Little Hunting Creek

Most of Little Hunting Creek borders residential area, and hence many marshes that existed a few years ago have either disappeared or have been considerably altered by bulkheading, filling, etc. Boat activity is moderate, but no evidence of significant erosion was detected. Also, like most creeks in Fairfax County, there is a sizable sewage plant discharge.

Most of the marshes are low in elevation and therefore contain mainly Yellow Pond Lily and some Arrow Arum and Pickerel Weed. The exceptions are some of the upstream marshes where Cattail, River Bulrush, and Rice Cutgrass become more common. Because of this vegetational pattern, most of the downstream marshes fall into the Type IX (Yellow Pond Lily Community) and Type VII (Arrow Arum-Pickerel Weed Community) categories, whereas many of the upstream marshes are of the Freshwater Mixed (Type XI) community type. All of these community types, as has been mentioned previously, are valuable not only as nursery and feeding grounds for fish, but as important food and nesting areas for birds.

Section V. Little Hunting Creek

#	Marsh Location	Total Acres	Pickeral Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
46	Little Hunting Creek	9	100	9.0																							Low pond lily marsh.	IX
47	Little Hunting Creek	2	40	0.8	-						60			-													Arrow arum at lower elevations; wild rice elsewhere.	XI
48	Little Hunting Creek	8	100	8.0	-																						High arrow arum marsh; scattered pond lily along edge.	VII
49	Little Hunting Creek	12	100	12.0																							Low pond lily marsh.	IX
50	Little Hunting Creek	1	50	0.5	50	-						-															Marsh located on dredged channel; some boat activity	XI
51	Little Hunting Creek	2	100	2.0																							Low pond lily marsh.	IX
52	Little Hunting Creek	1	30	0.3	30		40																				Large stands of sweetflag; arrow arum and pond lily along edge.	XI
53	Little Hunting Creek	1	20	0.2	80						-																Low marsh.	IX

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



Section V. Little Hunting Creek

#	Marsh Location	Total Acres	Pickerel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Outgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
54	Little Hunting Creek	1	%	-	20	-	20				-		-														Diverse marsh; dominated by smartweed.	XI
			acres	-	0.2	-	0.2		0.6				-		-													
55	Little Hunting Creek	2	%	-	40		10				50																Large stands of river bulrush; pond lily at lower elevations.	XI
			acres	-	0.8		0.2					1.0																
56	Little Hunting Creek	11	%		30	5	5		5	5	50																Diverse marsh with large stands of river bulrush.	XI
			acres		3.3	0.6	0.6		0.6	0.6		5.5																
57	Little Hunting Creek	4	%		30	10	5		5		50																Mostly high marsh with pure cattail stands at southern end.	XI
			acres		1.2	0.4	0.2		0.2		2.0																	
58	North Branch	1	%	100																							Small arrow arum marsh.	VII
			acres	1.0																								
59	North Branch	10	%	60	40																						Pond lily in low areas; arrow arum-pickerel weed elsewhere.	VII
			acres	6.0	4.0																							
60	Little Hunting Creek	24	%	5	95																						Extensive pond lily marsh.	IX
			acres	1.2	23.8																							
61	Little Hunting Creek	5	%		100																						Low pond lily marsh.	IX
			acres		5.0																							

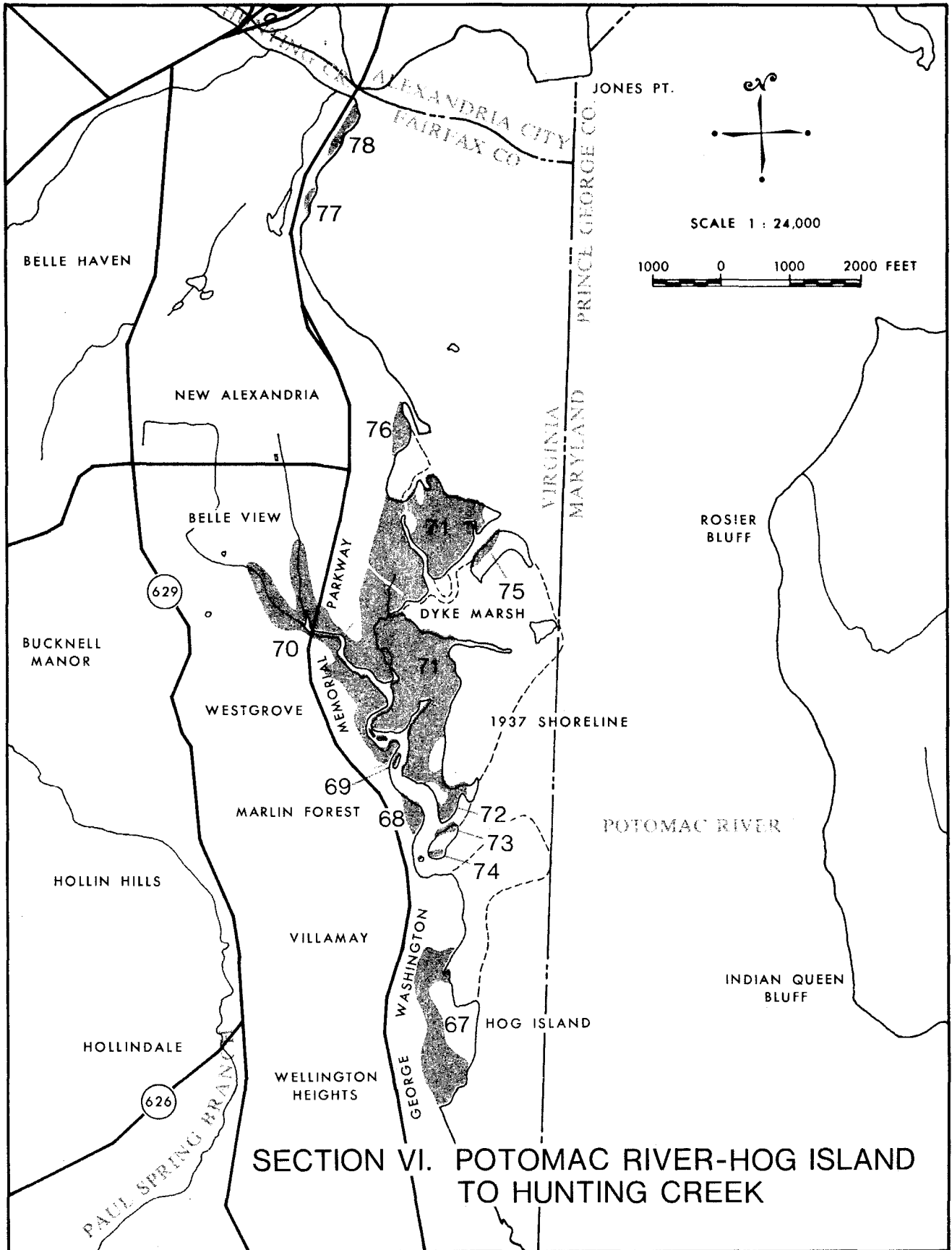
a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



Section V. Little Hunting Creek

#	Marsh Location	Total Acres		Pickrel Weed-Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
62	Little Hunting Creek	2	%	95						5																		Low arrow arum marsh.	VII
			acres	1.9							0.1																		
63	Little Hunting Creek	1	%	95						5																		Marsh island dominated by arrow arum.	VII
			acres	1.0							-																		
64	Little Hunting Creek	5	%	10				90																				Marsh almost completely dominated by sweetflag.	XI
			acres	0.5					4.5																				
65	Little Hunting Creek	2	%	80				20																				Low marsh with sweetflag in upper elevations.	IX
			acres	1.6					0.4																				
66	Little Hunting Creek	1	%	90		10																						Mostly arrow arum; with cattail along landward border.	VII
			acres	0.9		0.1																							
	Total Section V	105	%	21	62	1	1	5	1	1		8	1	-	-						-								
			acres	21.8	65.0	1.1	1.2	5.3	1.2	0.9			8.5	1.2	-	-						-							

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



SECTION VI. POTOMAC RIVER-HOG ISLAND  
TO HUNTING CREEK

## SECTION VI

### Potomac River - Hog Island to Hunting Creek

Along the Potomac River shoreline from Little Hunting Creek to Hunting Creek are found only two sizable wetlands systems: the marsh-swamp surrounding Hog Island and neighboring Dyke Marsh. These two wetlands are a prime example of man's destruction of valuable marsh and swampland by dredging activities. Aerial photographs taken as recently as 1937 show that at that time the two wetlands were approximately twice as large as they are now, making them together the largest wetlands system in Fairfax County. The 1937 shoreline is indicated on the accompanying map by a dotted line.

Over three-fourths of Dyke Marsh is vegetated by Cattail, making it a Type VI community, and thus it provides good cover for birds and muskrats and also acts as a sediment trap. Most of the lower marshes are dominated by Arrow Arum, with Yellow Pond Lily and Sweet-flag, Acorus calamus, being locally abundant.

Many portions of Dyke Marsh and the wetlands surrounding Hog Island are composed of wooded swamp which provides an excellent wildlife refuge and acts as a flood buffer. Since these areas contain Black Gum, Nyssa sylvatica, which is listed in the Virginia Wetlands Act of 1972, the areas of swamp which are tidally flushed meet the elevational requirements of the Act and are considered "wetlands". As determination of these areas requires an accurate survey, only those areas with marsh vegetation are included in this inventory.

Section VI. Potomac River - Hog Island to Hunting Creek

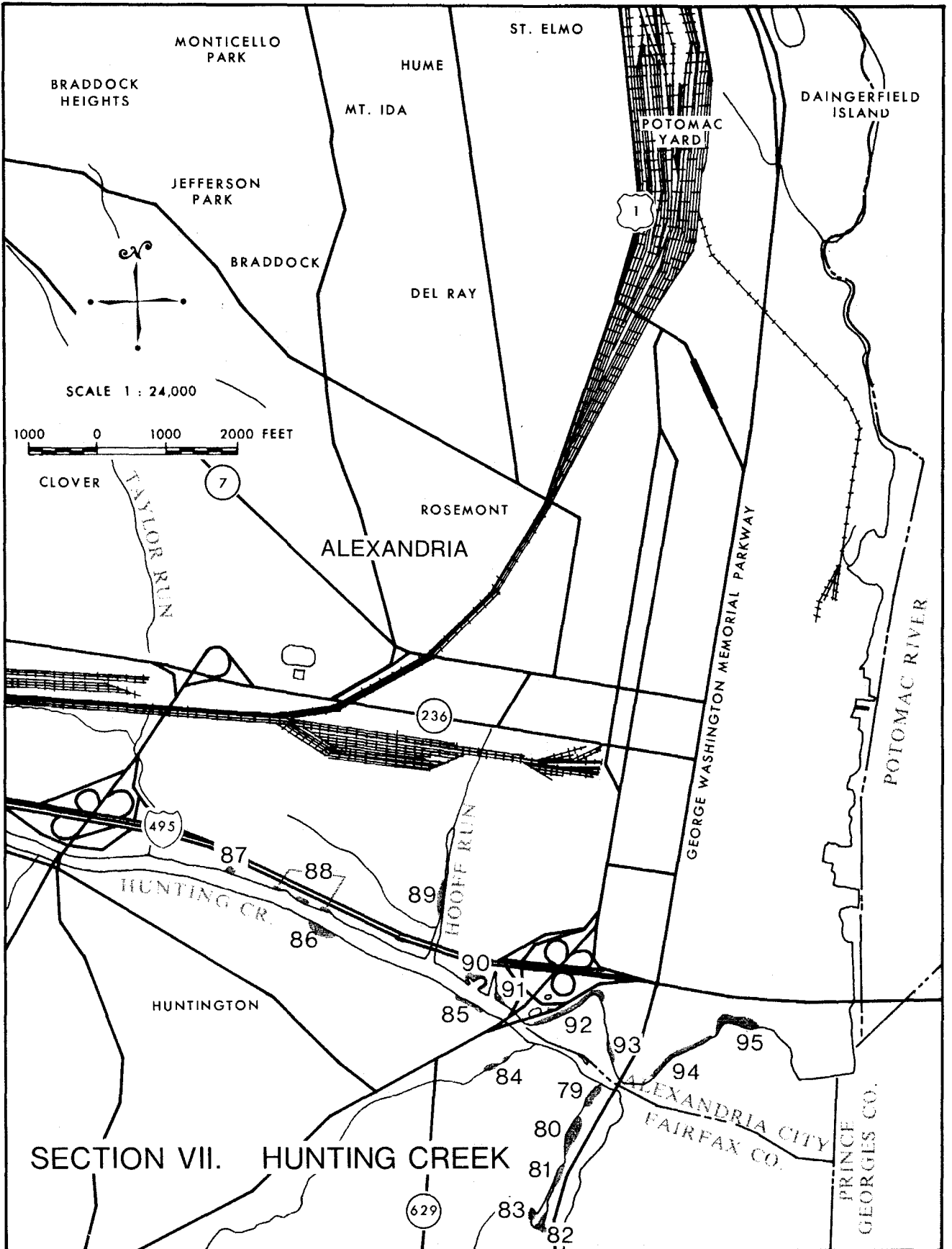
#	Marsh Location	Total Acres																Observations	Marsh Type										
			%	Pickereel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder			Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others
67	Hog Island	19	%	40	20	-		40	-																			Diverse marsh; growth more luxuriant in neighboring swamp areas.	XI
			acres	7.6	3.8	-		7.6	-																				
68	Dyke Marsh	3	%	90		10																					Marsh dominated by arrow arum; cattail in higher areas.	VII	
			acres	2.7		0.3																							
69	Dyke Marsh	1	%	50	50																						Marsh island; pond lily in lower portions.	XI	
			acres	0.5	0.5																								
70	Dyke Marsh	26	%	40	40	10		10																	d,-	Large, diverse marsh; up-stream areas border on developed areas.	XI		
			acres	10.4	10.4	2.6		2.6																				d,-	
71	Dyke Marsh	87	%	10	5	80	4	1																	h,-	Extensive; dominated by cattail. Marsh has been dredged and spoil areas are present.	VI		
			acres	8.7	4.4	69.6	3.5	0.9																				h,-	
72	Dyke Marsh	2	%	80		20																				Marsh dominated by arrow arum.	VII		
			acres	1.6		0.4																							
73	Dyke Marsh	2	%	30	70																					Low marsh; bordered by swamp.	IX		
			acres	0.6	1.4																								
74	Dyke Marsh	1	%	90	10																					Low marsh; bordered by swamp.	VII		
			acres	0.9	0.1																								

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

Section VI. Potomac River - Hog Island to Hunting Creek

#	Marsh Location	Total Acres																		Observations	Marsh Type							
			Pickrel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock			Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others
75	Byke Marsh	2	%	60		40																					Arrow arum marsh; with large amounts of cattail.	VII
			acres	1.2		0.8																						
76	Potomac River	4	%	50				50	-																		Large stands of sweetflag.	VII
			acres	2.0				2.0	-																			
77	Potomac River	1	%	55		45																					Intermittent fringe; mostly arrow arum.	VII
			acres	0.6		0.4																						
78	Potomac River	3	%	100		-																					Intermittent fringe; mostly arrow arum.	VII
			acres	3.0		-																						
Total Section VI		151	%	26	14	49	2	9	-	-	-																	
			acres	39.8	20.6	74.1	3.5	13.1	-	-	-																	

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks





## SECTION VII

### Hunting Creek

Hunting Creek marks the boundary between Fairfax County and the City of Alexandria, and contains 17.3 of the 907.7 acres of marshland included in this inventory. The shoreline of this creek has been extensively altered by filling and bulkheading, in fact, many buildings and roads now exist on what was once marsh or open water. Hence most of the marshes found on Hunting Creek are small, newly established fringes, with the exceptions being marsh nos. 79-83, which have probably been little disturbed. In addition to shoreline alterations, the creek receives effluent from a sewage treatment plant and possibly waste from the many residences and businesses in the area. In spite of the stresses, however, some of the plants such as Pickerel Weed and Arrowhead, Sagittaria latifolia, were found to be larger and more robust than in marshes elsewhere, perhaps due to the high nutrient levels.

Most of the marshes of Hunting Creek are designated as Arrow Arum-Pickerel Weed communities (Type XI), with many others being Fresh-water Mixed (Type XI) types, even though the species composition of these may vary significantly among marshes.

Section VII. Hunting Creek

#	Marsh Location	Total Acres		Pickeral Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
79	Hunting Creek	2	%	50		10	40																					Mostly arrow arum and pickeral weed mixed with rice cutgrass.	VII
			acres	1.0		0.2	0.8																						
80	Hunting Creek	4	%	90				-	10																			Marsh dominated by arrow arum and pickeral weed.	VII
			acres	3.6					-	0.4																			
81	Hunting Creek	1	%	80					20																			Marsh dominated by arrow arum.	VII
			acres	0.8						0.2																			
82	Hunting Creek	0.5	%	100																								Marsh dominated by arrow arum.	VII
			acres	0.5																									
83	Hunting Creek	0.5	%	100																								Marsh dominated by arrow arum.	VII
			acres	0.5																									
84	Hunting Creek	0.3	%	20		30			40							10												Intermittent fringe; disturbed habitat.	XI
			acres	0.1		0.1				0.1																			
85	Hunting Creek	0.3	%	20	20	25		15								20												Fringe marsh on outside of metal bulkhead.	XI
			acres	0.1	0.1	0.1		-										0.1											
86	Hunting Creek	3	%	70	10				10		10																	Mostly high marsh; pond lily along shoreline.	VII
			acres	2.1	0.3					0.3		0.3																	

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

Section VII. Hunting Creek

#	Marsh Location	Total Acres		Pickeral Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
	Total Fairfax County	920.4	%	33	21	23	1	2	1	-	2	5	3	1	-	1	-	-	1	1	-	-	-	-	-	-	a b c d e f g h	Trace amounts of d, e, f, g, h	
		acres		304.5	190.1	216.1	10.8	21.9	7.4	3.6	20.1	46.0	28.7	6.3	-	12.7	-	0.4	8.8	8.0	0.6	-	-	2.5	-	-			
87	Hunting Creek	0.3	%	10	-	40		10			40						-											Diverse pocket marsh; possibly disturbed habitat.	XI
		acres		-	-	0.1		-			0.1						-												
88	Hunting Creek	0.3	%	10	-	40		10			40						-											Intermittent fringe; disturbed habitat.	XI
		acres		-	-	0.1		-			0.1						-												
89	Hooff Run	0.3	%													100												Marsh has been filled; only arrowhead fringe remains.	XI
		acres														0.3													
90	Hunting Creek	1	%	40		50			10																			Cove marsh; arrow arum mixed with cattail.	VI
		acres		0.4		0.5			0.1																				
91	Hunting Creek	0.5	%	50		40			10																			Pickeral weed mixed with cattail.	VII
		acres		0.2		0.2			-																				
92	Hunting Creek	3	%	5		95			-	-																		Long cattail fringe; pickeral weed at lower elevations.	VI
		acres		0.2		2.8			-	-																			
93	Hunting Creek	0.3	%	40		60																						Cattail fringe; creek is mud flat at low tide in this area.	VI
		acres		0.1		0.2																							

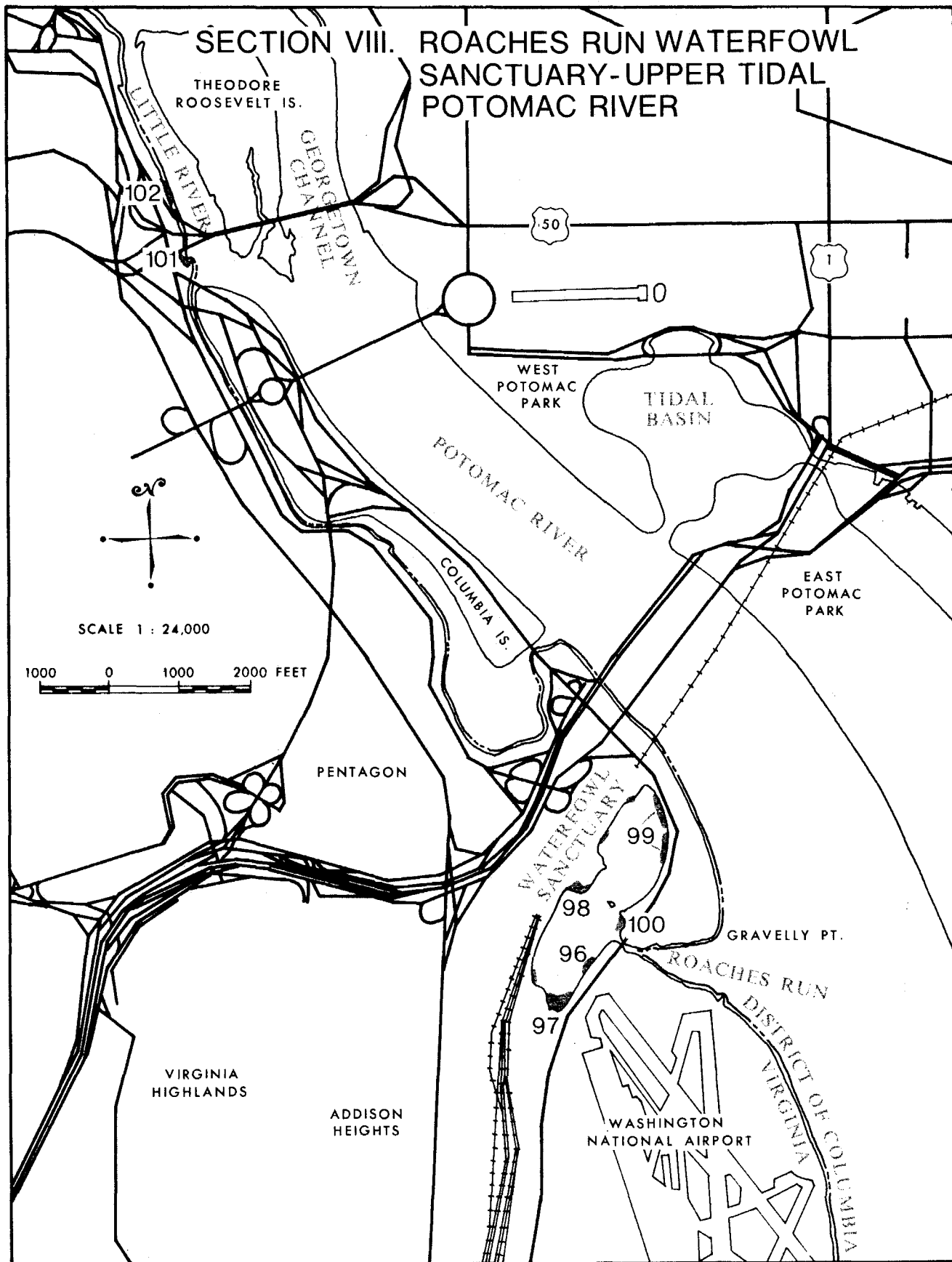
a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



Section VII. Hunting Creek

#	Marsh Location	Total Acres		Pickarel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
94	Potomac River	1	%			10	80		-	10	-																	Diverse fringe behind old wooden bulkhead.	XI
			acres			0.1	0.8		-	0.1	-																		
95	Potomac River	2	%	40		60		-		-	-																	Cattail marsh; pickarel weed at lower elevations.	VI
			acres	0.8		1.2		-		-	-																		
Total Alexandria City		8.7	%	20	-	60	9	-	1	1	2					3	-												
			acres	1.7	-	5.2	0.8	-	0.1	0.1	0.2						0.3	-											
Total Section VII		20.3	%	51	2	28	8	-	5	-	2					2	-												
			acres	10.4	0.4	5.6	1.6	-	1.1	0.1	0.5						0.4	-											

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



## SECTION VIII

### Roaches Run Waterfowl Sanctuary - Upper Tidal Potomac River

The section of Potomac River shoreline from Hunting Creek to Roaches Run is heavily commercialized, and thus contains no tidal marshes.

The Roaches Run Waterfowl Sanctuary is a large pond connected with the Potomac by a conduit, and is therefore tidal, with its 4.1 acres of marshes being included as "wetlands" under the Virginia Wetlands Act. This area contains a variety of marsh types, including the only Reedgrass marsh (Type VII) found in this inventory.

From Roaches Run to the Potomac River fall line are found only three small marshes which are located in the vicinity of Theodore Roosevelt Bridge. These three marshes, composed almost entirely of Yellow Pond Lily, are significant not only in that they are located in such an urbanized area, but also in that they are the northernmost tidal marshes in Virginia.

Section VIII. Roaches Run Waterfowl Sanctuary - Upper Tidal Potomac River

#	Marsh Location	Total Acres		Pickereel Weed- Arrow Arum	Yellow Pond Lily	Cattail	Rice Cutgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
96	Waterfowl Sanctuary	0.5	%																100									Reedgrass marsh.	VIII
			acres																		0.5								
97	Waterfowl Sanctuary	2	%		60	10													30									Reedgrass and cattail toward land border; pond lily elsewhere.	IX
			acres		1.2	0.2															0.6								
98	Waterfowl Sanctuary	1	%	10	90	-		-		-																	Low, diverse marsh.	IX	
			acres	0.1	0.9	-		-		-																			
99	Waterfowl Sanctuary	0.3	%																			100					Intermittent fringe composed mainly of water willow.	XI	
			acres																				0.3						
100	Waterfowl Sanctuary	0.3	%	100						-																	Mostly arrow arum; scattered hibiscus.	VII	
			acres	0.3							-																		
101	Potomac River	0.3	%		100																						Low pond lily marsh.	IX	
			acres		0.3																								
102	Potomac River	0.5	%		95			5																			Low pond lily marsh.	IX	
			acres		0.5			-																					
	Total Arlington County	4.9	%	8	59	4		-		-									22			6							
			acres	0.4	2.9	0.2		-		-											1.1			0.3					

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks



Section VIII. Roaches Run Waterfowl Sanctuary - Upper Tidal Potomac River

#	Marsh Location	Total Acres		Pickeral Weed-Arrow Arum	Yellow Pond Lily	Cattail	Rice Outgrass	Sweetflag	Smartweed	Marsh Hibiscus	Jewelweed	River Bulrush	Wild Rice	Tearthumb	Swamp Rose	Arrowhead	Dodder	Soft Rush	Reedgrass	Water Dock	Common Threesquare	Water Willow	Swamp Milkweed	Water Hemp	Spikerush	Burreed	Others	Observations	Marsh Type
	Total Section VIII	4.9	%	8	59	4		-		-									22			6							
			acres	0.4	2.9	0.2		-		-									1.1			0.3							
	Total Fairfax Co. Alexandria Co. Arlington Co.	933.7	%	33	21	24	1	2	1	-	2	5	3	1	-	1	-	-	1	1	-	-	-	-	-	-		Trace amounts of d, e, f, g, h.	
			acres	306.6	193.0	221.5	11.6	21.9	7.5	3.7	21.3	46.0	28.7	6.3	-	13.0	-	0.4	9.9	8.0	0.6	0.3	2.5	-	-	-			

a- Sedge. b- Big Cordgrass c- Switchgrass d- Buttonbush e- Woolgrass f- Cardinal Flower g- Duckweed h- Beggar Ticks

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