

**TOWN OF MAMARONECK and VILLAGE OF LARCHMONT**  
**LOCAL WATERFRONT REVITALIZATION PROGRAM**

***Adopted:***

Town of Mamaroneck Town Board, June 30, 1986  
Village of Larchmont Board of Trustees, June 30, 1986

***Approved:***

NYS Secretary of State Gail S. Shaffer, October 28, 1986

***Concurred:***

U.S. Office of Ocean and Coastal Resource Management, April 21, 1987

***Amendment***

***Adopted:***

Town of Mamaroneck Town Board, December 7, 1994  
Village of Larchmont Board of Trustees, December 5, 1994

***Approved:***

NYS Secretary of State Alexander F. Treadwell, November 3, 1995

**This Local Waterfront Revitalization Program has been adopted and approved in accordance with the provisions of the Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law, Article 42) and its implementing regulations (6 NYCRR 601). Federal concurrence on the incorporation of this Local Waterfront Revitalization Program into the New York State Coastal Management Program as a Routine Program Implementation has been obtained in accordance with the provisions of the U.S. Coastal Zone Management Act of 1972 (P.L. 92-583), as amended, and its implementing regulations (15CFR 923).**

**The preparation of this program was financially aided by a federal grant from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management, under the Coastal Zone Management Act of 1972, as amended. Federal Grant No. NA-82-AA-D-CZ068.**

**The New York State Coastal Management Program and the preparation of Local Waterfront Revitalization Programs are administered by the New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, 162 Washington Avenue, Albany, New York, 12231.**

## VILLAGE OF LARCHMONT

1986

### Board of Trustees

Miriam Curnin, Mayor  
James Anderson  
Sydney Astle  
Nan Forger, Deputy Mayor  
Paul Kean, CZMC Liaison

Barbara Wood, Village Clerk

1994

Cheryl Lewy, Mayor  
Kenneth Bialo  
William McSherry, Deputy Mayor/CZMC Liaison  
Judy O'Gorman  
Marian White

Eileen Finn, Village Clerk

## TOWN OF MAMARONECK

1986

### Town Council

Dolores Battalia, Supervisor  
Thomas Amlicke  
Stephen Chapin  
Lawrence Lerman, CZMC Liaison  
Caroline Silverstone, Deputy Supervisor

Patricia DiCioccio, Town Clerk

1994

Elaine Price, Supervisor  
Kathleen O'Flinn, Deputy Supervisor  
Valerie O'Keefe  
Paul Ryan  
Barry Weprin, CZMC Liaison

Patricia DiCioccio, Town Clerk

### Coastal Zone Management Committee

Co-Chairmen: Wallace Irwin, Jr. (VOL), Shirley Tolley (TOM).  
Subcommittee Heads: Elinor Fredston, Mary Anne Johnson, Lawrence Lowy, C. Alan Mason,  
Howard McMichael, Jr.  
Members: Bruce Allen, June Allen, Albert Blumenthal, Alex Buchman, Joseph Dorsey, William  
Eipel, Gary Hirschberg, Arthur Katz, James Killilea, James Lotto, Paul Miller, Elaine  
Price, Edward Riley, Abe Rosenfield, Robert Schoenberger, Joseph Vandernoot,  
Robert White, Leo Wilson

### Coastal Zone Management Commission

Chairmen: 9/86-9/88 Robert Schoenberger, 10/88-9/92 Phyllis Wittner,  
10/92-9/93 Angel Martin, 10/93-9/94 C. Alan Mason, 10/94 Phyllis Wittner  
Members: Bruce Allen, Lilian Andrews, Richard Coico, Mary Feldtmose, Elinor Fredston,  
Wallace Irwin, Jr., Mary Anne Johnson, Arthur Katz, Paul Kean, Lucien Leone,  
Lawrence Lowy, Frank McGahan, Howard McMichael, Jr., Richard Metzner, Nancy  
Seligson, Nancy Sterbenz, Shirley Tolley, Richard Ward, Richard Young

### IN MEMORIAM

The Commission records with sorrow the loss of Lawrence Lowy who served on the Commission from 1986 - 1992. Larry's contribution of time and expertise to local government and for the restoration and preservation of our local environment will long be remembered.



STATE OF NEW YORK  
DEPARTMENT OF STATE  
ALBANY, NY 12231-0001

ALEXANDER F. TREADWELL  
SECRETARY OF STATE

November 3, 1995

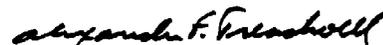
Honorable Elaine Price  
Supervisor  
Town of Mamaroneck  
740 Boston Post Road West  
Mamaroneck, NY 10543-3319

Dear Supervisor Price:

It is my pleasure to inform you that, pursuant to the Waterfront Revitalization and Coastal Resources Act, I have approved the amendments to the Town of Mamaroneck and the Village of Larchmont Local Waterfront Revitalization Program. I will now notify state agencies of the approval and will provide them with copies of the amendments to the Town of Mamaroneck and the Village of Larchmont Local Waterfront Revitalization Program.

The Town of Mamaroneck and the Village of Larchmont is to be commended for its diligent efforts to improve the quality of its waterfront by maintaining the relevance of its Local Waterfront Revitalization Program. I look forward to working with you in the future as you carry out the policies outlined in the Program.

Sincerely,

  
Alexander F. Treadwell

AFT\PM:mab



STATE OF NEW YORK  
DEPARTMENT OF STATE  
ALBANY, NY 12231-0001

ALEXANDER F. TREADWELL  
SECRETARY OF STATE

November 3, 1995

Honorable Cheryl Lewy  
Mayor  
Village of Larchmont  
Municipal Building  
Larchmont, NY 10538

Dear Mayor Lewy:

It is my pleasure to inform you that, pursuant to the Waterfront Revitalization and Coastal Resources Act, I have approved the amendments to the Town of Mamaroneck and the Village of Larchmont Local Waterfront Revitalization Program. I will now notify state agencies of the approval and will provide them with copies of the amendments to the Town of Mamaroneck and the Village of Larchmont Local Waterfront Revitalization Program.

The Town of Mamaroneck and the Village of Larchmont is to be commended for its diligent efforts to improve the quality of its waterfront by maintaining the relevance of its Local Waterfront Revitalization Program. I look forward to working with you in the future as you carry out the policies outlined in the Program.

Sincerely,

Alexander F. Treadwell

AFT\PM:mab



**Town of Mamaroneck**

Office of the Supervisor  
Town Center  
740 West Boston Post Road, Mamaroneck, NY 10543-3319

TEL 914/381-7805  
FAX 914/381-7809

Elaine Price

June 20, 1995

Mr. Charles McCaffrey  
NEW YORK STATE DEPARTMENT OF STATE  
Division of Coastal Resources &  
Waterfront Revitalization  
162 Washington Avenue  
Albany, NY 12231

Dear Mr. McCaffrey:

Please be advised that at our Town Board Meeting held on December 7, 1994 it was resolved by the Town Council of the Town of Mamaroneck to forward the amended Town of Mamaroneck-Village of Larchmont Local Waterfront Revitalization Program to the Secretary of State for approval.

Sincerely,

ELAINE PRICE  
SUPERVISOR

EP/lr(McCaffreyLocWatRev)

cc: Town Board  
Town Clerk  
Town Administrator  
Town Attorney  
Chair, CZM

*Larchmont*

OFFICE OF



VILLAGE OF LARCHMONT  
MUNICIPAL BUILDING  
LARCHMONT, N.Y. 10538  
TEL.: (914) 834-6230  
FAX: (914) 833-2170

June 20, 1995

Mr. Charles McCaffrey  
New York State Department of State  
Div. of Coastal Resources & Waterfront Revitalization  
162 Washington Avenue  
Albany, New York 12231

Dear Mr. McCaffrey:

This letter shall serve to certify that the Board of Trustees of the Village of Larchmont, at its regular meeting on December 5, 1994, approved the submission of the amended Village of Larchmont-Town of Mamaroneck Local Waterfront Revitalization Program to the Secretary of State for approval.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eileen A. Finn".

Eileen A. Finn  
Village Clerk



## CONTENTS

SECTION I	WATERFRONT REVITALIZATION AREA BOUNDARY	
	A. Background	I- 5
	B. Expansion of the Coastal Boundary	I- 5
	C. Description of the Coastal Boundary	I- 6
SECTION II	INVENTORY AND ANALYSIS	
	A. Summary	II- 5
	B. LWRP: General Description	II- 6
	C. LWRP: Management Structure	II- 7
	D. Physical Geography	II- 7
	E. Economy	II- 8
	F. Historic Buildings	II- 9
	G. Archaeological Sites	II-11
	H. Scenic Resources	II-11
	I. Public Access	
	1. Larchmont Manor Park	II-12
	2. Village of Larchmont Property	II-13
	3. Town of Mamaroneck Property	II-13
	J. Open Space	
	1. Village of Larchmont	II-14
	2. Town of Mamaroneck	
	a. Parks and Conservation Areas	II-14
	b. Larchmont Reservoir Conservation Area	II-15
	c. Private Golf Courses	II-15
	d. Residential Tracts	II-15
	K. Recreation	
	1. Active Land Sports	II-16
	2. Water-Dependent Sports	II-16
	3. Passive Recreation	II-17
	4. Possibilities and Limits	II-17
	L. Living Resources	II-18
	M. Significant Coastal Fish & Wildlife Habitat	II-19
	N. Locally Important Fish & Wildlife Habitats	
	1. Hommocks Salt Marsh Complex	II-21
	2. Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetland Complex	II-22
	3. Premium Salt Marsh Complex	II-24
	4. Intertidal & Littoral Zone	II-24
	O. County Critical Environmental Areas	II-24

P. Fish & Wildlife Values	
1. Fish	II-25
2. Other Aquatic Species	II-25
3. Birds	II-25
4. Land Animals	II-26
5. Utilization	II-26
6. Stewardship	II-27
Q. Water Resources	
1. Fresh water	II-27
2. Salt water	II-28
R. Coastal Erosion Hazard Area	II-28
S. Flood Hazard Areas	II-29
T. Other Resources	
1. Residential Real Estate	II-30
2. Human Resources	II-30
3. Organizational Resources	
a. Official Bodies	II-30
b. Nongovernmental Bodies	II-31
c. Educational & Informational	II-31
U. Watershed Management	
1. Introductory Observations	II-31
2. The Pine Brook-Premium Watershed	II-34
a. Larchmont Hills	II-35
b. Pine Brook Area	II-35
c. Upper Premium River	II-35
d. Lower Premium River, Marsh, Mill Pond	II-36
e. Other Issues	II-37
3. The Sheldrake Watershed	II-37
a. Weaver Street-Bonnie Briar Area	II-38
b. Brookside Drive Area	II-38
4. The East Creek-Gut Creek Watershed	II-39
a. East Creek	II-39
b. Hommocks Marsh	II-41
c. Little Harbor Sound	II-41
5. The Harbor Area	II-42
a. Navigation and Dredging	II-43
b. Harbor Security	II-43
6. Area-Wide Sewage Problems	II-45
V. Long Island Sound Study	II-47
W. Area-Wide Causes & Cures of Interacting Flooding, Siltation and Sewage Problems	II-47
X. Other Area-Wide Pollution Problems:	
1. Water Pollution	II-48
2. Air and Noise Pollution	II-49
3. Litter and Dog Waste	II-50

## SECTION III WATERFRONT REVITALIZATION PROGRAM POLICIES

Development Policies	
Policy 1	III- 5
2	III- 5
3	III- 6
4	III- 6
5	III- 6
6	III- 7
Fish and Wildlife Policies	
Policy 7	III- 7
7A	III- 9
8	III-11
9	III-12
10	III-13
10A	III-13
Flooding and Erosion Policies	
Policy 11	III-13
12	III-15
13	III-17
14	III-18
15	III-20
16	III-21
17	III-21
General Policy	
Policy 18	III-22
Public Access Policies	
Policy 19	III-23
20	III-23
Recreation Policies	
Policy 21	III-24
22	III-25
Historic and Scenic Policies	
Policy 23	III-26
24	III-28
25	III-28
Agricultural Lands Policy	
Policy 26	III-30
Energy and Ice Management Policies	
Policy 27	III-30
28	III-30
29	III-31

Water and Air Resources Policies	
Policy 30	III-31
31	III-32
32	III-33
Policy 32A	III-33
33	III-33
33A	III-34
34	III-35
35	III-35
36	III-36
37	III-37
38	III-41
39	III-42
39A	III-42
40	III-43
41	III-43
42	III-44
43	III-44
44	III-44
44A	III-46

#### SECTION IV PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS

A. LWRP 1986 and Major Accomplishments	IV- 5
1. Zoning	IV- 5
2. Habitat Protection	IV- 5
3. Legislation	IV- 6
B. Recommended Actions to Implement the LWRP	IV- 6
1. Land Use- Open Space	IV- 7
2. Land Use- Other Sensitive Areas	IV- 8
3. Wetlands and Other Natural Resources	IV- 8
4. Buffer Areas	IV- 9
5. Point and Nonpoint Pollution Control	IV-10
6. Water Quality- Pollution (Monitoring and Control)	IV-11
7. Flood Damage Prevention	IV-12
8. Scenic Protection	IV-12
9. Historic Sites	IV-12
10. Recreational Facilities	IV-13
11. Intermunicipal Watershed Cooperation	IV-13
12. Management Plans for Conservation Areas	IV-14
13. Harbor Management Plan for Larchmont Harbor and Other Waterways	IV-14
14. Education	IV-15
15. Lobbying Activities	IV-15

## SECTION V TECHNIQUES FOR LOCAL IMPLEMENTATION

A. Summary	V- 5
B. Local Laws and Regulations Pertinent to the LWRP	
1. Architectural Review	V- 5
2. Coastal Zone Management Commission	V- 6
3. Conservation Area Regulations	V- 6
4. Consistency	V- 6
5. Critical Environmental Areas	V- 6
6. Dog Waste	V- 7
7. Dumping	V- 7
8. Flood Damage Prevention	V- 8
9. Freshwater Wetlands	V- 8
10. Incinerators	V- 8
11. Larchmont Reservoir	V- 9
12. Litter	V- 9
13. Parks	V- 9
14. Satellite Earth Station	V- 9
15. Sewers	V- 9
16. Signs	V-10
17. Site Plan Approval	V-10
18. State Environmental Quality Review	V-11
19. Subdivision Regulations	V-11
20. Surface Water, Erosion and Sediment Control	V-11
21. Trees	V-12
22. Zoning	V-12
C. Local Law to Establish the Coastal Zone Management Commission	V-13
D. Other Laws and Directives Which Serve to Implement the LWRP	
1. Comprehensive Master Plans	V-16
2. County Critical Environmental Areas	V-17
3. New York State and Federal Regulations	
a. Coastal Erosion Hazard Area	V-17
b. Tidal Wetlands	V-17
c. Significant Habitats	V-18
d. Stream Protection Act	V-18
e. Reauthorization of Federal Coastal Zone Act	V-18
f. Long Island Sound Regional Coastal Management Program	V-18
E. Financial Resources Necessary to Implement the LWRP	V-19
F. Local, State and Federal Compliance	
1. Local	V-19
2. State	V-19
3. Federal	V-19

SECTION VI STATE AND FEDERAL ACTIONS AND PROGRAMS LIKELY TO AFFECT IMPLEMENTATION

A. Explanation	VI- 7
B. Federal and State Actions and Programs Which Should be Undertaken in a Manner Consistent with the LWRP	
State Agencies:	
Office for the Aging	VI- 8
Department of Agriculture and Markets	VI- 8
Division of Alcoholic Beverage Control/State Liquor Authority	VI- 8
Division of Alcoholism and Alcohol Substance Abuse Services	VI- 9
Council on the Arts	VI- 9
Department of Banking	VI- 9
NYS Bridge Authority	VI-10
Department of Correctional Services	VI-10
Dormitory Authority of the State of New York	VI-10
Department of Economic Development	VI-10
Education Department	VI-10
Energy Planning Board and Energy Office	VI-11
NYS Energy Research and Development Authority	VI-11
Department of Environmental Conservation	VI-11
Air Resources	VI-11
Construction Management	VI-12
Fish and Wildlife	VI-12
Lands and Forest	VI-12
Marine Resources	VI-12
Regulatory Affairs	VI-13
Solid Wastes	VI-13
Water Resources	VI-13
Environmental Facilities Corporation	VI-14
Facilities Development Corporation	VI-14
Office of General Services	VI-14
Department of Health	VI-14
Division of Housing and Community Renewal and Its Subsidiaries and Affiliates	VI-15
Housing Finance Agency	VI-15
Interstate Sanitation Commission (regional agency)	VI-15
Job Development Authority	VI-15
Medical Care Facilities Financing Agency	VI-15
Office of Mental Health	VI-15
Office of Mental Retardation and Development Disabilities	VI-16
Metropolitan Transportation Authority (regional agency)	VI-16
Division of Military and Naval Affairs	VI-16
Natural Heritage Trust	VI-16

Office of Parks, Recreation and Historic Preservation (including Regional State Park Commission)	VI-16
Port Authority of New York and New Jersey (regional agency)	VI-17
Power Authority of the State of New York	VI-17
NYS Science and Technology Foundation	VI-17
Department of Social Services	VI-17
Department of State	VI-17
State University Construction Fund	VI-18
State University of New York	VI-18
NYS Thruway Authority (regional agency)	VI-18
Department of Transportation	VI-18
Urban Development Corporation and its subsidiaries and affiliates	VI-19
Division of Youth	VI-19
Federal Agencies:	
Direct Federal Activities and Development Projects	
Department of Commerce	
National Marine Fisheries Services	VI-20
Department of Defense	
Army Corps of Engineers	VI-20
Army, Navy and Air Force	VI-20
Department of Energy	VI-20
General Services Administration	VI-20
Department of Interior	
Fish and Wildlife Service	VI-20
Mineral Management Service	VI-21
National Park Service	VI-21
Department of Transportation	
Amtrak, Conrail	VI-21
Coast Guard	VI-21
Federal Aviation Administration	VI-21
Federal Highway Administration	VI-21
Federal Licenses and Permits	
Department of Defense	
Army Corps of Engineers	VI-21
Department of Energy	
Economic Regulatory Commission	VI-22
Federal Energy Regulatory Commission	VI-22
Environmental Protection Agency	VI-22
Department of Interior	
Fish and Wildlife Services	VI-23
Mineral Management Service	VI-23
Interstate Commerce Commission	VI-23
Nuclear Regulatory Commission	VI-23

Department of Transportation	
Coast Guard	VI-23
Federal Aviation Administration	VI-23
Federal Assistance	
Department of Agriculture	VI-24
Department of Commerce	VI-24
Department of Housing and Urban Development	VI-25
Department of Interior	VI-25
Department of Transportation	VI-25
General Services Administration	VI-25
Community Services Administration	VI-26
Small Business Administration	VI-26
Environmental Protection Agency	VI-26
C. State Federal Actions Necessary to Further the LWRP	
State Agencies:	
Department of Economic Development	VI-26
Department of Environmental Conservation	VI-27
Office of General Services	VI-27
Job Development Authority	VI-27
Office of Parks, Recreation and Historic Preservation	VI-27
Department of State	VI-27
Council on the Arts	VI-27
Department of Transportation	VI-27
Federal Agencies:	
Department of Housing and Urban Development	
Office of the Assistant Secretary for Community Planning and Development	VI-28
Department of the Interior	
National Park Service	VI-28
Department of the Treasury	VI-28
Economic Development Administration	VI-28
Department of Transportation	
U.S. Coast Guard	VI-28

## SECTION VII CONSULTATION WITH OTHER AGENCIES

A. Adjacent Municipalities	VII- 5
B. Westchester County Government	VII- 5
C. State of New York	VII- 6
1. Department of State	
2. Department of Environmental Conservation	
D. Resolution of Conflicts	VII- 6

SECTION VIII LOCAL COMMITMENT

A. Background	VIII- 5
B. The Present	VIII- 6

SECTION IX APPENDICES

Appendix A- Subject Index- CZMC Annual Reports	5
Appendix B- Inventory of Bird Species in 3 Fish and Wildlife Habitats	7
Biological Inventory for 3 Fish and Wildlife Habitats	14
Appendix C- Botanical Inventory- Reservoir-Sheldrake-Leatherstocking Complex	17
Appendix D- Compilation of Bird Lists for the Reservoir-Sheldrake-Leatherstocking Complex	22
Appendix E- Compilation of Bird Lists for the Premium River-Pine Brook Wetlands Complex	27
Appendix F- Botanical Inventory- Hommocks Marsh Complex	34
Appendix G- Bird Species- Hommocks Salt Marsh Complex	38
Botanical Inventory- Hommocks Salt Marsh Complex	42
Appendix H- Management Recommendations for the Hommocks Salt Marsh Complex	43
Appendix I- Management Plan for the Reservoir-Sheldrake Leatherstocking Critical Environmental Area	50

Map 1	Regional Setting
Map 2	Boundary Map
Map 3	Location Map
Map 4	Existing Open Space
Map 5	Tidal Wetlands, Watershed Boundaries and Flood Hazard Areas
Map 6	Coastal High Hazard Areas and Coastal Erosion Hazard Areas
Map 7	Land and Water Uses

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**SECTION 1**

**WATERFRONT REVITALIZATION BOUNDARY**

Back of Page

## SECTION I: Contents

	<u>Page</u>
A. Background	5
B. Expansion of the Coastal Boundary	5
C. Description of the Coastal Boundary	6

Back of Section I: Contents

## WATERFRONT REVITALIZATION AREA BOUNDARY

### SECTION I: Waterfront Revitalization Area Boundary

#### A. Background

The original landward boundary of the coastal zone for the Town of Mamaroneck and Village of Larchmont delineated by the State of New York showed an inland boundary which followed the Boston Post Road all the way across the Town and Village from the City of New Rochelle border to the Village of Mamaroneck border (see Regional Setting Map No. 1). The area within this boundary included those lands most frequently associated with the coastal waters in terms of use and impact from the coastal environment. However, it did not include lands and inland waters that are of major importance under one of the criteria established by the State for defining coastal boundaries.

As the Inventory and Analysis (Section II) makes clear, the physical, chemical, biological, littoral and aesthetic characteristics of our coastal area suffer significant damaging impact from pollution, siltation and flooding. The sources of much of this damage are the various watercourses carrying runoff from drainage basins which empty into Long Island Sound. All of these watercourses traverse northerly areas of the Town and Village well inland from the coastal zone boundary originally established by New York State. Not only do existing conditions in these drainage basins adversely affect our coastal waters; we must also deal with the possibility of future changes in land use intensity and characteristics, drainage patterns, or land management practices that could have a further adverse impact. Removing, preventing, or mitigating such adverse impacts is a principal objective of a number of policies, projects, and actions proposed in Section III, IV and V.

#### B. Expansion of the Coastal Boundary

The Local Waterfront Revitalization Program's recommendation to extend the Coastal Zone boundaries of the Town and Village to include the entire Village of Larchmont and the entire Unincorporated Area of the Town of Mamaroneck was approved by the New York State Secretary of State with the acceptance of the LWRP in 1986 (see Boundary Map No. 2). This important action brought within the Coastal Zone the Town and Village portions of the four watersheds shared with White Plains, Scarsdale, New Rochelle and the Village of Mamaroneck. The main purpose of this action is to enable the Town and Village to apply State coastal policy throughout their respective jurisdictions, and thereby exert more effective control over one of the major environmental problems in this coastal area--flooding from upstream in all of the watersheds that drain into our coastal waters with associated erosion, pollution and sewer malfunctions, which together have a severe impact on our coastal area. Such expansion was also considered important as a basis for fostering intermunicipal watershed cooperation. Because

of this boundary change, LWRP policies are applicable throughout Larchmont Village and the Unincorporated Area of the Town, and development actions in that wider area are subject to review for consistency with those policies.

C. Description of the Coastal Boundary

The inland Coastal Zone boundary is described as follows:

- Beginning at the southern (Long Island Sound) terminus of the boundary between the Town of Mamaroneck and City of New Rochelle;
- Thence inland along the Town boundary to the boundary of the Village of Mamaroneck;
- Thence south along the western boundary of the Village of Mamaroneck to the coast.

The coastal boundary does not include any areas other than those in the Unincorporated Area of the Town of Mamaroneck and in the Village of Larchmont. The Village of Mamaroneck has adopted its own LWRP, has its own coastal boundary, and is not a party to the present Program. No part of it is included in the coastal boundary as here in described.

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**SECTION II**  
**INVENTORY AND ANALYSIS**

Back of Section II title page

## SECTION II: Contents

A.	Summary	5
B.	LWRP: General Description	6
C.	LWRP: Management Structure	7
D.	Physical Geography	7
E.	Economy	8
F.	Historic Buildings	9
G.	Archaeological Sites	11
H.	Scenic Resources	11
I.	Public Access	
	1. Larchmont Manor Park	12
	2. Village of Larchmont Property	13
	3. Town of Mamaroneck Property	13
J.	Open Space	
	1. Village of Larchmont	14
	2. Town of Mamaroneck	
	a. Parks and Conservation Areas	14
	b. Larchmont Reservoir Conservation Area	15
	c. Private Golf Courses	15
	d. Residential Tracts	15
K.	Recreation	
	1. Active Land Sports	16
	2. Water-Dependent Sports	16
	3. Passive Recreation	17
	4. Possibilities and Limits	17
L.	Living Resources	18
M.	Significant Coastal Fish & Wildlife Habitat	19
N.	Locally Important Fish & Wildlife Habitats	
	1. Hommocks Salt Marsh Complex	21
	2. Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetland Complex	22
	3. Premium Salt Marsh Complex	24
	4. Intertidal & Littoral Zone	24
O.	County Critical Environmental Areas	24
P.	Fish & Wildlife Values	
	1. Fish	25
	2. Other Aquatic Species	25
	3. Birds	25
	4. Land Animals	26
	5. Utilization	26
	6. Stewardship	27

Q.	Water Resources	
	1. Fresh water	27
	2. Salt water	28
R.	Coastal Erosion Hazard Areas	28
S.	Flood Hazard Areas	29
T.	Other Resources	
	1. Residential Real Estate	30
	2. Human Resources	30
	3. Organizational Resources	
	a. Official Bodies	30
	b. Nongovernmental Bodies	31
	c. Educational & Informational	31
U.	Watershed Management	
	1. Introductory Observations	31
	2. The Pine Brook-Premium Watershed	34
	a. Larchmont Hills	35
	b. Pine Brook Area	35
	c. Upper Premium River	35
	d. Lower Premium River, Marsh, Mill Pond	36
	e. Other Issues	37
	3. The Sheldrake Watershed	37
	a. Weaver Street-Bonnie Briar Area	38
	b. Brookside Drive Area	38
	4. The East Creek-Gut Creek Watershed	39
	a. East Creek	39
	b. Hommocks Marsh	41
	c. Little Harbor Sound	41
	5. The Harbor Area	42
	a. Navigation and Dredging	43
	b. Harbor Security	43
	6. Area-Wide Sewage Problems	45
V.	Long Island Sound Study	47
W.	Area-Wide Causes & Cures of Interacting Flooding, Siltation and Sewage Problems	47
X.	Other Area-Wide Pollution Problems:	
	1. Water Pollution	48
	2. Air and Noise Pollution	49
	3. Litter and Dog Waste	50

## SECTION II: INVENTORY AND ANALYSIS

### A. Summary

The Village of Larchmont and the Unincorporated Area of the Town of Mamaroneck together occupy an attractive but environmentally vulnerable six-square-mile residential area along the Long Island Sound shore of Westchester County -- a highly indented and beautiful coastline totaling some nine miles with pristine views of the Sound, its islands and the far shore of Long Island. Proximity to New York City and the beauty and recreational values of the area have attracted a business and professional population of 17,412, according to the 1992 census. The area supports an economy based on residential real estate and including many retail and service establishments. Although most of the coastline is in private hands, there is access to the shore through private clubs and through public access to shoreline parks and conservation areas.

Additional assets include environmentally significant fish and wildlife habitats (primarily salt and freshwater wetlands) and sites of historical importance and scenic beauty.

These values, and the economy and way of life that depend on them, have already been damaged to some degree, and are further threatened by environmental problems -- chiefly upstream flooding from over developed watersheds with associated siltation and sanitary sewer malfunctions, and adverse impact on streams, wetlands, and fish and wildlife habitats. Siltation in the harbor area also periodically affects boating, a major recreational activity. Other problems include water pollution, which affects public health and sensitive wildlife habitats; occasional coastal flooding during storms and high tides; noise pollution and litter. A further long-range problem is how to assure future protection of places of historic or scenic importance, such as the cherished, tranquil views of the Sound periodically threatened by the possible intrusion of high-rise or other aesthetically insensitive development. There are also concerns about the over use of boating facilities, for example, the addition of inappropriately large marinas clogging up the Sound's waters.

Our geographic situation makes it obvious that many aspects of our community's environmental problems can only be addressed effectively with the aid of intermunicipal cooperation extending throughout the watersheds that terminate in, or transit, our coastal zone. Section I details the scope of the inland Coastal Zone boundary in order to maximize the ability of both municipal governments to deal with these problems. However, since the problems follow geographic rather than political lines, and extend well beyond our political jurisdiction, the solutions can only be found with watershed-wide cooperation. Provision for intermunicipal cooperation, with reinforcing participation by agencies of the State and Westchester County governments, therefore remains an integral part of our Local Waterfront Revitalization Program.

Awareness of the social-economic, ecological, and institutional resources herein described is essential to an understanding of the problems and possibilities of the Larchmont-Mamaroneck Coastal Zone. Our success or failure in protecting and enhancing the quality of, and promoting access to, the Coastal Zone will go far to determine the economic and demographic future of our community, as well as of nearby communities which share in its economic and recreational life. On the one hand, excessive or poorly regulated development can, and in many ways already does, threaten our waterfront and its resources with flooding and other destructive effects. On the other hand, it is primarily the existence of a highly developed, high-value residential environment, of medium population density and with convenient commercial and transport facilities, that has created a community which desires protection of scenic, ecological and other coastal values and makes these goals possible and a priority. What is needed is a prudent and sustainable balance among ecological, economic and social values and concerns.

B. LWRP: General Description

On June 30, 1986, the governments of the Town of Mamaroneck and the Village of Larchmont, acting jointly, adopted the Town of Mamaroneck-Village of Larchmont Local Waterfront Revitalization Program (LWRP) under New York State's Waterfront Revitalization and Coastal Resources Act of 1981. The LWRP became effective as State coastal policy upon its approval by Secretary of State Gail Shaffer on October 28, 1986. The Office of Ocean and Coastal Resource Management at the National Oceanic and Atmospheric Administration (United States Department of Commerce) concurred with that approval on April 21, 1987. The LWRP was then incorporated into the New York State Coastal Management Program thereby making Federal actions in our coastal area subject to consistency review (see Section V) pursuant to the Waterfront Revitalization and Coastal Resources Act of New York State. State agencies are responsible for determining consistency of their actions with State coastal policies and the LWRP.

As noted in Section I, this LWRP covers the entire Village of Larchmont and the Unincorporated Area of the Town of Mamaroneck. The area covered is bounded on the west by the City of New Rochelle, on the north by the Village of Scarsdale, and on the east by the Town of Harrison and the Village of Mamaroneck. Of the approximately 6 square miles in this bi-municipal area, one square mile including about eight out of nine miles of highly indented coastline, lies within the incorporated Village of Larchmont. The remainder consists of the Unincorporated Area of the Town, which borders the Village on all its inland sides and also includes parts of two ecologically important pieces of shoreline and major parts of the watercourses that drain the area.

Geography and patterns of development link the two municipalities in many ways. The Town-Village borders on both east and west run through ecologically and hydrologically important stream beds and tidal inlets. Several of the municipalities' functions, notably sanitation, the library, Senior Center and conservation, are performed jointly. Town and

Village residents share the same school district, post office, telephone exchanges, and public library; many attend the same houses of worship and belong to the same local voluntary organizations. Thus, the entire area shares an interest in the health of the same Coastal Zone.

C. LWRP: Management Structure

At the time of adoption of the LWRP, the Town and Village also created an 11-member bi-municipal Coastal Zone Management Commission (CZMC) to coordinate and monitor implementation of the LWRP (see Section V). The responsibility for implementation not only lies with the Village and Town governments that adopted it, but also with the people whom those governments serve. Involvement of the public is of the essence, since effective local government is necessarily, to a great extent, self-government, which requires a major component of volunteer action and willing compliance with the law. This being the case, the actions called for in this document will continue to require the participation not only of the two municipal governments but also of concerned citizens throughout the Town and Village, both individually and through the organizations in which they work.

The CZMC is required by law (see Section V) to make an Annual Report to the Town and Village Boards on the activities of the Commission, including progress achieved and problems encountered during the year, and recommendations on such actions as the Commission considers necessary for the further implementation of the LWRP. The Annual Reports, therefore, are a resource for expanded information (see Appendix A.). Beginning with the Third Annual Report, background data was compiled as an abbreviated history so that the current year's actions and discussions could be weighed in the context of past years. That format also highlights the ongoing nature of CZMC considerations, and places what has been accomplished in the context of what remains to be done. Consistency Referrals (see Consistency law in Section V) from the inception of the CZMC on June 30, 1986 to date are found in the latest Annual Report.

D. Physical Geography

Geologically, the area is part of the Manhattan Prong, the southernmost portion of the New England upland geological province. The effects of differential weathering on the underlying rock structure and of glaciation make for great topographical variety and scenic beauty, with hills and streams running down to a sound shore made up of numerous small bays, inlets and promontories. This advantage, however, is partly offset by environmental drawbacks. In many places, the underlying rock is near the surface thus limiting the capacity of the ground to absorb water and thereby contributing to problems of flooding and siltation.

At other locations, former lakes, streams and marshes are buried by today's parks where water absorption is limited, such as at Pine Brook Park and Fountain Square. Flooding and siltation are serious problems for our community, most of which is drained by the Pine

Brook, Sheldrake, and East Creek-Gut Creek watersheds flowing through such rocky strata for much of their length.<sup>1</sup>

The two municipalities also lie less than 20 miles from the East River on the shores of the Western Narrows of Long Island Sound. The naturally sluggish tidal flushing action of the Western Narrows, exacerbated by excessive nitrogen flows caused by overdevelopment, polluted stormwater runoff and inadequate sewage treatment have combined to create an area in the Western Narrows where the water is plagued with the lowest dissolved oxygen counts (hypoxia) of the Sound, as reported by the federally funded Long Island Sound Study of 1992 (see Part V of this Section). The Hempstead Sill, a shoal extending from the mouth of Hempstead Harbor (directly across the Sound from Larchmont) to the New York-Connecticut border causes an even more narrow and shallow water area, 30 feet and less in depth, further restricting tidal action and significantly contributing to the polluted water of the Western Narrows.

#### E. Economy

The dominant business in both Larchmont and the Unincorporated Area is residential real estate. There is almost no manufacturing, and the commercial enterprises in the area exist mainly to serve local or nearby residents.

The area's residential value lies not only in its ready access to New York City -- as well as to a widening array of suburban business, commercial and cultural centers -- by both road and rail, but also in its physical beauty and the amenities and recreational advantages of its coastal location. Our economic geography is likewise a mixed blessing. Our location in a great metropolitan region -- with a railroad and two interstate highways crossing our community, four large airports nearby (one major one being just across the Sound), and substantial small industry and commercial water traffic along the nearby Sound shore -- brings us important economic benefits; indeed, it is the basic source of employment for our residents. But this location also brings environmental drawbacks: pollution of water, air and soil by aircraft, vehicular and industrial wastes; noise pollution; and the flooding and other evils that result from residential overbuilding.

Personal incomes vary over a wide range. The median household income is about \$74,000 annually. The resulting high residential real estate values, and the ancillary professional and business (mainly retail) establishments, provide tax support for a high-quality public school system and efficient municipal services.

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<sup>1</sup> These three watersheds are the focus of drainage-related problems discussed in Part U Watershed Management. As the drainage boundaries shown on Map 1 make clear, a fourth watershed, that of the Mamaroneck River, drains an area of about 1 square mile in the northeastern portion of the Town, about half of it consisting of a part of the Saxon Woods County Park. Immediately downstream from this area is the Village of Mamaroneck, which has chronic problems of residential flooding in this watershed during rainy periods.

The residential development of Larchmont and the Unincorporated Area (most of which lies within the Larchmont postal district, zip code 10538) has proceeded steadily since the late 19th century. Development of Larchmont Village took place primarily before World War II, while that of the Unincorporated Area continued thereafter, in both cases with subdivision of large properties into single-family homes and construction of several apartment houses near the major east-west thoroughfares. The population of the area grew from 14,500 in 1940 to about 20,000 in 1970. Of the latter number, about 7,000 lived in the Village. Today's population is approximately 17,400 with 6,180 in the Village. This stabilization underlines a fact of major importance for local planning, namely, that property in the area is already almost fully developed except for the existing parks, golf courses, and conservation areas described below. Overbuilding in recent decades, both in our community and in those upstream, has caused some of our most serious problems -- natural habitat reduction, flooding, siltation, pollution and malfunction of overloaded sanitary sewers -- which threaten the beauty and integrity of the coastal zone on which the community's property values, economy, and ecology all heavily depend. Development in upstream communities (see Part U of this Section) continues to exert new pressure on stormwater drainage in our community and in the Long Island Sound (see Section V for local controls concerning stormwater runoff).

#### F. Historic Buildings

Our community's resources include a considerable number of sites of historic and/or scenic value. Many such sites in the area deserve official protection, the absence of which may increase the likelihood of future actions needlessly damaging to historical and scenic values in this area.

Although no systematic survey has been made of historical and archaeological sites (see Part G) in this area<sup>2</sup>, the Village and the Unincorporated Area have many sites of historical, architectural, and cultural interest, including a score or more of private houses a century or more old, a few of these date from the Federal period and many from late Victorian times. Some formal survey work was done in the Village in 1982 by the Westchester County Division of Housing and Community Development Department when they conducted a survey of Larchmont's business district. In addition, the histories of approximately thirty houses were researched and documented in conjunction with house tours sponsored by the Larchmont Historical Society. Westchester County, New York: Colonial to Contemporary by Frank E. Sanchis was published in 1977 after a county-wide architectural survey recording over 2500 buildings. Larchmont, which represents a small geographic percentage of Westchester County, was considered to possess a large number of buildings considered

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<sup>2</sup> In November 1993, the Larchmont Historical Society received a \$5,000. grant from the Smart Family Foundation Inc. for a reconnaissance level historical sites survey of the Larchmont Postal District. This work is to begin in 1994.

architecturally significant within the context of the County as a whole. Numerous illustrations of Larchmont's residential and civic buildings can be found in the book.

The oldest surviving structure in the area is a private house at 4 Pryer Manor Road, built in 1775 on the site of an earlier mill house. It has been recognized by the Daughters of the American Revolution as a historical landmark, as has the Larchmont Public Library, built on the site of the original Samuel Palmer house. The Manor House, built in 1790 for Peter Jay Munro, still stands at the head of Prospect Avenue. Beside the Post Road outside Larchmont's municipal building is a milestone bearing the carved inscription "21 miles from New York", erected in 1804 along what was then the Westchester Turnpike and is now U.S. 1. Nearby are two small cemeteries of early date, one of them established by Quakers in the early 18th century -- the oldest known relic of European habitation in our community.

The house at 86 Weaver Street, now a private residence, was built prior to 1808 to house the first public school in the Town of Mamaroneck, organized under the New York State public education law of 1795.

Many structures of late 19th century vintage are in a neighborhood known locally as The Manor. It is defined by Town of Mamaroneck Map 610, the area once owned by the Larchmont Manor Company, predecessor of the incorporated Village of Larchmont. In addition to private residences, notable structures in this area include the clubhouse of the Larchmont Yacht Club, built in the 1880's, a remarkable show piece of late Victorian design; and Fountain Square in Larchmont Manor, turned over to the Larchmont Manor Park Society in 1892 and redesigned by Larchmont architect Walter C. Hunting. It is a distinguished landmark and was once the center of the incorporated Village of Larchmont. The Larchmont Manor Inn, opened in The Manor in 1893, two years after the Village was incorporated, has been nominated for listing on the National Historic Register.

Two books recording the Village's past were published in 1991 in honor of the Village of Larchmont's Centennial, Larchmont, N.Y.: People and Places Pre-History to 1892 by Judith Doolin Spikes and the Larchmont Official Centennial Edition.

#### G. Archaeological Sites

It is believed likely that traces of post-Revolutionary building sites remain on the Mamaroneck side of the Larchmont Reservoir property. This possibility is being investigated. Three quarry sites have also been identified at the Reservoir property. In addition, the Reservoir was the site of a saw mill, grain mill and ice-harvesting business.

Some other sites in the area bear traces of prehistoric American Indian habitation. Indians are believed to have built a weir at the site of the present Premium Mill Pond dam, which itself dates from 1801. A south-facing rocky cave adjacent to Pine Brook Park may have been used by Indians as a blind for hunting animals. Some large erratic boulders in the area, including the one that gave Rockingstone Avenue its name, are believed to have been places of Indian worship.

Phase I Archaeological Reconnaissance Surveys were conducted on two properties in Larchmont Manor in 1989 and 1990, one on Park Avenue opposite Larchmont Harbor and the other at Fountain Square, both prior to development. While the archaeologist's report traced the area's history back to prehistoric times, no meaningful artifacts were recovered and no further investigations were recommended.

#### H. Scenic Resources

Numerous sites and views contribute significantly to the scenic quality of the coastal zone. They include upland sites not visible from the shore, e.g., Fountain Square, Memorial (Station) Park, the Sheldrake River and Leatherstocking Trail Conservation area, the Larchmont Reservoir Conservancy, the three local golf courses (Bonnie Briar, Winged Foot, and Hampshire), and the Brookside Drive-Gardens Lake area.

The shoreline from the Premium River, Mill Pond and peninsula east to Flint Park on East Creek is primarily a low density residential area consisting of homes of fine architectural or historical significance, is well landscaped, and provides pleasing and interesting views of the shoreline and from the water to the shore. The Premium Mill Pond area, Manor Park, Flint Park, the Hommocks Marsh and the area's associated wetlands and open surface waters provide natural feature areas with a high degree of interesting line, texture and mass, provided by upland and wetland vegetation, the intersection of the rocky and vegetated shoreline with open waters, and the slope of land to the water's edge. Solid metamorphic rocks and sandy beaches skirt the shoreline. Native vegetation includes lush wetland marsh grasses, low trees and shrubs, as well as large deciduous trees, set back from the shoreline, which provide enclosure canopies when viewing the shore a short distance from the water's edge. The Premium River and Mill Pond comprise a protected and relatively undisturbed region offering welcome relief from surrounding developed and urbanized areas.

Viewer interest in shoreline characteristics, natural features, the foreground, middle ground and background changes depending upon the location and position of the viewer from various areas along roadways, from within Manor and Flint Parks, along the shoreline itself, and the elevation of the viewer in relation to the shoreline. The combined elements of rocky outcroppings, open water, wetland vegetation, and shoreline trees and shrubs result in a visually pleasing and high quality view from, along, and to the shoreline. Important vistas of and from the shoreline within this area are primarily from Park Avenue near Manor Park looking towards Long Island Sound, from Walnut and Bay Avenues looking toward the Sound, and from the Pryer Manor Bridge looking at the Premium River or looking across the Mill Pond to the Sound.

One must be mindful of the impact of development on the quality and character of life on the Sound coast. General standards are required on a regional basis to safeguard the view from the water to land and land to water, to protect specific significant structures and landscapes, and to protect community scale and character.

#### I. Public Access

The bulk of the Long Island Sound shoreline in our community, including tidal estuaries and inlets, is privately owned either by homeowners or by private clubs and associations, to which many Village and Town residents belong. However, a significant amount of public property, and one uniquely important private park, are open to the public, as follows (see Map 4 Existing Open Space):

1. The Larchmont Manor Park (12.65 acres) winds along a twisting half mile of indented shore from Umbrella Point westward to, and including, Horseshoe Harbor. It is one of the great beauty spots of the Westchester shore. From its various promontories, a panoramic view of the Sound unfolds of sky and water and low-lying greenery in ever-changing hues and configurations as the weather and the seasons shift. It has been owned and maintained since its establishment by the Larchmont Manor Park Society, whose enlightened volunteer management has preserved the park for more than a century as an asset for the whole community.

The Larchmont Manor Park Society is a nonprofit corporation whose membership is limited to residents of a designated area (Map 610) south of the Boston Post Road. Under a deed to the Society in 1892, the right to use the park is limited to residents of Map 610, their households and guests; however, the society has also invited access to the park by residents outside that area, subject only to rules designed principally to preserve the park's peaceful atmosphere, beauty, and fragile environment (its soil is shallow and has occasionally suffered from overuse). The boathouse in Horseshoe Harbor, recently rebuilt after a fire, is managed for the Society by the Horseshoe Harbor Yacht Club.

The Society itself manages the adjoining beach and swimming facilities, providing access and bathhouse space to Larchmont Village residents, first come first served, for a seasonal fee, and recently to Town residents of Larchmont postal district zip code 10538, subject to availability.

The larger, landscaped portion of the park is used for passive recreation only. Over the decades the Society, at its own expense, has erected seawalls and planted and maintained lawns and trees to preserve and maintain the park's appearance. The Horseshoe Harbor Yacht Club has conducted dredging operations three times in the past 30 years to maintain the needed depth for boats in Horseshoe Harbor.

The Manor Park is artfully landscaped and adorned with stately trees, three gazebos overlooking the Sound, broad lawns, wild thickets and winding walks, and a spectacular formation of ancient metamorphic rock skirting the shore. Flanked by the unspoiled tree-lined silhouettes of City Island, Pine Island, Davids Island and Huckleberry Island to the south, it commands a sweeping view of Long Island Sound and the Long Island shore opposite, the trees, bays and inlets of the Queens and Nassau County shorelines with the tips of Lloyds Point and Eton's Neck to the east, the last sight of land before the view is one of only open water. Manor Park is an important resource for natural history education and a favorite place for strolling and for watching the sailing and racing activity centered on the Larchmont Yacht Club nearby.

2. Village of Larchmont Property: Flint Park, the largest, as well as Pine Brook, Lorenzen and Woodbine Parks, all touch the waterfront or streams near it. The total park area of about 37 acres is mainly accounted for by Flint Park (27 acres). Its mostly level ground contains tennis and paddle tennis courts and playing fields for baseball and youth soccer. It is a key facility in the Village's recreational life. It is also the site of a small building, known as "The Play House", used for meetings and cultural events. Its use for public access to the shoreline for passive recreation, however, is impaired by the location of a Village leaf disposal facility. The Village has worked diligently to improve the leaf disposal site located at the south end of Flint Park.

It should also be noted that the dead ends of several Village streets abut the waterfront or the Premium estuary. In addition, the easternmost 50 feet of Premium Point, just inside the Village of Larchmont border, is unimproved Village property totaling about 0.1 acre.

The use of this area for public recreation has been considered from time to time, but, as is noted later in this inventory, there are many drawbacks to such use. (Also see Part N at 4.)

3. Town of Mamaroneck Property: Two important waterfront areas are Town property under the management of the Conservation Advisory Commission. These are the 5-acre Hommocks Conservation Area, most of which lies in the Town (the rest is in the Village of Mamaroneck) and the 10-acre Premium River Conservation Area. Both include tidal

wetlands with well-rooted marsh grasses which function as important wildlife habitats and, through their water-retention capacity, retard erosion in the tidal estuaries. Both are open to the public for passive recreation, with woodchipped walk trails and dry ground and catwalks and foot bridges in marshy areas. The Premium Conservation Area recently received a face-lift when its entranceway was enhanced with plantings indigenous to an upland tidal wetland provided by a grant from the National Small Business Administration, administered by the Department of Environmental Conservation, and two local organizations. However, as discussed in Part U, both the Hommocks and the Premium have chronic siltation and pollution problems.

In addition, the south end of the 12.5 acre Hommocks athletic field abuts the Hommocks Marsh and Little Harbor Sound. The field is owned by the Town, and its use is shared by the Town Recreation Department and the Board of Education whose property to the north of the field is the site of the Hommocks Middle School. The field was built on a sanitary landfill in the 1960's and early 1970's which buried the lower ends of East Creek and Gut Creek in culverts. The 900 foot above-ground section of East Creek runs approximately along the Town-Village border. Defects in covering, grading, and seeding remain.

#### J. Open Space

In the watersheds along the highly developed Westchester shore, open space serves several major purposes including wildlife habitat, recreation, aesthetic values, and of special importance in this area, improvement of air quality caused by water exchange, and flood control by absorbing and retarding runoff in wet weather. Three jurisdictional categories of open space are involved, totaling about 722 acres. These figures do not include 187 acres of parkland in the northeast corner of the Town, which form part of the County-owned Saxon Woods Park (see Map 4).

1. Within the Village of Larchmont, open space includes 34 acres of public parks; the 12.65-acre privately owned Larchmont Manor Park; and 17 waterfront acres occupied by the Larchmont Yacht Club and the Larchmont Shore Club -- a total of about 64 acres.
2. Within the Unincorporated Area of the Town, open space totals approximately 589 acres, as follows:
  - a. About 109 acres of Town-owned parks and conservation areas, namely: the Sheldrake River and Leatherstocking Trails, Hommocks and Premium River Conservation Areas; the handsomely landscaped Memorial Park; the Gardens Lake; and the Hommocks playing field. In September 1983 all these open spaces were formally dedicated by the Town for parks and recreational use.

- b. The 12.76-acre Larchmont Reservoir Conservation Area, consisting of that portion of the Larchmont Reservoir - James G. Johnson Jr. Conservancy lying within the Town of Mamaroneck.

The unique status of the 60-acre Larchmont Reservoir - James G. Johnson, Jr. Conservancy, calls for further comment. It is owned by the Village of Larchmont, located partly in the Unincorporated Area, (12.76 acres) with the remainder in the City of New Rochelle. In October 1984, this property was dedicated in perpetuity by the Village for specified public purposes including conservation, nature study, wildlife preserve, flood control, standby water supply, and environmental and historical education. Since late 1975, when the Reservoir ceased to serve as the Village's regular water supply, the property, with the concurrence of the Village, has been maintained as a conservation area and flood control facility by the Conservation Advisory Commission and the Town of Mamaroneck conservation staff, with additional support since 1981 from the Friends of the Reservoir, Inc., a private nonprofit organization. Following the dedication of the property, the Village's oversight of these arrangements has been strengthened by creation of the Village of Larchmont Reservoir Committee, which makes recommendations to the Village Board on policy and projects relating to the property and works with the above bodies in the initiation and review of proposals concerning it. In 1993, the National Institute for Urban Wildlife certified the Larchmont Reservoir as an "Urban Wildlife Sanctuary" noting that it had met all of the Institute's wildlife habitat and management criteria, including such items as natural food availability on a seasonal basis, water being present all year 'round and adequate living space with vegetated corridors extending from the property.

- c. Two large private golf courses and part of a third, totaling 428 acres. The Bonnie Briar and Winged Foot golf clubs are in northern part of the Town. A 6.74-acre portion of the Hampshire Country Club golf course extends west from the Village of Mamaroneck into the unincorporated area near the Hommocks Conservation Area.
- d. About 40 acres of large residential tracts with development potential lying between the Bonnie Briar and Winged Foot golf clubs.

This list is by no means conclusive. The Conservation Advisory Commission has been charged with the responsibility for maintaining an inventory of open spaces.

#### K. Recreation

Recreational facilities, part public and part private, are substantial for both active and passive recreation, much of it water-dependent or water-enhanced. Many of these facilities, because of their size and location, also have great environmental importance as absorbers of flood waters and as wildlife habitats. Their recreational uses can be summed up as follows:

1. Active Land Sports: In addition to the facilities of the Mamaroneck school system, active sport facilities for adults and children include public baseball and soccer fields, chiefly in Flint Park; a public indoor ice rink next to Hommocks School; tennis and paddle tennis courts in Flint Park, the Town's Memorial (Station) Park, and private clubs; and three private golf clubs, two of them wholly and one partly within the Town.
2. Water-Dependent Sports:

As befits a coastal community, water-dependent sports are well developed, for example:

- a. Boating: On the Larchmont shoreline are two yacht clubs, the Larchmont Yacht Club (11 acres) and the Horseshoe Harbor Yacht Club which uses the Larchmont Manor Park Society's boathouse in the Manor Park. Their combined fleets of sail and motor craft number over 450, and provide recreation to thousands of residents. In addition, a few members of the Larchmont Shore Club (6 acres) moor their boats in club waters, and numerous boats are docked or moored at private residences along the shore. The Larchmont Yacht Club has made Larchmont famous as one of the most important yachting centers on the American east coast, increasing the attractiveness of this area as a place of residence for sailing enthusiasts. The area is also a market for a considerable nearby industry, especially in the Village of Mamaroneck and in New Rochelle, devoted to yacht building, sailing, maintenance and supply.

There are no public boating facilities along the shoreline in Larchmont or the Unincorporated Area of the Town of Mamaroneck. Some residents keep their boats at the Village of Mamaroneck facility in Harbor Island nearby, although it has a long waiting list and charges a substantially higher fee for nonresidents. (Also see Part U.5.)

- b. Swimming: Facilities include the indoor Hommocks swimming pool, shared between the school system and the Town, and open to the public; an open-air County swimming pool in Saxon Woods Park; another Westchester County facility, Rye Playland and, as previously mentioned (see Part I), bathhouse facilities at the Manor Park Society's Manor Beach. Homeowners in the adjoining Map 610 area have priority rights in this facility, but the Manor Park Society makes room for hundreds of other Village and Town residents for a season fee, first come first served. Up to 750 families have shared this facility in some recent years. In addition, the Shore Club and the Yacht Club have private beaches for members. No public outdoor swimming facility exists along the shore, but such facilities are available, at higher fees than for residents, in nearby Sound shore municipalities including the Village of Mamaroneck and New Rochelle. A chronic problem affecting all Sound shore swimming in recent years is the pollution of coastal waters by raw sewage after heavy rains because of infiltration of storm water into the sanitary system thus

causing bypassing of the sewage plant which in turn frequently causes the closing of nearby beaches by order of the County Health Department.

- c. Fishing: Both local and deep-water fishing is done in the Sound by many boat owners in the area. In addition, there is some fishing from the shore at private residences and, subject to municipal regulation, on public property. Restoration of shellfishing along the Sound shore, for recreational as well as commercial purposes, will depend on future steps to upgrade water quality.
3. Passive Recreation: Much of the so-called passive recreation in parks and conservation areas -- walking, birding, sketching, painting, photography, nature study, etc. -- is enhanced by bodies of salt or fresh water and is in that sense water-related. The scenic beauty of the Larchmont Manor Park makes it a favorite public strolling place. For birders and students of ecology, the Premium and Hommocks Conservation areas, and on a smaller scale Horseshoe Harbor, incubate abundant fish, shellfish, and crustaceans and are nesting and feeding grounds for many species of waterfowl and shore birds. Farther inland, the Sheldrake and Leatherstocking Conservation areas (total 55 acres) and the 60-acre Larchmont Reservoir Conservancy all contain undisturbed woodland with a varied topography of open water, wetlands, and rocky heights, the habitats of abundant wildlife.
4. Possibilities and Limits: As has already been made clear, this area has extensive resources for water-related recreation, both active and passive. Private shoreline facilities for boating and swimming are enjoyed by many residents, and are used at or close to capacity. It is widely realized that possibilities for wider public access to boating and swimming along this part of the Sound shore are limited by the nature of the shoreline and its ownership.

Attempts in recent years to establish Village of Larchmont facilities for small boats, windsurfers, etc. in Little Harbor Sound at the foot of Flint Park, or at the dead ends of Beach and Magnolia Avenues were abandoned as impractical. The Village has determined that Little Harbor Sound, the dead-ends at Beach, Walnut and Magnolia Avenues and an unimproved beach lot at the east end of Premium Point (one of the finest intertidal areas along the Sound shore) are out-of-the-way locations hard to supervise and police, with difficult physical access and limited parking possibilities.

In sum, the potential of existing public properties for creating new recreational facilities is very limited. If either municipality should in the future acquire, or obtain the use of, property on or near the shore other than what they now own, the adaptation of such property for public recreational use would be desirable but would require careful weighing of relevant factors such as public demand, costs, environmental impact, and effect on the residential neighborhood.

Facilities for so-called passive recreation are more plentiful: birding and nature walks in the Town conservation areas and the Manor Park. Optimum use of the Premium Conservation Area for these purposes, however, will require more maintenance and community support. A potential also exists for creating additional small areas for passive recreation at the south end of Flint Park and along the open section of East Creek, as noted above in discussion of that area.

The importance of these public and private recreational resources, both in maintaining the quality of life in our community and in sustaining its economy, cannot be overstated. Whatever impairs or degrades or needlessly restricts recreational opportunities -- such as a ban on swimming at times of severe water pollution, or silting up of navigational channels, or unnecessarily limited public access, or littering and vandalism in parks and conservation areas -- tends to lower the quality of life, and makes the area a less desirable place to live. A major aim of this Program must be to prevent such conditions from arising and to correct them where they exist.

#### L. Living Resources

Our land and waters nourish a wide diversity of fish and wildlife.<sup>3</sup> Bird species are especially numerous owing to our coastal location and our transitional climate pattern caused in part by the meeting of the Labrador Current and the Gulf Stream. Birds, both resident and migratory, and land animals find food and shelter in the wide variety of trees, shrubs, lawns and rocky structures on private land and suburban streets, and in the more protected open space of our parks and conservation areas. Fish, shellfish, crustaceans, amphibians, and reptiles breed in the nutrient-rich ponds, salt marshes and watercourses, providing food for gulls, shore birds, winter-sheltering ducks, geese, and swans, and land animals, as well as some recreational fishing. (See Part M- Significant Coastal Fish and Wildlife Habitat and Part N- Locally Important Fish and Wildlife Habitats of this section for details.)

A 1991 report entitled Northeast Coastal Areas Study: Significant Coastal Habitats of Southern New England and Portions of Long Island, New York prepared by Joseph J. Dowhan of the U.S. Fish and Wildlife Service includes the Premium River Complex as part of "The Narrows Complex" or the westernmost part of Long Island Sound between Hell Gate and the Hempstead Sill to the New York-Connecticut boundary. The report sees habitats in this region to be linked, or potentially so.

Described are two major subcomplexes joined together by the waters of the Sound and ecologically linked with one another: 1) the Northern Bays (Little Neck and Manhasset Bays and Hempstead Harbor) and the immediate nearshore waters of Long Island Sound; and 2) the Mainland Coastline, with its several small offshore

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<sup>3</sup> See Wildlife Inventories in Appendix B.

islands, mainland wetlands and nearshore waters, bays and coves. The Mainland Coastline extends from Eastchester Bay and the Throgs Neck Bridge in New York eastward to Greenwich Cove in Greenwich, Connecticut.

Included within this subcomplex are the following Significant Habitat sites: Greenwich Cove, Cos Cob Harbor, and Great Captain Island in Connecticut; Playland Lake and Manursing Island Flats and the Marshlands Conservancy at Maries Neck/Milton Harbor, Rye; the Premium River-Pine Brook Wetlands in Larchmont, Mamaroneck and New Rochelle; Huckleberry Island- Davids Island in New Rochelle; and Pelham Bay Park in New York. (Also included in this subcomplex are South and North Brother Islands, just west of Rikers Island near the western boundary of The Narrows, approximately 6 linear miles (10 km) west of the core area.)

These areas may appear discontinuous and remote from each other, but based on the U.S. Fish and Wildlife study and others, there appears to be a natural connection between them (for example, a connection between the wading colonial bird rookeries of The Narrows and western Long Island Sound in Connecticut).

Development in recent years has impacted the region's wildlife in numerous ways: for example, with the reduction of habitat diversity, relatively adaptable species have flourished (crows, raccoons, and skunks) while more sensitive species have declined. As will be noted, inappropriate or careless development poses serious threats to many of the valued species that breed and thrive in our area.

This threat is especially significant in two saltwater wetlands located in the Premium and Hommocks Conservation Areas and in the freshwater wetlands areas in the Larchmont Reservoir-Sheldrake-Leatherstocking Complex. Largely because of the importance of salt marshes as spawning grounds for fish and other aquatic species, the Premium and Hommocks were designated locally over a decade ago as conservation areas under the jurisdiction of the Conservation Advisory Commission; but this status cannot fully protect them from environmental damage -- in fact, they have already been substantially damaged by siltation, erosion, and pollution. Because of their ecological value, these areas were designated "locally important fish and wildlife habitats" (see parts M and N of this Section).

M. Significant Coastal Fish and Wildlife Habitat

This narrative describes the Premium River-Pine Brook Wetlands Complex which was designated a Significant Coastal Fish and Wildlife Habitat by the NYS Secretary of State on November 15, 1987. This area is also identified in the LWRP as a Locally Important Habitat of regional importance, which led to its State designation.

The Premium River-Pine Brook Wetlands Complex is tributary to Long Island Sound in the Town of Mamaroneck, the City of New Rochelle<sup>4</sup> and the Village of Larchmont, Westchester County (7.5' Quadrangle: Mount Vernon, N.Y.). The fish and wildlife habitat is an approximately 65 acre area including Pine Brook south of the Boston Post Road, the Premium River, Premium Mill Pond, the northeast portion of Echo Bay, Pryer Manor Marsh, a former wetland between Dillon Road and Emerson Avenue, salt marsh areas adjacent to the river and creek and small portions of adjacent meadow. The land area bordering the wetlands complex is predominantly moderate density residential and commercial. Several town and village owned parklands including the Premium River Conservation Area, Woodbine Park, Kane Park, and Lorenzen Park are part of the habitat area.

The portion of the habitat area within Mamaroneck and Larchmont was designated a Critical Environmental Area pursuant to the State Environmental Quality Review Act (see Part N below).

The Premium River - Pine Brook Wetlands area is a diverse and relatively undeveloped complex of tidal river, tidal flats, shallows, salt marsh and freshwater wetlands which is unusual in Westchester County. Although adjacent and upstream developments and water pollution have degraded this area, the wetlands remain undeveloped and the range of natural communities in this area support a diversity of fish and wildlife species. Local efforts are underway to preserve, maintain and restore the wetlands. As an initial step, the Department of State funded the development of a wetland restoration and management feasibility study for the Town of Mamaroneck and the Village of Larchmont. The NYS Department of Environmental Conservation, under the Environmental Quality Bond Act of 1972, awarded the Town and Village \$618,965 in March of 1990 to dredge the Premium River. The Town serves as lead agency for the project and hired Malcolm Pirnie Inc. as consulting engineers to obtain the required permits, perform survey work, sample and analyze the disposal of dredged material, and to oversee the actual dredging work. This wetland restoration effort has focused on dredging to restore tidal circulation in the river and marsh system. This project has been stalled due to the dredging contract bids coming in above the budget and difficulty in finding capping material for the dredged spoil and the proper disposal site.

The productive salt marshes, tidal flats and shallows serve as nursery and feeding areas for a variety of finfish species including alewife, striped bass, blackfish, bluefish, cod, eel, winter flounder, summer flounder, mackerel, menhaden, porgy, weakfish, silversides and killifish. Shellfish found in the area include hard clam, soft clam, blue mussel, American oyster and bay scallop. Although the Mill Pond was once used for planting and harvesting oysters, the entire area is now closed to shellfishing due to degraded water quality (high coliform levels)

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<sup>4</sup> Adverse impacts on the Premium Marsh and the need for intermunicipal action to restore and protect it are discussed in some detail on pages 43-47 of the "Local Coastal Management Program" published in 1980 by the City of New Rochelle Department of Development.

resulting from roadway and other nonpoint source runoff. Recreational fishing remains locally important.

A variety of coastal wildlife species occur in and around the Premium River - Pine Brook Wetlands Complex (see Appendices B and E). Nesting bird species include the black-crowned night heron, ring-necked pheasant, mallard, Canada goose, mute swan and killdeer. Many species of waterfowl, shorebirds, marsh birds and passerine species feed in the area as residents during the summer and also during spring and fall migrations. Large concentrations of black duck occur during migrations and in recent years, osprey have been observed migrating through the area. Overwintering species include common loon, American coot, greater scaup, lesser scaup, northern shoveler, mallard, common goldeneye, canvasback, common merganser, hooded merganser and red-breasted merganser. The use of this area by waterfowl in winter is influenced by the extent of ice cover on Premium Mill Pond. Waterfowl hunting is not allowed except for some areas offshore of Premium Point. Harbor seals are occasional visitors to the area.

The combination of this area's diverse natural communities and wildlife and its proximity to New York City and the densely populated region of Westchester County makes the Premium River - Pine Brook Wetlands Complex significant for informal nature study, birding, photography, environmental education and research. The L.I.F.E. Center naturalists as well as other Westchester citizens groups conduct frequent nature walks in this area for school groups and adults. Several high schools and universities use this area as an ecological laboratory. Several local groups including the Conservation Advisory Commission, the L.I.F.E. Center, the Premium River-Pine Brook Preservation Association, and the Larchmont/Mamaroneck Coastal Zone Management Commission are dedicated to preserving and restoring this area.

N. Locally Important Fish and Wildlife Habitats

The three habitats mentioned below are designated as "Critical Environmental Areas" under the Town of Mamaroneck Environmental Quality Review ordinance and the State Environmental Quality Review Act adopted by the Village of Larchmont (see Section V).

1. The Hommocks Salt Marsh Complex is located in and near the head of Little Harbor Sound, a tidal inlet in Larchmont Harbor. It straddles the boundaries of the Village of Larchmont and the Unincorporated Area of the Town of Mamaroneck, and is associated environmentally with adjacent lands in the Village of Mamaroneck. Its main component is the Town portion (about 3.5 acres) of the Hommocks Conservation Area, most of which consists of tidal wetlands. Entering the marsh at the northwest corner of the conservation area are the outfalls of East Creek and Gut Creek, which flow through pipes under the Hommocks athletic field and drain a watershed which is fully developed with residential and business properties and major thoroughfares. There is also an above-ground section of East Creek running approximately along the Town-Village border. The

complex also includes three other areas. One consists of some 5 acres of sheltered waters off the southwest end of the Hommocks peninsula, an important feeding area for migrating waterfowl (see Appendix B). Another is a strip, about 2 acres in area, of partly marshy, partly wooded ground skirting the south end of Flint Park in the Village of Larchmont from the East Creek outfall to the western boundary of the park. This strip forms the north bank of Little Harbor Sound and is ecologically associated with the Hommocks Marsh. The fourth component is the 6.74-acre segment of the Hampshire Country Club golf course, lying within the Town east of Hommocks Road, through which Gut Creek flows on the surface. The total area of this complex is thus about 17 acres, all but about 2 acres of which are in the Unincorporated Area.

Both of the above habitat complexes are rich in wildlife and include areas of open ground, woods, meadow edges, salt marsh, intertidal flats, and open water, either salt or brackish. Water depths are shallow. Tidal fluctuation is slower in the Premium complex because of the dam between it and the Sound. Both areas are surrounded partly by parks and playing fields and partly by residential and commercial development. As is discussed in Part U, they have survived considerable adverse impact from their surroundings.

2. The Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetland Complex (RSL-CEA) is located in the Sheldrake watershed about two miles inland. Its total area is about 520 acres. Extending eastward from the Town portion (12.76 acres) of the Larchmont Reservoir property across the Unincorporated Area to the Village of Mamaroneck boundary, it forms a network of large and small open spaces and connecting habitat corridors (see Appendices B,C and D) to the north and south of the 55-acre Sheldrake-Leatherstocking trail system, which forms its main east-west axis. To the north are the Bonnie Briar and Winged Foot golf courses, respectively 141.4 and 280 acres. Within and near the golf courses and the trails are important habitat corridors following the two branches of the Sheldrake River and its small tributaries. These include wetlands, springs, ponds, flood plains, and streams flowing into the Sheldrake's two branches. South of the Conservation Area, the Complex includes the Sheldrake and its two branches, the 7.4-acre Badger Sports Club, Gardens Lake, and the small Revere Road Conservation Area next to the Village of Mamaroneck border. (If defined solely in ecological terms, this Complex would extend well into the Village of Mamaroneck downstream and into Scarsdale and New Rochelle along the upstream portions of the Sheldrake watershed. Only those sections within our Coastal Zone boundary are included here.) The main components of this Complex are as follows:
  - a. Of the 60-acre Larchmont Reservoir-James G. Johnson, Jr. Conservancy, 12.76 acres are within our Coastal Zone boundary, including the lower half of Goodliffe Pond, the lower dam and spillway, a section of the Sheldrake River (West Branch) below the spillway and west of Weaver Street, and surrounding woods and meadow. Although the larger part of this Conservancy lies in New Rochelle, the entire

Conservancy is owned by the Village of Larchmont, dedicated by it to public uses including wildlife preserve, and maintained by agencies of the Town under Village supervision and in cooperation with the City of New Rochelle. The Conservancy's two lakes (about 25 acres) and surrounding deciduous woods, rocky upland, marshy low ground and meadow, make it an excellent habitat for a wide variety of aquatic and land birds. In 1985, a fence was built across the base of the smaller peninsula near the south end of Sheldrake Lake creating a protected nesting area for wild birds. A nesting pole for ospreys was erected on Goodliffe Pond by the Friends of the Reservoir. Nesting ospreys have been observed.

- b. The two golf courses, totaling over 421 acres, offer wide expanses of relatively undisturbed open space with varied topography and numerous ponds, streams, thickets and groves of trees. With the Badger Sports Club property (7.4 acres), private open space in this complex totals some 428 acres. The Town undertook an environmental review of the golf course properties in order to ascertain what kind of zoning of these properties would best serve the Town's planning goals and community character. A Final Environmental Impact Statement on this matter was accepted by the Town Board in the fall of 1993, and a Findings Statement in support of rezoning to Private Recreation Zone was made on April 5, 1994.
- c. The Sheldrake-Leatherstocking Conservation Area comprises 55 acres of rocky, deciduous woodlands, of which 13 acres are freshwater wetlands. It is intersected by both branches of the Sheldrake and by two tributaries to them, as well as by two tributaries to the main stem of the Sheldrake near the Village of Mamaroneck line.
- d. All the habitat corridors connecting the above areas are centered on tributaries of the Sheldrake and include the wetlands and other features described above. Their total area is estimated at 24 acres.
- e. The existing, historical land use patterns within the RSL-CEA, as well as development in surrounding communities, have created an extensive "green" corridor and critical, although fragmented, stable corridor for local wildlife populations. The latter have had sufficient time to adjust and adapt to these habitats. The RSL-CEA has an extensive sampling of most ecological communities typical of Westchester County. Because wildlife populations have adapted to the existing land use and to the isolated nature of the various natural habitats, they would be very sensitive to any major changes in the habitat network. Pressure from surrounding areas would cause wildlife species to become more concentrated, and since individual species would be forced to rely on less acreage, they would experience greater competition for existing resources. These types of changes favor those

species that are adaptable to living under greater stress, and are responsible for the loss of more sensitive species noted throughout Westchester County.<sup>5</sup>

3. The Premium Salt Marsh Complex. See Part M above.
4. Intertidal & Littoral Zone. In addition to the above, a fourth habitat complex merits description in this inventory even though, because it is protected under the State Tidal Wetlands Law, it is not formally included among the habitat complexes listed in this program. This is the intertidal and littoral zone extending from Larchmont Harbor westward along the Sound shore to and around Premium Point. Included in it are the shores of the Larchmont Manor Park, Horseshoe Harbor, the Larchmont Shore Club, and intervening private and public shoreline properties. This complex includes rocky coves in the Manor Park-Horseshoe Harbor area, several of which contain patches of salt marsh peat and grasses, as well as a small sandy beach called Pirate's Cove. Biologically rich rocky and sandy beach continues off the Shore Club and Premium Point Beach. This habitat nourishes a wide variety of fish including striped bass, bluefish, flounder, mackerel, blackfish, menhaden, alewives, eels, porgies, minnows, pipefish, and seahorses; also horseshoe crabs, lobsters, hardshell and softshell clams, oysters, mussels, and snails. Bird species include several species of gulls, herons, kingfishers, and shorebirds that feed on the above organisms, as well as swans, geese, ducks, and other species that feed on marine vegetation.

O. County Critical Environmental Areas

In 1989, Westchester County enacted a law designating certain areas that are critical under the State Environmental Quality Review law but do not lie wholly within one municipality, and also areas that might impact on County property as Critical Environmental Areas (CEA), thereby entitling them to some measure of legal protection against adverse actions in or near them. While the Coastal Zone Management Commission (CZMC) supported the original "500 feet from Long Island Sound" zone as a CEA, the County subsequently adopted a "cultural boundary" which in our area is mainly a line mapped from the Boston Post Road to Long Island Sound. The Premium River-Pine Brook Wetlands Complex, recommended for inclusion in the CEA by the CZMC, and the Larchmont Reservoir-James G. Johnson, Jr. Conservancy, recommended for inclusion by The Friends of the Reservoir organization, were also designated County CEAs. (Also see Section V.)

The CZMC also recommended to the County Board of Legislators that provisions be made within the CEA law to ensure that an integrated review procedure would occur for those actions that might involve and affect more than one government. This recommendation was

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<sup>5</sup> Coleman, Stephen, Management Plan for the Reservoir-Sheldrake-Leatherstocking Critical Environmental Area (RSL-CEA) Part III, December 1992 (see Appendix I).

not adopted and therefore, there is no requirement for intermunicipal notification of pending actions in these special areas nor is there a system for coordinated "consistency" review. Examples of some of these intermunicipal areas can be found at the Larchmont Reservoir (Village of Larchmont and the City of New Rochelle), the Premium River-Pine Brook Wetlands Complex (the Town of Mamaroneck, Larchmont and New Rochelle) and at the Hampshire Country Club portion of the Hommocks Complex (the Town and the Village of Mamaroneck). Therefore, each municipality must remain vigilant. For our community, the most significant value of the Westchester County designation is that it conferred Critical Environmental Area status to the Larchmont Reservoir-James G. Johnson, Jr. Conservancy and to that portion of the Premium River-Pine Brook Wetlands Complex lying within the City of New Rochelle and to a wider range of areas lying south of the Boston Post Road, including privately held lands along the Premium River not previously cited by the Village.

P. Fish and Wildlife Values

In this narrow, densely developed region of southeastern New York State, between the *fjord* of the Hudson River and the arm of the sea that is Long Island Sound, all surviving patches of relatively undisturbed open space and wetland -- four of which, described above, are in our portion of the Coastal Zone -- are vitally important to a great diversity of fish and wildlife, both resident and migratory. Lists of bird, land and aquatic species found in these three habitat complexes are given in Appendix B. The discussion below deals only with some of the more notable species. Unless otherwise stated, the species mentioned are found in all three habitat complexes.

1. Fish: The Premium and Hommocks areas are nurseries and feeding areas for bluefish, winter and summer flounder, eels, blackfish, mackerel, menhaden, weakfish, silversides, alewives, and cod. Fish at the Reservoir include large-mouth bass, yellow perch, sunfish, eels (which migrate upstream from salt water), brown bullhead catfish, carp, and shiners.
2. Other Aquatic Species: Diamond-back terrapin breed in the Hommocks Marsh, and snapping turtles in the Reservoir. Blue crabs have begun to return to the Premium. It is hoped that their number may increase as water quality improves. Among shellfish that breed in both areas are ribbed and blue mussels; hard, soft-shell, and razor clams; oysters and scallops. However, because of pollution, the waters of the Premium area are not certified for shellfishing -- once a common activity there. Horseshoe crabs, now on the endangered species list, breed in the Premium River. Naiads, a freshwater mussel, breed in the lower Reservoir -- proof of the quality of its water, since this species is especially sensitive to pollution.
3. Birds: Many bird species use these habitats as nesting areas, and still more use them as feeding grounds, either as residents or in migration or as casual visitors. Nesting species include, in all three areas, the black-crowned night heron, ring-necked pheasant, mallard,

Canada goose, mute swan, green heron and killdeer. Also nesting at the Reservoir are the snowy egret and wood duck. Feeding species in all three areas include at least seven heron species: snowy egret, great egret, great blue heron, green heron, black-crowned night heron, yellow-crowned night heron and American bittern; and another long-legged wader, the glossy ibis. Migratory visitors feeding in all three areas include large numbers of black ducks and, in recent years, at least one osprey in each area. Between late October and April, the following wintering waterfowl feed in these areas: common loon, American coot, greater scaup, lesser scaup, shoveller, mallard, Canada goose, mute swan, ruddy duck, bufflehead, American widgeon, common goldeneye, canvasback, common merganser, hooded merganser, and red-breasted merganser. Grebes and pintails are casual visitors. Use of these areas by waterfowl in winter is influenced by the extent of ice cover from year to year. Normally most feed in the open water of the Mill Pond in midwinter; then, with the retreat of the ice, larger numbers invade the wetlands before migrating north.

Other bird species seen in, and in many cases nesting in, one or more of these three areas include many of the passerine species common in the American East; the belted kingfisher; crows (black and fish); blue jay; five hawks (red-shouldered, marsh, kestrel, merlin, osprey), four gulls (herring, great black-backed, ring-billed, laughing); six woodpeckers (common flicker, pileated, red-bellied, yellow-bellied sapsucker, hairy, and downy); three swallows (tree, bank, and roughwinged); four wading birds (lesser yellowlegs, greater yellowlegs, spotted sandpiper, semipalmated sandpiper); meadow-lark; and, as rarer visitors, the snowy owl, black skimmer, clapper rail, Virginia rail, and American pipit. On one occasion a Eurasian fieldfare appeared, drawing bird enthusiasts from near and far.

4. Land animals: Aside from the common rodents, muskrats breed in the Premium area and are also found in the Reservoir-Sheldrake- Leatherstocking area. Among other mammals found in the Reservoir area are the short-tailed shrew, North American field vole, white-footed mouse, woodchuck, opossum, striped skunk, raccoon, red fox and deer.
5. Utilization: The uses of the fish and wildlife species described above by people in our area, or nearby, include some commercial exploitation (mainly lobsters), but more important by far are recreational, educational, scientific, aesthetic and ecological values. There is some sport fishing offshore in addition to commercial fishing, the latter being based on nearby ports, not in our area. There is some land-based fishing from shoreline clubs and residences. Hunting is not allowed in Larchmont Harbor because of the proximity of residential areas, but there is some duck hunting offshore from Premium Point.

Most important are those recreational uses classified as "passive" -- birding, photography, nature study, etc. Much of this - activity has educational value, and in

some cases scientific value as well. L.I.F.E. Center naturalists conduct frequent nature walks in all three areas for school groups and adults. Annual Audubon bird counts are also conducted there. Several ecological studies of these areas, assigned as educational projects at the State University of New York at Purchase, the City University of New York, Manhattanville and Iona Colleges and Mamaroneck High School, have had scientific value. Students research has led to advanced investigation at the colleges, and a high school student's project won a Westinghouse Science Award.

No less important, although difficult to assess, is the contribution these three areas make to the balance of nature in this highly developed land and seascape at the western end of Long Island Sound. Spawning fish and lobsters (and, it is hoped, crabs and shellfish once again) not only contribute to the commercial catch in this part of the Sound, but provide food for many beautiful and useful species of shorebirds. Insect-eating birds that breed in these habitats help to control insect pests throughout the coastal area, reducing the need for chemical insecticides.

6. Stewardship: The biological and botanical inventories appearing in the Appendix were tabulated from 1991-1993. The Coastal Zone Management Commission and the Conservation Advisory Commission have employed a naturalist, bird specialist with many years of experience in the environmental field especially in habitat management, to assess the Town-Village Critical Environmental Areas (CEAs). The CZMC is particularly interested in keeping current the existing inventories which may be used as baseline data, to gain site specific recommendations for buffer areas to protect these resources and to know whether restoration and enhancement of CEAs is needed. Because of budget constraints, only a small part will be done each year. In time, all three CEAs should be studied in depth.

Q. Water Resources (See Maps 5 and 5A.)

1. Fresh water: A considerable network of lakes, small ponds, wetlands and watercourses in the Unincorporated Area, as well as the small but important remaining above-ground stretches of Pine Brook and East Creek in the Village, function as wildlife habitats and as important resources for quiet recreation. In addition, as noted above, the Upper Reservoir (Sheldrake Lake), located in New Rochelle but owned by the Village, serves the important function of standby water supply in case of severe water shortage. It is classified by New York State as "A", "suitable for all uses", while the Lower Reservoir (Goodliffe's Pond) is classified "C", "suitable for uses other than consumption and primary contact recreation" (swimming). The Sheldrake River is classified "C" due to intermittent flow and inability to support propagation of fish. Gardens Lake is also classified "C". The East Creek, Premium River and Pine Brook are currently classified "I"; however, they are subject to reclassification in the near future which will place them approximately between classes "C" and "D".

This community's water supply comes from the New York City system. However, recent reports by Westchester County authorities of increasing demand on the New York City system suggest that reactivation of the Upper Reservoir as an emergency water supply at some time in the not too distant future is a distinct possibility. Under County plans, filtration and other operational costs in such a contingency would be borne by the County. However, it is incumbent on, and in the interest of, the Village of Larchmont, as owner of the Reservoir property, to do its best, with the cooperation of upstream municipalities, to maintain Sheldrake Lake in its present water classification "A", not only for standby water supply purposes but also in order to avoid deterioration of the Reservoir property as a wildlife habitat and recreational and educational area.

2. Salt water: The deep waters of Long Island Sound off our shores are classified SA, suitable for all salt-water uses; but several wide areas near the shore, including many shellfish beds, are classified SB, which excludes human consumption of shellfish. Shell-fishing along these shores, once a significant commercial and recreational activity, has been banned for many years mainly because of organic pollution from sewage. The Premium Mill Pond is classified "SB", which excludes primary contact recreation as well as shellfishing. A further threat to the quality of these waters is the nonpoint discharge of organic nutrients--fertilizers, animal wastes, decomposing leaves and grass cuttings, etc.--into coastal waters via stormwater runoff. These substances, together with sewage overflow, stimulate algal growth and deplete the oxygen in the water which is essential to fish and other forms of life.

The above classifications do not reflect the frequent pollution crises described in later sections, caused by the flow of raw sewage into coastal waters after heavy rains, rendering these waters temporarily unfit for swimming; nor do they reflect the serious, though temporary, effects of oil spills.

#### R. Coastal Erosion Hazard Areas

The Coastal Erosion Hazard Areas (CEHA) program is part of a protective strategy that has been adopted by the State. CEHAs include natural protective feature areas (beach, bluff, wetland, dune and nearshore area), structural hazard areas (located landward of natural protective features) and flood zones. CEHAs were designated in the Town of Mamaroneck and Village of Larchmont in January 1989 pursuant to Article 34 of the New York State Environmental Conservation Law (Coastal Erosion Hazard Areas Act). The general location of the area is generally from west to east: Premium Point to Horseshoe Harbor and ending at Umbrella Point. The area as a whole varies in width from 50 to 200 feet upland from mean high water mark. However, a substantial portion of the Town/Village coastline did not receive CEHA designation. Those areas not so designated should be equally well protected.

Those prominent features falling within the designated CEHA are the following Natural Protective Features: a) beaches at Horseshoe Harbor and at the Larchmont Manor Park, and

b) Premium Point Beach. No Structural Hazard Areas have been designated here at this time.

In order to protect development or to mitigate the effects of development and other activities in the flood and erosion protection capability of these areas all development and activities are subject to the standards contained in the implementing regulations of Article 34 of the ECL (6NYCRR part 505). These regulations discourage, and in some instances prohibit, structures in coastal erosion hazard areas for safety reasons, and also because of the adverse effects structures may have on natural protective features and on coastal processes.

CEHA regulations are administered by the State Department of Environmental Conservation. These regulations are designed to ensure that certain kinds of activities meet required standards. Under the regulations, DEC will authorize a coastal erosion management permit on condition that the proposed regulated activity prevents, if possible, or minimizes adverse effects on natural protective features and their functions and protective values as described in Part 505 of the ECL.

S. Flood Hazard Areas

Another flood protection strategy is the National Flood Insurance Program (NFIP) that allows property owners to purchase federally backed flood insurance within communities that participate in the Program, thereby enabling property owners to reduce flood losses on residential structures. The Federal Emergency Management Agency (FEMA) has identified special flood hazard areas with various elevations such as the 100-year and the 500-year flood plain, and has issued flood insurance rate maps (FIRM) showing the location of these areas. Local flood damage prevention laws ensure protection of these areas through compliance with this policy.

The Flood Hazard Area or A-Zone in the TOM/VOL is located generally along the shoreline and up along the river corridors. It is located within the 100-year floodplain, extending from the boundaries of the V-Zone (Coastal High Hazard Area) to the limits of the 100-year flood hazard area. The A and V Zones are identified on the FIRM issued by FEMA.

The V- Zone or Coastal High Hazard Areas are located generally along the perimeter of Larchmont Harbor including along Monroe Inlet, Umbrella Point, Horseshoe Harbor to Premium Point Beach and most of the perimeter, and extending inland on the Premium Point peninsula. They extend inland to the A-Zone. The importance of their delineation is that these areas have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash.

T. Other Resources

1. Residential Real Estate: Our population chooses to live in this area not only because of its strategic proximity to New York City but also for its amenities, especially the aesthetic and recreational value of its Sound shore. This fact helps to account for the high value of real estate in the area.
  
2. Human Resources: Our residents include a high proportion of entrepreneurs, managers, professionals, artists, and skilled technicians working in the New York metropolitan area. The Mamaroneck district's primary and secondary schools, supported by its strong tax base, have long been of high quality with a high percentage of college-bound students -- a resource of great long-term importance.
  
3. Organizational Resources: Larchmont and the Town of Mamaroneck can draw on a wide array of local organizational resources and programs in formulating and carrying out their joint Local Waterfront Revitalization Program. Among these are:

a. Official bodies:

Town Council (Town Board)  
 Village Board of Trustees  
 Town Planning Board  
 Village Planning Commission  
 Town and Village Zoning Boards of Appeals  
 Town and Village Architectural Review Boards (also see Section V)  
 Town and Village Engineering, Highway & Parks Departments  
 Town Conservation Department  
 Joint (Village and Town) Sanitation Commission  
 Town of Mamaroneck Conservation Advisory Commission  
 (representing the Town, Village of Larchmont and Village of Mamaroneck)  
 Town Recreation Commission and Staff  
 Village Recreation Committee  
 Village Beautification Committee  
 Village Parks and Trees Committee  
 Village Reservoir Committee

b. Nongovernmental bodies:

The L.I.F.E. (Local Involvement for Environment) Center, the primary resource for environmental education and awareness. It is mainly supported by membership dues, but also receives budgetary contributions from the Town and the Villages of Larchmont and Mamaroneck.

The Larchmont League of Women Voters  
The Garden Club of Larchmont  
Friends of the Reservoir, Inc.  
The Larchmont Manor Park Society  
The Larchmont Yacht Club  
The Horseshoe Harbor Yacht Club  
The Larchmont Historical Society  
The Mamaroneck Historical Society  
Local Boy Scout, Cub Scout, Girl Scout, and Camp Fire Girl troops

This list is by no means complete. Various local organizations show an interest from time to time in local environmental, land-use, and other questions affecting the coastal zone, including the Larchmont Rotary Club, the Chamber of Commerce, the Larchmont-Mamaroneck Civic Association, the Premium River-Pine Brook Preservation Association and homeowners' groups in particular residential districts.

c. Educational and Informational:

Local public and parochial schools and their associated PTAs, active in environmental education and recycling programs.

The Larchmont Public Library

Newspapers: (1) The Gannett Westchester Newspapers' Suburban edition, The Daily Times, (2) The weekly Sound View News provides extensive local coverage for New Rochelle, Larchmont and Mamaroneck.)

Cable TV: LMC-TV, the local community public access facility, with studios in Mamaroneck High School and the Emelin Library, produces programs of local interest that are aired on three cable TV channels to TCI subscribers in Larchmont Village and Mamaroneck Town and Village.

U. Watershed Management

1. Introductory Observations: The problems of our coastal zone, unlike those in many industrial communities, are not primarily economic. There is no industry on our waterfront. Most of our residents commute to work elsewhere, and most of those who work in Larchmont's retail and service establishments reside elsewhere. (The Town has almost completed an affordable Townhouse type group of apartment buildings, which will provide housing for some Town employees.) Despite a normal degree of tax resistance, municipal and educational services remain strong, and there is a well-developed "safety net" of local governmental, County, and volunteer social services.

Phase I of a Master Plan Update completed in September 1986 for Mamaroneck and Larchmont dealt with the eastern portion of the Town and Village. Phase II completed

in October 1987 dealt with the Boston Post Road. The CZMC consistency review recommended the use of Best Management Practices in any drainage area (former Policy 14A, now see Policy 37), and the use of silt traps which have the capacity of removing oil and grease in parking lots and gas stations to protect the Sound from polluted stormwater runoff. Regular inspection of the silt traps was further recommended. The business areas are slowly being improved through the use of trees and shrubs and other amenities. As to large, undeveloped sites, increasing the minimum lot size was recommended where over-development could produce a negative impact on the Premium River-Pine Brook area. Some of our older apartment units have deteriorated and some commercial structures along the Post Road and Palmer Avenue are in need of a face lift.

Environmental constraints, on the other hand, are serious and increasing. As in other highly developed areas, these problems result primarily from many decades of residential and commercial development without much thought being given to environmental impact. In many cases, inadequate provision was made for sanitary sewage disposal and storm water drainage, and for maintaining a prudent balance between the built environment and the remaining open space.

Developers, while striving to produce "floodproof" structures in areas known to be flood-prone, gave little if any thought to the flooding that their alteration of the landscape could inflict on neighbors downstream nor were such effects sufficiently considered by municipal planners. These conditions were aggravated by taxpayers' natural wish to broaden the tax base by more intensive zoning and exploitation of remaining open land. The price is now being paid in flooding, erosion, siltation, and pollution of ground water and air, causing or threatening serious damage to property, to public amenities, and to local ecosystems, including the fish and wildlife habitats discussed in parts M and N above. (See Section V for legislation concerning storm water runoff, waterfront zoning, flood damage prevention.)

In addition, many adverse effects take place during the construction process. Land-clearing and building projects, lasting for months and sometimes for years, are important causes of erosion, siltation, and pollution, especially downstream from the construction site, due to inadequate management practices to control these side-effects. (See Section V for legislation concerning surface water, erosion and sediment control.)

It cannot be too strongly emphasized that these conditions have arisen not only within the political jurisdiction of the Village and the Unincorporated Area, but also in nearby upstream communities -- parts of New Rochelle, Scarsdale, White Plains, and the Village of Mamaroneck -- whose waters flow through the Pine Brook, Sheldrake, and East Creek watersheds into the Unincorporated Area and the Village of Larchmont. Overbuilding of housing, streets, shopping malls, parking lots, etc., in recent decades has been a general practice through most of the geologically shallow watershed whose

downstream coastal section our two municipalities occupy. Our community consequently receives the brunt of flooding, siltation and pollution from a wide area of overbuilding upstream.

Retention of open space is essential to flood control: open space in New Rochelle and Scarsdale retards flooding in the Village and the Unincorporated Area, while open space in the Unincorporated Area helps to retard flooding of the lower Mamaroneck River in the Village of Mamaroneck; and conversely, open space on the Village of Mamaroneck side of the Hampshire Country Club retards flooding and erosion in the Hommocks Marsh. Inter-municipal cooperation in the preservation of existing open space is thus of high importance to all these communities. Pressure for residential or commercial development in the Westchester Sound shore area's remaining open space cannot be wisely balanced against other important long-term considerations unless the municipalities concerned, in cooperation with the County government, develop common approaches to zoning, planning, public ownership, and other means of control.

A further intergovernmental dimension of our problem arises from the fact that the sanitary sewers in our community feed into the County sewage treatment plants in New Rochelle and the Village of Mamaroneck.

To succeed, therefore, our LWRP includes not only adequate policies and programs within our own jurisdiction but also effective measures to obtain the cooperation of upstream and neighboring communities, both directly and through the channels of State and County government, in order to cope with problems of storm water runoff, sewage, and pollution.

In the sections that follow, discussion of these adverse conditions centers first on certain key localities in our community; then on general problems affecting the community as a whole.

Important, but insufficient, protection against these problems is found in existing legislative and physical steps taken by the two municipalities. Existing local laws and regulations including those enacted to implement the LWRP's 1986 recommendations are listed in Section V. Important in this context are the Flood Damage Prevention regulations, the Town's Freshwater Wetlands law, certain provisions of the zoning laws, SEQR laws, site plan review laws, subdivision regulations, a Town law governing conservation areas and a Village law dedicating the Larchmont Reservoir property.

Physical mitigation has been obtained from a combination of natural and built features, the most important of which are the remaining open space in the Pine Brook and Sheldrake flood plains, lying partly within the Town and partly in White Plains, Scarsdale and New Rochelle; the Larchmont Reservoir with its computerized release valve, functioning as a retention basin; and the tidal wetlands at the foot of the Pine

Brook-Premium and East Creek-Gut Creek-Hommocks watersheds. Some role in the latter watershed is also played by a portion of the Hampshire Country Club property, located partly in the Town and partly in the Village of Mamaroneck. So far as lies within the power of the two municipalities, the flood protection value of all these features will be preserved. To this end they will also seek the necessary cooperation of the upstream municipalities just mentioned.

However, these existing laws and physical features, taken together, do not suffice to achieve effective flood and erosion control in this area and will not be relied upon to do so. Rather, they will be used as elements in an integrated flood and erosion control strategy which should be developed for the three drainage basins pursuant to Policy 14. This strategy should include physical, legal, and administrative actions such as those described below, as well as the land use controls set forth in Section IV. It should be based on technical studies of the hydrology and physical characteristics of the three watersheds, and on feasibility studies, where necessary, of various physical actions under consideration to determine their combined effects in association with land use patterns and controls. In all aspects of this strategy, the two municipalities should seek the cooperation of neighboring municipalities in the three watersheds and Westchester County.

## 2. Problem Localities: The Pine Brook-Premium Watershed

Of the three watersheds that drain our coastal zone, the most westerly one is drained by Pine Brook, which originates in north central New Rochelle, and flows south along Pine Brook Boulevard to Beechmont Lake. Thence it flows underground, passing beneath City Park, enters the Unincorporated Area at Fifth Avenue, passes under the New England Thruway and the residential Pine Brook section in Larchmont and then surfaces south of the Post Road. From there it flows southward a quarter of a mile to join the Premium River, which also originates in New Rochelle. An extensive salt marsh surrounds the confluence of the two streams. The river then winds its way to the Premium Mill Pond and thence to Long Island Sound.

The Pine Brook-Premium watershed drains a considerable part of New Rochelle and the western portion of our community, including several low-lying residential sections which are severely impacted by flooding. Other problems in these areas are sewage backup, siltation and oil pollution. Four areas in particular require comment:

- a. Larchmont Hills. This subdivision in the Unincorporated Area, bordering North Chatsworth Avenue north of the Thruway, I-95, overlies a covered eastern tributary of Pine Brook. Despite reconstruction of a faulty sewer in 1978 (a sag had developed due to settlement of marshy soil), sanitary sewers continue to back up during heavy rains such as those of the spring of 1983 and the winter of 1992, and basement flooding contaminated by raw sewage is common. The main causes have

been described as surcharging caused by long-standing illegal connections of residential storm drains and basement sump pumps into the sanitary sewers, and substantial leakage of storm water into sanitary sewers through broken pipes or vent holes. As a result, the New Rochelle treatment plant cannot handle the storm-swollen sewage flow from Larchmont. Its managers often shut down the Fifth Avenue pumping station during heavy rains, leaving sewage to back up in the streets and basements of Larchmont Hills.

- b. The Pine Brook Area. This residential neighborhood in Larchmont, overlying the covered portion of Pine Brook just north of the Post Road, has been subject to ever-increasing flooding and sewage backup in recent years. The problem has both upstream and downstream causes. Upstream, it stems from development since World War II - some of it local but most of it in New Rochelle - which consumed much of the open land in the Pine Brook flood plain. Downstream, the causes are several: siltation in the Premium River and erosion of the stream bank, further clogging a channel already narrowed by filling operations, and sluggish tidal cleansing of the river due to the dam at the mouth of the Mill Pond -- all resulting in a choking of the river by sediment at the confluence of its two branches causing upstream waters to back up. The effect can be seen in Shadow Lane and Pine Brook Drive which become a lake during heavy rains, flooding nearby basements and yards; as well as in rear yards along Mayhew Avenue, where sewage backup is frequent in heavy storms.
- c. The Upper Premium River, extending from Dillon Road to Pryer Manor Road and nearby streets along the Town's boundary with New Rochelle, is the fourth problem location in the Premium watershed. Flooding of Pryer Manor Road during storm high tides has been a common experience for decades, but the water storage capacity of the surrounding marsh helped to keep flood damage within narrow limits. In 1970, however, despite residents' protests, a part of this marsh lying within the Town of Mamaroneck was approved as a building site, destroying parts of the marsh on both sides of Dillon Road. Now, during storm high tides and heavy rains, the 36 homes in this area are completely cut off by floods from fire and ambulance service over either Dillon Road or Pryer Manor Road. Recent storms in 1992 caused serious damage to homes and garaged automobiles.
- d. The Lower Premium River, Marsh, and Mill Pond. This area is the central focus, the most beautiful section, and the most ecologically important part of the Premium Basin. It suffers from both siltation and chemical pollution. Some of the silt washes down from the Boston Post Road and from dead end streets abutting the east bank. The other main environmental insult in this area is pollution of the river by oil, gasoline and other automotive chemical pollutants coming mainly from the Boston Post Road (U.S. 1) traffic. In addition, carelessly discarded trash also finds its way to the water.

Incidents of sewage backup have also been reported in this section, especially near dead-end streets abutting the Premium River. Some relief was reported in 1984 after supplementary pumps were installed.

Numerous pollution incidents have occurred in the Premium Basin over the years. Most have been traced either by the Department of Environmental Conservation (DEC) or U.S. Coast Guard specialists or by a water quality consultant hired by the Town. The main sources were leaking oil tanks in apartment houses, leaking gasoline or waste oil tanks in service stations and taxi companies, and surreptitious disposal of waste oil in storm drains. These problems exist in all three municipalities: New Rochelle, Mamaroneck, and Larchmont. Although owners usually comply with orders to repair or replace faulty tanks after the damage is done, routine inspection to assure preventive maintenance has been grossly inadequate, and instances of illegal disposal have been hard to trace.

Due in greatest measure to the tenacity of Larchmont officials, years of leaking heating oil from the MacLeay Housing in New Rochelle was finally cleaned up by the DEC. The latter placed an oil containment boom on the Premium River near the Boston Post Road for about a year. This also proved very effective in containing oil illegally dumped into storm drains as well as trapping debris from eventually ending up in Long Island Sound. When the DEC finally removed the boom, the responsibility for maintaining a boom was assumed by the Village in 1989, which continues to assume this charge. Because of its possible toxic nature, the absorbent boom is placed, removed and replaced as needed by an outside firm by arrangement with the Village Engineer.

Finally, the natural barrier of Premium Point Beach at the narrow eastward neck of Premium Point provides important protection for the Mill Pond and adjacent residential areas against erosion and other storm damage during coastal storms. The beach itself, however, is vulnerable to erosion. It should not be built on, and will require careful monitoring and maintenance to preserve it.

- e. Other issues: The above discussion is by no means a complete account of flood-related problems in and near the Premium estuary. Sewage backup, for example, occurs in a number of nearby places in the Village. Basements of homes near the dead ends of Chestnut, Willow, and Oak Avenues suffer during storms from backed-up sewage whenever the County sewage treatment plant in New Rochelle closes the intake valve in the sanitary sewer that serves that area. Near the west end of Park Avenue, it is reported that backed-up sewers sometimes flow with such force that they dislodge a manhole cover in the street. Raw sewage has also appeared in plumbing facilities in the Manor Park bathing pavilion, requiring installation of a shutoff valve for use during rainy periods.

Aside from sewage backup, leakage from defective sewer pipes as well as leachate from existing septic fields may also be a problem in this area. Although we have no current information on the coliform count in the Premium Marsh, it is important to note that the sewer pipe draining the Premium area runs under the Premium River and the Premium Marsh. Its proper maintenance is highly important to the environment of this area.

### 3. The Sheldrake Watershed

Covering portions of White Plains, Scarsdale, New Rochelle, and the Town and Village of Mamaroneck, the Sheldrake watershed is largely developed but still has important areas of open space both in the Town and upstream. The Town's portion of the Sheldrake watershed has remained as a major area of concern regarding land use and consistency with coastal policy all through the first five years of the LWRP. It contains the largest surviving areas of open space, and is under continued pressure for further real estate development. Flooding and the attendant problems of erosion, siltation and sedimentation are of major concern. The Sheldrake watershed is drained by numerous small streams which join to form the West and East Branches of the Sheldrake River. The West Branch rises in a residential area at the westernmost edge of White Plains near Cushman Road. It then flows south across Scarsdale into northern New Rochelle, entering the Town of Mamaroneck at the Larchmont Reservoir. The two main tributaries of the shorter East Branch rise in Scarsdale and flow southward into the Town between the Winged Foot and Bonnie Briar golf courses, then join south of Fenimore Road in the Sheldrake Conservation Area. The East Branch then continues southward to join the West Branch east of Weaver Street at Valley Stream Road. The river then flows southeast between East and West Brookside Drive, through a series of waterfalls to Gardens Lake (widely known as the "Duck Pond"). Thence it turns northeast, flows under the New England Thruway, then enters the Village of Mamaroneck to join the Mamaroneck River which empties into Mamaroneck Harbor. The Sheldrake's problems thus affect our neighbors in the Village of Mamaroneck<sup>6</sup> as well as residents of the Unincorporated Area.

Two locations in the Sheldrake watershed present acute problems for our residents:

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<sup>6</sup> A proposed physical project in the original LWRP called for the Town to modify sections of the West Branch immediately upstream from its confluence with the East Branch at Valley Stream Road, a focus of particularly acute flooding. In 1982, the U.S. Army Corps of Engineers proposed a project to relieve flooding by constructing a concrete flume from the Conservation area to a point below Briarcliff Road. The Town rejected that proposal because of the impacts this flume would have on the neighborhood, and requested an alternative. After studying numerous alternatives to straighten and widen the channel, the Corps finally returned in 1991 to state that none of the proposals, including the flume, would meet new cost benefit guidelines.

- a. The Weaver Street-Bonnie Briar Area. Along Bonnie Way, Bonnie Briar Lane, nearby parts of Weaver Street, Sheldrake Place, Sheldrake Avenue, Brookside Place, and parts of Forest and Rockland Avenues, substantial flooding in homes has been common during periods of heavy rain in recent years. During the last five years, this has been reduced by the computerized valve at the Reservoir.
- b. The Brookside Drive Area. The same type of problems have been particularly acute for residents of this hillside area. In addition, at the foot of Brookside Drive, Gardens Lake was completely filled with silt from upstream erosion, a condition that further aggravates flooding and seriously impairs the beauty of this local landmark. In 1989-90, the Town had Gardens Lake dredged, and experienced great difficulty and excessive costs in disposing of the dredge spoil because of Gardens Lake's proximity to the New England Turnpike (I-95). At this time, Gardens Lake is again noticeably filling with siltation from upstream development and is an example of the price that must be paid--in taxes as well as inconvenience to residents--for unsolved problems and the need for intermunicipal watershed management and flood control.

In both cases, flooding results from the reduction of the flood plain upstream in recent times and from the emptying of storm drains from higher ground nearby. Some relief from these problems has been gained since the Larchmont Reservoir, after it ceased to be used for water supply in 1975, became available for temporary storage of runoff during heavy rains. The upper reach of the West Branch of the Sheldrake arises in White Plains, passes through a corner of Scarsdale and New Rochelle and drains into Sheldrake Lake (upper reservoir). From there it passes through a flood control valve or over the spillway during heavy, prolonged rains, and continues through Goodliffe Pond and over its spillway, and then courses through a section of the Town previously described as Gardens Lake. It later joins the Mamaroneck River in the Village of Mamaroneck. Sheldrake Lake and Goodliffe Pond, like Gardens Lake, are shoaling due to siltation and will soon require dredging. Sheldrake Lake is especially important for flood control.

This watershed consists of approximately 3,000 acres north of the reservoir and an additional 3,000 acres south of the reservoir. Both sections of the watershed are steep-sided and rapidly draining suburban residential areas. This topography adds to possible flash floods which have been the experience of the residents of the area.

In 1975, when the upper reservoir ceased to be used as a water supply, tentative use of the blowout valve at the dam as a flood control device was begun under the guidance of the Town Engineer with the cooperation of the Village of Larchmont Mayor and Board of Trustees since the Village owns the property. This appeared to be successful, but the approximately 75 year old valve was a source of worry since its failure seemed quite probable. In 1981, a new valve was installed in the blowout line and the use of the upper reservoir as a flood control device was tested. It

succeeded but it required manual operation, and storms that came in with little or no warning were still hard to manage if staff was not assigned over weekends or holidays. During 1989, a motor was added to the valve to make it easier to operate, and on April 15, 1990, a computer based controller was added to the system which senses water level in the upper reservoir and adjusts the valve for nearly optimum detention. The system continues to evolve with the addition of an external supervisory computer which, in heavy storm events, will take into account rainfall and stream levels, and augment the function of the smaller internal computer.

However, the flood problem is far from solved since it arises from both branches of the Sheldrake River. A hydrological study of the West Branch of the Sheldrake watershed, completed in 1985 by the Westchester County Soil and Water Conservation District at the request of the Friends of the Reservoir and the affected municipalities, is expected to be a major resource in planning a more adequate solution. The action of the Village of Larchmont in October 1984, dedicating the property in perpetuity to specified public uses including flood control, has made it possible to proceed with such plans with increased confidence. A full study and analysis of drainage in the entire Sheldrake basin, however, remains to be undertaken.<sup>7</sup>

#### 4. The East Creek - Gut Creek Watershed

- a. East Creek drains a smaller, almost completely built-up watershed between the Premium and Sheldrake systems. Once an open waterway, it is now enclosed along nearly all its length. It rises in the lower Unincorporated Area between the Pine Brook and Sheldrake systems, flows under the Thruway, the railroad, Vanderburgh Park, Hall Avenue and the Post Road, reappears for about 100 yards as an open stream behind an automobile dealer's car park, then enters a large pipe which runs beneath the Hommocks School playing field. There it is joined by a storm water pipe, which drains a portion of the Boston Post Road and Gut Creek, a smaller stream which also flows largely underground and drains areas to the north and east including the Hampshire Country Club golf course lying within the Village of Mamaroneck, then flows under the lower end of the Hommocks field. The two streams empty through outfalls into the Hommocks Marsh and Little Harbor Sound.

A monitoring report to the Conservation Advisory Commission in the summer of 1984 concerning East Creek and the Hommocks Marsh showed these waters to be

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<sup>7</sup> The LWRP supports the County plan for a retention basin on the East Branch of the Sheldrake River just above Rockland Avenue. However, land development since the County's 1945 study points out the need to expand the Hydrologic Study data prepared in 1990 by Malcolm Pirnie, Inc. for the Town's Draft Generic Environmental Impact Statement for the Conservation Recreation (CR) Zone. While much of the groundwork was probably done in the Study, more needs to be learned of what can be done upstream at each confluence point which would involve the County and other local governments.

severely polluted by fecal and coliform contaminants and waste oil. A follow-up study conducted in the summer of 1988 revealed continued high coliform and fecal counts. This led to an investigation by the Westchester County Health Department and the Village of Larchmont, which found broken sewer lines at Nassau Road. Larchmont repaired 400 linear feet of 18" diameter pipe.

Since 1984, oil pollution and litter have been mitigated by the addition of controls placed by Mamaroneck and Larchmont during the renovation of two adjoining automobile dealerships, including the use of silt traps, which have the capacity of removing oil and grease, to deal with surface water runoff and an extensive evergreen berm to buffer the open section of East Creek. (A green belt is one of the best known methods for filtering pollutants and keeping litter from entering waterways.) Although conditions have improved through the efforts of local advisory commissions and the L.I.F.E. Center volunteers, especially on Beautification Day, continued vigilance of the area is important to ensure that mitigation measures are maintained.

The CZMC hired a consultant to inspect East Creek and recommend protective measures. The consultant's recommendations were forwarded to the Town Board. It proposed installation and bimonthly maintenance of a temporary trash screen, followed by permanent installation of a fixed sediment curtain and floating oil boom to be periodically maintained by removing accumulated trash and renewing absorbent boom material. Since Larchmont maintains an absorbent boom for the Premium area, the Mamaroneck Board agreed in 1992 to support this project.

In addition to the adverse impact on the Hommocks Marsh (see below), the condition of the open stretch of East Creek was a small but typical case of urban pollution and casual litter turning a pleasant and ecologically valuable area into a small wasteland.

Although not close to any residential area, the open section of the creek is on the edge of Flint Park and could be a pleasant place for leisurely walking, jogging, birding and nature study. Further progress was made on the Larchmont side of the creek in 1990-91 under the leadership of the Larchmont Parks and Trees Committee and with the support of nearby residents and the CZMC. The Village Department of Public Works removed dead trees, saplings and rubble and then planted indigenous trees and shrubs to help stabilize the creek bank and help screen the dealership site from nearby residential streets.

- b. Hommocks Marsh. East Creek and Gut Creek take on added importance from the presence of a salt marsh in a sheltered tidal inlet. From 1972 to 1975, Hommocks Marsh and other salt marshes in the Larchmont-Mamaroneck area were the subject of intensive study by Drs. James Utter and Paul Steineck. Their findings showed that the Hommocks Marsh had undergone major changes as a result of siltation and sanitary landfill in the construction of the Hommocks playing field, plus chemical

and sewage pollution (the fecal coliform count exceeded State guidelines for bathing beaches), and that the production of algae and other organisms had dropped as the succession from low to high marsh proceeded. Still, however, they found the marsh functioning at a rate comparable to others more remote from suburbia, and making a net contribution to the ecosystem of Long Island Sound.

As was explained in Part N, the Hommocks Marsh and adjacent areas merit the recognition they received as a Critical Environmental Area. This area is also, and if properly managed can increasingly be, a pleasant setting for passive recreation. Moreover, the marsh and its ecosystem afford a superb educational resource convenient to the Hommocks School. Unfortunately, because Little Harbor Sound drains a residential area with unsolved sewage problems and is crossed by two major highways, the marsh receives steady doses of biological and chemical pollution. The health of the marsh depends on effective steps to control all types of pollution in this watershed.

- c. Little Harbor Sound. This narrow tidal inlet from Larchmont Harbor extends eastward to the Hommocks Marsh. Its western end is the site of 32 attractive waterfront homes, most of them with dock facilities, along Quarry Road, Bishop Place, Shore Drive, Old Colony Road, Lindsley Drive, and Spanish Cove Road. In 1978, homeowners in this neighborhood financed a dredging project to remove silt and debris which had made Little Harbor Sound un-navigable. By arrangement with the Town, the dredge spoil was deposited as landfill to rebuild the Hommocks School athletic field.

This locality suffers from several interacting problems: continued siltation, pollution by raw sewage and other wastes, and tidal flooding.

- (1). The siltation problem arises partly from normal tidal scouring of the banks of Hommocks Marsh, but mainly from silt and debris carried downstream to the East Creek and Gut Creek outfalls and by several large concrete storm drain outlets at the foot of Flint Park and the Hommocks playing field. There are no catch basins to trap this material, which consequently builds up to block the inlet. Since the 1979 dredging, re-siltation nearest the storm drain outlets has reached a depth of three to four feet, already largely nullifying the effect of the dredging.

- (2). The pollution problem has three main sources. The first is the runoff from commercial establishments and traffic along the Post Road which reaches this area mainly through the outfall pipes at the foot of Hommocks Field. Progress has been made in achieving abatement of nonpoint pollution on the Post Road both with respect to renovated commercial establishments and the replacement of an aging facility with multiple-family units which comply in all respects. The second is runoff from the Larchmont Village leaf composting area at the south end of Flint

Park adjoining the marsh. The third problem, raw sewage, comes primarily from a County outfall pipe behind Cedar Island. It is an overflow relief pipe connected to a County-operated pumping station on Flint Avenue. During heavy rains, the New Rochelle sewage treatment plant sheds part of its storm water overload by shutting off the pumps at Flint Avenue, allowing raw sewage to flow into the harbor. To make matters worse, the outfall pipe terminates near the shore in an area regularly used for swimming, boating and fishing. Malfunctions in the pumping station are frequent. Another source of sewage pollution is a sewer line which crosses Little Harbor Sound between the Hommocks Marsh and the Hommocks peninsula. It is uncertain whether this line is still active, and if so, whether it needs repair.

This locality's flooding problem, like that along Pryer Manor and Dillon Roads in the Premium area, occurs mainly when extreme high tides coincide with high winds and rain. Water then comes over the seawalls, enters lawns and basements, and in some places isolates homes until it subsides. A short-term solution to these interacting problems would include some purely engineering steps such as installation and maintenance of catch basins upstream from the storm water outlets nearby, repair and relocation of sewage outfall pipes, and periodic maintenance and dredging of Little Harbor Sound. A full solution, however, should include more far-reaching steps, suggested elsewhere in this program, to control flooding, erosion, siltation, and sewage and other forms of pollution.

## 5. The Harbor Area

The prized serenity of Larchmont Harbor (the eastern portion of which lies in the Village of Mamaroneck), and its neighboring bays and inlets, both as a residential setting and as a recreational resource, especially for yachting, swimming, and fishing has been emphasized above. Threats to swimming and fishing from water pollution are dealt with elsewhere in this inventory. The harbor has no commercial traffic and very little transient traffic; most boats moored there are owned by local residents or yacht club members. However, the harbor's serenity can be marred by speeding watercraft or the unwelcome sight of debris floating in the water or washed up on shore.

There are two problems that affect yachting. These are, first, siltation and other problems affecting navigation; second, a concern that the harbor could be better managed to control vandalism, recklessness, and discharge of waste and litter from pleasure boats, although the yacht clubs are educating their members to prevent such discharges.

- a. Navigation and Dredging. In 1983, the Village of Larchmont participated in a Westchester County study of dredging in Sound shore harbors. In addition, in June 1983 two members of the Coastal Zone Management Committee made an

on-the-spot survey, at extreme low tide, of conditions in Larchmont Harbor, Little Harbor Sound, and Horseshoe Harbor. Salient conclusions are:

- Large areas of Larchmont Harbor show definite silting, which has built small deltas near Little Harbor Sound and other outflow areas. Maintenance dredging in some areas will be necessary to maintain the harbor's present standard of usage. Safe navigation would also be helped if a number of submerged rocks near the surface along the western shore were clearly marked for better visibility.
  - Little Harbor Sound, as noted above, already shows heavy silting which has largely nullified the 1979 dredging. Construction and regular servicing of catch basins in the storm drains would greatly reduce, though not necessarily eliminate, the need for periodic dredging to keep the inlet navigable.
  - In Horseshoe Harbor, which includes the sandy Manor Beach, the tidal drift from the beach to the yacht landing area requires dredging about every 10 years to allow deeper-draft boats to reach the dock. A recent 30-foot extension of the dock will not obviate this need.
- b. Harbor Security. For most purposes, State law assigns responsibility for law enforcement in Long Island Sound to the State police. The Westchester County police also have jurisdiction as far as the County boundary, which runs parallel to the shore in mid-Sound. The U.S. Coast Guard is responsible for vessels in distress and for apprehending boats suspected of carrying illegal cargo. The Department of State advised that the Village has jurisdiction of the water off its shore within 1,500 feet, and that the Town may not regulate vessels within 1,500 feet of the Village shore.

These provisions of law do not quite fit the realities in Larchmont Harbor. The County police are not equipped to patrol the waters of the Sound. The nearest State police barracks is far inland in Hawthorne, a road distance of about 20 miles. There are no State police launches on duty along the Westchester Sound shore. State police response to calls for help in the harbor, not surprisingly in these circumstances, has been described as slow. Emergency calls to the Coast Guard station at Eaton's Neck (19 miles away at Northport, Long Island) also often bring a slow response. Thus the main burden of maintaining order and security, and dealing with all but the most serious violations in Larchmont Harbor, rests either on the Larchmont Village police or on the yacht clubs.

The Larchmont police, whatever their legal jurisdiction, are not equipped for such duty. They respond to calls for help in suspected crimes in the harbor, but have no launch and depend for water transportation either on private boats or on the Village of Mamaroneck police launch and Bay Constables. As a practical matter, therefore,

policing of all lesser violations and the maintenance of security and order often rests with the two yacht clubs.

The Larchmont Yacht Club has developed a plan to deal with emergencies in its area of the harbor, and the Horseshoe Harbor Yacht Club intends to do the same for its area. The two clubs will keep each other informed on harbor security matters as a part of this process. The Mamaroneck Village Bay Constable patrols the eastern portion of Larchmont Harbor, which lies within Mamaroneck Village.

An overall harbor management plan that concerns itself with current and future problems, such as maintaining the quality of the water, the quality of recreational use, maintenance of the current water uses and the quality of the scenic view, should be carefully pursued so that all users of the harbor can constructively reach agreement on an effective plan.

The CZMC advocated initiating a "Waterfront Protection Program including a Bay Constable Program" in order to provide police coverage in Larchmont waters in case of emergency or accident, for routine patrol services, to enforce existing laws and thereby provide for the safety and well-being of citizens and their property, and to assist in the clean-up of our waterways through education and enforcement of existing federal and state legislation. Village of Larchmont Police Chief Keresey supported the concept of a Bay Constable Program because it would offer the best possible police response time to the boating community. After much discussion, various proposals and numerous public meetings, the Larchmont Board of Trustees recommended that a formal agreement between the Larchmont Village and Mamaroneck Village Police Departments should be established to provide payment per emergency for calls placed through the Larchmont Police Department since the Mamaroneck Department already has a Bay Constable program. The CZMC concerns regarding the clean-up of our waterways would have to be satisfied through public education mainly via the yacht clubs, and reliance on the Coast Guard and DEC to enforce existing federal and state laws.

## 6. Area-wide Sewage Problems

As has been noted in the discussion of specific problem areas, the frequent appearance of raw sewage in basements, streets and waterways, with adverse effects on both public health and aesthetic values, is closely linked to flooding during heavy storms. Four different ways in which this linkage occurs have been touched on at various points in earlier pages. They can be summed up as follows:

- a. It has been a frequent practice for decades in this and other communities for private builders and even municipalities in flood-prone areas to save construction costs by connecting sump pumps, roof drains, street catch basins, etc., not, as the law

requires, with municipal storm drains but with the more accessible sanitary sewer lines. A newly completed Westchester County study of sewers in this and other communities has located many such illegal connections and estimated the cost of correcting them.

At the request of Mamaroneck and Larchmont, Westchester County performed smoke testing to address the problem of infiltration and inflow caused by the illegal hookups mentioned above. Homeowners with illegal hookups were notified and their cooperation was requested; however, not all of these have been eliminated. In Larchmont, the County reported 207 illegal hookups; 157 of these have been corrected (76%), and the Village continues to campaign for 100% compliance. As of 1991, no stringent enforcement measures were taken in Mamaroneck. Causing further complication is the fact that there are areas in the Town where no storm drains exist.

- b. Many sanitary sewer lines receive storm water through unrepaired leaks and breaks, or (when laid close to or under watercourses, as some sewer trunk lines are) through sewer vent holes. Major rehabilitation projects in both the Mamaroneck and Larchmont correcting municipal infiltration and stormwater inflow problems were undertaken in 1987, 1988 and mid 1989, and have been completed. Sewer repairs in 1987 and 1988 cost the Town \$2.2 million (\$1.5 million was paid by the state and federal governments). Larchmont spent \$415,000 on this project with \$88,906 offset by State and federal monies. Extensive replacement by Westchester County of its sewer lines from Weaver Street to Gardens Lake (1988-89) reduced the sewage backup problem. Also replaced were sewer mains along Monroe and Ocean Avenues. Mamaroneck installed a new pumping station as well.
- c. Because the New Rochelle sewage treatment plant is operating above its design capacity, it cannot accommodate the storm-swollen volume entering the sewage trunk lines, and must resort to throttling down pumping stations and intake valves from sewers in Larchmont and the Unincorporated Area, leaving the sewage-contaminated storm waters to back up into basements, streets, open waterways or bypassing directly to Long Island Sound. These polluted overflow problems became so severe that, in 1986, the State Department of Environmental Conservation placed the New Rochelle sewage treatment plant, which services the Town, Larchmont, New Rochelle and Pelham Manor, under a moratorium, directing the Westchester County Health Department to no longer approve any sewer line extensions tributary to the New Rochelle plant. This moratorium is still in effect.
- d. The growing number of sanitary sewer lines from upstream communities, traversing our area on their way to sewage treatment along the Sound, further aggravate the problem. Despite installation of pumps, piggyback lines and alternate routes, some

of these remedial sewer lines are still unable to handle the peak flow during rainy periods, and back up into our streets when they become surcharged.

Not all our sewage problems, however, are related to stormwater. Three other problems are:

- e. Inadequate sewage treatment in the County's Mamaroneck treatment plant. This plant was recently updated (1993) to secondary treatment. However, further updating may be desirable to reduce the amount of nitrogen flowing into the Sound. Aggressive action is still necessary to reduce stormwater infiltration and inflow into the sewer system throughout the Mamaroneck district to prevent raw sewage from entering the Sound.
- f. Suspected leakage from on-site (septic) residential sanitary systems. Some homes in this community are still served by these systems even though the entire coastal area is within public sanitary sewer districts. Many such systems have been found to be unreliable, overloaded and pollution-prone. Septic systems are the purview of Westchester County. It is highly unlikely that a local municipality can impose its own restrictions on their use.
- g. Finally, it should be recalled that land-based human sewage is not the only source of biological pollution. Pleasure boats off-shore frequently discharge their sewage in nearby waters -- a practice which seems to result partly from ignorance of the law and partly from lack of a clearly located enforcement responsibility (see part U 5 b. above). Plans are in the works for installation of pumpout stations.

In addition, local dog owners, in spite of Village and Town sanitary ordinances and the threat of fines (yet to be applied), continue to leave canine excrement on streets, sidewalks, parks and conservation areas throughout the community. Enforcement of existing laws against this practice is long overdue.

#### V. Long Island Sound Study

The National Estuary Program of the Clean Water Act was created in 1984 in order to study and protect coastal environments. The Long Island Sound Study (LISS) was begun in 1985 under the administration of the Environmental Protection Agency with an annual million dollar budget to develop a workable Comprehensive Conservation and Management Plan (CCMP) for the restoration and management of the Sound. The five problems that the LISS concentrated on were hypoxia, toxic and pathogen contamination, floatable debris and the effects of pollution on the marine life of the Sound.

By 1991 much of the research and field work was completed, and it was clear that hypoxia, or low dissolved oxygen levels which occur during the summer months, is the most pressing

water quality issue. As previously noted, the lowest levels of dissolved oxygen occur right off our shoreline in the western basin of Long Island Sound. Furthermore, researchers determined that nutrient pollution is the probable cause of hypoxia. Man-made sources of nutrients which exceed natural amounts comes from human waste, from sewage treatment plants and septic systems, increased stormwater runoff (and combined sewer overflows) caused by land development in the watershed, over-fertilization of lawns and agricultural fields and acid rainfall. Well over half of the problem comes from point (end-of-pipe) sources, predominately sewage treatment plants. The remaining part of the problem can be traced to nonpoint sources.

A computer model of the Sound, also part of the LISS, is nearing completion. Its purpose is to recommend, with as much accuracy as possible, those particular parts of the Sound that should take priority for sewage treatment plant upgrades.

Remedial actions were begun by the fall of 1991 with the setting of nitrogen base line loads at sewage treatment plants by the New York State Department of Environmental Conservation, the Connecticut Department of Environmental Protection and the federal Environmental Protection Agency to keep nitrogen discharges at the 1990 level. The CCMP was released in final form in 1994.

W. Area-Wide Causes and Cures of Interacting Flood, Siltation and Sewage Problems.

The threats to different parts of our three main watersheds from flooding, siltation and sewage overflow can be reduced to some extent by specific steps, many of them suggested in earlier sections, tailored to each local problem. In other respects, however, these problems are so wide-based geographically, and so interrelated functionally, that they cannot be solved independently or on a narrowly local scale. In large measure, these problems have arisen over many years from the natural tendency, here and in other communities, to widen the tax base through rapid development while economizing on tax-supported infrastructure. The risks of this course remain and require vigilance to maintain and preserve the residential attractiveness and the ecological integrity of the Larchmont-Mamaroneck coastal zone. Effective action on these interrelated problems, both within our two municipalities and in cooperation with neighboring municipalities and higher levels of government, is a major theme in later sections of this program.

X. Other Area-Wide Pollution Problems

1. Water pollution. Like communities in any metropolitan area, Larchmont and Mamaroneck receive water pollution, other than raw sewage discussed above, from many sources. Most of these are either far distant, such as industrial sources of acid rain, or are diffuse non-point sources nearby, especially from motor vehicle traffic on local streets as well as on the major highways that traverse this area. Pollutants from all these sources include some highly toxic compounds which only sophisticated monitoring can

identify and quantify. At present our local monitoring resources do not cover such substances, nor do we receive regular information about their presence in this area from higher levels of government. This is a potentially serious gap in the flow of information needed to assure water quality in our area.

Among the many nearby point and non-point sources of water pollution, there may be substantial room for improved water quality control (see Section V - Surface Water, Erosion and Sediment Control law). Sources of water contaminants vary widely in magnitude and in the likely costs and benefits of control; they include:

- Land disturbing activities.
- Scattered incidents, such as the furtive and illegal dumping of waste oil, paint, etc., into storm drains and streams.
- A number of antiquated septic discharge systems in our area which have a limited life expectancy and a high pollution potential.
- Drainage of chlorinated water and filter backwash from swimming pools.
- Underground fuel tanks and pipes subject to leaks.
- The use of sand, salt or other melting agents on icy roads.
- Use of fertilizers and pesticides on lawns, golf courses and trees on both municipal and private property.

It should be borne in mind that the weakness of tidal flushing action in our sheltered coastal waters aggravates the damage done by pollutants from any source to environmental, recreational and scenic values in this area. Since an irreducible minimum of pollution from highways and other nonpoint sources, and from small, hard-to-control point sources, is probably inevitable, it is all the more urgent to control all the sources that can be controlled cost-effectively, lest the total water pollution burden rise to unacceptable levels.

2. Air and noise pollution. Control of water pollution requires attention to air pollution as well, since the latter, aside from its direct damage to air-breathing organisms, also enters ground and water as precipitation. Air pollution in our area has many chronic causes, both near and distant, most of them largely beyond our control or influence. Some local point sources, it is true -- notably illegal smoke emissions from building incinerators -- can and should be reduced by more energetic use of County Health Department police

powers.<sup>8</sup> A local monitoring network to spot and report violations would contribute importantly to enforcement.

In our view, however, a more significant air pollution problem, and one which may prove receptive to our influence, comes from the heavy overhead traffic of aircraft approaching LaGuardia Airport. Since this same traffic is also a main source of noise pollution in our community, these two kinds of pollution can be considered together.

The final approach to commonly used Runway 22 at LaGuardia carries aircraft directly over Larchmont Harbor. Many incoming flights follow this flight pattern. While passing over Larchmont, the planes are at an average altitude of 2,000 to 3,000 feet, and engines are cut back as the aircraft descend. Each plane, during its passage over our area, releases carbon and unburned kerosene based pollutants, which fall on the harbor area and nearby homes. Their most visible manifestation is a blackish, oily film which gathers on docks, boat decks, lawn furniture, parked cars and other exposed surfaces. They place an additional burden on human health and organic life in the area.

These same aircraft also make an inordinate amount of noise as engines are throttled back or forward during adjustment to the final approach pattern. When the weather is bad and runway 22 is in use, aircraft pass over Larchmont about every 40 seconds; moreover, heavy clouds in bad weather reflect and amplify the sound. At such times, conversations have to be suspended while aircraft are overhead.

Residents have tried several times through our elected representatives to induce the FAA to re-route the airplanes over the Sound, which we understand is the normal approach route for LaGuardia Airport. Beyond making courteous replies, the FAA has brought us little or no relief. We intend to pursue this major problem of air and noise pollution in cooperation with nearby affected communities.

Another significant source of air and noise pollution in our community is the heavy vehicular traffic on the Boston Post Road and I-95, the New England Thruway, especially the latter. Noise from these sources can be acutely unpleasant for their nearest neighbors. Municipal efforts in past years have produced some action by the State to mitigate Thruway noise, and plans for construction of new noise barriers along the Thruway in this area were announced in 1986; however, as of early 1993, only a very small section of the Thruway which is in close proximity to Gardens Lake received noise barriers. The progress of this project continues to be followed locally with much interest. Meanwhile, the noise problem remains.

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<sup>8</sup> In 1992, Mamaroneck passed a law banning burning in apartment house incinerators by mid year 1994.

The roar of power boats speeding through the Sound's waters is jarring to those who seek to find renewal as they sit or walk in Larchmont Manor Park, or nearby areas, and look out at the open water. This noise pollution disturbs wildlife as well, and power boats can cause further degradation of wildlife habitats. While there may be little that can be done about this problem locally, the State should require that recreational boat engines meet the same noise emission standards that automobiles must meet when it requires the latter to be equipped with mufflers at all times.

Many smaller sources of noise within our community, mainly from power machinery such as jackhammers, chain saws, power mowers, snow and leaf blowers, etc., add up to a considerable din at times, creating a widespread demand for stronger regulation. In 1985 the Village of Larchmont responded by enacting a law regulating noise from commercial gardening machinery. In 1990, Larchmont revised the law to control hours of operation and to mandate that all internal combustion engine driven gardening equipment be fitted with mufflers. Regulation of lawn maintenance equipment by the Federal government minimizing emissions would help with this problem.

3. Litter and dog waste. No pollution problems are more pervasive, or seemingly more deeply rooted in suburban and urban mores, than litter and dog waste in public places. Sources of litter in our area are various: children and adults, municipal garbage trucks and commercial vehicles, fast-food stores, wind-scattered newspapers, etc. Ordinances decreeing fines for littering are widely ignored and only spottily enforced -- understandably, since there are seldom any witnesses to the act. Similarly, local laws requiring dog owners to clean up after their dogs are ignored in many cases and seldom enforced. Thus a minority of offenders creates a deteriorated aesthetic and public health environment which all must endure.

Anti-litter efforts in the community have been substantial and are led by the Village of Larchmont Beautification Committee, the L.I.F.E. Center, and the Conservation Advisory Commission. A conspicuous community effort is the annual Beautification Day clean-up in April, sponsored by the L.I.F.E. Center and the CZMC, and the International Coast Weeks cleanup with participation by students, scouting organizations, and neighborhood groups. Also, waste containers have been placed in parks and on sidewalks by civic organizations and by some businesses as a public service. (Also see use of containment booms on Premium and Hommocks waters.) A more wide-ranging approach to this complex of problems, with careful study of techniques that have succeeded elsewhere, should be an integral part of our coastal zone program.

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**SECTION III**  
**WATERFRONT REVITALIZATION PROGRAM POLICIES**

Back of Section III title page

### SECTION III: Contents

<u>Policy #</u>	<u>Page</u>
1	5
2	5
3	6
4	6
5	6
6	7
7	7
7A	9
8	11
9	12
10	13
10A	13
11	13
12	15
13	17
14	18
15	20
16	21
17	21
18	22
19	23
20	23
21	24
22	25
23	26
24	28
25	28
26	30
27	30
28	30
29	31
30	31
31	32
32	33
32A	33
33	33
33A	34
34	35
35	35
36	36

<u>Policy #</u>	<u>Page</u>
37	37
38	41
39	42
39A	42
40	43
41	43
42	44
43	44
44	44
44A	46

SECTION III: LOCAL POLICIES AND APPLICABLE STATE POLICIES

**DEVELOPMENT POLICIES**

**POLICY 1 THE STATE POLICY REGARDING THE RESTORATION, REVITALIZATION, AND REDEVELOPMENT OF DETERIORATED AND UNDERUTILIZED WATERFRONT AREAS FOR COMMERCIAL AND INDUSTRIAL, CULTURAL, RECREATIONAL AND OTHER COMPATIBLE USES IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 2 FACILITATE THE SITING OF WATER DEPENDENT USES AND FACILITIES ON OR ADJACENT TO COASTAL WATERS.**

Explanation of Policy

This policy applies to both water-dependent and water-enhanced uses, and is defined as follows:

A water-dependent use is one that must be located on or adjacent to coastal waters in order to function. Among such uses appropriate in this area are:

1. Recreational activities which depend on access to coastal waters (for example: swimming, fishing, boating, wildlife viewing, scenic and nature walks);
2. Aids to navigation;
3. Flood and erosion protection structures (for example: breakwaters, bulkheads);
4. Non-commercial facilities needed to store and service boats;
5. Scientific/educational activities which require access to coastal waters (for example: certain meteorological, ecological and oceanographic activities); and
6. Support facilities which are necessary for the successful functioning of permitted water-dependent uses.

A water-enhanced use is one that has no critical dependence on a waterfront location, but whose profitability or enjoyment is increased significantly by its proximity to, or visual access to, the waterfront (for example, a scenic waterfront park).

Existing residential development with associated recreational facilities along the local waterfront is cohesive and of high quality. Undeveloped land adjoining coastal waters is scarce and environmentally sensitive; however, critical lands now occupied by commercial establishments in Larchmont must be scrutinized.

Emphasis under this policy will be placed on preserving appropriate existing uses that are water-related. Only such new water-dependent or water-enhanced uses or facilities will be permitted that are compatible with appropriate existing uses and with other coastal policies herein, including those that relate to the protection of wildlife habitats and wetlands, the preservation of historical, scenic and recreational resources and the control of flooding, siltation and pollution.

Priority in the use of any property adjacent to coastal waters that may become available for development will be given to a water-dependent use over an otherwise equally qualified water-enhanced use, and to either of these in preference to a use that is in no way water-related.

**POLICY 3                    THE STATE COASTAL POLICY REGARDING THE DEVELOPMENT OF MAJOR PORTS IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 4                    THE STATE POLICY TO STRENGTHEN THE ECONOMIC BASE OF SMALLER HARBOR AREAS IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 5                    ENCOURAGE THE LOCATION OF DEVELOPMENT IN AREAS WHERE PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE, EXCEPT WHEN SUCH DEVELOPMENT HAS SPECIAL FUNCTIONAL REQUIREMENTS OR OTHER CHARACTERISTICS WHICH NECESSITATE ITS LOCATION IN OTHER COASTAL AREAS.**

Explanation of Policy

This policy is designed to assure that development in the coastal area is "encouraged to locate within, contiguous to, or in close proximity to, existing areas of concentrated development where infrastructure and public services are adequate, [and] where topography, geology, and other environmental conditions are suitable for and able to accommodate development." Since this coastal area is almost fully developed, many of the above conditions are present and some undesirable types of action such as urban sprawl or "leapfrog" development are not concerns here.

The topography and geology of the drainage basins traversing Mamaroneck and Larchmont set inherent limits on the intensity of development that is possible without overtaxing storm drainage facilities. As noted in Section II, these limits have already been exceeded, producing flooding, erosion, siltation, and other adverse impacts. Any future development in the area's remaining open space, both for the properties in question and for those downstream, must be designed and regulated to minimize these impacts, to assure adequate storm drainage and to provide pollution controls. Cooperation of upstream municipalities in controlling development

in their part of these watersheds must also be sought. Such steps, set forth under Policy 14 and in Section IV, will give effect to this policy.

**POLICY 6                   EXPEDITE PERMIT PROCEDURES IN ORDER TO FACILITATE THE SITING OF DEVELOPMENT ACTIVITIES AT SUITABLE LOCATIONS.**

Explanation of Policy

When administering existing regulations and prior to proposing new regulations, every effort should be made to determine the feasibility of coordinating administrative procedures and incorporating new regulations in existing legislation, if this can reduce the burden on a particular type of development without jeopardizing the integrity of the regulation's objectives.

**FISH AND WILDLIFE POLICIES**

**POLICY 7                   SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS, AS IDENTIFIED ON THE COASTAL AREA MAP, SHALL BE PROTECTED, PRESERVED, AND, WHERE PRACTICAL, RESTORED SO AS TO MAINTAIN THEIR VIABILITY AS HABITATS.**

Explanation of Policy

The Premium River - Pine Brook Wetlands Complex was designated a Significant Coastal Fish and Wildlife Habitat by the New York State Secretary of State on November 15, 1987. It was approved for inclusion in New York State's Coastal Management Program on November 1, 1990. (See Section II at M.)

The Premium River - Pine Brook Wetlands are tributary to the Long Island Sound in the Town of Mamaroneck, the Village of Larchmont and the City of New Rochelle (7.5' Quadrangle: Mount Vernon, N.Y.). The fish and wildlife habitat is an approximately 65 acre area including Pine Brook south of the Boston Post Road, the Premium River, the Premium Mill Pond, the northeast portion of Echo Bay, the Pryer Manor Marsh, a former wetland between Dillon Road and Emerson Avenue, the salt marsh areas adjacent to the river and creek and the small portions of adjacent meadow.

The Premium River - Pine Brook Wetlands area is a diverse and relatively undeveloped complex of tidal river, tidal flats, shallows, salt marsh and freshwater wetlands which is unusual in Westchester County. The wetland complex remains undeveloped and the range of natural communities in this area support a diversity of fish and wildlife species.

Although not comprehensive, examples of generic activities and impacts which could destroy or significantly impair the habitat are listed below to assist in applying the habitat impairment test to a proposed activity.

Any activity that would further degrade the water quality in the Premium River, Pine Brook, Premium Mill Pond and associated wetlands would impair the biological productivity of this area. Species of fish and wildlife may be affected by water pollution such as chemical contamination (including food chain effects), oil spills, excessive turbidity or sedimentation, waste disposal, and sewage discharges. Efforts should be made to improve water quality in the area by controlling runoff and waste discharge from adjacent and upstream commercial and residential areas and by improving tidal flushing. Habitat enhancement and restoration efforts are needed in several of the smaller, degraded wetlands in this area. Elimination of freshwater wetlands, salt marsh and intertidal areas through excavation or filling, would result in a direct loss of valuable habitat area. Natural plant communities bordering the wetlands should be maintained to provide cover for wildlife, erosion control, and buffer zones.

Opportunities for compatible public uses of the area (nature study, environmental education) should be maintained or enhanced to utilize this valuable fish and wildlife resource.

A **habitat impairment test** must be met for any activity that is subject to consistency review under federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific habitat impairment test that must be met is as follows:

In order to protect and preserve a Significant Habitat, land and water uses or development shall not be undertaken if such actions would destroy the habitat, or significantly impair the viability of the habitat.

Habitat destruction is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate or hydrology, or increases in runoff, erosion, sedimentation or pollutants.

Significant impairment is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include, but are not limited to, reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The tolerance range of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in

emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,
3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

**POLICY 7A                    THE FOLLOWING LOCALLY IMPORTANT HABITATS  
DESIGNATED AS CRITICAL ENVIRONMENTAL AREAS:  
(1) THE HOMMOCKS SALT MARSH COMPLEX INCLUDING  
THE EAST CREEK AREA;  
(2) THE LARCHMONT RESERVOIR-SHELDRAKE-  
LEATHERSTOCKING FRESHWATER WETLAND COMPLEX;  
(3) THE PREMIUM SALT MARSH COMPLEX  
SHALL BE PROTECTED, PRESERVED, AND, WHERE  
PRACTICABLE, RESTORED, SO AS TO MAINTAIN THEIR  
VIABILITY AS HABITATS.**

Note: The intertidal and littoral zone described in Section II at N 4., extending from Larchmont Harbor westward to and around Premium Point has characteristics which qualify it as an important habitat. It is not so listed here since it is protected by the Tidal Wetlands Law.

Brief description of habitats:

- The Hommocks Salt Marsh Complex (total 17 acres) at the head of Little Harbor Sound next to the outfalls from East and Gut Creeks, is comprised of the Hommocks Conservation area, East Creek and some small adjacent habitat areas;

- The Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetland Complex (total 520 acres) includes the Larchmont Reservoir-James G. Johnson Jr. Conservancy, three private open-space areas of which two are large golf courses, the Sheldrake-Leatherstocking Conservation Area, and connecting watercourses and ponds which function as habitat corridors.
- The Premium Salt Marsh Complex (total 32 acres) centers on the Premium River and includes the Premium Marsh and two smaller tidal wetlands nearby, a portion of the Significant Habitat (see Policy 7).

All three of these areas are nesting and feeding grounds for many bird species as well as fish, shellfish, crustaceans, reptiles and mammals. For a detailed description, see Section II at L through N and the inventory of species in Appendix B.

#### Explanation of Policy:

New local legislation identified in the 1986 LWRP led to the designation of these areas as Critical Environmental Areas (CEAs) under the State Environmental Quality Review law, and in addition, the County designated lands generally lying south of the Boston Post Road and the Larchmont Reservoir-James G. Johnson, Jr. Conservancy as County CEAs. These laws regulate land use and construction-related activities in or substantially contiguous to the CEA in order to limit adverse impacts, protect wetlands and habitats, and preserve open space.

#### Impact Assessment

Most of the land and water in the Premium and Hommocks complexes is public property, much of it in Town Conservation Areas. The same is true of a large part of the much larger Reservoir-Sheldrake-Leatherstocking complex. This fact, however, does not suffice to shield these areas from adverse impact. As is noted repeatedly in the Inventory and Analysis (Section II), the impact comes from outside the three areas themselves, mainly from upstream. Oil spills, raw sewage overflow, illegal waste disposal, pesticide and fertilizer residues from homes, parks, golf courses and commercial nurseries, silt from soil erosion, construction sites, and dredging operations -- all these have already inflicted their share of damage, impairing the quality of all three areas as feeding and breeding grounds for fish and wildlife. The effects have been seen, for example, in fish kills in the Larchmont Harbor area and in the ban on consumption of shellfish taken from the waters of the Westchester Sound shore and its estuaries.

A number of local steps are planned, either for execution or for study (see Section IV), which are designed in part to repair past damage to these three areas and to enhance their viability and survivability as wildlife habitats. Some steps have been accomplished such as the computerized release valve at the Larchmont Reservoir, absorbent booms to collect oil on Pine Brook and East Creek, a street sweeping schedule has been put into action, and numerous storm drain-sanitary sewer connections have been eliminated. Some general cleaning of the Larchmont leaf disposal facility has been completed and it was moved back to some degree from the water's edge.

Some of the recommendations are restorative or enhancing, to be taken within the areas themselves; others are protective, involving both physical projects and land use regulations upstream from these areas, and are intended to reduce future adverse impact from the outside. Any action that would cause or aggravate such impact, or adversely affect the preservation or restoration of the habitats covered by this policy, would be inconsistent with this policy. To the greatest degree practicable, the habitat impairment test found under Policy 7 should be applied to these CEAs.

Since all of these habitat areas are environmentally linked to neighboring jurisdictions, cooperation of adjacent municipalities is of great importance in accomplishing the purposes of this policy.

Note: Since all three of these habitats center on tidal or freshwater wetlands, which are dealt with under Policies 44 and 44A, the three policies will be considered together for purposes of implementation.

**POLICY 8                    PROTECT FISH AND WILDLIFE RESOURCES IN THE  
COASTAL AREA FROM THE INTRODUCTION OF  
HAZARDOUS WASTES AND OTHER POLLUTANTS WHICH  
BIOACCUMULATE IN THE FOOD CHAIN OR WHICH CAUSE  
SIGNIFICANT SUBLETHAL OR LETHAL EFFECT ON THOSE  
RESOURCES.**

Explanation of Policy

The regulation of hazardous wastes is assumed by State and Federal agencies. Other pollutants from point or non-point sources also cause substantial damage to fish and wildlife resources and are controlled by both State and local laws, the most important local laws in this connection being the Town's SEQR and the Town and Village's Freshwater Wetlands laws. County and local government must be more effective in monitoring pollution as well as enforcing local regulations and reporting violations of State or Federal law, which are a serious problem especially in the Premium area, the East Creek-Hommocks area, and nearby waters of Long Island Sound. Pursuant to this policy, a regular program of monitoring and reporting pollutants likely to damage fish and wildlife in the area will be conducted in cooperation with the Conservation Advisory Commission, appropriate State and County agencies, and neighboring municipal agencies. Local regulations against such pollutants will be reviewed for adequacy and strictly enforced.

## **POLICY 9**

**EXPAND RECREATIONAL USE OF FISH AND WILDLIFE RESOURCES IN COASTAL AREAS BY INCREASING ACCESS TO EXISTING RESOURCES, SUPPLEMENTING EXISTING STOCKS AND DEVELOPING NEW RESOURCES. SUCH EFFORTS SHALL BE MADE IN A MANNER WHICH ENSURES THE PROTECTION OF RENEWABLE FISH AND WILDLIFE RESOURCES AND CONSIDERS OTHER ACTIVITIES DEPENDENT ON THEM.**

### **Explanation of Policy**

The limited fish and wildlife resources of the area, the fragility of their habitats, and dense surrounding settlement combine to preclude hunting or extensive shore-based fishing. Hunting is prohibited throughout the area. Shore-based fishing on public property is limited because of the small number and size of the few locations available. However, recreational uses of coastal fish and wildlife resources also include non-consumptive uses such as wildlife photography, bird-watching and nature study. In general, the last group will be given preference over the former in view of the limited size of the resources and their location in urbanized areas.

The following additional guidelines should be considered by local, State, and Federal agencies as they determine the consistency of their proposed actions with the above policy.

1. Actions should not impede existing or future utilization of the State's recreational fish and wildlife resources.
2. Efforts to increase access to a recreational fish and wildlife resource should not lead to over-utilization of that resource or cause impairment of the habitat. Sometimes such impairment can be more subtle than actual physical damage to the habitat. For example, increased human presence can deter animals from using the habitat area.
3. The impacts of increasing access to recreational fish and wildlife resources should be determined on a case-by-case basis, consulting the Significant Habitat narrative (see Section II at M and Policy 7/7A) and/or conferring with a trained fish and wildlife biologist.

**POLICY 10                    THE STATE COASTAL POLICY TO FURTHER DEVELOP COMMERCIAL FINFISH, SHELLFISH AND CRUSTACEAN RESOURCES IN THE COASTAL AREA IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 10A                IMPROVE WATER QUALITY IN LONG ISLAND SOUND WATERS TO PERMIT THE TAKING OF SHELLFISH FOR HUMAN CONSUMPTION.**

Explanation of Policy

The Westchester Sound shore, whose waters are accessible by boat to both commercial and recreational shellfishing, was once a major shellfish producing area. For many years, however, (as was noted in Section II at Q and on Map 5) most of its inshore waters, including those off the Larchmont-Mamaroneck coastline, have been in New York State classification SB, which forbids shellfishing for human consumption. Biological pollution, mainly from sewage, is the main cause. The municipal governments, in cooperation with other Sound shore communities and with concerned County and State agencies, will endeavor to raise the water classification from SB to SA with the goal of reopening Western Long Island Sound for the taking of shellfish. More effective control of sewage pollution (see Policies 30 through 34) and organic nutrient runoff (Policy 37), as well as monitoring and regulation of heavy metals and other bioaccumulative substances entering coastal waters (Policy 8) will serve to promote this objective.

**FLOODING AND EROSION POLICIES<sup>1</sup>**

**POLICY 11                BUILDINGS AND OTHER STRUCTURES WILL BE SITED IN THE COASTAL AREA SO AS TO MINIMIZE DAMAGE TO PROPERTY AND THE ENDANGERING OF HUMAN LIVES CAUSED BY FLOODING AND EROSION.**

Explanation of Policy

This policy applies to Flood Hazard and Coastal High Hazard Areas in the Town and the Village pursuant to the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA).<sup>2</sup>

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<sup>1</sup> See Maps 5 and 6.

<sup>2</sup> This policy also applies to Structural Hazard Areas under the Coastal Erosion Hazards Act (CEHA), but none have been designated in the Town and Village at this time.

The design and location of existing or proposed buildings in designated flood hazard areas are regulated by Flood Damage Prevention laws adopted by both municipalities and enforced by their respective Building and Engineering Departments under the Federal Flood Insurance Program. The State Coastal Erosion Hazard Areas regulations (6 NYCRR Part 505) are enforced by a State permit process. These laws will assure compliance with this policy in such areas. Where recent flood experience, as in the Sheldrake watershed, shows a need to extend such regulation to wider areas than are shown on the current Federal map, the extension may be achieved by local adoption of a supplementary flood damage control map based on a qualified engineering survey.

### Flood Hazard and Coastal High Hazard Areas

The designated Flood Hazard Areas (A-Zones) and Coastal High Hazard Areas (V-Zones) as identified on the federal Flood Insurance Rate Maps are described in the Inventory and Analysis (Section II at R and S). The Flood Hazard Areas are located generally along the shoreline and in the Town and Village extend up along the river corridors. The A-Zone is located within the 100-year floodplain, extending from the boundaries of the V-Zone to the limits of the 100-year flood hazard area.

The Coastal High Hazard Areas (V-Zones) are located generally along the perimeter of Larchmont Harbor including along Monroe Inlet, Umbrella Point, Horseshoe Harbor to Premium Point Beach and most of the perimeter and extending inland on the Premium Point peninsula.

The V-zones extend from the shoreline inland to the A-zone. These areas have special flood hazards associated with high velocity waters from tidal surges and hurricane wave wash thus increasing the potential for loss of life and severe property damage.

### Standards for Development in Flood Hazard Areas (A-Zone)

1. New construction and substantial additions:
  - a. All buildings and structures shall be located the maximum setback possible from mean high tide;
  - b. All buildings and structures shall be elevated so that the lowest portion of the structural members of the lowest floor is located a minimum of 13 feet above mean sea level, with all space below the lowest floor's supporting member open so as not to impede the flow of water, except for breakaway walls. These areas are not to be used for human habitation;
  - c. All buildings or structures shall be securely anchored on pilings or columns used as structural support and shall be designed and anchored so as to withstand all applied loads of the base flood flow.
  - d. Building materials and utility equipment shall be resistant to flood damage.

2. For utilities:
  - a. All new, replacement and expanded water supply systems shall be designed to minimize or eliminate infiltration of flood water into the system;
  - b. All new, replacement and expanded sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters from the systems into flood waters;
  - c. On-site sanitary sewage systems shall be located to avoid impairment to them or contamination from them during flooding;
  - d. New, replacement or expanded gas and electrical service shall be located and constructed to reduce flood damage.

#### Standards for Development in Coastal High Hazard Areas (V-Zone)

Walled and roofed buildings and fuel storage tanks shall be sited landward and with the maximum setback possible of mean high tide.

**POLICY 12                    ACTIVITIES OR DEVELOPMENT IN THE COASTAL AREA WILL BE UNDERTAKEN SO AS TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION BY PROTECTING NATURAL PROTECTIVE FEATURES INCLUDING BEACHES, DUNES, BARRIER ISLANDS AND BLUFFS. PRIMARY DUNES WILL BE PROTECTED FROM ALL ENCROACHMENTS THAT COULD IMPAIR THEIR NATURAL PROTECTIVE CAPACITY.**

#### Explanation of Policy

While the Town and Village coastline is bounded, for the most part, by an unbroken line of sea or retaining walls, this area still contains beaches, nearshore areas, and wetlands that help safeguard coastal lands and property from damage, as well as reduce the danger to human life resulting from flooding and erosion. Excavation of coastal features, improperly designed structures, inadequate site planning, or other similar actions which fail to recognize their fragile nature and high protective values, lead to the weakening or destruction of these landforms. Activities or development in, or in proximity to, natural protective features must ensure that all such adverse effects are minimized. These Coastal Erosion Hazard Areas (CEHAs) are described in detail in Section II at R. The CEHA is located from Premium Point northeast to and including Premium Point Beach, Horseshoe Harbor and Umbrella Point, and are administered pursuant to the Coastal Erosion Hazard Management Program of the New York State Department of Environmental Conservation.

The Town and Village's natural protective features are discussed in Section II and standards follow below.

## Beaches

Beaches are located at Horseshoe Harbor, the Larchmont Manor Park and the Premium Point Beach in the Town and Village. These man-made beaches buffer shorelands from erosion by absorbing wave energy that otherwise would be expended on the immediate shorelands. As much beach as possible should be retained to increase the protective effectiveness.

To ensure that beaches will be protected, the following standards under applicable State law shall be adhered to:

1. Excavating, grading, or mining which diminishes the erosion protection afforded by beaches is prohibited.
2. Clean sand or gravel of an equivalent size or slightly larger grain size is the only material which may be deposited within beach areas.
3. Active bird nesting and breeding areas must not be disturbed unless such action is in accord with a specific wildlife management activity.
4. All development is prohibited on beaches.

## Nearshore Areas and Underwater Lands

Nearshore areas are located along the area designated a CEHA extending out in the water in the Town and Village. Nearshore areas dissipate a substantial amount of wave energy before it is expended on beaches and other areas by causing waves to collapse or break. Nearshore areas also act as reservoirs of sand, gravel and other unconsolidated material for beaches. Rock shoals and/or sandbars, which are located in nearshore areas, control the orientation of incoming waves and may promote the development of ice cap formations which help to protect the shore during winter storms. The roots of aquatic vegetation in nearshore areas bind fine grained silts, clays, and organic material to form a fairly cohesive bottom that resists erosion.

See Policy 15 for standards relative to the preservation of nearshore areas.

## Wetlands

Tidal wetlands are located in the lower Premium River and Marsh Complex, Little Harbor Sound including Spanish Cove and East Creek, and the Hommocks Marsh in the Town and Village. Wetlands serve as a buffer against severe storms by absorbing wave energy and protecting the mainland from erosion.

See Policy 44/44A for standards relative to the preservation of wetlands.

Additionally, major protection against upstream flooding and erosion is provided by a combination of other natural protective features, despite some impairment resulting from past

development: the floodplains in the Sheldrake with their associated freshwater wetlands and the Pine Brook drainage basins; the flood protection function of the Larchmont Reservoir. The flood protection value of these features will be protected against adverse impact from development or other activities, and further increased by physical improvements and by improved drainage basin management.

**POLICY 13                    THE CONSTRUCTION OR RECONSTRUCTION OF EROSION PROTECTION STRUCTURES SHALL BE UNDERTAKEN ONLY IF THEY HAVE A REASONABLE PROBABILITY OF CONTROLLING EROSION FOR AT LEAST 30 YEARS AS DEMONSTRATED IN DESIGN AND CONSTRUCTION STANDARDS AND/OR ASSURED MAINTENANCE OR REPLACEMENT PROGRAMS.**

Explanation of Policy

This policy applies to the designated Coastal Erosion Hazard Areas (CEHAs), as identified on the Coastal Erosion Hazard Maps for the Town and Village (see Policy 12).

Most of the Long Island Sound coastline, whether designated as a CEHA or not, is protected from erosion by permanent structures which, with periodic maintenance, provide long-term protection. However, because of improper design, construction and maintenance standards, many fail to give the protection which they are presumed to provide and may even be harmful to adjacent or nearby properties. As a result, development is sited in areas where it is subject to damage or loss due to erosion. This policy will help ensure the reduction of such damage or loss. The various rivers and streams flowing through the coastal area, however, are often subject to increasing erosion due to changing upstream flow characteristics. Erosion protection structures in these areas will be designed to give the long-term protection required by this policy while, at the same time, respecting considerations of the natural and aesthetic environment (see Policy 25). For example, use of natural materials such as rock or wood is preferable to concrete or steel.

Those areas which lie in the designated CEHAs require a State permit before any construction can take place. However, all coastline construction is subject to the following standards:

1. All erosion protection structures shall be designed and constructed according to generally accepted engineering principles which have demonstrated success or, where sufficient data is not currently available, a likelihood of controlling erosion on the immediate site for at least 30 years;
2. All materials used in such structures must be durable and capable of withstanding inundation, wave impacts, weathering, and other effects of storm conditions for a minimum of 30 years.

3. Erosion protection structures must not be likely to cause measurable increases in erosion at the development site or other locations; and must minimize, and if possible prevent, adverse effects to natural protective features (see policy 12), existing erosion protection structures (see policy 14), and natural resources such as significant coastal fish and wildlife habitats (see policy 7).
4. A long term maintenance program must be provided, which includes specifications for normal maintenance of degradable materials, the periodic replacement of removable materials, and minimizing the adverse impacts of erosion control structures.

**POLICY 14                    ACTIVITIES AND DEVELOPMENT, INCLUDING THE  
CONSTRUCTION OR RECONSTRUCTION OF EROSION  
PROTECTION STRUCTURES, SHALL BE UNDERTAKEN SO  
THAT THERE WILL BE NO MEASURABLE INCREASE IN  
EROSION OR FLOODING AT THE SITE OF SUCH ACTIVITIES  
OR DEVELOPMENT, OR AT OTHER LOCATIONS.**

Explanation of Policy

Application of this policy to local conditions requires the development of an integrated flood and erosion control strategy for improved control of flooding, erosion, siltation, and associated problems in the three watersheds of this coastal area.

Erosion and flooding are naturally occurring processes. However, unwise actions can increase the severity and adverse effects of these processes causing damage to or loss of property and endangering human lives. Such actions include:

- failure to follow proper drainage or land restoration practices, thereby causing runoff which erodes and weakens stream banks or shorelands and causes siltation of stream beds, wetlands and navigational channels;
- placing of structures in identified floodways so that the base flood level is increased, exposing otherwise hazard-free areas to flood damage;
- the use of erosion protection structures such as groins, or the use of impermeable docks which block the littoral transport of sediment to adjacent shorelands thus increasing their rate of recession;
- filling of wetlands and marsh areas with or without related measures to prevent erosion.

Actions of these and other kinds over many years, both within and upstream from the Town-Village coastal area, have resulted in serious aggravation of flooding, erosion, and siltation. As a result, substantial damage has occurred in residential areas as well as on recreational and ecological resources in the coastal zone, and further serious damage can be expected unless corrective actions are taken. In the Sheldrake watershed, these effects are felt not only within the Town-Village coastal area but also in densely developed sections of the Village of Mamaroneck downstream near where the Sheldrake joins the Mamaroneck River.

The Larchmont Reservoir property and the two golf club properties, the remaining open space in the Pine Brook and Sheldrake flood plains lying partly within the Town and partly in White Plains, Scarsdale and New Rochelle, the tidal wetlands at the foot of the Pine Brook-Premium and East Creek-Gut Creek-Hommocks watersheds, and a portion of the Hampshire Country Club property located partly in the Town and partly in the Village of Mamaroneck should be preserved for their flood protection values. The Town and Village will seek the necessary intermunicipal cooperation of upstream municipalities in order to develop an integrated flooding and erosion control strategy at the local level. In assessing proposals that might impact on the Larchmont Reservoir, weight should be given not only to their cost-effectiveness for flood control but also to their potential impact on the Reservoir's important aesthetic and recreational value and on its value as an emergency standby source of municipal water supply.

The Town and Village's Environmental Quality Review, Flood Damage Prevention and Freshwater Wetlands laws and the Town's Site Plan Review and Surface Water, Erosion and Sediment Control laws regulate rates of stormwater runoff in new developments to prevent increases in local or downstream flooding or erosion. Except where a different solution will clearly better serve the purposes of this policy in a particular site, this normally means zero increase in the rate of runoff from the site and zero decrease in the rate of runoff entering the site. In specific cases involving large properties upstream from flood-prone areas, a reduction in runoff rate from the site may be required. Such limits can be achieved by, for example, requiring maximum preservation of tree and ground cover, updating zoning categories, or construction of water retention devices. In keeping with Policy 17, consistency with this policy requires non-structural measures, such as retention or detention basins, be used wherever practicable.

When an erosion protection structure is proposed to be constructed, modified, or restored in the Town or Village, the following standards shall apply:

#### General Standards for Erosion Protection Structures

1. Need must be demonstrated.
2. The action must not cause a measurable increase in erosion at the development site or at other locations.
3. The action must minimize, and if possible, prevent long and short term adverse effects upon natural protective features, existing erosion protection structures, and natural resources such as Significant Coastal Fish and Wildlife Habitats and Critical Environmental Areas.

## Specific Standards for Erosion Protection Structures along the Coastline

### Bulkheads and Revetments

1. The location must be as far back from mean high water as possible and must be compatible with the location of erosion protection structures on adjacent properties.
2. Revetments shall be used in place of bulkheads whenever possible since they are more durable, provide habitats for vegetation and wildlife, and tend to reduce the amount of erosion from wave energy.
3. The taking of fill from Town/Village underwater or bottom lands shall be minimized.

### Jetties and Groins

1. The height of jetties and groins shall follow a low profile so as not to adversely affect the littoral transport of sand.
2. The proposed location of the jetty or groin must be compatible with existing shoreline structures.

### Docks and Pilings

1. The length of docks shall be kept to a minimum.
2. The height of docks and walkways to the docks shall conform to the height of existing docks and walkways in the area and shall be located above wetland vegetation.

**POLICY 15            MINING, EXCAVATION OR DREDGING IN COASTAL AREAS SHALL NOT SIGNIFICANTLY INTERFERE WITH THE NATURAL COASTAL PROCESSES WHICH SUPPLY BEACH MATERIALS TO LAND ADJACENT TO SUCH WATERS AND SHALL BE UNDERTAKEN IN A MANNER WHICH WILL NOT CAUSE AN INCREASE IN EROSION OF SUCH LAND.**

### Explanation of Policy

There is little beach material in the coastal area of the Town and Village which is supplied to the adjacent land via natural coastal processes. Mining does not exist in this area.

Excavation and dredging shall be done so that both the natural and manmade shoreline are not undermined and so that natural water movement is not changed in a manner that will increase erosion potential (also see Policies 13 and 35). Excavation and dredging activities must be reasonable and necessary, considering reasonable alternatives to the proposed activity, the extent

to which the proposed activity requires a shoreline location, and shall prevent, if possible, or minimize adverse effects on natural protective features and their functions and protective values, and on existing erosion protection structures.

**POLICY 16 PUBLIC FUNDS SHALL ONLY BE USED FOR EROSION PROTECTION STRUCTURES WHERE NECESSARY TO PROTECT HUMAN LIFE, AND NEW DEVELOPMENT WHICH REQUIRES A LOCATION WITHIN OR ADJACENT TO AN EROSION HAZARD AREA TO BE ABLE TO FUNCTION, OR EXISTING DEVELOPMENT; AND ONLY WHERE THE PUBLIC BENEFITS OUTWEIGH THE LONG TERM MONETARY AND OTHER COSTS INCLUDING THE POTENTIAL FOR INCREASING EROSION AND ADVERSE EFFECTS ON NATURAL PROTECTIVE FEATURES.**

Explanation of Policy

Public funds are used for a variety of purposes on the State's shorelines. This policy recognizes the public need for the protection of human life and existing investment in development or new development which requires a location in proximity to the coastal area or in adjacent waters to be able to function. However, it also recognizes the adverse impacts of such activities and development on the rate of erosion and on natural protective features and requires that careful analysis be made of such benefits and long-term costs prior to expending public funds.

The local circumstances to which this policy applies are stated in the Explanation of Policy 13. Projects contemplated under Policy 14, involving construction to protect property against erosion from upstream flooding, shall be consistent with this policy.

**POLICY 17 WHENEVER POSSIBLE, USE NON-STRUCTURAL MEASURES TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION. SUCH MEASURES SHALL INCLUDE: (1) THE SETBACK OF BUILDINGS AND STRUCTURES; (2) THE PLANTING OF VEGETATION AND THE INSTALLATION OF SAND FENCING AND DRAINAGE SYSTEMS; (3) THE RESHAPING OF BLUFFS; (4) THE FLOODPROOFING OF BUILDINGS OR THEIR ELEVATION ABOVE BASE FLOOD LEVEL.**

Explanation of Policy

This policy recognizes the potential adverse impacts of flooding and erosion, whether from coastal or upstream sources, upon development and upon natural protective features in the coastal area as well as the costs of protection against those hazards which structural measures entail. This policy shall apply to the planning, siting and design of proposed activities and development, including measures to protect existing activities and development. To ascertain

consistency with the policy, it must be determined if any one, or a combination of, non-structural measures would afford the degree of protection appropriate both to the character and purpose of the activity or development, and to the hazard. If non-structural measures are determined to offer sufficient protection, then consistency with the policy would require the use of such measures, whenever possible.

In determining whether or not non-structural measures to protect against erosion or flooding will afford the degree of protection appropriate, an analysis, and if necessary, other materials such as plans or sketches of the activity or development of the site, and of the alternative protection measures should be prepared to allow an assessment to be made.

In the Town and Village, non-structural measures shall include but not be limited to:

1. Within coastal erosion hazard areas; (a) the use of maximum setbacks; and (b) the strengthening of coastal landforms by appropriate planting of vegetation; and
2. Within identified coastal high hazard areas (V zones) or floodways; (a) the avoidance of risk or damage from flooding by the siting of buildings outside the hazard area; and (b) the flood proofing of buildings or their elevation above the base flood level.

Application of the Flood Damage Prevention regulations, Best Management Practices Guidelines for Construction-Related Activities (Catalog of Best Management Practices for Nonpoint and Source Pollution Control in Westchester County, 1991) and SEQR procedures will be effective in many instances as preventive measures. For some purposes, however, such as improved protection against flood damage, sewage backup, etc., from upstream sources (see Section II at U and Policy 14), nonstructural methods will have to be supplemented in some instances by structural measures.

## **GENERAL POLICY**

**POLICY 18                    TO SAFEGUARD THE VITAL ECONOMIC, SOCIAL AND ENVIRONMENTAL INTERESTS OF THE STATE AND OF ITS CITIZENS, PROPOSED MAJOR ACTIONS IN THE COASTAL AREA MUST GIVE FULL CONSIDERATION TO THOSE INTERESTS, AND TO THE SAFEGUARDS WHICH THE STATE HAS ESTABLISHED TO PROTECT VALUABLE COASTAL RESOURCE AREAS.**

### **Explanation of Policy**

Proposed major actions may not be undertaken in the coastal area if they will significantly impair valuable coastal waters and resources, thus frustrating the achievement of the purposes of the safeguards which the State has established to protect those waters and resources. Proposed actions must take into account the social, economic and environmental interests of the State and its citizens in such matters that would affect natural resources, water levels and flows, shoreline

damage, and recreation. Review under the SEQR process will allow a weighing of the costs and benefits of such actions to State interests.

## **PUBLIC ACCESS POLICIES**

**POLICY 19                    PROTECT, MAINTAIN, AND INCREASE THE LEVEL AND TYPES OF ACCESS TO PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES SO THAT THESE RESOURCES AND FACILITIES MAY BE FULLY UTILIZED BY THE PUBLIC IN ACCORDANCE WITH REASONABLY ANTICIPATED PUBLIC RECREATION NEEDS AND PROTECTION OF HISTORIC AND NATURAL RESOURCES. IN PROVIDING SUCH ACCESS, PRIORITY SHALL BE GIVEN TO PUBLIC BEACHES, BOATING FACILITIES, FISHING AREAS AND WATER FRONT PARKS.**

### Explanation of Policy

The Larchmont/Mamaroneck coastal area includes many water-related recreation resources to which the public has varying degrees of access depending on the nature of the facility and its ownership, as discussed in Section II. Balance between the type, capacity, and intensity of use of a facility, and the protection of the resource itself and of the adjacent environment, must be maintained if the quality of these resources is to be preserved. In general the level of access to, and use of, recreational resources in this coastal area appears consistent with current needs and with the ability of the facility or resource to accommodate it. Therefore, retention of present levels of access to existing facilities will be given priority. Future opportunities to increase access to active, water-dependent recreation resources should be carefully considered only if the potential impact of increased traffic and intensity of use on adjacent neighborhoods can be mitigated and adverse effect on the water environment avoided. Such increases, where desirable and feasible under these criteria, should, if possible, be achieved by expanding access to existing facilities.

**POLICY 20                    ACCESS TO THE PUBLICLY-OWNED FORESHORE AND TO LANDS IMMEDIATELY ADJACENT TO THE FORESHORE OR THE WATER'S EDGE THAT ARE PUBLICLY OWNED SHALL BE PROVIDED, AND IT SHOULD BE PROVIDED IN A MANNER COMPATIBLE WITH ADJOINING USES. SUCH LANDS SHALL BE RETAINED IN PUBLIC OWNERSHIP.**

### Explanation of Policy

The principal publicly owned lands adjacent to the foreshore are five parcels of municipally owned land: the Premium and Hommocks Conservation areas, Flint Park, Lorenzen Park, and Woodbine Park. In each case except Flint Park, access is provided to the water's edge for passive recreation activities. Access from Flint Park to the foreshore (Little Harbor Sound) is

largely blocked by the presence of the Village of Larchmont leaf disposal facility at the south end of the park. All such lands will be retained in public ownership and the existing level of access will be maintained unless damage to fragile environmental features mandates temporary or permanent limitations on access.

## **RECREATION POLICIES**

**POLICY 21            WATER-DEPENDENT AND WATER ENHANCED RECREATION WILL BE ENCOURAGED AND FACILITATED, AND WILL BE GIVEN PRIORITY OVER NON-WATER RELATED USES ALONG THE COAST, PROVIDED IT IS CONSISTENT WITH THE PRESERVATION AND ENHANCEMENT OF OTHER COASTAL RESOURCES AND TAKES INTO ACCOUNT DEMAND FOR SUCH FACILITIES. IN FACILITATING SUCH ACTIVITIES, PRIORITY SHALL BE GIVEN TO AREAS WHERE ACCESS IS THE RECREATION OPPORTUNITIES OF THE COAST CAN BE PROVIDED BY NEW OR EXISTING PUBLIC TRANSPORTATION SERVICES AND TO THOSE AREAS WHERE THE USE OF THE SHORE IS SEVERELY RESTRICTED BY EXISTING DEVELOPMENT.**

### Explanation of Policy

Water-related recreation includes such obviously water-dependent activities as boating, swimming, and fishing as well as certain activities which are enhanced by a coastal location and increase the general public's access to the coast such as pedestrian and bicycle trails, scenic overlooks and passive recreation areas that take advantage of coastal scenery.

The Larchmont-Mamaroneck shoreline features a broad range of water-dependent and water-enhanced recreation facilities (see Section II at K). The developed state of the shore leaves little scope for additional facilities. Therefore, the primary objective of this policy is to preserve those water-related facilities that now exist and to protect them against abuse, overuse, and physical deterioration (see Policies 19, 20, and 30 through 39A). In the event that any private water-related recreational facilities are in danger of conversion to other use, the local governments, in pursuance of the above objective, will endeavor to find ways by which the facilities can be maintained in a manner consistent with this policy and Policy 19, including the possibility of municipal ownership, in whole or in part, of such facilities.

Within the limits set by the developed state of the shore, and provided that additional water-related recreational facilities can be created in a manner consistent with the preservation and enhancement of other important coastal resources including fish and wildlife habitats, wetlands, aesthetically significant areas, and historical and cultural resources, and provided demand exists, water-related recreational development is to be increased and shall have a higher priority than any non-coastal-dependent uses, including non-water-related recreation uses; and

water-dependent recreation uses shall take priority over recreation uses that are water-enhanced but not water-dependent.

Recreation in the conservation areas will be confined to passive, non-intensive activities such as bird watching, nature study, photography, etc. Swimming and boating on the Sound are to be encouraged, but not to an extent that will overtax the capacity of on-shore support facilities. Recreational lobstering and shellfishing will be enhanced if water quality is improved (see Policy 10A). The balance between use of the resource on the one hand, and on the other hand the enjoyment and safety of users and integrity of the environment, must be constantly monitored. For example, additional moorings for boats should be encouraged only if on-shore parking and access facilities are available and if the new moorings will not inhibit safe navigation in the harbor. Conduct which degrades, endangers, or interferes with these activities, including vandalism and other unlawful or reckless conduct in the harbor, and unlawful discharge of sewage or litter or other pollutants from pleasure boats in municipal waters, will be controlled. To this end the Village will take steps to work out a clear sharing of responsibility for policing the harbor among the parties concerned (see also Policy 34). Action to control upstream or coastal erosion (Policies 11 through 17) will serve the purposes of this policy by retarding siltation of navigation channels used by recreational boats and by reducing siltation damage in natural areas suitable for passive recreation.

**POLICY 22                    DEVELOPMENT, WHEN LOCATED ADJACENT TO THE SHORE, SHALL PROVIDE FOR WATER-RELATED RECREATION, AS A MULTIPLE USE, WHENEVER SUCH RECREATIONAL USE IS APPROPRIATE IN LIGHT OF REASONABLY ANTICIPATED DEMAND FOR SUCH ACTIVITIES AND THE PRIMARY PURPOSE OF THE DEVELOPMENT.**

Explanation of Policy

This policy calls for compatible inclusion of recreational facilities in new developments adjacent to the shore. Lands adjacent to the shore in this coastal area are already developed to their capacity and include a balance of residential and recreational uses. However, if new development adjacent to the shore should occur, recreation facilities in conformity with this policy will be required.

## **HISTORIC AND SCENIC RESOURCES**

### **POLICY 23            PROTECT AND RESTORE STRUCTURES, DISTRICTS, AREAS OR SITES THAT ARE OF SIGNIFICANCE IN THE HISTORY, ARCHITECTURE, ARCHEOLOGY OR CULTURE OF THE STATE, ITS COMMUNITIES OR THE NATION.**

#### **Explanation of Policy**

Among the most valuable of the State's manmade resources are structures or areas of historic, archeological, or cultural significance. Under State law, municipalities have the power to adopt regulations for the protection of these resources. In so doing they may designate, and provide for protection of, or in appropriate cases restoration and adaptive reuse of, specific sites or more extensive districts.

New York State definitions of such significant resources include these categories that may be applicable to this area:

- A local landmark, park, or locally designated historic district that is located within the boundary of an approved local waterfront revitalization program.
- A resource on, or nominated to be on, or potentially eligible to be on, the National or State Register of Historic places.
- A resource on, or nominated to be on, the State Nature and Historic Preserve Trust.
- A resource identified on the archaeological sensitivity model of the New York State Office of Parks, Recreation and Historic Places or on the State Department of Education Inventory of Archaeological sites.

While the program is concerned with the preservation of all significant resources, as here defined, within the coastal boundary, it gives priority to the preservation of resources having a coastal relationship.

The following structures, districts, and sites, among others, in the Larchmont-Mamaroneck coastal area are of historic, architectural, archaeological, or cultural significance meriting protection under this policy:

1. Larchmont Manor Park, including the Horseshoe Harbor Yacht Club.
2. The neighborhood within Town of Mamaroneck Map 610, known as Larchmont Manor.
3. Fountain Square
4. The Larchmont Yacht Club and Larchmont Shore Club.

5. The Premium Mill Pond, dam, and associated structures, including the mill house.
6. The Larchmont Reservoir-James G. Johnson Jr. Conservancy.
7. The Winged Foot and Bonnie Briar Golf Clubs.
8. The Quaker and Barker Cemeteries.
9. The Manor House at the head of Prospect Avenue.
10. The Larchmont Public Library, site of the original Samuel Palmer House.
11. The Larchmont Post Office.
12. The Indian rock shelter and rock face next to Pine Brook Park.
13. The former Weaver Street School house at 86 Weaver Street.

Structures, districts and sites designated pursuant to this policy shall be protected against significant adverse change and, where appropriate, restored or rehabilitated for adaptive reuse. In this context "adverse change" means, among other things, demolition or removal in whole or in part, or inappropriate alteration of or addition to the architectural, structural, ornamental or functional features of, a building, structure, earth work, or site that is a recognized historical, cultural, or archaeological resource or component thereof; or an action within 500 feet of such a structure, or anywhere within such a district, that would be incompatible by virtue of location, scale, design, color, texture, pattern, line, setback, landscaping or similar characteristics, with the preservation of the quality and integrity of the designated structure or district. In a historic district, adverse change may also take the form of incompatible improvements in infrastructure elements such as street and sidewalk paving, street furniture and lighting.

Pursuant to this policy the municipal governments will establish appropriate procedures for designating significant resources and for accomplishing their protection or restoration. In addition, contacts with the State Historic Preservation Office, already initiated by the Larchmont Historical Society, will be pursued with regard to listing of sites in this area on the National or State Register of Historic Places.

Given the possibility that archaeologically significant sites may be found in the coastal area, any government agency proposing, permitting or funding a development action on any site in the coastal area will contact the New York State Office of Parks, Recreation and Historic Places for procedures to follow with respect to that site.

This policy shall not be construed as preventing (1) the alteration or demolition of any structure when such action is certified by competent authority as necessary to avert an imminent danger to life or to public health; or (2) normal maintenance, repair, or proper restoration of a designated

structure, not involving significant adverse change and in conformity with the U.S. Department of Interior "Standards for Rehabilitation" and "Guidelines for Rehabilitating Historic Buildings."

**POLICY 24            THE STATE POLICY REGARDING SCENIC RESOURCES OF STATEWIDE SIGNIFICANCE IS NOT APPLICABLE IN THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT BECAUSE NONE OF THESE RESOURCES HAVE BEEN SO DESIGNATED.**

**POLICY 25            PROTECT, RESTORE AND ENHANCE NATURAL AND MANMADE RESOURCES WHICH ARE NOT IDENTIFIED AS BEING OF STATEWIDE SIGNIFICANCE, BUT WHICH CONTRIBUTE TO THE SCENIC QUALITY OF THE COASTAL AREA.**

Explanation of Policy

- A. The Larchmont/Mamaroneck shoreline includes natural and historic features which in total comprise a diverse scenic resource of high quality. The pleasant blend of wetlands and marshes, landscaped parkland, geological forms of exceptional interest and beauty and attractive, water-oriented homes and recreation facilities, is unusual in the urbanized New York metropolitan area. Features of particular scenic quality on the shore include the Premium and Hommocks wetlands, the Larchmont Manor Park, the Larchmont Yacht Club, and the Larchmont Shore Club. Although not visible from the shore, Fountain Square, Memorial (Station) Park, the Sheldrake-Leatherstocking Conservation area, the Larchmont Reservoir-James G. Johnson Conservancy, the Brookside Drive-Gardens Lake area, and the Bonnie Briar, Winged Foot, and Hampshire golf courses all significantly contribute to the scenic quality of the entire coastal area.
  
- B. Given the generally high visual quality of the coastal area, action under this policy will be directed primarily toward protecting existing features, but will also seek to assure compatibility in the siting and appearance of new structures. These purposes are served to a great extent by existing controls in both municipalities. Industrial, commercial, and multi-family residential uses are not permitted outside of zones near the Thruway, Palmer Avenue, and the Boston Post Road. The appearance of new construction or remodeled structures in both the Village and the Town is subject to regulation. In the Village, designs may be disapproved on grounds of, among other things, monotonous similarity to nearby structures, visual offensiveness due to poor design, visual discord in relation to the site or surroundings, or characteristics that prevent appropriate use of adjacent lands. Site plan review regulations and a Board of Architectural Review provide comparable safeguards in the commercial area of the Town. The size, character, and location of all outdoor signs is also regulated, and property owners are required to keep their properties clear of brush, weeds and unsightly materials.

- C. Local efforts to maintain visual quality in the shore area consist primarily of maintaining existing natural areas, ensuring that development is well sited and in harmony with the surrounding environment, and retaining views to, along and from the shoreline. These efforts are implemented primarily through local building codes and through the protection of natural and open space areas. The overall effect is a coastal area which is visually interesting and attractive, and should be maintained and improved if possible.
- D. Views which contribute to the scenic quality of the coastal area should be maintained or where possible improved include: views to Larchmont Harbor from Walnut and Bay Avenue street ends, and from Larchmont Harbor to the Larchmont Harbor and Umbrella Point shoreline; views from the Premium River and Premium Mill Pond from Pryer Manor Road and the Pryer Manor Bridge; the view from the south end of Beach Avenue looking towards Long Island Sound; and views from Manor Park and Park Avenue looking south, east and west, a panoramic sweep of Long Island Sound and its north shore and offshore areas. It is important to preserve these views, and to prevent visual impairments to the area's scenic and open space qualities and value. Loss of these views cannot be mitigated or replicated.
- E. In order to ensure consistency with this policy, actions should protect, restore or enhance the overall scenic quality of the coastal area by preventing impairments to visual resources to the maximum extent practicable.
- F. Impairment of visual resources includes the following:
1. the irreversible modification of vegetation or structures whenever they are significant to the scenic quality of an identified view;
  2. the addition/development of structures which because of siting or scale will reduce identified views or which because of scale, form or material will diminish the scenic quality of an identified view.
- G. The following siting and development guidelines will be used when reviewing a proposed action that could affect the views described in subparagraph D above recognizing that each development situation is unique and that the guidelines will have to be applied accordingly.
1. Structures and other development such as power lines, pump stations, lights, high antennae, and signs should be of appropriate design and/or should be sited back from the shoreline or in other inconspicuous locations so as to maintain the attractive quality of the shoreline and to retain views to and from the shore.
  2. Structures should be oriented to retain views, save open space and provide visual organization to development.

3. Existing structures of scenic or historical value, if structurally sound, should be retained and incorporated into the overall development scheme.
4. Deteriorated or degrading elements should be removed or rebuilt.
5. The original land form should be maintained or restored, except when changes screen unattractive elements and/or add appropriate interest.
6. Vegetation should be maintained or added to provide interest, encourage the presence of wildlife, blend structures into the site, and obscure unattractive elements, except when selective clearing removes unsightly, diseased or hazardous vegetation or creates views of coastal waters.
7. Other appropriate materials in addition to vegetation may be used to screen unattractive elements.
8. Appropriate scales, forms and materials should be used to ensure that buildings and other structures are compatible with and add interest to the landscape.
9. Actions should be avoided that would be out of keeping with the scenic character of a location because of intensity of use or potential for generating noise, visual annoyance, litter, traffic jams, or other nuisance.
10. Where possible, erosion-protection structures in scenic or residential areas should be built of natural wood or stone materials that blend with their surroundings, rather than of manufactured materials (see Policy 13).

### **AGRICULTURAL LANDS POLICY**

**POLICY 26            THE STATE POLICY REGARDING THE CONSERVATION AND PROTECTION OF AGRICULTURAL LANDS IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

### **ENERGY AND ICE MANAGEMENT POLICIES**

**POLICY 27            DECISIONS ON THE SITING AND CONSTRUCTION OF MAJOR ENERGY FACILITIES IN THE COASTAL AREA ARE NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 28            THE STATE POLICY REGARDING ICE MANAGEMENT PRACTICES IS NOT APPLICABLE TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 29                    THE DEVELOPMENT OF ENERGY RESOURCES ON THE  
OUTER CONTINENTAL SHELF, IN LAKE ERIE AND IN OTHER  
WATER BODIES IS NOT APPLICABLE TO THE TOWN OF  
MAMARONECK AND VILLAGE OF LARCHMONT.**

**WATER AND AIR RESOURCES POLICIES**

**POLICY 30                    MUNICIPAL, INDUSTRIAL, COMMERCIAL AND RESIDENTIAL  
DISCHARGE OF POLLUTANTS, INCLUDING BUT NOT  
LIMITED TO, TOXIC AND HAZARDOUS SUBSTANCES, INTO  
COASTAL WATERS, WILL CONFORM TO STATE AND  
NATIONAL WATER QUALITY STANDARDS.**

**Explanation of Policy**

Excessive pollution of waters in the coastal zone is damaging to public health, the breeding and taking of edible fish, shellfish and crustaceans, water-related recreation, and (as noted under Policy 8) the ecology of wetlands and wildlife habitats. Effective adherence to the water quality standards of this policy will prevent it.

Pollutant discharges covered by this policy include "end-of-the-pipe" discharges into surface water and groundwater; runoff from plant sites; leaching; spillages; unlawful or damaging disposal of sludge, waste oil, and other polluting wastes; and drainage from raw material storage sites. Industrial discharges are covered if they empty directly into coastal waters or if they pass through municipal treatment systems before reaching coastal waters.

All such discharges are regulated by Federal and State laws. Water quality standards are set for a wide range of toxic substances. To maintain these standards, a permit system limits rates of effluent discharge of specified toxic substances and other pollutants by industrial plants. Effluent discharge should conform to federal standards required for maintaining the water classifications.

These Federal and State regulatory systems are supplemented locally by certain legal prohibitions, notably those of the Town Freshwater Wetland law which prohibits or limits certain categories of pollutants in controlled areas. The Westchester County Department of Health is responsible for monitoring coastal waters for pollutants dangerous to swimmers, and has the power to forbid swimming when and where pollution is excessive. The Conservation Advisory Commission has a limited pollution monitoring capability which serves both municipal governments by hiring a consultant to identify and trace some common pollutants, including coliform pollution, as a basis for either local, County or State enforcement action.

Taken together, these monitoring and regulatory activities at different levels of government go far toward assuring satisfactory water quality in the coastal zone. But constant and vigorous implementation of existing laws and regulations is essential, including adequate monitoring,

identification and inspection of point sources, and prompt enforcement. In addition, further experience may show that new legislation is necessary. Therefore, government agencies will:

1. Take all practicable steps, both within their own jurisdictions and in cooperation with other jurisdictions including neighboring municipalities as may be necessary, to apply existing legal and administrative mechanisms for water pollution monitoring and enforcement and for preventive inspection and maintenance of potential point sources; and, where appropriate, to strengthen such mechanisms. Local citizen participation in these efforts will be encouraged both for public education and for enforcement purposes.
2. Seek to assure, in concert with neighboring municipalities, that retail sellers of motor oil comply with the State statutory requirement that they shall accept waste oil for recycling and shall make this fact known to their customers.
3. The Town and Village will support the County's efforts to incorporate nitrogen removal (BNR) in treatment plants discharging into Long Island Sound, and will comply with other mandates from the State as a result of the Long Island Sound Study's Comprehensive Conservation and Management Plan (see Section II at V).

**POLICY 31 STATE COASTAL AREA POLICIES AND PURPOSES OF APPROVED LOCAL WATERFRONT REVITALIZATION PROGRAMS WILL BE CONSIDERED WHILE REVIEWING COASTAL WATER CLASSIFICATIONS AND WHILE MODIFYING WATER QUALITY STANDARDS; HOWEVER, THOSE WATERS ALREADY OVER BURDENED WITH CONTAMINANTS WILL BE RECOGNIZED AS BEING A DEVELOPMENT CONSTRAINT.**

Explanation of Policy

Pursuant to the Federal Clean Water Act of 1977 (PL 95-217) the State has classified its coastal and other waters in accordance with considerations of best usage in the interest of the public and has adopted water quality standards for each class of waters. These classifications and standards are reviewable at least every three years for possible revision or amendment. Local and regional coastal management policies shall be factored into the review process for coastal waters. However, such consideration shall not affect any water pollution control requirement established by the State pursuant to the Federal Clean Water Act.

Current classifications of fresh and saline waters in this area are given in Section II at Q. The fresh-water classifications are appropriate for the proposed uses in this Program. The salt-water classifications are consistent with proposed uses except in the former shellfishing areas along the shore now classified SB. As noted under Policy 10A, efforts will be made to restore these areas to SA status.

**POLICY 32                    ENCOURAGE THE USE OF ALTERNATIVE OR INNOVATIVE  
SANITARY WASTE SYSTEMS IN SMALL COMMUNITIES  
WHERE THE COSTS OF CONVENTIONAL FACILITIES ARE  
UNREASONABLY HIGH GIVEN THE SIZE OF THE EXISTING  
TAX BASE OF THESE COMMUNITIES.**

Explanation of Policy

Alternative systems include individual septic tanks and other subsurface disposal systems, dual systems, small systems serving clusters of households or commercial users, and pressure or vacuum sewers. These types of systems are often more cost-effective in smaller, less densely populated areas for which conventional facilities are too expensive. Although the entire coastal area is within public sanitary sewer districts, some homes are still served by on-site sanitary systems. Where such homes cannot be connected to public sewer lines without unreasonable cost, the use of on-site systems will continue to be permitted provided that owners use those that are most effective and pollution-free. However, see Policy 32A.

**POLICY 32A                    WHEREVER FEASIBLE AT REASONABLE COST, EXISTING  
ON-SITE SEWAGE DISPOSAL SYSTEMS SHALL BE  
ELIMINATED AND REPLACED BY DIRECT CONNECTION TO  
THE PUBLIC SEWAGE DISPOSAL SYSTEM.**

Explanation of Policy

On-site sanitary systems in this area (see Section II at U) have been found to be unreliable and pollution-prone in many instances. Therefore, in locations now served by such systems, where replacement of them by connection to public sewer systems would not be unreasonably costly, such action will be required. Otherwise the most effective and pollution-free on-site system will be required and will be closely monitored by municipal authorities to assure adequate performance. In all cases the objective will be the least risk of pollution consistent with acceptable cost.

**POLICY 33                    BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE  
THE CONTROL OF STORMWATER RUNOFF AND COMBINED  
SEWER OVERFLOWS DRAINING INTO COASTAL WATERS.**

Explanation of Policy

The purpose of this policy is to improve the quality of coastal waters by minimizing pollution from stormwater runoff and combined sewer overflows. Best management practices applicable to this purpose include both structural and non-structural methods. In some cases structural methods, such as construction of detention basins or replacement of combined sewer systems with separate sanitary and stormwater collection systems, are appropriate and will be used. In other cases, however, structural methods are inappropriate or excessively costly. Moreover, such methods alone cannot achieve the stated purpose as well unless they are combined with

non-structural best management practices such as improved street cleaning, reduced use of road salt, and control of runoff from construction sites (see Policies 37 and 37A). Non-structural best management practices, therefore, will be required or encouraged to the greatest extent appropriate and feasible for the purposes of this policy.

**POLICY 33A            ELIMINATE DISCHARGE OF RAW SEWAGE INTO COASTAL WATERS AND RESIDENTIAL AREAS DURING STORMS, ALL CONNECTIONS WHICH CARRY STORMWATER RUNOFF INTO THE SANITARY SEWER SYSTEM SHALL BE PROHIBITED AND APPROPRIATE ADMINISTRATIVE, LEGAL AND PHYSICAL ACTIONS SHALL BE TAKEN AS EXPEDITIOUSLY AS POSSIBLE TO REMOVE ALL SUCH CONNECTIONS.**

Explanation of Policy

The principal factors contributing to pollution in the coastal area are the connection of public and private storm water drains, in many cases illegally, to the public sanitary sewer system and the substantial leakage of storm water into the sanitary sewer system via broken pipes or vent holes.

The increased flow resulting from this practice exceeds the capacity of the sewage treatment plant and leads to discharge of raw sewage into streets, basements, and coastal waters and the closing of beaches during periods of heavy rain. In the Village of Larchmont, 76% of illegal hookups have been corrected to address the problem of inflow and infiltration. Additionally major sanitary sewer rehabilitation projects have been completed by the Village and the Town.

The further elimination and prevention of such conditions is an especially important objective of the community and will continue to be pursued energetically by the responsible governments and agencies. Sewage treatment plant overflows need to be further addressed beyond the moratorium prohibiting new sewer line extensions to the New Rochelle Sewage Treatment Plant (STP). The Mamaroneck STP, even though upgraded to full secondary treatment, needs further action throughout the sewer district to correct the above mentioned inflow and infiltration problems. Recommendations in the Long Island Sound Study's (LISS) Comprehensive Conservation and Management Plan (CCMP) (see Section II at V) will cause Westchester County to evaluate further nitrogen removal in the Sound's STP facilities. At the present time, the County has complied with the LISS's Interim Report, which mandated a "no net increase" in nitrogen discharge from 1990 levels. The Mamaroneck and New Rochelle plants are included in this "no net increase" policy.

**POLICY 34                    DISCHARGE OF WASTE MATERIALS INTO COASTAL WATERS FROM VESSELS WILL BE LIMITED SO AS TO PROTECT SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATIONAL AREAS AND WATER SUPPLY AREAS.**

Explanation of Policy

The discharge of sewage, garbage, rubbish, and other solid and liquid materials from watercraft and marinas into the State's waters is regulated by State law. Priority will be given to the enforcement of this law in areas where such discharges may damage shellfish beds, fish and wildlife habitats, or waters and beaches used for swimming and other recreation. Specific effluent standards for marine toilets have been promulgated by the Department of Environmental Conservation (6 NYCRR, Part 657). These standards, as well as other applicable laws and regulations concerning litter and pollution from vessels in coastal waters, shall be strictly enforced by the responsible authorities.

The development of a harbor management plan, posting signs to discourage vessel discharges, and public education, often by the yacht clubs, are the ways in which the Village can further address vessel discharges.

**POLICY 35                    DREDGING AND DREDGE SPOIL DISPOSAL IN COASTAL WATERS WILL BE UNDERTAKEN IN A MANNER THAT MEETS EXISTING STATE AND FEDERAL DREDGING PERMIT REQUIREMENTS, AND PROTECTS SIGNIFICANT FISH AND WILDLIFE HABITATS, SCENIC RESOURCES, NATURAL PROTECTIVE FEATURES, IMPORTANT AGRICULTURAL LANDS, AND WETLANDS.**

Explanation of Policy

Periodic dredging in this area is necessary for several purposes, primarily for maintenance of navigational channels at sufficient depths for recreational boating in Larchmont Harbor, Little Harbor Sound, and Horseshoe Harbor. In addition, actions to counter the effects of siltation and erosion in the Premium and Hommocks marshes (see Policies 7A and 14), and thereby to restore and maintain their ecological, recreational, and scenic value, may include dredging.

However, dredging projects, including dredge spoil disposal, may adversely affect water quality, fish and wildlife habitats, wetlands, and other important coastal resources. Such effects can be avoided or minimized by careful design and timing and by proper siting of spoil disposal.

Government agencies will assure that dredging operations in this area are in conformity with these principles and with State dredging permit requirements. They will also endeavor to bring about, and to participate in as appropriate, a coordinated dredging program for neighboring Sound shore communities as a means of obtaining high-quality service at acceptable cost. Operation of any such program within this coastal area will be subject to this policy.

**POLICY 36                    ACTIVITIES RELATED TO THE SHIPMENT AND STORAGE OF PETROLEUM WILL PREVENT OR AT LEAST MINIMIZE SPILLS INTO COASTAL WATERS; ALL PRACTICABLE EFFORTS WILL BE UNDERTAKEN TO EXPEDITE THE CLEANUP OF SUCH DISCHARGES; AND RESTITUTION FOR DAMAGES WILL BE REQUIRED WHEN THESE SPILLS OCCUR.**

Explanation of Policy

This policy shall apply not only to commercial storage and distribution facilities but also to residential and other users of petroleum products and radioactive and other toxic or hazardous materials. Spills, seepage or other accidents which occur on or adjacent to coastal waters or which, by virtue of natural or manmade drainage facilities, eventually reach coastal waters, are included under this policy. This includes the Pine Brook, Premium River and Mill Pond, East Creek, Gut Creek, Little Harbor Sound, the Sheldrake River, Gardens Lake, Larchmont Reservoir, Horseshoe Harbor, Larchmont Harbor and related marsh systems.

Government agencies will act vigorously under the applicable laws and regulations (including the New York State Petroleum Bulk Storage Act of 1983 and regulations issued or to be issued thereunder) to prevent or control such discharges, to minimize damage from them, and to obtain full and prompt compensation for the damage and costs caused by them. Such action shall include the requirement that such facilities shall not create undue fire or traffic hazard, nor impair property values. Such facilities must also meet safety standards for posting and labeling, and for transporting hazardous substances including the routing of materials in transit. To this end they will seek the cooperation of neighboring and upstream municipalities.

Petroleum storage at commercial facilities, on boats, and at marinas poses a potential threat to coastal resources. The fundamental problem associated with petroleum spills or hazardous materials is the contamination of water resources. To minimize damage from spills into coastal waters, the following standards shall be met:

1. The storage and use of petroleum products shall be undertaken to prevent any discharges to coastal waters.
2. Marinas shall provide facilities to collect petroleum and hazardous materials generated by marina patrons.
3. Wastes shall be disposed of using practices that are acceptable to the New York State Department of Environmental Conservation and U.S. Environmental Protection Agency.
4. Any proposed facility in the coastal area that stores petroleum products or hazardous materials shall be required to incorporate spill prevention measures into the design.

5. Any spill into coastal waters shall be cleaned up at the expense of the person responsible for such spills. To the extent permissible by law, the cost of the clean up activities undertaken by any level of government shall be reimbursed by the originator of the spill.

**POLICY 37                    BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO MINIMIZE THE NONPOINT DISCHARGE OF EXCESS NUTRIENTS, ORGANICS AND ERODED SOILS INTO COASTAL WATERS.**

Explanation of Policy

The coastal waters of the Town and Village are subject to eroded soils entering into their rivers, streams, creeks and ponds, which feed into Long Island Sound. These same bodies of water are also vulnerable to pollutants, such as coliform bacteria, chemical fertilizers, pesticides and other toxic materials, which are carried in stormwater runoff streams to the Sound. Measures should be taken to mitigate these problems since deterioration in water quality from this nonpoint source pollution is as great as the deterioration in water quality from poorly treated sewage discharges.

The federal Coastal Zone Act Reauthorization Amendments, Section 6217(g) of 1990, formally recognizes that nonpoint pollution is a key factor in the degradation of coastal waters, and directs the States to enact specific management measures to control nonpoint pollution. The Town and Village will support these measures.

The Town's Surface Water, Erosion and Sediment Control law, passed in 1992, controls and regulates land disturbing activities to assure that best management practices are used which minimize water pollution, retain valuable topsoil and vegetation and prevent flooding, erosion and sedimentation. This law requires applicants to submit a surface water and/or erosion and sediment control plan to the Town before any land disturbing activity is permitted. The current Westchester County Best Management Practices Manual for Erosion and Sediment Control is the recommended manual for procedures and methods whereby such plans can be reliably implemented.

The Village uses the County's Best Management Practices Manual as a guide for anyone undertaking a land disturbing activity within its borders, but does not require a permit.

The municipal governments of both communities will conform to these nonpoint pollution practices in their operations as well.

Other resource publications for erosion and sediment control guidelines are:

The Metropolitan Washington Council of Government's Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs;

The Guidance Specifying Management Measures For Sources Of Nonpoint Pollution In Coastal Waters issued under the authority of Section 6217 (g) of the Coastal Zone Act Reauthorization Amendments of 1990; and the New York State Department of Environmental Conservation's manual, Reducing The Impacts Of Stormwater Runoff From New Development.

Also important for the achievement of the purposes of this policy are the steps to be taken under Policy 33A and Policy 39A.

While the Town and Village nonpoint pollution mitigation measures represent a significant step forward in managing this pollution problem, this effort will never be wholly successful until upstream communities join with the Town and Village in watershed management programs. Watersheds cross municipal lines. Therefore, the Town and Village will request that Westchester County provide leadership to work toward planning and implementing watershed management programs.

The general guidelines which underlie the Town's Surface Water, Erosion and Sediment Control law and the County's Best Management Practices Manual, and which this Policy requires for compliance are as follows:

A. Standards for Erosion and Sediment Control

1. The construction site, or facilities, should fit the land, particularly with regard to its limitations.
2. Natural ground contours should be followed as closely as possible and grading minimized.
3. Areas of steep slopes, where high cuts and fills may be required, should be avoided.
4. Extreme care should be exercised in areas adjacent to natural watercourses and in locating artificial drainageways so that their final gradient and resultant discharge velocity will not create additional erosion problems.
5. Natural protective vegetation should remain undisturbed if at all possible; otherwise, plantings should compensate for the disturbance.
6. The amount of time that disturbed ground surfaces are exposed to the energy of rainfall and runoff water should be limited.
7. Runoff from upper watershed lands which would contribute runoff to areas subject to erosion should be diverted.

8. The velocity of the runoff water on all areas subject to erosion should be reduced below that necessary to erode the materials.
9. Sufficient ground cover should be applied to restrain erosion on that portion of the disturbed area undergoing no further active disturbance.
10. Runoff from a site should be collected and detained in sediment basins to trap pollutants which would otherwise be transported from the site. Such basins capture and mitigate the "first flush" of contaminant laden flows to protect downstream water quality.
11. Provision should be made for permanent protection of downstream banks and channels from the erosive effects of increased velocity and volume of runoff resulting from facilities constructed.
12. The angle for graded slopes and fills should be limited to an angle no greater than that which can be retained by vegetative cover or other erosion control devices or structures.
13. The length as well as the angle of graded slopes should be minimized to reduce the erosive velocity of runoff water.
14. Rather than merely minimize damage, the opportunity should be taken to improve site conditions wherever practicable.
15. Fills should not encroach on natural watercourses, construction channels, or flooding areas.
16. Permeable surfaces should be encouraged for driveways and parking lots, particularly in areas near wetlands and in floodways.
17. Zero Increase Requirement:
  - a. all development shall be undertaken to create no increase in rate of surface water runoff greater than the rate of such runoff existing prior to the development unless increases would facilitate the beneficial flow of water downstream;
  - b. Any new stormwater discharge into or adjacent to freshwater and marine surface waters, freshwater and tidal wetlands, should be further minimized to the extent necessary so as not to significantly impact wetlands or surface water by contamination with sediments, nor shall such runoff alter the hydrology of wetlands.

## B. Standards For Vegetation

Nonpoint pollution can be reduced by maintaining existing vegetation and adding vegetation that is appropriate to the site. Vegetation, including but not limited to trees, ground cover, and aquatic vegetation, is important for retention of soil and preventing sedimentation. New development and activities which interfere with such vegetation shall be conditioned upon the following:

1. The need for watering, fertilizing and pesticide application should be reduced by the use of native plants in landscaping and revegetation of sites.
2. Wherever feasible, natural vegetation, and in particular trees, should be retained, protected and supplemented. Stripping of vegetation, regrading, or other development shall be done in a manner which minimizes erosion.
3. The permanent (final) vegetation and erosion control measures should be installed as soon as practicable;

## C. Standards for Buffer Areas

An important component of nonpoint pollution management is the creation and protection of buffers along the watercourses of the Town and Village, which help to maintain and improve water quality by filtering stormwater runoff. Because our area has been highly developed, natural buffers have been altered in many areas. Natural buffers should be retained where they exist, and where appropriate, restored or enhanced.

## D. Standards for Prevention of Nonpoint Pollutants

Everyday activities have the potential to contribute to nonpoint source pollutant loadings. Some of the major sources include household, garden and lawn care activities, turf grass management, diesel and gasoline vehicles, onsite sanitary disposal systems, illegal discharges into stormwater drainage pipes, and pets and other domestic animals. By reducing the generation of these pollutants, adverse water quality impacts from these sources can be decreased.

1. Household hazardous chemicals, including automobile fluids, pesticides, paints, solvents, etc. should be disposed of at Westchester County designated sites on the days scheduled by the County's Department of Health.
2. Lawn and yard trimmings should be disposed of according to municipal directives for picking up such materials. However, yard composting should be encouraged. The use of chemical fertilizers and pesticides should be kept to a minimum.

3. Restricted use of herbicides and pesticides on golf courses, parks and recreation areas should be encouraged. Restriction of such uses also protects the wildlife and ecosystems of these areas.
4. Pollutants, such as floatables, waste oil, litter and pet excrement should not be discharged into storm drains.
5. Parking lots, gas stations, and other such entities, should be required to install appropriate silt traps which have the capability of removing oil and grease at the time application is made for new permits.
6. Septic tanks should be properly maintained.

**POLICY 38                    THE QUALITY AND QUANTITY OF SURFACE WATER AND  
GROUNDWATER SUPPLIES WILL BE CONSERVED AND  
PROTECTED, PARTICULARLY WHERE SUCH WATER  
CONSTITUTES THE PRIMARY OR SOLE SOURCE OF WATER  
SUPPLY.**

Explanation of Policy

The only water supply source to which this policy may apply is the Upper Reservoir (Sheldrake Lake) in the Larchmont Reservoir-James G. Johnson Conservancy. Although outside our Coastal Zone boundary, it is part of a property owned by the Village of Larchmont and dedicated by it to public use (see Section II at J and Q). It is no longer used as a regular water supply, but one of the uses specified in the October 1984 act of dedication is "standby water supply" in case of severe water shortage. Bearing in mind this use, the Village will make every effort to assure that the Upper Reservoir's water remains in State classification A ("all uses"), and will frame and enforce such rules as will promote this purpose. The necessary cooperation of upstream municipalities and of the Westchester County government will be sought in this connection.

Policies 30, 33, 36, 37 and 39 contain standards for ensuring the protection of ground and surface water quality.

**POLICY 39**

**THE TRANSPORT, STORAGE, TREATMENT AND DISPOSAL OF SOLID WASTES, PARTICULARLY HAZARDOUS WASTES, WITHIN COASTAL AREAS WILL BE CONDUCTED IN SUCH A MANNER AS TO PROTECT GROUNDWATER AND SURFACE WATER SUPPLIES, SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATION AREAS, IMPORTANT AGRICULTURAL LANDS AND SCENIC RESOURCES.**

Explanation of Policy

Federal and State laws provide a substantial base for regulation of the transport, storage, treatment, and disposal of solid wastes, particularly hazardous wastes. Strict enforcement of these regulations by the responsible authorities is extremely important to protect public health, the wetlands, fish and wildlife habitats, and water-related recreational resources of the coastal area. Especially important is adequate regulation of the transport of hazardous wastes through or near this coastal area, whether by land or on the nearby waters of Long Island Sound.

Solid wastes in this area consist primarily of garbage and refuse from households and retail stores, and construction debris. As far as is known, no significant quantities of hazardous wastes enter the local solid waste stream.

Patterns of garbage and refuse collection and disposal in the coastal area have generally been such as to have little impact on the resources enumerated in this policy other than some contribution to street litter (see Policy 39A). However, uncontrolled and illegal dumping -- a detriment to environmental and scenic values and potentially to public health -- continues in several locations including vacant lots, parks and the Village leaf disposal facility at the south end of Flint Park. The replacement of this facility as soon as possible by a suitable alternative mode of leaf disposal for the Village, and the restoration of the site, will, among other benefits, help to eliminate this form of pollution in that scenically attractive and ecologically sensitive location.

Corrective action will be taken by the municipal governments in the affected locations in a manner that will satisfy the requirements of this policy.

**POLICY 39A**

**LITTER AND DOG WASTE SHALL BE STRICTLY CONTROLLED IN THE COASTAL AREA.**

Explanation of Policy

Litter and dog waste create problems of pollution and "uglification" along streets and shoreline and in conservation and recreation areas in the coastal area. The problem has numerous sources including: illegal dumping in vacant lots, roadsides, stream beds, etc.; inadequate containment of household and commercial garbage and refuse before and/or during collection; wind-scattering of unsecured newspapers; casual discard of consumer items, chiefly containers and printed matter by individuals; and failure of many persons walking dogs to clean up after them. Despite

municipal laws against these practices and vigorous anti-litter measures by concerned civic and neighborhood organizations, the problems remain.

The municipal governments will work with concerned organizations and community leaders in renewed efforts to deal with these quality-of-life problems more effectively. They will study the most effective control techniques in comparable communities including action programs, incentives, penalties, means of enforcement, and educational efforts at all levels. The most promising and appropriate techniques will be tried locally and their effectiveness periodically evaluated.

**POLICY 40                    THE STATE POLICY REGARDING EFFLUENT DISCHARGED FROM MAJOR STEAM ELECTRIC GENERATING AND INDUSTRIAL FACILITIES INTO COASTAL WATERS DOES NOT APPLY TO THE TOWN OF MAMARONECK AND VILLAGE OF LARCHMONT.**

**POLICY 41                    LAND USE OR DEVELOPMENT IN THE COASTAL AREA WILL NOT CAUSE NATIONAL OR STATE AIR QUALITY STANDARDS TO BE VIOLATED.**

Explanation of Policy

New York's Coastal Management Program incorporates the air quality policies and programs developed for the State by the Department of Environmental Conservation pursuant to the Clear Air Act and State laws on air quality. The requirements of the Clean Air Act are the minimum air quality control requirements applicable within the coastal area.

According to New York State law, to the extent possible, the State Implementation Plan will be consistent with coastal lands and water use policies. Conversely, coastal management guidelines and program decisions with regard to land and water use and any recommendations considering specific sites for major new or expanded industrial, energy, transportation, or commercial facilities will reflect an assessment of their compliance with the air quality requirements of the State Implementation Plan.

According to New York State law, the Department of Environmental Conservation will allocate substantial resources to develop a regulatory and management program to identify and eliminate toxic discharges into the atmosphere. The State's Coastal Management Program will assist in coordinating major toxic control programming efforts in the coastal regions and in supporting research on the multi-media nature of toxics and their economic and environmental effects on coastal resources.

**POLICY 42                    COASTAL MANAGEMENT POLICIES WILL BE CONSIDERED  
IF THE STATE RECLASSIFIES LAND AREAS PURSUANT TO  
THE PREVENTION OF SIGNIFICANT DETERIORATION  
REGULATIONS OF THE FEDERAL CLEAN AIR ACT.**

Explanation of Policy

The policies of the State and local Coastal Management Programs concerning proposed land and water uses and the protection and preservation of special management areas will be taken into account prior to any action to change prevention of significant deterioration land classifications in coastal regions or adjacent areas. In addition, the Department of State will provide the Department of Environmental Conservation with recommendations for proposed prevention of significant deterioration land classification designations based upon State and local coastal management programs.

**POLICY 43                    LAND USE OR DEVELOPMENT IN THE COASTAL AREA MUST  
NOT CAUSE THE GENERATION OF SIGNIFICANT AMOUNTS  
OF THE ACID RAIN PRECURSORS: NITRATES AND  
SULFATES.**

Explanation of Policy

The New York Coastal Management Program incorporates the State's policies on acid rain. As such, the Coastal Management Program will assist in the State's efforts to control acid rain. These efforts to control acid rain will enhance the continued viability of coastal fisheries, wildlife, agricultural, scenic and water resources.

**POLICY 44                    PRESERVE AND PROTECT TIDAL AND FRESHWATER  
WETLANDS AND PRESERVE THE BENEFITS DERIVED FROM  
THESE AREAS.**

Explanation of Policy

Freshwater wetlands include marshes, swamps, bogs, and flats supporting aquatic and semi-aquatic vegetation and other wetlands so defined in the New York State Freshwater Wetlands Act and the NYS Protection of Waters Act.

Tidal wetlands include the following ecological zones: coastal fresh marsh, intertidal marsh, coastal shoals, bars and flats, littoral zone, high marsh or salt meadow, and formerly connected tidal wetlands. These tidal wetland areas are officially delineated on the Department of Environmental Conservation's Tidal Wetlands Inventory map.

The benefits derived from the preservation of tidal and freshwater wetlands include but are not limited to habitat for wildlife and fish and contribution to associated aquatic food chains, erosion, flood and storm control, natural pollution treatment, groundwater protection,

recreational opportunities, educational and scientific opportunities, and aesthetic open space in developed areas.

Major portions of the wetland complexes in this area (see Map 9), both freshwater and tidal, are protected as Town conservation areas. Their designation, together with associated open space, as Wildlife Habitats under Policy 7 and 7A, and as critical environmental areas will provide added protection against adverse impact from actions nearby. Further protection will be derived from the Town Freshwater Wetlands law revised in 1986.

However, the problem of protecting these areas is complicated by municipal boundaries. In the Premium area, the wetland complex, which is a major factor in local control of flooding, erosion and pollution, extends beyond the local coastal zone boundary into New Rochelle. The same is true of the Larchmont Reservoir area. Moreover, as is noted in the wildlife habitat narrative (Section II at M and N), all three wetland areas lie in watersheds originating wholly or partly beyond our municipal boundaries and are thus vulnerable to upstream impacts beyond local control. Accordingly, the municipal governments will seek the cooperation of the upstream municipalities in the implementation of this policy. They will also consider designating additional freshwater wetlands meriting protection.

The following will be used to determine consistency with this policy:

1. For those wetlands and riparian areas that are serving a significant flood protection and nonpoint pollution abatement function, this function should be maintained while protecting the other existing functions as measured by characteristics such as vegetative composition and cover, hydrology of surface water and ground water, geological factors, and species composition.
2. Where feasible, the restoration of preexisting functions of damaged wetlands and riparian systems in areas where the systems serve or could serve a significant nonpoint pollution abatement function as well as promote certain fish and wildlife values should be undertaken (see Policy 44A).
3. The use of engineered and/or native vegetation treatment systems, such as vegetated filter strips, where these subsystems can serve a significant nonpoint pollution abatement function should be encouraged.
4. Where possible, 100 foot buffers, at a minimum, should be preserved around all wetlands.
5. The use of fertilizers and pesticides should be kept to a minimum within all parts of the Town and Village, with particular concern for areas around wetlands.
6. The Town and Village should encourage the donation of easements around wetlands.

**POLICY 44A                    RESTORE TIDAL AND FRESHWATER WETLANDS ALREADY  
DAMAGED BY EROSION, SILTATION, AND POLLUTION.**

Explanation of Policy

Preservation and protection of wetlands from future damage, mandated by Policy 44, must be supplemented in this coastal area by measures to restore, insofar as possible, wetlands already damaged. This policy applies especially to the two tidal wetland complexes, which have suffered cumulative damage from upstream sources for many years - the Premium and the Hommocks wetland complexes; but damage to the Reservoir-Sheldrake-Leatherstocking wetland complexes has also occurred and requires restorative action. A staged program to correct damage from siltation, erosion, and pollution will therefore be combined with the protective measures under Policy 44 and with measures under Policy 7 and 7A concerning the wildlife habitats centering on all these wetlands. This program will be designed and carried out in appropriate cooperation with the City of New Rochelle and the Village of Mamaroneck, in whose jurisdictional control major parts of the three wetland complexes, and/or of the upstream sources of damage to them, are located. Specific implementation measures will be designed or revised in the light of, but need not in all cases await, the results of the technical, hydrological, and feasibility studies called for in Policy 14.

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**SECTION IV**

**PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS**

Back of Section IV title page

SECTION IV: Contents

A. LWRP 1986 and Major Accomplishments	5
1. Zoning	5
2. Habitat Protection	5
3. Legislation	6
B. Recommended Actions to Implement the LWRP	6
1. Land Use- Open Space	7
2. Land Use- Other Sensitive Areas	8
3. Wetlands and Other Natural Resources	8
4. Buffer Areas	9
5. Point and Nonpoint Pollution Control	10
6. Water Quality- Pollution (Monitoring and Control)	11
7. Flood Damage Prevention	12
8. Scenic Protection	12
9. Historic Sites	12
10. Recreational Facilities	13
11. Intermunicipal Watershed Cooperation	13
12. Management Plans for Conservation Areas	14
13. Harbor Management Plan for Larchmont Harbor and Other Waterways	14
14. Education	15
15. Lobbying Activities	15

Back of table of Contents Page

## SECTION IV: PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS

### A. LWRP 1986 and Major Accomplishments

The Larchmont-Mamaroneck LWRP, approved by the Department of State in 1986, enumerated in its Section IV ambitious zoning, planning, and environment enhancement goals for the two communities. Paramount was the preservation of open spaces so that flooding and erosion could be mitigated, wildlife habitats protected, development along the fragile coastline held to a minimum, and the superb visual quality of the communities maintained (Policy 14 [control of upstream flooding and erosion], Policies 7, 7A, 44 and 44A [protection of fish and wildlife habitats and wetlands], and Policies 21 [passive recreation] and 25 [scenic preservation]).

These goals have been attained to a remarkable degree. In the past eight years, the following major actions have taken place consistent with the Policies of the LWRP. (See Sections II and V for more detailed explanations.)

#### 1. Zoning

Mamaroneck upgraded the zoning category along its coastline from R-30 to R-50, upgraded from R-7.5 to R-30 the area around Hommocks Road (Hommocks Marsh area), and most recently after an exhaustive environmental study, zoned two golf course properties, Winged Foot and Bonnie Briar, as Private Recreation.

Larchmont established a Waterfront District along its coastline with specific controls on residential development at the Larchmont Yacht Club and the Larchmont Shore Club, and raised the zoning in all areas to R-50.

#### 2. Habitat Protection

The Premium River-Pine Brook Wetlands Complex (lying in the Town, Village and City of New Rochelle) was designated by New York State as a Significant Coastal Fish and Wildlife Habitat.

The Hommocks Salt Marsh Complex, the Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetlands Complex, and the Premium Salt Marsh Complex were designated as local Critical Environmental Areas and registered with New York State.

The Larchmont Reservoir-James G. Johnson, Jr. Conservancy was dedicated by Larchmont for public use in perpetuity.

Westchester County designated roughly the area between Boston Post Road and the Long Island Sound, which encompasses more than habitats alone, as a County Critical Environmental Area. Also included in that designation was the Larchmont Reservoir-James G. Johnson, Jr. Conservancy and the Premium River-Pine Brook Wetlands Complex.

### 3. Legislation

The Larchmont-Mamaroneck Coastal Zone Management Commission was established and empowered to review all Type I and Unlisted Actions for consistency with the LWRP before acceptance by the appropriate boards or commissions.

Mamaroneck updated and strengthened its Freshwater Wetlands and Watercourses Law with accompanying map.

A section was added to the Town's Site Plan Review Law requiring zero increase in the rate of runoff as a result of new development.

An entirely new Surface Water, Erosion and Sediment Control Law was enacted by Mamaroneck regulating land disturbing activities and incorporating the Westchester County Best Management Practices Manual. (In reviewing applications, the Village's engineer requires the use of the County's Best Management Practices where appropriate.)

Mamaroneck updated its Environmental Quality Review Law to better reflect local conditions.

Both the Town and Village amended their Flood Damage Prevention Laws to reflect new federal mandates. (Mamaroneck's flood map was updated in 1987.)

#### B. Recommended Actions to Implement the LWRP

With the enactment of the above noted actions, the Town and Village have embarked on a steady course of environmental protection and enhancement consistent with the Policies and purposes of the LWRP. However, experience demonstrates that there are additional local actions to be undertaken that will build on what has already been done, and serve to reinforce the environmental quality of the Town and Village as directed by this revised LWRP.

## 1. Land Use - Open Space

### a. Background

Of major concern is the problem of flooding, erosion and siltation from stormwater runoff. The high cost of dealing with this problem has become more apparent in two instances. The dredging of Gardens Lake in the Town and the difficulty of disposing of its dredge spoil exceeded by far the original amounts budgeted for that project. The difficulties presented by the mandated disposal methods for dredging the Premium River have caused repeated delays with the proposed costs far outweighing the original substantial monies granted by the State. Upland development exacerbates the problem of sedimentation, and nearby highways and roads transport toxic pollutants via stormwater runoff to our waterways.

Areas of low density development still remain and land use policies should reflect controls on development so that flooding, erosion and siltation are mitigated and the cost of coping with siltation does not become so prohibitive that economic resources to pay for remediation no longer exist.

### b. Substantial Areas of Open Space

(1). With the recent and very important zoning of Bonnie Briar and Winged Foot Golf Courses as Private Recreation, the Town has met, in large measure, its responsibilities toward mitigating flooding in the Shel Drake River drainage basin, and maintaining open space for its ecological, recreational and scenic values.

(2). Areas between and surrounding the two golf courses contain undeveloped properties of significant size. These localities contain streams, ponds and springs vital to the retention of water as the land slopes down toward the Sound. Current zoning is R-30, but some privately held tracts are two to three acres in size.

(3). Along the Boston Post Road in the Pine Brook-Premium River watershed are two large nursery properties adjacent to the Premium marsh which are non-conforming uses in a residential R-7.5 zone. Intensive residential development in these areas could increase siltation of Pine Brook and adversely impact the Premium River and Marsh.

(4). Adjacent to the Larchmont Reservoir between the Reservoir and the residences on Bonnie Way is an approximately two acre site owned by the Consolidated Edison Company for a transfer station. This site contains a branch of the Shel Drake River and surrounding wetlands, part of a highly flood prone area.

c. Recommendations

(1). The Town to consider rezoning of the R-30 areas between and surrounding Bonnie Briar and Winged Foot Golf Courses so that the water retention capabilities and scenic value of these areas are maintained.

(2). The Village to consider rezoning along the Pine Brook-Premium River in order that the Pine Brook and Premium River retain their scenic value, and siltation and degradation of these waterways and surrounding tidal wetlands are avoided.

(3). The Town to investigate the possibility of the granting of a conservation easement by Consolidated Edison to keep the area adjacent to the Reservoir as open space.

2. Land Use - Other Sensitive Areas

Recommendations

a. The Village to designate its small beach lot at the narrow eastern neck of Premium Point as a local Critical Environmental Area (CEA).

b. The Village to designate those portions of the Premium River-Pine Brook that have not previously been designated CEA so that it is brought into conformity with the Westchester County designated CEA.

3. Wetlands and Other Natural Resources

a. Background

In the spring of 1993, the Town commissioned aerial photographs of its boundaries which should result in a two-foot contour map of the Unincorporated Area. Impetus for this action came from the Surface Water, Erosion and Sediment Control Law, which requires applicants for building permits to prepare sediment control plans given the contours of the area under consideration. The resulting map will be available for their purchase.

b. Recommendations

(1). The Town's current Freshwater Wetlands Map uses the tax assessor's map as a base. Once the Town has acquired the contour map, a new Freshwater Wetlands map should be drawn, more accurately delineating wetlands areas. This map would then be added to an amended Freshwater Wetlands Law.

(2). The Conservation Advisory Commission's Natural Resources Inventory Map was last revised in 1977. The Town's new map, mentioned above, should enable that Commission to revise the Inventory Map and better depict remaining open spaces, wetlands, streams, ponds and recommended areas for protection.

(3). The Town and Village shall preserve all remaining natural wetlands (freshwater, tidal) and floodplains (riparian areas). These areas retain and filter water, prevent erosion and siltation, are the spawning grounds for marine organisms and feeding places for fish and wildlife.

(4)The Town and Village to review the State's Tidal Wetlands Law and its effectiveness regarding local wetlands.

4. Buffer Areas

a. Background

"Stormwater Management Guidelines for New Development" prepared by the New York State Department of Environmental Conservation recommends that "Care should be exercised to ensure that riparian vegetation, including grasses, shrubs and trees in the stream corridor or along the watercourse, remain undisturbed during land clearing, land grading and land development".

b. Recommendations

(1). The Town and Village to study the efficacy of buffer zones to preserve and protect sensitive areas.

(2). The Town and Village and associated conservation groups to encourage further public education and increased awareness of the value of undisturbed natural vegetation as it may exist along watercourses in developed and undeveloped parcels.

(3). Research should be conducted focusing greater attention on the value of vegetated buffers as they relate to the protection of lands and water bodies in the vicinity of our Critical Environmental Areas.

## 5. Point and Nonpoint Pollution Control

### a. Background

Federal, State and County studies on water quality and nonpoint pollution should result in an increase in governmental regulations to restore the water quality of Long Island Sound through improved sewage treatment, and control of polluted runoff by dealing with these problems at their source.

The federally funded, Environmental Protection Agency (EPA) administered Long Island Sound Study (LISS) has completed its Comprehensive Conservation and Management Plan (CCMP). The results of a computer model of the Sound's waters undertaken by the National Oceanic and Atmospheric Administration (NOAA) are anticipated this year.

The reauthorized Federal Coastal Management Act requires all States with Coastal Management Programs to establish nonpoint source programs approved by the EPA and NOAA (Section 6217). The New York State Department of State must have its program approved by 1996 to be fully implemented by January 1999, and additional measures implemented by January 2004, when the efficacy of the original 1999 measures have been evaluated.

The Westchester County Executive's Citizens Committee on Nonpoint Source Pollution made specific recommendations concerning land use controls to mitigate polluted runoff. It is expected that the County will implement these recommendations on its properties and work with the localities to educate them to institute similar measures in their communities. Because of the siltation and polluted stormwater runoff that occurs in our communities, steps can be taken locally to mitigate these hazards.

The Town's recently enacted Surface Water, Erosion and Sediment Control Law was a giant step forward in combating and minimizing pollution of coastal waters by runoff of excess nutrients, organics, and eroded soils.

### b. Recommendations

- (1). Elimination of storm drain-sanitary sewer connections. Town and Village to continue to give high priority to elimination of illegal connections of storm drains to sanitary sewers, whether on private or municipal property, in cooperation with State and Westchester County agencies.

(2). The Town should require golf courses to develop an integrated pest management plan which adopts an organic approach and includes a surface and groundwater monitoring program. Use of synthetic fungicides should be discouraged.

(3). The Town should consider the use of wet ponds and artificial wetlands to deal with upstream sedimentation settling in Gardens Lake, the Larchmont and Mamaroneck Reservoirs, Goodliffe Pond and the Pine Brook/Premium River with intermunicipal cooperation and support. (See "Intermunicipal Watershed Cooperation".)

(4). On-site sanitary systems. Town and Village to require replacement of on-site sanitary systems by connection to public sewers wherever possible without unreasonable cost. Alternatively, the most effective and pollution-free on-site system should be used with post-installation monitoring by municipal authorities to assure performance.

(5). Large Silt Traps. Silt, trash, and other pollutants, as was noted in Section II, enter the Premium and Hommocks marshes from upstream sources. The Town and Village should study the feasibility of using large silt traps, equipped with oil collars and trash racks at the outlets of the Premium River, Pine Brook, and East Creek.

(6). Litter and dog waste. Town and Village to study effective approaches to control these nuisances with a view to new legislative, administrative, and/or community action.

(7). Illegal dumping. Town and Village to upgrade enforcement of laws forbidding dumping on or near public property.

(8). Vessel waste discharges. Town and Village to keep the problem of waste discharges from vessels in coastal waters under continuing review, and take any necessary steps to comply with applicable laws and regulations.

## 6. Water Quality - Pollution (Monitoring and Control)

### a. Background

The Town and Village do a limited amount of water quality testing. The Conservation Advisory Commission retains a consultant who monitors mainly for indices of coliform contamination. The County Health Department is notified when high coliform counts are found and they are asked for assistance in tracking the problem. Project Riverwatch monitors water quality at the Reservoir. The Town

and Village continue their efforts at controlling non-point pollutants from entering stormwater by routine street sweeping and periodic cleaning of catch basins.

b. Recommendations

(1). Water quality testing and monitoring should include all of the waterways within our borders such as East Creek, the Premium River-Pine Brook, Gardens Lake and Larchmont Harbor.

(2). Town and Village to continue to develop, with County agencies, a systematic program to inspect, monitor, and report on water quality for the entire watersheds of which the Town and Village are only one part. Town and Village should pressure the County to implement its nonpoint source pollution recommendations so that all upstream communities comply with the County's Best Management Practices.

(3). Standby water supply. Village could seek necessary cooperation of upstream municipalities and County government, in order to maintain Sheldrake Lake water quality classification "A" required for standby water supply.

7. Flood Damage Prevention

Recommendation

The Town to request that the FEMA maps be revised to reflect the data found in the recent "Sheldrake River Watershed Hydrologic Study".

8. Scenic Protection.

Recommendation

Town and Village to enhance protection of scenic values by applying the siting and development guidelines in Policy 25, and by appropriate emphasis on preserving open space for its environmental and scenic value.

9. Historic Sites.

a. Background

Policy 23 lists numerous areas and structures meriting preservation due to their historical, architectural, cultural or archaeological significance. It commits the Town and Village to establish appropriate procedures for designation of such sites for

protection or restoration, including the encouragement of the Larchmont Historical Society's efforts to list sites in this area on the National or State Register of Historic Places.

b. Recommendation

A reconnaissance level survey, followed by an intensive survey, of historic resources and archaeological sites in the Town and Village should be undertaken in order to have sufficient data to make educated land use decisions.

10. Recreational Facilities.

Recommendation

Town and Village to take such steps regarding land use as may be appropriate to prevent reduction of existing waterfront recreational facilities or of access thereto.

11. Intermunicipal Watershed Cooperation.

a. Background

The NYS Department of State is preparing its first Long Island Sound Regional Coastal Management Program (CMP) addressing the needs and priorities of the shorelines of Westchester, the Bronx, Queens, Nassau and Suffolk Counties. When complete, this LIS CMP will replace the State CMP for this area. However, this Program does not address upstream watershed management problems, and the Town and Village will have to look to Westchester County to address those needs.

b. Recommendations

(1). Westchester County should be requested to amend its Critical Environmental Area Law so that notification of actions impacting more than one municipality is given to all affected municipalities, and a mechanism for intermunicipal consistency and environmental quality review is added to that law.

(2). Town and Village to participate in intermunicipal mechanisms for better control of flooding, erosion, and siltation through coordinated planning and management of shared watersheds, particularly the Pine Brook-Premium, Sheldrake and Mamaroneck drainage basins, and work with the County Soil and Water Conservation District and other concerned agencies to that end.

(3). Town and Village to participate in cooperative efforts with neighboring municipalities and concerned County agencies to control chemical and organic pollution affecting the coastal zone, including timely repair of County sewers and construction of adequate sound shore sewage treatment facilities.

(4). Town and Village to encourage the proper use and maintenance of Saxon Woods Park by Westchester County.

## 12. Management Plans for Conservation Areas

### a. Background

The Town and Village hired a naturalist consultant who surveyed the Hommocks Marsh, the Premium River-Pine Brook Area, and the Reservoir-Sheldrake-Leatherstocking Complex reporting on the birds, wildlife and flora. He also drafted a Management Plan for the Reservoir-Sheldrake-Leatherstocking Critical Environmental Area (CEA) and a Management Report for the Hommocks Salt Marsh Complex CEA (see Section IX Appendices H and I) recommending actions that should be taken to maintain and enhance these areas. This was a joint project of the Coastal Zone Management Commission and the Conservation Advisory Commission.

### b. Recommendations

(1). The above naturalist's recommendations should be considered for implementation to prevent these sensitive areas from further deterioration.

(2). Management plans should become a regular part of Critical Environmental Area maintenance.

## 13. Harbor Management Plan for Larchmont Harbor and Other Waterways

### a. Recommendations

(1). The Village and its waterfront clubs should study the benefits of establishing a Harbor Management Plan for Larchmont Harbor. (Also see 5 b.(8) above).

(2). The Village and Town to study the issue of restricting the size of docks especially in its coves and embayments. The Village of Mamaroneck should be invited to participate in this effort.

(3). The Village to encourage Westchester County to implement a "Feasibility Study of a Cooperative Harbor Maintenance Program" projecting dredging needs for the five Sound shore communities and proposing an effort to accomplish same.

#### 14. Education

##### Recommendation

Town and Village to develop training sessions for volunteers who serve on various Commissions to inform them of the environmental aspects of their respective municipalities and how local laws address those issues.

#### 15. Lobbying Activities

##### Recommendations

- a. The Town and the Village through their designated environmental organizations should monitor proposed legislation at all levels of government and be prepared to approve, disapprove or suggest improvements to these proposed laws.
- b. The CZMC should pay particular attention to proposed changes to the State's Waterfront Revitalization legislation, which created the local programs, and make comments on any proposed changes from the standpoint of the CZMC experience in implementing the local program. The CZMC should support an amendment to the consistency portion of the State law which would mandate that actions of a municipality impacting on a neighboring municipality with an approved LWRP should be subject to consistency review by the LWRP municipality. In addition, County and school districts should be subject to consistency review.

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**SECTION V**  
**TECHNIQUES FOR LOCAL IMPLEMENTATION**

Back of Section V title page

## SECTION V: Contents

A. Summary	5
B. Local Laws and Regulations Pertinent to the LWRP	
1. Architectural Review	5
2. Coastal Zone Management Commission	6
3. Conservation Area Regulations	6
4. Consistency	6
5. Critical Environmental Areas	6
6. Dog Waste	7
7. Dumping	7
8. Flood Damage Prevention	8
9. Freshwater Wetlands	8
10. Incinerators	8
11. Larchmont Reservoir	9
12. Litter	9
13. Parks	9
14. Satellite Earth Station	9
15. Sewers	9
16. Signs	10
17. Site Plan Approval	10
18. State Environmental Quality Review	11
19. Subdivision Regulations	11
20. Surface Water, Erosion and Sediment Control	11
21. Trees	12
22. Zoning	12
C. Local Law to Establish the Coastal Zone Management Commission	13
D. Other Laws and Directives Which Serve to Implement the LWRP	
1. Comprehensive Master Plans	16
2. County Critical Environmental Areas	17
3. New York State and Federal Regulations:	
a. Coastal Erosion Hazard Area	17
b. Tidal Wetlands	17
c. Significant Habitats	18
d. Stream Protection Act	18
e. Reauthorization of Federal Coastal Zone Act	18
f. Long Island Sound Regional Coastal Management Program	18
E. Financial Resources Necessary to Implement the LWRP	19
F. Local, State and Federal Compliance	
1. Local	19
2. State	19
3. Federal	19

Back of TOC page

## SECTION V: TECHNIQUES FOR LOCAL IMPLEMENTATION OF THE PROGRAM

### A. Summary

This section specifies the local legal, administrative, managerial and financial techniques by which the LWRP is to be carried out by the Town of Mamaroneck and Village of Larchmont.

Part B, Local Laws and Regulations Pertinent to the LWRP describes legislative means in both municipalities, including local laws and regulations that existed prior to the adoption of the LWRP that are used in implementing the Program, and amendments to those laws and new laws that were enacted as a result of the LWRP planning process (amendments and new laws are indicated with an asterisk). For each item listed, an explanation is given of its application to particular LWRP Policies.

Part C, Local Law to Establish the Coastal Zone Management Commission delineates the management structure, the Coastal Zone Management Commission, which was created to monitor and coordinate the implementation of the LWRP under the joint authority of the two municipal governments.

Part D, Other Laws and Directives Which Serve to Implement the LWRP includes the Mamaroneck-Larchmont Master Plan, which serve to implement the LWRP.

Part E, Financial Resources Necessary to Implement the LWRP discusses the financial resources that will be provided locally or sought elsewhere to implement special projects and other actions with financial implications as well as the costs of day-to-day management.

Part F describes local, New York State and Federal consistency in relation to the LWRP.

### B. Local Laws and Regulations Pertinent to the LWRP. (Laws passed specifically to implement the LWRP are indicated with an asterisk.)

#### 1. Architectural Review

- a. Town Local Law No.7, 1990 creates a Board of Architectural Review with power to grant or deny permits "to encourage quality exterior building design and good appearance and to relate such design and appearance to the sites and surroundings of structures" for commercial properties. Town zoning law, Chapter 89, requires application to the Town Board for special use permits to change architectural design or landscaping in specified respects.
- b. Village Code created a Board of Architectural Review in 1975 with power to deny permits for building or alteration to commercial or residential properties

that would, if granted, result in monotonous similarity, visual offensiveness or discord, or impair enjoyment or value of property.

c. Application: Scenic values (Policy 25).

2. Coastal Zone Management Commission (CZMC)\*. Also see Part C.

Town Local Law No. 4, 1986 Chapter 15A and Village Local Law No. 4, 1986 Chapter 253, both enacted on June 30, created a bi-municipal Coastal Zone Management Commission to coordinate and monitor the implementation of the LWRP.

3. Conservation Area Regulations

Town Law, Chapters 16 and 17, creates a Conservation Advisory Commission (CAC) on which the Town and the Villages of Larchmont and Mamaroneck are represented, designates certain Conservation Areas under the CAC's supervision, and directs that these be maintained in their natural state. A resolution adopted in September 1983 dedicated these areas as permanent parkland.

a. Application: Policies 7/7A, 14, 19, 20, 21 and 25.

4. Consistency\*

The consistency law, adopted on June 30 as Town Local Law No. 5, 1986 and Village Local Law No. 5, 1986 Chapter 292, requires that local government actions, including granting of permits, be consistent to maximum extent practicable with the policies and purposes of the LWRP, and establishes procedures to assure such consistency.

a. Application: All Policies.

5. Critical Environmental Areas

a. Several environmentally vulnerable areas were designated as Critical Environmental Areas (CEA) by the Town and Village as defined under Policy 7A. Under the State Environmental Quality Review Act (see below), any "unlisted" action in, or substantially contiguous to, a CEA must be treated as a "Type I" action, requiring special scrutiny for environmental effects.

Town Local Law No. 8, 1986 adopted on June 30 amended the Environmental Quality Review law Chapter 23 to name three CEA. In 1989,

two of these areas were renamed by the Town so that the names were more descriptive of the areas comprised:

1. The Premium River-Pine Brook Wetlands Complex (formerly The Premium Salt Marsh Complex);
  2. The East Creek-Hommocks Area (formerly The Hommocks Salt Marsh Complex);
  3. The Larchmont Reservoir-Sheldrake-Leatherstocking Freshwater Wetland Complex.
- b. Larchmont Local Law No. 7, 1986, Chapter 254 Article I, adopted on June 30 refers to the Village portion of the first two CEA as the Pine Brook-Premium Border and the Hommocks Border.
  - c. The 900 foot above-ground section of East Creek, which runs approximately along the Town-Village border, was added by the Town as Local Law No.4, 1987, Chapter 23, and by the Village as Local Law No. 3, 1987 making this area part of The East Creek-Hommocks Area CEA.
  - d. Application: Policies 7/7A, 11, 14, 44, 44A.
6. Dog Waste
- a. Town Law, Chapter 6, Article II, requires dog-walkers to immediately remove feces and forbids putting feces in storm drains.
  - b. Village Law No. 5, 1981 is similar.
  - c. Application: Policy 39A.
7. Dumping\*
- a. Town Local Law No. 6, 1987, Chapter 22, was enacted because "of a growing problem of dumping rubbish and discarded materials on various properties of the Town, including several park and recreation areas...."
  - b. Village Code, Chapter 255, makes similar provisions. All dumping must take place in a Village designated area.
  - c. Application: Policy 39A

## 8. Flood Damage Prevention Laws and Map

- a. In accordance with Federal mandate, the Town updated its Flood Damage Prevention Law (Local Law No.3, 1988), which sets construction controls on building in flood plain areas, and adds a section pertaining to building requirements in the State designated Coastal High Hazard Areas. Upon recommendation of the CZMC, the new law contains language allowing for extension of the flood plain if new conditions and new studies show that such extension is merited. The Federal Emergency Management Agency (FEMA) published new Flood Insurance Rate Maps for the Unincorporated Town in September 1989 (Local Law No. 5, 1989, Chapter 28).
- b. Similarly, the Village updated its Flood Damage Prevention Law, Local Law No. 2, 1987, Chapter 266. This law sets the same building standards, as contained in the Town law for construction in flood plain areas, and is based on the Village's Federal Flood Insurance Rate Map of 1984.
- c. Application: Policies 5, 11 and 14; also 7/7A, 44.

## 9. Freshwater Wetlands Laws

- a. \*The Town adopted a Freshwater Wetlands and Watercourses Protection Law, Local Law No. 7, 1986, Chapter 88, which preserves and protects locally mapped wetlands of less than 12.4 acres. That law was amended by Local Law No. 5, 1988 so that an application for a freshwater wetlands permit is made to the Building Inspector rather than the Town Clerk. However, the power to grant such permits remained with the Planning Board subject to the approval of the Consulting or Town Engineer.
- b. Village Code is outdated by recent amendments to State law and requires revision.
- c. Application: Policies 7/7A, 13, 14, 44, 44A.

## 10. Incinerators

- a. Town Local Law No. 3, 1992 protects public health and safety by prohibiting burning in incinerators.
- b. Village apartments no longer have incinerators.
- c. Application: Policy 30.

11. Larchmont Reservoir

- a. Village Law No. 4, 1984 dedicates in perpetuity the Larchmont Reservoir property to public uses such as conservation area, wildlife, preserve, nature study area, reservoir, standby water supply, flood control, education area, and other compatible uses.
- b. Application: Policies 7/7A, 14, 19, 21, 38, 44, 44A.

12. Litter

- a. Town Law, Chapter 30, (Garbage and Rubbish) prohibits littering on public property and on private property adjacent to public places.
- b. Village Code, Chapter 147, also prohibits littering on public and private property.
- c. Application: Policy 39A.

13. Parks

- a. Town Law, Chapter 55, prohibits littering or inflicting harm on wildlife, birds or plants in Town parks.
- b. Application: Policies 7/7A, 25, 39A.

14. Satellite Earth Stations

- a. Village Law No. 7, 1984 sets standards for size, position, color, etc. of satellite earth stations (dish antennae) and requires special permit for such devices exceeding 18" diameter. Purpose is to prevent eyesores.
- b. Town zoning ordinance with limits on size and height of structures can apply to dish antennas.
- c. Application: Policy 25.

15. Sewers

- a. Town Law, Chapter 60 (Plumbing Code): Article VIII requires that liquid wastes from any plumbing system be discharged into public sewers; Article XII prohibits any connection with any storm water drain or with any stream or watercourse within the Town for the removal of sewage from any premises; and

prohibits surface water from the ground, or from the cellar or roof of any building, to enter any pipe or drain that discharges into any fixture or trap connected with the public sewer; Article XIV mandates that such drainage shall be discharged into a storm drain.

- b. Village Code forbids connection of roof leaders, water drainage pipes or storm water drains to the sanitary sewer system and requires that those so connected shall be disconnected and drainage rearranged as directed by the Village Engineer.
- c. Application: Policy 33A.

#### 16. Signs

- a. Town Law, Chapter 14, Article XIX (building code) regulates appearance of signs in commercial areas, and Local Law No. 7, 1990 directs that the Board of Architectural Review give its approval. Signs are forbidden in residential areas with some exceptions. Chapter 3 prohibits posting of bills, placards, etc. on public property.
- b. Village Code regulates appearance of signs in commercial districts subject to Board of Architectural Review approval, and forbids most signs in residential areas.
- c. Application: Policy 25.

#### 17. Site Plan Approval

- a. Town Local Law No. 3, 1984 requires that a plan for any proposed development and use of land be submitted to the Planning Board demonstrating that such action is consistent with standards of traffic, parking, screening and landscaping, environmental quality, drainage and sewage disposal, as set forth in the law, and is in harmonious relationship with adjacent uses.
- b. \*Town Local Law No.6, 1986 (Chapter 66A) amended Local Law No. 3-1984 to set new limits on stormwater runoff from new development "so that there will be no measurable increase in erosion or flooding". Generally, on sites of 10,000 square feet or more, overflow from the site is to be limited to zero increase in the rate of runoff.
- c. Village Code (Chapter 283) requires applicants for building permits to submit detailed site plans to the Planning Commission, and sets criteria for approval

including drainage, preservation of natural features, screening and landscaping, etc.

- d. \*Village Local Law No.6, 1986 amended Chapter 283 and similarly controlled and regulated the rate of runoff in new development.
- e. Application: Policies 5, 11 and 14.

#### 18. State Environmental Quality Review (SEQR) Laws

- a. Town Local Law No. 4, 1985, Chapter 23, which repealed and replaced the original local State Environmental Quality Review law of 1977, provided for environmental quality review under procedures laid down in the State SEQR law of actions that may significantly affect the environment. The Town law was again revised in 1989 and became the Mamaroneck Environmental Quality Review law (MEQR), Local Law No. 4, 1989. The amendment helped to better define those actions subject to consistency review.
- b. Village Code included a SEQR law adopted in 1976. This law was updated when the Village adopted the New York State SEQR regulations promulgated in 1987-88.
- c. Application: As supplement to State EQR law, Town law provides local criteria for processing permit applications for projects that could produce runoff, siltation, pollution, etc. damaging to natural or built environment. (Policies 7/7A, 11, 14, 18, 23, 25, 30, 44, 44A, among others.)

#### 19. Subdivision Regulations

Town and Village regulations for approval of subdivision plats, issued by the Planning Board, require developers to (among other things) provide for drainage, water, sewerage, traffic, parks and playgrounds.

- a. Application: Same as for zoning laws below.

#### 20. Surface Water, Erosion and Sediment Control\*

- a. Town Local Law No. 8, 1992 safeguards persons, protects property, prevents damage to the environment and promotes public welfare by guiding, regulating and controlling the design, construction, use and maintenance of any development or other activity which disturbs or breaks the topsoil or results in movement of earth.

b. The Village, as of this date, has not adopted a similar law (see Section IV at 5 b(2) and requires use of Westchester County Best Management Practices through its Site Plan review process.

c. Application: Policy 37

## 21. Trees, Protection of

a. Town Law No. 10, 1985 (Chapter 76) prohibits destruction of any tree above specified size without a permit; creates a Tree Preservation Commission with power to grant permits under specified criteria and procedures. This law was twice amended (Local Law No. 6, 1990 and again in 1991) to clarify the purpose and intent of the law.

The Village adopted its Street and Park Trees Local Law No. 8 in 1981, and amended it by adding penalties for offenses for tree removal by enacting Local Law No. 5, 1988.

b. Application: Policies 7/7A, 14, 25, 37.

## 22. Zoning

a. Town law, Chapter 89, establishes land use and density controls in specified zones in accordance with a comprehensive plan to guide the growth and development of the Unincorporated Area, and prescribes rules and procedures regarding nonconforming uses, variances, appeals, etc. Village Code, Chapter 295, establishes comparable zoning patterns and procedures for the Village.

b. \*Concurrent with its approval of the LWRP, the Town amended its Zoning Law in 1986 to require larger building lot sizes in two areas:

(1). lot size in the Hommocks Middle School area was increased from R-7.5 to R-30 in order to conform to adjacent land uses and to afford protection to the Hommocks Marsh against adverse development. In 1988, a portion of this area along Rock Ridge Road was restored to its former R-7.5 status since the higher zoning had made all properties there nonconforming.

(2). Zoning of the private residential areas on the Town portions of the coastline, Hommocks Peninsula and Premium Point, was raised from R-30 to R-50 in order to preserve the scenic low density character of the coastline, and minimize impact on local ecosystems.

- c. \*The Village amended its Zoning Law with Local Law #3-1991. (A detailed history of this law can be found in the fourth and fifth Annual Reports. This law created a new Waterfront District (W) with R-50 zoning (minimum lot size 50,000 square feet) encompassing all properties fronting directly on the open water of Long Island Sound and Larchmont Harbor. The W District extends from Cedar Island west to the edge of the Premium Mill Pond and includes the Larchmont Yacht Club, the Larchmont Shore Club and Manor Park. Notable amendments include "no structure shall be located within 100 feet of the water's edge" and reduced lot coverage by principle structures, paved or impermeable surfaces.

On the club properties (Larchmont Yacht Club, Larchmont Shore Club, Manor Park), only clubs are permitted as a matter of right, but single family homes may be developed by special permit from the Village Board. Lots for such homes may be as small as 30,000 square feet if the number of homes is no more than would be allowed under the R-50 rule, and if this would better preserve the natural and scenic qualities of the site.

- d. Application: Essential to land use controls in Section IV-A and to the policies to which they relate regarding flood control, protection of habitats and wetlands, scenic values, especially 7/7A, 11, 14, 25, 44, 44A.

C. Local Law to Establish the CZMC

1. Background:

Design of an effective management structure for the implementation of this Program had to take into account its bi-municipal character, as well as the fact that no municipal or intermunicipal body existed with the overall responsibility for the wide range of activities covered by the Policies in Section III and the actions in Sections IV and V. Physical activities affecting the Coastal Zone are dealt with primarily by the municipal engineers and public works departments of the two municipalities, supported by various committees responsible for recreation, parks and trees, beautification, etc. Land use and related functions are primarily the responsibility of the two municipalities' respective Planning Boards and Zoning Boards, each functioning within its own municipal boundaries. The conservation areas, water quality monitoring, and protection of the freshwater wetlands are the responsibility of the Townwide Conservation Advisory Commission assisted by the Town Conservation Department. All these bodies, as their duties require, work in cooperation with local nongovernmental groups (see list in Section II) and with the local schools.

Since no part of this pattern fitted the unique requirements of LWRP planning, a Coastal Zone Management Committee (CZMC) was created by the Village of Larchmont in

September 1982 to undertake the drafting of an LWRP under a State planning grant. Soon after, the Town of Mamaroneck also received an LWRP planning grant. Recognizing the extensive interdependence of the two areas, the Town and the Village thereupon began working together. The Town Council appointed several Town residents to the CZMC, including a co-chairman. Under the authority of both municipal governments, the CZMC undertook to draft a single LWRP for the Village of Larchmont and the Unincorporated Area of the Town.

In its drafting work the Committee and its planning consultant conferred with many of the bodies mentioned above. Moreover, its membership included chairmen or members of a number of them, notably the Village Planning Commission and Zoning Board and the Conservation Advisory Commission. Thus the Committee developed a unique overview of the problems and possibilities facing the two municipalities in their shared Coastal Zone. This overview function is extremely important and was provided for in the implementation phase in order to facilitate coordination between two neighboring municipalities working together in a single Program.

## 2. Commission Composition:

- a. Appointment: Five members are appointed by the Village of Larchmont and five by the Town of Mamaroneck. The chairman, to serve a one-year term, is appointed jointly by the Supervisor of the Town and the Mayor of the Village. The other ten members are appointed for a term of three years and are eligible for reappointment.
- b. Qualifications: Each member serving on appointment by the Village must be a resident of the Village, and each member serving on appointment by the Town must be a resident of the Unincorporated Area of the Town. Members will be chosen for their demonstrated knowledge, ability, and readiness to serve the Commission in the functions described below, and with due regard to maintaining among the membership a range of special aptitudes and expertise relevant to the Commission's work.
- c. Functions and powers: The Commission's basic task is to monitor and coordinate the implementation of the LWRP, its Policies and projects, including physical, legislative, regulatory, administrative, and other actions included in the Program. In pursuance of this task the Commission:
  - (1) Advises the municipal governments on implementation priorities, work assignments, timetables, and budgetary requirements of the Program.

(2) Consults with the appropriate departments and professional staffs of the two municipalities concerning the matters in subparagraph (1) obtaining reports from them as necessary to assure implementation of the Program and consistency of local actions with it.

(3) Maintains liaison with related municipal bodies (including but not limited to the Planning Board/Commission, the Zoning Board of Appeals and the Conservation Advisory Commission) and with concerned nongovernmental bodies in order to further the implementation of the LWRP.

(4) Monitors in timely fashion the planned actions of State and Federal agencies within the Coastal Zone in order to assure consistency of such actions with the LWRP, and recommend appropriate action where necessary.

(5) Provides to any board, commission, or other agency of the Town or Village (including, but not limited to, the Planning Board/ Commission and the Zoning Board of Appeals), in such manner as may be prescribed by law, its opinion as to whether and in what respect, a proposed action by, or subject to the permission of, such body, may be inconsistent with the policies of the LWRP.

(6) Subject to the approval of the municipal governments, makes application for funding from State, Federal, or other sources to finance projects under the LWRP.

(7) Develops and maintains liaison with neighboring municipalities and with State and County agencies concerned with a view to strengthening and developing cooperation in, and common management of, shared drainage basins for flood and pollution control and other purposes.

(8) Makes an annual report to the municipal governments on progress achieved and problems encountered during the year, and recommending such actions as the Commission considers necessary for the further implementation of the LWRP.

(9) Makes or prepares such reports and communications concerning the Program to the Department of State and other agencies of the State of New York, by or on behalf of the municipal governments, as may be appropriate or required.

(10) ms such other functions regarding the Coastal Zone as the Village Board and the Town Board may assign to it from time to time.

d. Other provisions:

(1)Members of the CZMC serve without compensation. They are entitled to reimbursement for necessary expenditures in the performance of their work, subject to budgetary limitations.

(2)The Commission may engage such professional and clerical help and purchase such supplies and services as are necessary for its work, subject to prior budgetary approval by the two municipalities.

(3)The Commission meets not less than once a month except in December. Its meetings are open to the public. It keeps and distributes minutes of its proceedings. A majority of its members constitute a quorum.

3. Municipal Governments:

To assure timely and coordinated implementation of the Program at the local government level, the two municipal governments coordinate their policies and actions as necessary, taking into account the advice and recommendations of the Commission. For this purpose each municipal government appoints a liaison trustee or council member to work with the Commission. The liaison members serve as channels for guidance to the CZMC from their respective governments. They consult as appropriate with each other, and with their respective governments, on the work of the Commission, the implementation of the Program, and any questions arising in that connection that may require action by or guidance from one or both governments or coordination between the two governments.

D. Other Laws and Directives Which Serve to Implement the LWRP

1. Comprehensive Master Plans

It should be noted that Comprehensive Master Plans were written for the Village and the Unincorporated Area in 1966 and reviewed in 1976. Among subjects in that document relevant to the LWRP are open space and recreation areas. The plans have never been adopted formally by either municipal government, but recommendations in them have been drawn on in decisions on land use, parking, traffic, etc. In 1986, the Town and Village began to update their Master Plan in stages. Phase I, completed in September 1986, dealt with the eastern portion of the Town and Village. Phase II, completed in October 1987, dealt with the Boston Post Road. Traffic, engineering and parking studies were included in the updates.

## 2. County Critical Environmental Areas

In 1989, Westchester County enacted a law designating certain areas that are critical under the State Environmental Quality Review law, but do not lie wholly within one municipality, and areas that might impact on County Property as **Critical Environmental Areas** (CEA), thereby entitling them to some measure of legal protection against adverse actions in or near them. The County adopted a "cultural boundary" which is mainly a line mapped from the Boston Post Road to Long Island Sound. The Premium River-Pine Brook Wetlands Complex and the Larchmont Reservoir-James G. Johnson, Jr. Conservancy were also designated County CEAs.

## 3. New York State & Federal Regulations

### a. Coastal Erosion Hazard Area

The Coastal Erosion Management Program of the New York State Department of Environmental Conservation (DEC) completed in 1991 Coastal Erosion Hazard Area maps for the Town and Village, which are on file in the respective municipal offices. Both municipalities chose not to enact local Coastal Erosion Hazard Area laws. Therefore, the State law, which is basically a permitting process, will be enforced by the DEC. The law regulates the construction of new homes, modifications and additions to existing buildings, installation of above-ground and in-ground swimming pools, construction and restoration of erosion protection structures such as seawalls, the excavation or dredging of beach material and other actions within the mapped area.

### b. Tidal Wetlands

(1). Actions involving Tidal Wetlands are regulated by NYS law (Chapter 25) administered by the DEC. The DEC must provide a map of tidal wetlands and provide applications for the granting of permits. The law regulates the wetlands and the adjacent area extending 300 feet landward of the most landward edge of the tidal wetlands. Principal structures must be set back 75 feet from the edge of wetlands, and septic tanks must be at least 100 feet landward from the wetlands edge. The law regulates draining, dredging, any form of dumping or filling, any pollution and anything which may substantially alter or impair the function of the wetland. Civil and criminal penalties may be imposed.

(2). The Environmental Protection Agency and the U.S. Army Corps of Engineers have concurrent jurisdiction over the dredge and fill of the waters of the United States. The Fish and Wildlife Service is an important advisor to these agencies as is the Department of Agriculture, Soil and Conservation Service.

Federal wetlands permits are reviewed by the State DOS, and must be approved for consistency with the State's coastal policies.

c. Significant Habitats

New York State mapped, narrated and designated habitats included for protection in New York State's federally-approved Coastal Management Program as provided for under 19 NYCRR 602. There are seven designated Significant Coastal Fish and Wildlife Habitats in Westchester County. The Premium River-Pine Brook Wetlands Complex is one of these (see Policy 7).

d. Stream Protection Act

This law prohibits any person from changing, modifying or disturbing the course of any channel or bed of any stream without obtaining a permit from DEC. The law also requires a permit for any dam, dock, dredging or filling in any navigable waters or adjacent marshes or wetlands.

e. Reauthorization of Federal Coastal Zone Act

When the Federal Coastal Zone Act was reauthorized in 1990, Section 6217 was added to require all States with coastal management programs (CMP) to establish coastal nonpoint source programs which must be approved by the EPA and NOAA. Once these programs are approved, they will automatically be incorporated into each State's coastal management and nonpoint source programs. Programs approved in 1996 must be fully implemented by January 1999, and additional measures implemented by January 2004 when the efficacy of the original 1999 program implementations have been evaluated. Recommendations made in these documents will also impact the administration of local CMP as well as require changes in regulation of nonpoint source pollutants flowing into the Sound.

f. Long Island Sound Regional CMP

The Department of State is preparing its first regional Coastal Management Program (CMP) to address the needs and priorities of Long Island Sound (LIS), including the shorelines of Westchester, the Bronx, Queens, Nassau and Suffolk Counties. When completed, this LIS CMP will replace the New York State CMP for this area. The regional program will build on programs now being written for the Sound, and Local Waterfront Revitalization Programs already accepted. An initial draft of the LIS CMP was circulated in 1994.

E. Financial Resources Necessary to Implement the LWRP

Funding for most projects will come from the budget of the Coastal Zone Management Commission. The CZMC and the two governments will work together to pursue funding from other levels of government and other sources when necessary.

F. Local, State and Federal Compliance

1. Local: The Coastal Zone Management Commission will be primarily responsible for ensuring compliance with and implementation of LWRP policies. It will inform all agencies, boards, commissions, and officials of the two municipalities, as well as relevant nongovernmental organizations whose work may be affected by the LWRP policies, concerning the requirements of the policies affecting them; and it will confer with them to determine what new actions, if any, are necessary in order to assure fulfillment of such requirements. Problems or questions that arise from these discussions will be referred as appropriate to the Town or Village government for decision or action.
2. State: For State agencies' consistency with the LWRP, the municipalities will rely primarily on the consistency procedures laid down on pages 14-16 of "Guidelines for Local Waterfront Revitalization Programs" (Department of State, Albany, October 1982). The Coastal Zone Management Commission will evaluate promptly all proposed State actions of which it receives notice or of which it becomes aware and will give timely notice to the Secretary of State and the concerned agency of any potential conflicts between such actions and the LWRP.
3. Federal: For Federal agencies' consistency with the LWRP, the municipalities will rely primarily on the principles and procedures described in "State of New York Coastal Management Program and Final Environmental Impact Statement," U.S. Department of Commerce, August 1982, pages II-9-11 and 12, in which the Department of State, State of New York, declares that it "will consult with other State agencies and local governments before providing its official comment on all Federal actions and that the basis for all consistency review will specifically include "local waterfront revitalization programs." The Coastal Zone Management Commission, on being informed by the Department of State of any Federal action likely to affect the LWRP, will promptly evaluate and comment on the likely effect of such action.

In this connection, note is taken of the provision of Department of State Regulation 600.4, regarding initial review of actions by State agencies under Article 42 of the Executive Law, that "for purposes of this part, planning or rulemaking actions which affect land or water in the coastal area shall be deemed to be located therein." (Emphasis added.) Because of the topography of the Westchester Sound shore, actions inland and upstream, beyond the coastal area of the two municipalities, can seriously affect land and water in this coastal area. Consequently, such proposed

actions by State agencies, when likely to produce such an effect, should be made known to the Coastal Zone Management Commission in a timely fashion for its evaluation and comment.

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**SECTION VI**

**STATE AND FEDERAL ACTIONS AND PROGRAMS  
LIKELY TO AFFECT IMPLEMENTATION**

Back of Section VI title page

## SECTION VI: Contents

A. Explanation		7
B. Federal and State Actions and Programs Which Should be Undertaken in a Manner Consistent with the LWRP		
State Agencies:		
Office for the Aging		8
Department of Agriculture and Markets		8
Division of Alcoholic Beverage Control/State Liquor Authority		8
Division of Alcoholism and Alcohol Substance Abuse Services		9
Council on the Arts		9
Department of Banking		9
NYS Bridge Authority		10
Department of Correctional Services		10
Dormitory Authority of the State of New York		10
Department of Economic Development		10
Education Department		10
Energy Planning Board and Energy Office		11
NYS Energy Research and Development Authority		11
Department of Environmental Conservation		11
Air Resources		11
Construction Management		12
Fish and Wildlife	12	
Lands and Forest		12
Marine Resources	12	
Regulatory Affairs		13
Solid Wastes		13
Water Resources		13
Environmental Facilities Corporation		14
Facilities Development Corporation		14
Office of General Services		14
Department of Health		14
Division of Housing and Community Renewal and Its Subsidiaries and Affiliates		15
Housing Finance Agency		15
Interstate Sanitation Commission (regional agency)		15
Job Development Authority		15
Medical Care Facilities Financing Agency		15
Office of Mental Health		15
Office of Mental Retardation and Development Disabilities		16
Metropolitan Transportation Authority (regional agency)		16
Division of Military and Naval Affairs		16
Natural Heritage Trust		16
Office of Parks, Recreation and Historic Preservation (including Regional State Park Commission)		16

Port Authority of New York and New Jersey (regional agency)	17
Power Authority of the State of New York	17
NYS Science and Technology Foundation	17
Department of Social Services	17
Department of State	17
State University Construction Fund	18
State University of New York	18
NYS Thruway Authority (regional agency)	18
Department of Transportation	18
Urban Development Corporation and its subsidiaries and affiliates	19
Division of Youth	19
Federal Agencies:	
Direct Federal Activities and Development Projects	
Department of Commerce	
National Marine Fisheries Services	20
Department of Defense	
Army Corps of Engineers	20
Army, Navy and Air Force	20
Department of Energy	20
General Services Administration	20
Department of Interior	
Fish and Wildlife Service	20
Mineral Management Service	21
National Park Service	21
Department of Transportation	
Amtrak, Conrail	21
Coast Guard	21
Federal Aviation Administration	21
Federal Highway Administration	21
Federal Licenses and Permits	
Department of Defense	
Army Corps of Engineers	21
Department of Energy	
Economic Regulatory Commission	22
Federal Energy Regulatory Commission	22
Environmental Protection Agency	22
Department of Interior	
Fish and Wildlife Services	23
Mineral Management Service	23
Interstate Commerce Commission	23
Nuclear Regulatory Commission	23
Department of Transportation	
Coast Guard	23
Federal Aviation Administration	23

Federal Assistance	
Department of Agriculture	24
Department of Commerce	24
Department of Housing and Urban Development	25
Department of Interior	25
Department of Transportation	25
General Services Administration	25
Community Services Administration	26
Small Business Administration	26
Environmental Protection Agency	26
C. State and Federal Actions Necessary to Further the LWRP	
State Agencies:	
Department of Economic Development	26
Department of Environmental Conservation	27
Office of General Services	27
Job Development Authority	27
Office of Parks, Recreation and Historic Preservation	27
Department of State	27
Council on the Arts	27
Department of Transportation	27
Federal Agencies:	
Department of Housing and Urban Development	
Office of the Assistant Secretary for Community Planning and Development	28
Department of the Interior	
National Park Service	28
Department of the Treasury	28
Economic Development Administration	28
Department of Transportation	
U.S. Coast Guard	28

Back of page 5

## A. Explanation

State and Federal actions will affect and be affected by implementation of the LWRP. Under State law and the U.S. Coastal Zone Management Act, certain State and Federal actions within or affecting the local waterfront area must be "consistent" or "consistent to the maximum extent practicable" with the enforceable policies and purposes of the LWRP. This consistency requirement makes the LWRP a unique, intergovernmental mechanism for setting policy and making decisions and helps to prevent detrimental actions from occurring and future options from being needlessly foreclosed. At the same time, the active participation of State and Federal agencies is also likely to be necessary to implement specific provisions of the LWRP.

The first part of this section (Part B) identifies the actions and programs of State and Federal agencies which should be undertaken in a manner consistent with the LWRP. This is a generic list of actions and programs, as identified by the NYS Department of State; therefore, some of the actions and programs listed may not be relevant to this LWRP. Pursuant to the State Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law, Article 42), the Secretary of State individually and separately notifies affected State agencies of those agency actions and programs which are to be undertaken in a manner consistent with approved LWRPs. Similarly, Federal agency actions and programs subject to consistency requirements are identified in the manner prescribed by the U.S. Coastal Zone Management Act and its implementing regulations. The lists of State and Federal actions and programs included herein are informational only and do not represent or substitute for the required identification and notification procedures. The current official lists of actions subject to State and Federal consistency requirements may be obtained from the NYS Department of State.

The second part of this section (Part C) is a more focused and descriptive list of State and Federal agency actions which are necessary to further implementation of the LWRP. It is recognized that a State or Federal agency's ability to undertake such actions is subject to a variety of factors and considerations; that the consistency provisions referred to above, may not apply; and that the consistency requirements can not be used to require a State or Federal agency to undertake an action it could not undertake pursuant to other provisions of law. Reference should be made to Section IV and Section V, which also discuss State and Federal assistance needed to implement the LWRP.

## B. Federal and State Actions and Programs Which Should be Undertaken in a Manner Consistent with the LWRP

### 1. State Agencies

## **OFFICE FOR THE AGING**

- 1.00 Funding and/or approval programs for the establishment of new or expanded facilities providing various services for the elderly.

## **DEPARTMENT OF AGRICULTURE AND MARKETS**

- 1.00 Agricultural Districts Program
- 2.00 Rural Development Program
- 3.00 Farm Worker Services Programs.
- 4.00 Permit and approval programs:
  - 4.01 Custom Slaughters/Processor Permit
  - 4.02 Processing Plant License
  - 4.03 Refrigerated Warehouse and/or Locker Plant License

## **DIVISION OF ALCOHOLIC BEVERAGE CONTROL/STATE LIQUOR AUTHORITY**

- 1.00 Permit and Approval Programs:
  - 1.01 Ball Park - Stadium License
  - 1.02 Bottle Club License
  - 1.03 Bottling Permits
  - 1.04 Brewer's Licenses and Permits
  - 1.05 Brewer's Retail Beer License
  - 1.06 Catering Establishment Liquor License
  - 1.07 Cider Producer's and Wholesaler's Licenses
  - 1.08 Club Beer, Liquor, and Wine Licenses
  - 1.09 Distiller's Licenses
  - 1.10 Drug Store, Eating Place, and Grocery Store Beer Licenses
  - 1.11 Farm Winery and Winery Licenses
  - 1.12 Hotel Beer, Wine, and Liquor Licenses
  - 1.13 Industrial Alcohol Manufacturer's Permits
  - 1.14 Liquor Store License
  - 1.15 On-Premises Liquor Licenses
  - 1.16 Plenary Permit (Miscellaneous-Annual)
  - 1.17 Summer Beer and Liquor Licenses
  - 1.18 Tavern/Restaurant and Restaurant Wine Licenses
  - 1.19 Vessel Beer and Liquor Licenses
  - 1.20 Warehouse Permit
  - 1.21 Wine Store License
  - 1.22 Winter Beer and Liquor Licenses
  - 1.23 Wholesale Beer, Wine, and Liquor Licenses

## **DIVISION OF ALCOHOLISM AND ALCOHOL SUBSTANCE ABUSE SERVICES**

- 1.00 Facilities, construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Certificate of approval (Substance Abuse Services Program)
- 3.00 Permit and approval:
  - 3.01 Letter Approval for Certificate of Need
  - 3.02 Operating Certificate (Alcoholism Facility)
  - 3.03 Operating Certificate (Community Residence)
  - 3.04 Operating Certificate (Outpatient Facility)
  - 3.05 Operating Certificate (Sobering-Up Station)

## **COUNCIL ON THE ARTS**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Architecture and environmental arts program.

## **DEPARTMENT OF BANKING**

- 1.00 Permit and approval programs:
  - 1.01 Authorization Certificate (Bank Branch)
  - 1.02 Authorization Certificate (Bank Change of Location)
  - 1.03 Authorization Certificate (Bank Charter)
  - 1.04 Authorization Certificate (Credit Union Change of Location)
  - 1.05 Authorization Certificate (Credit Union Charter)
  - 1.06 Authorization Certificate (Credit Union Station)
  - 1.07 Authorization Certificate (Foreign Banking Corporation Change of Location)
  - 1.08 Authorization Certificate (Foreign Banking Corporation Public Accommodations Office)
  - 1.09 Authorization Certificate (Investment Company Branch)
  - 1.10 Authorization Certificate (Investment Company Change of Location)
  - 1.11 Authorization Certificate (Investment Company Charter)
  - 1.12 Authorization Certificate (Licensed Lender Change of Location)
  - 1.13 Authorization Certificate (Mutual Trust Company Charter)
  - 1.14 Authorization Certificate (Private Banker Charter)
  - 1.15 Authorization Certificate (Public Accommodation Office - Banks)
  - 1.16 Authorization Certificate (Safe Deposit Company Branch)
  - 1.17 Authorization Certificate (Safe Deposit Company Change of Location)
  - 1.18 Authorization Certificate (Safe Deposit Company Charter)
  - 1.19 Authorization Certificate (Savings Bank Charter)
  - 1.20 Authorization Certificate (Savings Bank De Novo Branch Office)
  - 1.21 Authorization Certificate (Savings Bank Public Accommodations Office)
  - 1.22 Authorization Certificate (Savings and Loan Association Branch)

- 1.23 Authorization Certificate (Savings and Loan Association Change of Location)
- 1.24 Authorization Certificate (Savings and Loan Association Charter)
- 1.25 Authorization Certificate (Subsidiary Trust Company Charter)
- 1.26 Authorization Certificate (Trust Company Branch)
- 1.27 Authorization Certificate (Trust Company-Change of Location)
- 1.28 Authorization Certificate (Trust Company Charter)
- 1.29 Authorization Certificate (Trust Company Public Accommodations Office)
- 1.30 Authorization to Establish a Life Insurance Agency
- 1.31 License as a Licensed Lender
- 1.32 License for a Foreign Banking Corporation Branch

**NEW YORK STATE BRIDGE AUTHORITY**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition.

**DEPARTMENT OF CORRECTIONAL SERVICES**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**DORMITORY AUTHORITY OF THE STATE OF NEW YORK**

- 1.00 Financing of higher education and health care facilities.
- 2.00 Planning and design services assistance program.

**DEPARTMENT OF ECONOMIC DEVELOPMENT**

- 1.00 Preparation or revision of statewide or specific plans to address State economic development needs.
- 2.00 Allocation of the State tax-free bonding reserve.

**EDUCATION DEPARTMENT**

- 1.00 Facilities construction, rehabilitation, expansion, demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Certification of Incorporation (Regents Charter)
  - 2.02 Private Business School Registration
  - 2.03 Private School License
  - 2.04 Registered Manufacturer of Drugs and/or Devices
  - 2.05 Registered Pharmacy Certificate
  - 2.06 Registered Wholesale of Drugs and/or Devices

- 2.07 Registered Wholesaler-Repacker of Drugs and/or Devices
- 2.08 Storekeeper's Certificate

## **ENERGY PLANNING BOARD AND ENERGY OFFICE**

- 1.00 Preparation and revision of the State Energy Master Plan.

## **NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY**

- 1.00 Issuance of revenue bonds to finance pollution abatement modifications in power-generation facilities and various energy projects.

## **DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of lands under the jurisdiction of the Department.
- 2.00 Classification of Waters Program; classification of land areas under the Clean Air Act.
- 3.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 4.00 Financial assistance/grant programs:
  - 4.01 Capital projects for limiting air pollution
  - 4.02 Cleanup of toxic waste dumps
  - 4.03 Flood control, beach erosion and other water resource projects
  - 4.04 Operating aid to municipal wastewater treatment facilities
  - 4.05 Resource recovery and solid waste management capital projects
  - 4.06 Wastewater treatment facilities
- 5.00 Funding assistance for issuance of permits and other regulatory activities (New York City only).
- 6.00 Implementation of the Environmental Quality Bond Act of 1972, including:
  - (a) Water Quality Improvement Projects
  - (b) Land Preservation and Improvement Projects including Wetland Preservation and Restoration Projects, Unique Area Preservation Projects, Metropolitan Parks Projects, Open Space Preservation Projects and Waterways Projects.
- 7.00 Marine Fin fish and Shellfish Programs.
- 8.00 New York Harbor Drift Removal Project.
- 9.00 Permit and approval programs:

### Air Resources

- 9.01 Certificate of Approval for Air Pollution Episode Action Plan
- 9.02 Certificate of Compliance for Tax Relief - Air Pollution Control Facility
- 9.03 Certificate to Operate: Stationary Combustion Installation; Incinerator; Process, Exhaust or Ventilation System
- 9.04 Permit for Burial of Radioactive Material
- 9.05 Permit for Discharge of Radioactive Material to Sanitary Sewer

- 9.06 Permit for Restricted Burning
- 9.07 Permit to Construct: a Stationary Combustion Installation; Incinerator; Indirect Source of Air Contamination; Process, Exhaust or Ventilation System

#### Construction Management

- 9.08 Approval of Plans and Specifications for Wastewater Treatment Facilities

#### Fish and Wildlife

- 9.09 Certificate to Possess and Sell Hatchery Trout in NYS
- 9.10 Commercial Inland Fisheries Licenses
- 9.11 Fishing Preserve License
- 9.12 Fur Breeder's License
- 9.13 Game Dealer's License
- 9.14 Licenses to Breed Domestic Game Animals
- 9.15 License to Possess and Sell Live Game
- 9.16 Permit to Import, Transport and/or Export under Section 184.1 (11-0511)
- 9.17 Permit to Raise and Sell Trout
- 9.18 Private Bass Hatchery Permit
- 9.19 Shooting Preserve Licenses
- 9.20 Taxidermy License

#### Lands and Forest

- 9.21 Certificate of Environmental Safety (Liquid Natural Gas and Liquid Petroleum Gas)
- 9.22 Floating Object Permit
- 9.23 Marine Regatta Permit
- 9.24 Mining Permit
- 9.25 Navigation Aid Permit
- 9.26 Permit to Plug and Abandon (a non-commercial, oil, gas or solution mining well)
- 9.27 Permit to Use Chemicals for the Control or Elimination of Aquatic Insects
- 9.28 Permit to Use Chemicals for the Control or Elimination of Aquatic Vegetation
- 9.29 Permit to Use Chemicals for the Control or Extermination of Undesirable Fish
- 9.30 Underground Storage Permit (Gas)
- 9.31 Well Drilling Permit (Oil, Gas, and Solution Salt Mining)

#### Marine Resources

- 9.32 Digger's Permit (Shellfish)
- 9.33 License of Menhaden Fishing Vessel
- 9.34 License for Non-Resident Food Fishing Vessel
- 9.35 Non-Resident Lobster Permit
- 9.36 Marine Hatchery and/or Off-Bottom Culture Shellfish Permits
- 9.37 Permits to Take Blue-Claw Crabs

- 9.38 Permit to Use Pond or Trap Net
- 9.39 Resident Commercial Lobster Permit
- 9.40 Shellfish Bed Permit
- 9.41 Shellfish Shipper's Permits
- 9.42 Special Permit to Take Surf Clams from Waters other than the Atlantic Ocean

Regulatory Affairs

- 9.43 Approval - Drainage Improvement District
- 9.44 Approval - Water (Diversion for) Power
- 9.45 Approval of Well System and Permit to Operate
- 9.46 Permit - Article 15, (Protection of Water) - Dam
- 9.47 Permit - Article 15, (Protection of Water) - Dock, Pier or Wharf
- 9.48 Permit - Article 15, (Protection of Water) - Dredge or Deposit Material in a Waterway
- 9.49 Permit - Article 15, (Protection of Water) - Stream Bed or Bank Disturbances
- 9.50 Permit - Article 15, Title 15 (Water Supply)
- 9.51 Permit - Article 24, (Freshwater Wetlands)
- 9.52 Permit - Article 25, (Tidal Wetlands)
- 9.53 River Improvement District Approvals
- 9.54 River Regulatory District Approvals
- 9.55 Well Drilling Certificate of Registration

Solid Wastes

- 9.56 Permit to Construct and/or Operate a Solid Waste Management Facility
- 9.57 Septic Tank Cleaner and Industrial Waste Collector Permit

Water Resources

- 9.58 Approval of Plans for Wastewater Disposal Systems
  - 9.59 Certificate of Approval of Realty Subdivision Plans
  - 9.60 Certificate of Compliance (Industrial Wastewater Treatment Facility)
  - 9.61 Letters of Certification for Major Onshore Petroleum Facility Oil Spill Prevention and Control Plan
  - 9.62 Permit - Article 36, (Construction in Flood Hazard Areas)
  - 9.63 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
  - 9.64 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
  - 9.65 State Pollutant Discharge Elimination System (SPDES) Permit
  - 9.66 401 Water Quality Certification
- 10.00 Preparation and revision of Air Pollution State Implementation Plan.
  - 11.00 Preparation and revision of Continuous Executive Program Plan.
  - 12.00 Preparation and revision of Statewide Environmental Plan.
  - 13.00 Protection of Natural and Man-made Beauty Program.
  - 14.00 Urban Fisheries Program.

- 15.00 Urban Forestry Program.
- 16.00 Urban Wildlife Program.

### **ENVIRONMENTAL FACILITIES CORPORATION**

- 1.00 Financing program for pollution control facilities for industrial firms and small businesses.

### **FACILITIES DEVELOPMENT CORPORATION**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

### **OFFICE OF GENERAL SERVICES**

- 1.00 Administration of the Public Lands Law for acquisition and disposition of lands, grants of land and grants of easement of land under water, issuance of licenses for removal of materials from lands under water, and oil and gas leases for exploration and development.
- 2.00 Administration of Article 4-B, Public Buildings Law, in regard to the protection and management of State historic and cultural properties and State uses of buildings of historic, architectural or cultural significance.
- 3.00 Facilities construction, rehabilitation, expansion, or demolition.

### **DEPARTMENT OF HEALTH**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Approval of Completed Works for Public Water Supply Improvements
  - 2.02 Approval of Plans for Public Water Supply Improvements.
  - 2.03 Certificate of Need (Health Related Facility - except Hospitals)
  - 2.04 Certificate of Need (Hospitals)
  - 2.05 Operating Certificate (Diagnostic and Treatment Center)
  - 2.06 Operating Certificate (Health Related Facility)
  - 2.07 Operating Certificate (Hospice)
  - 2.08 Operating Certificate (Hospital)
  - 2.09 Operating Certificate (Nursing Home)
  - 2.10 Permit to Operate a Children's Overnight or Day Camp
  - 2.11 Permit to Operate a Migrant Labor Camp
  - 2.12 Permit to Operate as a Retail Frozen Dessert Manufacturer
  - 2.13 Permit to Operate a Service Food Establishment
  - 2.14 Permit to Operate a Temporary Residence/Mass Gathering
  - 2.15 Permit to Operate or Maintain a Swimming Pool or Public Bathing Beach
  
  - 2.16 Permit to Operate Sanitary Facilities for Realty Subdivisions
  - 2.17 Shared Health Facility Registration Certificate

## **DIVISION OF HOUSING AND COMMUNITY RENEWAL AND ITS SUBSIDIARIES AND AFFILIATES**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition.
- 2.00 Financial assistance/grant programs:
  - 2.01 Federal Housing Assistance Payments Programs (Section 8 Programs)
  - 2.02 Housing Development Fund Programs
  - 2.03 Neighborhood Preservation Companies Program
  - 2.04 Public Housing Programs
  - 2.05 Rural Initiatives Grant Program
  - 2.06 Rural Preservation Companies Program
  - 2.07 Rural Rental Assistance Program
  - 2.08 Special Needs Demonstration Projects
  - 2.09 Urban Initiatives Grant Program
  - 2.10 Urban Renewal Programs
- 3.00 Preparation and implementation of plans to address housing and community renewal needs.

## **HOUSING FINANCE AGENCY**

- 1.00 Funding programs for the construction, rehabilitation, or expansion of facilities.
- 2.00 Affordable Housing Corporation

## **INTERSTATE SANITATION COMMISSION (regional agency)**

- 1.00 Adoption and enforcement of air and water pollution standards within the Interstate Sanitation District.

## **JOB DEVELOPMENT AUTHORITY**

- 1.00 Financing assistance programs for commercial and industrial facilities.

## **MEDICAL CARE FACILITIES FINANCING AGENCY**

- 1.00 Financing of medical care facilities.

## **OFFICE OF MENTAL HEALTH**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Operating Certificate (Community Residence)
  - 2.02 Operating Certificate (Family Care Homes)
  - 2.03 Operating Certificate (Inpatient Facility)

- 2.04 Operating Certificate (Outpatient Facility)

**OFFICE OF MENTAL RETARDATION AND DEVELOPMENT DISABILITIES**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Permit and approval programs:
  - 2.01 Establishment and Construction Prior Approval
  - 2.02 Operating Certificate Community Residence
  - 2.03 Outpatient Facility Operating Certificate

**METROPOLITAN TRANSPORTATION AUTHORITY (regional agency)**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Increases in special fares for transportation services to public water-related recreation resources.

**DIVISION OF MILITARY AND NAVAL AFFAIRS**

- 1.00 Preparation and implementation of the State Disaster Preparedness Plan.

**NATURAL HERITAGE TRUST**

- 1.00 Funding program for natural heritage institutions.

**OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION (including Regional State Park Commission)**

- 1.00 Acquisition, disposition, lease, grant of easement or other activities related to the management of land under the jurisdiction of the Office.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 3.00 Funding program for recreational boating, safety and enforcement.
- 4.00 Funding program for State and local historic preservation projects.
- 5.00 Land and Water Conservation Fund programs.
- 6.00 Nomination of properties to the Federal and/or State Register of Historic Places.
- 7.00 Permit and approval programs:
  - 7.01 Floating Objects Permit
  - 7.02 Marine Regatta Permit
  - 7.03 Navigation Aide Permit
  - 7.04 Posting of Signs Outside State Parks
- 8.00 Preparation and revision of the Statewide Comprehensive Outdoor Recreation Plan and the Statewide Comprehensive Historic Preservation Plan and other plans for public access, recreation, historic preservation or related purposes.

- 9.00 Recreation services program.
- 10.00 Urban Cultural Parks Program.

**PORT AUTHORITY OF NEW YORK AND NEW JERSEY (regional agency)**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Commission.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 3.00 Waterfront development project activities.

**POWER AUTHORITY OF THE STATE OF NEW YORK**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition.

**NEW YORK STATE SCIENCE AND TECHNOLOGY FOUNDATION**

- 1.00 Corporation for Innovation Development Program.
- 2.00 Center for Advanced Technology Program.

**DEPARTMENT OF SOCIAL SERVICES**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
- 2.00 Homeless Housing and Assistance Program.
- 3.00 Permit and approval programs:
  - 3.01 Certificate of Incorporation (Adult Residential Care Facilities)
  - 3.02 Operating Certificate (Children's Services)
  - 3.03 Operating Certificate (Enriched Housing Program)
  - 3.04 Operating Certificate (Home for Adults)
  - 3.05 Operating Certificate (Proprietary Home)
  - 3.06 Operating Certificate (Public Home)
  - 3.07 Operating Certificate (Special Care Home)
  - 3.08 Permit to Operate a Day Care Center

**DEPARTMENT OF STATE**

- 1.00 Appalachian Regional Development Program.
- 2.00 Coastal Management Program.
- 3.00 Community Services Block Grant Program.
- 4.00 Permit and approval programs:
  - 4.01 Billiard Room License
  - 4.02 Cemetery Operator

4.03 Uniform Fire Prevention and Building Code

**STATE UNIVERSITY CONSTRUCTION FUND**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**STATE UNIVERSITY OF NEW YORK**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the University.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

**NEW YORK STATE THRUWAY AUTHORITY/CANAL CORPORATION/CANAL RECREATIONWAY COMMISSION (regional agency)**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land and other resources under the jurisdiction of the Thruway Authority, Canal Corporation and Canal Recreationway Commission.
- 2.00 Facilities construction, rehabilitation, expansion, or demolition.
- 3.00 Permit and approval programs:
  - 3.01 Advertising Device Permit
  - 3.02 Approval to Transport Radioactive Waste
  - 3.03 Occupancy Permit
  - 3.04 Permits for use of Canal System lands and waters.
- 4.00 Statewide Canal Recreationway Plan

**DEPARTMENT OF TRANSPORTATION**

- 1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Department.
- 2.00 Construction, rehabilitation, expansion, or demolition of facilities, including but not limited to:
  - (a) Highways and parkways
  - (b) Bridges on the State highways system
  - (c) Highway and parkway maintenance facilities
  - (d) Rail facilities
- 3.00 Financial assistance/grant programs:
  - 3.01 Funding programs for construction/reconstruction and reconditioning/preservation of municipal streets and highways (excluding routine maintenance and minor rehabilitation)
  - 3.02 Funding programs for development of the ports of Albany, Buffalo, Oswego, Ogdensburg and New York
  - 3.03 Funding programs for rehabilitation and replacement of municipal bridges

- 3.04 Subsidies program for marginal branchlines abandoned by Conrail
- 3.05 Subsidies program for passenger rail service
- 4.00 Permits and approval programs:
  - 4.01 Approval of applications for airport improvements (construction projects)
  - 4.02 Approval of municipal applications for Section 18 Rural and Small Urban Transit Assistance Grants (construction projects)
  - 4.03 Approval of municipal or regional transportation authority applications for funds for design, construction and rehabilitation of omnibus maintenance and storage facilities
  - 4.04 Approval of municipal or regional transportation authority applications for funds for design and construction of rapid transit facilities
  - 4.05 Certificate of Convenience and Necessity to Operate a Railroad
  - 4.06 Highway Work Permits
  - 4.07 License to Operate Major Petroleum Facilities
  - 4.08 Outdoor Advertising Permit (for off-premises advertising signs adjacent to interstate and primary highway)
  - 4.09 Real Property Division Permit for Use of State-Owned Property
- 5.00 Preparation or revision of the Statewide Master Plan for Transportation and sub-area or special plans and studies related to the transportation needs of the State.
- 6.00 Water Operation and Maintenance Program--Activities related to the containment of petroleum spills and development of an emergency oil-spill control network.

**URBAN DEVELOPMENT CORPORATION and its subsidiaries and affiliates**

- 1.00 Acquisition, disposition, lease, grant of easement or other activities related to the management of land under the jurisdiction of the Corporation.
- 2.00 Planning, development, financing, construction, major renovation or expansion of commercial, industrial, and civic facilities and the provision of technical assistance or financing for such activities, including, but not limited to, actions under its discretionary economic development programs such as the following:
  - (a) Tax-Exempt Financing Program
  - (b) Lease Collateral Program
  - (c) Lease Financial Program
  - (d) Targeted Investment Program
  - (e) Industrial Buildings Recycling Program
- 3.00 Administration of special projects.
- 4.00 Administration of State-funded capital grant programs.

**DIVISION OF YOUTH**

- 1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding or approval of such activities.

**2. Federal Agencies**

**DIRECT FEDERAL ACTIVITIES AND DEVELOPMENT PROJECTS**

## **DEPARTMENT OF COMMERCE**

### National Marine Fisheries Services

- 1.00 Fisheries Management Plans

## **DEPARTMENT OF DEFENSE**

### Army Corps of Engineers

- 1.00 Proposed authorizations for dredging, channel improvements, break-waters, other navigational works, or erosion control structures, beach replenishment, dams or flood control works, ice management practices and activities, and other projects with potential to impact coastal lands and waters.
- 2.00 Land acquisition for spoil disposal or other purposes.
- 3.00 Selection of open water disposal sites.

### Army, Navy and Air Force

- 4.00 Location, design, and acquisition of new or expanded defense installations (active or reserve status, including associated housing, transportation or other facilities).
- 5.00 Plans, procedures and facilities for landing or storage use zones.
- 6.00 Establishment of impact, compatibility or restricted use zones.

## **DEPARTMENT OF ENERGY**

- 1.00 Prohibition orders.

## **GENERAL SERVICES ADMINISTRATION**

- 1.00 Acquisition, location and design of proposed Federal Government property or buildings, whether leased or owned by the Federal Government.
- 2.00 Disposition of Federal surplus lands and structures.

## **DEPARTMENT OF INTERIOR**

### Fish and Wildlife Service

- 1.00 Management of National Wildlife refuges and proposed acquisitions.

### Mineral Management Service

- 2.00 OCS lease sale activities including tract selection, lease sale stipulations, etc.

### National Park Service

3.00 National Park and Seashore management and proposed acquisitions.

## **DEPARTMENT OF TRANSPORTATION**

### Amtrak, Conrail

1.00 Expansions, curtailments, new construction, upgrading or abandonments or railroad facilities or services, in or affecting the State's coastal area.

### Coast Guard

2.00 Location and design, construction or enlargement of Coast Guard stations, bases, and lighthouses.

3.00 Location, placement or removal of navigation devices which are not part of the routine operations under the Aids to Navigation Program (ATON).

4.00 Expansion, abandonment, designation or anchorages, lightening areas or shipping lanes and ice management practices and activities.

### Federal Aviation Administration

5.00 Location and design, construction, maintenance, and demolition of Federal aids to air navigation.

### Federal Highway Administration

6.00 Highway construction.

## **FEDERAL LICENSES AND PERMITS**

## **DEPARTMENT OF DEFENSE**

### Army Corps of Engineers

1.00 Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Section 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).

2.00 Establishment of harbor lines pursuant to Section 11 of the Rivers and Harbors Act of 1899 (33 U.S.C. 404, 405).

3.00 Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

4.00 Approval of plans for improvements made at private expense under USACE supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).

- 5.00 Disposal of dredged spoils into the waters of the U.S., pursuant to the Clean Waters Action, Section 404, (33 U.S.C. 1344).
- 6.00 All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
- 7.00 Construction of artificial islands and fixed structures in Long Island Sound pursuant to Section 4(f) of the Rivers and Harbors Act of 1912 (33 U.S.C.).

## **DEPARTMENT OF ENERGY**

### Economic Regulatory Commission

- 1.00 Regulation of gas pipelines, and licensing of import or export of natural gas pursuant to the Natural Gas Act (15 U.S.C. 717) and the Energy Reorganization Act of 1974.
- 2.00 Exemptions from prohibition orders.

### Federal Energy Regulatory Commission

- 3.00 License for non-Federal hydroelectric projects and primary transmission lines under Sections 3(11), 4(e) and 15 of the Federal Power Act (16 U.S.C. 796(11), 797(11) and 808).
- 4.00 Orders for interconnection of electric transmission facilities under Section 202(b) of the Federal Power Act (15 U.S.C. 824a(b)).
- 5.00 Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities under Section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)).
- 6.00 Permission and approval for the abandonment of natural gas pipeline facilities under Section 7(b) of the Natural Gas Act (15 U.S.C. 717f(b)).

## **ENVIRONMENTAL PROTECTION AGENCY**

- 1.00 NPDES permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and aquaculture permits pursuant to Section 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 (33 U.S.C. 1341, 1342, 1343, and 1328).
- 2.00 Permits pursuant to the Resources Recovery and Conservation Act of 1976.
- 3.00 Permits pursuant to the underground injection control program under Section 1424 of the Safe Water Drinking Water Act (42 U.S.C. 300h-c).
- 4.00 Permits pursuant to the Clean Air Act of 1976 (42 U.S.C. 1857).

## **DEPARTMENT OF INTERIOR**

### Fish and Wildlife Services

- 1.00 Endangered species permits pursuant to the Endangered Species Act (16 U.S.C. 153(a)).

#### Mineral Management Service

- 2.00 Permits to drill, rights of use and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334, exploration and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.
- 3.00 Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

#### **INTERSTATE COMMERCE COMMISSION**

- 1.00 Authority to abandon railway lines (to the extent that the abandonment involves removal of trackage and disposition of right-of-way); authority to construct railroads; authority to construct coal slurry pipelines.

#### **NUCLEAR REGULATORY COMMISSION**

- 1.00 Licensing and certification of the siting, construction and operation of nuclear power plants pursuant to Atomic Energy Act of 1954, Title II of the Energy Reorganization Act of 1974 and the National Environmental Policy Act of 1969.

#### **DEPARTMENT OF TRANSPORTATION**

##### Coast Guard

- 1.00 Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 49 U.S.C. 1455.
- 2.00 Permits for Deepwater Ports pursuant to the Deepwater Ports Act of 1974 (33 U.S.C. 1501).

##### Federal Aviation Administration

- 3.00 Permits and licenses for construction, operation or alteration of airports.

#### **FEDERAL ASSISTANCE**<sup>1</sup>

#### **DEPARTMENT OF AGRICULTURE**

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<sup>1</sup> Numbers refer to the Catalog of Federal Domestic Assistance Programs, 1980 and its two subsequent updates.

- 10.068 Rural Clean Water Program
- 10.409 Irrigation, Drainage, and Other Soil and Water Conservation Loans
- 10.410 Low to Moderate Income Housing Loans
- 10.411 Rural Housing Site Loans
- 10.413 Recreation Facility Loans
- 10.414 Resource Conservation and Development Loans
- 10.415 Rural Renting Housing Loans
- 10.416 Soil and Water Loans
- 10.418 Water and Waste Disposal Systems for Rural Communities
- 10.422 Business and Industrial Loans
- 10.424 Industrial Development Grants
- 10.426 Area Development Assistance Planning Grants
- 10.429 Above Moderate Income Housing Loans
- 10.430 Energy Impacted Area Development Assistance Program
- 10.901 Resource Conservation and Development
- 10.902 Soil and Water Conservation
- 10.904 Watershed Protection and Flood Prevention
- 10.906 River Basin Surveys and Investigations

#### **DEPARTMENT OF COMMERCE**

- 11.300 Economic Development - Grants and Loans for Public Works and Development Facilities
- 11.301 Economic Development - Business Development Assistance
- 11.302 Economic Development - Support for Planning Organizations
- 11.304 Economic Development - State and Local Economic Development Planning
- 11.305 Economic Development - State and Local Economic Development Planning
- 11.307 Special Economic Development and Adjustment Assistance Program - Long Term Economic Deterioration
- 11.308 Grants to States for Supplemental and Basic Funding of Titles I, II, III, IV, and V Activities
- 11.405 Anadromous and Great Lakes Fisheries Conservation
- 11.407 Commercial Fisheries Research and Development
- 11.417 Sea Grant Support
- 11.427 Fisheries Development and Utilization - Research and Demonstration Grants and Cooperative Agreements Program
- 11.501 Development and Promotion of Ports and Intermodal Transportation
- 11.509 Development and Promotion of Domestic Waterborne Transport Systems

#### **DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

- 14.112 Mortgage Insurance - Construction or Substantial Rehabilitation of Condominium Projects
- 14.115 Mortgage Insurance - Development of Sales Type Cooperative Projects
- 14.117 Mortgage Insurance - Homes
- 14.124 Mortgage Insurance - Investor Sponsored Cooperative Housing
- 14.125 Mortgage Insurance - Land Development and New Communities
- 14.126 Mortgage Insurance - Management Type Cooperative Projects

- 14.127 Mortgage Insurance - Mobile Home Parks
- 14.218 Community Development Block Grants/Entitlement Grants
- 14.219 Community Development Block Grants/Small Cities Program
- 14.221 Urban Development Action Grants
- 14.223 Indian Community Development Block Grant Program

#### **DEPARTMENT OF INTERIOR**

- 15.400 Outdoor Recreation - Acquisition, Development and Planning
- 15.402 Outdoor Recreation - Technical Assistance
- 15.403 Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments
- 15.411 Historic Preservation Grants-in-Aid
- 15.417 Urban Park and Recreation Recovery Program
- 15.600 Anadromous Fish Conservation
- 15.605 Fish Restoration
- 15.611 Wildlife Restoration
- 15.613 Marine Mammal Grant Program
- 15.802 Minerals Discovery Loan Program
- 15.950 National Water Research and Development Program
- 15.951 Water Resources Research and Technology - Assistance to State Institutes
- 15.952 Water Research and Technology - Matching Funds to State Institutes

#### **DEPARTMENT OF TRANSPORTATION**

- 20.102 Airport Development Aid Program
- 20.103 Airport Planning Grant Program
- 20.205 Highway Research, Planning, and Construction
- 20.309 Railroad Rehabilitation and Improvement - Guarantee of Obligations
- 20.310 Railroad Rehabilitation and Improvement - Redeemable Preference Shares
- 20.506 Urban Mass Transportation Demonstration Grants
- 20.509 Public Transportation for Rural and Small Urban Areas

#### **GENERAL SERVICES ADMINISTRATION**

- 39.002 Disposal of Federal Surplus Real Property

#### **COMMUNITY SERVICES ADMINISTRATION**

- 49.002 Community Action
- 49.011 Community Economic Development
- 49.013 State Economic Opportunity Offices
- 49.017 Rural Development Loan Fund
- 49.018 Housing and Community Development (Rural Housing)

## **SMALL BUSINESS ADMINISTRATION**

- 59.012 Small Business Loans
- 59.013 State and Local Development Company Loans
- 59.024 Water Pollution Control Loans
- 59.025 Air Pollution Control Loans
- 59.031 Small Business Pollution Control Financing Guarantee

## **ENVIRONMENTAL PROTECTION AGENCY**

- 66.001 Air Pollution Control Program Grants
- 66.418 Construction Grants for Wastewater Treatment Works
- 66.426 Water Pollution Control - State and Areawide Water Quality Management Planning Agency
- 66.451 Solid and Hazardous Waste Management Program Support Grants
- 66.452 Solid Waste Management Demonstration Grants
- 66.600 Environmental Protection Consolidated Grants Program Support Comprehensive Environmental Response, Compensation and Liability (Super Fund)

## **C. STATE AND FEDERAL ACTIONS NECESSARY TO FURTHER THE LWRP**

### **STATE AGENCIES<sup>2</sup>**

## **DEPARTMENT OF ECONOMIC DEVELOPMENT**

Any action or provision of funds for the development or promotion of tourism related activities or development.

## **DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

1. Planning, development, construction, major renovation, or expansion of facilities in waterfront, including recreational improvement projects.
2. Advance assistance under the Small Communities and Rural Wastewater Treatment Grant Program and a subsequent construction grant subsidy.
3. Review of actions within National Register Districts pursuant to SEQR.

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<sup>2</sup> In addition to the State agency actions and programs listed above, important technical support is available from the Westchester County Soil and Water Conservation District, an agency established by the Westchester County government under New York State law and deriving part of its funding from the State. In cooperation with the County Planning Department, the District provides technical expertise on hydrological studies, and facilitates municipal and inter-municipal drainage basin management programs. Its services are important for watershed management and flood and erosion control throughout the County's coastal regions.

## **OFFICE OF GENERAL SERVICES**

Prior to any development occurring in the water or on the immediate waterfront, OGS should be consulted for a determination of the State's interest in underwater or formerly underwater lands and for authorization to use and occupy these lands.

## **JOB DEVELOPMENT AUTHORITY**

Provision of low interest mortgage loans to local non-profit development corporations to finance commercial and industrial facilities.

## **OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION**

1. Planning, development, construction, major renovation, or expansion of recreational facilities or the provision of funding for such facilities.
2. Provision of funding for State and local activities from the Land and Water Conservation Fund.
3. Planning, development, implementation or the provision of funding for recreation services programs.
4. Certification of properties within the National Register Districts.
5. Provision of funding for State and local historic preservation activities.
6. Review of Type I actions within the National Historic Districts.
7. Activities under the Urban Cultural Park program.

## **DEPARTMENT OF STATE**

1. Provision of funding for implementation of the LWRP.
2. Provision of funding under the Community Services Block Grant Program.

## **COUNCIL ON THE ARTS**

Assistance from the Architecture and Environmental Arts program for a harborfront plan.

## **DEPARTMENT OF TRANSPORTATION**

Assistance for street repairs through the Consolidated Highway Improvements Program.

## **FEDERAL AGENCIES**

### **DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

Office of the Assistant Secretary for Community Planning and Development  
Funding under the Community Development Block Grant Program for improvements in the waterfront.

## **DEPARTMENT OF THE INTERIOR**

National Park Service

Provision of funding under the Land and Water Conservation Fund Program.

1. Review of Federal actions within the National Register Districts pursuant to NEPA.

## **DEPARTMENT OF THE TREASURY**

1. Continuation of Incentives for Qualified Building Rehabilitation.
2. Provision of appropriate tax-exempt status for non-profit agencies active in the coastal area.

## **ECONOMIC DEVELOPMENT ADMINISTRATION**

Assistance under the Public Works and Economic Development Act for street improvements.

## **DEPARTMENT OF TRANSPORTATION**

United States Coast Guard

Maintenance/rehabilitation of facilities.

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**SECTION VII**

**CONSULTATION WITH OTHER AGENCIES**

Back of Section VII title page

## **SECTION VII: Contents**

A.	Adjacent Municipalities	5
B.	Westchester County Government	5
C.	State of New York	6
	1. Department of State	
	2. Department of Environmental Conservation	
D.	Resolution of Conflicts	6

Back of Section VII contents

## SECTION VII: CONSULTATION WITH OTHER AFFECTED FEDERAL, STATE, REGIONAL AND LOCAL AGENCIES

### A. Adjacent Municipalities

LWRP planning in this bi-municipal area can affect, and be affected by, policies and actions of nearby municipalities, both along the Sound shore and directly inland. Prior to the official acceptance of the LWRP in 1986, useful consultations were held with the Village of Mamaroneck's Coastal Zone Management Commission, who were a step ahead in drafting their LWRP. Moreover, the two areas have important problems in common. Both suffer from upstream flooding involving other municipalities (including each other); thus, cooperation with each other and with neighboring municipalities for flood and siltation control has been a basic theme in LWRP planning for both.

In 1984, contacts were made between the Larchmont-Mamaroneck Coastal Zone Management Committee and the City of New Rochelle and the Village of Scarsdale, two municipalities that share watersheds with our communities. Therefore, both municipalities were able to offer advice and information, and, at the same time, were better able to understand the purposes of our LWRP and the problems that were being addressed in its application of policies. When the LWRP was accepted in 1986, these two municipalities had been fully informed of its contents.

### B. Westchester County Government

The County Planning Department and the staff of the Westchester County Soil and Water Conservation District have given useful advice on questions relating to the LWRP.

The Coastal Zone Management Commission relied heavily on the County's model Surface Water, Erosion and Sediment Control Law when drafting a local counterpart enacted by the Town in 1992 (see Section V). Incorporated in that law is the mandated use of the County's "Best Management Practices" (BMP) manual. Larchmont also uses that manual, and copies of it are in the Building Departments of both municipalities.

At the legislative level, County Legislator George Latimer has attended meetings of the Coastal Zone Management Commission apprising them of County matters that have an impact on the LWRP. Latimer is also an active member of the County's Environmental Committee which meets publicly once a week to consider County environmental concerns, such as problems relating to Long Island Sound water quality and the administration of County sewer districts. Recommendations for County actions regarding environmental issues emanate from this Committee.

The Commission has also kept informed on contacts between the governments of Mamaroneck and Larchmont on the one hand, and County agencies on the other, concerning matters bearing on the LWRP, notably the program to eliminate illegal sewer connections.

C. State of New York

1. Department of State

From the inception of the Local Waterfront Revitalization Program's planning process in 1982 through its official acceptance in 1986 and the establishment of the Coastal Zone Management Commission (CZMC), contact with the Department of State (DOS) Division of Coastal Resources and Waterfront Revitalization staff has been continuous and constructive. The CZMC has sought and received advice from the DOS since 1986. In addition, the DOS has provided invaluable help in drafting this revision of the original Local Waterfront Revitalization Program.

2. Department of Environmental Conservation

Throughout the years, appropriate departments of the Department of Environmental Conservation have provided information and suggestions regarding local concerns; for example, questions about SEQRA, registration of Critical Environmental Areas, Region II water quality in White Plains, interpretation of State laws and regulations regarding tidal wetlands, freshwater wetlands and Coastal Erosion Hazard Areas.

D. Resolution of Conflicts

No conflicts between the LWRP and the policies or programs of the municipalities and agencies referred to above are presently known to the Coastal Zone Management Commission. The consultative relationships here described will be helpful in resolving any such conflicts that may arise in the future.

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**SECTION VIII**  
**LOCAL COMMITMENT**

Back of Section VIII title page

**SECTION VIII: Contents**

A. Historical Background	5
B. The Present	6

Back of Section VIII contents

## SECTION VIII: LOCAL COMMITMENT

### A. Historical Background

The first step in seeking public commitment in Larchmont to the LWRP was taken in the choice of individuals appointed by the Village to the Coastal Zone Management Committee when this body was first established in September 1982. In addition to several members appointed for their known interest and expertise in environmental matters, water management and other relevant subjects, representation was also obtained from concerned private organizations in the Village including the shoreline clubs and property owners' groups. Subsequently, when the Committee became a bi-municipal body, the members appointed by the Town Council -- as well as additional members appointed by the Village -- included individuals with extensive experience in local government and community service.

All working meetings of the Committee were held at least once each month, and were open to the public. Many were attended and addressed by interested citizens. Prior notice of meetings was routinely sent to the local news media. The Daily Times (Mamaroneck) and the Soundview News published numerous articles on the work of the Committee and the LWRP planning process.

In June 1984 the Committee published as a paid advertisement in the Daily Times a questionnaire designed to obtain residents' views on the merits and relative importance of various issues with which the LWRP was expected to deal. Responses were received from about 40 individuals and were taken into account by the Committee in its work. One respondent commented: "Bravo! A survey like this is a very good idea... why not do it every year?" "

On April 27, 1984, and again on November 27, the Committee held well-publicized public meetings to acquaint interested residents with the program and to obtain their views on the issues involved. Attendance at the first meeting was about 75, at the second about 60. Committee members and the Committee's professional consultant addressed the meetings and answered questions. In advance of the November 27 meeting the Committee distributed widely throughout the community a 10-page "Overview" of the draft program.

The Committee did not shy away from controversy when it arose but sought to deal with it through open discussion and debate. When disagreement arose in the Village of Larchmont on the issue of a permanent management structure for the LWRP, opposing views on the subject, written by a member of the Village Board and the Larchmont co-chairman of the Committee, were published by the Daily Times in adjoining columns. The issue was later resolved by negotiation.

Material about the LWRP, both for and against, also appeared in the letters column of The Daily Times. A notable item in this category was a letter printed July 10, 1984, from Town

Supervisor Dolores Battalia and Village Mayor Miriam Curnin, supporting the Committee's questionnaire project and calling the LWRP process "an unparalleled opportunity to plan with intelligence to nurture and protect the beautiful gift which is our coastal area".

Brief accounts of the LWRP process were printed in the 1984 annual report of the Tri-municipal Conservation Advisory Commission and in "Facts of Life in Larchmont," a periodical information bulletin of the Village government.

Members of the Coastal Zone Management Committee participated as speakers and/or panelists in several meetings organized by local citizens' organizations: a Larchmont-Mamaroneck forum on coastal zone planning organized by the local Leagues of Women Voters on October 18, 1984; a meeting of the Larchmont-Mamaroneck Civic Association, a property owners' group, on March 26, 1985; a Larchmont Rotary Club luncheon, July 12, 1985; and a League of Women Voters forum on the "Westchester 2000" report (a County-wide study of long-range issues), November 14, 1985. Discussions were held for a briefing of realtors in the Larchmont-Mamaroneck area. Candidates for the Mamaroneck Town Council were briefed on the LWRP in October 1984 prior to the November election.

In connection with the LWRP planning process, "Coast Week 1984" (October 7 to 14) was proclaimed officially by the Supervisor of the Town of Mamaroneck and the Mayor of the Village of Larchmont.

The local-access cable TV studio, LMC-TV, produced and broadcast early in 1986 an hour-long program on the LWRP with narrative by CZM Committee members and on local access cable TV, with footage at locations critical to the program such as the Larchmont Manor Park, the Larchmont Reservoir, and the tidal marshes.

## B. The Present

Since 1986, the Coastal Zone Management Commission (CZMC) has become a recognizable and respected presence in Mamaroneck and Larchmont. Commission meetings are held once a month, and are open to the public. All proposed Type I and Unlisted actions are reviewed by the CZMC, which only acts in an advisory capacity, but whose advice is usually taken by the respective Boards. The advice of the CZMC is also sought by the Building Departments of both municipalities. Liaisons from the CZMC attend meetings of the Town and Village Boards, their respective Planning Board, Zoning Board of Appeal, Board of Architectural Review and local environmental organizations.

Commission activities are carefully detailed in Annual Reports (see Appendix), which also list all referrals and their disposition, record other environmental events and record all matters concerning the LWRP and the workings of the Commission.

The Mamaroneck-Larchmont Local Waterfront Revitalization Program is a living document. It is an integral part of the decision-making process when environmental issues are involved. For these reasons, the 1986 LWRP required updating.

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**SECTION IX**  
**APPENDICES**

Back of Section IX title page

## SECTION IX: Contents

Appendix A.	Subject Index- CZMC Annual Reports	5
Appendix B.	Inventory of Bird Species in 3 Fish and Wildlife Habitats	7
	Biological Inventory for 3 Fish and Wildlife Habitats	14
Appendix C.	Botanical Inventory- Reservoir-Sheldrake-Leatherstocking Complex	17
Appendix D.	Compilation of Bird Lists for the Reservoir-Sheldrake-Leatherstocking Complex	22
Appendix E.	Compilation of Bird Lists for the Premium River-Pine Brook Wetlands Complex	27
Appendix F.	Botanical Inventory- Hommocks Marsh Complex	34
Appendix G.	Bird Species- Hommocks Salt Marsh Complex	38
	Botanical Inventory- Hommocks Salt Marsh Complex	42
Appendix H.	Management Recommendations for the Hommocks Salt Marsh Complex	43
Appendix I.	Management Plan for the Reservoir-Sheldrake Leatherstocking Critical Environmental Area	50
Map 1	Regional Setting	
Map 2	Boundary Map	
Map 3	Location Map	
Map 4	Existing Open Space	
Map 5	Tidal Wetlands, Watershed Boundaries and Flood Hazard Areas	
Map 6	Coastal High Hazard Areas and Coastal Erosion Hazard Areas	
Map 7	Land and Water Uses	

Back of Section IX contents

**APPENDIX A**  
**SUBJECT INDEX- CZMC ANNUAL REPORTS**

AR 1 - First Annual Report	Sept. 1986 thru Sept. 1987
AR 2 - Second Annual Report	Oct. 1987 thru Sept. 1988
AR 3 - Third Annual Report	Oct. 1988 thru Sept. 1989
AR 4 - Fourth Annual Report	Oct. 1989 thru Sept. 1990
AR 5 - Fifth Annual Report	Oct. 1990 thru Sept. 1991
AR 6 - Sixth Annual Report	Oct. 1991 thru Sept. 1992

<u>SUBJECT</u>	<u>AR 1</u>	<u>AR 2</u>	<u>AR 3</u>	<u>AR 4</u>	<u>AR 5</u>	<u>AR 6</u>
<b>LEGISLATION</b>						
Coastal Erosion Hazard		12	16			
County CEA			16	18		
Erosion & Sediment Control		15	17	19	16	19-20
Flood Damage Law/Map	11	7	12,20			
Litter				20		
SEQR Revisions (Town)		15	19	20		
Zoning						
Proposed CR District (Town)				15	14-15	
Rock Ridge Road (Town)		9	14			
Waterfront (Town)	16		15			
Waterfront (Village)	16	12	19	21-23	18-20	
<b>AREA-WIDE</b>						
Area of the Coastal Zone Map			7	9	8	8
Boaters						
Education				18		
Harbor security	17	12	17-18	18		
Chronological History	Annex D	Appendix A	5-6	7-8	6-7	
Davids Island	16	13	16-17	24-25	21-22	
Department of State					22-23	
Earth Day II				25		
Freshwater Wetlands Mapping						22
Governor's Task Force					23	
Historic Preservation			18	19		
Jay Coalition/Property			19	25		
Listen to Sound Campaign				26		
Long Island Sound					23	
Master Plan Update		11				
National Beach Cleanup Day				26	24	23
Sewers						
Infiltration & Inflow	15	14	20			
Repairs			14,15			
Soil & Water Conserv. District					24	
Storm Drain Stencil				20	16	
Water Quality Testing					17	
Weaver St. Corridor	2,10					
Winston Property		13	11,12			
<b>PREMIUM-PINE BROOK AREA</b>						
Beach Lot		15				
Bird Surveys						13
Conservation Area				12		12-13
Feasibility Study	1,5	4,Appendix B		11		
Implementation Grant - Dredging		8	10-11	9-11	9-10	9-11
Intermunicipal Cooperation					12	
Lorenzen Park					12	
Oil Containment Boom			8-9	11-12		

**APPENDIX A**  
**SUBJECT INDEX- CZMC ANNUAL REPORTS**

<u>SUBJECT</u>	<u>AR 1</u>	<u>AR 2</u>	<u>AR 3</u>	<u>AR 4</u>	<u>AR 5</u>	<u>AR 6</u>
<b>PREMIUM-PINE BROOK AREA- cont.</b>						
Pryer Manor Bridge				12	11	
Public Education	6		9	12		
Significant Habitat Designation	5	18			11	11-12
<b>EAST CREEK-HOMMOCKS AREA</b>						
Critical Environmental Area	1		15	16		
Dredge spoil disposal	13					
East Creek						
Restoration	13	15	13	16		
Silt/trash traps			13	17		17-18
Leaf disposal		15	14,15	17		
Water quality monitoring		15				
<b>SHELDRAKE RIVER AREA</b>						
Army Corps Flood Control Project	2,9	14	12	13	13	
Gardens Lake						
Dredging	2,10,13	6				
Restoration			11			
Golf Course Areas						
Shuster Study		11	12	15		
Proposed CR District				15	14-15	14-15
Intermunicipal Cooperation					15	
Larchmont Reservoir						
Automatic Release Valve	11	7	11,12	14		
Facility Improvements	12	7	11	14		
Sewer Connection		15				
Water Quality Testing	12	7,15		14		
R-S-L Crit. Environ. Area						16
Watershed Study			10	15		
Westchester Land Trust						23
<b>OTHER</b>						
Implementation						
Physical Projects	18					
Program Priorities	2,22-26					
Recommendations	26-27					
LWRP Update				23	20	21
Professional Consultant						22
Sale of Properties						
Town of Mamaroneck						
Village of Larchmont	2,8		12	14		
<b>TABLES &amp; CHARTS</b>						
Consistency Referrals	2,6,7,14,19-21, Annex B	5,8,9-10, Appendix C	22-28	27-31	25-30	25-30
<b>CZMC Members</b>						
Conferences Attended			35	38	37	37
Kit			37	41		
Liaison Responsibilities			34	37	36	36
Names & Terms	Annex C	Appendix D	33	36	35	35
Envir. Organizations			36	40	38	38
Implementing Actions-Status	Annex A	16	21	39		
Library Acquisitions				42	39	
LWRP Policies- List			29-32	32-35	31-34	31-34

APPENDIX B

INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS

KEY:

**P = Premium River-Pine Brook Wetlands Complex and adjacent lands**

**H = Hommocks Marsh Complex**

**R = Reservoir-Sheldrake-Leatherstocking Complex**

**\* = Occasional or rare**

**E = NY State DEC list (1983)      ENDANGERED SPECIES**

**S =    SPECIES OF SPECIAL CONCERN**

**T =    THREATENED SPECIES**

**V =    VULNERABLE SPECIES**

**e, s, t =    NY State DEC list (1987)**

GAVIIFORMES

**S** Common Loon    *Gavia immer*    P    H

PODICIPEDIFORMES

Horned Grebe    *Colymbus auritus*    P    H

Pied-billed Grebe    *Podilymbus podiceps*    P            R

PELECANIFORMES

Double-crested Cormorant    *Phalacrocorax auritus*    H    R

CICONIIFORMES

Great Blue Heron    *Ardea herodias*    P    H    R

Little Blue Heron    *Florida caerulea*    P

Louisiana Heron    *Hydranassa tricolor*    P\*

Great Egret    *Casmerodius albus*    P    H    R

Snowy Egret    *Egretta thula*    P    H    R

Cattle Egret    *Bubulcus ibis*    P\*

Black-crowned Night Her.    *Nycticorax nycticorax*    P    H    R

Yellow-crowned NightHer.    *Nyctanassa violacea*    P\*

Green Heron    *Butorides striatus*    P    H    R

**Ss** Least Bittern    *Ixobrychus exilis*    P

American Bittern    *Botaurus lentiginosus*    P    H

Glossy Ibis    *Plegadis falcinellus*    P    H

ANSERIFORMES

Mute Swan    *Cygnus olor*    P    H    R

Snow Goose    *Chen hyperborea*    P            R\*

Canada Goose    *Branta canadensis*    P    H    R

Brant    *B. bernicla*    P

Amer. Black Duck    *Anas rubripes*    P    H    R

Gadwall    *A. strepera*    P

Mallard    *A. platyrhynchos*    P    H    R

Common Pintail    *A. acuta*    P\*            R\*

American Widgeon    *A. americana*    P            R

Eurasian Widgeon    *A. Penelope*    P

Wood Duck    *Aix sponsa*    P\*    R

APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

Northern Shoveler	<i>Anas clypeata</i>	P	R
Blue-winged Teal	<i>A. discors</i>	P	R
Green-winged Teal	<i>A. crecca</i>		R
Oldsquaw	<i>Clangula hyemalis</i>	P	
Canvasback	<i>Aythya valisineria</i>	P	
Redhead	<i>A. americana</i>	P	
Ring-necked Duck	<i>A. collaris</i>		R
Lesser Scaup	<i>A. affinis</i>	P	
Greater Scaup	<i>A. marila</i>	P	R*
Common Goldeneye	<i>Bucephala clangula</i>	P	
Bufflehead	<i>B. albeola</i>	P	R
Ruddy Duck	<i>Oxyura jamaicensis</i>	P	R
Common Merganser	<i>Mergus merganser</i>	P	R
Red-breasted Merganser	<i>M. serrator</i>	P	R
Hooded Merganser	<i>Lophodytes cucullatus</i>	P	R
<b><u>FALCONIFORMES</u></b>			
Sharp-shinned Hawk	<i>Accipiter striatus</i>	P	H R
<b>s</b> Cooper's Hawk	<i>A. cooperii</i>	P	R
Northern Goshawk	<i>A. gentilis</i>	P	
<b>Tt</b> Northern Harrier	<i>Circus cyaneus</i>	P	H R
Red-tailed Hawk	<i>Buteo jamaicensis</i>	P	H R*
<b>Tt</b> Red-shouldered Hawk	<i>B. lineatus</i>	P*	R*
Broad-winged Hawk	<i>B. platypterus</i>		R*
<b>e</b> Golden Eagle	<i>Aquila chrysaetos</i>		R*
<b>Tt</b> Osprey	<i>Pandion haliaetus</i>	P	H R
Turkey Vulture	<i>Cathartes aura</i>	P	R
American Kestrel	<i>Falco sparverius</i>	P	H R
Merlin	<i>F. columbarius</i>	P*	H
<b><u>GALLIFORMES</u></b>			
Ruffed Grouse	<i>Bonasa umbellus</i>	P*	
Ring-necked Pheasant	<i>Phasianus colchicus</i>	P	H R
<b><u>GRUIFORMES</u></b>			
American Coot	<i>Fulica americana</i>	P	H R
Virginia Rail	<i>Rallus limicola</i>	P*	
Clapper Rail	<i>R. longirostris</i>	P*	
Sora Rail	<i>Porzana carolina</i>	P	R
<b><u>CHARADRIIFORMES</u></b>			
Semipalmated Plover	<i>Charadrius semipalmatus</i>	P	H
Killdeer	<i>C. vociferous</i>	P	H R
American Woodcock	<i>Philohela minor</i>	P	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	P	H R
Lesser Yellowlegs	<i>T. flavipes</i>	P	H
Solitary Sandpiper	<i>T. solitaria</i>	P*	R

APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

Sanderling	Calidris alba	P*		
Pectoral Sandpiper	C. melantos	P		
Dunlin	C. alpina	P*		
Spotted Sandpiper	Actitis macularia	P	H	R
Least Sandpiper	Calidris minutilla	P		
Semipalmated Sandpiper	C. pusilla	P		
White-rumped Sandpiper	C. fuscicollis	P		
Herring Gull	Larus argentatus	P	H	R
Ring-billed Gull	L. delawarensis	P	H	R
Great Black-backed Gull	L. marinus	P		
Laughing Gull	L. atricilla	P	H	R
Bonaparte's Gull	L. philadelphia	P		
<b>Ee</b> Little (Least) Tern	Sterna albifrons	P		
<b>Tt</b> Common Tern	S. hirundo	P	H	
Black Skimmer	Rynchops niger	P*		
 <u>COLUMBIFORMES</u>				
Mourning Dove	Zenaida macroura	P	H	R
Rock Dove	Columba livia	P	H	R
 <u>CUCULIFORMES</u>				
Yellow-billed Cuckoo	Coccyzus americanus			R*
Black-billed Cuckoo	C. erythrophthalmus			R*
 <u>STRIGIFORMES</u>				
Common Screech Owl	Otus asio	P		R
Great Horned Owl	Bubo virginianus	P		R
<b>Ss</b> Barn Owl	Tyto alba	P*		
Snowy Owl	Nyctea scandiaca	P*		
 <u>CAPRIMULGIFORMES</u>				
<b>Ss</b> Common Nighthawk	Chordeiles minor	P	H	R
 <u>APODIFORMES</u>				
Chimney Swift	Chaetura pelagica			R
<b>V</b> Ruby-throated Hummbrd.	Archilochus colubris	P		R
 <u>CORACIIFORMES</u>				
Belted Kingfisher	Megasceryle alcyon	P	H	R
 <u>PICIFORMES</u>				
Red-headed Woodpecker	Melanerpes erythrocephalus	P		R*
Pileated Woodpecker	Dryocopus pileatus	P*		R
Common Flicker	Colaptes auratus	P	H	R
Red-bellied Woodpecker	Melanerpes carolinus	P		R
Yellow-bellied Sapsucker	Sphyrapicus varius	P		R

## APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

Downy Woodpecker	Picoides pubescens	P	H	R
V Hairy Woodpecker	P. villosus	P		R
<b><u>PASSERIFORMES</u></b>				
Tyrannidae-Flycatchers				
Eastern Kingbird	Tyrannus tyrannus	P		R
Great Crested Flycatcher	Myiarchus crinitus	P		R
Ash-throated Flycatcher	M. cinerascens	P*		
Eastern Phoebe	Sayornis phoebe	P	H	R
Eastern Pewee	Contopus virens	P		R
Acadian Flycatcher	Empidonax virescens	P		
Yellow-bellied Flycatcher	E. flairventris	P		R
Least Flycatcher	E. minimus			R
Hirundinidae-Swallows				
Cliff Swallow	Petrochelidon pyrrhonata	P*		
Barn Swallow	Hirundo rustica	P	H	R
Tree Swallow	Iridoprocne bicolor	P	H	R
Rough-winged Swallow	Stelgidopteryx ruficollis	P		R
Bank Swallow	Riparia riparia	P		R
Corvidae-Jays, Crows				
Fish Crow	Corvus ossifragus	P	H	
American (Common) Crow	C. brachyrhynchos	P	H	R
Blue Jay	Cyanocitta cristat	P	H	R
Paridae- Titmice				
Black-capped Chickadee	Parus atricapillus	P	H	R
Tufted Titmouse	P. bicolor	P	H	R
Sittidae-Nuthatches				
White-breasted Nuthatch	Sitta carolinensis	P	H	R
Red-breasted Nuthatch	S. canadensis	P		R
Certhiidae-Creepers				
Brown Creeper	Certhia familiaris	P		R
Troglodytidae- Wrens				
House Wren	Troglodytes aedon	P	H	R
Winter Wren	T. troglodytes	P		R
Carolina Wren	Thryothorus ludovicianus	P	H	R
Marsh Wren	Cistothorus palustris	P		
Sedge Wren	C. platensis	P		
Mimidae-Mimic Thrushes				
Brown Thrasher	Toxostoma rufum	P	H	R

APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

Gray Catbird	<i>Dumetella carolinensis</i>	P	H	R
Northern Mockingbird	<i>Mimus polyglottos</i>	P	H	R
Turdidae-Thrushes				
<b>Ss</b> Eastern Bluebird	<i>Sialia sialis</i>	P	H*	
American Robin	<i>Turdus migratorius</i>	P	H	R
Gray-Cheeked Thrush	<i>Catharus minimus</i>		H	R
Swainson's Thrush	<i>C. ustulatus</i>	P	H	R
Hermit Thrush	<i>C. guttatus</i>	P		R
Veery	<i>C. fuscescens</i>	P		R
Wood Thrush	<i>Hylocichla mustelina</i>	P	H	R
Fieldfare	<i>Turdus pilaris</i>	P*		
Sylviidae - Kinglets, Gnatcatchers:				
Ruby-crowned Kinglet	<i>Regulus calendula</i>	P	H	R
Golden-crowned Kinglet	<i>R. satrapa</i>	P	H	R
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	P		R
Motacillidae - Pipets etc.:				
Water (American) Pipet	<i>Anthus spinoletta</i>	P*		
Bombycillidae - Waxwings:				
Cedar Waxwing	<i>Bombycilla cedrorum</i>	P	H	R
Sturnidae - Starlings:				
European Starling	<i>Sturnus vulgaris</i>	P	H	R
Vireonidae-Vireos				
Red-eyed Vireo	<i>Vireo olivaceus</i>	P	H	R
Warbling Vireo	<i>V. altiloquus</i>			R
Yellow-throated Vireo	<i>V. flavifrons</i>			R
Solitary Vireo	<i>V. solitarius</i>			R
Parulidae - Wood Warblers:				
Northern Parula Warbler	<i>Parula americana</i>	P	H	R
Black-throated Green War.	<i>Dendroica virens</i>	P	H	R
Black & White Warbler	<i>Mniotilta varia</i>	P	H	R
Blackpoll Warbler	<i>Dendroica striata</i>			R
Black-throated Blue War.	<i>D. caerulescens</i>	P	H	R
Magnolia Warbler	<i>D. magnolia</i>	P	H	R
Yellow-rumped Warbler	<i>D. coronata</i>	P	H	R
Canada Warbler	<i>Wilsonia canadensis</i>	P		R
Cape May Warbler	<i>Dendroica tigrina</i>	P		
Chestnut-sided Warbler	<i>D. pensylvanica</i>	P	H	R
Blackburnian Warbler	<i>D. fusca</i>	P	R	
American Redstart	<i>Setophaga ruticilla</i>	P	H	R
Prairie Warbler	<i>Dendroica discolor</i>	P		R

APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

Palm Warbler	<i>Dendroica palmarum</i>	P		R
Blue-winged Warbler	<i>Vermivora pinus</i>	P	H	R
V Yellow Warbler	<i>Dendroica petechia</i>	P	H	R
Worm-eating Warbler	<i>Helmitheros vermivorus</i>	P		R
Tennessee Warbler	<i>Vermivora peregrina</i>	P		R
S Wilson's Warbler	<i>Wilsonia pusilla</i>	P	H	R
Nashville Warbler	<i>Vermivora ruficapilla</i>	P		
Mourning Warbler	<i>Oporornis philadelphia</i>	P		
Common Yellowthroat	<i>Geothlypis trichas</i>	P	H	R
Yellow-breasted Chat	<i>Icteria verens</i>	P		
Northern Waterthrush	<i>Seiurus noveboracensis</i>	P		
Louisiana Waterthrush	<i>S. motacilla</i>	P		R
Ovenbird	<i>S. aurocapillus</i>	P		R
Ploceidae - Weaver Finches:				
House Sparrow	<i>Passer domesticus</i>	P	H	R
Icteridae - Blackbirds, Orioles:				
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	P	H	R
Brown-headed Cowbird	<i>Molothrus ater</i>	P	H	R
Rusty Blackbird	<i>Euphagus carolinus</i>	P		R
Common Grackle	<i>Quiscalus guiscula</i>	P	H	R
Bobolink	<i>Dolichonyx oryzivorus</i>	P	H	
V Eastern Meadowlark	<i>Sturnella magna</i>	P	H	
Orchard Oriole	<i>Icterus spurius</i>	P		R
Northern Oriole-Baltimore	<i>I. galbula</i>	P	H	R
Thraupidae - Tanagers:				
Scarlet Tanager	<i>Piranga olivacea</i>	P		R
Fringillidae - Finches, Sparrows:				
Northern Junco	<i>Junco hyemalis</i>	P	H	R
Snow Bunting	<i>Plectrophenax nivalis</i>	P		
Northern Cardinal	<i>Cardinalis cardinalis</i>	P	H	R
House Finch	<i>Carpodacus mexicanus</i>	P	H	R
Purple Finch	<i>C. purpureus</i>	P		R
Evening Grosbeak	<i>Hesperiphona vespertina</i>	P		R
American Goldfinch	<i>Carduelis tristis</i>	P	H	R
Pine Siskin	<i>C. pinus</i>	P		R
Indigo Bunting	<i>Passerina cyanea</i>	P	H	R
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	P		R
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>	P	H	R
White-throated Sparrow	<i>Zonotrichia albicollis</i>	P	H	R
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	P	R	
Chipping Sparrow	<i>Spizella passerina</i>	P	H	R
Field Sparrow	<i>S. pusilla</i>	P		R
Swamp Sparrow	<i>Melospiza georgiana</i>	P		

APPENDIX B

**INVENTORY OF BIRD SPECIES IN 3 FISH AND WILDLIFE HABITATS**

American Tree Sparrow	Spizella arborea	P	R
<b>s</b> Grasshopper Sparrow	Ammodramus savannarum	P	
Fox Sparrow	Passerella iliaca	P	H R
Song Sparrow	Melospiza melodia	P	H R
<b>Ss</b> Vesper Sparrow	Pooecetes gramineus	P	
Savannah Sparrow	Passerculus sandwichensis	P	

Sources: PREMIUM COMPLEX LWRP 1986, 6 bird lists (1967 thru 1990), Consultant 1992-1993.

HOMMOCKS COMPLEX LWRP 1986 list, Walk Book (1979), Consultant 1993.

RESERVOIR COMPLEX LWRP 1986 list, 2 Walk Books (1984 and 1986), Bird Lists 1970-1991, Consultant 1992.

APPENDIX B

**BIOLOGICAL INVENTORY FOR 3 FISH AND WILDLIFE HABITATS**

KEY:

P = Premium River-Pine Brook Wetlands Complex and adjacent lands

H = Hommocks Marsh Complex

R = Reservoir-Sheldrake-Leatherstocking Complex

MAMMALS

Little Brown Bat	<i>Myotis lucifugus lucifugus</i>			R
Eastern Chipmunk	<i>Tamias striatus</i>	P	H	R
White-tailed Deer	<i>Odocoileus virginianus</i>	P	H	R
Red Fox	<i>Vulpes fulva</i>			R
Common Eastern Mole	<i>Scalopus aquaticus</i>	P	H	R
White-footed (Deer) Mouse	<i>Peromyscus leucopus</i>	P	H	R
Muskrat	<i>Ondratra zibethicus</i>	P	H	R
Opossum	<i>Didelphis marsupialis</i>	P	H	R
	<i>D. virginiana</i>			R
Eastern Cottontail Rabbit	<i>Sylvilagus floridanus</i>		H	R
Racoon	<i>Procyon lotor</i>	P	H	R
Brown (Norway) Rat	<i>Rattus norvegicus</i>		H	R
Short-tailed Shrew	<i>Blarina brevicauda</i>		H	R
Striped Skunk	<i>Mephitis monax</i>	P	H	R
Eastern Gray Squirrel,	<i>Sciurus carolinensis</i>	P	H	R
Black Squirrel	<i>S. niger</i>	P	H	R
North Amerivan Field Vole	<i>Microtus pennsylvanicus</i>	P	H	R
Woodchuck	<i>Marmota monax</i>		H	R

REPTILES

Red Salamander	<i>Plethodon cinereus cinereus</i>			R
Black Rat Snake	<i>Elaphe obsoleta obsoleta</i>			R
Eastern Milk Snake	<i>Lampropeltis triangulum</i>			R
	<i>triangulum</i>			
Smooth Green Snake	<i>Opheodrys vernalis</i>			R
Northern Diamondback Terrapin	<i>Malaclemys terrapin</i>		H	
Box Turtle	<i>Terrapene carolina</i>			R
Painted Turtle	<i>Chrysemis picta picta</i>			R
Snapping Turtle	<i>Chelydra serpentina</i>			R
s Spotted Turtle	<i>Clemmys guttata</i>			R

AMPHIBIANS

Red Eff	<i>Diemictylus virideseens</i>			R
Bull Frog	<i>Rana catesheiano</i>	P	H	R
Green Frog	<i>R. clamitans</i>	P	H	R
Pickerel Frog	<i>R. palustris</i>			R
Northern Leopard Frog	<i>R. pipiens</i>			R
Wood Frog	<i>R. sylvatica</i>			R
Spring Peeper	<i>Hyla crucifer</i>			R

APPENDIX B

**BIOLOGICAL INVENTORY FOR 3 FISH AND WILDLIFE HABITATS**

AMPHIBIANS- cont.

Gray Tree Frog	<i>Hyla versicolor</i>			R
Spotted Salamander	<i>Ambystoma maculatum</i>			R
Red-Backed Salamander	<i>Plethodon cinereus cinereus</i>			R
Lead-Backed Salamander	<i>P. cinereus cinereus</i>			R
Red-Spotted Newt	<i>Notophthalmus viridescens</i>			R
American Toad	<i>Bufo americanus</i>	P	H	R

INSECTS

Damselfly		P	H	R
Dragonfly		P	H	R
Praying Mantis		P	H	R
Common Blue	<i>Icaricia icarioides</i>			R
Small White Cabbage	<i>Artogeia rapae</i>			R
Mourning Cloak	<i>Nymphalis antiopa</i>			R
Monarch Butterfly	<i>Danaus plexippus</i>			R
Spicebush Swallowtail	<i>Pterourus troilus</i>			R
Tiger Swallowtail	<i>P. glaucus</i>			R
Common Sulphur	<i>Colias philodice</i>			R
Viceroy	<i>Basilarchia archippus</i>			R

APPENDIX B

**BIOLOGICAL INVENTORY FOR 3 FISH AND WILDLIFE HABITATS**

AQUATIC SPECIES

Marsh Snail		P	H	
Mud Snail		P	H	
Fiddler Crab	Uca spp.	P	H	
Marsh Crab		P	H	
Horseshoe Crab	Limulus polyphemus	P	H	
Ribbed Mussel	Geukensia demissa	P	H	
Naiad (freshwater mussel)	Unio spp.			R

FISH

Alewives	Alosa pseudoharengus	P	H	
Large-mouth Bass	Micropterus salmoides			R
Striped Bass	Morone saxatilis	P	H	
Bluefish	Pomatomus saltatrix	P	H	
Carp	Cyprinus carpio			R
Brown Bullhead Catfish	Ictalurus nebulosus			R
American Eel	Anguilla rostrata	P	H	R
Flounder, winter	Pseudopleuronectes americanus	P	H	
Goldfish	Carassius auratus			R
Killifish	Fundulus spp.	P	H	
Mackeral	Scomber scombrus	P	H	
Menhaden	Brevoortia tyrannus	P	H	
Yellow Perch	Perca flavescens			R
Porgy		P	H	
Shiner	Notropis cornutus			R
Silversides	Menidia spp.	P	H	
Sunfish	Centrarchidae family			R
Tautog (Blackfish)	Tautoga onitis	P	H	

Note: Other important coastal species are found along the rocky shores, tidepools, beaches and harbors of Larchmont, as follows:

Redbeard Sponge	Mussels: Blue, Ribbed
Deadman's fingers	Atlantic Bay Scallop
Jellyfish: Comb, Moon	Jingle Shell
Sea Anemones	Eastern Oyster
Worms: Ribbon, sand, sea	Cockle
Starfish, Sea Star	Clams: Northern Quahog, Softshell, Razor
Sandhoppers: Amphipods	Shipworm
Barnacles: Rock	Sea Snails: Limpet, Moon
Shrimp: Mantid, Brine	Slipper Periwinkle: Smooth, rough, common
American Lobster	Mud Snail
Crabs: Hermit, Blue, Green, Rock, Calico, Fiddler	Atlantic oysterdrill
	Whelk: Knobbed, Channeled

APPENDIX C

**BOTANICAL INVENTORY- RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

TREES

Ailanthus (Tree of Heaven)	<i>Ailanthus altissima</i>
Alder, Smooth	<i>Alnus serrulata</i>
Alder, Speckled	<i>A. rugosa</i>
Apple	<i>Malus pumila</i>
Ash, Mountain	<i>Sorbus americana</i>
Ash, White	<i>Fraxinus americana</i>
Basswood, American (Linden)	<i>Tilia americana</i>
Beech, American	<i>Fagus grandifolia</i>
Birch, Black	<i>Betula lenta</i>
Birch, Gray	<i>B. populifolia</i>
Birch, White	<i>B. papyrifera</i>
Cedar, Northern White	<i>Thuja occidentalis</i>
Cedar, Eastern Red	<i>Juniperus virginiana</i>
Cherry, Black	<i>Prunus serotina</i>
Chestnut, American	<i>Castanea dentata</i>
Cottonwood, Eastern	<i>Populus deltoides</i>
Elm, American	<i>Ulmus americana</i>
Hawthorne, spp.	<i>Craetegus</i> spp.
Hemlock, Eastern	<i>Tsuga canadensis</i>
Hickory, Butternut	<i>Carya cordiformis</i>
Hickory, Pignut	<i>C. glabra</i>
Hickory, Shagbark	<i>C. ovata</i>
Hornbeam, American	<i>Carpinus caroliniana</i>
Larch (Tamarack)	<i>Larix laricina</i>
Locust, Black	<i>Robinia pseudoacacia</i>
Locust, Honey	<i>Gleditsia triacanthos</i>
Magnolia, Cucumber	<i>Magnolia acuminata</i>
Maple, Ash-leaved (Box elder)	<i>Acer negundo</i>
Maple, Norway	<i>A. platanoides</i>
Maple, Red	<i>A. rubrum</i>
Maple, Sugar (Silver)	<i>A. saccharum</i>
Mulberry, Red	<i>Morus rubra</i>
Oak, Black	<i>Quercus velutina</i>
Oak, Pin	<i>Q. palustris</i>
Oak, Red	<i>Q. rubra (borealis)</i>
Oak, Scrub	<i>Q. ilicifolia</i>
Oak, Swamp	<i>Q. bicolor</i>
Oak, White	<i>Q. alba</i>
Pine, Austrian	<i>Pinus nigra</i>
Pine, Eastern white	<i>P. strobus</i>
Sassafras	<i>Sassafras albidum</i>
Shadbush	<i>Amelanchier canadensis</i>
Spruce, Norway	<i>Picea abies</i>
Sweetgum	<i>Liquidambar stypaciflua</i>
Sycamore, American	<i>Platanus occidentalis</i>
Tulip tree (Yellow poplar)	<i>Liriodendron tulipifera</i>

APPENDIX C

**BOTANICAL INVENTORY- RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

TREES- cont.

Tupelo, Black	<i>Nyssa sylvatica</i>
Weeping Willow	<i>Salix badylonica</i>
Witchhazel	<i>Hamamelis virginiana</i>

SHRUBS

Arrow-wood	<i>Viburnum recognitum</i>
Barberry, Japanese	<i>Berberis thunbergii</i>
Bayberry	<i>Myrica</i> spp.
Bladdernut	<i>Staphylea trifolia</i>
Blueberry, Low	<i>Vaccinium vacillans</i>
Blueberry, Low Bush	<i>V. angustifolium</i>
Blueberry, High Bush	<i>V. corybosum</i>
Burning Bush	<i>Euonymus atropurpureus</i>
Brambles	<i>Rubus</i> spp.
Cranberry, High Bush	<i>Viburnum trilobum</i>
Current/Gooseberry	<i>Ribes</i> spp.
Forsythia spp.	
Honeysuckle, Japanese	<i>Lonicera japonica</i>
Knotweed, Japanese	<i>Polygonum cuspidatum</i>
Pepperbush, Sweet or Coast	<i>Clethra alnifolia</i>
Rhododendron spp.	
Rose, Multiflora	<i>Rosa multiflora</i>
Sassafras	<i>Sassafras albidum</i>
Spicebush	<i>Lindera benzoin</i>
Sumac, Smooth	<i>Rhus glabra</i>
Sumac, Winged	<i>R. copallina</i>
Poison Ivy	<i>R. radicans</i>
<i>Viburnum</i> , Maple-Leaf	<i>Viburnum acerifolium</i>
Witch Hazel	<i>Hamamelis virginiana</i>
Yew, American	<i>Taxus canadensis</i>

WILDFLOWERS, PLANTS & HERBS

Alyssum, Hoary	<i>Berteroa incoma</i>
Arrowhead, Broad-leaved	<i>Sagittaria latifolia</i>
Aster, Heart-leaved	<i>Aster cordifolius</i>
Aster, New York	<i>A. novae-belgii</i>
Aster, White wood	<i>A. divaricatus</i>
Avens, White	<i>Geum canadense</i>
Baneberry, White	<i>Actaea pachypoda</i>
Bindweed, Hedge	<i>Convolvulus sepium</i>
Black-eyed Susan	<i>Rudbeckia hirta</i>
Bloodroot	<i>Sanguinaria canadensis</i>
Bluecurls	<i>Trichostema dichotomum</i>
Boneset	<i>Eupatorium perfoliatum</i>
Bugleweed	<i>Lycopus virginicus</i>
Burdock	<i>Arctium minus</i>

APPENDIX C

**BOTANICAL INVENTORY- RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

WILDFLOWERS, PLANTS & HERBS- cont.

Buttercup, Common Tall	Ranunculus acris
Campion, Starry	Silene stellata
Catnip	Nepeta cataria
Celandine	Chelidonium majus
Celandine, Lesser	Ranunculus ficata
Celandine, Poppy	Stylophorum diphyllum
Chickweed, Mouse-eared	Cerastium arvense
Cinquefoil, Dwarf	Potentilla canadensis
Clover, White	Trifolium repens
Cohosh, Blue	Caulophyllum thalictroides
Coltsfoot	Tussilago farfara
Columbine	Aquilegia canadensis
Cress, Winter, (Yellow Rocket)	Barbarea vulgaris
Daisy, Ox-eye	Chrysanthemum leucathemum
Dandelion, Common	Taraxacum officinale
Deadnettle, Purple	Lamium purpureum
Dogbane, Spreading	Apocymum androsaemifolium
Dutchman's Breeches	Dicentra cucullaria
Evening Lychnis	Lychnis alba
Everlasting, Sweet (Catfoot)	Gnaphalium obtusifolium
Field Pussytoes	Antennaria neglecta
Gall-of-the-earth	Prenanthes trifoliata
Geranium, Wild	Geranium maculatum
Gill-over-the-ground (Ground-ivy)	Glechoma hederacea
Goldenrod, Erect	Solidago altissima
Goldenrod, Blue-stemmed	S. caesia
Grasses	Gramineae spp.
Groundnut	Apios americana
Heal-all	Prunella vulgaris
Horse-balm	Collinsonia canadensis
Horsetails	Equisetum spp.
Hawkweed, Orange (Devil's Paintbrush)	Hieracium aurantiacum
Indian-pipe	Monotropa uniflora
Iris, Blue-Flag	Iris versicolor
Jack-in-the-Pulpit	Arisaema dracontium
Jewelweed (Spotted Touch-Me-Not)	Impatiens capensis
Joe-Pye Weed	Eupatorium spp.
Knotweed, Japanese	Polygonum cuspidatum
Knotweed, Long-bristled Smartweed	P. cespitosum
Knotweed, Virginia (Jumpseed)	Tovara virginiana
Lamb's quarters (Pigweed)	Chenopodium alba
Lettuce, Blue	Lactula spp.
Lettuce, White	Prenanthes alba
Lettuce, Tall-white	P. altissima
Lily, Trout	Erythronium americanum
Lily, Yellow Pond (Bullhead, Spatterdock)	Nuphar variegatum

APPENDIX C

**BOTANICAL INVENTORY- RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

WILDFLOWERS, PLANTS & HERBS- cont.

Loosestrife, Purple	<i>Lythrum salicaria</i>
Loosestrife, Fringed	<i>Lysimachia ciliata</i>
Loosestrife, Swamp (Water-willow)	<i>Decodon verticillatus</i>
Mallow, Swamp Rose	<i>Hibiscus palustris</i>
Mallow, Crimson-eyed	<i>H. palustris peckii</i>
Marigold, Marsh	<i>Caltha palustris</i>
Mayflower, Canada	<i>Maianthemum canadense</i>
Meadowrue, Early	<i>Thalictrum dioicum</i>
Milkweed, Common	<i>Asclepias syriaca</i>
Milkweed, Purple	<i>A. purpurascens</i>
Mugwort	<i>Artemisia vulgaris</i>
Mullein, Common	<i>Verbascum thapsus</i>
Mullein, Moth	<i>V. blattaria</i>
Mullein, Pink	<i>Lychnis coronaria</i>
Mustard Garlic	<i>Alliaria officinalis</i>
Nettle, False	<i>Boehmeria cylindrica</i>
Nettle, Stinging	<i>Utrica dioica</i>
Nightshade, Enchanter's	<i>Circaea quadrisulcata</i>
Oats, Wild	<i>Uvularia sessifolia</i>
Periwinkle	<i>Vinca minor</i>
Pineapple Weed	<i>Matricaria matricariodes</i>
Pink, Deptford	<i>Dianthus armeria</i>
Plantain, Common	<i>Plantago major</i>
Pokeweed	<i>Phytolacca americana</i>
Primrose, Common Evening	<i>Oenothera biennis</i>
Queen Anne's Lace	<i>Daucus carota</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Ragweed, Great	<i>A. trifida</i>
Rue, Anemone	<i>Anemonella thalictroides</i>
Rue, Tall Meadow	<i>Thalictrum polygamum</i>
St. Johnswort, Common	<i>Hypericum perforatum</i>
Sarsaparilla	<i>Aralia</i> spp.
Sarsaparilla, Bristly	<i>A. hispida</i>
Saxifrage, Early	<i>Saxifraga virginiana</i>
Spikenard	<i>A. racemosa</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Skunk Cabbage	<i>Symplocarpus foetidus</i>
Snakeroot	<i>Sanicula</i> spp.
Snapdragon, Lesser	<i>Antirrhinum orontium</i>
Solomon's Seal	<i>Polygonatum biflorum</i>
Solomon's Seal, False	<i>Smilacina racemosa</i>
Sow-thistle, Common	<i>Sonchus oleraceus</i>
Speedwell, Field	<i>Veronica arvensis</i>
Speedwell, Thyme-leaved	<i>V. serpyllifolia</i>
Spring-beauty	<i>Claytonia virginica</i>
Strawberry, Wild	<i>Fragaria virginiana</i>

APPENDIX C

**BOTANICAL INVENTORY- RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

WILDFLOWERS, PLANTS & HERBS- cont.

Sunflower, Thin-leaved	Helianthus decapetalus
Thistle, Bull	Cirsium vulgare
Turtlehead	Chelone glabra
Violet, Common blue	Viola papilionacea
Violet, Smooth Yellow	V. pennsylvanica
Violet, Sweet White	V. lauceolata
Watercress, Alien	Nasturtium officinale
Wintergreen, Spotted	Chimophila maculata
Yarrow	Achillea millefolium

VINES

Bindweed, Hedge	Convolvulus sepium
Bittersweet, Asiatic	Celastrus orbiculatus
Cucumber, Bur	Sycios angularis
Dodder	Cuscuta gronovii
Grape, Wild	Vitis spp.
Greenbrier (Catbrier)	Smilax rotundifolia
Honeysuckle, Japanese	Lonicera japonica
Nightshade (Bittersweet)	Solanum dulcamara
Porcelainberry	Ampelopsis brevipedunculata
Virginia Creeper	Parthenocissis quinquefolia

FERNS & FERN ALLIES

Broad Beech	Dryopteris hexagonoptera
Marginal Shield	D. marginalis
Christmas	Polystichum acrostichoides
Cinnamon	Osmunda cinnamomea
Field Horsetail	Equisetum arvense
Hayscented	Dennstaedtia punctilobula
Interrupted	Osmunda claytoniana
Lady	Athyrium filix-femina
Maidenhair	Adiantum pedatum
Marsh	Telypteris palustris
Ostrich	Matteuccia struthiopteris
New York	Thelypteris noveboracensis
Rock Polypody	Polypodium vulgare
Sensitive	Onoclea sensibilis
Shining Clubmoss	Lycopodium lucidulum

Sources: 2 Walk Books (1984 and 1986), Wallace Irwin Jr., Edward Frankel, Mary Anne Johnson.  
Consultant Stephen Coleman (1992).

APPENDIX D

**COMPILATION OF BIRD LISTS FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

(Sources: LWRP 1986 Appendix A, Irma Volk, Paul Lehman, James and Mary Anne Johnson)

**KEY:**

- 1 Occasional or rare**
- 2 Consultant Stephen Coleman- Observations March - November 1992**
- \* Nesting in R-S-L CEA- Confirmed by Consultant**
- \*\* Nests on Bonnie Briar**
- E ENDANGERED SPECIES NY STATE DEC LIST (1983)**
- S SPECIES OF SPECIAL CONCERN**
- T THREATENED SPECIES**
- V VULNERABLE SPECIES**
- e,s,t NY STATE DEC LIST (1987)**

PODICIPEDIFORMES

Pied-billed grebe<sup>2</sup> Podilymbus podiceps

PELECANIFORMES

Double-crested Cormorant<sub>2</sub> Phalacrocorax auritus

CICONIIFORMES

Great Blue Heron<sup>2</sup> Ardea herodias  
 Great Egret<sup>2</sup> Casmerodius albus  
 Snowy Egret<sup>2</sup> Egretta thula  
 Black-crowned Night Heron<sup>2</sup> Nycticorax nycticorax  
 Green Heron<sup>2,\*</sup> Butorides striatus

ANSERIFORMES

Mute Swan<sup>2,\*</sup> Cygnus olor  
 Snow Goose<sup>1</sup> Chen hyperborea  
 Canada Goose<sup>2,\*</sup> Branta canadensis  
 Amer. Black Duck<sup>2</sup> Anas rubripes  
 Mallard<sup>2,\*</sup> A. platyrhynchos  
 Common Pintail<sup>1,2</sup> A. acuta  
 American Wigeon<sup>2</sup> A. americana  
 Wood Duck<sup>2,\*</sup> Aix sponsa  
 Northern Shoveler<sup>2</sup> Anas clypeata  
 Blue-winged Teal A. discors  
 Green-winged Teal A. crecca  
 Ring-necked Duck<sup>2</sup> Aythya collaris  
 Greater Scaup<sup>1,2</sup> A. marila  
 Bufflehead<sup>2</sup> Bucephala albeola  
 Ruddy Duck<sup>2</sup> Oxyura jamaicensis  
 Common Merganser<sup>1,2</sup> Mergus merganser  
 Red-breasted Merganser<sup>2</sup> M. serrator  
 Hooded Merganser<sup>2</sup> Lophodytes cucullatus

FALCONIFORMES

Sharp-shinned Hawk<sup>2,\*</sup> Accipiter striatus  
 Cooper's Hawk<sup>2</sup> A. cooperii

APPENDIX D

**COMPILATION OF BIRD LISTS FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

<b>Tt</b> Northern Harrier <sup>2</sup>	Circus cyaneus
Red-tailed Hawk <sup>2,*</sup>	Buteo jamaicensis
<b>Tt</b> Red-shouldered Hawk <sup>1</sup>	B. lineatus
Broad-winged Hawk <sup>2</sup>	B. platypterus
<b>e</b> Golden Eagle <sup>1</sup>	Aquila chrysaetos
<b>Tt</b> Osprey <sup>2</sup>	Pandion haliaetus
Turkey Vulture <sup>2</sup>	Cathartes aura
American Kestrel	Falco sparverius
<u>GALLIFORMES</u>	
Ring-necked Pheasant <sup>1,2,*</sup>	Phasianus colchicus
<u>GRUIFORMES</u>	
American Coot <sup>1,2</sup>	Fulica americana
Sora Rail <sup>2</sup>	Porzana carolina
<u>CHARADRIIFORMES</u>	
Killdeer <sup>2,*</sup>	Charadrius vociferous
Greater Yellowlegs	Tringa melanoleuca
Lesser Yellowlegs	T. flavipes
Solitary Sandpiper	T. solitaria
Spotted Sandpiper <sup>2,*</sup>	Actitis macularia
Herring Gull <sup>2</sup>	Larus argentatus
Ring-billed Gull <sup>2</sup>	L. delawarensis
Laughing Gull <sup>2</sup>	L. atricilla
<u>COLUMBIFORMES</u>	
Mourning Dove <sup>2,*</sup>	Zenaida macroura
Rock Dove <sup>2,*</sup>	Columba livia
<u>CUCULIFORMES</u>	
Yellow-billed Cuckoo <sup>1</sup>	Coccyzus americanus
Black-billed Cuckoo <sup>1</sup>	C. erythrophthalmus
<u>STRIGIFORMES</u>	
Great Horned Owl <sup>2,*</sup>	Bubo virginianus
Screech Owl <sup>2,*</sup>	Otus asio
<u>CAPRIMULGIFORMES</u>	
<b>Ss</b> Common Nighthawk <sup>2,*</sup>	Chordeiles minor
<u>APODIFORMES</u>	
Chimney Swift	Chaetura pelagica
<b>V</b> Ruby-throated Hummingbird <sup>1,2,*</sup>	Archilochus colubris
<u>CORACIIFORMES</u>	
Belted Kingfisher <sup>2,*</sup>	Megasceryle alcyon

APPENDIX D

**COMPILATION OF BIRD LISTS FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

PICIFORMES

Red-headed Woodpecker <sup>1</sup>	<i>Melanerpes erythrocephalus</i>
Pileated Woodpecker <sup>2,*</sup>	<i>Dryocopus pileatus</i>
Common Flicker <sup>2,*</sup>	<i>Colaptes auratus</i>
Red-bellied Woodpecker <sup>2,*</sup>	<i>Melanerpes carolinus</i>
Yellow-bellied Sapsucker <sup>2</sup>	<i>Sphyrapicus varius</i>
Downy Woodpecker <sup>2,*</sup>	<i>Picoides pubescens</i>
V Hairy Woodpecker <sup>2,*</sup>	<i>P. villosus</i>

PASSERIFORMES

Tyrannidae-Flycatchers

Eastern Kingbird <sup>2,*</sup>	<i>Tyrannus tyrannus</i>
Great Crested Flycatcher <sup>2,*</sup>	<i>Myiarchus crinitus</i>
Eastern Phoebe <sup>2,*</sup>	<i>Sayornis phoebe</i>
Eastern Pewee <sup>2,*</sup>	<i>Contopus virens</i>
Yellow-bellied Flycatcher <sup>2</sup>	<i>Empidonax flairventris</i>
Least Flycatcher	<i>E. minimus</i>

Hirundinidae-Swallows

Barn Swallow <sup>2</sup>	<i>Hirundo rustica</i>
Tree Swallow <sup>2,*</sup>	<i>Iridoprocne bicolor</i>
Rough-winged Swallow	<i>Stelgidopteryx ruficollis</i>
Bank Swallow	<i>Riparia riparia</i>

Corvidae-Jays, Crows

American (Common) Crow <sup>2,*</sup>	<i>Corvus brachyrhynchos</i>
Blue Jay <sup>2,*</sup>	<i>Cyanocitta cristat</i>

Paridae- Titmice

Black-capped Chickadee <sup>2,*</sup>	<i>Parus atricapillus</i>
Tufted Titmouse <sup>2,*</sup>	<i>P. bicolor</i>

Sittidae-Nuthatches

White-breasted Nuthatch <sup>2,*</sup>	<i>Sitta carolinensis</i>
Red-breasted Nuthatch <sup>2</sup>	<i>S. canadensis</i>

Certhiidae-Creepers

Brown Creeper <sup>2</sup>	<i>Certhia familiaris</i>
----------------------------	---------------------------

Troglodytidae- Wrens

House Wren <sup>2,*</sup>	<i>Troglodytes aedon</i>
Winter Wren	<i>T. troglodytes</i>
Carolina Wren <sup>2,*</sup>	<i>Thryothorus ludovicianus</i>

Mimidae-Mimic Thrushes

Brown Thrasher <sup>2,*</sup>	<i>Toxostoma rufum</i>
Gray Catbird <sup>2,*</sup>	<i>Dumetella carolinensis</i>

APPENDIX D

**COMPILATION OF BIRD LISTS FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

Northern Mockingbird <sup>2,*</sup>	Mimus polyglottos
Turdidae-Thrushes	
American Robin <sup>2,*</sup>	Turdus migratorius
Gray-cheeked Thrush <sup>2</sup>	Catharus minimus
Swainson's Thrush <sup>2</sup>	C. ustulatus
Hermit Thrush <sup>2</sup>	C. guttatus
Veery <sup>2,*</sup>	C. fuscescens
Wood Thrush <sup>2,*</sup>	Hylocichla mustelina
Sylviidae - Kinglets, Gnatcatchers:	
Ruby-crowned Kinglet <sup>2</sup>	Regulus calendula
Golden-crowned Kinglet <sup>1,2</sup>	R. satrapa
Blue-gray Gnatcatcher <sup>2,**</sup>	Poliophtila caerulea
Bombycillidae - Waxwings:	
Cedar Waxwing <sup>2</sup>	Bombycilla cedrorum
Sturnidae - Starlings:	
European Starling <sup>2,*</sup>	Sturnus vulgaris
Vireonidae-Vireos	
Red-eyed Vireo <sup>2,*</sup>	Vireo olivaceus
Warbling Vireo <sup>2</sup>	V. gilvus
Yellow-throated Vireo	V. flavifrons
Solitary Vireo <sup>2</sup>	V. solitarius
Parulidae - Wood Warblers:	
Northern Parula Warbler	Parula americana
Black-throated Green Warbler <sup>2</sup>	Dendroica virens
Black & White Warbler <sup>2,*</sup>	Mniotilta varia
Blackpoll Warbler <sup>2</sup>	Dendroica striata
Black-throated Blue Warbler	D. caerulescens
Magnolia Warbler <sup>2</sup>	D. magnolia
Yellow-rumped Warbler <sup>2</sup>	D. coronata
Canada Warbler <sup>2</sup>	Wilsonia canadensis
Chestnut-sided Warbler <sup>2</sup>	Dendroica pensylvanica
Blackburnian Warbler	D. fusca
American Redstart <sup>2</sup>	Setophaga ruticilla
Prairie Warbler <sup>2,*</sup>	Dendroica discolor
Palm Warbler <sup>2</sup>	D. palmarum
Blue-winged Warbler <sup>2,*</sup>	Vermivora pinus
<b>V</b> Yellow Warbler <sup>2,*</sup>	Dendroica petechia
Worm-eating Warbler <sup>2,*</sup>	Helmitheros vermivorus
Tennessee Warbler	Vermivora peregrina
<b>S</b> Wilson's Warbler <sup>2</sup>	Wilsonia pusilla

APPENDIX D

**COMPILATION OF BIRD LISTS FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING COMPLEX**

Common Yellowthroat <sup>2,*</sup>	Geothlypis trichas
Louisiana Waterthrush <sup>2,*</sup>	Seiurus motacilla
Ovenbird <sup>2,*</sup>	S. aurocapillus
Ploceidae - Weaver Finches:	
House Sparrow	Passer domesticus
Icteridae - Blackbirds, Orioles:	
Red-winged Blackbird <sup>2,*</sup>	Agelaius phoeniceus
Brown-headed Cowbird <sup>2,*</sup>	Molothrus ater
Rusty Blackbird	Euphagus carolinus
Common Grackle <sup>2,*</sup>	Quiscalus guiscular
Orchard Oriole	Icterus spurius
Northern Oriole-Baltimore <sup>2,*</sup>	I. galbula
Thraupidae - Tanagers:	
Scarlet Tanager <sup>2,*</sup>	Piranga olivacea
Fringillidae - Finches, Sparrows:	
Northern Junco <sup>2</sup>	Junco hyemalis
Northern Cardinal <sup>2,*</sup>	Cardinalis cardinalis
House Finch <sup>2,*</sup>	Carpodacus mexicanus
Purple Finch <sup>2</sup>	C. purpureus
Evening Grosbeak <sup>1,2</sup>	Hesperiphona vespertina
American Goldfinch <sup>2,*</sup>	Carduelis tristis
Pine Siskin <sup>2</sup>	C. pinus
Indigo Bunting <sup>1,2,*</sup>	Passerina cyanea
Rose-breasted Grosbeak <sup>2,*</sup>	Pheucticus ludovicianus
Rufous-sided Towhee <sup>2,*</sup>	Pipilo erythrophthalmus
White-throated Sparrow <sup>2</sup>	Zonotrichia albicollis
White-crowned Sparrow <sup>2</sup>	Z. leucophrys
Chipping Sparrow <sup>2,*</sup>	Spizella passerina
Field Sparrow <sup>2,*</sup>	S. pusilla
American Tree Sparrow <sup>2</sup>	S. arborea
Fox Sparrow <sup>2</sup>	Passerella iliaca
Song Sparrow <sup>2,*</sup>	Melospiza melodia

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

**1 Identified in Chester Place Woods (May 1967-July 1969) by T. Waller.**

**Pryer Manor Marsh, Premium River/marshes, Mill Pond and adjacent lands:**

- |          |                               |   |
|----------|-------------------------------|---|
| <b>2</b> | <b>1970-1973</b>              | <b>Sidney Bahrt <i>et al.</i></b>                             |
| <b>3</b> | <b>October 1978-1985</b>      | <b>Mary Anne Johnson <i>et al.</i></b>                        |
| <b>4</b> | <b>1987-1988</b>              | <b>Audubon Christmas Count &amp; PPPA monitors (partial).</b> |
| <b>5</b> | <b>March 11, 1989</b>         | <b>John Moyle Bird Walk.</b>                                  |
| <b>6</b> | <b>1972-1990</b>              | <b>James Coe Life List &amp; Bird Walk 10/14/90.</b>          |
| <b>7</b> | <b>June '92; Jan-July '93</b> | <b>Consultant Stephen Coleman</b>                             |

\* Occasional or rare.

\*\* Nesting

- |              |                           |                                   |
|--------------|---------------------------|-----------------------------------|
| <b>E</b>     | <b>NY State list-1983</b> | <b>ENDANGERED SPECIES</b>         |
| <b>S</b>     |                           | <b>SPECIES OF SPECIAL CONCERN</b> |
| <b>T</b>     |                           | <b>THREATENED SPECIES</b>         |
| <b>V</b>     |                           | <b>VULNERABLE SPECIES</b>         |
| <b>e,s,t</b> |                           | <b>NY STATE DEC LIST-1987</b>     |

GAVIIFORMES

Gaviidae - Loons:

- |                      |                    |   |
|----------------------|--------------------|---|
| <b>S</b> Common Loon | <i>Gavia immer</i> | 3 |
|----------------------|--------------------|---|

PODICIPEDIFORMES

Podicipedidae - Grebes:

- |                   |                            |         |
|-------------------|----------------------------|---------|
| Horned Grebe      | <i>Colymbus auritus</i>    | 3,4,5,6 |
| Pied-billed Grebe | <i>Podilymbus podiceps</i> | 3,6     |

PELECANIFORMES

Phalacrocoracidae - Cormorants:

- |                          |                              |   |
|--------------------------|------------------------------|---|
| Double-crested Cormorant | <i>Phalacrocorax auritus</i> | 7 |
|--------------------------|------------------------------|---|

CICONIIFORMES

Ardeidae - Herons:

- |                           |                              |             |
|---------------------------|------------------------------|-------------|
| Great Blue Heron          | <i>Ardea herodias</i>        | 3,4,6,7     |
| Little Blue Heron         | <i>Florida caerulea</i>      | 6           |
| Louisiana Heron           | <i>Hydranassa tricolor</i>   | 2,4*        |
| Great Egret               | <i>Casmerodius albus</i>     | 2,3,4,6,7   |
| Snowy Egret               | <i>Egretta thula</i>         | 2,3,4,6,7   |
| Cattle Egret              | <i>Bubulcus ibis</i>         | 2           |
| Black-crowned Night Her.  | <i>Nycticorax nycticorax</i> | 3,4,6,7     |
| Yellow-crowned Night Her. | <i>Nyctanassa violacea</i>   | 3           |
| Green Heron               | <i>Butorides striatus</i>    | 1,2,3,6,7** |
| <b>Ss</b> Least Bittern   | <i>Ixobrychus exilis</i>     | 1           |
| American Bittern          | <i>Botaurus lentiginosus</i> | 2,3,7**     |

Threskiornithidae - Typical Ibises:

- |             |                             |     |
|-------------|-----------------------------|-----|
| Glossy Ibis | <i>Plegadis falcinellus</i> | 1,3 |
|-------------|-----------------------------|-----|

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

ANSERIFORMES

Anatidae - Cygninae - Swans:

Mute Swan                                      *Cygnus olor*                                      2,3,4,5,6,7\*\*

Anatidae - Anserinae - Geese:

Snow Goose                                      *Chen hyperborea*                                      3,4  
 Canada Goose                                      *Branta canadensis*                                      2,3,4,5,6,7\*\*  
 Brant                                      *B. bernicla*                                      4,6,7

Anatidae - Anatinae - Marsh Ducks:

Amer. Black Duck                                      *Anas rubripes*                                      2,3,4,6,7  
 Gadwall                                      *A. strepera*                                      3,4,6,7  
 Mallard                                      *A. platyrhynchos*                                      1,2,3,4,5,6,7\*\*  
 Common Pintail                                      *A. acuta*                                      3  
 American Widgeon                                      *A. americana*                                      2,3,4,5,6,7  
 Eurasian Widgeon                                      *A. penelope*                                      2,3,4,6  
 Wood Duck                                      *Aix sponsa*                                      2,3,7  
 Northern Shoveler                                      *Anas clypeata*                                      3,4,6,7  
 Blue-winged Teal                                      *A. discors*                                      6

Anatidae - Aythyinae - Diving Ducks:

Oldsquaw                                      *Clangula hyemalis*                                      5  
 Canvasback                                      *Aythya valisineria*                                      2,3,4,5,6  
 Redhead                                      *A. americana*                                      6  
 Lesser Scaup                                      *A. affinis*                                      3,4,6,7  
 Greater Scaup                                      *A. marila*                                      3,4,5,6,7  
 Common Goldeneye                                      *Bucephala clangula*                                      3,6  
 Bufflehead                                      *B. albeola*                                      3,4,5,6,7

Anatidae - Oxyurinae - Stiff-Tailed Ducks:

Ruddy Duck                                      *Oxyura jamaicensis*                                      3,6,7

Anatidae - Merginae - Mergansers:

Common Merganser                                      *Mergus merganser*                                      3,6,7  
 Red-breasted Merganser                                      *M. serrator*                                      3,4,5,6  
 Hooded Merganser                                      *Lophodytes cucullatus*                                      3,6,7

FALCONIFORMES

Accipitridae - Hawks etc.:

Sharp-shinned Hawk                                      *Accipiter striatus*                                      4,5,6,7  
**s** Cooper's Hawk                                      *A. cooperii*                                      6  
 Northern Goshawk                                      *A. gentilis*                                      5  
**Tt** Northern Harrier                                      *Circus cyaneus*                                      3,6

Buteoninae - Eagles etc.:

Red-tailed Hawk                                      *Buteo jamaicensis*                                      3,5,6,7  
**Tt** Red-shouldered Hawk                                      *B. lineatus*                                      3

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

Pandionidae - Ospreys:		
Tt Osprey	Pandion haliaetus	3,6
Cathartidae - American Vultures:		
Turkey Vulture	Cathartes aura	3,7
Falconinae - Falcons:		
American Kestrel	Falco sparverius	2,3,6
Merlin	F. columbarius	3
<u>GALLIFORMES</u>		
Tetraonidae - Grouse etc.:		
Ruffed Grouse	Bonasa umbellus	1,3*
Phasianidae - Pheasants:		
Ring-necked Pheasant	Phasianus colchicus	1,2,3,4,5,6,7**
<u>GRUIFORMES</u>		
Rallidae - Duck-like swimmers:		
American Coot	Fulica americana	2,3,6
Virginia Rail	Rallus limicola	3*
Clapper Rail	R. longirostris	3*
Sora	Porzana carolina	6
<u>CHARADRIIFORMES</u>		
Charadriidae - Plovers:		
Semipalmated Plover	Charadrius semipalmatus	2*,6,7
Killdeer	C. vociferous	1,2,3,5,6,7**
Scolopacidae - Sandpipers etc.:		
American Woodcock	Philohela minor	3,6
Greater Yellowlegs	Tringa melanoleuca	2,3,6
Lesser Yellowlegs	T. flavipes	2,3,6
Solitary Sandpiper	T. solitaria	2
Sanderling	Calidris alba	2
Pectoral Sandpiper	C. melantos	2
Dunlin	C. alpina	3*
Spotted Sandpiper	Actitis macularia	3,6
Least Sandpiper	Calidris minutilla	2
Semipalmated Sandpiper	C. pusilla	2,3
White-rumped Sandpiper	C. fuscicollis	2
Laridae - Larinae - Gulls:		
Herring Gull	Larus argentatus	1,2,3,5,6,7
Ring-billed Gull	L. delawarensis	3,4,5,6,7
Great Black-backed Gull	L. marinus	2,3,4,5,6,7
Laughing Gull	L. atricilla	3,4,6,7

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

Bonaparte's Gull	<i>L. philadelphia</i>	6
Laridae - Sternidae - Terns:		
<b>Ee</b> Least (Little) Tern	<i>Sterna albifrons</i>	3,6
<b>Tt</b> Common Tern	<i>S. hirundo</i>	3
Rynchopidae - Skimmers:		
Black Skimmer	<i>Rynchops niger</i>	3*
<u>COLUMBIFORMES</u>		
Columbidae - Pigeons, Doves:		
Mourning Dove	<i>Zenaida macroura</i>	1,2,3,4,5,6,7**
Rock Dove	<i>Columba livia</i>	1,2,3,4,5,6,7**
<u>STRIGIFORMES</u>		
Tytonidae - Barn Owls:		
<b>Ss</b> Barn Owl	<i>Tyto alba</i>	3
Strigidae - Typical Owls:		
Common Screech Owl	<i>Otus asio</i>	3,7**
Great Horned Owl	<i>Bubo virginianus</i>	3,6
Snowy Owl	<i>Nyctea scandiaca</i>	3*
<u>CAPRIMULGIFORMES</u>		
Caprimulgidae - Goatsuckers:		
<b>Ss</b> Common Nighthawk	<i>Chordeiles minor</i>	3,7
<u>APODIFORMES</u>		
Trochilidae - Hummingbirds:		
<b>V</b> Ruby-throated Hummbrd.	<i>Archilochus colubris</i>	1,2,3,6,7
<u>CORACIIFORMES</u>		
Alcedinidae - Kingfishers:		
Belted Kingfisher	<i>Megasceryle alcyon</i>	2,3,5,6,7
<u>PICIFORMES</u>		
Picidae - Woodpeckers:		
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	1,3
Pileated Woodpecker	<i>Dryocopus pileatus</i>	3
Common Flicker	<i>Colaptes auratus</i>	1,2,3,4,6,7
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	3,4,7
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2,3
Downy Woodpecker	<i>Picoides pubescens</i>	1,2,3,4,5,6,7
<b>V</b> Hairy Woodpecker	<i>P. villosus</i>	1,2,3,6,7

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

PASSERIFORMES

Tyrannidae - Flycatchers:

Eastern Kingbird	<i>Tyrannus tyrannus</i>	1,2,3,6,7**
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	2,6,7
Ash-throated Flycatcher	<i>M. cinerascens</i>	2
Eastern Phoebe	<i>Sayornis phoebe</i>	1,3,6,7
Eastern Pewee	<i>Contopus virens</i>	2,3
Acadian Flycatcher	<i>Empidonax virescens</i>	1
Yellow-bellied Flycatcher	<i>E. flairventris</i>	1

Hirundinidae - Swallows:

Cliff Swallow	<i>Petrochelidon pyrrhonata</i>	1
Barn Swallow	<i>Hirundo rustica</i>	2,3,6,7
Tree Swallow	<i>Iridoprocne bicolor</i>	3,6,7
Rough-winged Swallow	<i>Stelgidopteryx ruficollis</i>	1,2,6
Bank Swallow	<i>Riparia riparia</i>	2,3

Corvidae - Jays, Crows:

Fish Crow	<i>Corvus ossifragus</i>	3,6,7
American (Common) Crow	<i>C. brachyrhynchos</i>	1,2,3,5,6,7
Blue Jay	<i>Cyanocitta cristat</i>	1,2,3,4,5,6,7

Paridae - Titmice:

Black-capped Chickadee	<i>Parus atricapillus</i>	1,2,3,4,5,6,7
Tufted Titmouse	<i>P. bicolor</i>	1,2,3,4,5,6,7**

Sittidae - Nuthatches:

White-breasted Nuthatch	<i>Sitta carolinensis</i>	1,2,3,4,5,6,7**
Red-breasted Nuthatch	<i>S. canadensis</i>	3,6

Certhiidae - Creepers:

Brown Creeper	<i>Certhia familiaris</i>	1,2
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Troglodytidae - Wrens:

House Wren	<i>Troglodytes aedon</i>	1,3,6,7**
Winter Wren	<i>T. troglodytes</i>	3
Carolina Wren	<i>Thryothorus ludovicianus</i>	3,6,7
Marsh Wren	<i>Cistothorus palustris</i>	1,3
Sedge Wren	<i>C. platensis</i>	1

Mimidae - Mimic Thrushes:

Brown Thrasher	<i>Toxostoma rufum</i>	1,2,3,4,6
Gray Catbird	<i>Dumetella carolinensis</i>	2,3,4,6,7**
Northern Mockingbird	<i>Mimus polyglottos</i>	2,3,4,5,6,7

Turdidae - Thrushes:

<b>Ss</b> Eastern Bluebird	<i>Sialia sialis</i>	1,2,4
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APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

American Robin	<i>Turdus migratorius</i>	1,2,3,4,6,7
Swainson's Thrush	<i>Catharus ustulatus</i>	1,6
Hermit Thrush	<i>C. guttatus</i>	4,6
Veery	<i>C. fuscescens</i>	6
Wood Thrush	<i>Hylocichla mustelina</i>	1,3,7
Fieldfare	<i>Turdus pilaris</i>	3
Sylviidae - Kinglets, Gnatcatchers:		
Ruby-crowned Kinglet	<i>Regulus calendula</i>	1,2,3,4,6
Golden-crowned Kinglet	<i>R. satrapa</i>	6
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	3
Motacillidae - Pipets etc.:		
Water (American) Pipet	<i>Anthus spinoletta</i>	3*
Bombycillidae - Waxwings:		
Cedar Waxwing	<i>Bombycilla cedrorum</i>	2,3*,6,7
Sturnidae - Starlings:		
Eurasian Starling	<i>Sturnus vulgaris</i>	1,2,3,4,6,7
Vireonidae - Vireos:		
Red-eyed Vireo	<i>Vireo olivaceus</i>	3,7
Parulidae - Wood Warblers:		
Northern Parula Warbler	<i>Parula americana</i>	6
Black-throated Green War.	<i>Dendroica virens</i>	1,6
Black & White Warbler	<i>Mniotilta varia</i>	1,2,3,6,7
Black-throated Blue War.	<i>Dendroica caerulescens</i>	6
Magnolia Warbler	<i>D. magnolia</i>	1,6
Yellow-rumped Warbler	<i>D. coronata</i>	1,2,3,6
Canada Warbler	<i>Wilsonia canadensis</i>	1
Cape May Warbler	<i>Dendroica tigrina</i>	6
Chestnut-sided Warbler	<i>D. pensylvanica</i>	6
Blackburnian Warbler	<i>D. fusca</i>	1
American Redstart	<i>Setophaga ruticilla</i>	1,2,6,7
Prairie Warbler	<i>Dendroica discolor</i>	6
Palm Warbler	<i>D. palmarum</i>	2,6
Blue-winged Warbler	<i>Vermivora pinus</i>	3,6,7**
V Yellow Warbler	<i>Dendroica petechia</i>	1,2,3,6,7
Worm-eating Warbler	<i>Helmitheros vermivorus</i>	6
Tennessee Warbler	<i>Vermivora peregrina</i>	6
S Wilson's Warbler	<i>Wilsonia pusilla</i>	1,6
Nashville Warbler	<i>Vermivora ruficapilla</i>	6
Mourning Warbler	<i>Oporornis philadelphia</i>	1
Common Yellowthroat	<i>Geothlypis trichas</i>	1,2,3,6,7
Yellow-breasted Chat	<i>Icteria verens</i>	1

APPENDIX E

**COMPILATION OF BIRD LISTS FOR THE PREMIUM RIVER-PINE BROOK WETLANDS COMPLEX**

Northern Waterthrush	<i>Seiurus noveboracensis</i>	1
Louisiana Waterthrush	<i>S. motacilla</i>	1,7
Ovenbird	<i>S. aurocapillus</i>	1,3,6,7
Ploceidae - Weaver Finches:		
House Sparrow	<i>Passer domesticus</i>	1,2,3,5,6,7
Icteridae - Blackbirds, Orioles:		
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1,2,3,5,6,7**
Brown-headed Cowbird	<i>Molothrus ater</i>	1,2,3,6,7
Rusty Blackbird	<i>Euphagus carolinus</i>	1
Common Grackle	<i>Quiscalus guiscula</i>	1,2,3,5,6,7
Bobolink	<i>Dolichonyx oryzivorus</i>	2,6
<b>V</b> Eastern Meadowlark	<i>Sturnella magna</i>	2,3
Orchard Oriole	<i>Icterus spurius</i>	2,6
Northern Oriole (Baltimore)	<i>I. galbula</i>	1,2,3,6,7
Thraupidae - Tanagers:		
Scarlet Tanager	<i>Piranga olivacea</i>	1,2,3,7
Fringillidae - Finches, Sparrows:		
Northern Junco	<i>Junco hyemalis</i>	1,2,3,4,6
Snow Bunting	<i>Plectrophenax nivalis</i>	6
Northern Cardinal	<i>Cardinalis cardinalis</i>	1,2,3,4,5,6,7
House Finch	<i>Carpodacus mexicanus</i>	1,2,3,5,6,7
Purple Finch	<i>C. purpureus</i>	1,3,6
Evening Grosbeak	<i>Hesperiphona vespertina</i>	3
American Goldfinch	<i>Carduelis tristis</i>	2,3,6,7
Pine Siskin	<i>C. pinus</i>	3,6
Indigo Bunting	<i>Passerina cyanea</i>	6,7
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	1,2,3,6
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>	1,2,3,4,6,7
White-throated Sparrow	<i>Zonotrichia albicollis</i>	2,3,4,5,6,7
White-crowned Sparrow	<i>Z. leucophrys</i>	1,3,6
Chipping Sparrow	<i>Spizella passerina</i>	1,6,7
Field Sparrow	<i>S. pusilla</i>	2,6,7
Swamp Sparrow	<i>Melospiza georgiana</i>	6
American Tree Sparrow	<i>Spizella arborea</i>	1,3,6
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	6
Fox Sparrow	<i>Passerella iliaca</i>	1,2,3,6,7
Song Sparrow	<i>Melospiza melodia</i>	1,2,3,4,5,6,7**
<b>Ss</b> Vesper Sparrow	<i>Pooecetes gramineus</i>	1,2,6
Savannah Sparrow	<i>Passerculus sandwichensis</i>	2,6

APPENDIX F

**BOTANICAL INVENTORY- HOMMOCKS MARSH COMPLEX**

TREES

Ailanthus (Tree of Heaven)	<i>Ailanthus altissima</i>
Ash, Green	<i>Fraxinus pennsylvanica lanecolata</i>
Birch, Black	<i>Betula lenta</i>
Birch, White	<i>B. papyrifera</i>
Cedar, Northern White	<i>Thuja occidentalis</i>
Cedar, Eastern Red	<i>Juniperus virginiana</i>
Cherry, Black	<i>Prunus serotina</i>
Cottonwood, Eastern	<i>Populus deltoides</i>
Elm, American	<i>Ulmus americana</i>
Elm, Slippery	<i>U. fulva</i>
Hawthorne, spp.	<i>Craetegus</i> spp.
Hickory, Mockernut	<i>Carya tomentosa</i>
Hickory, Pignut	<i>C. glabra</i>
Locust, Black	<i>Robinia pseudoacacia</i>
Locust, Honey	<i>Gleditsia triacanthos</i>
Maple, Norway	<i>A. platanoides</i>
Maple, Sugar (Silver)	<i>A. saccharum</i>
Mulberry, Red	<i>Morus rubra</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Post	<i>Q. stellata</i>
Oak, Swamp	<i>Q. bicolor</i>
Oak, White	<i>Q. alba</i>
Pine, Red	<i>Pinus resinosa</i>
Pine, Scotch	<i>P. sylvestris</i>
Pine, Eastern white	<i>P. strobus</i>
Sassafras	<i>Sassafras albidum</i>
Spruce, Norway	<i>Picea abies</i>
Tupel	<i>Nyssa sylvatica</i>
Willow, Weeping	<i>Salix babylonica</i>
Willow, Silky	<i>S. sericea</i>

SHRUBS & VINES

Barberry, Japanese	<i>Berberis thunbergii</i>
Bindweed, Field	<i>Convolvulus arvensis</i>
Bittersweet, Asiatic	<i>Celastrus orbiculatus</i>
Brambles	<i>Rubus</i> spp.
Cherry, Choke	<i>Prunus virginiana</i>
Current/Gooseberry	<i>Ribes</i> spp.
Dogwood, Silky	<i>Cornus amomum</i>
Dogwood, Flowering	<i>C. florida</i>
Elder, Red-berried	<i>Sambucus</i> spp.
Elder, Marsh	<i>Iva frutescens</i>
Grape, Fox	<i>Vitis labrusca</i>
Green-brier, Common	<i>Smilax glauca</i>
Green-brier, Bristly	<i>S. hispida</i>
Hazelnut, American	<i>Corylus americana</i>

APPENDIX F

**BOTANICAL INVENTORY- HOMMOCKS MARSH COMPLEX**

SHRUBS & VINES- cont.

Honeysuckle, Canadian  
 Honeysuckle, Japanese  
 Morning Glory, Common  
 Nightshade, Bittersweet  
 Olive, Russian  
 Poison Ivy  
 Rose, Sweet Brier  
 Rose, Multiflora  
 St. Johnswort, Shrubby  
 Sea Lavender  
 Sumac, Smooth  
 Sumac, Winged  
 Viburnum, Maple-Leaf  
 Virginia Creeper, Woodbine  
 Witch Hazel

Lonicera sempervirens  
 L. japonica  
 Ipomoea purpurea  
 Solanum dulcamara  
 Elaeagnus angustifolia  
 R. radicans Rose, Multiflora  
 Rosa multiflora  
 Rosa eglanteria  
 R. multiflora  
 Hypericum spp.  
 Limonium nashii  
 Rhus glabra  
 R. copallina  
 Viburnum acerifolium  
 Parthenocissus quinquefolia  
 Hamamelis virginiana

WILDFLOWERS, GRASSES, FERNS

Alfalfa  
 Alyssum, Hoary  
 Anemone, Rue  
 Asparagus, Wild  
 Aster, Heart-leaved  
 Aster, New York  
 Aster, White wood  
 Avens, White  
 Baneberry, White  
 Bindweed, Hedge  
 Bindweed, Field  
 Bluebells, Virginia  
 Burdock, Common  
 Buttercup, Common Tall  
 Butter-and-Eggs  
 Catnip  
 Celandine  
 Chickweed, Mouse-eared  
 Chicory  
 Clover, White  
 Clover, Red  
 Clover, Yellow Hop  
 Daisy, Ox-eye  
 Dandelion, Common  
 Dock, Curled  
 Dogbane, Spreading  
 Evening Lychnis  
 Fern, Marsh  
 Fern, Sensitive

Medicago sativa  
 Berteroa incana  
 Anemonella thalictoides  
 Asparagus officinalis  
 Aster cordifolius  
 A. novae-belgii  
 A. divaricatus  
 Geum canadense  
 Actaea pachypoda  
 Convolvulus sepium  
 C. arvensis  
 Mertensia virginica  
 Arctium minus  
 Ranunculus acris  
 Linaria vulgaris  
 Nepeta cataria  
 Chelidonium majus  
 Cerastium arvense  
 Cichorium intybus  
 Trifolium repens  
 T. pratense  
 T. agrarium  
 Chrysanthemum leucathemum  
 Taraxacum officinale  
 Rumex crispus  
 Apocymum androsaemifolium  
 Lychnis alba  
 Telypteris palustris  
 Onoclea sensibilis

APPENDIX F

**BOTANICAL INVENTORY- HOMMOCKS MARSH COMPLEX**

WILDFLOWERS, GRASSES, FERNS- cont.

Fleabane, Daisy	<i>Erigeron annuus</i>
Foxtail, Meadow	<i>Alopecurus</i> spp.
Geranium, Wild	<i>Geranium maculatum</i>
Goldenrod, Seaside	<i>Solidago sempervirens</i>
Goldenrod, Lance-Leaved	<i>S. graminifolia</i>
Goldenrod, Slender	<i>S. erecta</i>
Grass, Blue	<i>Poa pratensis</i> var.
Grass, Cord	<i>Spartina pectinata</i>
Grass, Reed Canary	<i>Phalaris arundinacea</i>
Hawkweed, Mouse-Ear	<i>Hieracium pilosella</i>
Heal-all	<i>Prunella vulgaris</i>
Horsetails	<i>Equisetum</i> spp.
Jack-in-the-Pulpit	<i>Arisaema dracontium</i>
Jewelweed (Spotted Touch-Me-Not)	<i>Impatiens capensis</i>
Joe-Pye Weed	<i>Eupatorium</i> spp.
Knotweed, Japanese	<i>Polygonum cuspidatum</i>
Knotweed, Virginia (Jumpseed)	<i>Tovara virginiana</i>
Lamb's quarters (Pigweed)	<i>Chenopodium alba</i>
Lettuce, Tall Blue	<i>Lactula biennis</i>
Loosestrife, Purple	<i>Lythrum salicaria</i>
Milkweed, Common	<i>Asclepias syriaca</i>
Mullein, Common	<i>Verbascum thapsus</i>
Mullein, Moth	<i>V. blattaria</i>
Mustard Garlic	<i>Alliaria officinalis</i>
Nettle, Stinging	<i>Urtica dioica</i>
Nightshade, Bittersweet	<i>Solanum dulcamara</i>
Nightshade, Enchanter's	<i>Circaea quadrisulcata</i>
Phlox, Wild Blue	<i>Phlox divaricata</i>
Phragmites	<i>Phragmites</i> spp.
Pineapple Weed	<i>Matricaria matricariodes</i>
Plantain, Common	<i>Plantago major</i>
Pokeweed	<i>Phytolacca americana</i>
Queen Anne's Lace	<i>Daucus carota</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
St. Johnswort, Common	<i>Hypericum perforatum</i>
Saxifrage, Early	<i>Saxifraga virginiana</i>
Sedges	<i>Cyperus</i> spp.
Smartweed	<i>Polygonum pensylvanicum</i>
Solomon's Seal	<i>P. pubescens</i>
Sorrel, Wood	<i>Oxalis stricta</i>
Star-Grass, Yellow	<i>Hypoxis hirsuta</i>
Strawberry, Wild	<i>Fragaria virginiana</i>
Thistle, Bull	<i>Chelone glabra</i>
Vetch, Blue	<i>Vicia cracca</i>
Vetch, Crown	<i>Coronilla varia</i>
Violet, Common blue	<i>Viola papilionacea</i>

APPENDIX F

**BOTANICAL INVENTORY- HOMMOCKS MARSH COMPLEX**

WILDFLOWERS, GRASSES, FERNS- cont.

Violet, Smooth Yellow  
Violet, Sweet White  
Waterleaf, Virginia

*V. pennsylvanica*  
*V. lauceolata*  
*Hydrophyllum virginianum*

Source: Consultant Stephen Coleman 1992-1993.

APPENDIX G

**BIRD SPECIES - HOMMOCKS SALT MARSH COMPLEX**

**KEY:**

**1** Consultant Stephen Coleman 1992-1993

**\*** Occasional or rare

**NY State DEC list (1983)**

**S SPECIES OF SPECIAL CONCERN**

**T THREATENED SPECIES**

**V VULNERABLE SPECIES**

**e, s, t NY State DEC list (1987)**

GAVIIFORMES

**S** Common Loon *Gavia immer*

PODICIPEDIFORMES

Horned Grebe *Colymbus auritus*<sup>1</sup>

PELECANIFORMES

Double-crested Cormorant *Phalacrocorax auritus*<sup>1</sup>

CICONIIFORMES

Great Blue Heron *Ardea herodias*<sup>1</sup>  
 Great Egret *Casmerodius albus*<sup>1</sup>  
 Snowy Egret *Egretta thula*<sup>1</sup>  
 Black-crowned Night Her. *Nycticorax nycticorax*<sup>1</sup>  
 Green Heron *Butorides striatus*<sup>1</sup>  
 American Bittern *Botaurus lentiginosus*  
 Glossy Ibis *Plegadis falcinellus*

ANSERIFORMES

Mute Swan *Cygnus olor*<sup>1</sup>  
 Canada Goose *Branta canadensis*<sup>1</sup>  
 Amer. Black Duck *Anas rubripes*<sup>1</sup>  
 Mallard *A. platyrhynchos*<sup>1</sup>

FALCONIFORMES

Sharp-shinned Hawk *Accipiter striatus*<sup>1</sup>  
**Tt** Northern Harrier *Circus cyaneus*  
 Red-tailed Hawk *Buteo jamaicensis*<sup>1</sup>  
**Tt** Osprey *Pandion haliaetus*<sup>1</sup>  
 American Kestrel *Falco sparverius*  
 Merlin *F. columbarius*

GALLIFORMES

Ring-necked Pheasant *Phasianus colchicus*<sup>1</sup>

GRUIFORMES

American Coot *Fulica americana*<sup>1</sup>

APPENDIX G

**BIRD SPECIES - HOMMOCKS SALT MARSH COMPLEX**

CHARADRIIFORMES

	Semipalmated Plover	Charadrius semipalmatus <sup>1</sup>
	Killdeer	C. vociferous <sup>1</sup>
	Greater Yellowlegs	Tringa melanoleuca <sup>1</sup>
	Lesser Yellowlegs	T. flavipes
	Spotted Sandpiper	Actitis macularia
	Herring Gull	Larus argentatus <sup>1</sup>
	Ring-billed Gull	L. delawarensis <sup>1</sup>
	Laughing Gull	L. atricilla <sup>1</sup>
<b>Tt</b>	Common Tern	Sterna hirundo

COLUMBIFORMES

	Mourning Dove	Zenaida macroura <sup>1</sup>
	Rock Dove	Columba livia <sup>1</sup>

CAPRIMULGIFORMES

<b>Ss</b>	Common Nighthawk	Chordeiles minor <sup>1</sup>
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CORACIIFORMES

	Belted Kingfisher	Megaceryle alcyon <sup>1</sup>
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PICIFORMES

	Common Flicker	Colaptes auratus <sup>1</sup>
	Downy Woodpecker	Picoides pubescens <sup>1</sup>

PASSERIFORMES

	Tyrannidae-Flycatchers	
	Eastern Phoebe	Sayornis phoebe <sup>1</sup>
	Hirundinidae-Swallows	
	Barn Swallow	Hirundo rustica <sup>1</sup>
	Tree Swallow	Iridoprocne bicolor <sup>1</sup>
	Corvidae-Jays, Crows	
	Fish Crow	Corvus ossifragus <sup>1</sup>
	American (Common) Crow	C. brachyrhynchos <sup>1</sup>
	Blue Jay	Cyanocitta cristat <sup>1</sup>
	Paridae- Titmice	
	Black-capped Chickadee	Parus atricapillus <sup>1</sup>
	Tufted Titmouse	P. bicolor <sup>1</sup>
	Sittidae-Nuthatches	
	White-breasted Nuthatch	Sitta carolinensis <sup>1</sup>

APPENDIX G

**BIRD SPECIES - HOMMOCKS SALT MARSH COMPLEX**

Troglodytidae- Wrens	
House Wren	Troglodytes aedon <sup>1</sup>
Carolina Wren	Thryothorus ludovicianus <sup>1</sup>
Mimidae-Mimic Thrushes	
Brown Thrasher	Toxostoma rufum
Gray Catbird	Dumetella carolinensis <sup>1</sup>
Northern Mockingbird	Mimus polyglottos <sup>1</sup>
Turdidae-Thrushes	
<b>Ss</b> Eastern Bluebird	Sialia sialis*
American Robin	Turdus migratorius <sup>1</sup>
Gray-Cheeked Thrush	Catharus minimus
Swainson's Thrush	C. ustulatus
Wood Thrush	Hylocichla mustelina <sup>1</sup>
Sylviidae - Kinglets, Gnatcatchers:	
Ruby-crowned Kinglet	Regulus calendula
Golden-crowned Kinglet	R. satrapa <sup>1</sup>
Bombycillidae - Waxwings:	
Cedar Waxwing	Bombycilla cedrorum <sup>1</sup>
Sturnidae - Starlings:	
European Starling	Sturnus vulgaris <sup>1</sup>
Vireonidae-Vireos	
Red-eyed Vireo	Vireo olivaceus <sup>1</sup>
Parulidae - Wood Warblers:	
Northern Parula Warbler	Parula americana
Black-throated Green War	Dendroica virens <sup>1</sup>
Black & White Warbler	Mniotilta varia <sup>1</sup>
Black-throated Blue War.	Dendroica caerulescens
Magnolia Warbler	D. magnolia
Yellow-rumped Warbler	D. coronata <sup>1</sup>
Chestnut-sided Warbler	D. pensylvanica <sup>1</sup>
American Redstart	Setophaga ruticilla <sup>1</sup>
Blue-winged Warbler	Vermivora pinus <sup>1</sup>
<b>V</b> Yellow Warbler	Dendroica petechia <sup>1</sup>
<b>S</b> Wilson's Warbler	Wilsonia pusilla
Common Yellowthroat	Geothlypis trichas <sup>1</sup>
Ploceidae - Weaver Finches:	
House Sparrow	Passer domesticus <sup>1</sup>

APPENDIX G

**BIRD SPECIES - HOMMOCKS SALT MARSH COMPLEX**

Icteridae - Blackbirds, Orioles:

Red-winged Blackbird	Agelaius phoeniceus <sup>1</sup>
Brown-headed Cowbird	Molothrus ater <sup>1</sup>
Common Grackle	Quiscalus guiscula <sup>1</sup>
Bobolink	Dolichonyx oryzivorus
<b>V</b> Eastern Meadowlark	Sturnella magna
Northern Oriole-Baltimore	Icterus galbula <sup>1</sup>

Fringillidae - Finches, Sparrows:

Northern Junco	Junco hyemalis <sup>1</sup>
Northern Cardinal	Cardinalis cardinalis <sup>1</sup>
House Finch	Carpodacus mexicanus <sup>1</sup>
American Goldfinch	Carduelis tristis <sup>1</sup>
Indigo Bunting	Passerina cyanea <sup>1</sup>
Rufous-sided Towhee	Pipilo erythrophthalmus <sup>1</sup>
White-throated Sparrow	Zonotrichia albicollis <sup>1</sup>
Chipping Sparrow	Spizella passerina <sup>1</sup>
Fox Sparrow	Passerella iliaca <sup>1</sup>
Song Sparrow	Melospiza melodia <sup>1</sup>

APPENDIX G

**BIOLOGICAL INVENTORY - HOMMOCKS SALT MARSH COMPLEX**

MAMMALS

Eastern Chipmunk	<i>Tamias striatus</i> <sup>1</sup>
White-tailed Deer	<i>Odocoileus virginianus</i> <sup>1</sup>
Common Eastern Mole	<i>Scalopus aquaticus</i> <sup>1</sup>
White-footed Deer Mouse	<i>Peromyscus leucopus</i> <sup>1</sup>
Muskrat	<i>Ondatra zibethicus</i> <sup>1</sup>
Opossum	<i>Didelphis marsupialis</i> <sup>1</sup>
Eastern Cottontail Rabbit	<i>Sylvilagus floridanus</i> <sup>1</sup>
Raccoon	<i>Procyon lotor</i> <sup>1</sup>
Brown (Norway) Rat	<i>Rattus norvegicus</i> <sup>1</sup>
Short-tailed Shrew	<i>Blarina brevicauda</i> <sup>1</sup>
Striped Skunk	<i>Mephitis monax</i> <sup>1</sup>
Eastern Gray Squirrel	<i>Sciurus carolinensis</i> <sup>1</sup>
Black Squirrel	<i>S. niger</i>
North American Field Vole	<i>Microtus pennsylvanicus</i> <sup>1</sup>
Woodchuck	<i>Marmota monax</i> <sup>1</sup>

REPTILES

Northern Diamondback Terrapin	<i>Malaclemys terrapin</i>
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AMPHIBIANS

Gray Tree Frog	<i>Hyla versicolor</i> <sup>1</sup>
Bull Frog	<i>Rana catesbeiana</i> <sup>1</sup>
Green Frog	<i>R. clamitans</i> <sup>1</sup>
American Toad	<i>Bufo americanus</i> <sup>1</sup>

INSECTS

Damselfly  
Dragonfly  
Praying Mantis

AQUATIC SPECIES

Horseshoe Crab	<i>Limulus polychamus</i> <sup>1</sup>
Fiddler Crab	<i>Uca minor</i> <sup>1</sup>
Marsh Snail	<i>Amnicola</i> spp. <sup>1</sup>
Ribbed Mussel	<i>Geukensia demissa</i>

FISH

Alewives	<i>Alosa pseudoharengus</i>
Striped Bass	<i>Morone saxatilis</i>
Bluefish	<i>Pomatomus saltatrix</i>
American Eel	<i>Anguilla rostrata</i>
Flounder, winter	<i>Pseudopleuronectes americanus</i>
Killifish	<i>Fundulus</i> spp.
Mackeral	<i>Scomber scombrus</i>
Menhaden	<i>Brevoortia tyrannus</i>
Porgy	
Silversides	<i>Menidia</i> spp.
Tautog (Blackfish)	<i>Tautoga onitis</i>

## APPENDIX H

### **MANAGEMENT RECOMMENDATIONS FOR THE HOMMOCKS SALT MARSH COMPLEX<sup>1</sup>**

by Stephen W. Coleman, Environmental Consultant, December 1993

Field observations of the Hommocks Salt Marsh Complex were conducted from March through November 1993. The Hommocks Salt Marsh Complex consists of a mixture of habitats including open fields, woods and meadows, salt marsh, intertidal flats and open water. The water depth tends to be shallow and consists mostly of salt or brackish water. Land use throughout the area includes a mixture of residential and commercial developments.

Management recommendations for the Hommocks Salt Marsh Complex follow standard operating practices used in natural area management. The eventual implementation of these management recommendations will require someone familiar with plant identification to oversee that proper restoration and maintenance strategies are performed correctly.

#### **I. PRESENT PROBLEMS AND/OR THREATS**

##### **A. VISITOR ACCESSIBILITY AND PERCEPTIONS**

The Hommocks Conservation Area is not clearly identified for the first time visitor. Trail signs are absent and once they find the area, it is not entirely clear where one should park and where the trail begins and ends.

#### **RECOMMENDED ACTION**

1. Paint all wood posts a consistent color that helps identify that each entrance location is part of the same area. "Brown paint with Yellow or White Lettering" is often used throughout other Westchester sites.
2. Maintain erected signs with appropriate signage that identifies the area as the Hommocks Conservation Area.
3. Garbage cans that are located at each entrance should be maintained on a regular basis and if possible replaced with newer ones that have a locking cover. They should also be placed in areas that are easier for maintenance crews to maintain on a regular basis.
4. Parking along the road is not an ideal situation. Cars parked along the road can be a nuisance to residents, passing motorists, and a potential safety hazard for visitors. A new parking area could be created at the corner of Hommocks Road and Oak Lane for up to 6 vehicles. A parking area in this location would serve to create a definable entrance to the Hommocks Conservation Area, remove parking from Hommocks Road, and create for the visitor a clearly marked beginning point to the trail system. The periphery of the parking area could be screened with vegetation that is native to the site. An evergreen border with some deciduous shrubs would be appropriate. Included within the new parking area should be a trail

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<sup>1</sup> The complete, detailed Management Report may be seen at the Town of Mamaroneck Conservation Department. Appendix H is an excerpt of that report.

## APPENDIX H

kiosk that would provide information for visitors about the Hommocks Conservation Area, a large trail map, registration and other informational materials.

### B. TRAIL SYSTEM

The present trail system needs some major repairs to improve the safety and overall experience for the visitor. The present layout of the trails is confusing in two areas: the field/meadow trail section and the lower trail nearest Hommocks Road. In addition, all of the boardwalks are in need of maintenance and stabilization.

#### RECOMMENDED ACTION

1. Make necessary repairs to the boardwalk sections of the trails.
2. At the junction of the main boardwalk where it goes out into the marsh and terminates was probably designed to serve as an area to allow easier access to the salt marsh. This could be re-built and expanded to serve as a sampling area for educational groups studying the salt marsh environments.
3. Where the trail ends at the school playing field, it would be desirable to visually demonstrate that the trail continues to the other end of the school playing field. Either marking the trail edge or creating a trail inside the edge of the playing field would solve this problem for visitors.
4. The trail within the field/meadow area needs to have a marking system to visibly show visitors that the trail goes around the edge of the field/meadow.
5. If the recommendation for creating a new parking area is adopted, the following improvements should also be made to the existing trail system:
  - a. The trail should begin and end at the new parking lot area.
  - b. The trail layout should be designed to be a one-way loop.
  - c. The trail entrances along Hommocks Road should be removed, posts should be taken out or chained with a sign indicating the direction for the new entrance area. The trail section for each entrance should be changed to be one continuous loop and marked with a sign, or vegetation planted to discourage their use by visitors and residents.
  - d. Garbage cans should only be present at the new parking area.

## APPENDIX H

- e. At the far edge of the salt marsh by the school playing field, it may be appropriate to install an informational sign/shelter that explains the Hommocks Conservation Area.

### II. HABITAT MANAGEMENT AND RESTORATION

The Hommocks Salt Marsh Complex represents an ecological system that has been significantly altered due to internal and external influences. The Hommocks Conservation Area consists of approximately five distinct habitat types. These include a mixture of woodland habitats, an open field/meadow area, a salt marsh, intertidal flats within the salt marsh area, and an open water environment. Each habitat area has shown the adverse impacts of land use practices and encroachment from adjacent land use activities. The management recommendations that follow are designed to help restore and improve the natural functioning of this unique and very important ecological resource.

#### A. WOODLANDS/FOREST

The woodland habitat present within the Hommocks Salt Marsh Complex primarily refers to the areas adjacent to Hommocks Road. This wooded section provides a distinct transition zone between the residential homes and golf course on one side and the salt marsh complex on the other side. In many instances, this wooded section helps to serve as a corridor for wildlife species to move between habitat zones.

#### RECOMMENDED ACTION

1. Asiatic bittersweet has aggressively become established throughout the woodland habitat. This aggressive vine needs to be pruned back at its roots in successive years until the majority of it has been weakened and starts to die back.
2. Japanese Barberry and Japanese Honeysuckle should be spot cut and removed from the site to favor some of the more indigenous species.
3. Additional pruning of shrubs and vines should occur to keep them out of the trail areas and where they are encroaching other more sensitive native species.
4. Ailanthus and Locust trees should be cut immediately from the site. Ailanthus has become well established and will continue to take over the site and drastically change the transition zone between the forest edge and the salt marsh.
5. Introduced cultivated species like Blue Spruce should be cut and removed from the site. There is only one individual of this species present on the study area.
6. Several trees have been removed recently along the Hommocks Road adjacent to the golf course. This has served to alter the corridor that was present for wildlife species. In addition, these changes will encourage the introduction of more aggressive invasive species.

## APPENDIX H

Periodic surveys of what species become established will need to be monitored.

### B. FIELD/MEADOW

The field/meadow habitat has a relatively good diversity of species and its small size allows the opportunity to create a more self-sustaining system with minimal management and maintenance. Species commonly associated with a farm/agricultural operation can be observed within the field/meadow. This is representative of former land use practices within this particular area. The field/meadow site has a minimal transition area to the salt marsh environment and consists of species that have adapted well to the limitations of the site. This area could be restored to demonstrate and reveal typical successional stages within a natural plant community.

### RECOMMENDED ACTION

1. The trail around the edge of the field/meadow should be mowed frequently during the growing season. Poison Ivy (Rhus radicans) should be pulled out along the edges of the trail as needed.
2. All tree, shrub and vine saplings and shoots should be cut back within the open meadow area once per year.
3. The open meadow area should not be mowed every season as is currently the practice. Instead the meadow should be mowed every 3-4 years as long as step # 2 above is being done on an annual basis.
4. To restore the diversity of species present within the meadow it is advisable to add new plants on an annual basis. This will serve to increase diversity and in the long run help sustain the plant community. Perennial native wildflowers and grasses should be planted every spring or fall. This practice should continue for 3 -5 years.
5. Along the Hommocks Road border, a new corridor should be established to isolate the road and golf course from the field/meadow area. This should be done in two layers. First a layer of trees followed by a layer of shrubs to create two distinct zones of vegetation. Tree species should be native species. Evergreen trees would be ideal to create more of a screen from the golf course area. The shrub layer should consist of native species, preferably berry and seed producing species that are preferred by wildlife.
6. The screening border along the edge of the salt marsh should be maintained. Some pruning of the lower branches should be done to create a few more layered vistas from the field/meadow trail area into the salt marsh. All vines that are growing around these trees should be cut and later removed.

## APPENDIX H

### C. SALT MARSH

The Salt Marsh appears to be relatively stable with the plant community fairly well established, especially the shrub layer. Species present are representative of other salt marsh communities. The loss of tidal flow throughout this area more than likely has influenced the growth of monotypic stands of salt marsh shrub species. A significant amount of pollution is evident within the salt marsh environment. Garbage and debris is readily found along with evidence of petroleum remains at the base of many of the plants.

#### RECOMMENDED ACTION

1. The phragmites have taken over the area between the two boardwalks and has virtually eliminated any other species. They should be cut and removed to encourage a more open growth pattern and establishment of other marsh grass species. Phragmites cannot be eradicated, however, a judicious cutting and removal a few times a year can have a pronounced effect on its aggressiveness.
2. If possible, a planting program to establish more diversity of salt marsh grasses would greatly improve the value of this area. Cord grass (Spartina pectinata), is readily available from many nursery sources. The key criteria would be to have the personnel to implement this type of project.
3. The edge of the salt marsh adjacent to the school field could be planted with a shrub and tree border to screen this area from the school field and create a more permanent buffer between these two areas.

### D. INTERTIDAL FLATS

The intertidal flats habitat zone is well represented and provides plenty of suitable area for salt marsh species. There appears to be a limited abundance and activity by salt marsh organisms. Few crabs were observed in the area. Observed use by wildlife species appeared to be infrequent and these areas were not functioning as a principal feeding area. Wildlife species were observed using the area but were not actively exhibiting feeding behavior. The amount of intertidal habitat appears average for the site and relatively free from encroachment by shrub species. Through time, due to less tidal flushing action, it is likely that the amount of this particular habitat will begin to diminish in area.

#### RECOMMENDED ACTION

No specific recommendations at this time.

### E. OPEN WATER

A large section of open water habitat is present within the salt marsh complex. The open water area is relatively shallow and appears to remain relatively consistent. At entry points there is evidence of siltation that is helping to reduce the amount of open water habitat available. A lot of debris is evident in the water. The water is murky and has a lot of suspended solids. Aquatic

## APPENDIX H

vegetation is minimal. Considerable use by wildlife species was observed, however, it appeared to be mainly for resting and loafing.

### RECOMMENDED ACTION

1. A monitoring program should be established to determine the inflow of siltation into the salt marsh area from upstream entry point sources and the influence of sewer system and storm water discharge.
2. The water should be tested to determine the presence of any leachate material from the former landfill site or the leaf mulch operation.
3. More rip-rap material should be placed along the edges to minimize shoreline erosion and increased sedimentation.
4. Installation of a permanent siltation barrier should be investigated for the leaf mulch operation and for the present development project adjacent to the school. Further testing needs to be conducted to determine whether this type of device would assist with minimizing potential impacts to the salt marsh habitats.
5. The impact of the old barge remains within the salt marsh area requires further analysis to determine its contributive effect on the environment. Unless an educational value is associated to the old barge, it should be removed and disposed of properly.

### III. EDUCATIONAL VALUE AND POTENTIAL USES

The Hommocks Salt Marsh Complex provides a wealth of potential for educating residents and visitors about the values of preserving and restoring natural areas. The proximity to the school and easy accessibility for visitors enables this site to serve as a major outreach service to the residents and area school children. Expansion of the informational materials provided about the site could enhance people's understanding about the Town's natural resources and why these critical areas have been preserved.

### RECOMMENDED ACTION

1. A new trail map should be developed for the Hommocks Conservation Area. This should be designed to be part of a brochure that includes information about the Town's Conservation Areas and related programs and services.
2. A trail kiosk should be built that includes within its design a place to exhibit brochures and additional literature about the site.
3. A self guided brochure could be developed in conjunction with making the trail system into a self-guided trail. To accentuate the interpretive value and interest level of visitors the self-guided trail and brochure should not exceed 10-12 stations.
4. If the recommendation for a new parking area is implemented, it would be a good time to restructure the trail system as outlined above. These improvements could be packaged

## APPENDIX H

together to help communicate to residents the exciting plans that are being put into place to restore and enhance the area for their enjoyment and use.

5. The CAC or CZMC should create an informative newsletter or brochure that talks about the Town's Critical Environmental Areas to educate the residents and visitors about these unique resources. It also may help residents to understand that these areas require management and maintenance and are not areas where people can dispose of their lawn clippings and other trash. It also could be a source to advertise for volunteer or community support to carry out some of the management initiatives outlined in this report.

6. Efforts should be made to interest local science teachers in utilizing the Hommocks Salt Marsh Complex for teaching environmental science and as a living laboratory for applying classroom concepts. Students could get involved in water testing, siltation studies, planting trees, shrubs and wildflowers, and many other experiential learning exercises. The boardwalk could be redesigned or modified to include a sampling station area.

## APPENDIX I

### MANAGEMENT PLAN FOR THE RESERVOIR-SHELDRAKE-LEATHERSTOCKING CRITICAL ENVIRONMENTAL AREA (RSL-CEA)<sup>2</sup>

by Stephen W. Coleman, Environmental Consultant, December 1992.

#### I. OVERVIEW

Field Observations of the Reservoir-Sheldrake-Leatherstocking Critical Environmental Area (RSL-CEA) were conducted from February through November 1992. The RSL's main ecological habitats and communities consists of the 60 acre Larchmont Reservoir, sections of the West Branch of the Sheldrake River, the Bonnie Briar and Winged Foot Golf Courses (totaling over 421 acres) and the Sheldrake-Leatherstocking Conservation Area (comprising 55 acres). The Sheldrake Watershed and its tributaries provide the connecting links for the majority of habitats found within the RSL-CEA.

The importance of the RSL-CEA cannot be understated. The area due to its configuration of residential properties, private golf courses, and Town and Village Conservation areas provides a critical mass of open spaces resources. It is this extensive mosaic network of open space and natural resources which help contribute to the unique beauty and character of Mamaroneck and Larchmont. The values of the RSL-CEA are well documented within the LWRP and will not be mentioned in detail here.

The long history of existing land use patterns within the RSL-CEA and development in surrounding communities have created an extensive "green" corridor. The configuration of these properties and existing road systems have created a critical--though fragmented--"stable"--corridor for local wildlife populations. The RSL has an extensive sampling of most ecological communities typical of the Westchester region. Several stages of wooded communities are present, along with several wetlands, streams, ponds, meadows and fields.

#### II. GENERAL RECOMMENDATIONS

##### A. OPEN SPACE RESOURCES

The value to the TOM of open space resources provided within the RSL-CEA represent irreplaceable resources that could not be re-created. Based upon field observations and data provided as part of the recommendations submitted on the proposed development of the Bonnie Briar Country Club, they support the establishment of a new zoning district designated as **Recreation Zone**. The Bonnie Briar Country Club, The Winged Foot Country Club and a portions of the Hampshire Country Club should be included within this zone.

##### B. WATER RESOURCES

A majority of the fresh water resources within the TOM are located in the RSL-CEA. These include several wetland communities consisting of reservoirs, streams, wooded

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<sup>2</sup> The complete, detailed Management Plan, may be seen at the Town of Mamaroneck Conservation Department. Appendix I is an excerpt of that plan.

## APPENDIX I

swamps, wet meadows, and ephemeral ponds. The Sheldrake Watershed and its tributaries are the major water resource.

Natural surface water drainage patterns are still evident throughout the site, especially in the two golf courses, even though the natural contours of the landscape have been modified.

The history of flooding within the golf courses, primarily Bonnie Briar, reflect that prior drainage patterns are still functioning to some degree despite present land use patterns.

Natural buffers adjacent to the Sheldrake River and its tributaries are basically non-existent, which further contributes to the intensity of siltation and erosion of the stream and its banks. The proper placement of vegetative buffer strips would help alleviate some of the problems from increased surface water runoff.

### RECOMMENDATIONS

The following recommendations would provide greater protection and enhancement of existing water resources. It is important that any protective or improvement strategy adopted, bear in mind, that for enhancement measures to be successful, will require a long-term program. Several years are often needed to rehabilitate or improve the functioning of water resources.

1. Any development projects under consideration should require as part of the subdivision plan the cumulative effects of upstream development on the proposed new project and its impact on present water resources at the site and those downstream.
2. The Town of Mamaroneck should adopt a "no net loss" policy regarding its water resources especially wetlands or wetland habitats. All mitigation measures should be considered to avoid impacts to existing wetland resources with the exception of the common mitigation technique of replacing existing wetlands with the creation of new wetlands in other areas of a development project. Creating wetlands is not an exact science and in a majority of the cases, the results have not come even close to duplicating the natural features and functioning of an existing wetland system. All attempts be made to restore and enhance rather than replace a wetland.
3. Vegetative buffers should be established for all water resources within the RSL-CEA. They are as follows:
  - a. Ephemeral Ponds- Temporary, seasonal flooded areas which should have a minimum buffer of 50 feet. This is necessary to provide sufficient terrestrial habitat for those animals directly associated with this type of community. Ephemeral ponds or vernal ponds, are located at the Larchmont Reservoir, within the Sheldrake-Leatherstocking Conservation Area near Knollwood Drive, the Bonnie Briar and Winged Foot Country Clubs.
  - b. Wooded Swamps- A buffer should be established of a minimum of 100 feet with a goal to extend them to 300 - 400 feet. These wetlands are

## APPENDIX I

located throughout the area. During field investigation, another wooded swamp was identified on the northeastern section of Bonnie Briar. This area probably represents remnants of wetlands that were once adjacent to the Sheldrake that is now piped underground and channeled.

c. Sheldrake River and its Tributaries--within Bonnie Briar where the lower Sheldrake traverses the property, the natural ability of this system to slow down the rate of runoff is severely limited. A vegetative buffer strip extending out a minimum of 20 feet with a mixture of meadow grasses that are allowed to grow taller and maintained at different heights and cut in different directions, would help trap sediments and filter some of the surface water runoff. If these buffers are properly designed it should have minimal impact on the fairways.

4. The placement of rip-rap along the bank of the Sheldrake combined with planting of meadow grasses would be another approach to trap and hold sediments longer before entering the river.

5. A long-term strategy would be to recommend the installation of circulation pumps/filtration devices to minimize the build-up of nutrients combined with periodic draining of the ponds themselves.

6. Sediment traps properly placed along the Sheldrake would help minimize some of the downstream pollution that occurs during major storms. In addition, water detention systems could be installed to hold back some of the storm water discharge.

7. Managing the harmful impacts from pesticides, herbicides and fertilizers is a major concern that is not restricted only to the RSL-CEA. Because the RSL-CEA has a high percentage of steep slopes, and the bedrock is close to the surface throughout the Sheldrake Watershed, the impact from chemicals is of major significance on surface and ground water resources.

a. The Town should require that an integrated pest management plan be developed for each of the golf courses to encourage or mandate adoption of an "organic" approach to golf course management. The plan should include a surface and ground water monitoring program.

b. The Town should have the annual ground water recharge rate tested to help predict what the current overall impact of nitrate compounds are within the groundwater supplies.

c. The use of synthetic fungicides which are often used to kill most weeds and insects should be discouraged.

d. An overall monitoring program that reviews annual phosphorous and nitrogen loads would enable a more accurate prediction of what the Sheldrake Watershed's natural retention capabilities are.

## APPENDIX I

- e. The golf courses should be encouraged to consider the use of native grasses and a cutting rotation that allows grasses to grow longer. This will enable grasses to develop a stronger root system which in turn makes the plants stronger and less susceptible to disease; hence, less need for fungicides and herbicides.

### C. WILDLIFE RESOURCES

Due to the long history of existing land use practices, wildlife populations are well represented with a good diversity of species present. The area is primarily second growth forests with various successional stages. The composition of plant communities and species is average with a good diversity of trees, shrubs and wildflowers typical of most Westchester naturalized environments.

### RECOMMENDATIONS

1. The Town should adopt a "no net loss approach" to habitat management. This would imply that if any habitats are altered due to development or land use changes, that the areas altered should be replaced, with the exception of wetlands as previously noted.
2. All efforts should be made to minimize habitat fragmentation and if possible, expanding the size of these corridors would be preferred, especially in areas where there are gaps in the corridors.
3. A more thorough study should be conducted that looks at the relationship between wildlife populations, habitat suitability and productivity, to document the potential impacts on species composition and survivability from land use changes.
4. Periodic follow-up surveys should be conducted to document changes over time of species distribution throughout the RSL-CEA.
5. Applied management (for example, mechanical removal of Japanese Knotweed and Black Locust) should be implemented in dealing with the encroachment of exotic plant or animal species within the RSL-CEA.

### D. SHELDRAKE--LEATHERSTOCKING CONSERVATION AREA

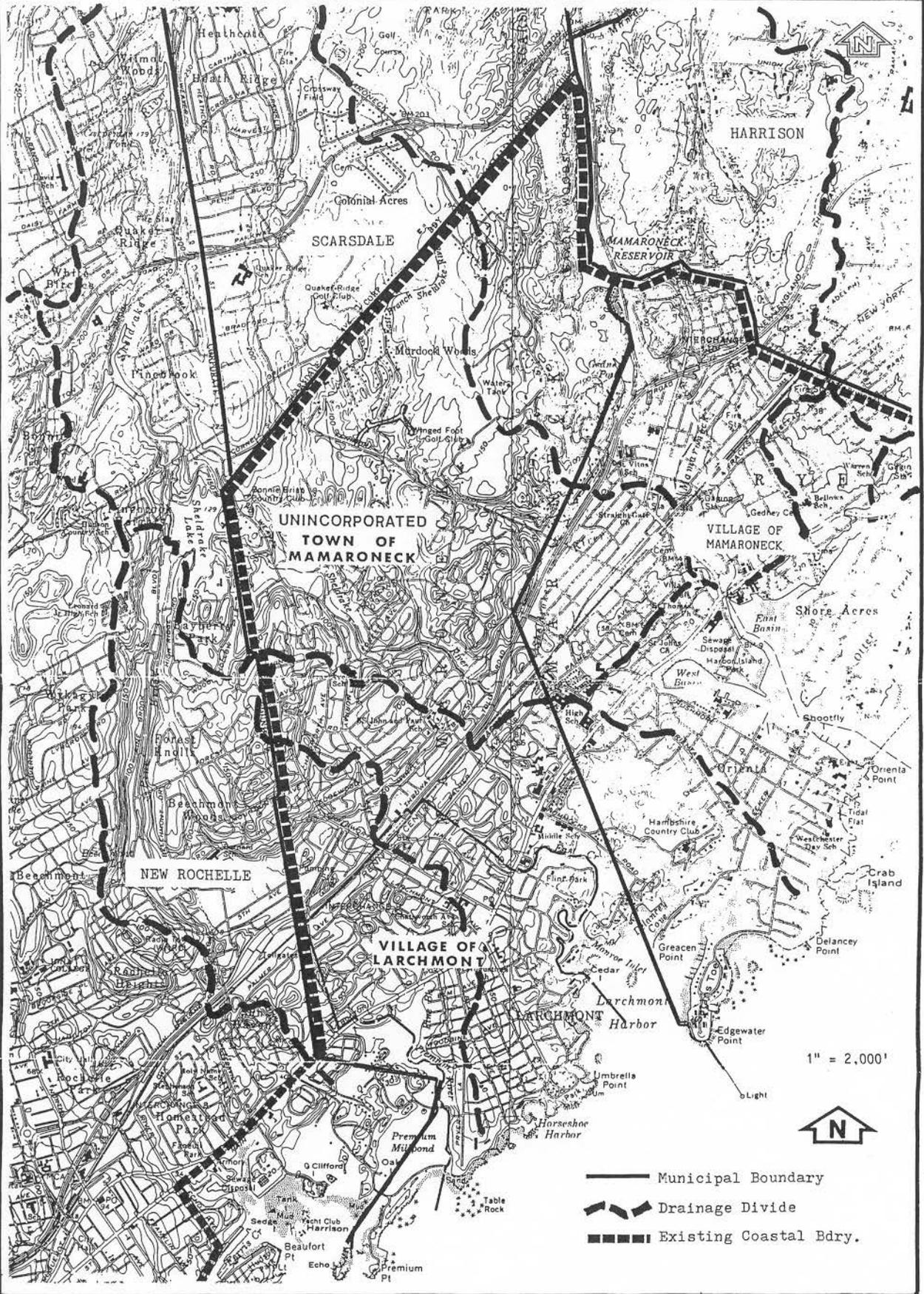
### RECOMMENDATIONS

1. The entrance signs at all points should be improved. Painting of the signs to make them more visible would help people notice the area and increase usage.
2. The current Walk Books should be revised and simplified. The interpretive trail markers are in a state of disrepair and should either be removed or replaced to avoid confusion to visitors.

## APPENDIX I

3. A new trail information kiosk should be erected at the major entrances to the trail system. Materials that could be displayed would include a registration book, trail maps, walk books, information on other Town programs, a blown-up laminated map of the entire trail system and rules and regulations. This would require regular maintenance but would help create a more active utilized look to the area.
4. Actual trail improvements appear to be under control by summer work crews and should continue.
5. More extensive improvements could be made to the trail system but would require additional resources and would require a more careful analysis than possible within this report.

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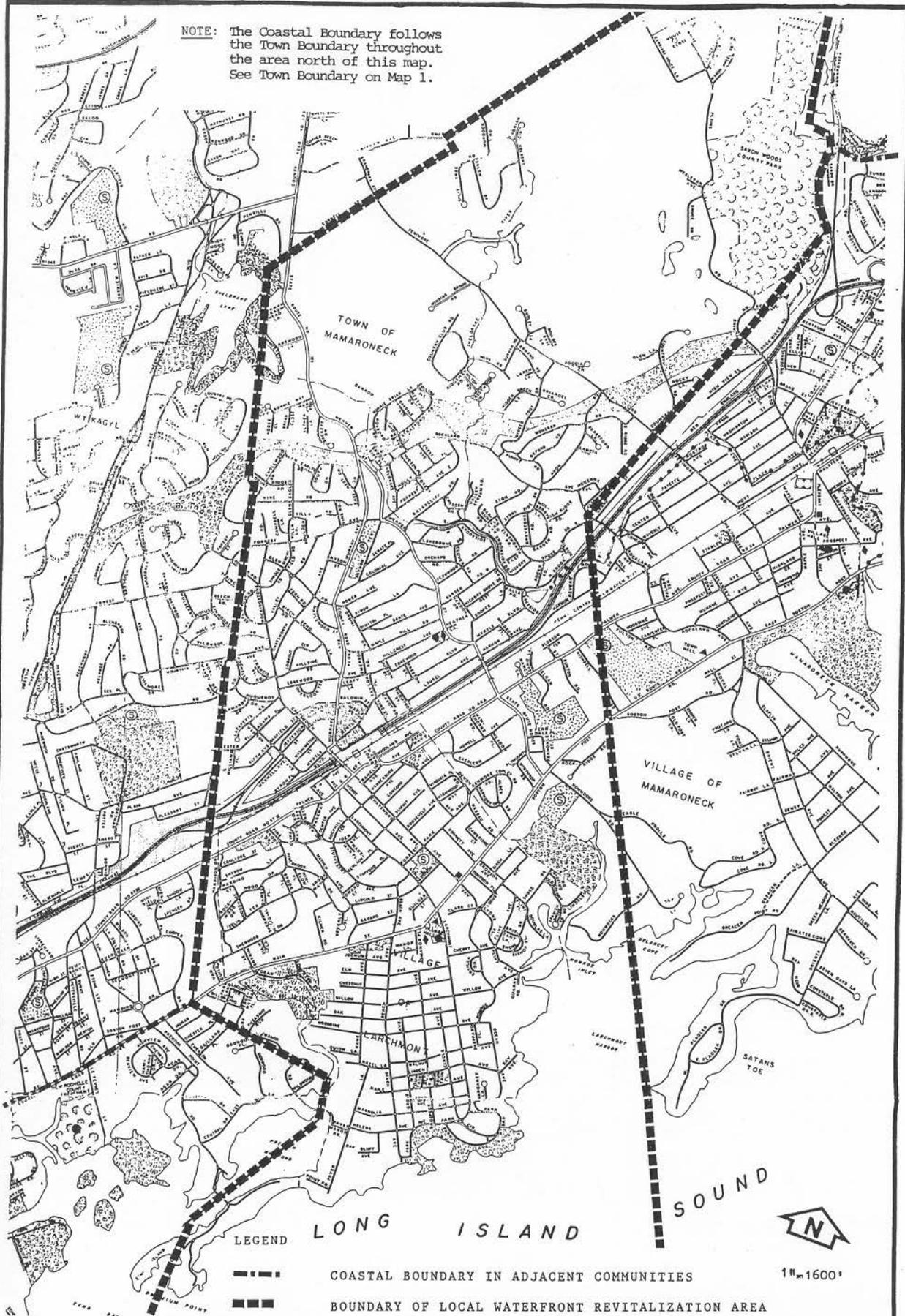
**Local Waterfront Revitalization Program**  
**Village of Larchmont - Town of Mamaroneck**  
 Shuster Associates Planning Consultants

**REGIONAL SETTING**

Map No. **1**

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.  
 Federal Grant Number: NA-82-AA-D-C2068  
 Date of Preparation: February 1986

NOTE: The Coastal Boundary follows the Town Boundary throughout the area north of this map. See Town Boundary on Map 1.



LEGEND

-  COASTAL BOUNDARY IN ADJACENT COMMUNITIES
-  BOUNDARY OF LOCAL WATERFRONT REVITALIZATION AREA

1"=1600'

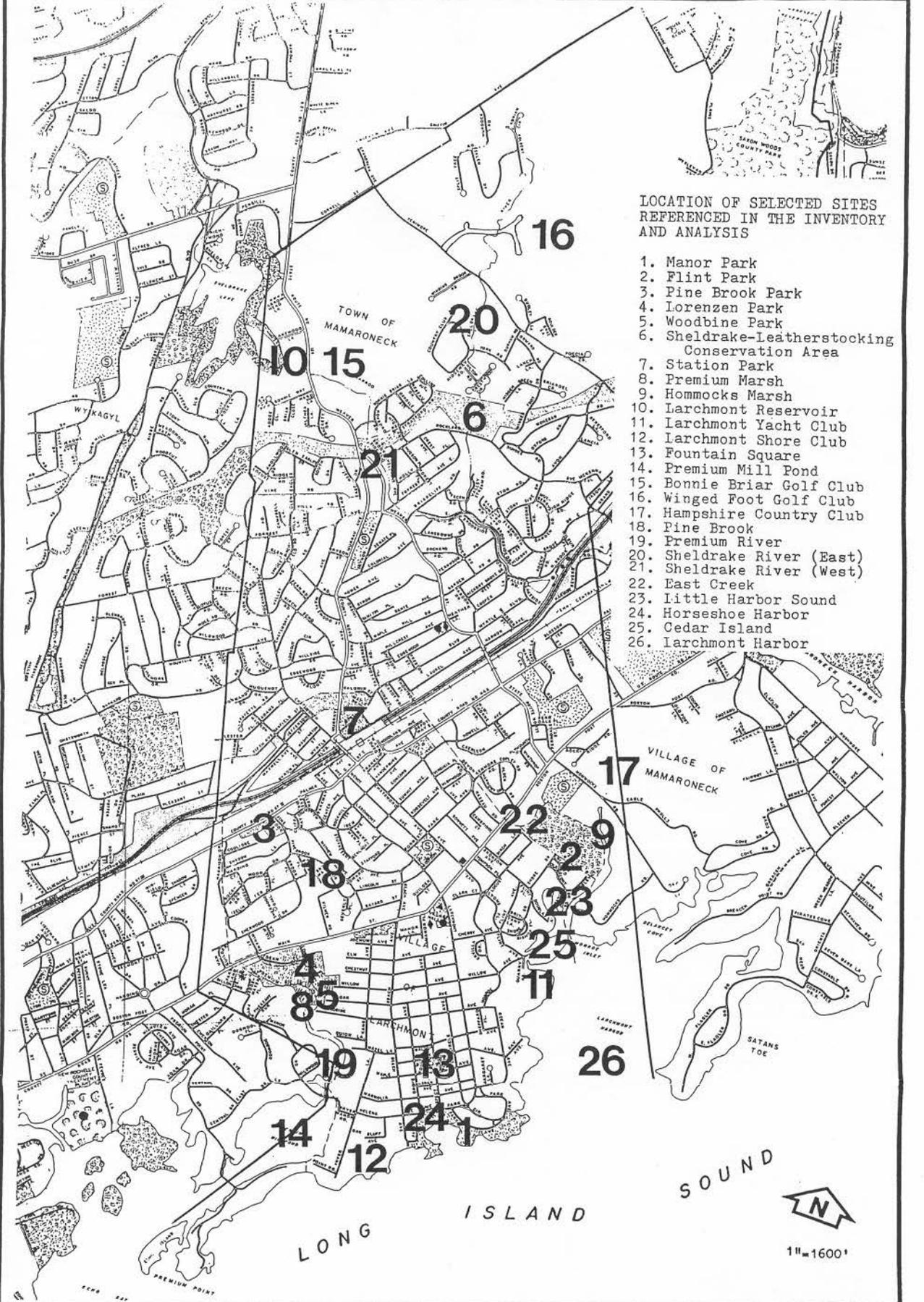
Local Waterfront Revitalization Program  
 Village of Larchmont - Town of Mamaroneck  
 Shuster Associates  
 Planning Consultants

**BOUNDARY MAP**

Map No.  
**2**

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

Federal Grant Number: NA-82-AA-D-CZ068  
 Date of Preparation: February 1985



LOCATION OF SELECTED SITES REFERENCED IN THE INVENTORY AND ANALYSIS

1. Manor Park
2. Flint Park
3. Pine Brook Park
4. Lorenzen Park
5. Woodbine Park
6. Sheldrake-Leatherstocking Conservation Area
7. Station Park
8. Premium Marsh
9. Hommocks Marsh
10. Larchmont Reservoir
11. Larchmont Yacht Club
12. Larchmont Shore Club
13. Fountain Square
14. Premium Mill Pond
15. Bonnie Briar Golf Club
16. Winged Foot Golf Club
17. Hampshire Country Club
18. Pine Brook
19. Premium River
20. Sheldrake River (East)
21. Sheldrake River (West)
22. East Creek
23. Little Harbor Sound
24. Horseshoe Harbor
25. Cedar Island
26. Larchmont Harbor

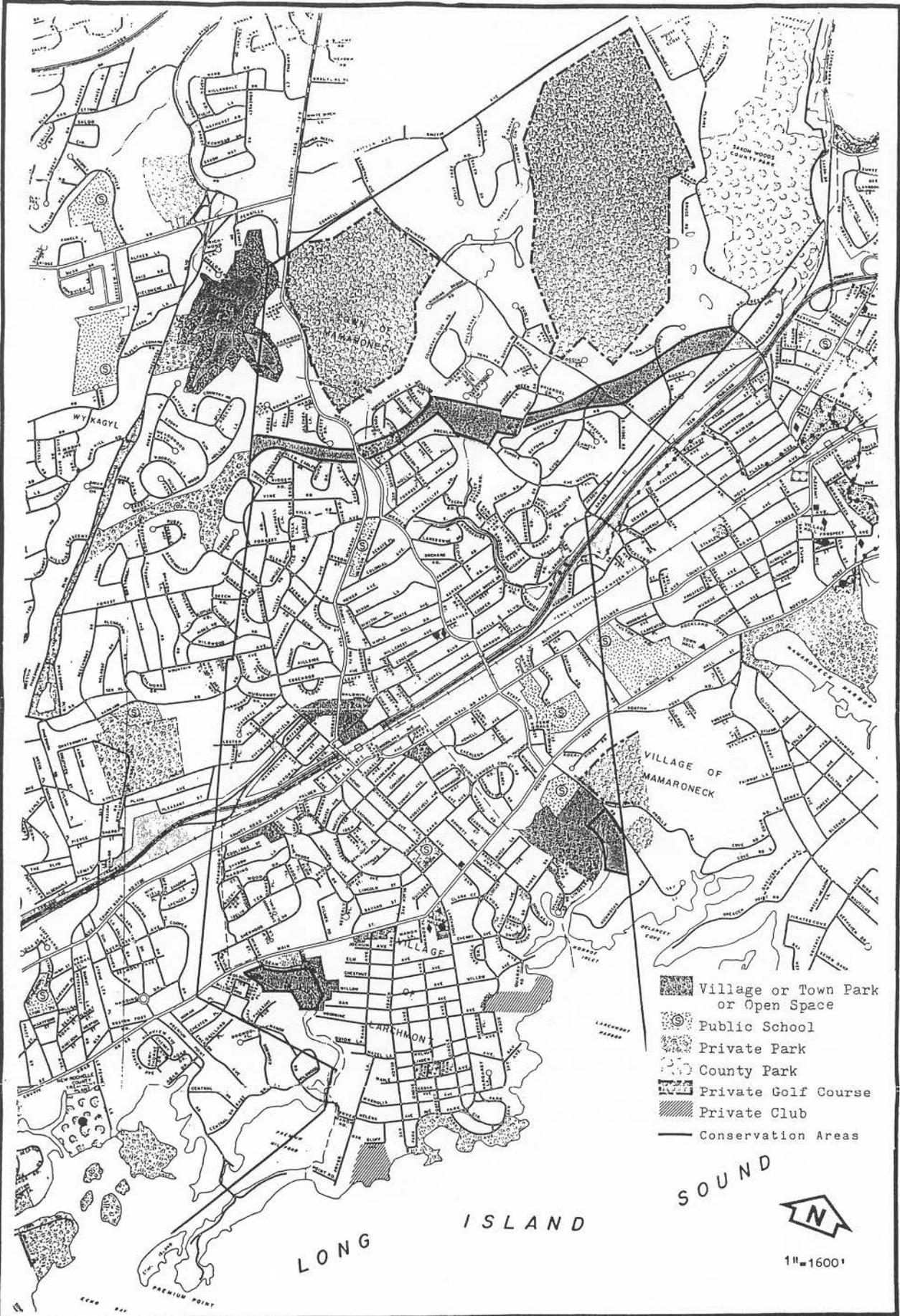
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LOCATION MAP

Map No. **3**

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 Village of Larchmont - Town of Mamaroneck

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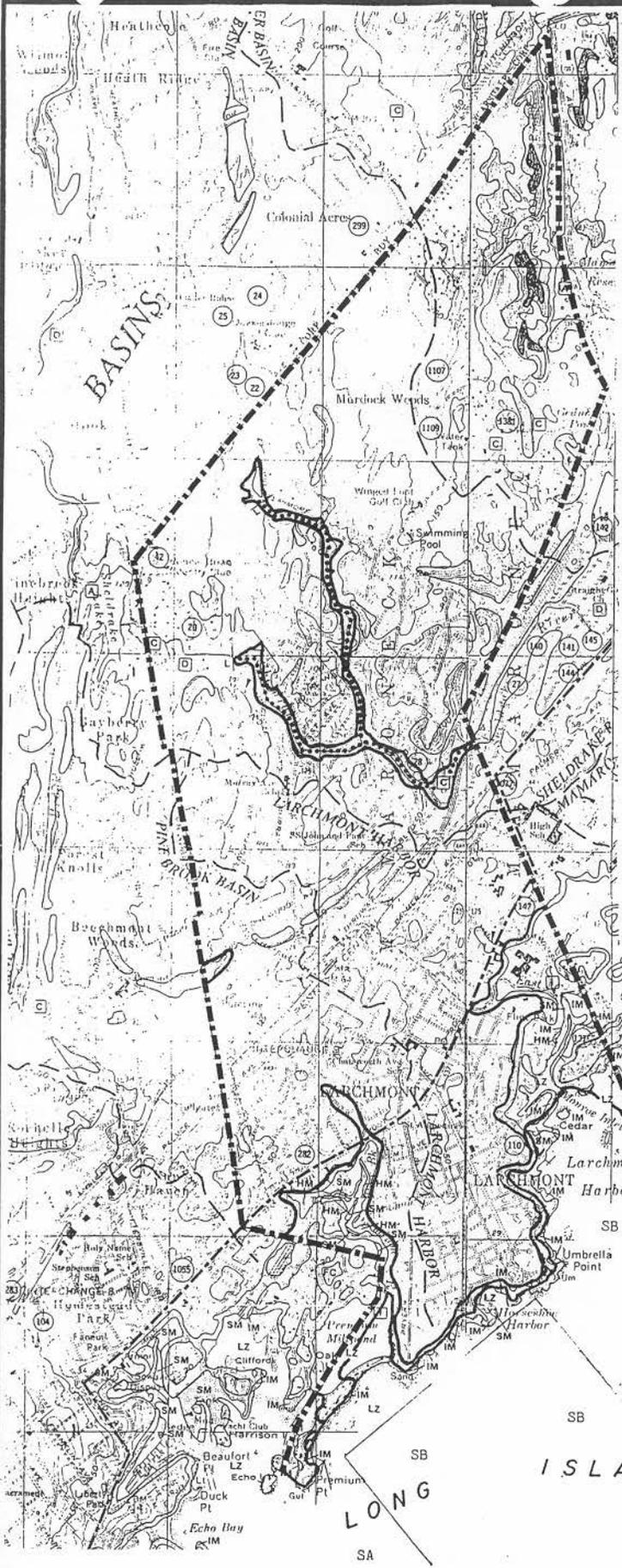
EXISTING  
 OPEN SPACE

Map No.

4

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**LEGEND**

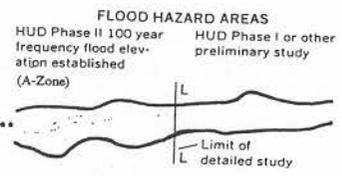
- WATER FEATURES**  
Streams Lakes
- DRAINAGE DIVIDES**  
Major divides separate groups of basins   
Minor divides separate individual basins

**CLASSIFICATION OF WATERS**

BEST USAGE	Fresh Water					Saline Water				
	AA	A	B	C	D	SA	SB	SC	SD	I
Human Consumption										
Food Processing										
Primary Contact Recreation										
Secondary Contact Recreation										
Propagation of Aquatic Life										
Growth of Aquatic Life										
Survival of Aquatic Life										
Propagation of Fish Life										
Survival of Fish Life										
Trout Propagation & Survival										
Shellfishing for Market Purposes										

See D.C. Sec. 701 & 702 NYC for Definition and Standards

- TIDAL WETLANDS**  
Formerly Connected FC  
Coastal Fresh Marsh FM  
High Marsh or Salt Meadow HM  
Intertidal Marsh IM  
Coastal Shoal, Bar, Mudflats SM  
Littoral Zone LZ



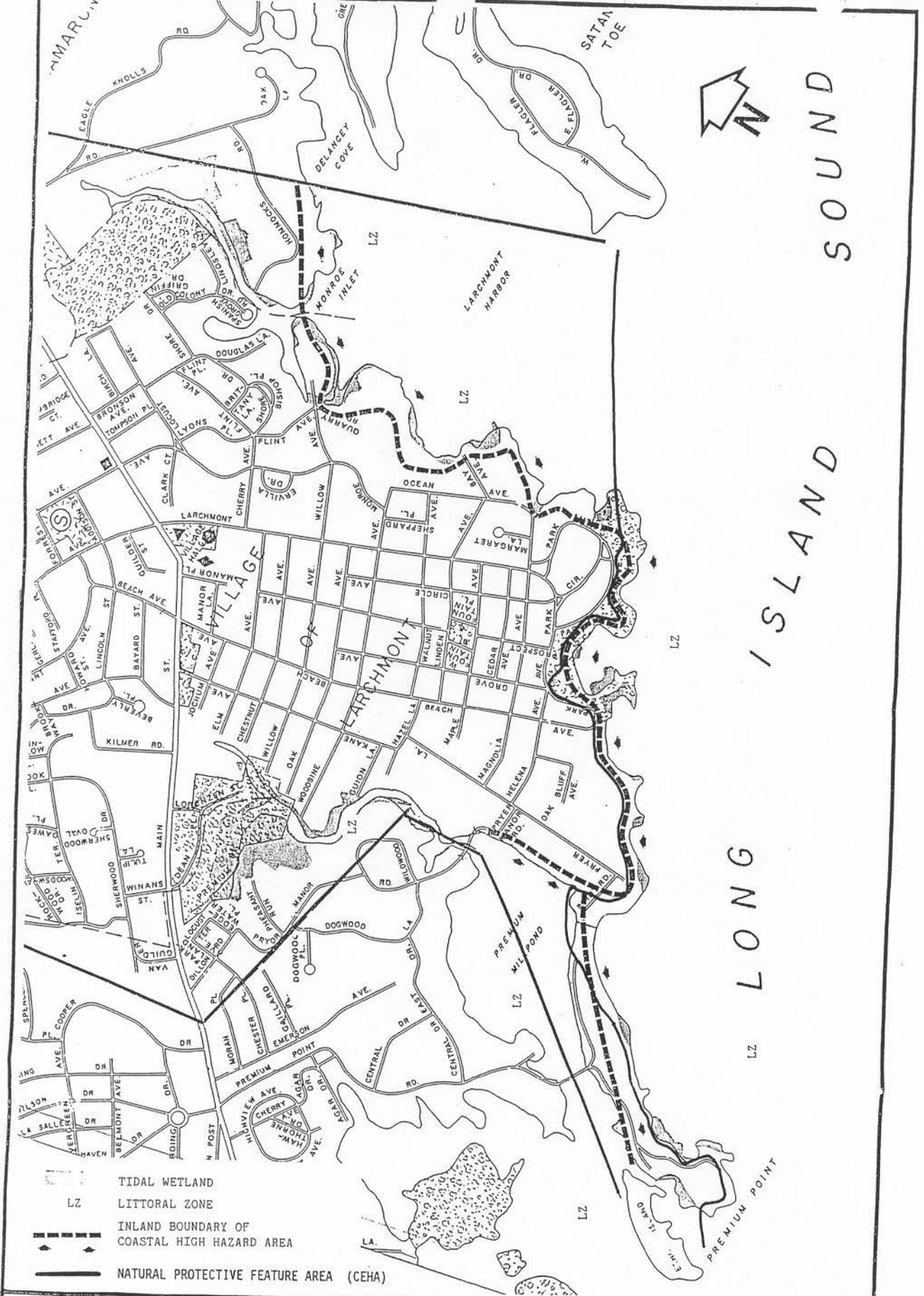
**NOTE:** See Map 6 for more detailed delineation of Coastal High Hazard Areas and Tidal Wetlands.

Source: Westchester Planning Department "Environmental Atlas"



<p>Local Waterfront Revitalization Program  Village of Larchmont - Town of Mamaroneck  Shuster Associates Planning Consultants</p>	<p><b>TIDAL WETLANDS,  WATERSHED BOUNDARIES  AND FLOOD HAZARD AREAS</b></p>	<p>Map No.  <b>5</b></p>
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This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended. Federal Grant Number: HA-02-MA-D-C2068 Date of Preparation: February 1985



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**COASTAL HAZARD AREAS**

Map No.  
**6**

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**RESERVOIR-SHELDRAKE-LEATHERSTOCKING**  
 Freshwater Wetland and Fish and Wildlife Habitat Complex, including connecting stream corridors

Winged Foot Golf Course

Bonnie Briar Golf Course

**HOMMOCKS-HAMPSHIRE**  
 Fish and Wildlife Habitat Complex, including Hampshire Freshwater Wetland and Hommocks Tidal Wetland

Hampshire Golf Course

**PREMIUM**  
 Tidal Wetland and Fish and Wildlife Habitat Complex

- Single Family Res.
- Very Low Density
- Low Density
- Moderate Density
- High Density
- Multi-Family Res.
- Commercial
- Industrial
- Public and Private Recreation
- Critical Environmental Areas (CEA)

LONG ISLAND SOUND

1"=1600'

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LAND AND WATER USE  
 Map No. 7

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