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# ST. LAWRENCE- EASTERN ONTARIO COMMISSION



Special Study Series

A Proposed Coastal Management  
Program for the Eastern Shore  
Dune-Bay-Wetland Complex

F I N A L

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Prepared by St. Lawrence-Eastern  
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## INTRODUCTION

The State Coastal Management Program designates specific areas along the shore as being of particular concern, because of exceptional "coastal-related values or characteristics, or because of exceptional pressures which require detailed attention" to a greater degree than does the coastal area as a whole. For those reasons, specific management programs are being prepared for these areas, so that the state and local agency efforts and private actions can be effectively focused in a priority fashion.

The proposed New York CM Program has identified 97 site-specific Geographic Areas of Particular Concern (GAPC's) throughout the state; management programs have been prepared for thirty-six of these. Five GAPC's are located in the St. Lawrence River - Eastern Lake Ontario (SLEO) coastal area, including one (Henderson High Bank-Lake Ontario Islands) for which a recommended management program has been prepared.\* These GAPC's are:

- Oswego Harbor Area
- Eastern Shore Dune-Bay-Wetland Complex
- Henderson High Banks-Lake Ontario Islands
- Thousand Islands
- Ogdensburg Harbor Area

This report presents a recommended management program for the Eastern Shore Dune-Bay-Wetland Complex.

The State CM Program also has identified four types of coastal development or natural areas as being generic GAPC's, calling for special management attention wherever they occur. Areas included in each of these categories have similar significant characteristics and therefore similar management program objectives.

They are:

- Wetlands that are subject to regulation under the Freshwater Wetlands Act;
- Historic sites that are on the National Register of Historic Places;
- State Parks
- Sites of existing and proposed major power plants.

There are of course numerous wetlands in the SLEO coastal area, including much of the area within the Eastern Shore GAPC. In addition, 18 nationally registered historic places are sited within the proposed SLEO coastal area, as are 23 state parks.

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\*See Proposed Coastal Management Program, St. Lawrence River-Eastern Lake Ontario Area (St. Lawrence-Eastern Ontario Commission, March 1979), pp. 113-122.

One (Selkirk Shores State Park) is located at the southern end of the Eastern Shores GAPC. Major Power Plant sites classified as generic GAPC's in the SLEO area are:

- Robert Moses power dam and Lake St. Lawrence (PASNY) (existing hydroelectric)
- New Haven (NYSEG/LILCO) (proposed nuclear or proposed coal-fired)
- J.A. Fitzpatrick (PASNY) (existing nuclear)
- Nine Mile Point #2 (NM) (nuclear under construction)
- Nine Mile Point #1 (NM) (existing nuclear)
- Oswego (NM) (5 existing and 1 under construction, oil-fired)
- Sterling (RGE) (proposed nuclear or proposed coal-fired).

None of those sites is within the Eastern Shore area of concern or directly affects it, although plants built at two sites (the Nine Mile/Fitzpatrick complex, and New Haven) are or would be visible from Selkirk Shores State Park and the Salmon River-Deer Creek coastal area.

The designation of the Eastern Shore Dune-Bay-Wetland Complex recognizes the unique barrier beach formations and the importance of wildlife habitat found in the adjacent back-dune wetlands.

The numerous water-related recreational opportunities of the area are significant both to users and local economies. The preservation of the unique land and water features and promotion of recreational uses however, are competitive and often conflicting.

Designation of the Eastern Shore area as a Geographic Area of Particular Concern will focus attention on the region's resources and use conflicts and identify possible management programs and their implementation.

Since geographic features important to the area's designation are not limited to political boundaries, it is appropriate to identify programs and policies of regional perspective as well as local application.

I. GENERAL DESCRIPTION OF GEOGRAPHIC AREA OF PARTICULAR CONCERN (GAPC)

- A. NAME: Eastern Shore Dune-Bay-Wetland Complex
- B. LOCATION AND BOUNDARIES: The Eastern Shore Dune-Bay-Wetland Complex is located in the Towns of Richland and Sandy Creek (Oswego County), and Ellisburg (Jefferson County). It extends from the shoreline inland to New York Route 3, and from Selkirk Shores State Park northwards about 9.1 miles to the southern edge of Lakeview Wildlife Management Area. Its total area is about 20 square miles.
- C. OWNERSHIP: The coastal shoreline of this area is primarily (89 percent) in private ownership.
- D. PHYSICAL/NATURAL FEATURES:

The area is notable for its system of barrier beaches and dunes, which front a chain of wetlands, ponds and bays (see Figure 1). This type of formation is characteristic of the eastern shore of Lake Ontario south of Black Pond, but is rare elsewhere on the state's Great Lakes shoreline. The rear areas are sheltered from direct lake wave action by an elevated shorefront, and vary from open water areas to wetlands in advanced eutrophic succession towards dry land. They provide highly productive habitat for fish and a wide variety of birds and other wildlife. This GAPC is on the migration flyway around the eastern end of Lake Ontario for many bird species, including rare and endangered Bald eagle and Osprey.

The GAPC includes active, unstable dunes that are the most dramatic feature of this system. The dunes were formed by prevailing wind action on wide sand beaches exposed when the Lake level was lower than its present level. Dunes (20 to 40 ft. high with some cresting at more than 70 ft. above water) occur on 85 percent (85%) of this reach of shore (see Figures 2,3). The shoreline is classified as erodible. Fifty-five percent (55%) of the lake frontage has been developed as seasonal residences (see Tables 1,2).

The area includes the mouth of the Salmon River, one of eastern Lake Ontario's major tributaries, where development of a small-craft harbor of refuge has been proposed for many years.

Deer Creek Marsh is the most advanced in eutrophic succession of the three major back-dune features along the shoreline of the GAPC. It has been designated as "extremely important" and is one of the most productive littoral wetlands along the eastern lakeshore. Maintenance of the marsh depends upon preservation of the unstable barrier formation. Recreational, residential and extractive uses along the barrier and marginal uplands have severely threatened the marsh's habitat values. As a step to protect this ecologically sensitive area from further degradation, the NYS Department of Environmental Conservation (DEC) recently acquired 1196 acres including the wetlands, upland buffer, Deer Creek outlet and approximately 1 mile of barrier beach and dunes. The acquisition will provide permanent protection for this unique area and its natural character.

North Sandy Pond is another major back-dune area in the form of a large open-water embayment. It has excellent summer and winter fishing activity and its shoreline wetlands offer high potential for waterfowl hunting. The barrier beaches and dunes provide a resting and feeding site for birds in migration, particularly as a storm refuge for birds reaching the shore under stress. Fifty-nine percent (59%) of the shoreline has been developed for seasonal residences and related recreational uses.

South Sandy Pond is the third major back-dune feature in the Eastern Shore Area. The Pond and adjacent wetlands exhibit several stages of eutrophic succession from open fresh water to bog-like conditions. Fifty percent (50%) of the fringe area of South Sandy Pond (including dunes and wetlands), contains cottage development. Shoreline developments have resulted in reduction of wildlife habitat potential and exposed structures to storm erosion damage.

Seasonal residences, located on more than half of the Area's shoreline, comprise about one-fifth of the tax base of local communities. The area includes 35 percent (35%) of the hotel/motel units and 65 percent (65%) of commercial camps located on eastern Lake Ontario. Unfortunately, excessive development has adversely affected scenic values, water quality, wildlife habitat and shoreline erosion conditions.

Dune sand is valuable for industrial use in foundry molds. The economic benefits from sand mining, however, conflict with dune stabilization necessary for protection of shore and back-dune areas.

The Salmon River has been the center of the state's coho and chinook stocking program, resulting in locally significant economic benefits. Expenditures by



fishermen in the eastern Lake Ontario area have been projected to total \$7.6 million annually when the salmonid stocking program is mature. Large scale salmon stocking on the lake's tributaries has been resumed by DEC, because of this fishery's substantial economic and recreation value. Consumption warnings have been maintained because of continued mirex contamination.

Proposed development of a harbor of refuge at the mouth of the Salmon River is expected to stimulate recreational fishing and boating, and encourage development of related support facilities in the area.

E. PRESENT USES:

The lake and pond shorelines are extensively developed with seasonal residences and water-related recreational facilities (see Table 3). Eight commercial marinas are located on North Sandy Pond and the lower Salmon River. Deer Creek Marsh, Cranberry Pond Marsh and South Sandy Pond Marsh contain shoreline that is undeveloped, probably due to low, wet conditions or inaccessibility. Upland areas are rural residential interspersed with forest and brush land and parcels of land in active agriculture.

F. ZONING:

The Town of Richland has a zoning ordinance, a mobile home ordinance, subdivision regulations, floodplain regulations, a junk car ordinance and a sign ordinance. Nearly a mile of Route 3 frontage, on both sides of the Salmon River, is zoned for commercial uses. The remainder of the coastal area is zoned Residential Recreation (Route 3 to the shoreline) and Residential-Agricultural (inland from Route 3). Residential-Recreation permits one-family dwellings, mobile homes and outdoor recreation uses on lots not less than 40,000 sq. ft. Flood hazard zones include most shore-front and wetland areas.

The town of Sandy Creek has a mobile home ordinance, a sanitary code and floodplain regulations. It has not enacted zoning regulations.

The town of Ellisburg has a zoning ordinance, subdivision regulations, a junk car ordinance and a sign ordinance. The zoning ordinance delineates a Resort District permitting single family dwellings or individual mobile homes on a minimum lot of 9000 sq. ft. and a frontage requirement of not less than 60 ft. along shoreline property.



## G. EXISTING PLANS FOR AREA USE:

The NYS Development Plan designates the Eastern Shore Area as "natural open space" bordered by "minimum viability farming." The Black River-St. Lawrence Regional Land Use Plan (1977) designates areas of "intensive management-forest resources" and the Jefferson County Land Use Plan (1978) identifies "forest areas" and "medium potential agricultural land" for the GAPC portion in Jefferson County. The Oswego County Land Use Plan designates "recreation" and "medium density residential" areas along the shoreline intermixed with "forest/wetland" and "rural/agricultural" areas.

The Corps of Engineers has prepared plans for a harbor of refuge for recreational boats in the lower Salmon River. This would entail channel dredging and construction of protective breakwaters flanking the river mouth. A public dock, and basic utility services, would be provided by NYS OPR at the State Park. Earlier plans, which included pedestrian access to the breakwaters for fishing, drew considerable opposition from adjacent property owners. The harbor's development would support increased fishing activities that are projected because of the State's salmonid stocking program. There is the consequent likelihood of substantial related commercial developments in the Port Ontario-Selkirk area as well, with potential adverse effects on environmental quality and local community facilities and services.

As noted above, the Department of Environmental Conservation has acquired land in the Deer Creek Marsh area. Acquisition will provide habitat protection, wildlife management and limited recreational uses (such as fishing, hiking and birdwatching).

## H. ADJOINING AREAS:

Upland areas consist of forest and agricultural land, with low to medium density residential development. North of the Eastern Shore GAPC is the Lakeview Wildlife Management Area owned by NYS Department of Environmental Conservation, which is a continuation of the eastern shore's distinctive barrier dune-wetland formation.

## II. RATIONALE FOR GAPC DESIGNATION

### A. COASTAL ISSUES:

The St. Lawrence-Eastern Ontario Commission has identified coastal issues in the Eastern Shore area as needing management attention. Designation of this area as a GAPC will focus the needed attention on problems associated with the following issues:

1. WATER QUALITY - Addition of toxic chemicals and excessive quantities of nutrients to lake and tributary waters has seriously affected fishing and other recreational uses of the area. Much of the area's economic activity depends on its recreational values.

Toxin levels exceeding recommended health standards have been found in Lake Ontario fish, while excessive quantities of nutrients have caused increased aquatic plant growth in North Sandy Pond.

Point sources of pollutants are not clearly established, although possible sources may include industrial and domestic wastes, insecticides, and agricultural activities.

Additional monitoring is needed within the area and throughout the Great Lakes Basin.

2. FISH AND WILDLIFE - The area's location and unique barrier-dune formations and adjacent wetlands provide exceptional wildlife and fish habitat. However, suitable habitat is threatened by heavy use for camping, seasonal residences, and associated recreational activities.

Deer Creek Marsh is exceptional because of its varied wetland types (shallow fresh marsh to wooded wetland) and its relatively undeveloped character. It provides suitable habitat for fish, furbearers, reptiles, waterfowl, and shore birds. Species migrating through the area include the Bald eagle and Osprey. Recent acquisition and related plans by the Department of Environmental Conservation will provide fish and wildlife management and protection of the wetland and barrier-dune systems.

Various embayments around North Sandy Pond provide suitable habitat for common tern, black tern and green heron; however, human disturbance, particularly heavy boating traffic, has reduced nesting use by those species.

The barrier dunes serve as a resting and feeding site for birds migrating around the eastern end of Lake Ontario. The dunes are an important refuge from storms and human disturbance.

The dense vegetation and bog-like conditions of South Sandy Pond wetland provide potential waterfowl breeding sites, however, habitation is unlikely due to extensive development nearby.

3. SHORE EROSION DAMAGE - Much of the Eastern Shore Area is "open coast" shore which can be severely damaged by prevailing westerly winds in the event of a storm. The entire shoreline is classified as erodible. Development along barrier dunes is extremely vulnerable to storm wave action, and extensive and costly damage can happen in shoreline areas primarily from failure to recognize potential hazard areas.

Between 1972 and 1974, extensive damage occurred as a result of unusually high Lake levels combined with seasonal storms. Damages averaged \$12,800 per mile of lakefront properties. Subsequent study showed long term shoreline recession rates from 1938-1974 with an average of 1.86 feet annually. Forty-four percent of seasonal dwellings were sited no more than 25 feet from the edge of the shoreline bluff. The storm of April 1979 also caused considerable damage to structures and property located along the South Sandy Pond barrier shore.

In an attempt to prevent shore damage, 264 protective structures have been built by property owners. Sixty-nine percent of those structures appear to be ineffective in providing adequate protection from shoreline erosion (see Tables 4,5).

4. ACCESS-RECREATION - Seasonal homes comprise approximately half of the lake-dune frontage and North Sandy Pond shore in this area. South Pond also has several seasonal residence settlements. The area includes 23 percent of the boat launch sites on the eastern lake shore. Public lake beach access is limited to locally developed semi-public day-use beach at the south end of the North Sandy Pond barrier formation and two commercial areas for transient campers. Eight commercial launching facilities provide boating access. Minor access points are provided by several dead-end public road rights-of-way.

A need for additional public access (boat launch) facilities has been projected, to support a growing salmonid fishery in Eastern Lake Ontario expected to result from increased stocking of those species by DEC.

Development of the proposed Port Ontario Harbor of Refuge would serve to enhance public access to Mexico Bay, by providing safe shelter for boaters in the event of lake storms. However, construction

of the harbor of refuge and subsequent development in that area may pose conflicts with present seasonal residence property owners who desire privacy.

Construction of the harbor of refuge may also generate development on the adjacent Southern Deer Creek Marsh, and barrier shore area. Seasonal residences and active recreation uses conflict with maintenance of the dunes and protected wetlands for important wildlife habitat.

5. AESTHETICS - The dunes are a unique physical and aesthetic feature not found elsewhere on the state's Great Lakes shoreline. The numerous adjacent wetlands and Lake Ontario also provide aesthetic amenities to the area. High concentrations of shoreline development detract from the natural aesthetic qualities.

Route 3, designated as a scenic touring route, views sections in the area. Since existing land use controls have not considered aesthetic values, formulation of visual design standards in the area may be appropriate.

B. CRITERIA SATISFIED AND WHY:

Criteria for identification of GAPC's were taken from the draft (3/79) of proposed Article 40 of the NYS Executive Law. Some criteria have been modified in order to emphasize pertinent points found in the Eastern Shore area.

1. The barrier/dune formation is a scarce habitat type and physical feature of the Lake Ontario Coastal Area. The dunes were formed by prevailing winds when the Lake level was much lower. They are no longer replenished by natural processes and are in jeopardy today due to excessive use and physical alteration.

Is the best example of this scenic type of the Lake Ontario shore. The dunes, 20 to 40 feet high with some cresting at more than 70 feet above the water, are of unusual scenic value for their unique massive structure rare elsewhere on the state's Great Lakes shoreline.

Includes habitat for threatened, etc., species. The area provides nesting and feeding sites for numerous bird species migrating around the eastern end of Lake Ontario. Rare and endangered species include the Bald Eagle and Osprey.

2. Includes wetland and littoral areas of high productivity. The variety of wetland (open water to wooded wetland) upland, and shore areas provide excellent fish and waterfowl habitat.

3. Includes areas of substantial or potential recreational value of statewide significance. Many seasonal residents and campers are attracted to the area by the coast-related recreation opportunities. Nearly two-thirds of seasonal residence owners in the area live outside the four county SLEOC area. (Ten percent live out of the state.)
4. Includes places where public access to the coastal waters is of statewide recreational/economic significance. The initial salmonid stocking program attracted large numbers of sport fishermen and recreational boaters to the area. A harbor of refuge is proposed for the mouth of the Salmon River to aid safe navigation in anticipation of a larger salmonid stocking program. The facility will also provide storm refuge for recreational boaters cruising Lake Ontario.
5. Includes commercial reserves of non-renewable resources of statewide significance. The unique dunes contain sand favorable for industrial use in foundry molds. Mining of the dune sand for this purpose has caused this rare, non-renewable resource to dwindle.
6. Includes places where competition among commercial, residential, recreational, and environmental concerns suggests possible conflicts among coastal management policies. The preservation of scenic values, natural resources and wildlife habitat may conflict with industrial, commercial, or residential development activities in the area.

### III. MANAGEMENT PROGRAM

#### A. MANAGEMENT OBJECTIVES:

##### 1. North Sandy Pond

- a. To improve water quality through identification and mitigation of point and non-point sources of excess nutrients.
- b. To protect and enhance unique dune and back-dune wetland features and aesthetic values through appropriate land use controls or acquisition.
- c. To provide adequate public access through private recreational facilities and acquisition.

2. South Sandy Pond

- a. To ensure appropriate consideration for storm erosion areas through land use regulation.

3. Deer Creek Marsh

- a. To protect fish and wildlife and their habitat adjacent to Deer Creek Marsh Management Area, through existing protective legislation or acquisition.
- b. To protect and enhance unique dune and back-dune wetland features through land use controls or acquisition.

4. Salmon River

- a. To provide adequate public access for recreation through promotion of private recreational facilities, public launching sites, and acquisition.
- b. Minimize use conflicts and potential impacts of a proposed harbor of refuge.

B. PRIORITY USES:

1. HIGH:

- a. North Sandy Pond - open space, recreational uses, sport fishing and related access facilities, uses having minimal discharge and runoff.

Barrier Formation - Natural open space, limited public access, uses that preserve natural condition.

- b. South Sandy Pond - open space, sport fishing, low intensity recreational uses.

Barrier Formation - open space, uses that preserve natural character and functions.

- c. Deer Creek Marsh - uses compatible with keeping the area in its natural condition (fishing, hiking, trapping), controlled public access.

- d. Salmon River - Recreational boating and fishing, and related public access facilities, water-dependent development.

2. LOW:

- a. North Sandy Pond - uses that would degrade area water quality, housing units immediately adjacent to shore.

Barrier Formation - uses detrimental to natural systems and character.

- b. South Sandy Pond - housing units immediately adjacent to shore.

Barrier Formation - uses vulnerable to flood and erosion damage.

- c. Deer Creek Marsh - development that would adversely affect natural systems and character.

- d. Salmon River - non-water-dependent development.

C. EXISTING MANAGEMENT AUTHORITIES:

1. Local Regulation - A broad number of powers are available to local governments to achieve management objectives. Although each of the towns in the GAPC have enacted some form of land use controls, the intent of coastal resource management has not been incorporated.

The towns of Ellisburg and Richland have subdivision and zoning ordinances. Unfortunately, many shoreline subdivisions consist of one or two lots and are not reviewed under Realty Subdivision Approval or local subdivision regulations. Revision of these existing ordinances should address all coastal development and include provisions for cluster development and encourage open space uses and habitat management.

The Town of Sandy Creek has a sanitary code and flood plain regulations. Subdivision regulations and a zoning ordinance should be considered to limit further development to very low density seasonal dwellings or to open space uses.

Existing sanitary codes for Oswego County and the Towns of Ellisburg and Sandy Creek regulate sewage disposal or disposal systems.

Municipalities may acquire land for protection of fish and wildlife habitat or for public access.



2. Freshwater Wetland Act, ECL (Article 24) - The Act regulates alteration such as dredging or filling wetlands. A permit process determines possible adverse impact of activities on wetland and habitat value. Most wetlands in this area qualify for regulation under this Act. Proposed wetlands regulations (Parts 663 and 664 of 6 NYCRR) give the DEC regulatory authority over wetlands adjacent to Lake Ontario - essentially all wetlands in this GAPC. Local wetland laws have also been adopted in Sandy Creek and Oswego County, and will go into effect once the official maps are developed for these areas. Since much of the undeveloped area in the GAPC is wetland or adjacent, the wetlands act will be an important consideration for implementation of a management plan.
3. Fish and Wildlife Management Practices Cooperative Program, ECL (Article 71-0501) - This law enables DEC to enter into cooperative agreements with private landowners and provide technical aid to develop measures for maintenance and protection of fish and wildlife and their habitats.
4. State Nature and Historical Preserve Trust, ECL (Article 45) - This program provides for acquisition of lands of ecological significance. To date, funding has been provided by the 1972 Environmental Quality Bond Act. Additional State acquisition of dune and wetland areas may be needed to provide adequate protection.
5. Environmental Quality Bond Act of 1972, ECL (Article 51) - This Act provides funding from the Department of Environmental Conservation for land preservation and improvement including acquisition. The recent acquisition of Deer Creek Marsh is an example of using this act as a management tool.
6. State Comprehensive Recreation Plan, Parks and Recreation Law, (Section 3.15) - The Recreation Plan establishes a priority system for projects that contribute to the plan implementation. Water-dependent or water-related projects, particularly privately owned facilities would receive a higher priority rating.
7. Harbors of Refuge, Navigation Law, (Article II Section 141) - This Law authorizes the Office of Parks and Recreation to enter into agreement with the Federal Government and with municipalities to construct, operate and maintain harbors of refuge. Location of harbors should not conflict with preservation and enhancement of coastal resources.

Involvement of OPR in the proposed harbor of refuge will help provide access facilities.

8. OPR Grants-In-Aid - OPR provides funding, through the U.S. Dept. of Interior's Land and Water Conservation Fund, for acquisition, development and rehabilitation of parks and outdoor recreation facilities. Sandy Creek, Ellisburg or Richland could use these funds to provide public access to the shoreline.
9. The State Environmental Quality Review Act - SEQRA requires state and local governments to consider environmental impact for actions they directly undertake, fund or approve. Use of the SEQRA review process will also ensure consistency of projects with coastal management policies.

D. ADDITIONAL MANAGEMENT AUTHORITIES NECESSARY:

1. Coastal Management Program - Proposed Legislation provides for the state's use of its own capital construction powers and permit issuing powers to discourage development in certain coastal resource areas. Money will become available to provide public access. The CMP has also developed new legislation that would establish authority for non-structural controls in coastal areas that are designated as erosion prone.
2. Coastal Erosion Hazard Areas, ECL (Article 34) (PROPOSED) - This proposed law provides for identification and mapping of coastal erosion hazard areas through State and Local government cooperation. Land use and development within these designated areas will be regulated.

E. IMPLEMENTING AGENCIES:

1. Town of Ellisburg
2. Town of Sandy Creek
3. Town of Richland
4. Dept. of Environmental Conservation
5. St. Lawrence-Eastern Ontario Commission (technical assistance, project review)
6. Corps of Engineers - Port Ontario
7. NYS Office of Parks and Recreation
8. Oswego County
9. Jefferson County

F. OBSTACLES TO IMPLEMENTATION:

Adherence to existing regulations and enforcement is necessary for proper management implementation.

Abatement of excess nutrients in North Sandy Pond will require substantial in-depth study to determine actual sources and mitigation techniques. Provisions for funding and technical assistance would be major concerns.

Lack of sufficient funding sources often hinders acquisition or development of facilities. Present use of privately-owned Sandy Island Park by town residents could be facilitated by town purchase of the site. Purchase of access rights or leasing the site may be preferable financially.

## SUMMARY

The management program identifies issues and objectives, as well as available existing and proposed authority and implementing agencies to achieve these objectives.

Achievement of coastal management policies will depend largely on participation of local municipalities. Although each of the communities has implemented some form of land use controls, revision of these or implementing additional regulations may be required to accomplish desired policies and objectives of the Coastal Management Program.

Administration of management techniques is further complicated by diverse and often conflicting interests and varied political jurisdictions and authorities. Concerns in the area include 3 towns, a state wildlife management area, a state park, and a proposed Corps of Engineers' harbor of refuge. To adequately address management of unique environmental concerns requires cooperation and a unified approach while considering differing individual concerns.

Existing land use controls are not based on environmental character and compatibility. Identification of critical habitat areas and development suitability areas is needed to ensure adequate protection of this unique natural resource area.

Actual implementation and administration of a management program will rely extensively on the data base available, administrative ability of towns, and possibly additional detailed analysis of individual problems. Since some communities presently may not have adequate data, and are unfamiliar with management programs of this type, the Commission recommends moving into a more detailed, second phase program.

Because some of the problems are regional and concern more than one town or agency, implementation of a program should be approached through creation of a cooperative board consisting of municipalities within the GAPC, counties, and state agencies (OPR, DEC and SLEOC). Such a board could resolve regional issues and ensure adequate management techniques for each town. Individual land use controls should be consistent with adjacent towns and the coastal management program. Commission staff would provide technical assistance to the board and towns developing new or revised regulations.

This program would include natural and socio-economic resources inventories, analysis of specific problem areas and identification of development suitability areas. Based on this information, land use controls can address natural resource protection and provide for development in suitable areas.

The success of a management program will depend on coordination of state and local regulations and the ability to administer them. An educational program should provide local governments with information to adequately enact and enforce land use controls. Implementation of a freshwater wetlands law or SEQRA are examples.

Pending approval of the State Coastal Management Program, development of a detailed management program for the Eastern Shore GAPC will aid other communities in preparing local coastal management programs.

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FIGURES & TABLES

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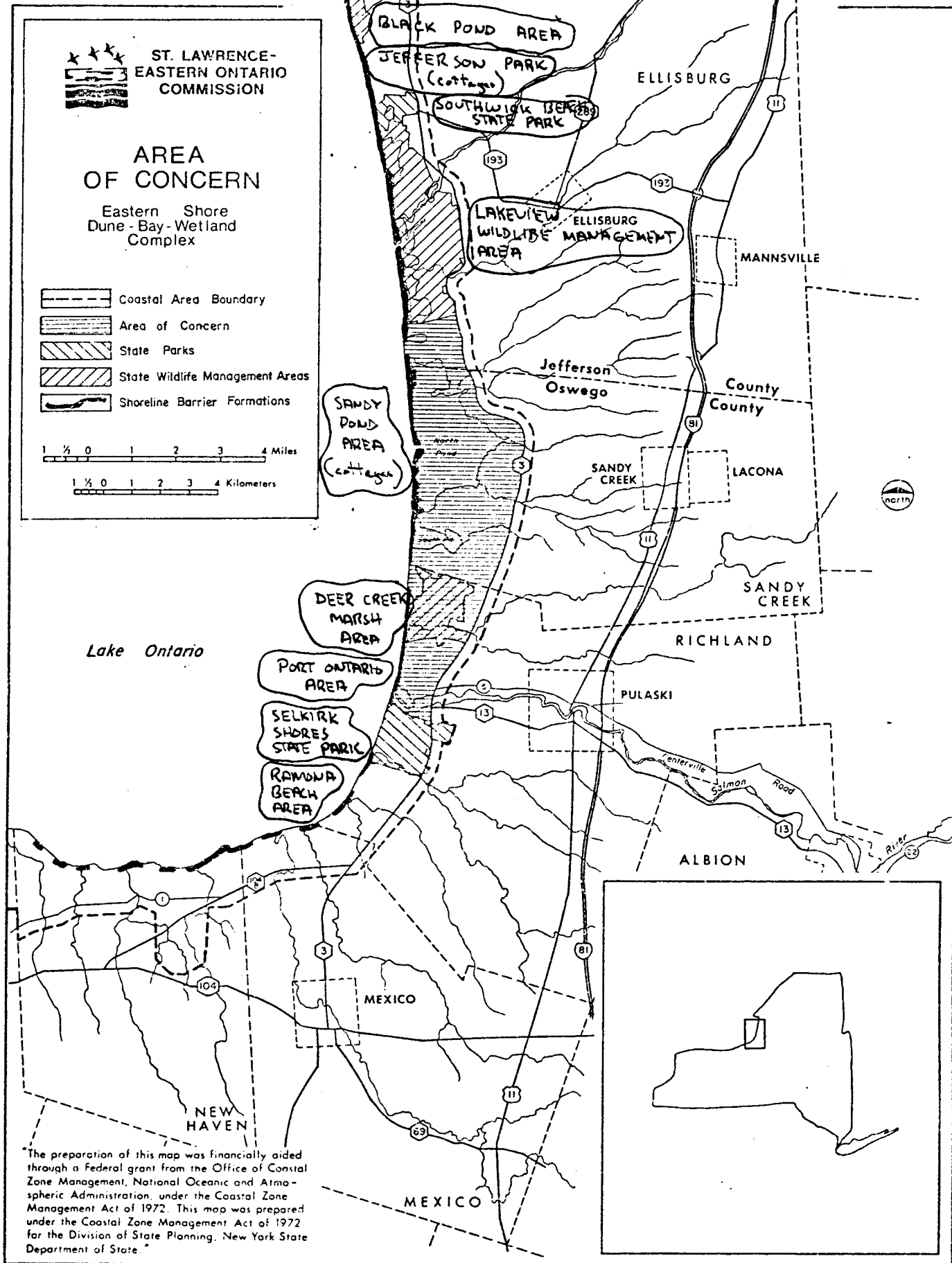


FIG. 8

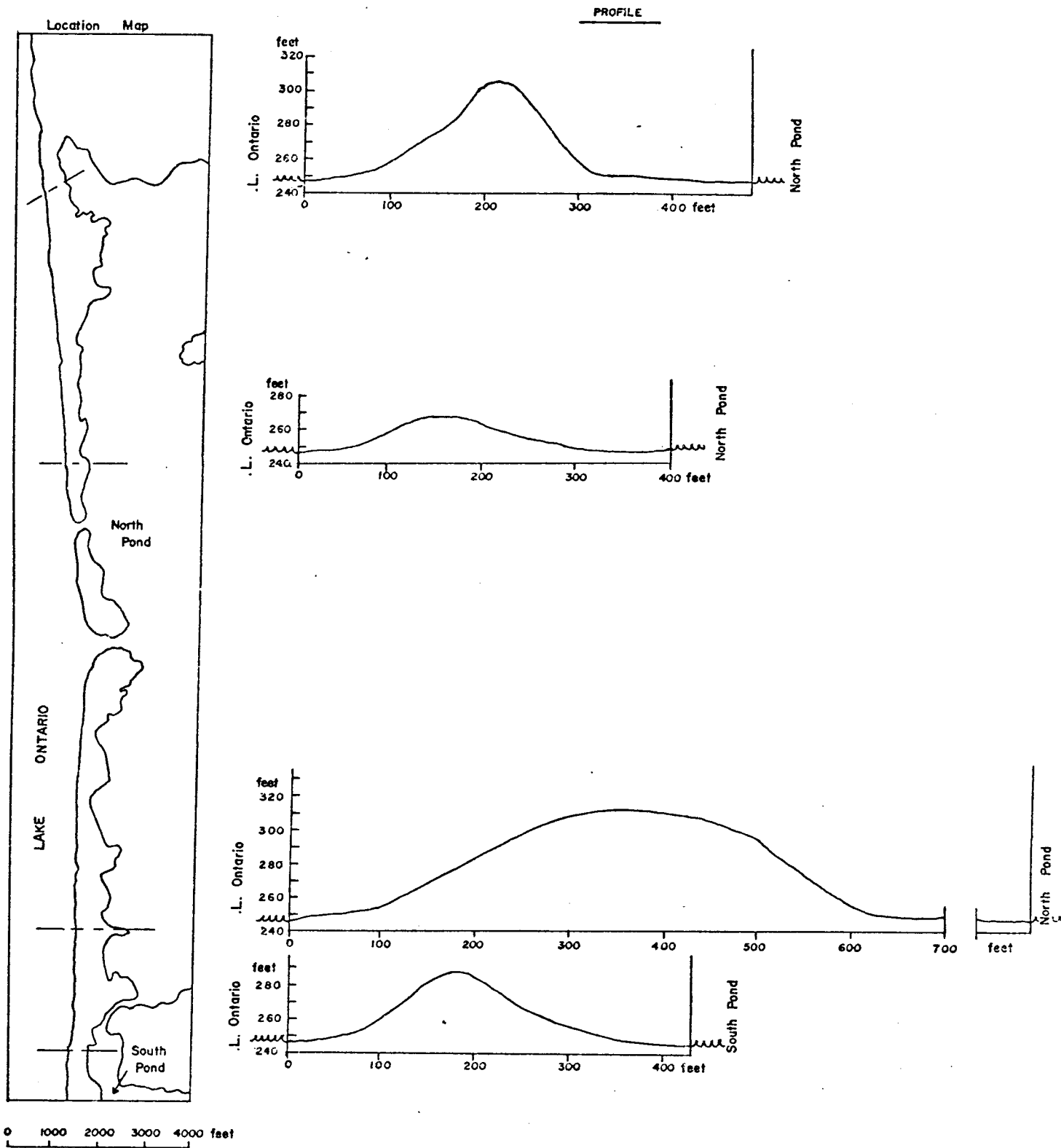


Figure 2. Schematic Profile of Barrier Formations on the Mexico Bay Shoreline of Lake Ontario.

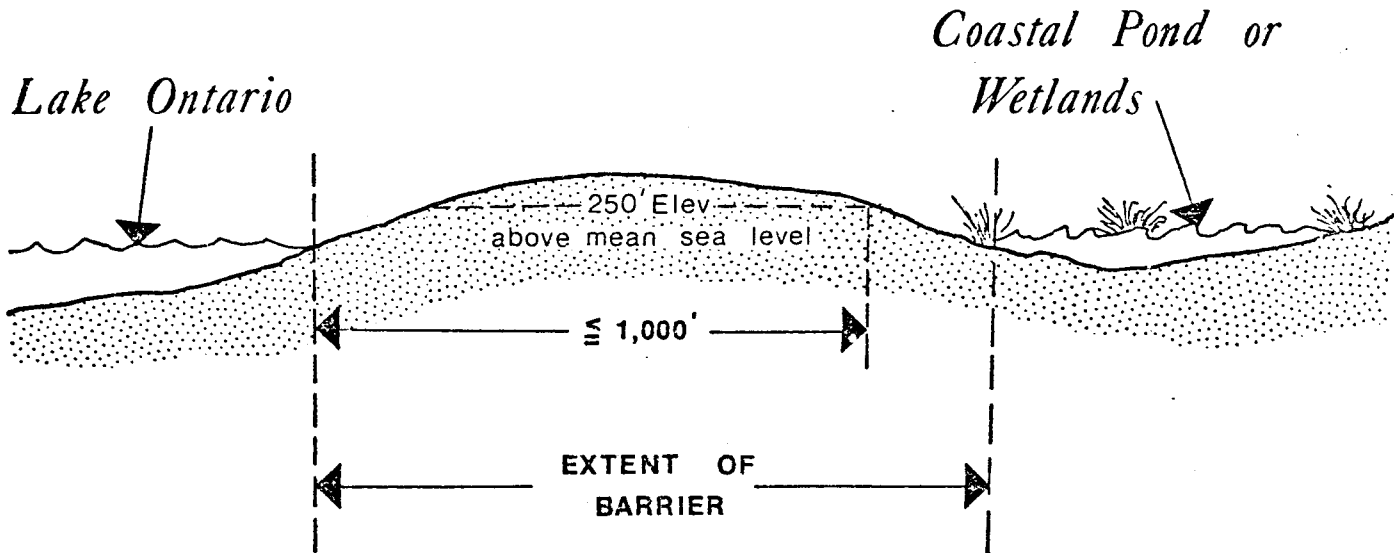


Figure 3. Illustrative Cross-Section of Barrier Beach or Dune Formation in the Eastern Shores GAPC.

Table 1. Mexico Bay, Subarea II - Shoreline Character

<u>Open Coast</u>	<u>Shoreline Total</u> (feet)	<u>Barrier Formation</u> (% of Shoreline)	<u>Seasonal Residences</u> (% of Shoreline)
New Haven	30,800	39.6	40.9
Mexico	8,800	68.2	68.2
Richland	34,800	60.9	50.9
Sandy Creek	24,200	100	50.4
Ellisburg	53,000	85.7	15.5*
<u>Total</u>	152,200	71.9	37.3
<u>Public Shoreline</u>			
Black Pond Wetland	4,400	100	
Southwicks Beach SP	3,400	100	
Lakeview WMA	24,800	100	
Deer Creek Marsh WMA	5,770	100	
Selkirk Shores SP	6,000	20	
Mexico Point Boat Launch	800	100	

\*including Renshaw Bay Area

Table 2. Eastern Shore Area of Particular Concern - Shoreline Character

<u>Open Coast</u>	<u>Shoreline Total(feet)</u>	<u>Barrier Formation(% of Shoreline)</u>	<u>Seasonal Residences (% of Shoreline)</u>
Richland	17,800	73.0	50.6
Sandy Creek	24,200	100.0	50.4
Ellisburg	5,600	57.1	89.3
<u>Total</u>	47,600	84.9	54.5
<u>Interior Areas</u>			
Cranberry Pond	6,200	9.7	3.2
North Sandy Pond	60,800	22.7	59.2
South Sandy Pond	19,400	19.6	49.7
<u>Total</u>	104,800	20.8	43.7
<u>Public Shoreline</u>			
Deer Creek Marsh WMA	5,170	100	

Table 3. Eastern Shore Area of Particular Concern - Shoreline Land Use

	<u>Seasonal Residential</u>		<u>Recreation</u>		<u>Forest/brush</u>		<u>Agriculture</u>		<u>Other</u>	
	ft. of shore	%	ft.	%	ft.	%	ft.	%	ft.	
<u>ELLISBURG</u>										
Lake Ontario	5000	89.3								
South of Lakeview									600	10.7
Cranberry Pond	200	3.2			900	14.3			5200	82.5
North Sandy Pond	1200	33.3	1000	27.8	800	22.2			600	16.7
<u>SANDY CREEK</u>										
Lake Ontario	12,200	50.4	1400	5.8					10,600	43.8
<u>North Sandy Pond</u>										
	34,800	59.0			10,800	18.3			13,400	22.7
<u>South Sandy Pond</u>										
	9600	49.7	300	1.6					9,400	48.7
<u>RICHLAND</u>										
Lake Ontario	9000	50.6	4,000	22.5	800	4.5			4,000	22.4
North of Selkirk										
Shores State Park										
Selkirk Lake	10,200	55.1	2,100	11.4	600	3.2			4,300	26.0

Source: St. Lawrence-Eastern Ontario Commission, Coastal Management Atlas, Maps 030-032.

Table 1 Shoreline Structures (defensive)

<u>TOWN</u>	<u>Number of Structures within GAPC</u>	<u>Number of Remaining Structures in town</u>	<u>North Sandy Pond Shoreline</u>	<u>Total number of Structures by town</u>
Ellisburg	21	41	6	68
Sandy Creek	18	--	158	176
Richland	61	26	--	87
Mexico	--	43	--	43
New Haven	--	68	--	68
Totals	100	178	164	442

Source: Shoreline Structures Inventory, Franklin, St. Lawrence, Jefferson Counties, NYS, Department of the Army, Buffalo District, Corps of Engineers, St. Lawrence-Eastern Ontario Commission, 1979. Engineering Studies for a Contract for Field Investigation of High Water Damage in Oswego County, NY, St. Lawrence-Eastern Ontario Commission, Army Corps of Engineers, Chicago, 1975.



Table 5. Effects on Shoreline Stabilization, Subarea II

	# of Structures within GAPC (including North Sandy Pond Shoreline)			# of Structures Remaining in Subarea II			Total Effect of Shore- line Stabilization			
	P <sup>1</sup>	L <sup>2</sup>	N <sup>3</sup>	P <sup>1</sup>	L <sup>2</sup>	N <sup>3</sup>	P <sup>1</sup>	L <sup>2</sup>	N <sup>3</sup>	# of Structures (Total)
Ellisburg	7	20	-	14	23	4	21	43	4	68
Sandy Creek	48	122	6	-	-	-	48	122	6	176
Richland	28	33	-	9	17	-	37	50	-	87
Mexico	-	-	-	17	25	1	17	25	1	43
New Haven	-	-	-	14	52	2	14	52	2	68
<b>-TOTALS:</b>	<b>83</b>	<b>175</b>	<b>6</b>	<b>54</b>	<b>117</b>	<b>7</b>	<b>137</b>	<b>292</b>	<b>13</b>	<b>442</b>

- <sup>1</sup>Permanent
- <sup>2</sup>Limited
- <sup>3</sup>None

Source: "Shoreline Structures Inventory, Franklin, St. Lawrence, Jefferson Counties," NYS Department of the Army, Buffalo District, Corps of Engineers, St. Lawrence-Eastern Ontario Commission, 1979. "Engineering Studies for a Contract for Field Investigation of High Water Damage in Oswego County, NY," St. Lawrence-Eastern Ontario Commission, Army Corps of Engineers, Chicago, 1975.

APPENDIX B

ORIGINAL DESIGNATION CRITERIA  
COMPARED TO ARTICLE 40 CRITERIA

Designation criteria for areas of particular concern are based on consideration of coastal resources and uses.

The following criteria are characteristics, resources and uses originally identified by the St. Lawrence-Eastern Ontario Commission, and corresponding criteria stated in the proposed New York State Coastal Management Act, Article 40 of the New York State Executive Law.

Original Criteria Identified  
by the St. Lawrence-Eastern  
Ontario Commission

Criteria identified in the  
proposed NYS Coastal Management  
Act, Article 40 of the NYS  
Executive Law

Physical features which demonstrate particular value as physiographic or geologic resources, and serve as important examples of historic land structural processes

(i) areas representing unique, or scarce, natural habitats or physical features, or areas of state or national historic or archeological significance, or scenic areas of widespread recognition or that best represent a particular type of scenic vista, or habitat areas for rare, threatened, endangered or diminished species of fish or wildlife;

Areas of significant scenic importance

Natural habitats which demonstrate particular wildlife use as feeding, roosting, spawning, loafing, or nesting areas

(ii) areas of high natural productivity, or habitat necessary for the survival of a particular species of fish or wildlife, if such areas are determined to be of statewide significance, including, but not limited to, such areas which are essential to the continued economic viability of an industry or commercial enterprise;

Areas of high natural productivity for living resources

Areas of essential habitat, critical to the well-being (survival) of various species

(iii) areas or facilities of substantial or potential statewide recreational value;

Coastal areas of substantial recreational value providing significant degree of diversity and opportunity

Economic and commercial activities the characteristics for which depend upon access to a water body, access to deep water, or access to living aquatic resources, and whose viability is derived solely from the water

Facilities which support water-dependent recreation activities.

Areas where geologic or mineral resource features are sufficient to support economic activity

Areas where proposed urban-industrial-commercial uses may be in conflict with natural water resource values and characteristics

(iv) areas where access to or utilization of coastal waters is of statewide significance for recreational, economic, transportation or research purposes;

(v) areas of unique geologic or topographic significance for industrial or commercial development of statewide significance, or areas containing commercially important reserves of non-renewable resources of statewide significance;

(vi) areas where completion among commercial, industrial, residential, recreational, and environmental concerns may have an impact on the ability to achieve one or more of the policies set forth in this article;

APPENDIX C

DESIGNATION CRITERIA  
AND APPLICABLE NEW YORK CMP POLICIES

DESIGNATION CRITERIA  
And Applicable New York CMP Policies\*

(i) areas representing unique or scarce natural habitats or physical features or scenic areas of widespread recognition or that best represent a particular type of scenic vista, or habitat areas for rare, threatened, endangered or diminished species of fish or wildlife.

1. Aesthetics.

In order to provide for the preservation and protection of aesthetic areas of statewide significance, the following policies shall apply to such areas: new land use or development shall be undertaken so as to minimize impact on the integrity of the aesthetic resources; new land use or development shall not degrade or block views of such resource from adjacent lands ; new land use or development which is incompatible with such aesthetic resources shall be screened; new land use or development which enhances such aesthetic resources shall be encouraged.

Aesthetic considerations shall be incorporated into planning and land use or development decisions in the coastal area. Such considerations shall reflect the nature of the aesthetic resources, the particular conditions of a site, the land use or development pattern in the vicinity, and the constraints required by the nature of proposed land use or development.

Visual access to and along the shoreline of the coastal area shall be increased and existing visual access points shall be protected, to the extent possible and consistent with reasonable use of property.

6. Fish and Wildlife

Significant fish and wildlife habitat areas shall be preserved, managed and, where possible, restored so as to maintain or re-establish their viability as habitats: maintenance and protection of such areas as habitat for the fish and wildlife populations to which they are important shall receive the highest priority; land use or development shall be undertaken

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\*Criteria and policy statements are drawn from the draft (3/79) of proposed Article 40 of the NYS Executive Law; some have been condensed in order to emphasize pertinent points.

only after consideration of the impact on such habitat areas and on their maintenance and protection and after consideration of alternatives to the proposed land use or development; high priority shall be accorded to the use of any available monies for acquisition of fee or lesser interests in real property identified as significant fish and wildlife habitat.

(ii) areas of high natural productivity, if such areas are determined to be of statewide significance including, but not limited to, such areas which are essential to the continued economic viability of an industry or commercial enterprise.

## 6. Fish and Wildlife

Significant fish and wildlife habitat areas shall be preserved, managed, and where possible, restored so as to maintain or re-establish their viability as habitats: maintenance and protection of such areas as habitat for the fish and wildlife populations to which they are important shall receive the highest priority, land use or development shall be undertaken only after consideration of the impact on such habitat areas and on their maintenance and protection and after consideration of alternatives to the proposed land use or development: high priority shall be accorded to the use of any available monies for acquisition of fee or lesser interests in real property identified as significant fish and wildlife habitat.

Fish, wildlife and their habitats shall be protected from contamination due to the introduction of toxic substances and other pollutants.

(iii) areas or facilities of substantial or potential statewide recreational value.

## 6. Fish and Wildlife

In a manner consistent with sound resource management considerations, public use of fish and wildlife resources for recreational purposes shall be expanded by increasing access to existing resources, supplementing existing stocks and developing new resources.

## 7. Flooding and Erosion

All practical efforts shall be undertaken to minimize the damage to property and to natural resources of great public benefit, caused by erosion. Such efforts shall include, as appropriate the following: the location of new structures so as to minimize damage that may result from erosion during the economic life thereof; the location of new land use or development so as to insure that it does not alter land areas, including but not limited to, beaches, dunes, barrier islands, bluffs, and other coastal features, if such alteration will unreasonably

increase the severity of erosion on other lands; the location and design of new erosion protection structures so as to insure that such structures have a reasonable probability of controlling long term erosion on the site and not increasing erosion of other lands; the use of available public funds to provide erosion control structures in those areas where such structures are necessary to protect human life, or existing investment which is dependent upon a location near or adjacent to the water.

## 10. Recreation

State agencies shall in the development of park and recreational facilities and in the provision of grants, loans or other funding assistance, give priority to water-related recreation activities, including activities associated with boating, swimming and fishing, and trails, picnic areas or scenic viewpoints.

All practical efforts shall be undertaken to promote the role of the private sector in the provision of recreation facilities.

All practical efforts shall be undertaken to develop recreational boating facilities, including marinas, boat launching sites and harbors of refuge, in those areas where demand for such facilities shall be located and developed in such manner as will be consistent with achievement of the policies otherwise set forth in this section.

All practical efforts shall be undertaken, in a manner consistent with sound resource management principles, to provide for increased public use of fish and wildlife resources by increasing access to existing resources, supplementing existing stocks and developing new resources.

Land use or development shall provide for multiple use thereof so as to permit water-related recreation activities, where appropriate in light of reasonably anticipated demand for such facilities, where feasible in view of the purpose of the land use or development and reasonable use of property, and where the provision of such multiple use would be consistent with achievement of the policy otherwise set forth in this section.

Land use or development contiguous to or in close proximity to recreational resources shall not impair the character or quality of such resources.

## 11. Water Quality

The use of smaller or innovative sanitary waste systems which are alternatives to conventional waste treatment facilities shall be encouraged in those areas where the cost of conventional facilities is unreasonably high given the degree of protection they would afford; priority in encouraging the use of such systems shall be accorded to those areas where significant coastal resources will be protected.



In providing funds to apply best management practices to mitigate rural non-point pollution problems, priority shall be given to those critical agriculture-related water quality problems which can best be eliminated or reduced through such practices. The threat of impact on significant coastal resources will also be considered.

All practical efforts will be undertaken to minimize the introduction of excess nutrients into coastal waters from both point and non-point discharge sources.

(iv) areas where access to or utilization of coastal waters is of statewide significance for recreational or economic purposes.

## 9. Access to the Coast

Maximum access to public water-related recreational resources and facilities shall be provided, to the extent possible consistent with the policies otherwise set forth in this section, and with reasonably anticipated public beaches, boating facilities, fishing areas and waterfront parks. Land use or development which provides for multiple uses or mixed use shall be encouraged where appropriate.

Physical access to the coastal waters and land immediately adjacent thereto shall be increased, to the extent possible consistent with the policies otherwise set forth in this section and with reasonable use of property.

## 10. Recreation

All practical efforts shall be undertaken to promote the role of the private sector in the provision of recreation facilities.

All practical efforts shall be undertaken to develop recreational boating facilities, including marinas, boat launching sites and harbors of refuge, in those areas where demand for such facilities is anticipated to be highest; such facilities shall be located and developed in such manner as will be consistent with achievement of the policies otherwise set forth in this section.

All practical efforts shall be undertaken, in a manner consistent with sound resource management principles, to provide for increased public use of fish and wildlife resources by increasing access to existing resources, supplementing existing stocks and developing new resources.

Land use or development shall provide for multiple use thereof so as to permit water-related recreation activities, where appropriate, in light of reasonably anticipated demand for such facilities, where feasible in view of the purpose of the land use or development and reasonable use of property, and where the provision of such multiple use would be consistent with achievement of the policies otherwise set forth in this section.

(v) areas of unique geologic significance containing commercially important reserves of non-renewable resources of statewide significance.

### 1. Aesthetics.

In order to provide for the preservation and protection of aesthetic areas of statewide significance, the following policies shall apply to such areas: new land use or development shall be undertaken so as to minimize impact on the integrity of the aesthetic resources; new land use or development shall not degrade or block views of such resource from adjacent lands; new land use or development which is incompatible with such aesthetic resources shall be screened.

Aesthetic considerations shall be incorporated into planning and land use or development decisions in the coastal area. Such considerations shall reflect the nature of the aesthetic resources, in particular conditions of a site, the land use or development pattern in the vicinity, and the constraints required by the nature of proposed land use or development.

### 7. Flooding and Erosion

All practical efforts shall be undertaken to minimize the damage to property and to natural resources of great public benefit caused by erosion. Such efforts shall include, as appropriate, the following:

The location of new land use or development so as to insure that it does not alter land areas, including, but not limited to, beaches, dunes, barrier islands, bluffs and other coastal features, if such alteration will unreasonably increase the severity of erosion of other lands.

(vi) areas where competition among commercial, industrial, residential, recreational, and environmental concerns may have an impact on the ability to achieve one or more of the policies set forth in this article.

(Each of the preceding policies is applicable to portions of this GAPC, and the consequent conflicts among policies and their underlying objectives must be mitigated by the management program for the area).