Preconstruction Engineering and Design Phase Reevaluation Report

Olcott Harbor Project Olcott, NY

DTIC
ELECTE
FEB 25 1993
S D E

AD-A261 412

DISTRIBUTION STATEMENT
Approved for public release
Distribution Unlimited

93-03969

Volume 1

Main Report and Supplemental Environmental Impact Statement

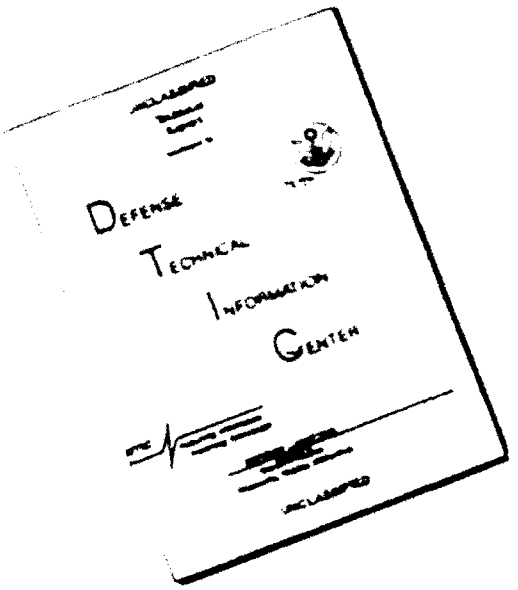
FINAL

US Army Corps of Engineers
Buffalo District

August 1991
Revised: September 1992

93 2 24 093

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Preconstruction Engineering and Design Phase Reevaluation Report: Olcott Harbor Project, Olcott, NY VOLUME I		5. TYPE OF REPORT & PERIOD COVERED Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Buffalo District, Corps of Engineers		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Engineer District, Buffalo 1776 Niagara Street Buffalo, NY 14207		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Engineering and Planning Division Plan Formulation and Technical Management Buff. Dist., 1776 Niagara St., Buff., NY 14207		12. REPORT DATE 1992
		13. NUMBER OF PAGES 336
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS (of this report) Unclassified
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

The Reevaluation Report and Supplement EIS were posted in the Federal Register, Vol. 57, No. 220, Fri., Nov. 13, 1992

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Wave Analysis	Recreational Boating and Fishing
Sediment Analysis	Geology
Boat Safety	Hydrologic Study

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Olcott Harbor is located in Olcott, a village of the town of Newfane, NY, at the mouth of Eighteenmile Creek at Lake Ontario. A report, completed in 1978, recommended modifications to the harbor, including the construction of various lakeshore facilities. Construction was authorized to begin in 1986, but due to legislative, technical, and physical changes the project was reevaluated. This General Reevaluation Report documents technical studies. As a result of the reevaluation a plan called the

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Refined Plan 10A Modified was selected. This plan met all economic, engineering, and enviornmental criteria. However, due to current policy constraints the plan could not be approved and the current recommended plan is no Federal action.

Accesion For	
NTIS CRA&I	X
DTIC TAB	☐
U. announced	☐
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and / or Special
A-1	

DTIC QUALITY INSPECTED 3

OLCOTT HARBOR
GENERAL REEVALUATION REPORT

TABLE OF CONTENTS

I. MAIN REPORT (VOLUME 1)

Paragraph	Description	Page
	PREFACE	ii
	SECTION 1 - INTRODUCTION	
1.1	GENERAL	1-1
1.2	PROJECT AUTHORIZATION	1-1
1.3	PURPOSE OF THE REEVALUATION STUDY	1-2
1.4	SCOPE OF THE REEVALUATION STUDY	1-2
	A. Field Investigations	1-2
	a. Bathymetric Survey	1-2
	b. Geophysical Survey	1-2
	c. Baseline Information Survey	1-3
	d. Literature Search	1-3
	e. Boater and Resident Survey	1-3
	f. Sediment Sampling Program	1-3
	B. Technical Studies	1-7
	a. Regional Boating Demand Analysis	1-7
	b. Regional Fishing Demand Analysis	1-7
	c. Wave Refraction Analysis	1-8
	d. Physical Model Study	1-8
	e. Geotechnical Study	1-8
	f. Hydrologic Study	1-9
	g. Sediment Analysis	1-9
1.5	STUDY/PROJECT AREA (Physical, Biological, and Human)	1-9
	A. Physical Environment	1-10
	a. Physiography/Topography	1-10
	b. Geology	1-10
	c. Soils	1-10
	d. Climate	1-13
	e. Water Levels and Fluctuations	1-13
	f. Littoral Transport	1-13
	g. Water Quality	1-13
	h. Air Quality	1-14
	i. Wetlands	1-14

TABLE OF CONTENTS (Cont'd)

Paragraph	Description	Page
	B. Biological Environment	1-14
	a. Fish	1-14
	b. Wildlife	1-14
	c. Threatened and Endangered Species	1-15
	C. Human Environment	1-15
	a. History	1-15
	b. Land Use	1-16
	c. Population and Housing	1-18
	d. business and Industry	1-18
	e. Employment and Income	1-21
	f. Transportation	1-21
	g. Utilities	1-24
	h. Public Services and Facilities	1-24
	i. Public Health and Safety	1-24
	j. Recreational Resources	1-24
	k. Cultural Resources	1-25
1.6	PRIOR STUDIES/PROJECTS, AND REPORTS	1-26
1.7	STUDY PARTICIPANTS AND COORDINATION	1-32
	SECTION 2 - PLAN FORMULATION	
2.1	GENERAL	2-1
2.2	PROBLEMS, NEEDS, OPPORTUNITIES	2-1
2.3	CHANGED CONDITIONS	2-10
	A. Policy Changes Since 1978	2-10
	a. Methodology for Economic Evaluation	2-10
	b. Cost for Uncompleted Authorized Projects	2-11
	c. Changes in Cost Sharing	2-11
	(1) Recreational and Commercial Navigation Cost	2-12
	(2) Local Flood Control Cost	2-12
	B. Physical Changes in Project Area	2-13
	a. Burt Dam	2-13
	b. Marina Expansion	2-14

TABLE OF CONTENTS (Cont'd)

Paragraph	Description	Page
2.4	DEVELOPMENT AND SCREENING OF ALTERNATIVE PLANS	2-14
	A. Description of the Authorized Project (Plan 10)	2-14
	B. Rationale for Project Reevaluation	2-17
	C. Objectives of Reevaluation	2-17
	D. Evaluation Criteria	2-18
	a. Technical Criteria	2-18
	b. Economic Criteria	2-19
	c. Socio-Economic and Environmental Criteria	2-19
	d. Cost-Sharing Criteria	2-20
	e. Local Sponsor	2-20
	f. Social Well-Being	2-21
	g. Regional Development	2-21
	h. Other Considerations/Requirements	2-21
2.5	PROJECT PLANS/CONCEPTS CONSIDERED	2-21
	A. The Authorized Project (Plan 10)	2-22
	B. Recreational and Commercial Harbor Alternative Concepts (Concepts 1 and 2)	2-23
	C. Other Modifications to the Authorized Project (Plans 10A and 10B)	2-25
	D. No-Action Plan	2-31
	E. Summary (Plans/Concepts Eliminated or Studied Further)	2-33
2.6	PHYSICAL MODEL STUDIES	2-33
	A. Introduction	2-33
	B. The Physical Model and Appurtenances	2-34
	C. Model Investigation of Coastal Design	2-34
	a. Model Tests	2-35
	b. Model Testing Results	2-35
	(1) Existing Conditions	2-35
	(2) Plans 10A, 10B, and Plan 10A Modified	2-41
	(a) Plan 10A	2-41
	(b) Plan 10B	2-41
	(c) Plan 10A Modified	2-44

TABLE OF CONTENTS (Cont'd)

Paragraph	Description	Page
	D. Model Investigation of Environmental Parameters	2-44
	a. General	2-44
	b. Environmental Test Result	2-53
	(1) Spring Conditions	2-53
	(2) Fall Conditions	2-53
	Conclusion	2-53
SECTION 3 - ASSESSMENT, EVALUATION, AND COMPARISON OF PLANS		
3.1	GENERAL	3-1
3.2	ITERATION 1	3-1
	A. Summary Assessment of Optimum Plans 10A and 10B	3-1
	B. Elimination of Plan 10	3-10
3.3	ITERATION 2	3-10
	A. Identification of Candidate Plan(s)	3-10
	B. Local Sponsor's Views	3-11
3.4	EVALUATION AND COMPARISON OF PLANS 10A MODIFIED AND 10B	3-13
	A. Cost Evaluation	3-13
	a. First Cost	3-14
	(1) Federal Cost-Shared Project	3-14
	(2) Non-Federal Associated Project	3-14
	b. Investment Costs	3-17
	c. Average Annual Costs	3-18
	B. Benefit Evaluation	3-19
	a. General	3-19
	(1) Willingness to Pay	3-20
	(2) New Passenger Benefits	3-20
	(3) Current Slip Users	3-21
	(4) Transient Craft	3-21
	(5) Charter Service Benefits	3-21

TABLE OF CONTENTS (Cont'd)

Paragraph	Description	Page
	(6) Pier Fishing Benefits	3-22
	(7) Sightseeing Benefits	3-23
	(8) Existing Launch Ramp	3-23
	(9) Harbor of Refuge Benefits	3-24
	(10) Flood Inundation Benefits	3-24
	(11) Associated Benefits	3-24
	b. Net Benefit and Benefit-to-Cost Ratios	3-26
	c. Impact of Decreased Number of Slips	3-27
	d. Rationale for Designation of NED Plan	3-28
	e. Rationale for Elimination of Plan 10B	3-28
3.5	PLAN SELECTED FOR FURTHER STUDY	3-29
3.6	THE DETAILED DESIGN	3-31
	SECTION 4 - EVALUATION OF CANDIDATE PLANS	
4.1	GENERAL	4-1
4.2	PLAN DESCRIPTION (REFINED PLAN 10A MODIFIED)	4-1
4.3	BENEFIT-COST EVALUATION (REFINED PLAN 10A MODIFIED)	4-9
	A. Total Average Annual Costs	4-9
	B. Total Average Annual Benefits	4-9
4.4	COST ALLOCATION	4-9
4.5	DERIVATION OF BENEFIT PERCENTAGES (REFINED PLAN 10A MODIFIED)	4-16
4.6	COST ALLOCATION BY PURPOSE (REFINED PLAN 10A MODIFIED)	4-17
4.7	COST APPORTIONMENT (REFINED PLAN 10A MODIFIED)	4-18
4.8	COMPARATIVE EVALUATION OF CANDIDATE PLANS	4-18
4.9	PUBLIC VIEWS	4-18
4.10	PLAN ACCOMPLISHMENTS	4-25
	SECTION 5 - PLAN IMPLEMENTATION	
5.1	IMPLEMENTATION RESPONSIBILITIES	5-1
	A. Ability to Pay	5-1
	B. Cost Allocation and Apportionment	5-2
	C. Federal Responsibilities	5-2
	D. Non-Federal Responsibilities	5-3
5.2	PLAN IMPLEMENTATION	5-3
	SECTION 6 - CONCLUSION(S)	
	SECTION 7 - RECOMMENDATIONS	
	SECTION 8 - SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT	

TABLE OF CONTENTS (Cont'd)

TABLES

Number	Title	Page
1.1	Area Population	1-18
1.2	Marina Facilities	1-23
2.1	Construction and Maintenance Cost Sharing Requirements	2-13
2.2	Maximum Wave Height (ft) for Existing Conditions	2-50
2.3	Maximum Wave Height (ft) for Model Plan 1 (10A)	2-51
2.4	Maximum Wave Height (ft) for Model Plan 10A	2-51
2.5	Maximum Wave Height (ft) for Model Plan 19 (10B)	2-52
2.6	Temperature of Water in Lake and Water Introduced into Creek for Various Tests. (Spring Conditions)	2-56
2.7	Temperature of Water in Lake and Water Introduced into Creek for Various Tests. (Fall Conditions)	2-56
3.1	Total Project Cost, Plan 10A	3-4
3.2	Total Project Cost, Optimum Plan 10A	3-5
3.3	Total Project Cost, Plan 10B	3-6
3.4	Investment Cost and Average Annual Cost	3-7
3.5	Benefit Summary	3-8
3.6	Assessment, Evaluation, and Comparison of Optimum Plans	3-9
3.7	Total Project Cost, Plan 10A Modified	3-15
3.8	Total Project Cost, Plan 10B	3-16
3.9	Non-Federal Associated Project Cost (Plans 10A and 10B)	3-17
3.10	Total Investment Costs for Federal and Non-Federal Projects	3-18
3.11	Average Annual Costs (Plans 10A Modified and 10B)	3-19
3.12	Benefit Summary (October 1989 Prices)	3-25
3.13	Benefit to Cost Summary (October 1989 Prices)	3-26
3.14	Decrease in Benefit and Cost (Plan 10B)	3-27
3.15	Adjusted Benefit - Cost Summary	3-28
3.16	Comparison of Features, Costs, and Benefits of Plan 10 (Authorized) and Plan 10A Modified (Current NED and Selected Plan)	3-30

TABLE OF CONTENTS (Cont'd)

TABLES

Number	Title	Page
4.1	Cost-Shared Federal Project (Total Construction First Cost)	4-10
4.2	Non-Federal Associated Project (Total Construction First Cost)	4-11
4.3	Total Investment Costs	4-12
4.4	Average Annual Costs	4-13
4.5	Average Annual Benefits	4-14
4.6	Benefit-Cost Ratio	4-15
4.7	Benefit Allocation by Purpose	4-16
4.8	Percents of Benefit by Purpose	4-17
4.9	Allocated Costs for Plan 10A Modified	4-17
4.10	Apportionment of Construction First Cost	4-19
4.11	Apportionment of Annual Maintenance Costs	4-19
4.12	Comparative Evaluation of Candidate Plans	4-20

PLATES

1.1	Bathymetric Survey - Eighteenmile Creek Channel (1989)	1-4
1.1a	Bathymetric Survey - Lake Ontario at Olcott (1988)	1-5 - 1-5a
1.2	Western New York Region	1-11
1.3	Market Demand Area	1-12
1.4	Land Use Zoning	1-20
1.5	Location of Existing Marinas	1-22
1.6	Olcott Harbor Master Plan	1-29
2.1	Authorized Plan 10	2-16
2.2	Plan 10A (Model Plan 16)	2-26
2.3	Typical Cross Section West Breakwater	2-28
2.4	Typical Cross Section of East Breakwater	2-29
2.5	Typical Cross Section of Shore-Connected East Breakwater	2-30
2.6	Plan 10B (Model Plan 19)	2-32
2.7	Water Circulation System	2-37
2.8	Existing Conditions Layout Showing Gage Locations	2-38
2.9	Basic Plan 10A Configuration (WES Plan 1)	2-39
2.10	Basic Plan 10B Configuration (WES Plan 17)	2-40
2.11	Location of Temperature Stations in the Prototype	2-49
3.1	Optimum Plan 10A (Model Plan 16)	3-2
3.2	Optimum Plan 10B (Model Plan 19	3-3
3.3	Plan 10A Modified	3-12

TABLE OF CONTENTS (Cont'd)

PLATES

4.1	Plan 10A Modified	4-2
4.2	Breakwater Cross-Sections and Profiles	4-3
4.3	Profile of Pedestrian Bridge	4-5
4.4	Real Estate	4-8

PHOTOS

Number	Title	Page
i	Aerial View of Olcott Harbor Photo Taken 4/88	i
1.1	The Olcott Beach Resort Hotel - North View (1900)	1-17
1.2	The Olcott Beach Resort Hotel - South View (1900)	1-17
1.3	Olcott Harbor - Summer Activities - Federal East Pier (1900)	1-19
1.4	Olcott Harbor - Federal East Pier (1900)	1-19
2.1	Waves Overtopping Federal Pier - Oct. 88	2-2
2.2	Choppiness of Waves - 1986	2-2
2.3	Submerged island marked by buoys	2-3
2.4	Protective features at Olcott, 8/87	2-5
2.5	Damage to cottages on west side of harbor, 17 March 1973	2-7
2.6	Wave action inside harbor, south of entrance, 17 March 1973	2-8
2.7	Wave action in channel and along east shore of project, Spring 1973	2-9
2.8	Improved marina facilities in Eighteenmile Creek, 8/88	2-15
2.9	Artist rendering of commercial and recreational harbor	2-24
2.10	General View of Physical Model	2-36
2.11	Typical wave patterns, current patterns (existing conditions)	2-42
2.12	Sediment tracer patterns	2-43
2.13	Typical wave patterns for (Model Plan 1)	2-45
2.14	Typical wave patterns for (Model Plan 16) (343^{o})	2-46
2.15-2.16	Typical wave patterns, current patterns for Plan 19 (343^{o})	2-47
2.17	Optimum Plan 16 (10A)	2-48
2.18	Optimum Plan 19 (10B)	2-48
2.19	Current patterns and movement of creek plume for spring conditions (existing conditions)	2-54

TABLE OF CONTENTS (Cont'd)

PHOTOS

Number	Title	Page
2.20	Current patterns and movement of creek plume for spring conditions (Plan 19)	2-54
2.21	Current patterns and movements of creek plume for fall conditions (existing conditions)	2-55
2.22	Current patterns and movements of creek plume for fall conditions (Plan 19)	2-56

FIGURES

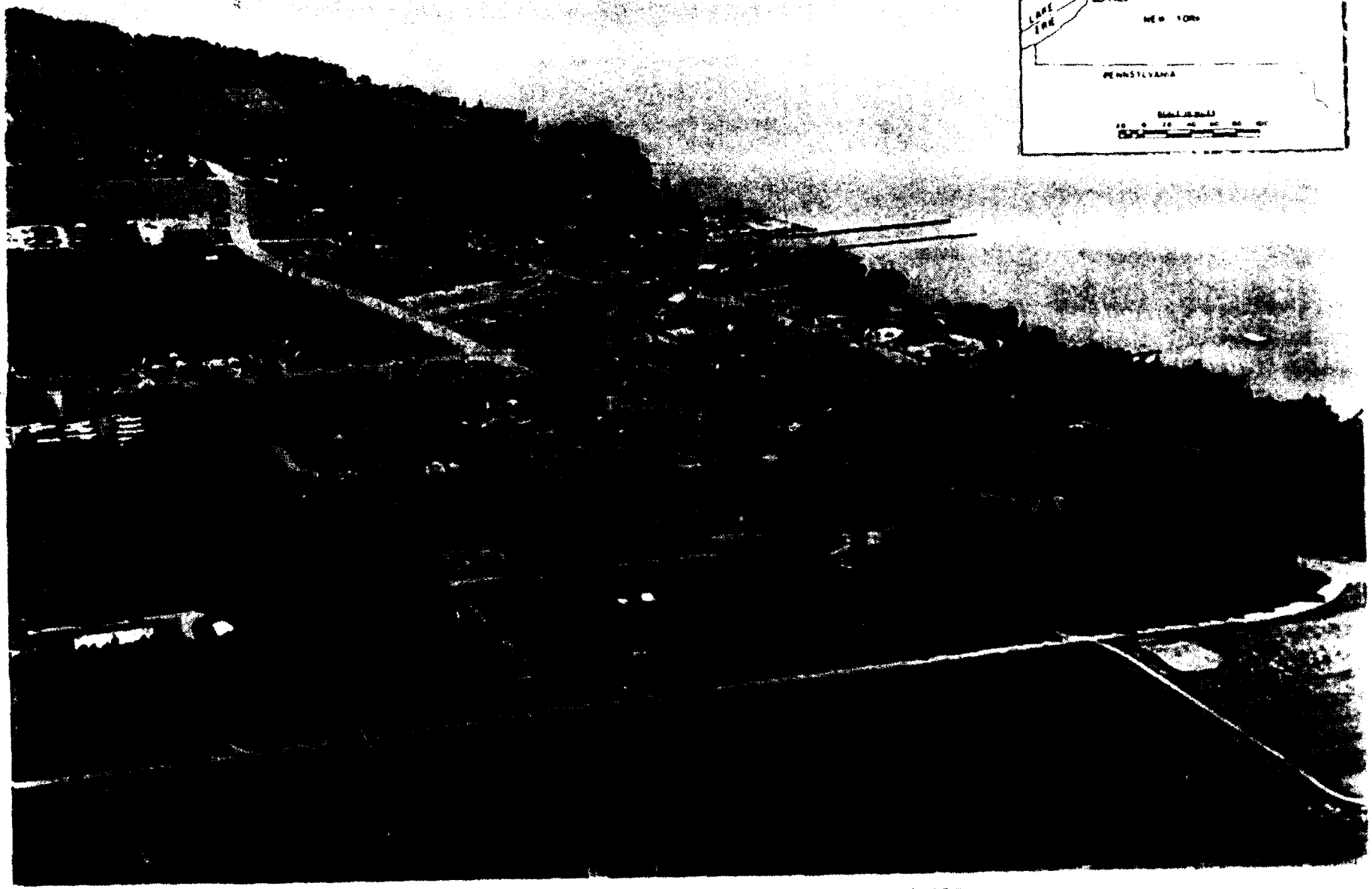
Number	Title	Page
1.1	Material Survey. Location of Sources	

SUPPLEMENT EIS

II. APPENDICES (VOLUME 2)

Appendix A - Design Analysis
- Sub-Appendix A Geotechnical
- Sub-Appendix B Coastal
- Sub-Appendix C Structural/Design

Appendix B Cost Engineering
Appendix C Economics
Appendix D Hydraulics and Hydrology
Appendix E Correspondence
Appendix F Real Estate



Aerial View of Olcott Harbor Photo taken 4/1988

PREFACE

Olcott Harbor is located in Olcott, a hamlet of the town of Newfane, New York. The harbor lies on the south shore of Lake Ontario at the mouth of Eighteenmile Creek approximately 35 miles northeast of the city of Buffalo, New York (See Photo 1). The existing project was completed in 1918 and consists of two parallel piers and an entrance channel from deep water in the lake to the shoreward end of the piers. This pier-protected entrance channel is only safe for use during calm weather or light wind conditions. These parallel piers are 200 feet apart and have vertical steel sheet pile surfaces. In 1967, the U.S. Congress authorized the Corps of Engineers to review the existing project with a view to determining if it is advisable to modify the project. As a result, a feasibility study was undertaken in 1969. The final feasibility study report, completed in 1978, recommended modifications to the harbor to provide for greater protection against wave action on the harbor entrance channel. The report also recommended the construction of a small-boat navigation project to satisfy the need for more boat berths and greater public access to the lakefront. The recommended modification provided for the construction of offshore breakwaters, pier modification, channel deepening and extension, recreational pier fishing facilities, and other associated facilities. This recommended modification to the existing project was authorized for construction in 1986 by Section 601(a) of the Water Resources Development Act of 1986.

However, due to the passage of time, changed physical conditions, and changes in the laws and regulations that govern the implementation of Corps' projects, the authorized project was reevaluated. The authorized modification of the existing Federal project has been the focal point in the local waterfront revitalization program and has strong Congressional and local agency support for its implementation. However, expressed or written public views of local residents have been mixed. Some residents foresee a "revitalization of recreation and tourism in the local community" while others fear "disruption of their lives."

This General Reevaluation Report presents the technical studies and events that have transpired throughout the reevaluation study process, the results of the reevaluation study, and recommendations on future project implementation.

Section 1

INTRODUCTION

Section 1
Introduction

1.1 GENERAL

This is a General Reevaluation Report for the authorized project modification at Olcott Harbor, New York. This section introduces the reader to the Olcott Harbor Reevaluation study report. It also presents information on the project authority; the reevaluation study purpose and scope; the study area; related projects, studies, and reports; the study process; and study participants and coordination.

1.2 PROJECT AUTHORIZATION

Modification of the existing project at Olcott Harbor, New York, was authorized by Section 601(a) of the Water Resources Development Act of 1986, Public Law 99-662, dated November 17, 1986. The applicable portion of the Act states:

"SECTION 601. AUTHORIZATION OF PROJECTS.

(a) AUTHORIZATION OF CONSTRUCTION - The following works of improvement for water resources development and conservation and for other purposes are adopted and authorized to be prosecuted by the Secretary substantially in accordance with the plans and subject to the conditions recommended in the respective reports designated in this subsection, except as otherwise provided in this subsection:

OLCOTT HARBOR, NEW YORK

The project for navigation, Olcott Harbor, New York: Report of the Chief of Engineers, dated June 11, 1980, at a total cost of $12,600,000, with an estimated first Federal cost of $6,300,000 and an estimated first non-Federal cost of $6,300,000. The Secretary in consultation with appropriate Federal, State, and local agencies, shall conduct additional studies of the effect of the project on fish and wildlife resources. The Secretary is authorized to undertake any additional measures which he determines necessary and appropriate to minimize any adverse effects of the project on fish and wildlife production and habitat."

1.3 PURPOSE OF THE REEVALUATION STUDY

In 1978, the Office, Chief of Engineers prepared and later submitted to Congress the Final Feasibility Report on the modifications to the existing Federal harbor project at Olcott, New York. The report recommended the construction of a small-boat harbor as part of these modifications to the existing Federal project. In 1986, Congress authorized the modification project. Since submission of the 1978 Feasibility Report, however, several legislative, technical, and physical changes have occurred. These changes, which will be discussed in Section 2 of this report, have direct impact on the feasibility of construction of the authorized project. Therefore, the purpose of the reevaluation study is to evaluate the viability of the 1978 plan in light of these changes; develop, if necessary, modified plans that can satisfactorily meet the criteria for environmental, economic, social, engineering, financial, and institutional feasibility; and to determine the need for future Federal improvement of the existing harbor at Olcott, New York.

1.4 SCOPE OF THE REEVALUATION STUDY

A number of workshops were conducted to determine the need for, and the scope of, the reevaluation study. At the initial workshop meeting on May 24, 1988, the New York State Department of Environmental Conservation (NYSDEC), Fish and Wildlife Division stated that they will not support any project that would adversely impact the fishery at Olcott. Specific concerns were possible adverse impact of any project on flow velocity, water temperature and turbidity, water circulation pattern, and wetland areas upstream of the Route 18 bridge. Another concern expressed at the meeting was the availability of adequate lands adjacent to the harbor to develop parking spaces. These concerns were not previously investigated to the satisfaction of the Corps of Engineers and other interested agencies such as the U.S. Fish and Wildlife Service, the NYSDEC's Fish and Wildlife Division, and the U.S. Environmental Protection Agency. As a result of the concerns expressed in these workshops, the scope of the reevaluation study encompassed the following field investigations and technical studies. (See appendix E for minutes of the workshops.)

A. <u>Field Investigations</u>.

Field investigations conducted for this reevaluation report included:

a. a bathymetric survey to establish offshore conditions;

b. a geotechnical probing program to establish the location of top of rock in the considered east and west marina basins;

c. a combined biological, hydraulic, coastal, and hydrologic data collection program to establish baseline data for incorporation into the physical model studies;

d. a literature search to identify existing baseline information and determine the scope of further site-specific data collection programs;

e. boater and resident surveys to gather data for investigating slip demand and evaluating economic benefits; and,

f. a dredge material sampling program with laboratory analysis to determine the quality of the materials to be dredged and their ultimate means of disposal.

A summary discussion of each one of these field investigations is provided below:

a. Bathymetric Survey - A bathymetric survey was undertaken by the Buffalo District personnel in the summer of 1987, and supplemented by additional survey work completed in the fall of 1988 and 1990. The purpose of the 1988 and 1990 surveys was to expand, revise, and update the offshore bottom contours map of the study area. This information was required for the wave refraction analysis needed to revise the design of the breakwaters; and for input to the physical model studies. The bathymetric survey information is shown on Plates 1.1 and 1.1a.

b. Geophysical Survey - The District Geotechnical Section in April 1989 probed the bottom of the lake in the nearshore area east and west of the harbor entrance channel to locate the top of rock in relation to the lake water surface. The result of the probes indicated that installation of docks in the considered east and/or west basins can be accomplished with little or no rock excavation. However, no final conclusion could be drawn using this limited investigation. In July 1990 therefore, a full subsurface exploration program was executed to determine the foundation conditions. The plan of the subsurface explorations is shown on Plate A1 of the Geotechnical Design sub-appendix A.

Also, a preliminary material survey was conducted in December 1990 to determine the potential sources of stones for the construction of the breakwaters. This was followed by a detailed material survey performed in April 1991. As a result of this detailed survey, it was found that all armor, underlayer, and bedding stones can be produced from ten identified suitable sources (See Figure 1.1). These sources passed all inspection criteria and did not show any significant breakdown during the wet-dry and freeze-thaw tests. For detailed information on the subsurface exploration and material (Quarry stone) survey, see the Geotechnical Design sub-appendix A.

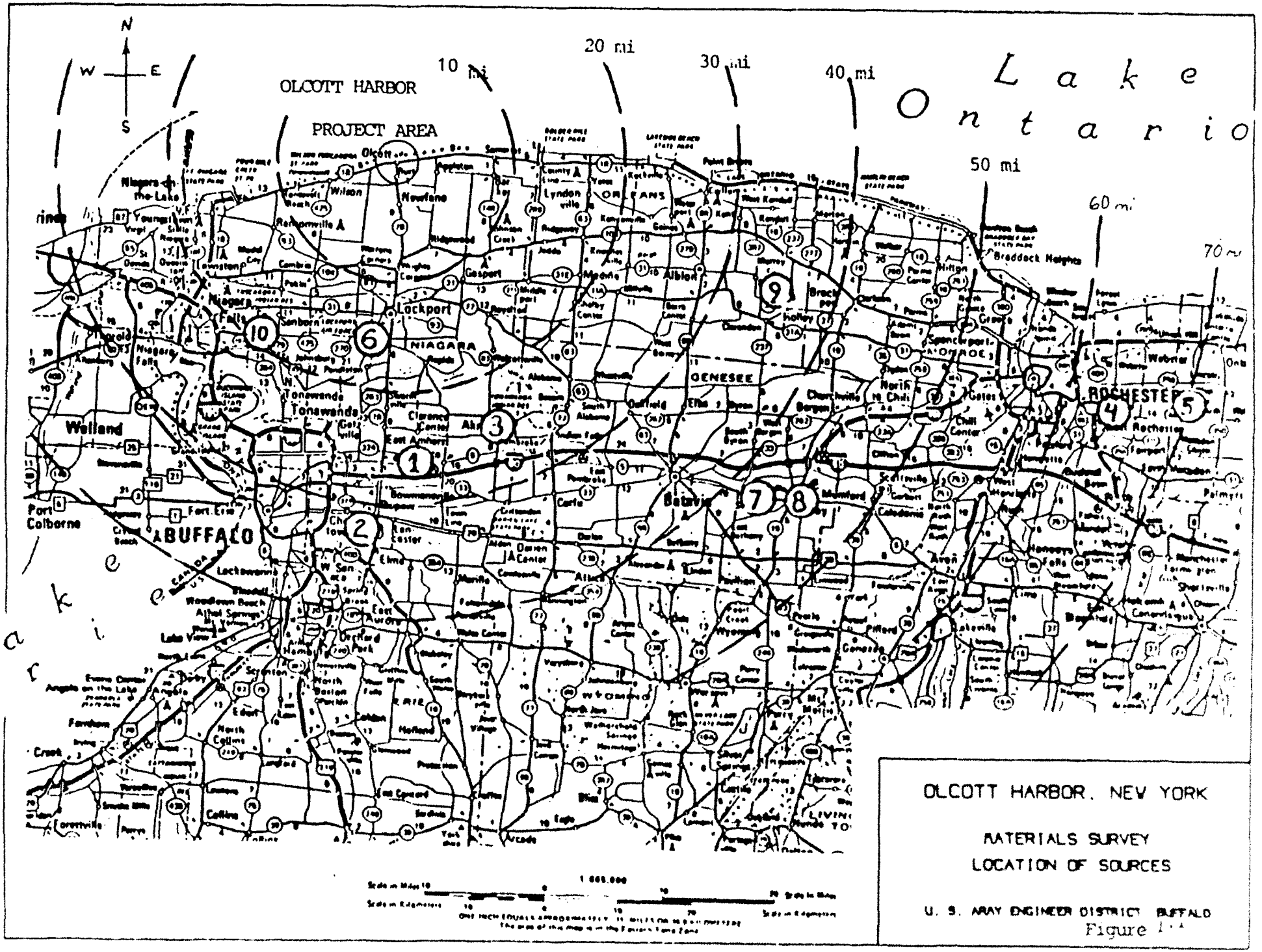
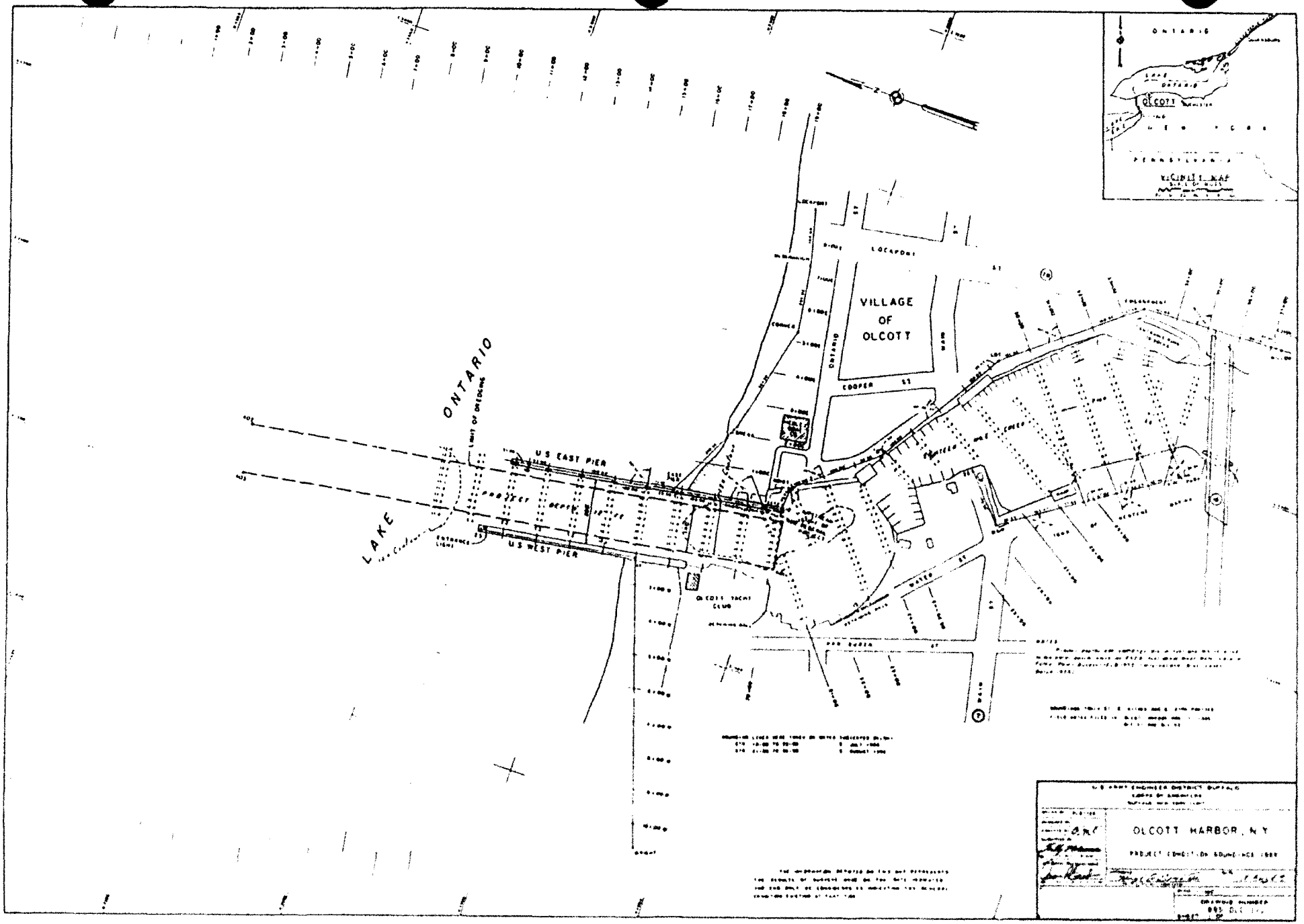
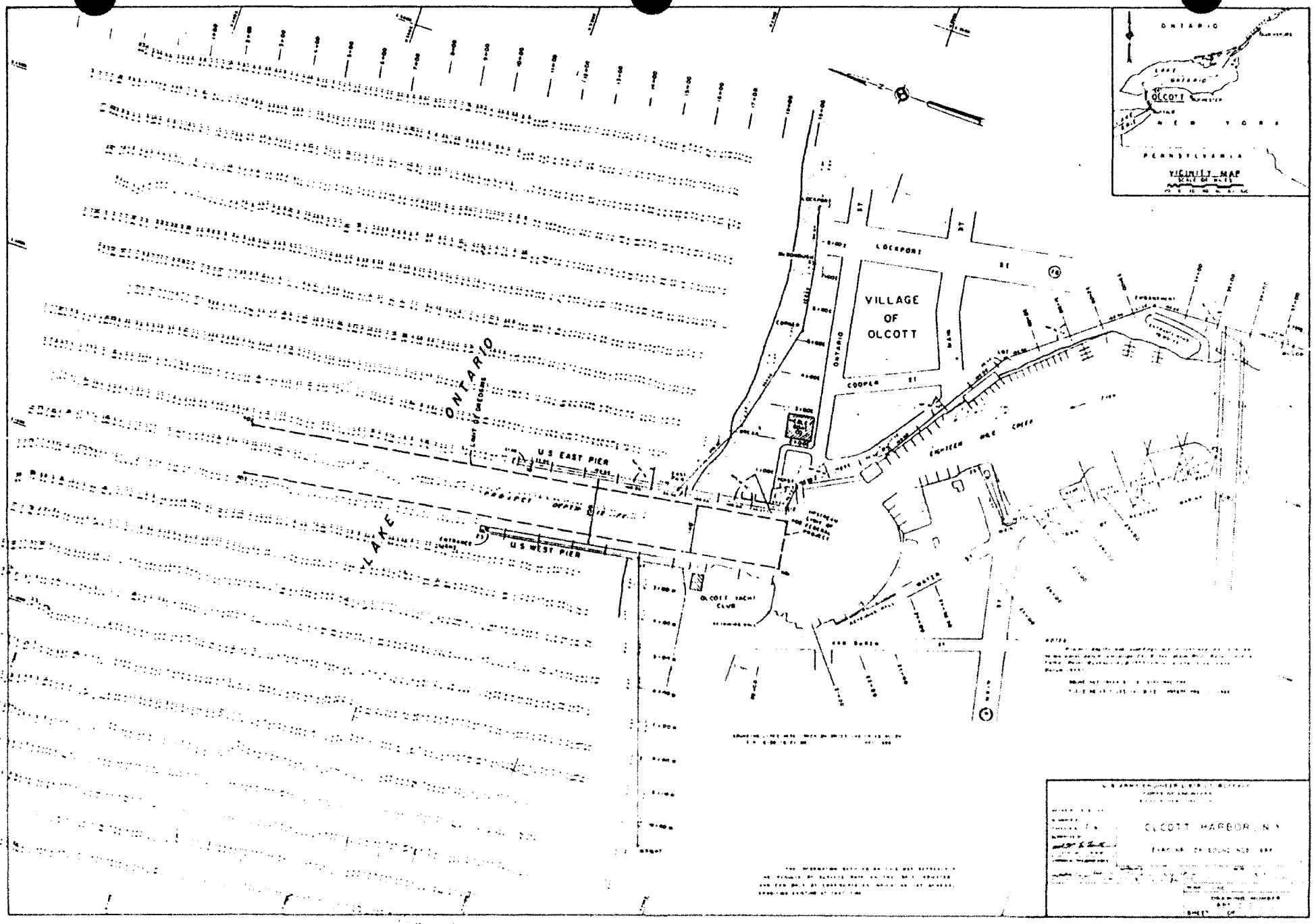

N
W
E
S
OLCOTT HARBOR
PROJECT AREA
10 mi
20 mi
30 mi
40 mi
50 mi
60 mi
70 mi
Lake Ontario
Lake Erie
Niagara Falls
Lockport
NIAGARA
GENESEE
ROCHESTER
Welland
Port Colborne
BUFFALO
Batavia
1
2
3
4
5
6
7
8
9
10
OLCOTT HARBOR, NEW YORK
MATERIALS SURVEY
LOCATION OF SOURCES
U. S. ARMY ENGINEER DISTRICT BUFFALO

Figure 1.1


ONTARIO
OLCOTT
VICINITY MAP
LOCKPORT
VILLAGE OF OLCOTT
MAIN
ONTARIO
COOPER ST
LAKE ONTARIO
LIMIT OF DREDGING
U.S. EAST PIER
U.S. WEST PIER
OLCOTT YACHT CLUB
WATER ST
OLCOTT HARBOR, N.Y.


ONTARIO
OLCOTT
NEW YORK
PENNSYLVANIA
VICINITY MAP
LOCKPORT ST
VILLAGE OF OLCOTT
ONTARIO
COOPER ST
LAKE ONTARIO
U.S. EAST PIER
U.S. WEST PIER
LIGHT
OLCOTT YACHT CLUB
OLCOTT HARBOR, N.Y.

c. Baseline Information Surveys - In 1989, the U.S. Fish and Wildlife Service, assisted by the Corps of Engineers, conducted field surveys and studies to establish baseline conditions for the physical model testing of the considered plans and to help assess possible impacts of these plans on the general vicinity of Olcott Harbor. Field data collected included water temperature, turbidity, velocity profile measurements at selected stations in the lake, harbor, and in Eighteenmile Creek; and measurements of lake levels and wind speeds as well. Also included in the survey were channel cross sections at some selected stations in the creek, photos taken on the day of each survey to record the position of the creek plume in the lake, and the monitoring of the presence of warmwater fish and salmonids into Eighteenmile Creek. Data were collected every two weeks from 24 April through 14 November 1989. Detailed information is provided in the Technical Report CERC-89 on the Hydraulic Model Investigation by the Corps' Waterways Experimentation Station, November 1989.

d. Literature Search - Prior to the above-mentioned field studies, the U.S. Fish and Wildlife Service conducted a literature search to identify existing available baseline information, and to plan for a future site-specific data collection program, as necessary. Several other states in the Great Lakes basin were contacted, where the life history of fish, particularly Salmonids, has been studied. The results of the literature search were provided to the Corps of Engineers in a Planning Aid Letter dated 15 March 1989, and is documented on file at the Buffalo District's office.

e. Boater and Resident Survey - From late 1988 to mid 1989, the Buffalo District conducted boater and resident surveys that covered a five-County market demand area. The purpose of the survey was to determine the value of the proposed harbor expansion and measure the benefits that will result from the harbor expansion using the required current methodology based on willingness to pay. A total of 6,000 survey questionnaires were mailed to boaters and residents of Niagara, Orleans, Monroe, Genesee, and Erie Counties. Details of the survey results are presented in appendix C of this report.

f. Sediment Sampling Program - A sediment sampling program was conducted on July 10, 1989 by Aqua Tech Environmental Consultants, Inc. under contract to the Buffalo District. Samples were taken from the lake to rock bottom elevation, and from the creek to elevation -9 feet below low water datum. The purposes of this sediment sampling were to evaluate the quality of the dredge material and to determine the means of disposal of polluted materials, if required. Proper disposal of the polluted materials could be costly and could significantly increase the cost of construction of the project.

B. **Technical Studies.**

Several technical studies were also conducted for the Preconstruction Engineering and Design phase. These studies are discussed below and include:

a. a regional boating demand analysis to establish recreational boating needs in the area;

b. a regional fishing demand analysis to establish recreational fishing needs in the area;

c. a wave refraction analysis to establish deep-water wave conditions utilized in the design and model testings of the breakwaters;

d. three physical model studies to evaluate the geometry, effectiveness, and performance of the breakwaters, and also to evaluate the effects of the considered plans on selected environmental parameters;

e. a geophysical survey to evaluate foundation conditions and physical characteristics of the materials within the proposed marina;

f. a hydrologic study to determine the 100-year peak discharge from Burt Dam through Eighteenmile Creek to the lake; and,

g. an analysis of sample laboratory results to determine the acceptable means of disposal of any potential polluted materials.

A summary discussion of each one of these technical studies is provided below:

a. Regional Boating Demand Analysis - Various socio-economic variables such as income and education levels, household size, age and sex groups, leisure time, existence value, and willingness-to-pay were gathered from the surveys. These factors were analyzed and utilized to determine existing and future demand for permanent boat moorings and trailered boat launching facilities at Olcott. Willingness-to-pay was used to estimate benefits that would accrue due to construction of the proposed marina, and to determine the size of the required mooring area that will service boats from any of the five counties, open to all on equal terms. The results of this regional boating demand analysis are presented in appendix C of this report.

b. Regional Fishing Demand Analysis - In 1989, interviews with State fish stocking authorities, local fishermen, and review of fishing derby participation data were utilized in the regional

fishing demand analysis. The demand for fishing activity days at the project site was used to develop pier fishing benefits. A monetary value for each activity day was then developed for the without-project conditions and with-project conditions. This value determined for each activity day was then used to estimate the benefits that would result from providing breakwater fishing facilities as part of the small-boat marina project at Olcott. The pier fishing benefit analysis considered the existing and projected characteristics and physical traits of the harbor, such as: availability of opportunity, carrying capacity, accessibility, environmental quality, and recreation experience. Appendix C provides more information on the results of the regional fishing demand analysis.

c. Wave Refraction Analysis - This analysis was done to study the shoreward propagation of the design deep-water waves at Olcott Harbor. The information developed was utilized in the redesign of the breakwaters, and in defining the deep-water wave at the boundary of the physical model. The results of the analysis are presented in sub-appendix A of the General Design appendix of this report.

d. Physical Model Study - Three physical models of the considered plans of improvement for Olcott Harbor were necessary to assure the performance of the breakwaters with respect to meeting established engineering and environmental criteria, and to determine the most economical breakwater configuration which would help achieve the required levels of performance. The model construction and testing were performed at the Corps Waterways Experiment Station (WES) in Vicksburg, Mississippi. The model helped evaluate the degree to which wave height criteria in the harbor would be met; that is, provision of wave protection for small crafts in the harbor. It also provided qualitative information on the effects of the breakwater on the littoral processes. The physical model tests also included detailed model velocity and temperature measurements for base conditions and improved conditions to determine the effects of the breakwater on flow and temperature of the water in Eighteenmile Creek and the lake. A flume test was also performed by WES primarily to investigate the wave transmission response of the proposed breakwaters. The model reports were published by WES as Technical Reports TR CERC-89 dated August 1989, TR CERC-89 dated November 1989, and TR CERC-90 dated October 1990.

e. Geotechnical Study - As a result of the geophysical survey and probing conducted in April 1989, limited geophysical studies were performed to evaluate foundation conditions and physical characteristics of the materials within the proposed marina. The results of these limited studies and information from past studies/projects were evaluated to assess the impact of the subsurface conditions on the construction of the breakwaters and other pertinent structures. In July 1990, a more detailed

and thorough exploration program was conducted by the Buffalo District to fully assess the foundation conditions and evaluate geotechnical parameters for the stability of the breakwaters. More information is provided in sub-appendix A of the General Design Appendix of this report.

f. Hydrologic Study - A hydrologic analysis of Eighteenmile Creek was conducted in December 1988. The analysis provided information on the discharge-frequency relationship, and average annual and seasonal discharges for Eighteenmile Creek at Olcott. Also, a preliminary evaluation of the average annual flood damages due to high lake levels and wave action under existing and improved conditions was performed and completed in August 1989. These expected annual damages under existing conditions were determined separately for the lakefront and harbor areas using lakefront and harbor stage damage curves obtained from the Corps 1976 "Operation Foresight" report. These annual damages were later revised in May 1991 as a result of actual field damage surveys performed by the Hydraulics and Hydrologic Engineering Branch. The revised damage curves were then used in conjunction with the revised stage-frequency curves for Lake Ontario at Olcott to develop the damage-frequency curves. See appendix D for details.

g. Sediment Analysis - A sediment analysis for the harbor area was performed by a certified chemical laboratory using sediment samples collected from 10 areas located throughout the proposed project site and up Eighteenmile Creek to the Route 18 bridge. Details of the sampling procedures, and results of particle size analysis, bulk chemical analyses, elutriate testing, and bioassays were provided to the Buffalo District Water Quality Section.

Based on the samples, the sediments in the proposed lake boat basin are considered unpolluted by the U.S. EPA's "Criteria for Determining acceptability of Dredged Spoil Disposal to the Nation's Waters." However, samples taken from Eighteenmile Creek between the river's mouth and the Route 18 bridge indicate that a portion of the dredge material is moderately to heavily polluted with metals.

1.5 STUDY/PROJECT AREA (Physical, Biological, and Human)

Olcott Harbor is located on the south shore of Lake Ontario at the mouth of Eighteenmile Creek, approximately 35 miles, northeast of Buffalo, and 57 miles west of Rochester, New York, and 18 miles east of Youngstown, New York. See Plate 1.2. The harbor is situated in the community of Olcott, an unincorporated hamlet in the town of Newfane, Niagara County, New York.

The study area, or recreation market area, was defined by the location of actual and potential user populations. The recreation market area varies by the recreational activity considered. The regional recreational market area could vary from a six-County area to a six-State area. For this study, users of the new facility were defined to originate from the following five county service areas: Erie, Genesee, Monroe, Niagara, and Orleans (See Plate 1.3).

The project area is limited to the hamlet of Olcott. The physical boundaries are the lower reaches of Eighteenmile Creek in the town of Newfane, New York, and the adjacent shoreline along Lake Ontario.

A. **Physical Environment.**

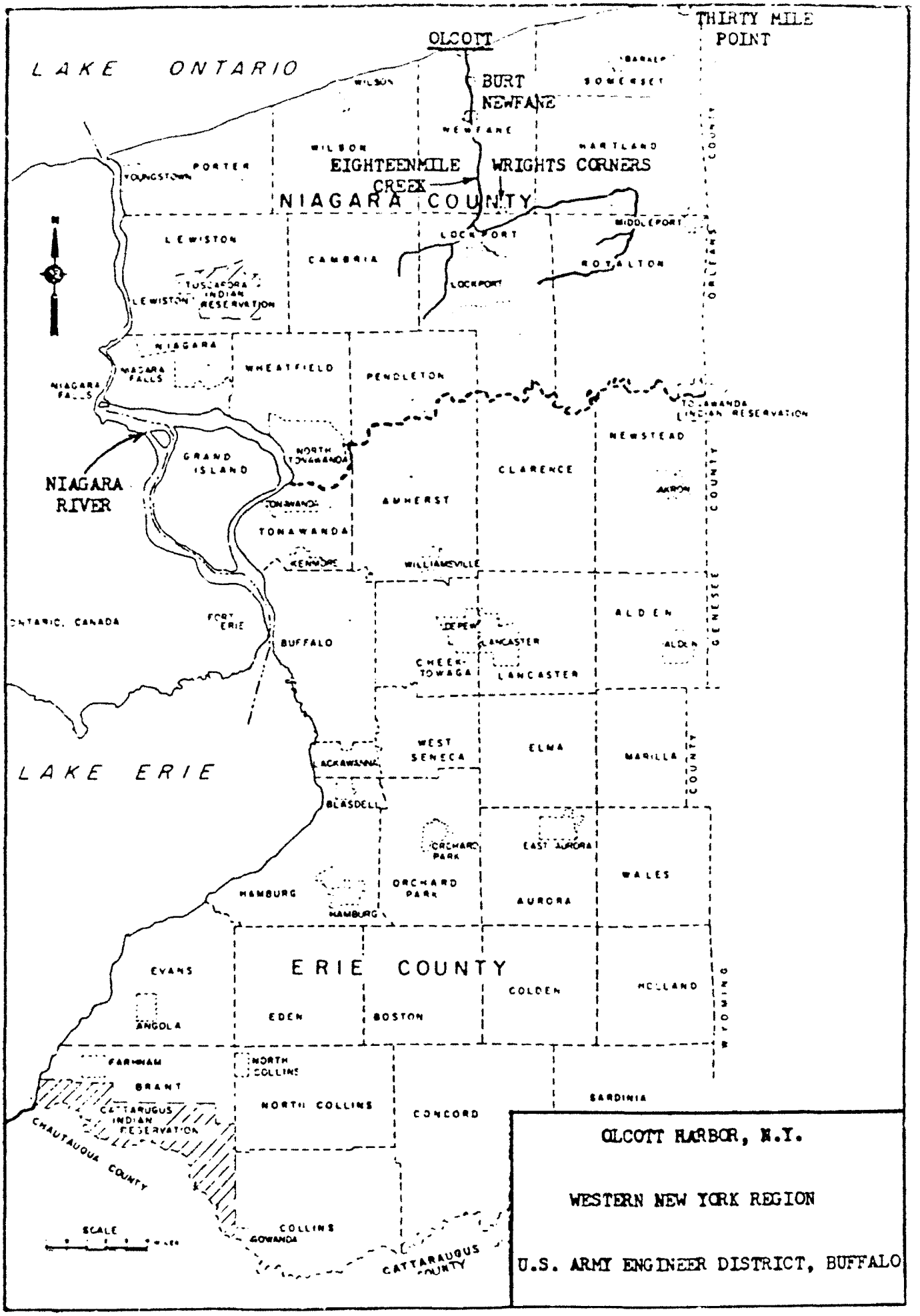
a. Physiography/Topography - The town of Newfane is located on the Ontario Lake Plain of the eastern section of the Coastal Lowland province. The Niagara, Onondaga, and Portage escarpments are located south of the Ontario Lake Plain. The basic natural characteristics of the area, such as level topography, drumlin fields, and moraines, were formed during the glacial ages which ended about 25,000 years ago.

The town of Newfane is generally level with drainage to the north. The northerly third is characterized by a narrow beach at the base of a bluff fronting the lake. From the top of the bluff, the land levels to a slope of approximately 20 feet per mile. The southern portion of Newfane is characterized as flat to gently rolling with a slope to the north of less than 20 feet per mile. Eighteenmile Creek is the major water course in the area, flowing north approximately at the midpoint of the town's width.

b. Geology - The project area is typified by the Queenston Formation, a marine sedimentary layer laid down during the upper Ordovician geological period. The Queenston Formation is characterized by red shale, locally green shale, and red silt stone.

The town of Newfane lies in Zone 2 of the 1969 Seismic Risk Map developed by the National Oceanic and Atmospheric Administration's Environmental Research Laboratory. Zone 2 is a zone of moderate damage with a seismic coefficient of 0.1. See Figure A4 of the Geotechnical Design (sub-appendix A).

c. Soils - All the major soil associations along Eighteenmile Creek, north from the village of Newfane to the Lake Ontario shore, are the types formed by glacial action. Continental glaciation from the northeast during the Wisconsin Stage covered the area.



OLCOTT HARBOR, N.Y.

WESTERN NEW YORK REGION

U.S. ARMY ENGINEER DISTRICT, BUFFALO

OLCOTT HARBOR SLIP
MARKET DEMAND AREA

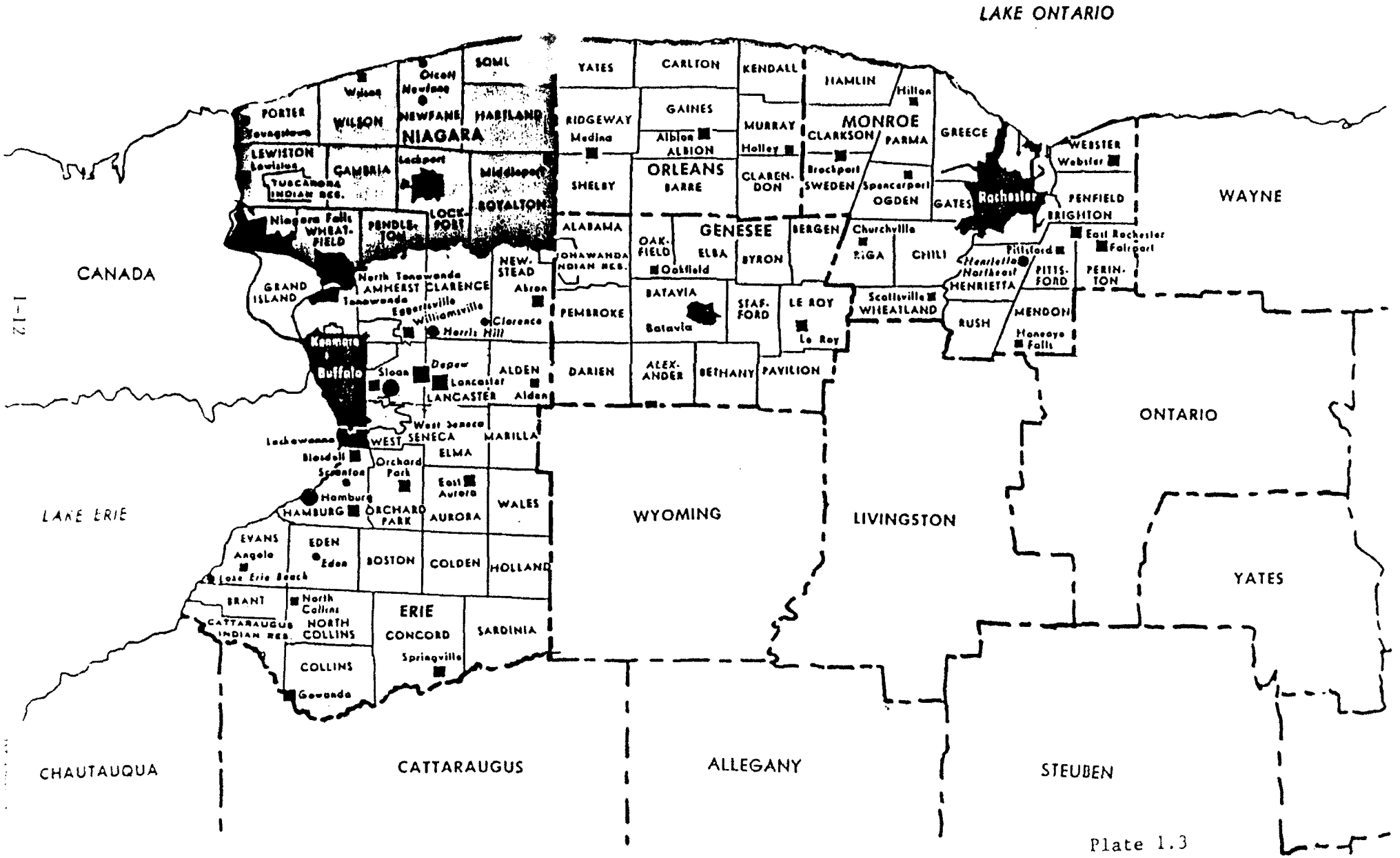


Plate 1.3

d. Climate - Olcott Harbor and vicinity are subject to four distinct seasons and a variety of precipitation types and sources. Climatic effects of Lake conditions favor long dry periods in the autumn season, but cause heavy local snowstorms in the winter months. Cloudy, cool conditions prevail in the spring season wile summer temperature extremes are moderated by Lake breezes.

The annual snowfall averages about 81.95 inches and average precipitation is 37.91 inches per year. The mean annual temperature is 47.9°F and the growing season averages about 133 days per year. The total number of frost free days averages 180 per year.

Mild breezes are typical of Olcott's Lacustrine climate. Winds average eight miles per hour (mph) and are generally from the southwest. Spring winds are usually the strongest, with mean speeds from all directions of about 13 mph. Summer winds are more variable in direction and less variable in speed than winter winds. Autumn winds exhibit frequent variations in both speed and direction. The harbor is exposed to storms from the west through north to northeast. Winds from the northwest and northeast are the most frequent and have fetches of 36 and 63 miles, respectively.

On the average, 60-70 percent of summer days and 25-40 percent of winter days are sunny. Spring and autumn days can be expected to be sunny about 50 percent of the time.

e. Water Levels and Fluctuations - The maximum Lake surface elevation recorded in June 1952 was 248.06 feet Low Water Datum (LWD) which is at elevation 242.8 feet above mean water level at Father Point, Quebec (International Great Lakes Datum, 1955). The minimum elevation was 241.45 feet during November 1934. Since 1958, the water surface elevation has been regulated between monthly mean elevations of 247.92 feet and 241.78 feet. About 85 percent of the net total supply of water to Lake Ontario is inflow from the other Great Lakes through the Niagara River. The remaining 15 percent comes from within the Lake Ontario Basin. Outflow from Lake Ontario is through the St. Lawrence River.

f. Littoral Transport - In general, the littoral transport in the vicinity of Olcott is from west to east. However, observation of sediment movement between the various existing groins indicate that sediments move shoreward and then either easterly or westerly depending on the incident wave direction. The net transport rate is very low as evidenced by the small amount of littoral material trapped by area groins.

g. Water Quality - Coordination with the NYSDEC on water quality in the vicinity of Olcott Harbor and Eighteenmile Creek indicated that, based on best usage, waters in this locale have

been assigned the following classifications: Lake Ontario at Olcott Harbor - "Class A"; Eighteenmile Creek from its mouth to upstream for a distance of about a half mile - "Class B"; and the remaining portion of Eighteenmile Creek to Burt Dam - "Class C." Class "A" water can be used for: drinking water, culinary or food processing purposes, and any other purposes. Class "B" water may be used for primary contact recreation and any other uses except as a source of water for drinking and culinary or food processing purposes. Class "C" waters are considered suitable for fishing and all other uses except as a source of water for drinking and culinary or food processing purposes and primary contact recreation.

h. Air Quality - The potential project area lies within a Level I air quality designated area. Air quality in the Olcott area is in compliance with both Federal and State standards.

i. Wetlands - There are no known wetlands at the immediate potential project site. However, upstream of the Route 18 bridge, there are a number of palustrine wetland cover types and scattered beds of submergent and floating plants.

B. **Biological Environment.**

a. Fish - The coastal littoral zone of Olcott Harbor, and its associated tributary of Eighteenmile Creek, provide important aquatic habitat for both coldwater and warmwater fish. Eighteenmile Creek has a predominantly silt and gravel substrate between the downstream Route 18 bridge and the upstream Burt Dam. This supports a variety of warmwater and coldwater fish species.

The State of New York Department of State describes Eighteenmile Creek as being "particularly significant because large concentrations of coho and chinook salmon and brown trout migrate from Lake Ontario into the Creek each fall, from late August through December when salmonids ascend the streams to spawn." Additionally, steelhead (lake-run rainbow trout) migrate into Eighteenmile Creek during the fall and between late February and April. These fish populations are the result of an ongoing effort by the New York State Department of Environmental Conservation (NYSDEC) to establish a major salmonid fishery in the Great Lakes through stocking. In 1984, the Creek was among the top ten tributaries to Lake Ontario for numbers of salmonids stocked, and for its warmwater fishery which supports substantial reproduction of smallmouth bass, northern pike, rockbass, black crappie, brown bullhead, and largemouth bass. Coordination with the Region 9 NYSDEC office indicated annual stocking of rainbow and brown trout in the harbor, and chinook and coho salmon in the Creek, are expected to continue at their recent levels.

b. Wildlife - Terrestrial shoreline habitat along the intensively developed Olcott Harbor area, as well as along Eighteenmile Creek up to the Route 18 bridge, is limited for use

by wildlife as food, cover or nesting habitat. The open water in the littoral zone of the lake harbor provides resting and feeding habitat for aquatic Wildlife (ducks, seagulls). The existing concrete piers, groins, and remnants of old hotel piers provide loafing areas for aquatic birds. Steep vegetated banks are found along the shoreline just east of the mouth of Eighteenmile Creek. This woody and herbaceous area, along with the mixture of old, tall hardwood and evergreen tree canopies provides some degree of feeding, nesting, and cover habitat for use by birds and small mammals. A significant coastal wildlife habitat zone borders Eighteenmile Creek between the Route 18 bridge and Burt Dam. a variety of uncommon species inhabit the area, including blue heron, mallard, march wren, and swamp sparrow. Other wildlife species occurring along the creek include such resident fur bearers as muskrat, mink, and raccoon.

c. Threatened and Endangered Species - The EIS included in the November 1978 Final Feasibility Report listed all endangered vertebrate species protected by Federal and State law that presently or previously may have occurred in the Olcott region. No known threatened or endangered species under Federal jurisdiction of the U.S. Fish and Wildlife Service are known to exist in the project area. Also, no plants protected by State law are known to occur in the immediate project area. Additionally, no plants native to the immediate project area are currently protected by the Endangered Species Act. The 1991 Supplemental Environmental Impact Statement concurred in these findings. However, the NYSDEC Wildlife Resources Center indicated that the entire Lake Ontario shoreline in Niagara County is a major duck wintering area; and that no duck habitat disruption would be expected due to implementation of the authorized project.

C. **Human Environment**.

a. History - The hamlet of Olcott has had a rather colorful history of transportation, commerce, tourism, and recreation that dates back to the early 1800's when the Newfane area started to become settled. With the onset of the War of 1812, many settlers fled from the area when the British Navy bombarded the area and burned all the structures at the mouth of Eighteenmile Creek. The village was quickly rebuilt and called Kempville. The opening of the Erie Canal in 1825 and the Welland Canal in 1833 diverted commerce from the harbor at Kempville. The harbor was later revitalized with the construction of a pier and a warehouse on the east bank. By 1837, the area returned to normalcy and Kempville became known as Olcott. The recreational value of Olcott began to be recognized. The wide mouth of the Eighteenmile Creek provided a natural harbor, the lake made available all forms of water activities, and the grove was perfect for picnics, camping, etc. The first group picnic of record was held in 1848.

Between 1867 and 1877, the Corps of Engineers built parallel piers to protect the entrance to Eighteenmile Creek. An entrance channel was also dredged for access to Lake Ontario. Olcott was an official customs point of entry with its own customs officer at that time. By 1878, there was sufficient commerce and tourism to support three hotels.

Possibly the greatest event to come to Olcott was the annual picnic of the Niagara County Pioneer Association in the fall of 1877, which attracted approximately 1,500 people. The Pioneer picnic reached its peak in the period 1899-1910, particularly, in 1899 when Teddy Roosevelt addressed a crowd numbered between 20,000 to 30,000 people. In 1900, the International Railway purchased the area north of Main Street now known as Krull Park. The Olcott Beach Resort Hotel (See Photo 1.1) was a major tourist destination point in the early 1900's. The famous hotel was located at the foot of Franklin Street (See Photo 1.2) now the public beach area. It contained 100 rooms for guests, a dance floor of 14,000 square feet, a large dining room, a ladies' beauty parlor, a men's barber shop, a game room, and several small dressing rooms on the lake level where one might change from street clothes to swim suit. Straight out in the lake from the hotel was a long pier that was illuminated at night.

Around the turn of the century and throughout the year there were many activities in which one might become involved. For those who did not want to listen to speeches, there was dancing, roller skating, and good food at reasonable prices. For others there was fishing, hiking, picnicking, boating, camping, bathing, and tobogganing in the slides near the Federal piers (See Photos 1.3 and 1.4).

The railway, the trolley line that connected Lockport, Buffalo, Niagara Falls, and Rochester to Olcott provided access to this lakeside resort which offered such attractions as an outdoor theater, a merry-go-round, a miniature railroad, and a photo gallery, all located in the park; and a complete amusement park on the south side of the Lake Road.

b. Land Use - The hamlet of Olcott has 1,978 acres. The hamlet is divided east-west by Eighteenmile Creek. Land use on the west side of Olcott is predominantly residential, with major marina activity located adjacent to the creek. The east side of the hamlet is mostly commercial, with some residential. The commercial activities are concentrated along East Main Street. Krull Park, a 329 acre County park, generally forms the eastern boundary of the hamlet. Approximately 44 acres are developed for recreational use such as picnicking, play fields, ball diamonds, tennis courts, and a wading pool.

The entire developed area at Olcott is bordered by agricultural lands located east of the park, south of Route 18, and west of Cresent Avenue. A Land Use Map is presented on Plate 1.4.

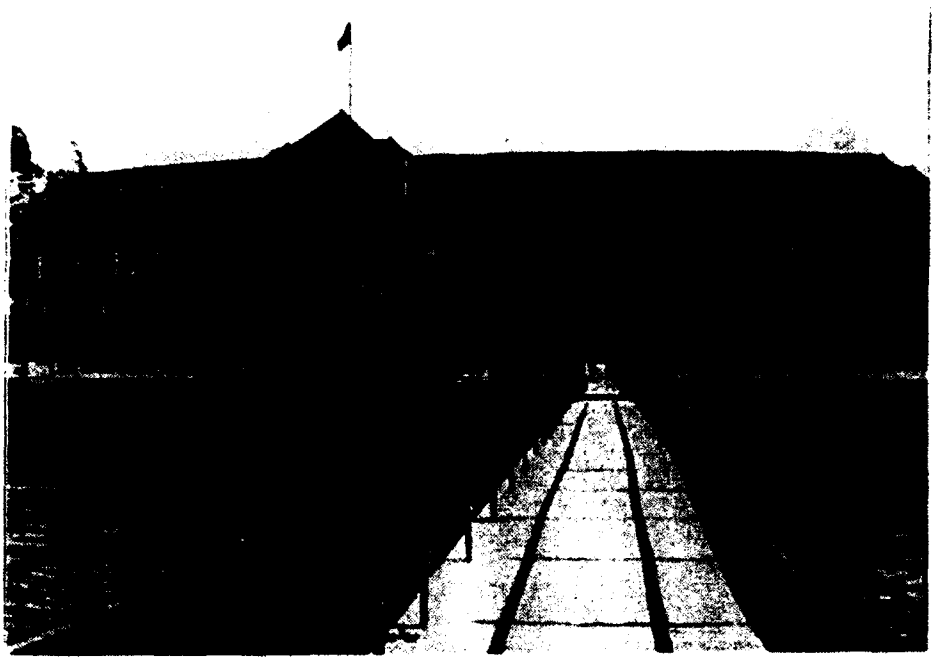


Photo 1.1 Olcott Beach Hotel - North View
early 1900

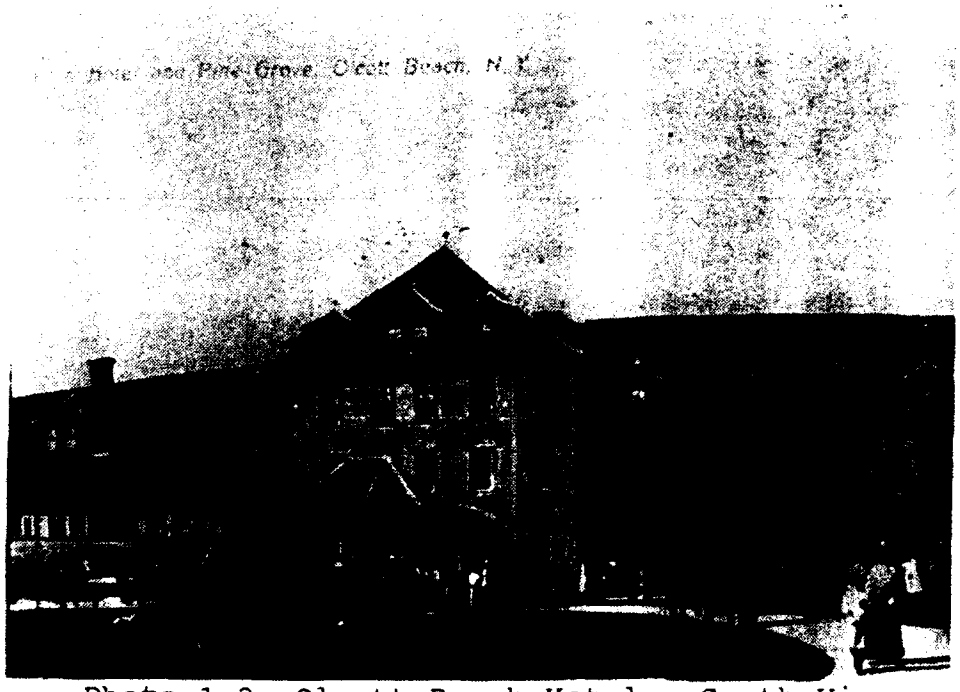


Photo 1.2 Olcott Beach Hotel - South View
early 1900

c. Population and Housing - Trends in population in Olcott, the town of Newfane, Niagara county, and Erie County are shown in Table 1.1.

Table 1.1 - Area Population

Area	1970	1980	1986	1990	2000	2010
Erie County	1,113,491	1,015,472	964,700	983,773	987,749	984,665
Niagara County	235,720	227,354	216,900	217,257	221,589	233,962
Newfane (T)	9,459	9,268	8,950	8,850	9,200	9,300
Olcott (CDP)	1,592	1,571	N/A	N/A	N/A	N/A

(Source: U.S. Bureau of the Census)

Moderate population growth for the Niagara County and Olcott/Newfane area is anticipated. Projections of Erie County's population show a slight increase from 1990 to 2000 and then a slight decrease from 2000 to 2010. The population of Niagara County is projected to increase 3.1 percent from 1990 to 2010. The town of Newfane's population is forecasted to grow approximately 5 percent from 1990 to 2010.

Approximately 1,600 people live in the hamlet of Olcott, accounting for approximately 17 percent of the population in the town of Newfane. Approximately 96 percent of these residents are white, two percent black, and two percent "other." The median age of the population is 30, with 11 percent of the population 65 and over.

In addition to the resident population in the Olcott/Newfane vicinity, a significant influx of people occurs during the spring through fall boating, fishing, and bathing seasons, since Olcott is a significant regional access area to Lake Ontario's associated recreational resources.

Approximately 600 households are located in Olcott with an average of three persons per household. About two-thirds of Olcott families own their own homes and the remaining third reside in rented units. The median value of housing units in Olcott is $83,000 and the median gross rent is about $345 per month.

d. Business and Industry - Business activity in Olcott is generally centered in retail trade and service type activities. The primary type of businesses in the area are marina and marina-related establishments located along the Eighteenmile Creek

Photo 1.3 - Olcott Harbor, NY - Summer Activities early 1900

Photo 1.4 - Olcott Harbor - East Federal Pier early 1900

Olcott Harbor Land Use Map

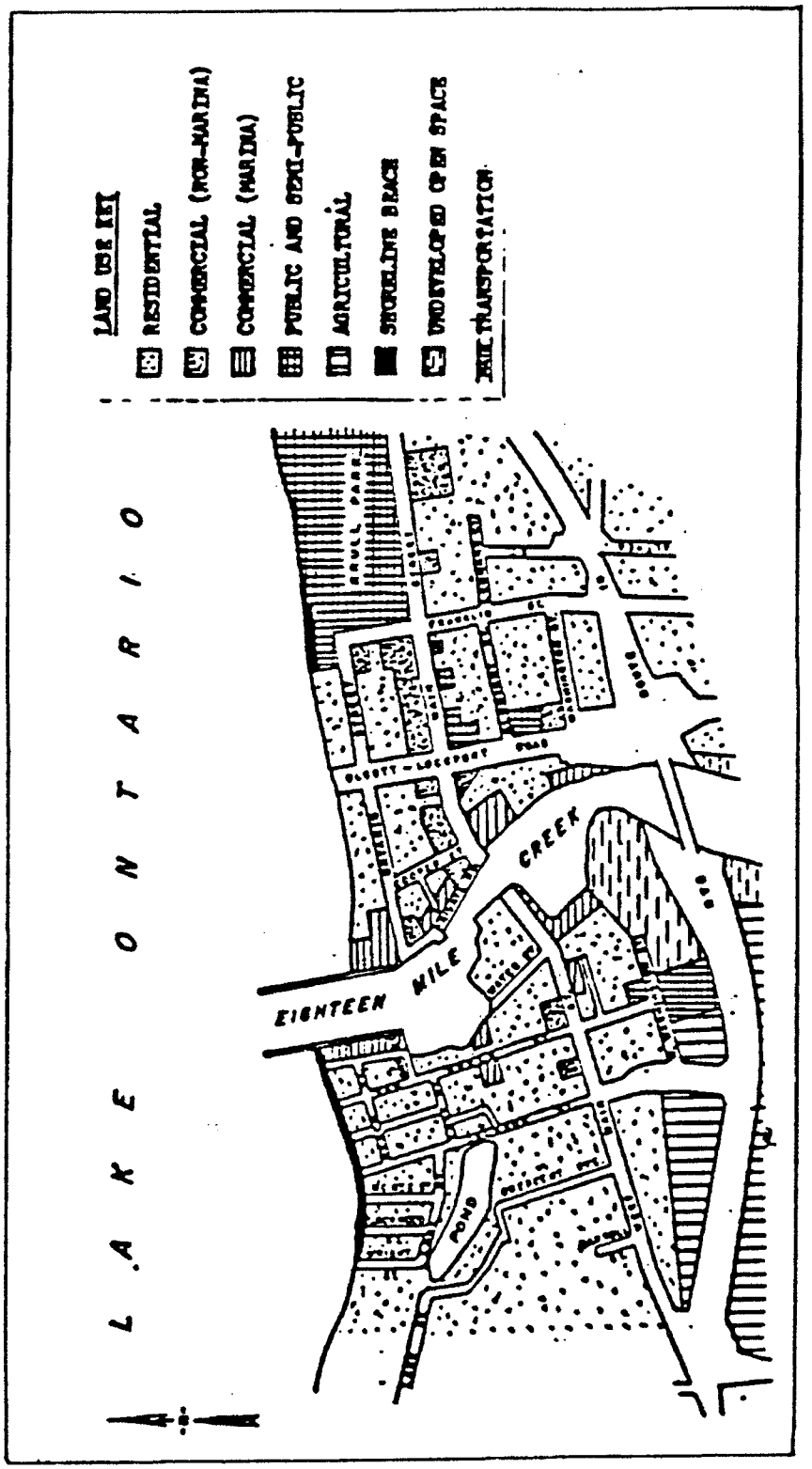


Plate 1.4

shoreline. Local marina enterprises include Hedley Boat Company, Inc., McDonough Marina, Town of Newfane Marina, King Marina, Teal Marina, and the Olcott Yacht Club. Marina locations are shown on Plate 1.5. A brief summary of services provided by marina is presented in Table 1.2.

Other community retail and service establishments are located along East Main Street. These businesses serve the resident population and provide goods and services to recreators and visitors to the harbor. The most numerous types of businesses are eating and drinking places, and amusement and recreation places. Many of these service type businesses are only open during the summer recreation season.

The products and services of other types of business establishments, insurance agencies, banking institutions, and general merchandise stores are available at other locations in the town.

There are no large industrial establishments in the hamlet of Olcott. The majority of Niagara County's manufacturing and wholesale trade is located in the region's larger urban centers at Lockport, Niagara Falls, and North Tonawanda.

e. Employment and Income - Employment in the two-county area of Niagara and Erie totaled 535,500 in 1989. The leading employment sectors include services, wholesale and retail trade, and manufacturing. The Buffalo-Niagara Falls area is experiencing employment growth in the following sectors: service, wholesale, retail trade and finance, insurance, and real estate. While some of Olcott's residents are employed at local business establishments, most are employed at surrounding regional business establishments.

Erie County's per capita income has grown at an average annual growth rate of 7.65 percent from 1978 to 1986. Niagara County's per capita income grew at a 7.3 percent annual growth rate for the same time period. Per capita income for Niagara County in 1986 was $13,500. Moderate growth in business, employment, and income is anticipated for the region.

f. Transportation - Olcott is linked with other hamlets, villages, and cities in the Niagara region by local and State highways. New York State Route 18 is a major east-west road that parallels the Lake Ontario shoreline. It provides access to Niagara Falls, Buffalo, and Ontario, Canada on the west; and to Rochester on the east. Olcott is the northern terminus of New York State Route 78, which extends southward through the town of Newfane to Lockport, Amherst, and Buffalo. Route 78 also intersects the New York State Thruway (Interstate 90) about 28 miles south of Olcott.

Locations Of Current Marina Facilities

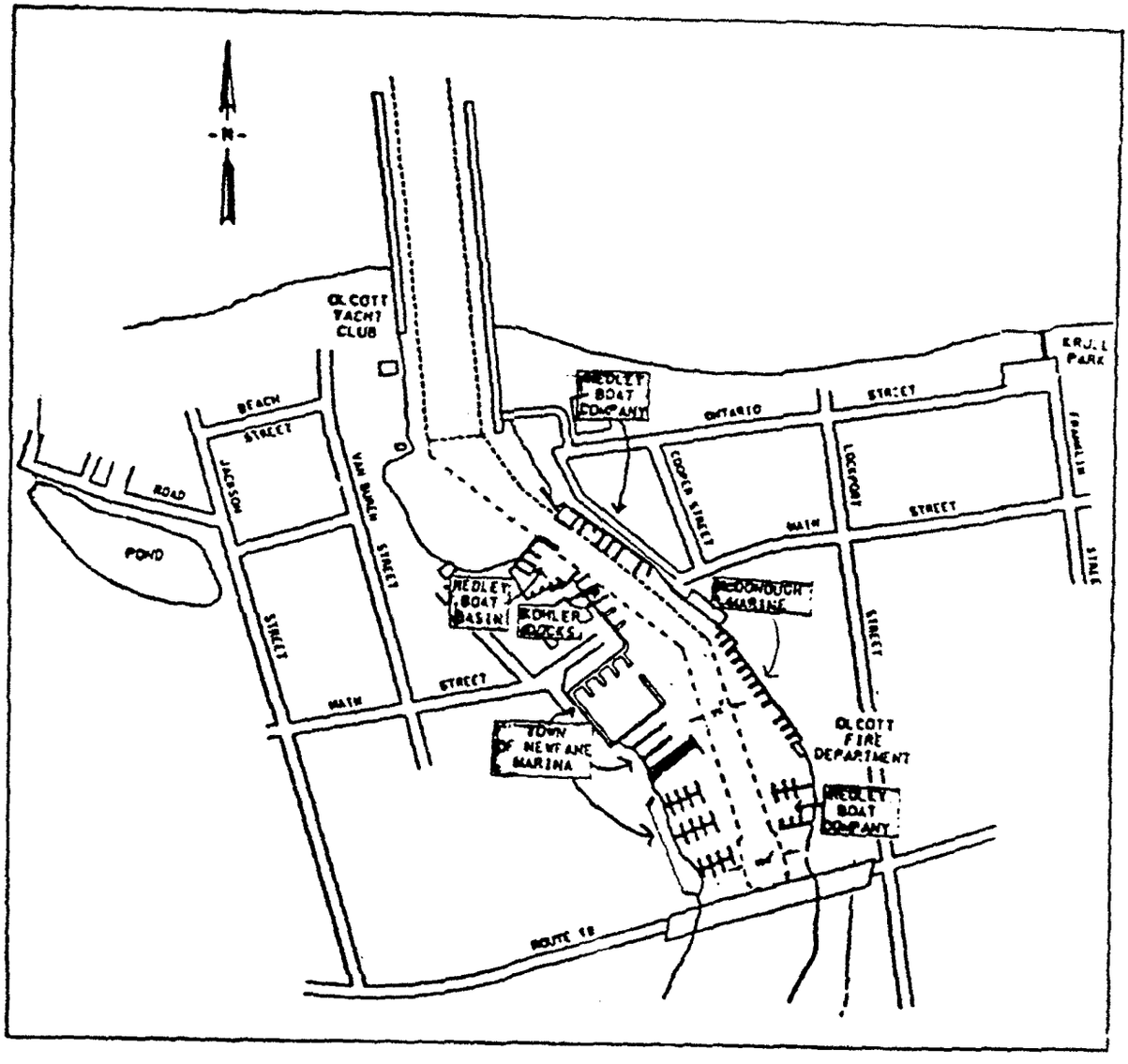


Plate 1.5

Table 1.2 - Marina Facilities

Marina Facilities	Hedley Boat Co.	King Docks*	McDonough Marina	Newfane Marina	Olcott Yacht	Teal Marina
Owner	Private	Private	Private	Town	Private	Private
Slips	61	8	45	48	0	0
Transient Slips	0 (3)	0	0	30	0	0
Moorings	4 (3)	0	0	-	0	0
Dry Storage	X		(50)	-		
Launch Ramps	-	-	-	6	X	-
Hoist	X	-	-	-		-
Parking	X	X	X	X	X	X
Fuel	X	-	X		-	-
Sanitary	X					
Sales/Service	X	-	X		-	X
Restaurant			X		X	
Lodging	X	-	-	-	-	-
Fish Cleaning Station	-	-	-	X	-	-

* Formerly known as Kohler Marina; changed ownership in 1988.

The street system in Olcott is generally adequate for local traffic flows. Route 78 is the major north-south route through the hamlet. East and West Main Streets are the principal east-west roads. A Main Street bridge was built over Eighteenmile Creek in 1935, but was too low to allow sailboats to pass beneath it. The bridge was demolished and replaced by the existing Route 18 bridge in 1970. The new structure has a vertical clearance of more than 50 feet above LWD and a horizontal clearance of more than 100 feet. There are public parking facilities in the immediate harbor area and several limited-capacity, privately owned parking areas located near the local marina buildings. Parking areas at Krull Park provide the closest public parking facilities to the harbor.

The Hamlet has daily bus service to Lockport. A charter bus service also operates on an irregular basis between Lockport and Krull Park. Two airfields for small, private aircraft are located southwest of Olcott. A Conrail freight line is located parallel to and about 1-1/2 miles south of the lakeshore.

g. Utilities - Residential and business places in the Hamlet are serviced by local electric, gas, and telephone utility service lines. Water is supplied by the Niagara County Water District. Water is drawn from the west branch of the Niagara River via a pumping station located in the town of Wheatfield. A new sewage treatment plant has been built east of the hamlet of Olcott to service the hamlet, Newfane, and other developed areas in the vicinity of the Olcott-Lockport Road.

h. Public Services and Facilities - Olcott Elementary School is located on Godfrey Road, immediately east of Olcott-Lockport Road. The school serves the educational needs of the local grade school population. Junior and Senior High Schools are located in the town of Newfane.

The Olcott Volunteer Fire Company is located on Olcott-Lockport Road near Albright Street. Police services in Olcott are provided by the town, County, and State.

The Olcott Post Office is located on East Main Street near Franklin Street. Other major community services, such as the Newfane Town Hall and Inter-Community Memorial Hospital, are located in the Newfane Hamlet. The town of Newfane provides solid waste disposal services for the local hamlets.

i. Public/Health and Safety - Lack of a small boat refuge on the south shore of Lake Ontario is quite prominent. The 27-mile gap between Olcott and Oak Orchard Harbor to the east is one indication of this lack of refuge. Wilson Harbor, six miles to the west of Olcott and having well protected mooring areas, can offer some refuge.

Olcott in its present condition offers limited refuge opportunities. The rough wind-wave climate in the entrance channel could cause serious problems for an unfamiliar boater attempting to enter under storm conditions. Therefore, it cannot be considered a safe harbor of refuge with its present poor entrance protection. Even after entering the harbor, boats are still exposed to damage by wave action unless they proceed well upstream in Eighteenmile Creek.

j. Recreational Resources - The Olcott area provides numerous recreational opportunities such as boating, sailing, canoeing, picnicking, baseball, tennis, swimming, fishing, and general sightseeing.

Boaters located on Eighteenmile Creek at Olcott Harbor access Lake Ontario through the existing Federal Project. This project provides an east and west pier system that forms a channel 140 feet wide and 12 feet deep. The marinas located along Eighteenmile Creek provide over 160 wet slips for seasonal use. The Town of Newfane Marina, on the west bank near the foot of West Main Street, provides three launch ramps for trailer-drawn boats. The town also has an area north of the launch ramps for rent to transient boaters. There are 30 direct tie-up spaces available for use as overnight facilities. Finally, approximately 150 charterboat captains have charters out of Olcott Harbor over the course of a season. Most of these charterboat captains (125) only come to Olcott during the weekends when there are fishing derbies. There are about 25 charterboat captains who use Olcott Harbor as their home base and rent slips year round.

Krull Park, a 329-acre County park located to the east of Olcott's commercial area, offers a wide variety of recreational opportunities. The park has baseball fields, tennis courts, children's playgrounds and equipment, and well maintained picnic areas. The park can accommodate over 3,000 visitors daily and usually services over 1,000 visitors on an average weekend day. An estimated 100,000 to 250,000 visitors use the park annually.

The existing east and west Federal piers provide exceptional fishing opportunities in the spring and fall for the seasonal salmon runs. The heavy use of the piers by fishermen necessitated the town of Newfane's construction of a fish cleaning station in the vicinity of the town's public launch ramps. The station is used extensively by pier fishermen and charterboat clients.

In general, the Olcott area provides many sightseeing opportunities. One may walk through Krull Park, visit the Olcott business district on East Main Street, watch boat launching activity at the town of Newfane launch ramps, or take a walk out on the existing Federal piers for a view of the harbor or the lake.

k. Cultural Resources - A Cultural Reconnaissance Survey was performed for the Buffalo District on an area extending three-eights of a mile on either side of the mouth of Eighteenmile Creek. There are no sites in the project area listed in the National Register of Historic Places annual list for February 1978, nor in the files of the Historic American Engineering Record and Historic American Buildings Survey as of July 1976. Currently there are no sites in the area in the process of being nominated to the National Register, nor were any sites in the area listed in the State files. There is only one structure in the project area that may have significant historic value: the Wesleyan Methodist Church built in 1850 and since converted to a private home.

The harbor has been dredged repeatedly since 1867. There are no known records of shipwrecks in the areas where the proposed marina and breakwaters would be built.

1.6 PRIOR STUDIES/PROJECTS, AND REPORTS

Prior to this Reevaluation study and report, several Corps studies of, and reports on, the harbor were performed to address the need to protect lakefront residential, commercial, and public properties against both lake and rain storms. These studies are summarized below:

. The Rivers and Harbors Acts of 1867 and 1913 authorized the construction of the existing project which provides for two parallel piers having an average length of 861 feet each and about 200 feet apart; and an entrance channel 12 feet deep and 140 feet wide. The existing project, was completed in 1918 and is shown on Plate 1.1.

. About 18 years later (1936) a study was conducted to consider further harbor improvement for the benefit of small-boat navigation and upstream channel extension into Eighteenmile Creek. The study report concluded that these improvements were not warranted at that time because of the high cost involved.

. A 1951 report, covering a study scope similar to that of 1936, reached the conclusion that further harbor improvements and channel extension could not be economically justified. The report recommended that no further Federal improvements be made at Olcott at that time.

. As a result of Congress authorizing the Corps of Engineers to review the existing Federal project, a feasibility study was undertaken in 1969 and completed in 1978. The final feasibility report completed in November 1978 was approved by the Chief of Engineers in June 1980. This final 1978 report recommended that the existing Federal Harbor project at Olcott be modified to provide for the construction of a system of east and west breakwaters and pertinent jetties to create a marina basin, access channels, and expansion of the entrance channel into Eighteenmile Creek. Construction of recreational fishing facilities, access facilities, and parking and sanitary facilities would also be provided.

. In February 1981, "Forward Management Associates, Inc." under contract to the Buffalo District, prepared a Reconnaissance Study Report which evaluated the feasibility of maintenance dredging at Olcott Harbor. The report concluded that adequate level of Federal maintenance of the harbor had been provided; and recommended future periodic maintenance. The report also recommended that consideration be given to the construction of protective structures beyond the piers to mitigate wave and swells from entering the harbor under adverse lake conditions.

. In May 1981, under the authority of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973, a flood insurance study was conducted by the Federal Emergency Management Agency to investigate the existence and severity of flood hazards in the town of Newfane. As a result Newfane was converted to the regular program of flood insurance by the Federal Insurance Administration. The Town, recognizing the importance of flood plain management, adopted a flood control ordinance which would control future building construction within the flood hazard areas, particularly the lakefront areas.

. In June 1982, the Buffalo District finalized the 1981 "Forward Management Associates" Reconnaissance Report on dredging operations. The report presented an economic evaluation of dredging with and without replacement of boats. This sensitivity analysis lead to the conclusion that maintenance of the authorized 12.0-foot channel is economically justified. However, the report also concluded that dredging of 4 feet of sediment every 8 years is the most cost-effective dredging scenario.

In December 1982, the Niagara County Department of Economic Development and Planning completed the Niagara County Fisheries Development Study. The study outlined the impact of the Lake Ontario and lower Niagara River salmonid sportfishery on Niagara County. The study identified existing facilities and was the basis for the development of a Fisheries Development Plan for Niagara County.

The Fisheries Development Plan for Niagara County was completed in January 1984 by the Niagara County Department of Economic Development and Planning. The plan outlined the capital projects that would eliminate the county's salmonid recreational fishing facility deficits identified in the December 1982 report. Capital improvements included $4.8 million for constructing 16 double lane launch ramps and $150,000 for bank and pier access improvements.

The January 1984 Fisheries Development Plan was revised by Niagara County's Department of Economic Development and Planning early in 1984 to be consistent with Local Waterfront Revitalization Program Comprehensive Plans for Niagara Falls, the town of Lewiston, and other communities. The revised plan was released in June 1984 as the Niagara County, New York Salmonid Fisheries Development Plan. The recommendations for capital improvements were essentially the same as the January 1984 report. The plan was endorsed by the Niagara County Fisheries Development Board, the Niagara County Planning Board, the Niagara County Economic Development and Planning Legislative Committee, and the Niagara County Legislature.

. In October 1986, the town of Newfane completed a Draft Local Waterfront Revitalization Program Report (LWRP). This plan was included in the State Coastal Management Program and gave the town the responsibility to manage and enforce coastal development in its community. The plan centered on development in the hamlet of Olcott Beach and Eighteenmile Creek.

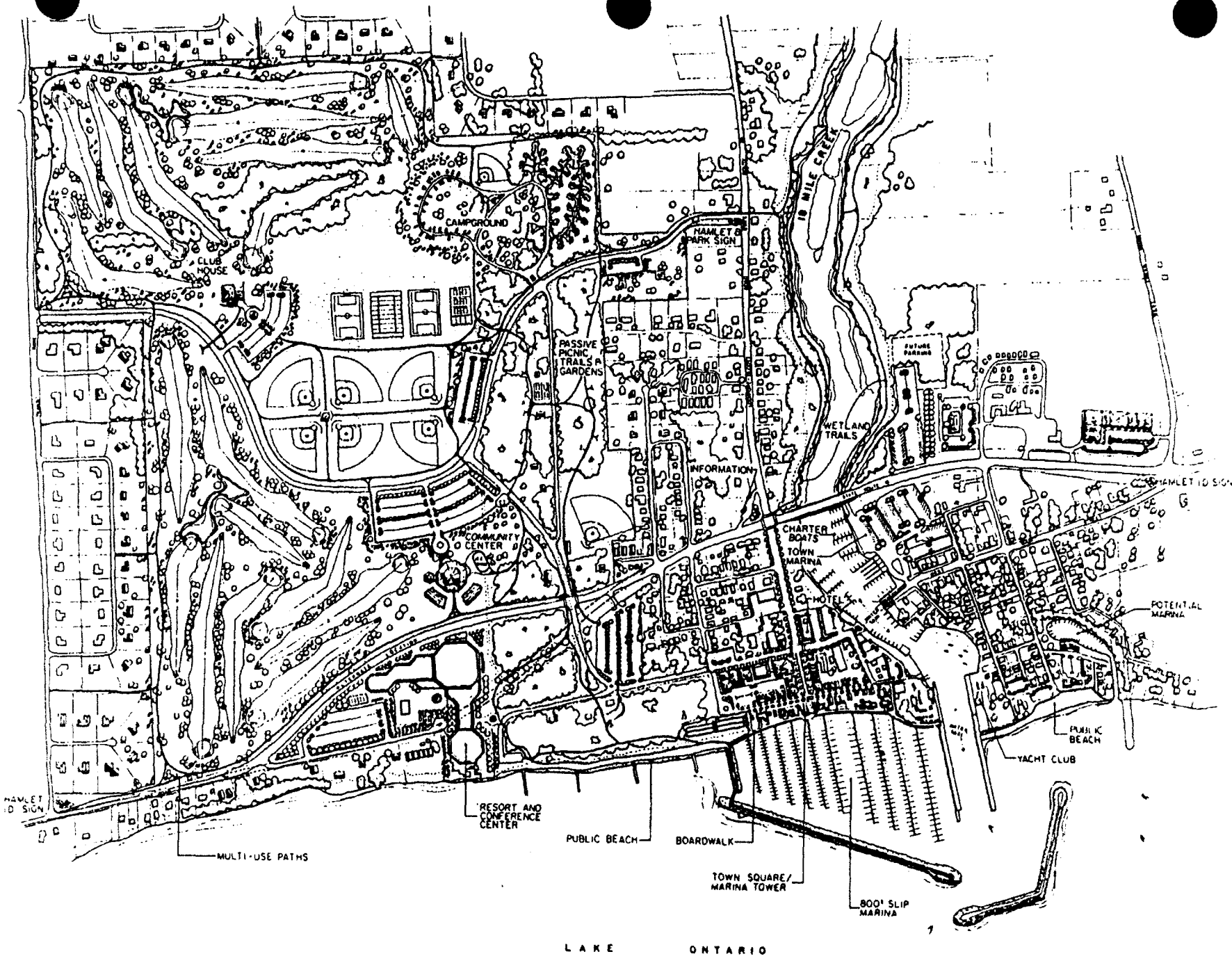
A range of capital improvement projects were proposed which would be consistent with the goals and objectives associated with coastal development outlined in the LWRP. There were 7 capital improvement projects with an estimated cost of $18 million. The development of a basin area for recreational craft in Lake Ontario at Olcott was the major capital improvement project and had a development cost of $12 million. A major component of the project was the development of breakwalls for the boat basin area in Lake Ontario. The town endorsed the U.S. Army Corps of Engineers breakwater system proposed in the 1978 Olcott Harbor Feasibility Report.

. A Comprehensive Economic Development Strategy for Niagara County was completed for the Niagara County Industrial Development Agency and the New York State Urban Development Corporation in November 1986.

This eighteen month study identified: the strengths and weaknesses of Niagara County's Economy, County goals and objectives, new and expanded programs to implement these goals, and steps required for implementation.

Six key short-term and long-term development projects were identified and would require $50 million in public funds to implement. The major short-term project was development of a super marina project at Olcott. The two phase project would include a marina, a motel/hotel, a condominium complex, restaurant, stores, parking, and recreational and other support facilities. Full project development would require the construction of a breakwater in Lake Ontario to create a large protected harbor. The super marina would account for more than one-fourth of the $50 million of public funds needed to implement the six development projects. This project would complement and be consistent with the town of Newfane's Local Waterfront Revitalization Program.

In 1988, a local engineering firm was retained by the town of Newfane to develop the hamlet master plan. The Master Plan addresses development in three main areas: the waterside area of Eighteenmile Creek and Lake Ontario; the hamlet of Olcott; and Krull Park. All marina-based components of the Master Plan are compatible with plans evaluated in this reevaluation report. An architect's rendition of the components of the master plan (Plate 1.6) shows the Lake Ontario boat marina area as being located east of the existing east Federal pier.



APRIL 1990

NIAGARA COUNTY PLANNING DEPT

OLCOTT HARBOR MASTER PLAN

PLATE 1.9

The Master Plan calls for that portion of Eighteenmile Creek south of Route 18 to remain as untouched wetlands. A fishing charterboat center would be established adjacent to the town marina and an additional double wide boat launch ramp would be added north of the town's existing launch ramps. A tour boat dock would be located on the southwest side of the east Federal pier adjacent to a new marina control tower servicing the entire harbor. Transient boat docks with power and water would be located north of the tour boat dock. The majority of new slips would be located in Lake Ontario behind two new breakwaters that encompass the existing Federal piers.

The marina would be generally mixed between power and sail docking, with some segregation between pleasure boaters and fishermen. Throughout the water area connecting the mixed land-use items would be a water taxi that would continuously carry passengers from points on either side of Eighteenmile Creek and the harbor.

Land use in the hamlet of Olcott was redesigned by revising current land use zoning. Zoning changes would occur to land currently owned by the town and land currently zoned marine services, residential, commercial, marine commercial, public space, and parking.

The Town-owned fire hall, post office, cemetery, two churches, and marina all remain in their present locations, as well as the Olcott Yacht Club. Additional marine services, including the marina control tower, would be located adjacent to the east Federal pier and at the terminus of Route 78. Some displacement of residential areas on both sides of the creek will occur to accommodate the marine services and other land uses of commercial, parking, and public areas. The commercial areas are mainly concentrated along the major thoroughfares of East and West Main Street, Routes 78 and 18 and parts of Van Buren. A hotel zone is proposed approximately north of East Main Street near Franklin Street. Complimenting the commercial zones would be the marine commercial zones located on both sides of the creek and at major intersections along Route 18. Planned public spaces include a developed Town Square at the terminus of Route 78, public landing areas for the water taxi, better public access to the Federal piers and new marina, an extended beach on the east and a new beach on the west lakeshore.

Vehicular parking zones would be handled in several ways. The Hamlet would accommodate the commercial traffic via on-street meter parking as well as designated parking lots for shoppers only. Limited prime marina parking would be available in designated areas of the hamlet within a 600' walking distance to the docks. The balance of the marina parking as well as overflow special events and holiday parking would be accommodated with larger remote parking lots in Krull Park and the use of a shuttle

service (1500' - 2000' away from the docks). Additional parking for cars with boat trailers would be provided immediately south of Route 18 connected to the Town marina via a road under the Route 18 bridge. Finally the transient boaters with boat trailers staying more than 1 day would park in remote lots on the west side of the creek south of Route 18. A marina drop off area would be provided at the Town Square on the east harbor and a car-top launch drop off area will be provided at the foot of Jackson Street on the west side.

Boat winter storage would be accommodated through use of the Town Marina area and adjacent car/trailer parking lots, available spaces in the marina services areas and the remote parking lots situated south of Route 18.

Krull Park would be further developed to help establish Olcott Harbor as a major all-around recreational community.

Approximately 100± acres of the park land are presently developed with picnic grounds, baseball diamonds, tennis, playgrounds, wading pool, beach and open parkland. The remaining 225± acres presently under agriculture are designated to expand picnicking, active game sports, and playgrounds by duplicating these features throughout the site. Planned additional items to the park program include an 18-hole golf course, trailer and tent camping facilities, and a festival commons area for year-round use, with an amphitheater and informal/formal gardens adjacent to the commons area.

New park entrances would be developed off of Route 78 and Transit Road as well as a redesigned entrance at Route 18. One possibility is to relocate part of Route 18 to provide more waterside land for development of a conference/resort center. Another possibility is to incorporate a Theme Park into the land use program that would also act as a regional attraction.

A multi-use trail for walking, biking, running, and cross country skiing would connect all features of the park, as well as provide for a direct linkage to the hamlet and surrounding region. This includes connections to trails on both banks of Eighteenmile Creek and the public spaces on Lake Ontario, as well as landing points for the water taxi.

The pedestrian and vehicular circulation would tie the key elements of the overall master plan into an integrated, cohesive framework. This framework will meet the needs of an improved fishing/boating harbor and create a more versatile year-round recreation community serving the needs of the region. Components of the Master Plan will be refined to achieve public acceptance and compatibility with the Federal project.

1.7 STUDY PARTICIPANTS AND COORDINATION

The public involvement program is a two-way forum of communication by which the Corps receives information from, and provides information to, the public during the study process. Information on study status, report findings, and recommendations are disseminated to the public in an ongoing fashion. This is achieved through letters, news media, workshops, public meetings, and hearings.

Regarding this Reevaluation Study, the first action accomplished was to send letters to United States Senators and Congressmen, State and local representatives, and other Federal, State, and local agencies to inform them of the initiation of work for the authorized project. Coordination was also initiated with the various agencies to identify water resource problems and needs in the project area. This coordination was achieved through correspondence, telephone conversations, workshops, conferences, and meetings.

A meeting was held on 15 March 1988 at the Buffalo District office with representatives from Congressman John LaFalce's office, the New York State Office of Parks and Recreation, the Niagara County Legislature, the New York State Department of Environmental Conservation, the town of Newfane, Niagara County, and a number of Corps of Engineers representatives. Its purpose was to develop a consensus of appropriate post-authorization studies to be performed to ready the authorized project, or modification thereof, for construction.

Another "scoping" meeting took place at the Olcott Harbor Inn on 25 April 1988. Participants included the Newfane Town Supervisor, the Chairman and members of the Olcott Harbor Task Force, the Chairman of the Eastern Niagara Chamber of Commerce, and a number of Corps representatives. The Chairman of the Task Force chaired the meeting and invited the Corps Project Manager to brief the group on the progress of the project.

Another meeting was held on 24 May 1988 at the Newfane Town Hall to discuss technical modeling, coastal process, and environmental concerns. Corps representatives met with staffs from the U.S. Fish and Wildlife Service, the New York State Office of Parks, Recreation, and Historic Preservation, the New York State Department of Environmental Conservation, Niagara County and local officials, and interested citizens of the town of Newfane.

A meeting was also held on 18 August 1988 at the Harbor Inn in Olcott to discuss the concept of incorporating a ferry service as part of the project (this concept was presented in a previous 20 July 1988 meeting at the Buffalo District). Participants included Corps representatives, the town of Newfane, State of New York representatives, and interested citizens from Niagara County and the Province of Ontario, Canada.

Another meeting was held in the town of Newfane on 1 September 1988 to discuss realignment of project structures and lake access and boating facilities. Participants included the town of Newfane Supervisor and Engineer, and Corps representatives.

On 28 October 1988, a meeting was held at the Niagara County Cooperative Extension Service Office, Lockport, New York, to discuss coordination of the Olcott Harbor upland development and the roles of local, State, and Federal agencies. A steering committee was formed to facilitate coordination among all interested parties. Participants included the town of Newfane Supervisor, the Chairman of the Eastern Niagara Chamber of Commerce, the Chairman of the Olcott Harbor Task Force, and representatives from the Niagara County Planning Department, the Corps of Engineers, and the State Legislature.

On 10 January 1989, a meeting was held at the office of Wendel Engineers in Amherst, New York, to discuss a permit request by McDonough Marina to build new slips in Eighteenmile Creek, and to discuss upland development at Olcott. Attendees included representatives from the Corps, Wendel Engineers, and the town of Newfane Supervisor.

On 19 January 1989, a meeting was held at the Best Western Lockport Inn to discuss the project status, identify problems, issues, and sources of funds for the development of a Master Plan. Attendees included representatives of local, State, and Federal governmental entities, and interested citizens.

A meeting was held on 30 January 1989 at the Olcott Harbor Inn to promote public awareness and support for the project. Participants included Federal, State, and local officials and the general public totaling about 150 people.

A public information meeting was held at the Miller Hose Fire Company on 27 February 1989 to present and discuss preliminary revisions to the authorized harbor modification project. Principals in attendance included representatives from the Newfane Chamber of Commerce, Corps of Engineers, NYS Assembly, Niagara County Legislature, town of Newfane, and Wendel Engineers.

On 2 May 1989, a meeting was held at the Harbor Inn Restaurant in Olcott, to discuss economic issues, and the purpose and impact of the project on the area. Participants included representatives from the Corps, town of Newfane, Niagara County Chamber of Commerce, Niagara County Planning, County Legislature, and NYS Office of Parks and Recreation.

On 1 June 1989, a meeting was held at the Best Western Inn, Lockport, New York. The purpose of the meeting was to provide an update on the status of the project to the Olcott Harbor

Development Committee. The Olcott Harbor Development Committee is composed of the Eastern Niagara Chamber of Commerce, the town of Newfane, Niagara County Planning and Development, New York State Office of Parks and Recreation, New York State Department of Environmental Conservation, New York State Department of State, New York State Department of Transportation, and representatives of interested Federal and State officials. The Corps of Engineers was represented by members of the District's Planning Division. Survey data on support for the project indicated 67 percent of survey respondents in Niagara county were in favor of the project.

On 20 June 1989, local officials from Niagara County and the town of Newfane met and defined roles for five committees to help implement the project. The five committees were: the Olcott Harbor Task Force, the Olcott Harbor Steering Committee, the Olcott Harbor Development Committee, the Olcott Master Plan Advisory Committee, and the Ad Hoc Olcott Outer Harbor Project Advisory Committee.

On 5 July 1989, the District staff involved in the project met with Congressman LaFalce's representative in the District office. A progress update was presented on plan formulation and the economic evaluation.

On 5 September 1989, representatives from the town of Newfane, Niagara County, Congressman LaFalce's office, and State Assemblyman Murphy met with the District Commander and his Planning staff at the District office, Buffalo, New York. The Corps staff briefed these local officials on the two plans that were being considered, costs and cost sharing, and the environmental impacts of potential polluted dredged materials.

On 11 September 1989, key local interests and a potential non-Federal sponsor met in Albany, New York to discuss the project and non-Federal cost sharing. The Corps representative at the meeting discussed the two plans under consideration and responded to questions from the participants.

On 27 September 1989, local officials met with District staff at the District office to discuss the development of a local master plan with regard to the authorized outer harbor project. These local officials indicated a preference for the larger outer harbor plan but reserved further comments until after viewing the model testing at WES in December 1989.

On 14 November 1989, District Environmental and Planning staff, and representatives from NYSDEC, NYS Fish and Wildlife at the NYSDEC office in Buffalo, New York, met to discuss means of disposing of polluted dredged material from Eighteenmile Creek. A number of options were discussed, but no final decision was

reached on them. DEC staff indicated no position would be taken until after USEPA responded to the Corps proposal of offshore disposal.

On 27 November 1989, Buffalo District staff met with the Olcott Harbor Steering Committee at the Eastern Niagara Chamber of Commerce office in Lockport, New York, to discuss cost allocation and apportionment, the sponsors financing plan and the deadline for the selection of a plan (the current NED plan or the locally preferred plan).

On 5 and 6 December 1989, a model study conference was held at the Corps Waterways Experiment Station in Vicksburg, Mississippi. The Corps Buffalo District and WES staff, State Legislative representatives, town and County officials, and the New York State Department of Parks and Recreation Deputy Commissioner participated therein. An around-the-table discussion of the plans tested by a physical model took place following a slide presentation by WES staff. This was followed by a model viewing and demonstration of these plans (Plans 10A and 10B) which culminated in the tentative identification of a preferred plan. This preferred plan was also tested, and it was unanimously agreed upon by all parties present. It was referred to as Plan 10A Modified.

On 19 December 1989, Buffalo District staff and WES staff met with U.S. Fish and Wildlife Service and NYSDEC representatives at the Buffalo District office to discuss project impacts on fishery parameters based on WES model results. All model results indicated that these plans would have no adverse impacts on local fishery environmental parameters such as water temperature, velocity, turbidity, etc., or disposing of polluted dredged material from Eighteenmile Creek.

The general consensus from these meetings was that the project as proposed had generally been well-received by the various governmental agencies involved. Concerns were raised about such items as the number of boat slips needed, parking spaces, public access to breakwalls, and comfort facilities, among others. These concerns were given full consideration in the Reevaluation Study and were proven invaluable in reformulating the plans.

On April 4, 1990, Buffalo District's Planning, Engineering, and Construction Operations & Maintenance staffs and the Council's office met with Wendel Engineers and discussed parking spaces and the Master Plan development. As a result, 800 parking spaces would be made available to all users of the marina facilities; 150 of these 800 parking spaces would be for fishermen, and cost-shared on a 50-50 basis between the Federal and non-Federal sponsors.

On May 8, 1990, members of the Buffalo District's staff met with State, Town, and local officials to discuss the change in project management from Mr. Cadet to Mr. Byrnes. Other issues regarding progress and schedule to complete the reevaluation report were also discussed.

On June 21, 1990, Buffalo District Life Cycle Project Management staff met with the New York State Department of Environmental Conservation, the U.S. Fish and Wildlife Service Office, and the New York State Office of Parks and Recreation and discussed the length of the construction season, and its impact on fisheries. As a result, NYSDEC indicated they would agree with a larger construction window if adverse impacts on fisheries would be mitigated.

On January 31, 1991, Wendel Engineers, the consultant for the town of Newfane, met with the Corps and discussed a proposed boardwalk along the lakefront. Wendel Engineers unsuccessfully requested that the proposed boardwalk be part of the cost-shared project. The number of slips in the east basin was also discussed. A probable number was 800 slips with potential for more depending on the outcome of the impact assessment of the boardwalk.

On March 7, 1991, Buffalo District staff met with the New York State Office of Park, Recreation, and Historic Preservation and discussed schedule and cost to address Corps higher headquarters' comments on the Draft Reevaluation Report and the items to be furnished by the non-Federal sponsor.

Note: For more information on these and other subsequent meetings, see Appendix E, "Correspondence "

Section II

PLAN FORMULATION

Section 2
Plan Formulation

2.1 GENERAL.

Boating and sport fishing recreational activities in the Olcott Harbor area capitalize on both traditional recreational use of the harbor and the availability of existing marine facilities. Significant growth of these facilities has been hampered for some time because of a number of long-standing water-related problems and needs. This section presents the process by which alternative plans were formulated based on the water and related land resource needs and opportunities at Olcott Harbor. It discusses the range of these problems, needs, and opportunities; and presents the basic criteria and rationale for reevaluating the authorized plan in the context of the development of the local master plan of improvement and of new Corps policies and budget priorities.

2.2 PROBLEMS, NEEDS, OPPORTUNITIES

The mouth of Eighteenmile Creek is exposed to wave action from the north through the east or west. Because the most desirable spaces for berthing boats in Eighteenmile Creek are occupied, many boats moor precariously in the open basin immediately upstream of the piers. The principal factors that adversely impact on these boats, and navigation in general, are surge action in the lake entrance channel, and choppiness created by waves overtopping the existing Federal piers (See Photos 2.1 and 2.2). Additionally, the lack of well-protected mooring facilities, crowded conditions, and lack of public access to the harbor discourage significant development of mooring facilities for recreational or pleasure craft. During winds from the northerly quadrant, waves entering between the piers are reflected from the vertical steel sheet pile face of the piers back into the channel. These reflected waves, combined with waves overtopping the piers, cause extreme rough water conditions in the entrance channel. These conditions are particularly dangerous for transient boats seeking shelter at Olcott. Shoaling in the lower reach of Eighteenmile Creek has caused inadequate depths and widths which are a hazard to navigation. This does not permit full and unrestricted use of the harbor by typical recreational craft and by transient boaters seeking refuge when either cruising or fishing in the area. Submerged remains of one pier of the demolished Main Street bridge that at one time crossed Eighteenmile Creek, and a submerged island (See Photo 2.3) upstream of that bridge have restricted free and easy navigation in the creek channel.

Photo 2.1 Waves Overtopping Federal Pier
Ocotober 1988

Photo 2.2 Rough and Choppy Wave Conditions
1986

Photo 2.3 Shoaling. Note submerged Island marked by buoys

Local interests desire increased depths, width, and protection in the lower creek. The existing entrance to the creek does not provide a dependable all-weather, all-season entrance, even though protected by the two existing Federal piers. Results of boater and household surveys conducted by the Corps in 1988, and interested local officials indicate that an improved harbor would attract more boats, enhance recreational fishing and also provide a much needed harbor of refuge, thus increasing the safety of navigation. Also, given the size of the authorized project and other site-specific physical and environmental constraints, the regional demand for more slips would not be fully satisfied. Additional boat launching ramps and parking facilities are needed to accommodate the increasing number of fishermen who prefer to trailer their boats.

Access to the lakefront in the Newfane coastal area, particularly Olcott, is limited by both topographic and ownership restrictions. The shoreline on both the east and west sides of the harbor and along Eighteenmile Creek are lined with steep bluffs (25 to 60 feet) that significantly restrict the residents, fishermen, and the general public from reaching the water. There are few places of access along Eighteenmile Creek as public and semi-public property ownership account for only 20.3 percent of the 5.4 mile shoreline (Town Local Waterfront Revitalization Program, October 1986). Public access to the east side of Olcott Harbor and the existing east Federal pier is very limited. Only a small portion of the waterfront at Olcott near Hopkins Creek to the west, and Keg Creek to the east is naturally accessible to the water because of extensive bluffs. These bluffs are steep, unstable, and historically subject to erosion caused by wave action. The entire lakefront of Newfane is subject to erratic erosion due to storms, waves, wind, steep slopes, and lack of soils stability.

The majority of the shoreline at Olcott has some protective features (See Photo 2.4) that reduce shoreline erosion and protect properties. Yet the erosion rate, as shown in the town of Newfane's "Local Waterfront Revitalization Program Report," is estimated at an average of 1 foot per year. Unprotected areas have lost 10 to 15 feet of shoreline relative to the protected areas. While significant effort was directed toward Lake Ontario shoreline protection in the mid-70s, erosion to date remains a significant problem as area soils and shale bedrock are quite susceptible to disintegration. Major Lake Ontario shoreline and bluff erosion damage occurred in 1973 as a result of heavy storms. Under a remedial action program, each landowner was offered up to $5,000 to undertake remedial work; the diversity of implementation, however, and lack of continuity in the program compromised its effectiveness. As a result, the town adopted a policy which requires that new developments locate in areas not subject to damage or loss due to erosion. Many of the erosion protection structures built in the coastal area failed to give

Photo 2.4 Protective features at Olcott Harbor, 10/87

the protection for which they were built. Another policy, recognizing the potential adverse impacts of flooding and erosion in the waterfront area, calls for implementation of nonstructural measures to minimize damage to natural resources and properties.

Flooding in the town of Newfane is confined to a small section in the low-lying areas abutting Lake Ontario on the east and west sides of Eighteenmile Creek. These lake flooding conditions are caused by rises in water levels of Lake Ontario combined with heavy rains and high winds. The high winds accompanying Tropical Storm Agnes in June 1972 resulted in flooding the area known as the "flats" in the hamlet of Olcott. Waves ran up the beach east of the harbor causing erosion and flooding extensive inland areas. Local residents tried to combat the rising flood waters by sandbagging, but the surging effect of the waves rendered their efforts ineffective. Other storms in 1973 and 1976 caused severe flooding of many areas along the south shore of Lake Ontario, including Olcott (See Photos 2.5-2.7). Approximately 40 homes and several businesses in the Olcott Harbor vicinity experienced severe damage estimated at $5 million.

In 1973, the Corps of Engineers, under Operation Foresight, assisted the town of Newfane in flood control measures by providing the town with temporary sea walls constructed of riprap and gabion baskets. These baskets were effective in preventing damages during the April 1976 storm. However, the results of a field survey conducted by the Corps in 1984 to determine the condition of the project and evaluate its eligibility for rehabilitation, revealed that layers of gabions had been removed in some sections of the structures. This field survey also revealed that a 50-foot section of the riprap was bulldozed into the lake to give property owners unobstructed view of the Lake. Some residents objected that the location of these structures on the lakefront area would be aesthetically displeasing to property owners in the immediate vicinity. As a result of the survey, it was concluded that these lakefront riprap and gabion baskets built under Operation Foresight had been altered in such a way that their full protective capability had been lost. It was therefore recommended that they be eliminated from any consideration for rehabilitation under Public Law 84-99.

Since completion of the feasibility report in 1978, recreational fishing has undergone tremendous growth. Fishing license sales in Olcott have increased from 1,000 in 1980 to about 14,000 in 1988. This has earned Olcott a reputation as being a premier fishing spot in Western New York. From a revenue point of view, the industry generated about $10 million in 1988 in the Niagara County economy, including $4.6 million in Olcott alone.

PHOTO NO. 2.5

OLCOTT HARBOR, NEW YORK - 17 MARCH 1973 - COTTAGES ON WEST SIDE OF HARBOR SHOWING DAMAGE DUE TO WAVE ACTION INSIDE THE HARBOR.

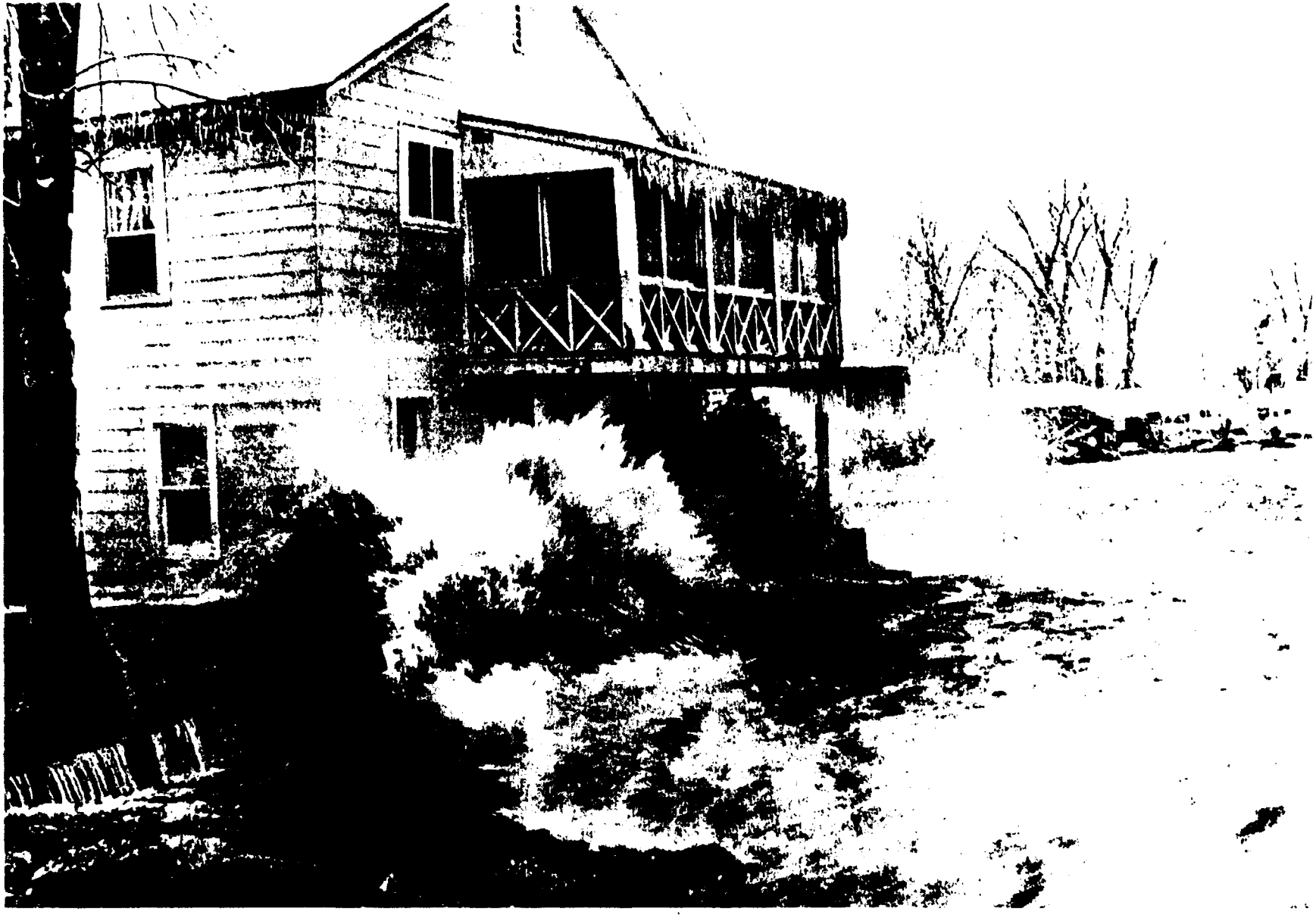


PHOTO NO. 2.6

OLCOTT HARBOR, NEW YORK - 17 MARCH 1973 - WAVE ACTION INSIDE HARBOR, DIRECTLY SOUTH OF ENTRANCE.

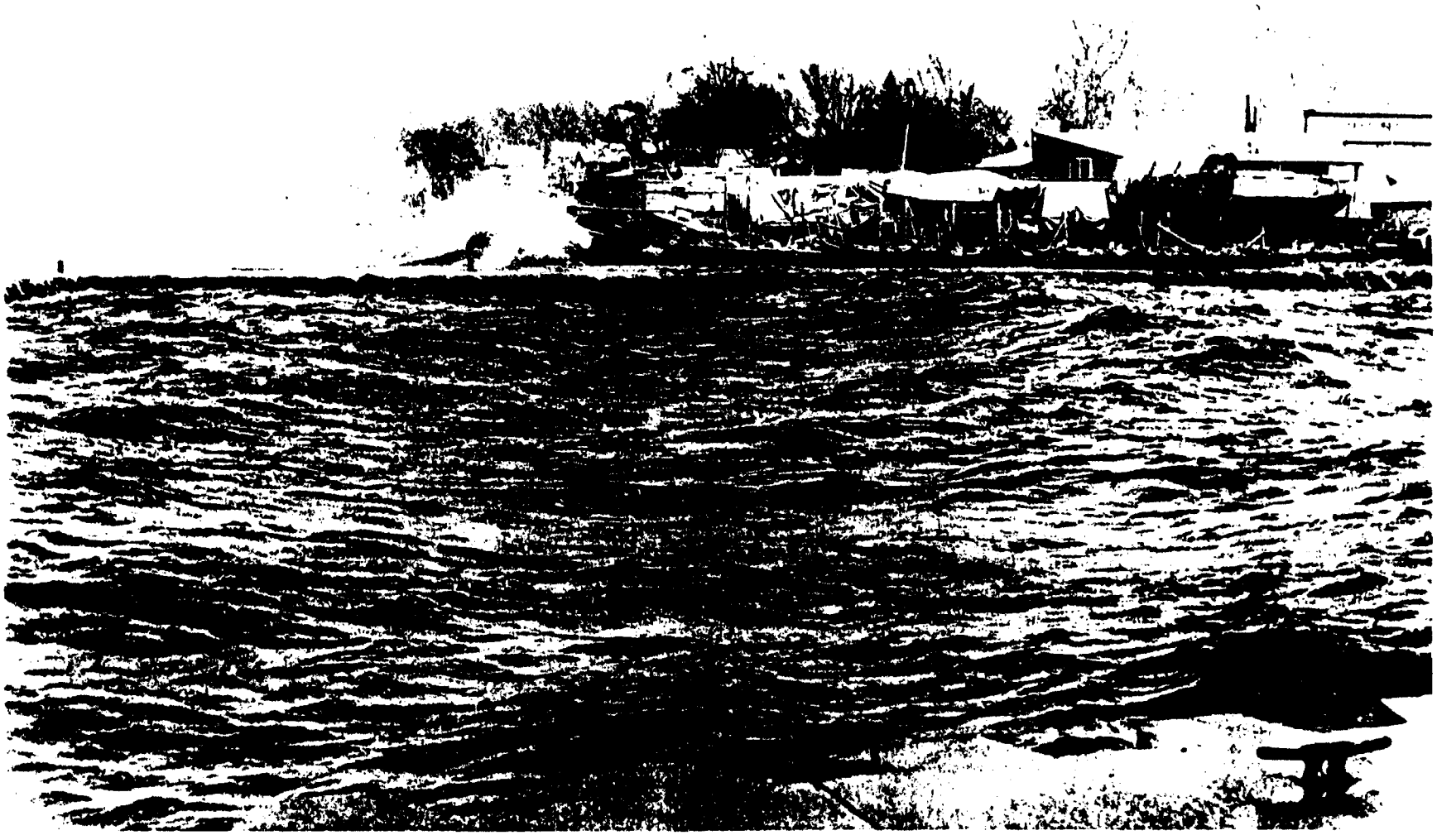


PHOTO NO. 27

OLCOTT HARBOR, NEW YORK - SPRING 1973 - FROM WEST JETTY LOOKING EASTERLY SHOWING WAVE ACTION IN CHANNEL AND ALONG SHORE EAST OF PROJECT.

A State sponsored fish stocking program, started in the late 1970's, began to prosper in about 1980. The influx of thousands of fishermen and their families to Niagara County, and particularly Olcott, became highly visible in 1983 because salmonids such as salmon and trout species offered fishermen one of the best fishery resources of the Great Lakes area. To accommodate this fishermen influx, encourage sport fishing, and realize the inherent economic benefits of its development, Niagara County constructed a 3/4-mile long artificial reef along the west side of Hopkins Creek. The reef has a depth of about 20 feet and extends to a depth of 40 feet, approximately 2 miles from the entrance of Olcott Harbor. Other sport fishing improvements by the town of Newfane include increased parking spaces at Fisherman's Park near Burt Dam and a state-of-the-art fish cleaning station at its launch ramp area. Streambank clean-up and trail improvements along Eighteenmile Creek have also taken place.

In 1983, the town implemented a face-lift program which transformed the hamlet of Olcott's business district on Main Street. Sidewalks and roadways were repaired, new businesses such as a convenience store and a camp ground were opened with an investment of about $850,000. New business ventures have been characterized by investors as being new, robust, and meeting their expectations. The value of land, according to realtors, especially waterfront footage, doubled in value between 1981 and 1986 from $100 a front-foot to more than $200 a front-foot (Buffalo News, August 25, 1986).

2.3 CHANGED CONDITIONS

A. Policy Changes Since 1978

Since completion of the Olcott Harbor feasibility study report in November 1978, approval by the Chief of engineers in June 1980, and authorization of the project by the Water Resources Development Act of 1986, significant changes in Corps policy regarding single-purpose recreation projects have been adopted. These policy changes, whether they pertain to cost estimates, economic evaluation, design criteria, plan evaluation, or cost sharing and local cooperation agreement, will certainly impact the implementation of this project as authorized. Some of these policy changes are discussed below.

a. Methodology for Economic Evaluation - The 1978 economic evaluation of the recreation navigation project at Olcott was based on the "SMALL BOAT FORMULA." This "FORMULA", was developed in the early 1950's and for almost 30 years was the basis for all recreational harbor studies conducted by the Federal Government. The formula was based on the rate of return to boat liveries,

rental fleet, and the size of boats. Nationwide studies were conducted in the early 1950's to determine the annual rate of return on boat liveries which varied from approximately 6 percent to 15 percent per year. The "Small Boat Formula" was appropriate for its time; however, in the 1970's, the limitations of this formula became controversial among natural resource economists. A significant amount of research was devoted to developing a set of procedures consistent with the current economics theories. New procedures developed by the Water Resource Council were published in the Federal Register in March 1983 under the title "PRINCIPLES AND GUIDELINES" (P&G). The P&G recommended three methods for evaluation of recreation projects: the Travel Cost Method (TCM); the Contingent Valuation Method (CVM); and the Unit Day Value (UDV). These methods are required for all studies conducted under P&G. Therefore, a full economic reevaluation using CVM procedure evaluating the authorized Olcott Harbor project was performed based on a close examination of the facts within the current economic market area.

b. Costs for Uncompleted Authorized Projects - Prior to the Water Resources Development Act of 1986, any changes to authorized projects required either approval by the Department of the Army, or authorization by the Congress depending on the purpose and/or cost of the changes. The maximum allowable increase in cost for these changes has been lowered as explained in the paragraph below. New guidance was provided by Engineering circular EC 1105-2-176, dated March 31, 1989, for implementing the new maximum project cost provision of Section 902 of the Water Resources Development Act of 1986.

For instance, the Division Commander had the approval authority to increase or decrease the scope or cost of a project, if such increases or decreases were no greater than 25 percent of the scope or cost last authorized by Congress. The Water Resources Development Act of 1986, Public Law 99-662, dated November 17, 1986 limits all increases in scope or total project cost to 20 percent. Engineering Circular (EC 1105-2-176) allows for cost increases up to 20 percent for further engineering and design refinements necessary to construct the project features that are generally described in authorizing documents.

c. Changes in Cost Sharing - The physical nature of waterways and their importance to the Nation within the overall transportation network structure justifies continuing Federal responsibility for navigation and flood control improvements. This responsibility, however, has been modified by the 1986 Water Resource Development Act (WRDA) which redefines the role and interest of the Federal Government in water resource projects. As reflected in existing Federal water resource legislations, it is generally established that the Federal Government:

. Should undertake only those activities which local levels of Government or private enterprise cannot do as readily or as well from the standpoint of the National interest;

. May construct certain works for which local interests will be willing to pay, or it may provide subsidies (as by permitting repayment at low Federal interest rates);

. May, where special circumstances make such action necessary or desirable in the National interest, provide services which normally would be provided by non-Federal public entities. (Examples are when problems of comprehensive and coordinated development cannot be readily resolved below the Federal level.)

(1) Recreational and Commercial Navigation Cost

In 1978, the Federal government assumed 50 percent of the first costs of general navigation facilities serving recreational traffic, and 100-percent of all costs of project construction for commercial navigation. Also 100 percent of all costs of operation and maintenance of the general navigation features (as established by ER 1165-2-25 and ER 1105-2-20) for both recreational and commercial navigation projects were borne by the Federal government.

Based on the cost sharing provisions of the Water Resources Development Act (WRDA) of 1986, the Federal share of the cost of construction for recreational navigation projects is limited to 50 percent of the costs for the general navigation features (GNF) consisting of breakwaters and jetties, entrance and primary access channels, and turning basins. The Federal share of the cost for construction of commercial navigation projects varies from 40-80 percent depending on the range of water depths where the work would be performed. Further, except for aids to navigation, operation and maintenance costs are no longer a Federal responsibility for recreational navigation projects. Such costs are now the responsibility of non-Federal sponsors.

(2) Local Flood Control Cost

Prior to the 1986 WRDA, the Federal government generally assumed 100 percent of the cost of construction of the structural flood control project. Non-Federal sponsors were required to provide lands, easements, rights-of-way, and relocations of utilities up to the cost of construction and fund 100 percent of the Operations and Maintenance Costs. The non-Federal sponsors for these projects continue to pay 100 percent of the operation and maintenance costs in accordance with regulations prescribed by the Secretary of the Army (33 CFR 208.10). Current laws and regulations, however, require that the Federal government's share

of the cost of construction vary from 50 to 75 percent of the total cost of the structural project, including lands, easements, rights-of-way, relocations, and dredged material disposal areas.

The following table shows a summary of the past and current construction and maintenance cost sharing requirements by purpose.

Table 2.1 - Construction and Maintenance Cost Sharing Requirements

	Traditional Cost Sharing		Current Cost Sharing	
	Federal	Non-Federal	Federal	Non-Federal
1. Recreational Navigation (General Navigation)	50%	50% LERRD	50% (1)	50% (1)
O&M (Recreation)	100%	0	0	100%
2. Commercial Navigation (Depths 20'-45')	100%	LERRD	40-80%	20-60% (2) LERRD
O&M (Commercial)	100%	0	50-100%	0-50% (2)
3. Flood Control (Local Protection Projects)	100%	LERRD	50-75%(1)	25-50% (1)
O&M (Flood Control)	0	100%	0	100%

(1) Includes lands, easements, rights-of-way, relocations, and areas for dredged disposal, and access channel dredging (LERRD).

(2) Depth is the controlling factor for determining Federal and non-Federal shares. For this project, the authorized depth being less than 20 feet, maintenance of commercial navigation features will be 100 percent Federal cost.

B. Physical Changes in Project Area

a. Burt Dam - The Burt Dam and Reservoir, constructed in the 1920's, and once owned by the Olcott Harbor Board of Trade, was rehabilitated in 1988 to generate hydroelectric power. The facility is located 1.9 miles upstream of Olcott Harbor in the village of Burt in the town of Newfane. The Burt Dam is operated 24 hours a day, seven days a week, and produces 1.8 million kilowatts per hour of electricity. A computerized run-of-river operation, equipped with a powerhouse and one vertical 1200 kw Francis turbine, produces enough electricity to light 600 homes. The discharge from the dam flows directly through to the mouth of the Eighteenmile Creek at Lake Ontario in Olcott. In the 1970's when the feasibility study was conducted, the dam was not in operation. Discharges from the dam played a significant role in

the current Corps effort to establish a baseline condition involving parameters such as flow velocity, discharge, and temperature in Eighteenmile Creek.

b. Marina Expansion - Pressure for more slips has caused the marina owners to improve their facilities (See Photo 2.8), despite adverse wave and surge conditions in the lower reach of Eighteenmile Creek, congested conditions and navigation hazards caused by the remains of the old Main Street bridge. The town marina provides public launching ramps, seasonal slip rentals, and docking for transient boaters. The existing launch ramp, parking spaces, grading, and landscaping were improved and expanded in 1978. In 1988, approximately 13,000 cubic yards of material was dredged from Eighteenmile Creek and disposed of under the jurisdiction of the New York State Department of Environmental Conservation and the U.S. Army Corps of Engineers. Today the town marina consists of 48 floating docks for seasonal use, 30 spaces for transient boaters, and 3 double-lane launch ramps. In 1989, McDonough Marine Service and the town of Newfane each applied for a permit for further expansion. These two permits will allow an additional 65 slips. Overall, the aesthetic quality of the harbor area, layout of dock spaces, and the quality of marine services has been upgraded. However, the intense demand for more slips and access to the lakefront is far from being satisfied by these improvements. There is very little remaining unoccupied water area in the lower Eighteenmile Creek for additional expansion, leaving the lakefront area as the only potentially viable option for providing additional facilities to meet the excess boating demand at Olcott. Since this improvement of the lower reach of Eighteenmile Creek occurred prior to implementing the authorized project, benefits claimed in the 1978 report for improvement of Eighteenmile Creek can no longer be counted, because the major portion of these slip rental and related benefits are being realized without the authorized project it is therefore highly probable that the Eighteenmile Creek feature of the authorized project will not be implemented as authorized. The Corps project, however, should provide the needed safe entrance channel and quality service facilities on equal terms for all.

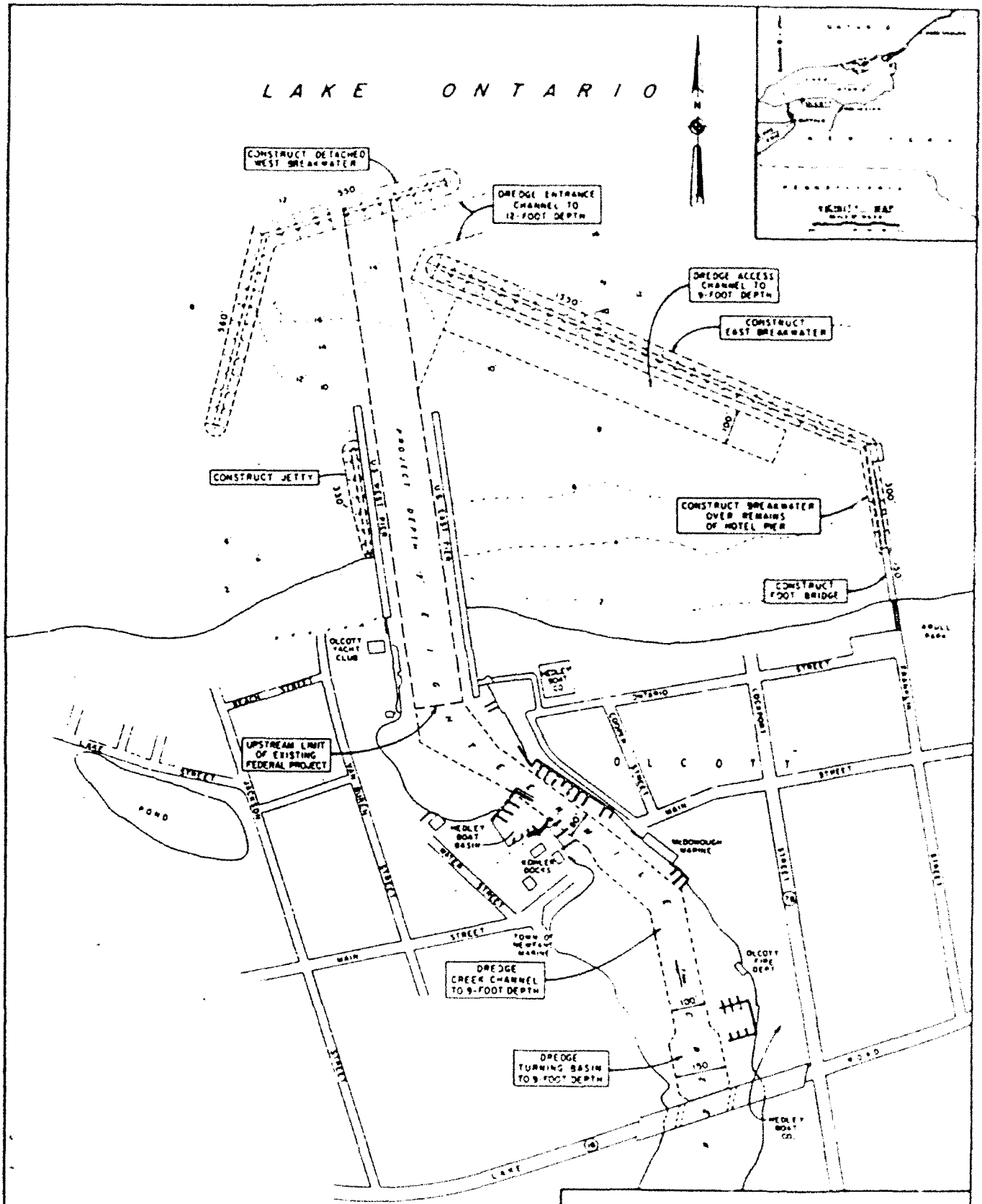
2.4 DEVELOPMENT AND SCREENING OF ALTERNATIVE PLANS

This reevaluation study report addresses these water resource problems, needs, and opportunities in light of the discussed physical and policy changes. This will be accomplished through the development and screening of alternative plans as follows.

A. Description of the Authorized Project (Plan 10).

The authorized modification to the existing project, referred to as Plan 10 (See Plate 2.1), consists of the construction of a 1,100-foot long west detached rubblemound

Photo 2.8 Improved Marina Conditions in 18 Mile Creek
8/88



OLCOTT HARBOR
NEW YORK

AUTHORIZED PLAN #10

U.S. ARMY ENGINEER DISTRICT, BUFFALO

breakwater northwesterly of the creek mouth; a 1,650-foot long east rubblemound breakwater with a walkway and guard rail northeasterly of the creek mouth connected to shore by a 150-foot long foot bridge; a stone jetty 330 feet long adjacent to the U.S. West Pier; the dredging of an irregularly shaped channel between breakwaters 12 feet deep with a minimum width of 100 feet; dredging an access channel parallel to the long leg of the east breakwater; dredging a 1,500 foot channel in Eighteenmile Creek, nine feet deep and generally 100 feet wide with an 80-foot section in the constricted reach downstream from Main Street; and provision of recreational fishing facilities including access facilities, sanitary facilities, and parking areas. This plan would provide 537 slips in the east marina basin, and 265 slips in Eighteenmile Creek for a total of 802 slips.

This plan also includes a land site for disposal of dredged material should the U.S. Environmental Protection Agency recommend upland disposal of possibly polluted material from dredging Eighteenmile Creek. All channel depths are below low water datum (LWD) elevation of 242.8 feet above mean water level at Father Point, Quebec, International Great Lakes Datum (IGLD)-1955. The breakwaters are stone rubblemound construction with cover, core, and bedding layers. The crest width and sideslope for each of the east and west breakwaters is 15 feet and 1 foot vertical and 1.5 foot horizontal, respectively. Their crest heights are 11 feet above LWD for the east breakwater and 16 feet above LWD for the west breakwater.

B. **Rationale for Project Reevaluation**.

The WRDA (PL 99-662) authorized the above described project for meeting the recreational boating needs at Olcott Harbor. As previously mentioned, changes in the demand for recreational boating and fishing, environmental laws, executive and legislative actions; and changes in methodologies for benefit evaluation, physical characteristics of the project area, and other unresolved technical and environmental issues, have affected the economic viability of the project. These changes and intense local interest for project implementation lead to the conclusion that a full project reevaluation should be undertaken. This action gave rise to the various field investigations and technical studies generally described in Section 1 of this report, as required by Corps Regulations (ER 1110-2-100, dated 15 December 1989).

C. **Objectives of Reevaluation**.

The objectives of this reevaluation study were to:

. Address the U.S. Fish and Wildlife Service and New York State Department of Environmental Conservation concerns regarding the impacts of the project on the fisheries resources at Olcott Harbor;

. Reevaluate the economic feasibility of the project in terms of the presently accepted methodologies;

. Redesign the structural features of the project using results from physical model studies;

. Address the post-feasibility physical changes at the project site;

. Reassess the public and potential user attitude; and,

. Identify the best general plan consistent with sound engineering, economic, and environmental principles that would satisfy the recreational boating needs at Olcott based on physical constraints, the desires of local interests, and Corps regulations, policies, and budget priorities.

An interactive process that provides for increased levels of refinement in design, and critique and evaluation by the principal study participants was used to identify the optimal plans. The process also allowed for review and comments by the public at meetings, workshops, and through written communications. Investigation of other water resource problems and needs, such as water quality and flooding was limited to the level necessary to assess their potential impacts on the project area.

D. **Evaluation Criteria**.

Federal policy on multi-objective planning, derived from legislative and executive authorities, defines the National objective for water resource planning and sets forth the conditions and criteria which must be applied when evaluating plans. The planning framework established in the Water Resource Council's "Principles and Guidelines" for planning water and related land resources requires systematic preparation and evaluation of alternative solutions to problems under the objective of National Economic Development (NED) and Environmental Quality (EQ). Within the structure of the overall planning framework, the following criteria relative to general policies, technical engineering, economic principles, social and environmental values, and local conditions were established.

a. Technical Criteria - Technical criteria consist of the following:

(1) Design wave and lake level should be based on the recreational boating season which generally extends from April to November for Lake Ontario;

(2) The 20-year recurrence significant deep-water wave height in combination with the 10-year lake level, should be used for design of structures;

(3) Interior waves shall be limited to a height of 1.0 foot or less for safe and efficient operation of the marina facility;

(4) Final design of the selected plan will be based on the model study performed by the Corps Waterways Experiment Station;

(5) Sideslopes of 1V:1.5H or 1V:2H or both should be used as appropriate in the design of the stone rubblemound structures; and,

(6) Water temperature, velocity, turbidity, and flow pattern should not significantly deviate from the without project conditions.

b. Economic Criteria - Economic criteria consist of the following:

(1) Project benefits should exceed project costs;

(2) Each separable unit of improvement or purpose should provide benefits at least equal to its cost;

(3) The recommended plan should yield the maximum net benefits possible within the formulation framework;

(4) The costs for alternative plans of development should be based on revised layouts, estimates of quantities, and current price levels. These costs should not exceed the maximum cost limitation allowed by Section 902 of the 1986 Water Resources Development Act;

(5) The benefits and costs should be in comparable economic terms to the fullest extent possible. A 50-year economic life and 8.875 percent annual interest rate and/or the current interest rate are used for the economic evaluation; and,

(6) The base case for comparison of alternative plans is the "do-nothing" (no-action) plan.

c. Socioeconomic and Environmental Criteria - Significant adverse and beneficial economic, social, and environmental effects of the harbor improvement project should be considered and evaluated during this reevaluation study (Reference: National Environmental Policy Act of 1969 (PL 91-190) 42 USC 470a; and Section 122 of the River and Harbor Act of 1970 (PL 91-611)). Suitable mitigation measures should be formulated as applicable.

d. Cost-Sharing Criteria - Project cost-sharing and financing requirements, as specified in the Water Resources Development Act of 1986 (PL 99-662) are as follows:

(1) Navigation (Recreational) - Non-Federal interests, for a recreational navigation project, or separable elements thereof, must pay 50 percent of the joint and separable costs of constructing the General Navigation Features (GNF) allocated to recreational navigation during the construction period. The non-Federal sponsors must accomplish or pay for 100 percent of these features' Operations and Maintenance costs allocated to recreational navigation.

- Local interests must provide all lands, easements, rights-of-way, relocations, and dredged material disposal areas (LERRD), including LERRD required for fish and wildlife mitigation. The value of LERRD contributions are included in the 50 percent non-Federal share of the project costs assigned to recreational navigation.

- The non-Federal sponsors must provide and maintain, without cost to the Federal Government, all project facilities other than the GNF needed to achieve anticipated project benefits;

(2) Navigation (Commercial) - The non-Federal share for commercial navigation projects is based upon project depths, and varies from 20 to 60 percent of the cost of the GNF allocated to commercial navigation during the construction period. However, at projects where depths are not modified, non-Federal interests must provide a share of the GNF costs, using the appropriate percentage that correspond to the authorized or existing project depth, which ever is greater; and,

e. Local Sponsor - Formal assurances of local cooperation must be furnished by a municipality or other public agency fully authorized under State law to give such assurances and financially capable of fulfilling all items of local cooperation. The New York State Office of Parks, Recreation, and Historic Preservation is the designated local sponsor for Corps-built recreational navigation projects in New York State, and, as such, would be the local sponsor for any proposed recreational navigation project at Olcott Harbor.

f. Social Well-Being - The Selected Plan should promote increased recreational opportunities for boating and fishing, and increased public visitation in and around the immediate harbor area.

g. Regional Development - The Selected Plan should be compatible with local efforts in the development of the local master development plan which revolves around the construction of the Corps harbor improvement project. The Corps project should take into consideration transients whose visitations have a significant impact on regional development as it relates to supportive facilities for recreation.

h. Other Considerations/Requirements

(1) Adequate dockage space (800 square feet/dock) including maneuvering area and access channels in accordance with accepted practice;

(2) Marina should have at least 800-slip capacity to achieve economic justification;

(3) Provide adequate and sufficient launching ramps and public landing with service facilities;

(4) Provide sufficient convenient parking spaces for optional utilization of the marina facility. A maximum of one parking space per slip was established as the preferred standard for this project; and,

(5) Support facilities such as excavation for dockage and access areas, dock construction, construction of service facilities and launching ramps, and parking facilities for boaters are 100 percent non-Federal costs. These costs are considered associated costs and are not part of the cost-sharing requirements.

2.5 PROJECT PLANS/CONCEPTS CONSIDERED

At the beginning of the Preconstruction Engineering and Design (PED) phase when initiating the reevaluation of the authorized project, a number of meetings were held to encourage and facilitate agency and public input in the reevaluation study. Several ideas were expressed in favor of expanding the project from a small localized marina to a larger regional marina. The principal reasons were that spaces for slips development in Eighteenmile Creek were no longer available, the new method for evaluating benefits would yield less benefits, and costs of construction were escalating at rapid rates. Although recreation was the primary water resource need for which solutions were sought, and the constraints imposed by the scope of the authorized project, commercial and other water resource needs

comtemplated and discussed by various other interested groups and individuals. Every individual or entity was given an opportunity to input into the process of reformulating a consensus plan consistent with current Corps policies, guidelines, and budget priorities. The alternative plans and/or concepts considered and screened in the reformulation process were as follows:

A. The Authorized Project (Plan 10)
B. Recreational/Commercial Harbor Alternative Concepts
C. Other Modifications to the Authorized Project (Plans 10A and 10B)
D. No-Action Plan

The following discussion lead to the elimination or further consideration of each one of these plans and/or concepts.

A. **The Authorized Project (Plan 10)**.

This plan (See Plan 10 shown on Plate 2.1), previously described in paragraph 2.4 of this section, was formulated in 1978. Given the 10-year period that elapsed since completion of the feasibility report, the plan needed to be reaffirmed or reformulated. As discussed above, and as a result of several meetings (See appendix E for summary of these meetings) involving the Corps, the local sponsors, interested State and Federal agencies, and individuals, it became evident that a general reevaluation study was needed to address the economic, engineering, and environmental concerns, as well as the desires of the local sponsor.

The increase in demand for boat slips in Niagara County and four other contiguous counties of Erie, Monroe, Orleans, and Genesee rendered the project incapable of fulfilling all the needs of recreational boating. In addition, the sport fishing industry, in Olcott particularly, grew to a multi-million dollar industry in the 10-year period after completion of the feasibility study report. The benefit-to-cost ratio was expected to change: factors influencing this include not only the economic market conditions, but also the new methodologies and design criteria required for evaluation of benefits and increases in the cost of the project. For instance, the Corps of Engineers' Planning Guidance Notebook required that the Travel Cost Method (TCM) or Contingent Value Method (CVM) be used as opposed to the Small Boat Formula used in 1978 to evaluate the benefits. (See ER 1105-2-100) In addition to the above, the U.S. Fish and Wildlife Service and New York State Department of Environmental Conservation both strongly reiterated their concerns regarding possible adverse impact of the project on the without project conditions. They believed that these conditions were good for the flourishing fisheries' industry and habitat. These agencies indicated that they would object to any project that will have significant adverse impacts on water temperature,

velocity, circulation pattern, and turbidity; these environmental parameters being key fish attractants to the harbor. In view of these factors, other physical facts previously stated in paragraphs 2.3A.a, 2.3B.b, 2.4B, and 2.5, and the local interests desire to have a refined plan that will not impede further development of the harbor, the authorized plan 10, as described above, was considered inadequate to fulfill the project purpose without appropriate modifications.

B. **Recreational and Commercial Harbor Alternative Concepts.**

Over the years, several residents of the town of Newfane have contemplated the idea of a Lakeport alternative at Olcott Harbor. This commercial Lakeport idea was presented at a workshop meeting in July 1988 between State, County, and Town officials, interested citizens, potential investors, and the Corps of Engineers, Buffalo District. The concept was resolved into two alternative concepts:

a. Alternative Concept 1 - A commercial vehicle, private vehicle, passenger ferry service between Toronto, Canada, and Olcott Harbor. Under this alternative (See Photo 2.9), commercial vehicle traffic would be a major user of the ferry service; and,

b. Alternative Concept 2 - A passenger ferry service and private automobile ferry service between Toronto, Canada, and Olcott Harbor.

The commercial vehicle ferry service component of Alternative 1 was rejected by the participants because, in their view, it would tend to disrupt the quiet, residential suburban life-style being enjoyed by the Olcott community. Other drawbacks for the commercial ferry service were that it would require several acres for a truck marshaling area and "Customs" area, and require vessels with a minimum length of 400 feet for cargo. These cargoes were considered detrimental to the quality of life and the quiet environment at Olcott. Further, initial feasibility studies conducted by regional, State, and County agencies (See Booz, Allen, and Hamilton final feasibility report dated March 1986) indicated such a service was not feasible from a transportation cost perspective. These studies considered industrial and rail freight access to a ferry across the lake to Canada; and included a 1,300-foot pier, a rail yard, outer breakwalls for mooring protection and dockage for 300-foot ships. It also included an extension of the east Federal pier and extension of Transit Road, east of Olcott (Reference: Local Waterfront Revitalization Program report, dated October 1986). This referenced report concluded that, although the lake port proposals intuitively offered significant employment and industrial growth prospects to the Town, they also may be potentially incompatible with the recreational projects and

Photo 2.9 Artist Rendering of Commercial and Recreational Harbor Project

coastal activities presented herein. Much of the renovation efforts focused in the east portion of Olcott would be compromised by the Lakeport and its rail infrastructure. This would substantially alter the uses and water-oriented recreation nature of the area and further sever the hamlet. In addition, local harbor access for the lake and navigation would be disrupted, possibly reducing the use and attractiveness of the area. Several residents of the town of Newfane, however, indicated preference for the passenger ferry service as being a more realistic proposal. Most participants viewed the passenger ferry service as one option that would have positive impacts on the economy of the Town and Niagara County; and that also would help solve the traffic congestion problem between Fort Erie and Niagara Falls, Ontario, Canada, and Buffalo and Niagara Falls, New York.

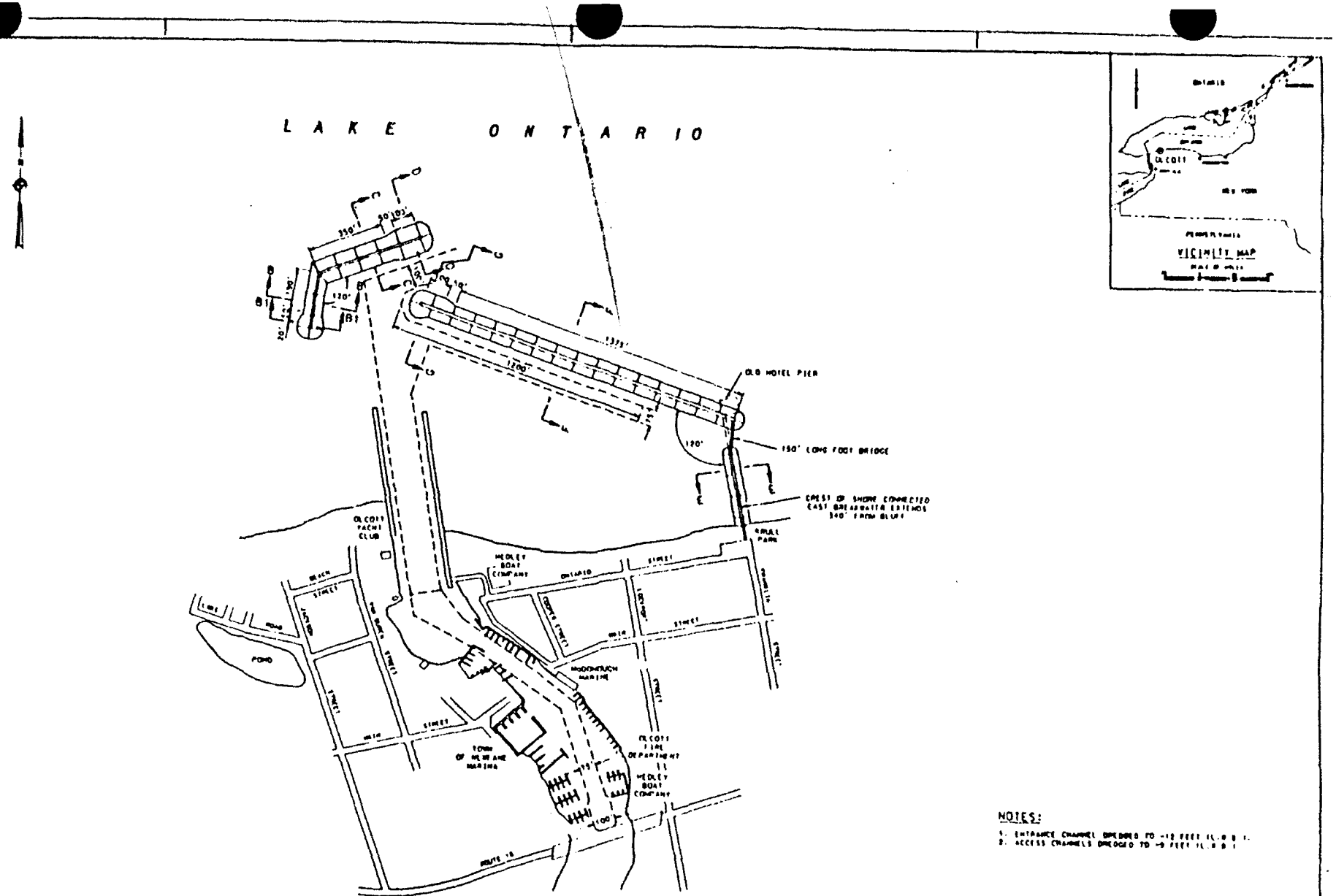
Further consideration was given to the idea of a "private auto/passenger" ferry service at a subsequent meeting in August 1988 among State representatives, the County, Town officials, and the Buffalo District. It was agreed that "passenger only" ferry service should be pursued in the reevaluation of the authorized project.

There have been many discussions over the last few years regarding the need for a new shipping port on Lake Ontario as an extension of the Buffalo Harbor for rail freight transfer between the U.S. and Canada. A number of conceptual plans utilizing the existing harbor at Olcott were developed by local residents. Although various opinions of the ferry service were formed prior to this reevaluation study, every interested individual or entity was provided the opportunity to express his or her views as part of the Corps' public involvement program for this study. After consideration of all the input provided, it was concluded that both the commercial and passenger vehicle ferry service idea would not be considered any further under this project authority. However, inclusion of an excursion boat in the reformulation process would be given further consideration, as the "passenger only" service idea was more acceptable to the desires of the local interests (See Correspondence Appendix E).

C. **Other Modifications to the Authorized Project (Plan 10A and Plan 10B)**.

As the authorized project was considered inadequate to meet the boating demand and other recreational demands at Olcott, the following modifications to the authorized plan were considered in the reevaluation study consistent with Corps policies and guidelines.

a. Plan 10A (East Mooring Basin) - This plan (See Plate 2.2) consists of breakwaters, a pedestrian bridge, guardrails, concrete walkways, bridge access ramps, sanitary facilities, parking areas, and navigation channels.



PLAN

SCALE: 1" = 200'

NOTES:

1. ENTRANCE CHANNEL DREDGED TO -12 FEET (L.W.R.)
2. ACCESS CHANNELS DREDGED TO -9 FEET (L.W.R.)

OLCOTT HARBOR
OLCOTT, NEW YORK

PLAN #10A

U.S. ARMY ENGINEER DISTRICT BUFFALO
OCTOBER 1989

The breakwall configuration of the authorized Plan 10 has been realigned such that the pedestrian bridge would be supported by both the east breakwater and a shore-connected east breakwater. The east marina basin would accommodate at least 800 boats in order to satisfy the regional slip demand. The shore-connected east breakwater was also considered to reduce sediment migration into the east basin. Other design modifications were made to the breakwaters to meet design criteria consistent with recreation needs at the lowest possible costs.

The west detached breakwater consists of a shoreward leg 260-feet long and a lakeward leg 500-feet long. The two legs form an interior angle of 120 degrees. The shoreward leg consists of a trunk segment, a head segment, and a transition segment which joins the head to the trunk. A typical cross section and details are shown on Plate 2.3. The lakeward leg consists of a trunk segment, a head segment, and a transition segment which joins the head to the trunk.

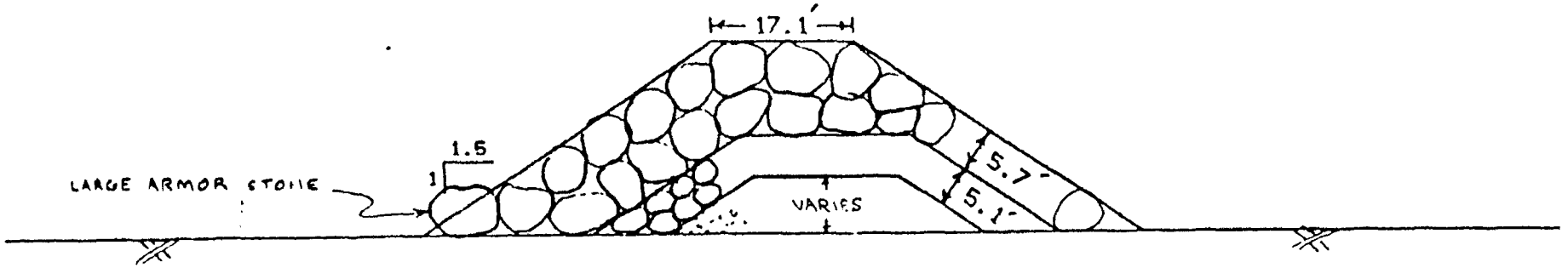
The detached east breakwater and the shore-connected east breakwater form an interior angle of 120 degrees. The entire length of the shore-connected breakwater and also a small portion of the detached breakwater would be constructed over the remains of the old hotel pier. The detached east breakwater has a crest length of 1,525 feet. It consists of a trunk segment, a head segment, and a transition segment which joins the head to the trunk. Typical cross sections and details are shown on Plate 2.4.

The crest length of the shore-connected east breakwater is 340 feet. Typical cross sections and details are shown on Plate 2.5. The shore-connected east breakwater would be linked to the east breakwater by a 150 foot long pedestrian bridge. The open water below the bridge would be about 100 feet wide with an average vertical clearance of +10 feet LWD. Crest elevations for the east breakwater and the shore-connected breakwater would be +14.5 and +12.9, respectively.

The entrance channel would be 12 feet deep and 100 feet wide. The access channel connecting the entrance channel and east mooring basin would be 9 feet deep, 75 feet wide, and 1,200 feet long. The channel in Eighteenmile Creek connecting the existing Federal channel with the turning basin would be 9 feet deep, 75 feet wide, and 1,300 feet long. The turning basin would be 9 feet deep, 100 feet wide, and 100 feet long.

LAKE SIDE

HARBOR SIDE



CREST ELEVATION (FT.) .....) 14.5 LWD

BOTTOM ELEVATION (FT.) .....) VARIES FROM -9.0 TO -10.0

ARMOR STONE (LBS.) .....)	18000. TO	40000.
UNDERLAYER STONE (LBS.) ...)	1200. TO	4000.
BEDDING STONE (LBS.) .....)	2.0 TO	125.

Notes

1. Specific gravity of stone = 2.48

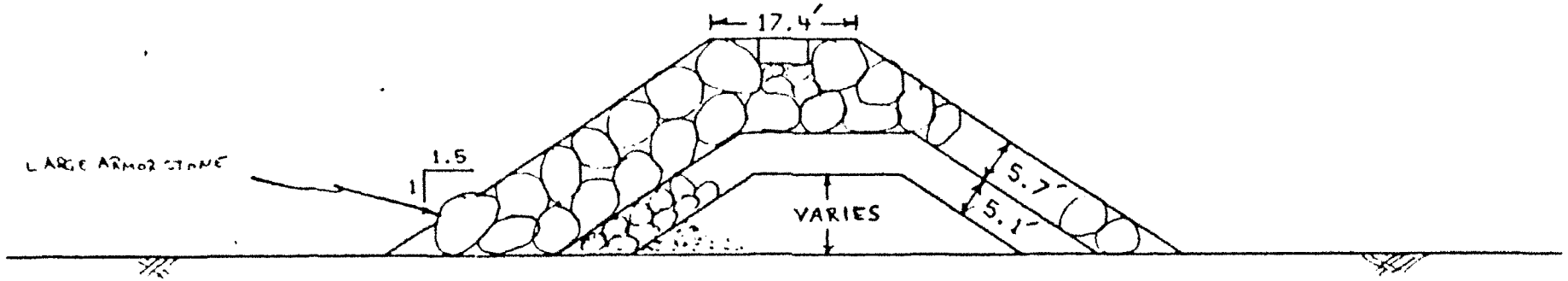
SCALE = 0.050000 INCHES PER FOOT

OLCOTT HARBOR NY
PLAN 10A
SECTION B-B

U. S ARMY ENGINEER DISTRICT BUFFALO

LAKE SIDE

HARBOR SIDE



CREST ELEVATION (FT.) .....) 14.5 LWD

BOTTOM ELEVATION (FT.) .....) VARIES FROM -6.0 TO -12.0

ARMOR STONE (LBS.) .....) 18000. TO 40000.

UNDERLAYER STONE (LBS.) ...) 1200. TO 4000.

BEDDING STONE (LBS.) .....) 2.0 TO 125.

Notes

1 Specific gravity of stone = 2.68

2 Guardrail on harbor side of walkway is not shown but should be included as part of the project

3 Concrete walkway is 6.8 ft wide by 3.8 ft thick.

SCALE = 0.050000 INCHES PER FOOT

OLCOTT HARBOR NY

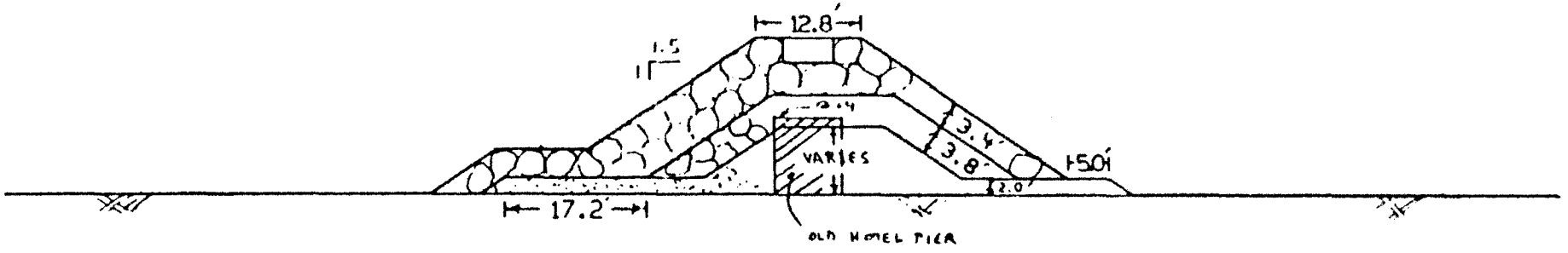
PLAN 10A

SECTION F-F

U. S. ARMY ENGINEER DISTRICT BUFFALO

LAKE SIDE

HARBOR SIDE



CREST ELEVATION (FT.)	12.9 LWD
BOTTOM ELEVATION (FT.)	VARIES 0.0 TO -6.0

ARMOR STONE (LBS.)	4000. TO	8000.
UNDERLAYER STONE (LBS.) ...	700. TO	1500.
BEDDING STONE (LBS.)	2.0 TO	125.

Notes

1. Specific gravity of stone = 2.68
2. Guardrail on harbor side of walkway is not shown but should be included as part of the project.
3. Concrete walkway is 6.8 ft wide by 3.8 ft high.

SCALE : 0.050000 INCHES PER FOOT

OLCOTT HARBOR NY
PLAN 10A
SECTION E-E

U S ARMY ENGINEER DISTRICT BUFFALO

b. Plan 10B (East and West Mooring Basins) - The modifications to Plan 10 that resulted in Plan 10A were utilized in the derivation of Plan 10B (See Plate 2.6). In addition, Plan 10's west breakwater was further modified and connected to shore to provide for fisherman access, and a west marina basin to accommodate a greater number of boats than Plan 10A. Consequently, a wider entrance channel was considered to effectively manage the increase in boat traffic.

This plan consists of breakwaters, two pedestrian bridges, guardrails, concrete walkways, bridge access ramps, sanitary facilities, parking areas, and navigation channels.

The east breakwaters of Plan 10B are the same as those of Plan 10A.

The detached and shore-connected west breakwaters would be connected by a 150-foot long pedestrian bridge.

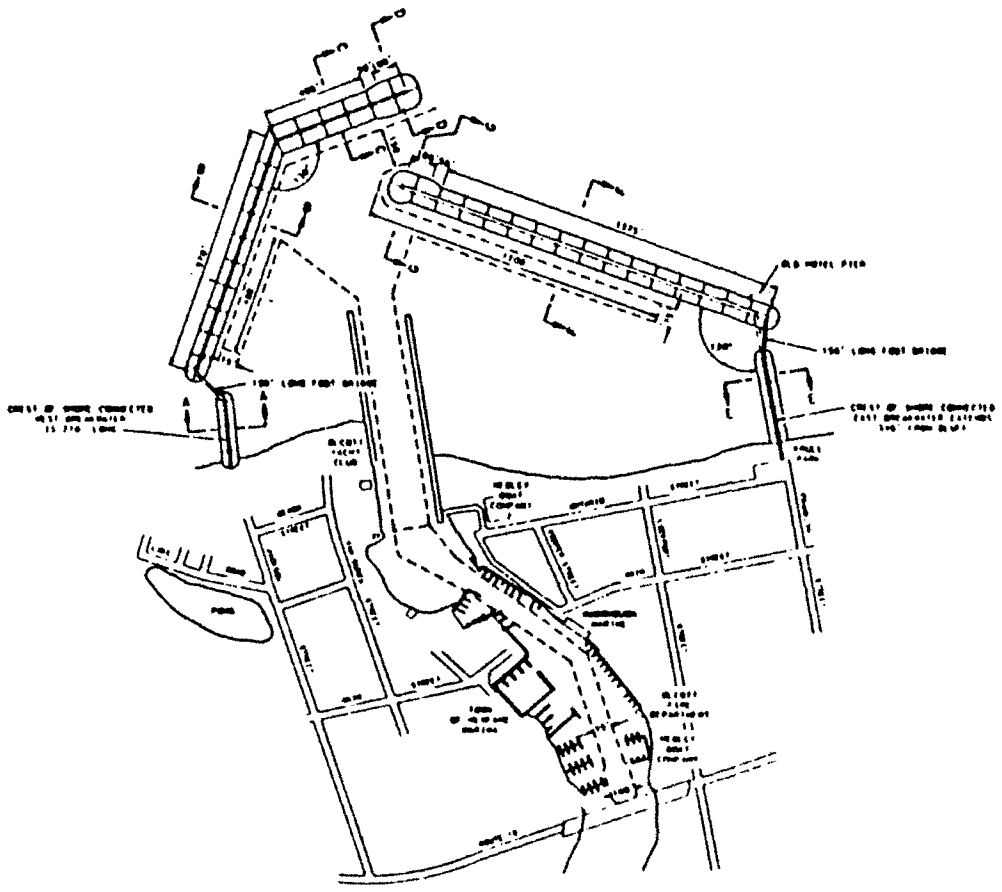
The detached west breakwater consists of a shoreward leg 970-feet long and a lakeward leg 550-feet long. The two legs form an interior angle of 130 degrees. The shoreward leg has a sideslope of 1.5H:1V along its entire length. The lakeward leg consists of a trunk segment, a head segment, and a transition segment which joins the head to the trunk. Typical cross sections and details are shown on previous Plate 2.3. The crest elevations of both the west breakwaters would be +14.5.

The shore-connected west breakwater would be 270 feet long with a sideslope of 1.5H:1V. Crest elevation of the shore-connected west breakwater is +13.6 feet.

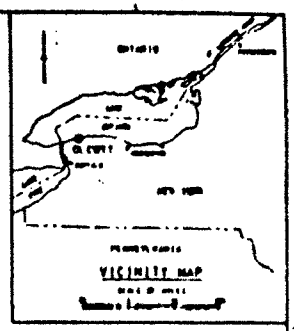
The entrance channel would be 12 feet deep and 150 feet wide and terminate in an irregularly shaped, 12-feet deep maneuvering basin. The access channel leading from the maneuvering basin to the west mooring basin would be 9 feet deep, 75 feet wide, and 480 feet long. The access channel leading from the maneuvering basin to the east mooring basin would be 9 feet deep, 75 feet wide, and 1,200 feet long. The channel in Eighteenmile Creek connecting the existing Federal channel with the turning basin would be 9 feet deep, 75 feet wide, and 1,300 feet long. The turning basin would be 9 feet deep, 100 feet wide, and 100 feet long.

D. **No-Action Plan**

The no-action plan is the base condition. In the absence of a signed Local Cooperation Agreement (LCA) between the Corps of Engineers and the New York State Department of Parks, Recreation, and Historic Preservation, the base condition will probably



PLAN



NOTES:

OLCOTT HARBOR
OLCOTT, NEW YORK

PLAN #108

U.S. ARMY ENGINEER DISTRICT BUFFALO
OCTOBER 1989

prevail. As a result, no significant harbor improvement would be implemented in the near future that would meet the economic criteria and planning objective set for the area. No other public agency or private developer has indicated they would be willing or financially able to undertake the proposed improvements.

E. **Summary (Plans/Concepts Eliminated or Studied Further)**

Three of the six plans or conceptual plans discussed above were not given further consideration for the reasons cited above. They are:

the authorized plan 10;

the Commercial Vehicle, Private Vehicle Passenger Ferry Service;

and the Passenger and Private Automobile Ferry Service.

Some local residents and Canadian business entrepreneurs were still interested in a commercial harbor at Olcott at the time of preparation of this report.

The other three Plans 10A, 10B, and the No-Action Plans were carried further through the Preconstruction Engineering and Design phase for full evaluation of their engineering, socioeconomic and environmental efficiency. However, Plan 10, being the authorized NED plan, will be evaluated in the preliminary evaluation of Plans 10A and 10B although it was considered inadequate to fulfill the project purpose without appropriate modifications. Also, Plan 10 will be included in the comprehensive table which will display a comparison of project features, costs, and benefits between the current NED plan and the selected modified plan.

2.6 PHYSICAL MODEL STUDIES

A. **Introduction**

Three hydraulic model studies were conducted at the Corps' Waterways Experiment Station in Vicksburg, Mississippi during the periods August 1988-December 1989, and June 1990-October 1990. During the first period, two three-dimensional physical model studies were conducted to develop the optimum breakwater configuration that would: (1) meet small boat harbor wave height criteria that is to protect against wave entering the new proposed harbor entrance; and (2) meet environmental criteria to achieve minimum deviation from the baseline environmental parameters such as creek flow patterns, water temperature, turbidity, and velocity.

During the second period, one two-dimensional model study was conducted to primarily investigate the wave transmission response of the proposed breakwaters. Tests to check the structural stability of the breakwaters were also conducted. Three basic harbor configurations were tested: the without-project condition, Plan 10A, and Plan 10B. Plans 10A and 10B were modified based on the results of the model studies.

B. The Physical Model and Appurtenances

The 1:60 scale three-dimensional physical model reproduced approximately 7,000 feet of the Olcott Harbor shoreline. It included the existing harbor entrance and the lower 3,000 feet of Eighteenmile Creek. Underwater bathymetry in Lake Ontario was reproduced to an offshore depth of -24 feet with a sloping transition to the wave generator pit elevation of -60 feet. The total area reproduced in the model was approximately 13,930 square feet, representing about 1.8 square miles in the prototype. A general view of the model is shown on Photo 2.10. Vertical control for model construction was based on Low Water Datum (LWD), elevation 242.8 feet above mean water level at Father Point, Quebec (International Great Lakes Datum, 1955). Model waves were generated by an 80-foot-long, unidirectional spectral wave generator. A water circulation system (Plate 2.7) consisting of a 6-inch, perforated-pipe water-intake manifold, a 3 cubic foot per second (cfs) pump, and a magnetic flow tube and transmitter, was used in the model to reproduce steady-state flows through the creek channel and the harbor area.

Tests for structural stability and wave transmission response of the breakwaters were conducted at a scale 1:20 model to prototype. All tests were conducted in a concrete wave flume 3 feet wide and 118.3 feet long. An Automated Data Acquisition and Control System was used to generate and transmit control signals, monitor wave generator feedback, and secure and analyze wave height data at selected locations in the models. Detailed information on the three model studies is provided in the Corps Waterways Experiment Station Technical Reports TR CERC-90 and TR CERC-90-1.

C. Model Investigation of Coastal Design

The existing harbor was initially modeled to evaluate the severity of the existing conditions. Waves were generated from five directions: 318°, 334°, 343°, 42°, and 24°. Wave heights were in the range of 4 feet to 11 feet. Two water levels were used, +2.8 and +4.0, in the model tests. The +2.8 level was used in conjunction with test waves that occur during the fall and winter seasons; and the +4.0 level was used with test waves that occur during spring and summer seasons. These water levels were used in conjunction with flood flows through Eighteenmile Creek. The most critical wave direction based on test results was found

to be N343°W. This direction resulted in the most severe wave conditions at the harbor. Currents were also measured up to 4.8 feet per second (fps) at the existing entrance. Many of the variation plans meet the established wave criteria of 1.0 foot within the proposed marina, and 3.0 feet at the proposed entrance. However, wave attenuation capability and costs governed WES optimization of the two basic configurations (a mooring area east of the existing entrance, and an east and west mooring area on both sides of the existing entrance).

a. Model Tests.

Comprehensive tests were conducted for existing conditions (See Plate 2.8) and the two basic harbor configurations: Plan 10A (Configuration 1, Plate 2.9) and Plan 10B (Configuration 2, Plate 2.10).

Variations of these two basic configurations resulted in 23 test plans referred to in the model study report as Plan 1 through Plan 23. These variations consisted of changes in the lengths and crest elevations of the proposed breakwaters. Wave patterns, magnitude, and sediment tracer pattern were obtained. Also the creek flow velocities, and water surface elevations were obtained for some to these plans.

b Model Testing Results.

(1) Existing Condition - Results of all wave heights tests, tracer tests, current tests conducted for existing conditions are presented in detail in the model study report (TR CERC-90-1). However Table 2.2, following, shows maximum wave heights read at installed gages for the spring, summer, fall boating season wave conditions for areas:

along the west breakwater (Gage 2);

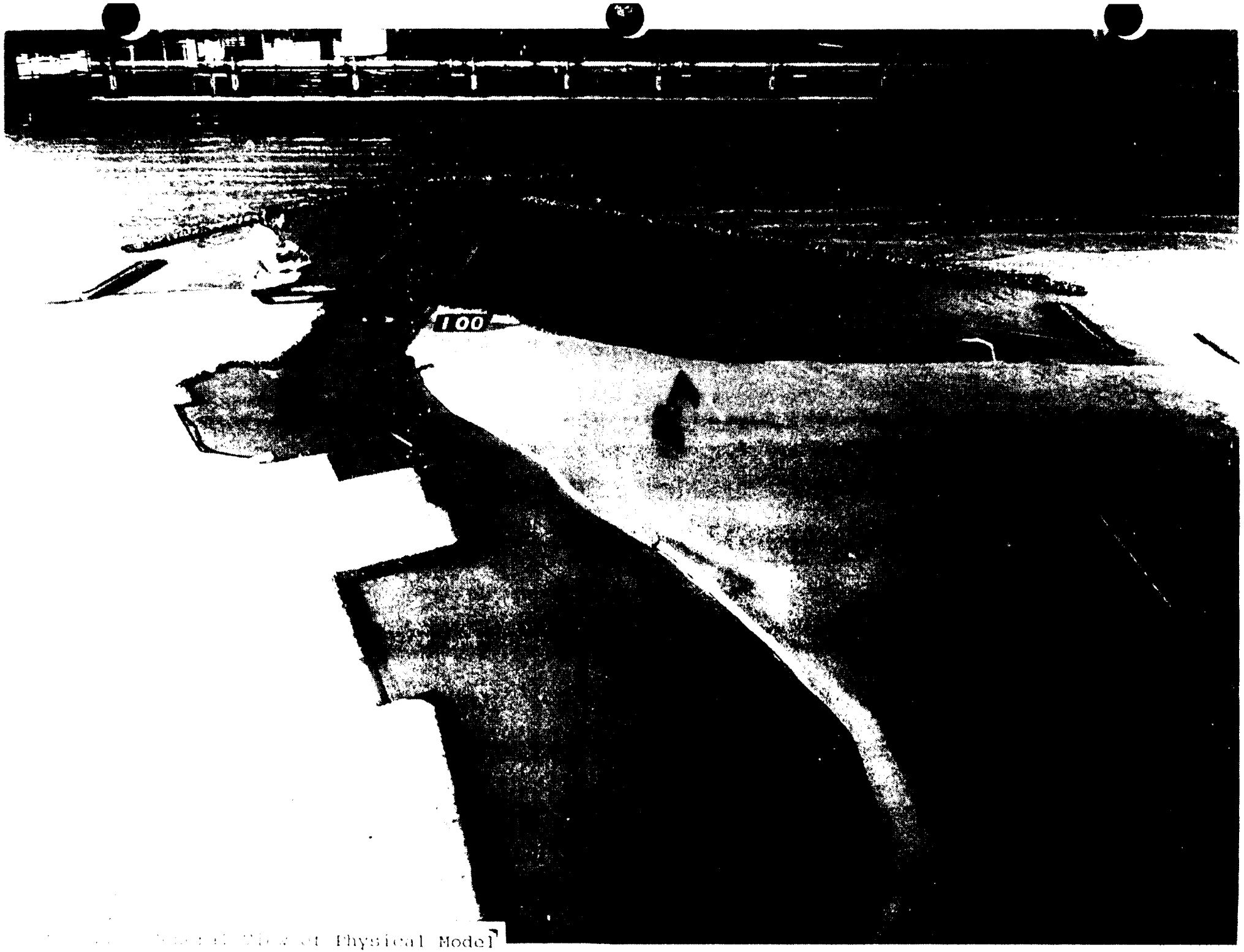
the east breakwater (Gages 3-5);

the entrance of the existing channel (Gage 8);

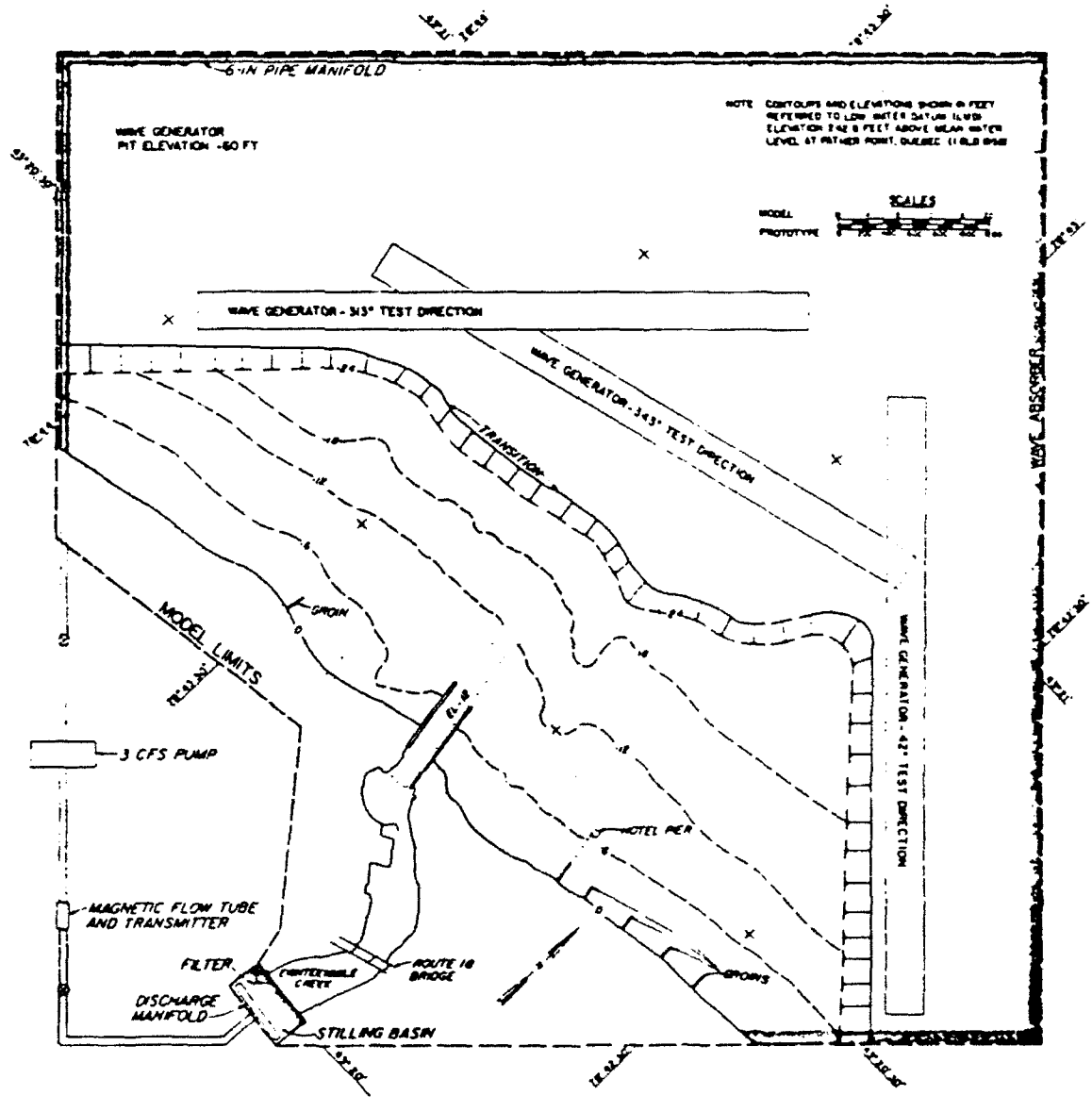
the channel within the existing Federal piers (Gages 9 and 10); and

at the first creek bend (Gage 11).

Considering all test waves, the maximum wave heights were 9.9 feet along the centerline of the proposed west breakwater; and 8.0 feet along the centerline of the proposed east breakwater. Typical wave, current and sediment tracer patterns for existing conditions are shown on Photos 2.11-2.12 (Critical condition: 343° wave approach angle).



Physical Model



Water Circulation System

PLATE 2.7

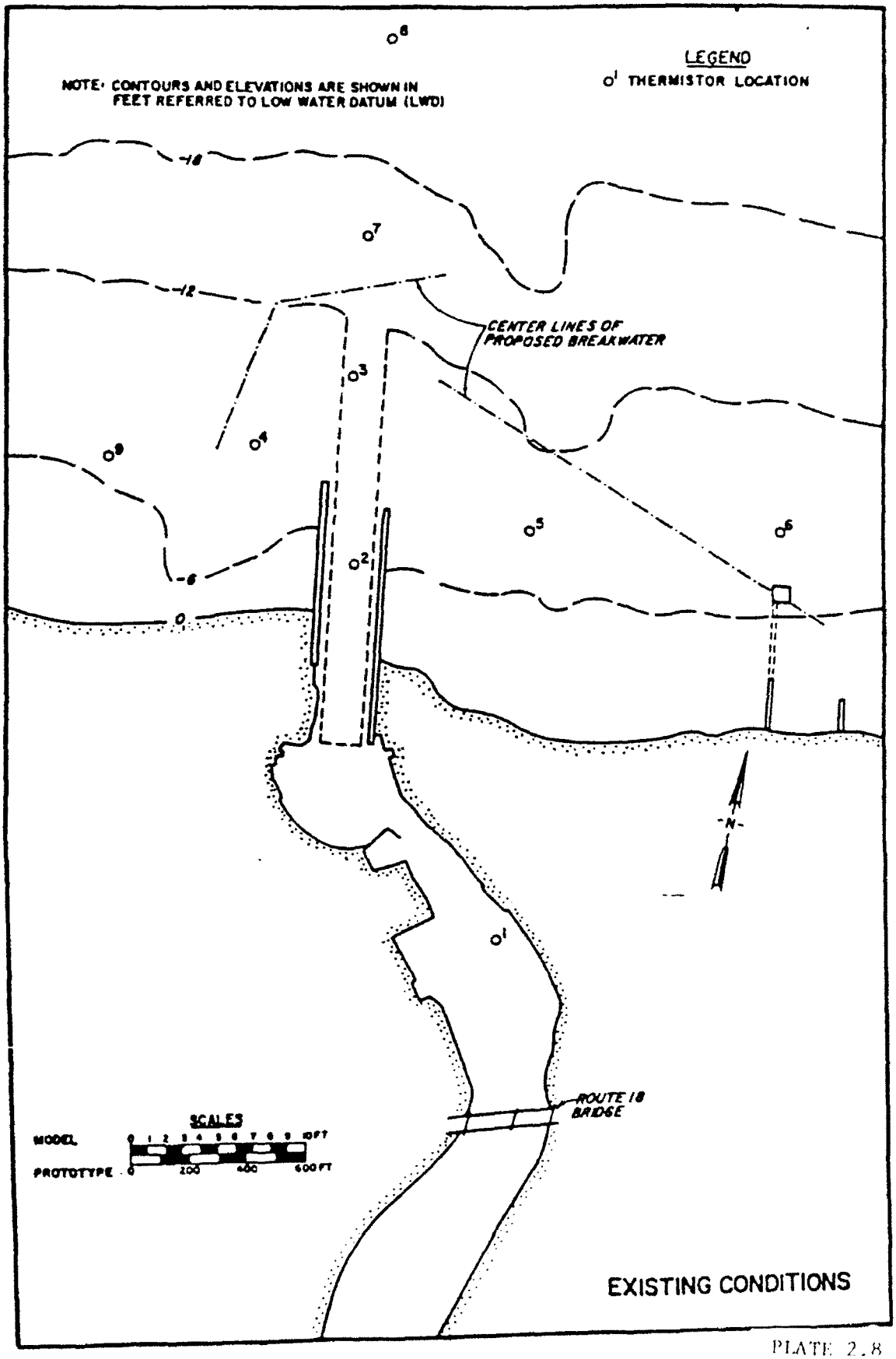

LEGEND
o¹ THERMISTOR LOCATION
NOTE: CONTOURS AND ELEVATIONS ARE SHOWN IN FEET REFERRED TO LOW WATER DATUM (LWD)
-18
-12
-6
0
CENTER LINES OF PROPOSED BREAKWATER
o¹
o²
o³
o⁴
o⁵
o⁶
o⁷
o⁸
N
ROUTE 18 BRIDGE
SCALES
MODEL
PROTOTYPE
0 200 400 600 FT
EXISTING CONDITIONS

PLATE 2.8

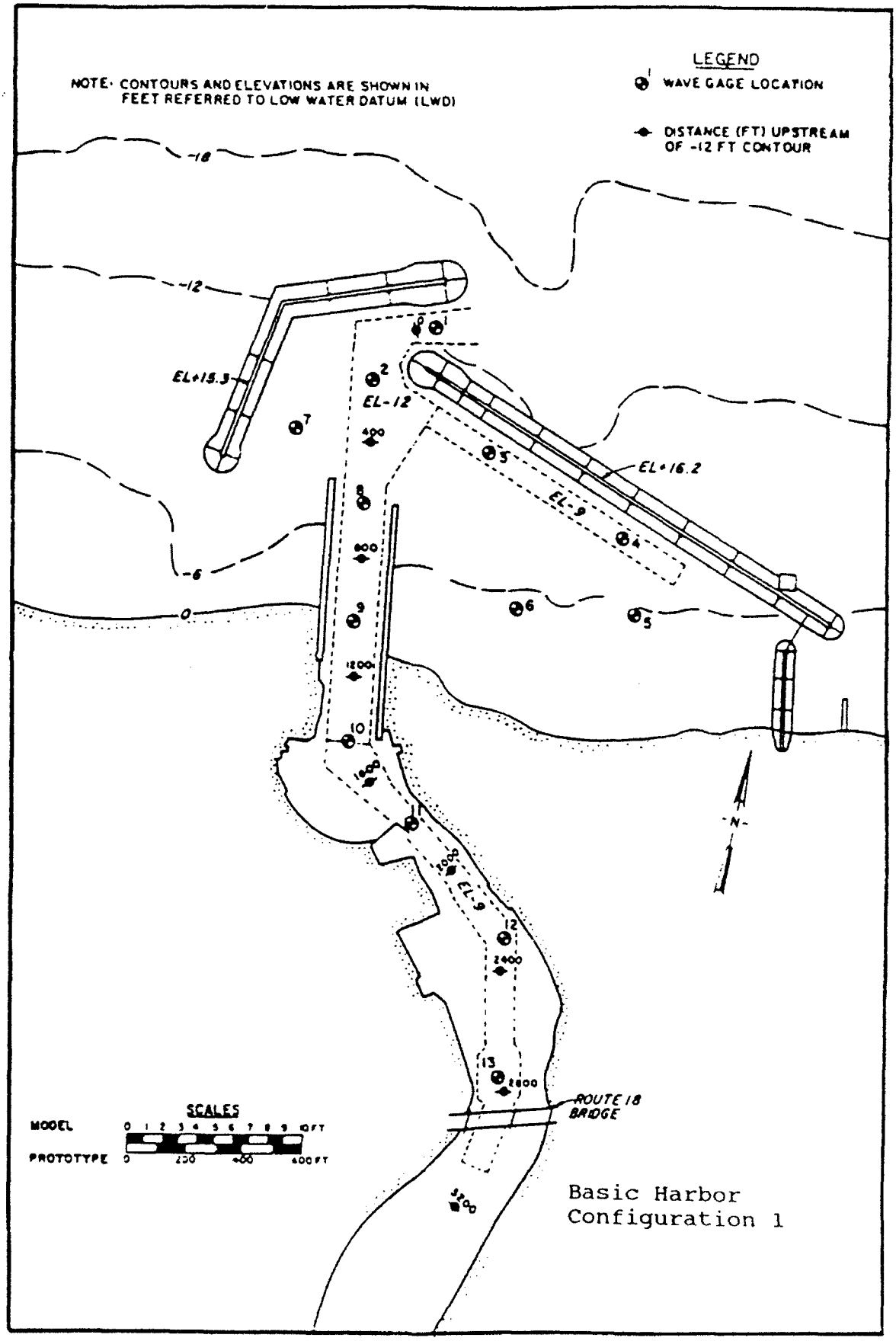

NOTE: CONTOURS AND ELEVATIONS ARE SHOWN IN FEET REFERRED TO LOW WATER DATUM (LWD)
LEGEND
WAVE GAGE LOCATION
DISTANCE (FT) UPSTREAM OF -12 FT CONTOUR
-18
-12
-6
0
EL+15.3
EL-12
EL+16.2
EL-9
EL-9
400
800
1200
1600
2000
2400
2800
3200
ROUTE 18 BRIDGE
N
SCALES
MODEL
0 1 2 3 4 5 6 7 8 9 10 FT
PROTOTYPE
0 200 400 600 FT
Basic Harbor Configuration 1

PLATE 2.9

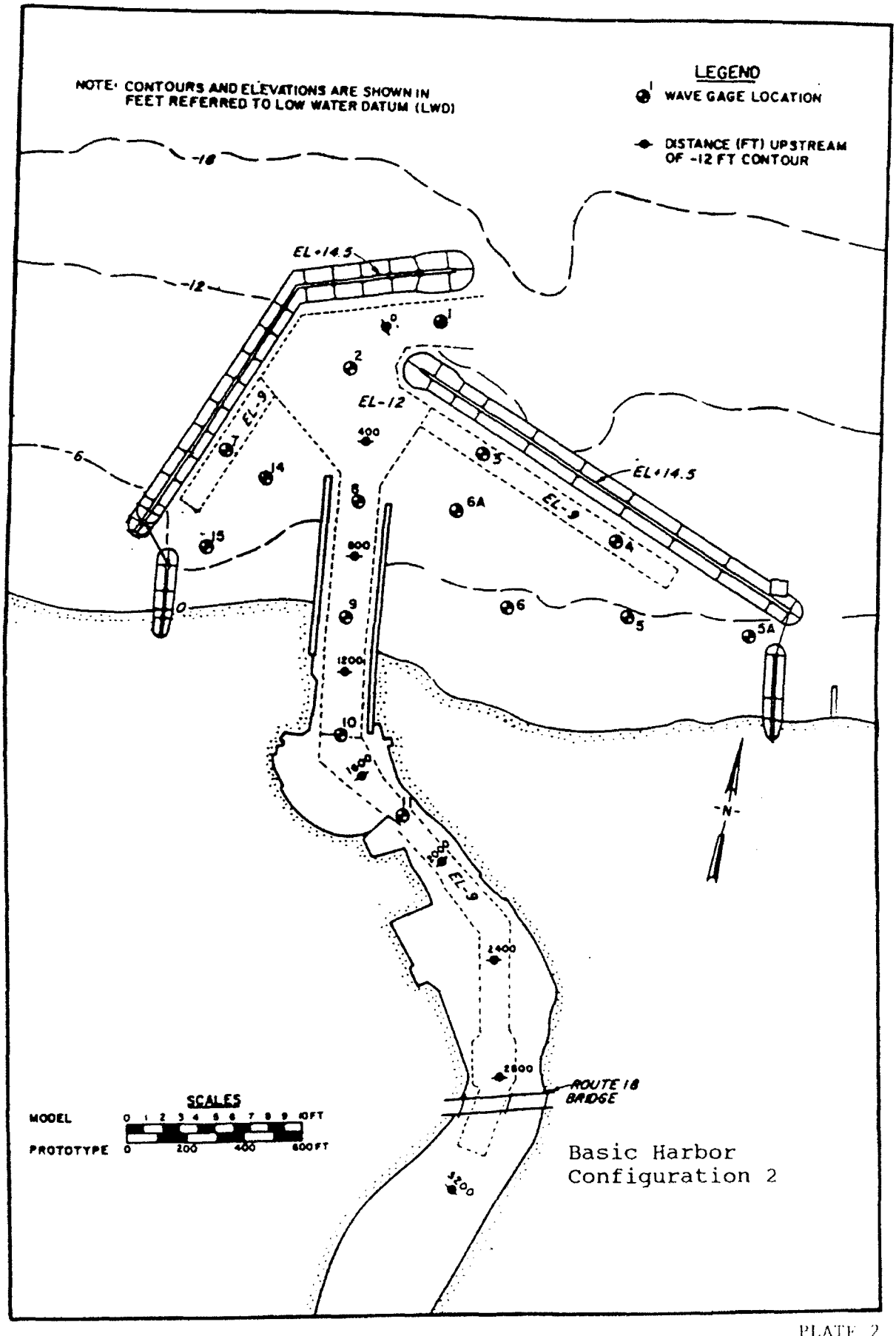

NOTE: CONTOURS AND ELEVATIONS ARE SHOWN IN FEET REFERRED TO LOW WATER DATUM (LWD)
LEGEND
WAVE GAGE LOCATION
DISTANCE (FT) UPSTREAM OF -12 FT CONTOUR
-18
-12
-6
EL+14.5
EL-12
EL-9
400
800
1200
1600
2000
2400
2800
3200
N
SCALES
MODEL
PROTOTYPE
0 200 400 600FT
ROUTE 18 BRIDGE
Basic Harbor Configuration 2

PLATE 2.10

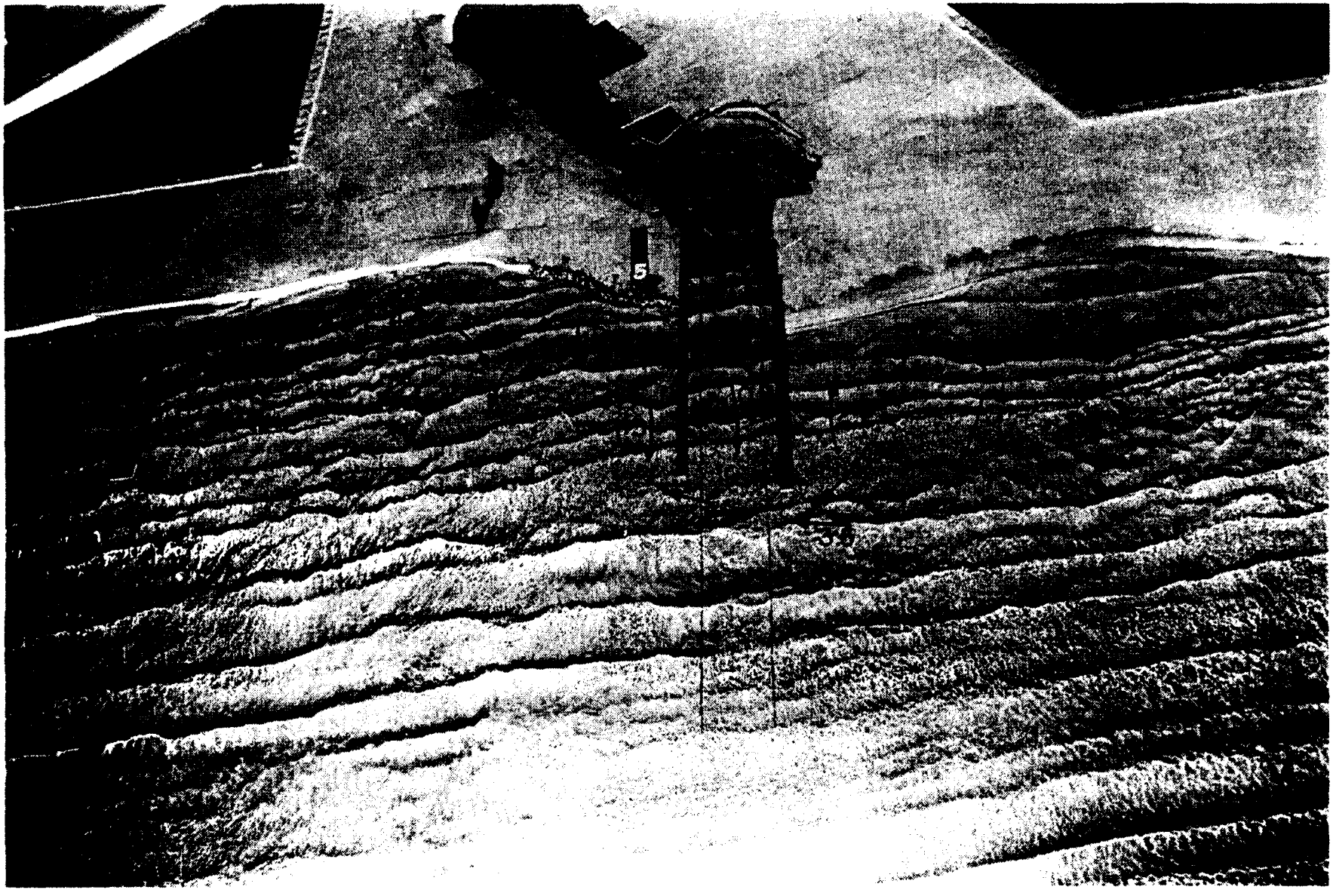


PHOTO 2.11 Typical wave patterns, current patterns, and current magnitudes (prototype feet per second) for existing conditions; 7.4-sec, 11-ft waves approaching from 343 degrees; +2.8 ft swl

a. 7.4-sec, 11.0-ft waves; +2.8-ft swl

b. 5.7-sec, 5.8-ft waves; +4.0-ft swl

PHOTO 2.12 General movement of tracer material and subsequent deposits on each side of the entrance for test waves from 343 deg for existing conditions

(2) Plans 10A, 10B, and Plan 10A Modified - Results of wave height tests, tracer tests, current patterns, velocity measurement, and water surface elevation and depth, conducted for 23 plans derived from the basic Plans 10A and 10B (Plans 1-16 for Plan 10A, and Plans 17-23 for Plan 10B) are presented in detail in the model study report (TR CERC-90-1).

(a) Plan 10A - Table 2.3 below shows maximum wave heights obtained for the spring, summer, fall boating season wave conditions from the five test directions for Plan 10A (Model Plan 1), in areas of:

the proposed entrance (Gage 1);

the proposed access channel (Gages 3-4);

the proposed marina basin (Gages 5, 6); and

the existing entrance and upstream limit (Gages 8-10).

Typical wave patterns for Plan 1 are shown in Photo 2.13. Maximum wave heights for cost-optimum Plan 16 obtained for boating season wave conditions for the aforementioned areas are presented in Table 2.4. Also, typical wave patterns for Plan 16 are shown on Photo 2.14.

Test results for Plan 16 indicated this plan would meet the established 3.0-foot and 1.0-foot wave criteria in the proposed entrance and mooring area, respectively, for waves occurring during the boating season but would allow overtopping of the U.S. east pier. Plan 16 was determined to be the optimum plan tested considering wave protection and costs for the first basic harbor configuration (Plan 10A with one mooring area east of the existing entrance).

(b) Plan 10B - Table 2.5 below shows maximum wave heights obtained for boating season wave conditions from the 343°, approach angle, the most critical direction for Plan 19 in the areas of:

the mooring basin east and west of the existing entrance (Gages 6, 6A, 14, 15); and,

the existing and new proposed entrances (Gages 8 and 1).

Typical wave patterns are shown in Photos 2.15-2.16.

Test results for Plan 19 for waves from the 313, 334, 24, and 42 degree directions revealed this plan would meet the specified 3.0-foot and 1.0-foot criteria for the proposed entrance and mooring areas, respectively, for waves occurring during the boating season. Considering wave protection and

costs, Plan 19 was identified as the optimum plan for the second basic harbor configuration (Plan 10B with two mooring areas, east and west of the existing entrance).

(c) Plan 10A Modified - A typical section through the east detached breakwater was modeled to investigate the wave transmission response, and structural stability of the breakwater. Two variations (1 and 1A) for the same cross-section having crest elevations of +14.5 and +12.5, respectively, were tested. Boating season waves were considered along with water levels of +4.3 and +5.1. Test results showed that the maximum transmitted wave height for Cross-sections 1 and 1A were .9 and 1.5 feet, respectively.

Also, based on test results, Cross-sections 1 and 1A, were found structurally stable for the maximum wave heights that can be expected to occur. For details on Cross-sections 1 and 1A, see sub-appendix B of the General Design Analysis Appendix A.

D. Model Investigation of Environmental Parameters

a. General.

The two identified optimum plans (Plan 16 from basic configuration 10A, and Plan 19 from basic configuration 10B are shown on Photos 2.17-2.18) for both basic harbor configurations were subject to more testing to determine the impacts of the proposed improvements on current patterns and temperature conditions as creek currents moved into the lake. Only one harbor configuration (mooring areas east and west of the existing entrance) was model tested. It was determined that Plan 19 (10B) which has two mooring basins would have more impact on creek current and temperature conditions that Plan 16 (10A) which has one mooring basin. The rationale was that if Plan 19 resulted in satisfactory conditions, then conditions for Plan 16 would be as good or better.

Site-specific data utilized in the analysis of the test results included currents, temperature, velocity, and estimated wave heights. Velocity data were used to compute the creek discharge for each field data collection or survey. These survey data were gathered by the USFWS during the spring and fall of 1989. Other survey data included weather conditions and Lake Ontario water levels recorded by the Great Lakes Acquisition Unit of the National Ocean Service throughout the data collection period. Plate 2.11 shows locations of the prototype stations that were established in the lake and in Eighteenmile Creek. Discharge data obtained in Eighteenmile Creek during the spring

Photo 2.13 Typical wave patterns for Var. 1; 7.2-sec, 7.6-ft waves approaching from 313 degrees; +2.8 ft swl

Photo 2.14 Typical wave patterns for Var. 16; 7.2-sec, 7.6-ft waves approaching from 313 degrees; +2.8 ft swl

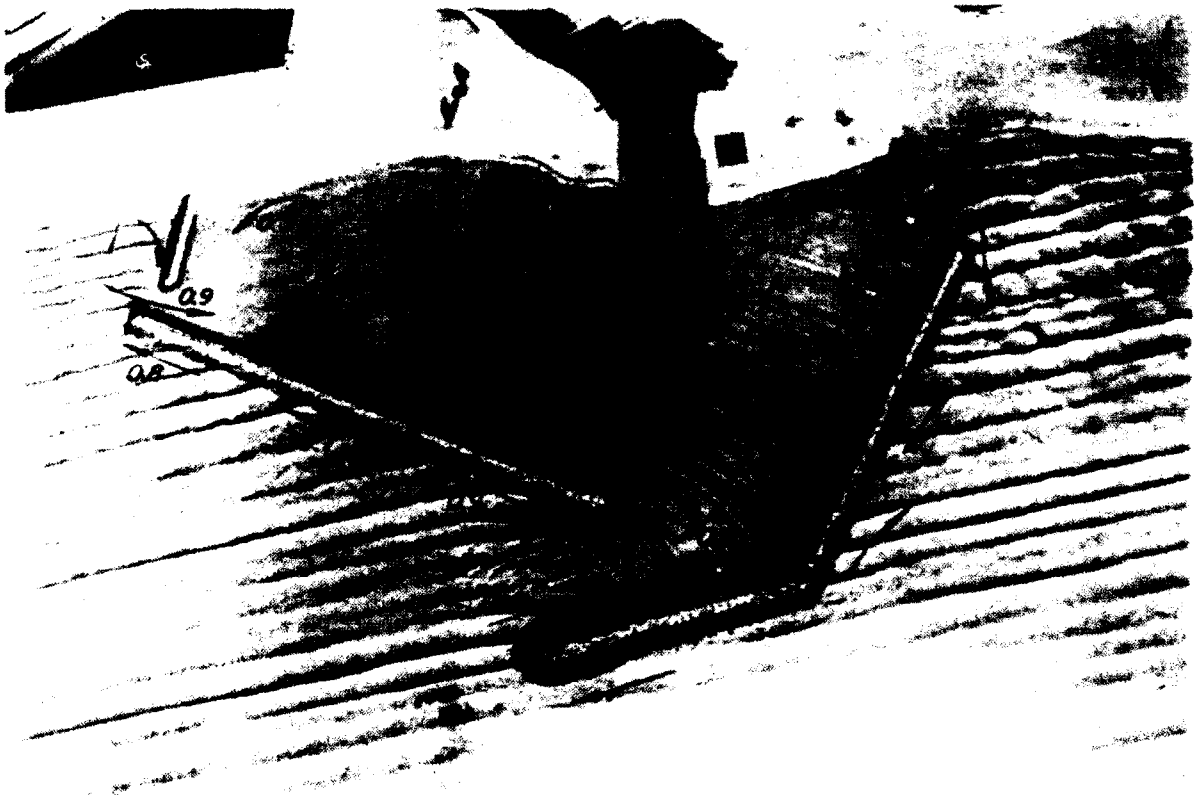


Photo 2.15 Typical wave patterns, current patterns, and current magnitudes (prototype feet per second) for Var. 19; 5.7-sec, 5.8-ft waves approaching from 343 degrees; +4.0 ft swl

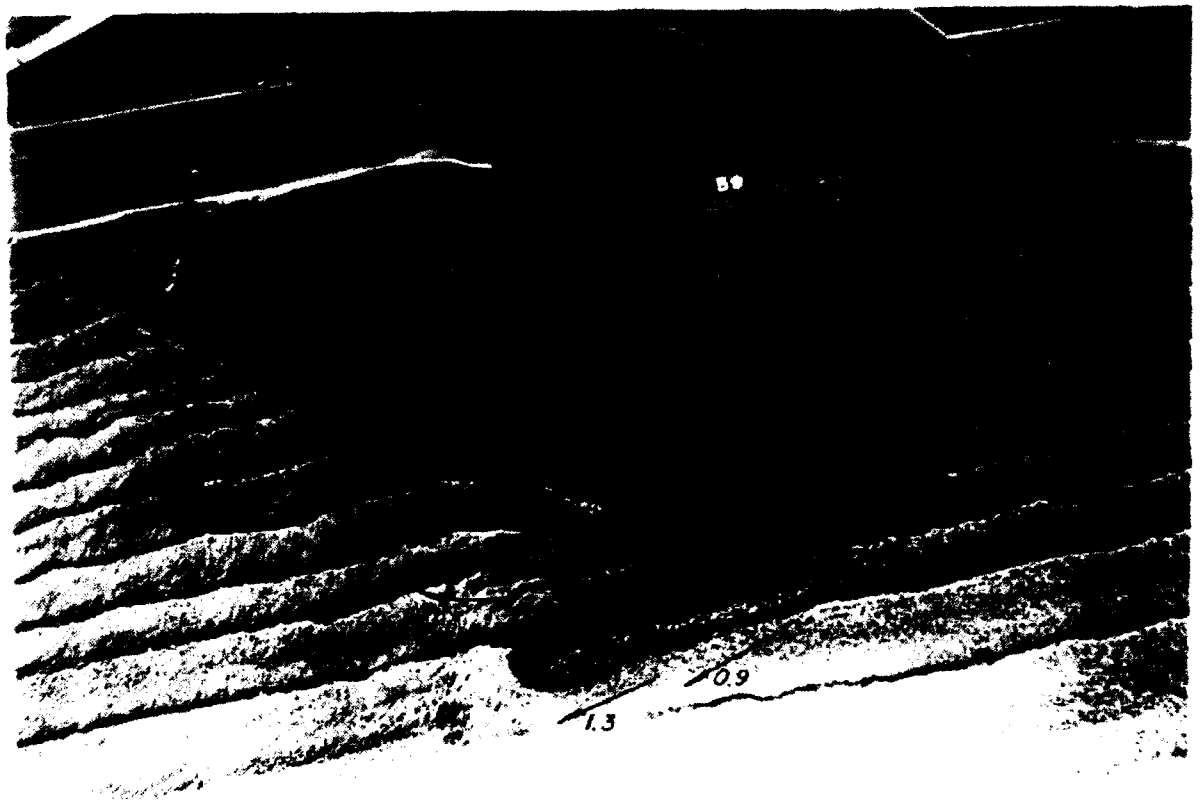


Photo 2.16 Typical wave patterns, current patterns and current magnitudes (prototype feet per second) for Var. 19; 7.4-sec, 11-ft waves approaching from 343 degrees; +2.8 ft swl

Photo 2.17 Plan View (Variation 16 from Plan 10A)

Photo 2.18 Plan View (Variation 19 from Plan 10B)

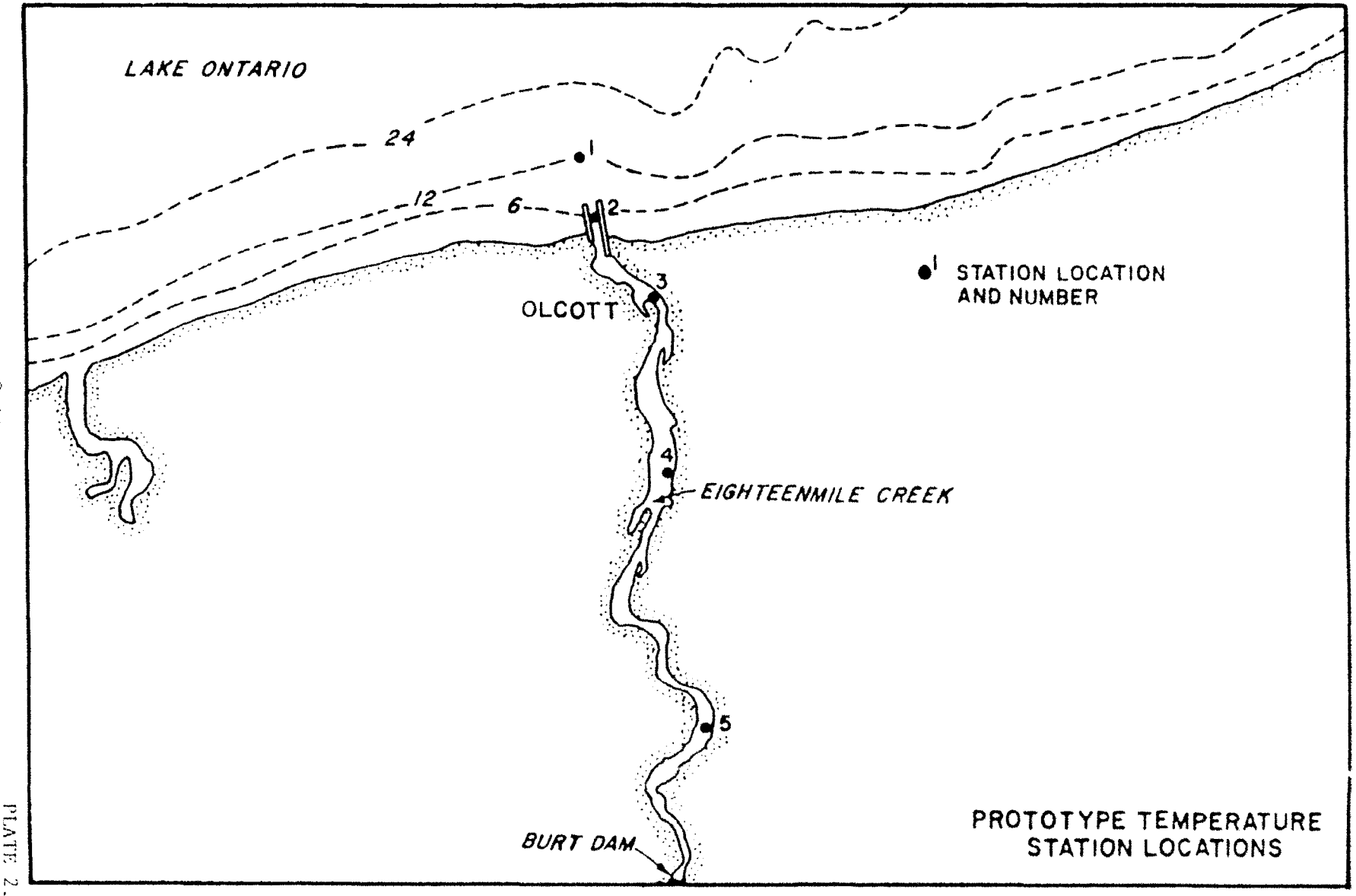

LAKE ONTARIO
24
12
6
1
2
3
OLCOTT
1 STATION LOCATION AND NUMBER
4
EIGHTEENMILE CREEK
5
BURT DAM
PROTOTYPE TEMPERATURE STATION LOCATIONS

PLATE 2.11

Table 2.2 - Maximum Wave Height (ft) for Existing Conditions

Direction (Degrees)	Boating Season Test Wave Period (Sec.)	Boating Season Test Wave Height (Ft.)	West Breakwater Gage 2	East Breakwater Gage 3	East Breakwater Gage 4	East Breakwater Gage 5	Existing Entrance Gage 8	Between Existing Piers Gage 9	Between Existing Piers Gage 10	1st Creek Bend Gage 11
334	7.2	8.4					6.5			
343	7.0	9.9					6.5			
334	7.2	8.4						5.8		
42	6.6	4.7							4.0	
343	5.8	6.1								1.3
343	7.4	11.0 1/	9.9							
343	7.4	11.0 1/			8.0					

1/ Non-boating season test waves.

Table 2.3 - Maximum Wave Height (ft) for Improvement Plan 10A (Plan 1)

Direction	Boating Season Test Wave		Proposed Entrance	Proposed Access Channel	Proposed Mooring Area	Existing Entrance	Between Existing Piers	1st Creek Bend
	Period	Height	Gage 1	Gages 3 - 4	Gages 5 - 6	Gage 8	Gages 9 - 10	
(Degrees)	(Sec.)	(Ft.)						
343	7.4	11.0	2.6	0.5	0.5	.5	.6	
334 1/	7.2	8.4				.6 1/		
343 1/	7.4	11.0					0.6 1/	

1/ This maximum wave height also occurred for wave directions of 24° and 42°.

Table 2.4 - Maximum Wave Height (ft) for Improvement Plan 10A (Plan 16)

Direction	Boating Season Test Wave		Proposed Entrance	Proposed Access Channel	Proposed Mooring Area	Existing Entrance	Between Existing Piers	1st Creek Bend
	Period	Height	Gage 1	Gages 3 - 4	Gages 5 - 6	Gage 8	Gages 9 - 10	
(Degrees)	(Sec.)	(Ft.)						
343	7.0	9.9	3.0	0.7	0.9	1.1	1.1	0.8

Table 2.5 - Maximum Wave Height (ft) for Improvement Plan 10B (Plan 19)

Direction (Degrees)	Boating Season Test Wave Period (Sec.)	Boating Season Test Wave Height (Ft.)	Proposed Entrance Gage 1	Proposed West Access Channel Gage 7	Existing Entrance Gage 8	Proposed West Mooring Area Gage 15
343	7.0	9.9	2.8	1.1	0.6	1.0

and fall surveys were used to select representative flow rates. A discharge of 210 cubic feet per second (cfs) was used for spring conditions; and a discharge of 145 cfs for fall conditions for the model testing. Details on the data collection program are provided in the Hydraulic Model report (TR CERC-90-3) prepared by the Corps Waterways Experiment Station.

A reservoir of heated water was used to determine temperature conditions in the model. The heated water was introduced into the creek to represent discharges for the spring and fall seasons. It was also dyed so that the current pattern could be traced as the creek discharges entered the lake where they were impacted by the wave climate and moved further into the lake and/or along the shoreline.

Temperatures at various locations in the model were recorded with thermistor probes during the conduct of the tests. These probes are precision temperature sensing devices that were used with a thermometer recorder. Thermistors respond rapidly to the slight temperature change and accurately measures electrical resistance which gives a direct reading of the precise temperature at a given location.

b. Environmental Test Results

(1) Spring Conditions - The temperature of the water in the lake and that of the water introduced into the creek for spring conditions prior to the conduct of test for existing conditions and for Plan 19 (10B) are shown in Table 2.6. Comparison of the density difference between existing condition model data, and prototype data, for the spring period indicated that similar trends were established. Current patterns and the movement of the plume as the creek water entered the lake are shown in Photos 2.19-2.20 for "without and with" project conditions. Also the plume moved in a easterly direction for both conditions.

(2) Fall Conditions - For fall conditions, the same trend were established as shown in Table 2.7. Current patterns and the movement of the plume as the creek waters entered the lake are shown in Photos 2.21-2.22.

Conclusions

Existing conditions in the model accurately reproduced trends established in the prototype with regard to temperature variations between the creek and the lake water and the movement of the creek plume as it entered Lake Ontario. Further, temperature variations in the creek entrance and the lake revealed similar trends between existing conditions and Plan 19 (10B). Also similar trends were observed with regard to the movement of the plume into the lake and along the shoreline. Therefore, the technical report concluded that the proposed

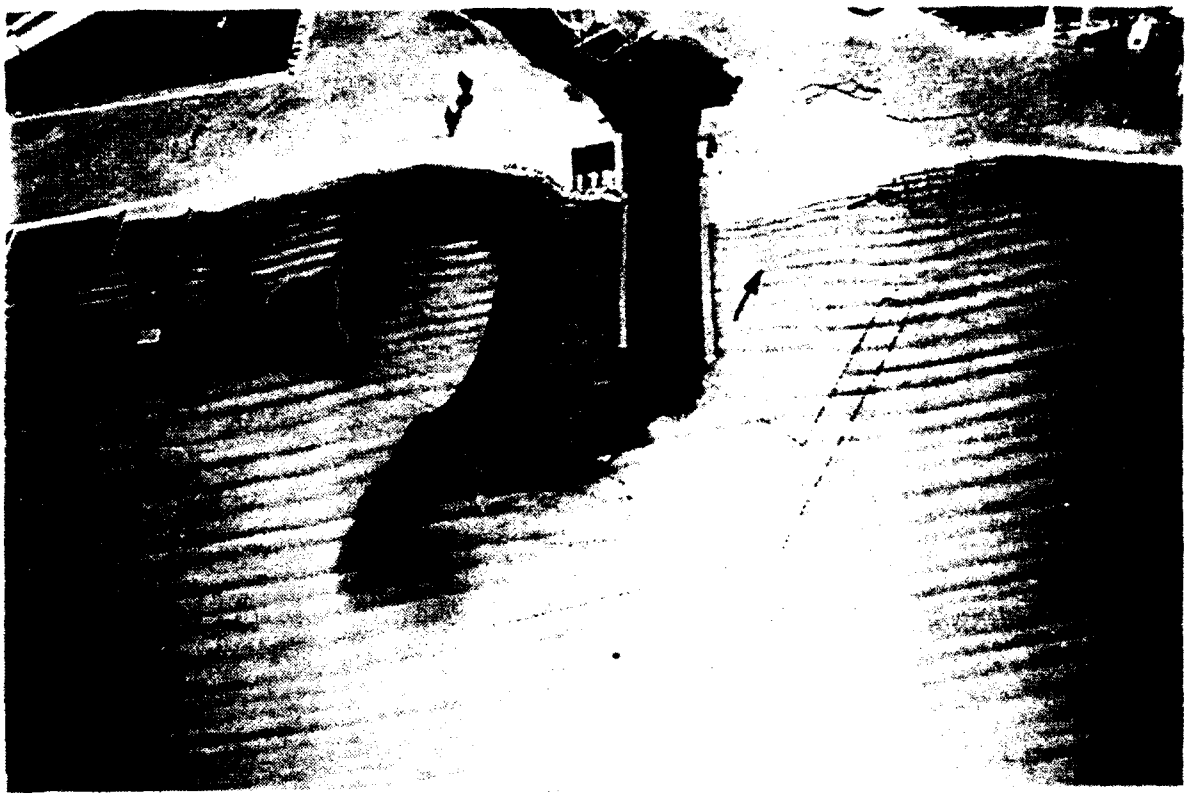


Photo 2.19 Current patterns and movement of creek plume for existing conditions for test waves from 343 degrees during spring conditions

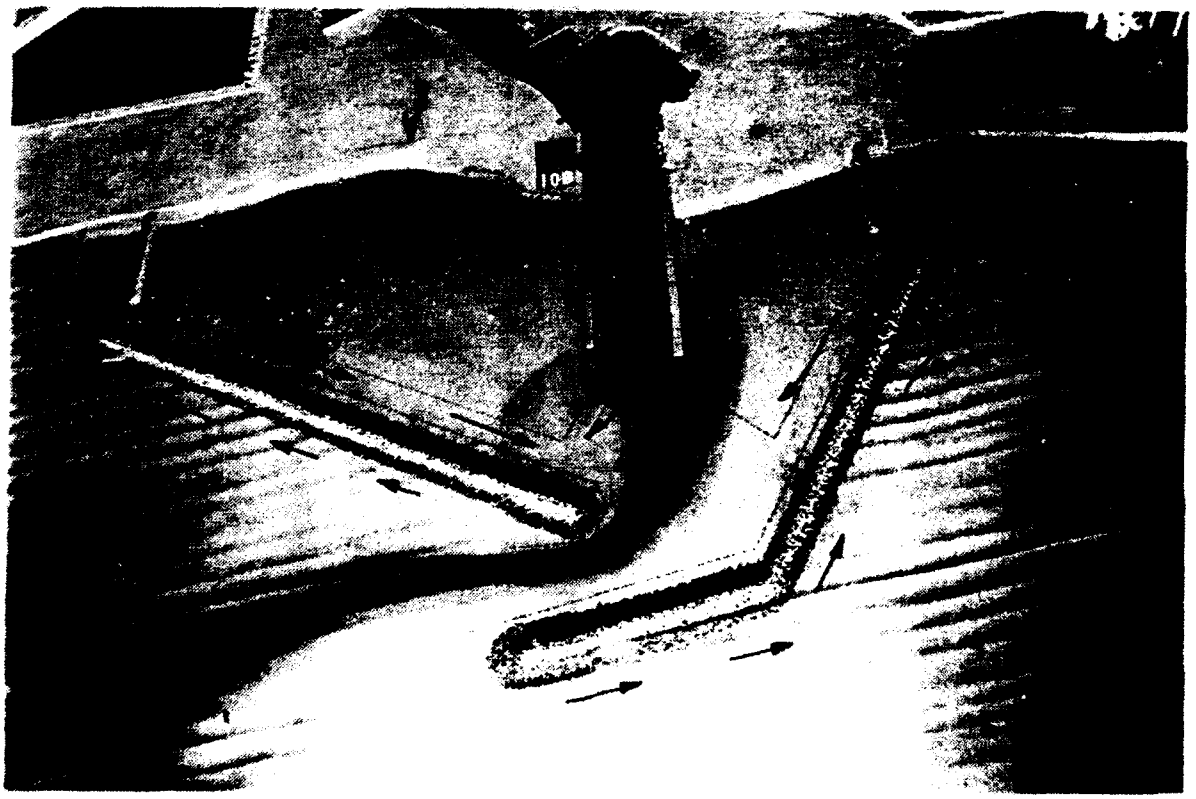


Photo 2.20 Current patterns and movement of creek plume for Var. 19 for test waves from 343 degrees during spring conditions

Photo 2.21 Current patterns and movement of creek plume for existing conditions for test waves from 343 degrees during fall conditions

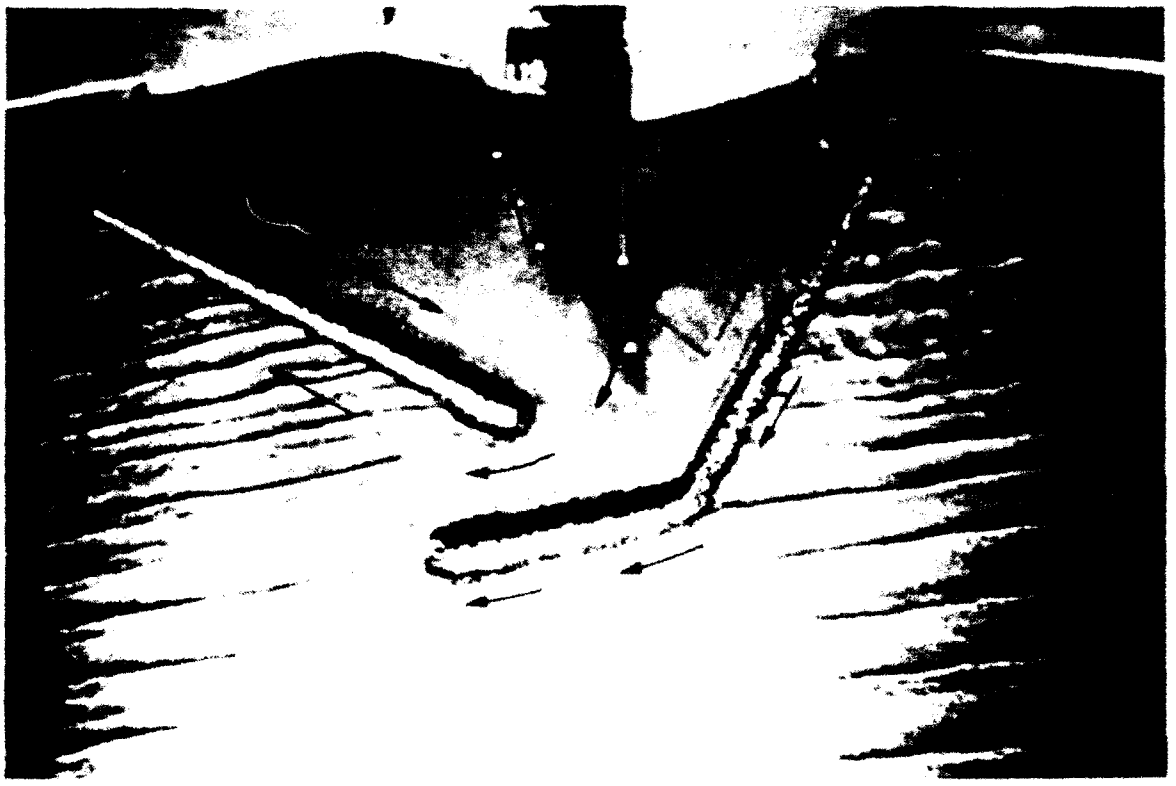


Photo 2.22 Current patterns and movement of creek plume for Var. 19 for test waves from 343 degrees during fall conditions

modifications to the existing harbor should have no adverse impact on temperature variations, or the movement of the creek water into the lake and along the shoreline. To establish whether or not there is further Federal interest in this project, the least and most costly plans 16 (Plan 10A) and 19 (Plan 10B), respectively, will preliminary and primarily be evaluated on costs and benefits with consideration given to other planning objectives. For comparison purposes, the authorized Plan 10, will also be included in the evaluation. This evaluation is presented in the next section of this report.

Table 2.6 - Temperature of Water in Lake and Water Introduced into Creek for Various Tests, Spring Conditions

Wave Direction Degree	Temperature of Water in Lake Prior to Tests, Degree C	Temperature of Water Introduced into Creek, Degree C	Density Difference slugs/ft^3
	Existing Conditions		
42	19.1	22.9	.00134
343	19.8	23.7	.00138
313	21.7	25.4	.00136
	Plan 19		
42	21.4	25.2	.00138
343	19.3	23.2	.00138
313	19.7	23.5	.00138

Table 2.7 - Temperature of Water in Lake and Water Introduced into Creek for Various Tests, Fall Conditions

Wave Direction Degree	Temperature of Water in Lake Prior to Tests, Degree C	Temperature of Water Introduced into Creek, Degree C	Density Difference slugs/ft^3
	Existing Conditions		
42	17.4	18.1	.00024
343	17.1	17.7	.00020
313	17.4	18.1	.00024
	Plan 19		
42	13.1	13.7	.00022
343	11.9	12.5	.00020
313	12.5	13.2	.00024

Section III

ASSESSMENT, EVALUATION, AND COMPARISON OF PLANS

Section 3
Assessment, Evaluation and Comparison of Plans

3.1 GENERAL

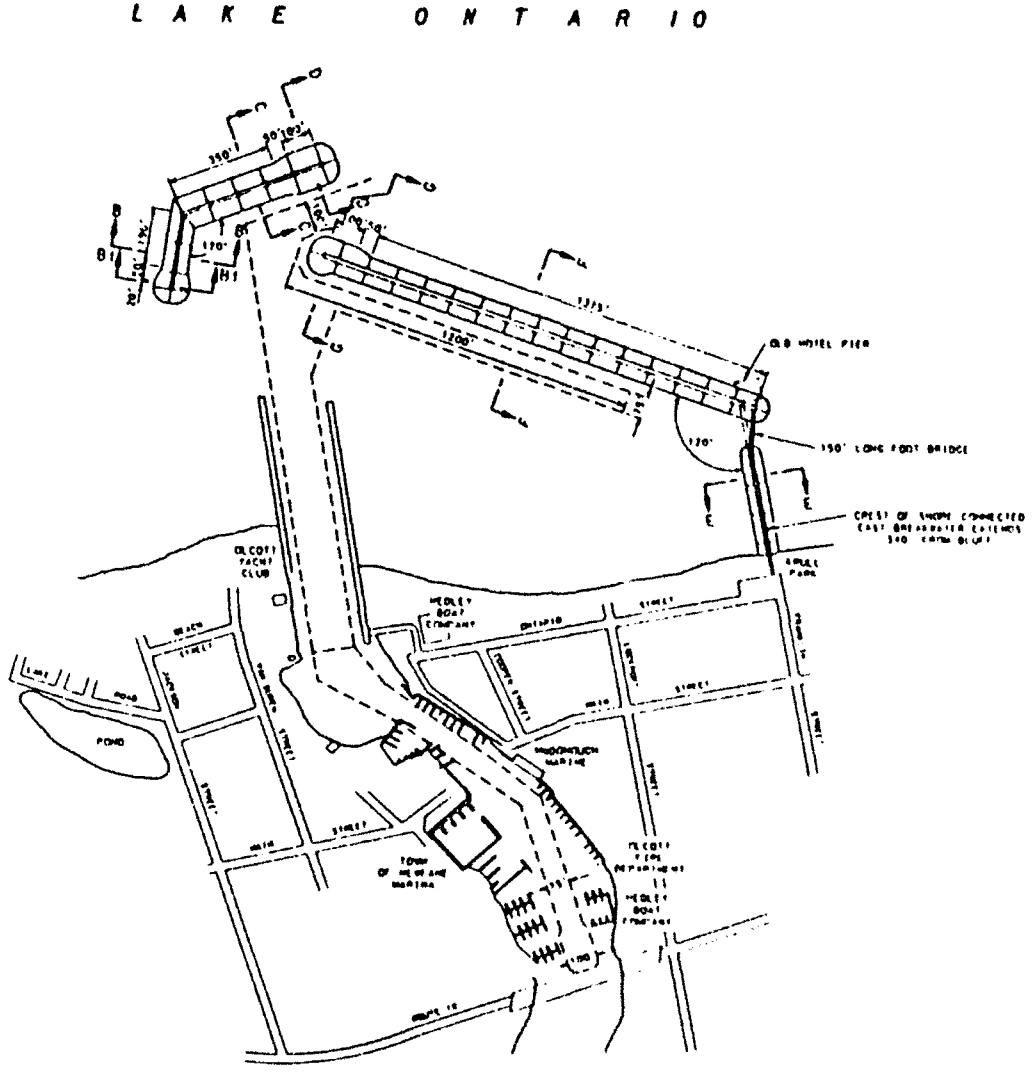
This section provides a summary description of the authorized Plan 10, and the two optimum plans resulting from the first two three-dimensional model studies: Plan 16 (10A) and Plan 19 (10B). This section also compares the economic and environmental impacts of these plans. These plans were formulated to address the planning objectives and constraints described in Section 2. The basis of comparison is the "No-Action" (do-nothing) Plan.

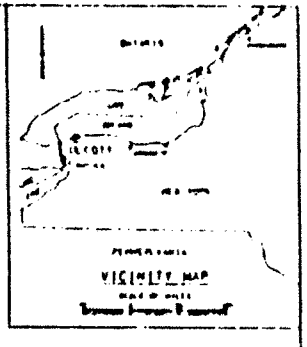
This preliminary assessment and evaluation of these plans, based on the Federal cost-shared project, would indicate whether or not there is a Federal interest in at least one plan, and to determine whether this pre-construction Engineering and Design phase can be completed. This section also discusses the rationale for modifying and selecting plans for further study through an iterative process.

3.2 ITERATION 1

A. Summary Assessment of Plan 10, Optimum Plans 10A and 10B

Optimum Plan 10A and optimum Plan 10B are shown on Plates 3.1 and 3.2. Plan 10 is previously shown on Plate 2.1. Total construction first costs for Plan 10 (as authorized), optimum Plan 10A, and optimum Plan 10B are shown in Tables 3.1 - 3.3. Average annual costs, and average annual benefits for Plan 10, optimum Plan 10A, and optimum Plan 10B are shown in Tables 3.4-3.5. Details on cost and benefit estimates for these plans are discussed in appendices B and C, respectively. Table 3.6 provides a brief description of these plans formulated to meet the planning objectives as well as various technical, economic, environmental, and design criteria previously discussed in this report. These criteria were established to guide the reformulation process, and the assessment and evaluation of the plans. Total first costs, average annual cost and benefits, net benefits, benefit-cost ratios, and environmental impacts for these plans are also summarized in Table 3.6. Design features, project alignment, and degree of protection were emphasized in this initial iteration.





NOTES:

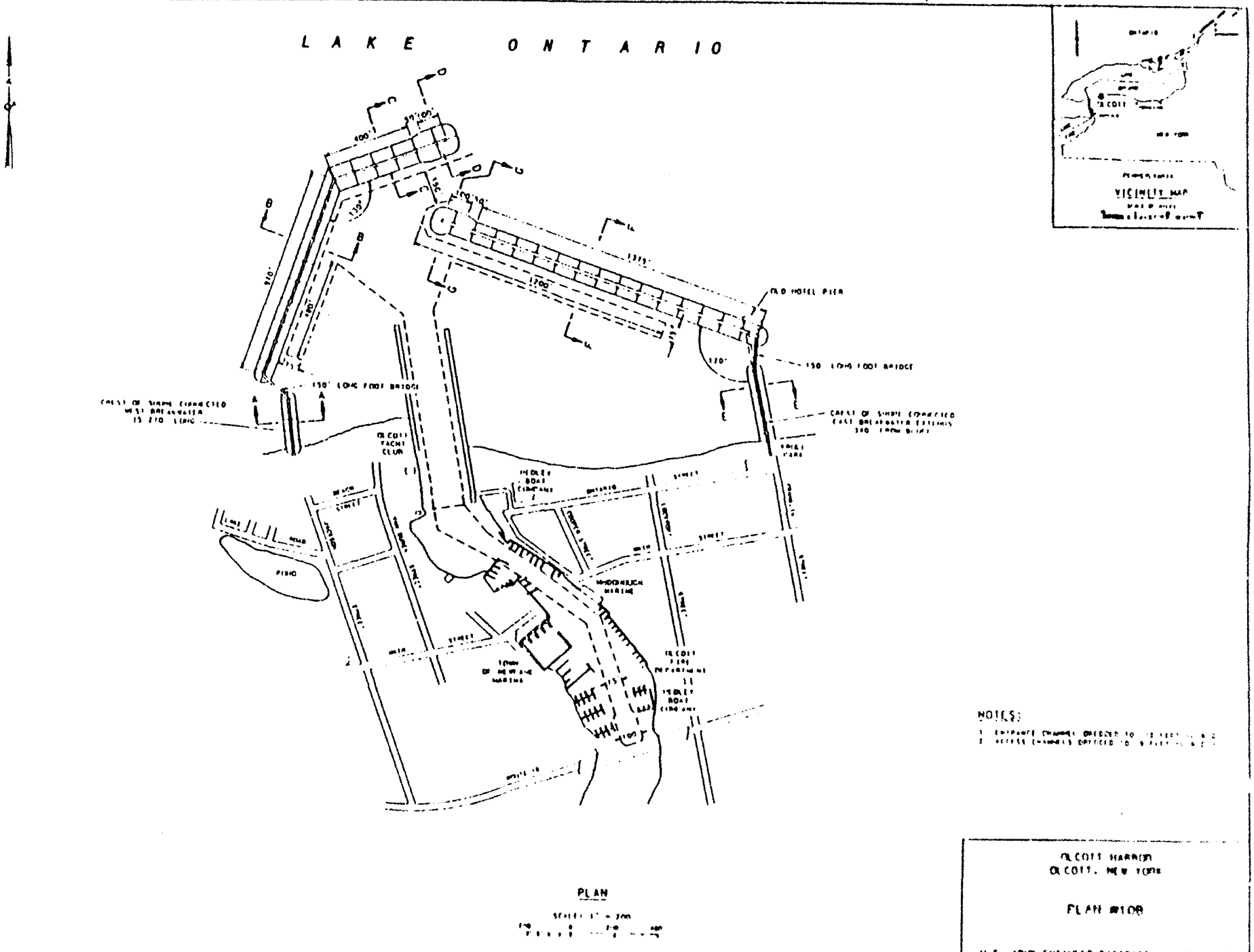
1.
2.

OLCOTT HARBOR
OLCOTT, NEW YORK

PLATE #10A

PLATE 3.

3-2



OLCOTT HARBOR
OLCOTT, NEW YORK

PLAN #108

U.S. ARMY ENGINEER DISTRICT

Table 3.1 - Total Project Cost, Plan 10
October 1989 Price Levels

12	DREDGING	
12.0.4	Mechanical Dredging	$ 234,000
12.0.4.B	Obstruction Removal	$ 31,500
10.0.1	BREAKWATERS	
10.0.1.B	West Breakwaters	$ 3,290,437
10.0.1.B	West Jetty	$ 163,719
10.0.1.B	East Breakwaters	$ 4,193,743
10.0.R.B	Navigation Aids	$ 55,000
14	RECREATION FACILITIES	
14.0.1	Parking Lots and Service Roads	$ 216,000
14.0.P	Sanitary Facilities	$ 124,000
14.0.3.B	Footbridge (one)	$ 150,000
14.0.3.B	Concrete Walkway	$ 447,617
14.0.3.B	Walkway Guardrail	$ 28,710
	TOTAL CONSTRUCTION	$ 8,934,726
	Contingencies @ 25% ±	$ 2,175,274
	TOTAL CONSTRUCTION PLUS CONTINGENCIES	$11,110,000
01	Lands and Damages Incl. Contingencies	$ 70,000
30	Planning, Engineering, and Design	$ 1,400,000
	CONSTRUCTION MANAGEMENT	$ 906,000
	TOTAL PROJECT COST (1)	$13,486,000

(1) See Cost Engineering Appendix B for details.

Table 3.2 - Total Project Cost, Plan 10A
October 1989 Price Levels

12	DREDGING	
12.0.4	Mechanical Dredging	$ 273,000
12.0.4.B	Obstruction Removal	$ 31,500
10.0.1	BREAKWATERS	
10.0.1.B	West Breakwaters	$ 2,811,500
10.0.1.B	East Breakwaters	$ 4,810,650
10.0.R.B	Navigation Aids	$ 55,000
14	RECREATION FACILITIES	
14.0.1	Parking Lots and Service Roads	$ 216,000
14.0.P	Sanitary Facilities	$ 124,000
14.0.3.B	Footbridge (one)	$ 150,000
14.0.3.B	Concrete Walkway	$ 397,500
14.0.3.B	Walkway Guardrail	$ 29,000
14.0.3.B	Precast Walkway Barriers	$ 56,100
	TOTAL CONSTRUCTION	$ 8,954,250
	Contingencies @ 20%	$ 1,775,750
	TOTAL CONSTRUCTION PLUS CONTINGENCIES	$10,730,000
01	Lands and Damages Incl. Contingencies	$ 70,000
30	Planning, Engineering, and Design	$ 1,400,000
	CONSTRUCTION MANAGEMENT	$ 800,000
	TOTAL PROJECT COST (1)	$13,000,000

(1) See Cost Engineering appendix B for details.

Table 3.3 - Total Project Cost, Plan 10B
October 1989 Price Levels

12	DREDGING	
12.0.4	Mechanical Dredging (Creek & new channels)	$ 329,000
12.0.4.B	Obstruction Removal	$ 31,500
10.0.1	BREAKWATERS	
10.0.1.B	West Breakwaters	$ 5,432,300
10.0.1.B	East Breakwaters	$ 4,810,700
10.0.R.B	Navigation Aids	$ 55,000
14	RECREATION FACILITIES	
14.0.1	Parking Lots and Service Roads	$ 324,000
14.0.P	Sanitary Facilities	$ 124,000
14.0.3.B	Footbridge (two)	$ 300,000
14.0.3.B	Concrete Walkway	$ 826,800
14.0.3.B	Walkway Guardrail	$ 58,400
14.0.3.B	Precast Walkway Barriers	$ 112,200
	TOTAL CONSTRUCTION	$12,403,900
	Contingencies @ 20%	$ 2,506,100
	TOTAL CONSTRUCTION PLUS CONTINGENCIES	$14,910,000
01	Lands and Damages Incl. Contingencies	$ 70,000
30	Planning, Engineering, and Design	$ 1,400,000
	CONSTRUCTION MANAGEMENT	$ 1,100,000
	TOTAL PROJECT COST (1)	$17,480,000

(1) See Cost Engineering appendix B for details.

Table 3.4 - Investment Cost
and
Average Annual Cost
October 1989 Price Levels

Item	Plan 10	Plan 10A	Plan 10B
Construction Costs	13,486,000	13,000,000	17,480,000
IDC (1)	1,001,700	965,600	1,298,400
Investment Costs	14,487,700	13,965,600	18,778,400
Interest and Amortization(3)	1,304,300	1,257,300	1,690,600
Annual Maintenance (2)	134,900	130,000	174,800
TOTAL AVERAGE ANNUAL COST	1,439,200	1,387,300	1,865,400

(1) Interest during construction based on 8-7/8 interest rate and a 2-year construction period.

(2) One percent of construction cost.

(3) 8-7/8% interest rate and 50-year economic life.

Table 3.5 - Benefit Summary (1) October 1989 Price Levels

	Plan 10	Plan 10A	Plan 10B
	$	$	$
1. NET WILLINGNESS TO PAY-BOAT OWNERS			
A. New slip renters (Less Transients & Charters)	313,200	431,800	559,300
B. New launch ramp users	9,300	9,300	9,300
NET WILLINGNESS TO PAY SUBTOTAL	322,500	441,100	568,600
2. NEW PASSENGER RECREATIONAL BOATING BENEFITS			
A. Passengers of new slip renters	190,800	263,000	340,700
B. Passengers of new launch ramp users	28,600	28,600	28,600
PASSENGER BOATING BENEFITS SUBTOTAL	219,400	291,600	369,300
3. BENEFITS TO CURRENT SLIP USERS			
A. Increase in recreational value to current slip renter boat owners	28,200	28,200	28,200
B. Increase in recreational value to passengers of current slip renters	17,200	17,200	17,200
CURRENT SLIP USER BENEFITS SUBTOTAL	45,400	45,400	45,400
4. BENEFITS FROM TRANSIENT CRAFT			
A. New transient rentals			
(1) Recreational value for boat owners	17,700	32,900	32,900
(2) Recreational value for passengers	5,600	10,400	10,400
NEW TRANSIENT CRAFT BENEFITS SUBTOTAL	23,300	43,300	43,300
B. Existing transient rentals			
(1) Recreational value for boat owners	9,900	9,900	9,900
(2) Recreational value for passengers	3,100	3,100	3,100
NEW TRANSIENT CRAFT BENEFITS SUBTOTAL	13,000	13,000	13,000
5. CHARTER SERVICE BENEFITS (CHARTERFISHING, EXCURSIONS)			
A. Net income for new charter fishing operators 50 new charters @ $6,345 net income per operator	0	180,000	180,000
B. Increase in net income for existing charter fishermen	0	71,300	71,300
C. Recreational value for clients using new charterboat services	0	217,300	217,300
D. Recreational value for new clients using existing charter fishing operators	0	21,700	21,700
E. Increase in recreational value for existing charter fishing clients	0	21,000	21,000
F. Benefits to slips set aside for charter usage but not used in first 5 years			
a. Slip renter benefits	0	4,200	4,200
b. Benefits to passengers of slip renters	0	2,600	2,600
G. Slip revenue for new charter boats			
H. Net income for new tour boat operator	TBC	TBC	TBC
I. Recreational value for passengers using the new tour boat	0	49,800	49,800
CHARTER SERVICE BENEFITS SUBTOTAL	0	567,900	567,900
6. PIER FISHING BENEFITS			
A. New fishermen	152,500	152,500	248,500
B. Current fishermen	18,900	18,900	18,900
PIER FISHING BENEFITS SUBTOTAL	171,400	171,400	267,400
7. SIGHTSEEING BENEFITS	166,700	166,700	166,700
8. EXISTING LAUNCH RAMP USER BENEFITS			
A. Increase in recreational value to current launch ramp boat owners	9,400	9,400	9,400
B. Increase in recreational value to passengers of current launch ramp boat owners	29,200	29,200	29,200
SUBTOTAL	38,600	38,600	38,600
9. HARBOR OF REFUGE BENEFITS	20,000	20,000	20,000
10. INUNDATION REDUCTION BENEFITS	64,000	64,000	66,300
TOTAL AVERAGE ANNUAL BENEFITS	1,084,300	1,863,000	2,166,500

(1) All benefits reflect October 1989 price levels, an 8-7/8 percent annual interest rate and a 50 year project life.

Table 3.6 - Assessment, Evaluation, and Comparison of Plans 10, 10A, and 10B
October 1989 Price Levels

Item	No Action Plan	Authorized Plan 10	Plan 10A	Plan 10B
Plan Description	The No Action Plan will result in no recreation development as described in this report and in the Olcott Harbor Master Plan.	This plan consists of breakwaters, a pedestrian bridge, guardrails, a concrete walkway on the entire east breakwater, a stone jetty, and navigation channels. It would provide a total of 802 boat slips including 265 in Eighteenmile Creek and 537 in the east basin. The west detached breakwater consists of a 560-foot long shoreward leg and a 550-foot long lakeward leg. The stone jetty is 330 feet long. The east breakwater is 1650 feet long. It is connected to shore via a 150-foot pedestrian bridge. The entrance channel is 100 feet wide and 12 feet deep. The access channel connecting the entrance channel and the east mooring basin is 9 feet deep, 100 feet wide, and 1040 feet long. The channel in Eighteenmile Creek is 9 feet deep, 80-100 feet wide, and 1,500 feet long with a turning basin 9 feet deep, 150 feet wide, and 150 feet long. Other features include sanitary and parking facilities for fishermen.	This plan consists of breakwaters, a pedestrian bridge, guardrails, a concrete walkway on the the entire east breakwater, and navigation channels. It would provide a total of 886 boat slips including 714 in the east basin, 112 between the existing Federal piers and 60 in Eighteenmile Creek immediately south of the Piers. The west detached breakwater consists of a 260-foot long shoreward leg and a 500-foot long lakeward leg. The east breakwater has a 1,525-foot detached segment and a 340-foot shore-connected segment. These segments are connected by a 150 foot pedestrian bridge. The entrance channel is 100 feet wide and 12 feet deep. The access channel connecting the entrance channel and the east mooring basin is 9 feet deep, 75 feet wide, and 1,200 feet long. The channel in Eighteenmile Creek is 9 feet deep, 75 feet wide, and 1,300 feet long with a turning basin 9 feet deep, 100 feet wide, and 100 feet long. Other features include sanitary and parking facilities for fishermen.	This plan consists of breakwaters, two pedestrian bridges, guardrails and access walkway on the entire east and west breakwaters and navigation channels. It would provide a total of 1,118 boat slips including 946 in the east and west basins, 112 slips between the existing Federal piers, and 60 in Eighteenmile Creek immediately south of the piers. The west detached breakwater consists of a 970-foot long shoreward leg and a 550-foot long lakeward leg. The two segments are linked by a 150 foot long pedestrian footbridge. The east breakwater is the same as that for Plan 10A. The entrance channel is 150 feet wide and 12 feet deep. The access channel in the east mooring basin is 9 feet deep, 75 feet wide, and 1,200 feet long. The Eighteenmile Creek channel is the same as that for Plan 10A. The access channel in the west basin is 480 feet long, 75 feet wide, and 9 feet deep. Other features include sanitary and parking facilities for fishermen.
Construction Costs	Not Applicable	$ 13,486,000 (1)	$ 13,000,000 (1)	$ 17,480,000 (1)
Average Annual Costs	Not Applicable	1,439,200 (2)	$ 1,387,300 (2)	$ 1,865,400 (2)
Average Annual Benefits	Not Applicable	1,084,300 (3)	$ 1,863,000 (3)	$ 2,166,500 (3)
Net Benefits	Not Applicable	-354,900	$ 475,700	$ 301,100
Benefit Cost Ratio	Not Applicable	.75 (4)	1.34	1.16
Environmental Impacts		Dredging of the lower Eighteenmile Creek between the Route 18 bridge and the south end of the Federal piers will cause resuspension of sediment and associated pollutants into the water column. Polluted dredged material must be placed in a USEPA approved disposal site.	Dredging of the lower Eighteenmile Creek between the Route 18 bridge and the south end of the Federal piers will cause resuspension of sediment and associated pollutants into the water column. Polluted dredged material must be placed in a USEPA approved disposal site.	Dredging of Eighteenmile Creek between the Route 18 bridge and the south end of the Federal pier will cause resuspension of sediment and associated pollutants into the water column. Polluted dredged material must be placed in a USEPA approved disposal site.
Carry On	Yes	No (5)	Yes	Yes

(1) October 1989 Price Levels. See Tables 3.1-3.3 and Cost Engineering Appendix B for details.
(2) See Table 3.4.
(3) October 1989 Price Levels. See Table 3.5 and Economics Appendix C for details.
(4) Plan 10 as authorized would provide a total of 802 slips. The fact however, is that only 60 slips can be built in Eighteenmile Creek as part of any authorized Federal small-boat marina at Olcott. This results in Plan 10 providing only 597 slips as opposed to 802.
(5) The authorized Plan 10 is eliminated from further study. However, as per Project Guidance Memo dated 15 January 1991, Plan 10 will be included in the Comprehensive Table, displaying a comparison of project features, costs, and benefits between the current NED Plan and the modified selected plan.

The benefit-to-cost ratios for Plans 10, 10A and 10B are .75, 1.34, and 1.16, respectively. The B/C ratio of 0.75 for Plan 10 indicates that the authorized Plan 10 is no longer economically justified.

B. **Elimination of Plan 10**

The benefit-to-cost ratio of .75 for Plan 10 is based on Plan 10 providing 597 boat slips. The majority of the 265 slips that would be built in Eighteenmile Creek, were Plan 10 implemented as authorized, are already built except for 60 slips within that reach of the Creek immediately south of the existing Federal piers. Taking this into account, contributes to the above B/C ratio of 0.75 and the elimination of Plan 10 from further consideration.

Further, as required by the Project Guidance Memo (PGM) dated 15 January 1991, the authorized Plan 10 will be included in a comprehensive table displaying a comparison of project features, costs, and benefits between itself (i.e., authorized Plan 10), the current NED plan, and the modified selected plan.

The B/C ratios of 1.34 and 1.16 for Plans 10A and 10B indicate that these plans have potential for economic justification, and should therefore be given further consideration together with the no-action plan.

Both plans have potential for negative environmental impacts due to possible dredging of that section of Eighteenmile Creek from the south end of the current Federal piers to the north end of the Route 18 bridge. Any polluted creek bottom material would have to be disposed of at an approved U.S. Environmental Protection Agency and NYSDEC disposal site. Fulfilling these agencies requirements may substantially increase the total cost of the project.

3.3 INTERATION 2

A. **Identification of Candidate Plan(s)**

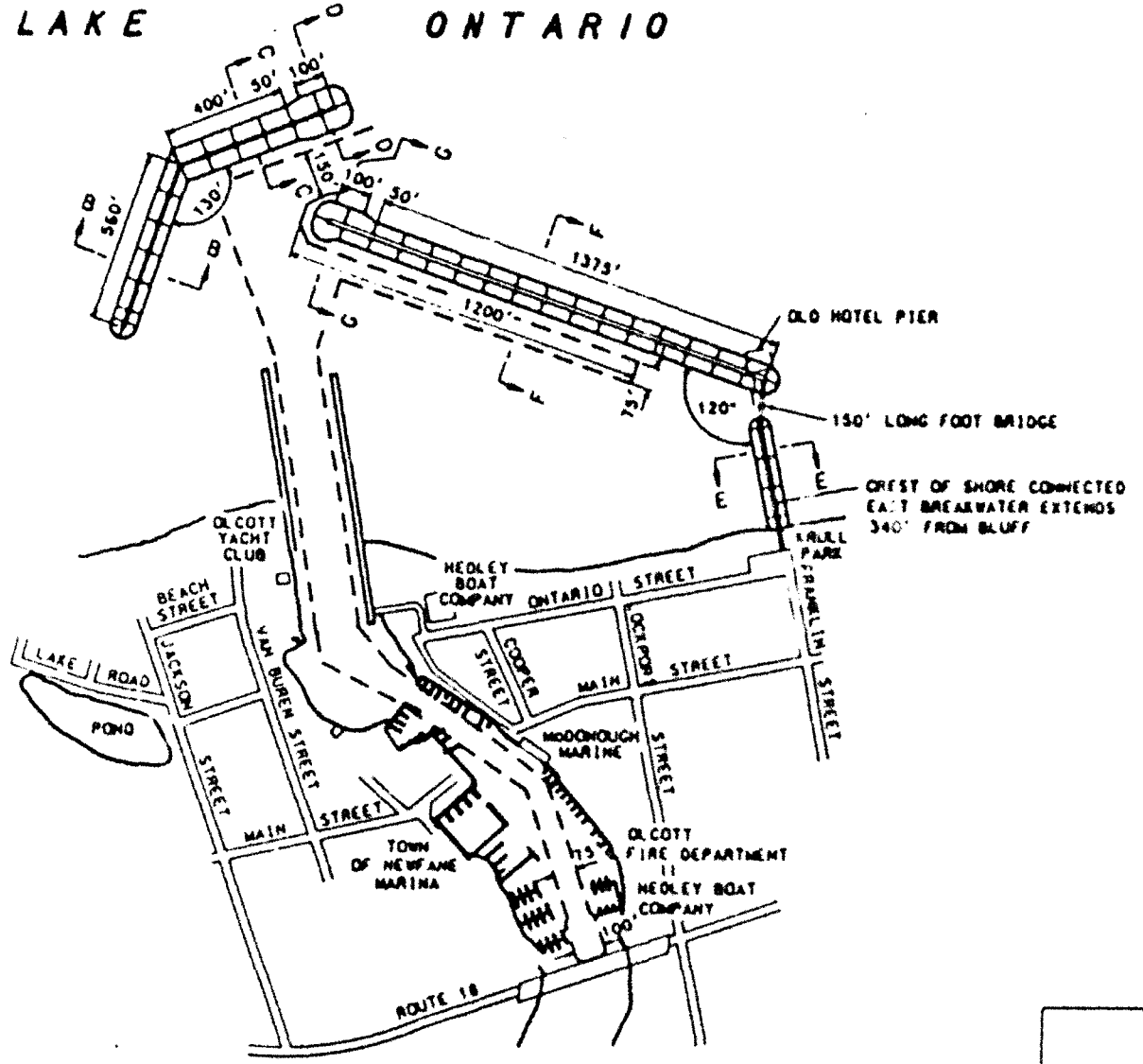
On December 5 and 6, 1989, a conference was held at the Corps' Waterways Experiment Station in Vicksburg, Mississippi to discuss the results of the model studies, demonstrate optimum Plan 10A (16), optimum Plan 10B (19), and identify a preferred plan. Present at the Conference were representatives of the New York State Office of Parks, Recreation, and Historic Preservation (official local sponsor); the County of Niagara Planning and Industrial Development; the town of Newfane; State Senator Daly's office; the Corps Waterways Experiment Station and Buffalo District. Prior to this conference and throughout the study

process, the town of Newfane and the County of Niagara and other interested citizens have expressed preference for the larger Plan 10B. WES personnel, using slides and video projections, discussed with the participants the features of the plans, their performance, and functionality. An immediate and fruitful discussion followed involving representatives from all the Federal, State, County, and town offices present at the Conference. After seeing the slides and video projections, both Plans 16 and 19 were recognized as meeting the objective of providing the year-round safe boating basin needed to achieve the local development program laid out in the local master plan. The cost factor, however, appeared to be the only concern in everyone's mind at that time. Plan 10B (19) would exceed the maximum project cost limit defined by Section 902 of the 1986 Water Resources Development Act. Further, NYSPR&HP stated it could not support the larger Plan 10B because of the high non-Federal cost that would result from the Federally supported plan.

The viewing of the model and demonstration of Plan 1 (basic 10A), Plan 16 (optimum 10A), and Plan 19 (optimum 10B) led to the consensus that Plan 16 would not do as good a job as Plan 19 from an engineering point of view. However, Plan 19 would have a strong potential for adverse environmental impact by restricting water circulation patterns and fish migration. In demonstrating Plan 16 (optimum 10A), the west pier was heavily overtopped by waves bringing tracer materials in the existing Federal channel between the existing piers. Plan 16 (optimum 10A) was then modified by extending the length of its west breakwater to the full length of the original west breakwater (basic 10A). Given consideration to possibly congested boat traffic at the new entrance and need for greater water circulation at the harbor, Plan 16 was further modified by widening the entrance channel to 150 feet and the angle between the two legs of the west breakwater to 130 degrees. As a result of this modification, optimum Plan 10A performed well in reducing wave overtopping the west pier, and in reducing the rate of tracer material migrating to the entrance channel. Wave attack on, and wave overtopping of, the west pier were considerably abated. Because of these modifications to the optimum Plan 10A (Plan 16), Plan 10A was referred to as Plan 10A Modified. Plan 10A Modified (Plate 3.3) was agreed to as the preferred candidate plan. Given the above, Plan 10A Modified and optimum Plan 10B were designated candidate plans along with the no-action plan; and were given further consideration in the reevaluation study process. They were further evaluated, compared, and screened.

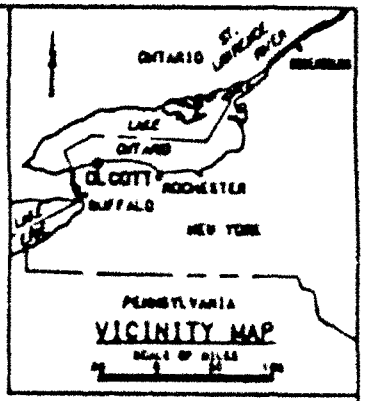
B. Local Sponsors' Views

The non-Federal sponsors left the conference with the feeling that they met an important milestone toward the completion of this project. A unanimous agreement was reached on one harbor modification plan that seemed capable of satisfying



PLAN

SCALE: 1" = 600'



OLCOTT HARBOR
OLCOTT, NEW YORK

PLAN #10A MODIFIED

U.S. ARMY ENGINEER DISTRICT BUFFALO
FEBRUARY 1990

PLATE

all the social, engineering, economic, and environmental requirements. The NYSPR&HP Deputy Commissioner who attended the conference, by memo dated December 26, 1989 wrote:

"I am happy to see this project make such dramatic improvements from New York State's point of view... We realize that the Olcott Harbor project may be the most significant economic development and boating/fishing access project in this area of Niagara County in the next 50 years. Also we recognize the great navigational safety and storm protection improvements offered by the Harbor...

The Olcott Harbor Steering Committee by letter dated December 19, 1989 to the Buffalo District Commander wrote: "...It was the unanimous consensus of the Committee that Plan 10A Modified was the preferred plan..."

On October 10, 1989, the Niagara County Legislature, Commerce, and Tourism Committee passed Resolution No. 464-89 reaffirming their support of the Olcott Outer Harbor project. The County participated in the December 19, 1989 unanimous consensus of the Steering Committee that "Plan 10A Modified was the preferred plan."

On December 9, 1989 the Town Board of Newfane voted to support the construction of Plan 10A Modified.

3.4 EVALUATION AND COMPARISON OF PLAN 10A MODIFIED AND PLAN 10B

A detailed economic analysis was performed considering Plan 10A Modified and Plan 10B to help identify the current NED Plan (See appendix C). The analysis included the development and comparison of average annual costs, average annual benefits, net benefits, and a benefit to cost ratio for the two plans. Note that costs for dredging the lower reach of Eighteenmile Creek and new access channels were still under consideration. A Federal discount rate of 8-7/8 percent per year and a 50-year project life were used in the analysis.

A. Cost Evaluation.

Average annual costs, including dredging were developed for Plans 10A Modified and optimum Plan 10B. The cost evaluation involved obtaining the following cost information: construction costs for the Federal project, construction costs for the non-Federal ancillary recreational features to be provided by the local sponsor, interest costs during construction, investment costs, and all annual maintenance costs. Summaries of these costs are presented in Tables 3.7-3.11.

a. First Costs. Tables 3.7 and 3.8 provide summaries of the cost estimates for Plan 10A Modified and Plan 10B. In addition, Table 3.9 shows the cost estimate for providing the non-Federal ancillary recreational features or non-Federal associated features needed to capture all of the benefits claimed in the economic evaluation. All of these non-Federal features associated costs would be paid for by the local sponsor and are not subject to cost sharing requirements.

(1) Federal project first costs for Plan 10A Modified and Plan 10B are estimated at $14,200,000 and $17,480,000, respectively. These costs are itemized in Table 3.10 according to the required cost code of accounts.

Slip construction costs include: slip walkways and electric and water hookup costs. These costs also reflect the present value of full replacement of these features, 25-years from project year one. Slip construction costs are estimated at $3,962,400 and $5,000,000 for Plan 10A Modified and Plan 10B, respectively.

Launch ramp construction costs of $60,000 reflect construction of a two lane launch ramp and the present value of full replacement of the launch ramp in project year 25.

Non-Federal associated first costs for Plan 10A Modified and Plan 10B are estimated at $6,387,600 and $7,471,900, respectively. As shown in Table 3.9, the following marina related facilities would be provided: access and slip walkways, one launch ramp with two lanes, a dock for a tour boat as well as the tour boat acquisition costs, winter storage equipment, a main "service" building and purchase of land for the building, boat gasoline sales and boat pumpout facilities, and infrastructure costs (roads, utilities, and parking).

Winter storage equipment costs cover all the machinery needed to provide winter storage services. This includes one 25-ton retrieval lift ($115,700), two 8-ton forklifts ($92,000), two heavy duty pickup trucks ($32,000), and four boat trailers ($10,000). Winter storage equipment costs reflect replacement of the retrieval lift in project year 25. All other winter storage equipment was replaced every eight years.

The building cost of $825,000 would be able to provide a 5,000 plus square-foot main "service" building and equipment needed for marine gasoline sales and marine pumpout services. The main "service" building would be used as a control center for the entire marina area. The manager's office and common areas (hallways, utilities, and restrooms) would be located here. The majority of the "service" building floor space would be leased to businesses offering ancillary marine related retail goods and services.

Table 3.7 - Total Project Cost, Plan 10A Modified
October 1989 Price Levels

12	DREDGING	
12.0.4	Mechanical Dredging (Creek & new channels)	$ 273,000
12.0.4.B	Obstruction Removal	$ 31,500
10.0.1	BREAKWATERS	
10.0.1.B	West Breakwaters	$ 3,705,100
10.0.1.B	East Breakwaters	$ 4,801,650
10.0.R.B	Navigation Aids	$ 55,000
14	RECREATION FACILITIES	
14.0.1	Parking Lots and Service Roads	$ 216,000
14.0.P	Sanitary Facilities	$ 124,000
14.0.3.B	Footbridge (one)	$ 150,000
14.0.3.B	Concrete Walkway	$ 397,500
14.0.3.B	Walkway Guardrail	$ 29,000
14.0.3.B	Precast Walkway Barriers	$ 56,100
	TOTAL CONSTRUCTION	$ 9,847,850
	Contingencies @ 20%	$ 1,976,150
	TOTAL CONSTRUCTION PLUS CONTINGENCIES	$11,824,000
01	Lands and Damages Incl. Contingencies	$ 70,000
30	Planning, Engineering, and Design	$ 1,400,000
	CONSTRUCTION MANAGEMENT	$ 906,000
	TOTAL PROJECT COST (1)	$14,200,000

(1) See Cost Engineering, Appendix B for details.

Table 3.8 - Total Project Cost, Plan 10B
October 1989 Price Levels

12	DREDGING	
12.0.4	Mechanical Dredging (Creek & new channels)	$ 329,000
12.0.4.B	Obstruction Removal	$ 31,500
10.0.1	BREAKWATERS	
10.0.1.B	West Breakwaters	$ 5,432,300
10.0.1.B	East Breakwaters	$ 4,810,700
10.0.R.B	Navigation Aids	$ 55,000
14	RECREATION FACILITIES	
14.0.1	Parking Lots and Service Roads	$ 324,000
14.0.P	Sanitary Facilities	$ 124,000
14.0.3.B	Footbridge (two)	$ 300,000
14.0.3.B	Concrete Walkway	$ 826,800
14.0.3.B	Walkway Guardrail	$ 58,400
14.0.3.B	Precast Walkway Barriers	$ 112,200
	TOTAL CONSTRUCTION	$12,403,900
	Contingencies @ 20%	$ 2,506,100
	TOTAL CONSTRUCTION PLUS CONTINGENCIES	$14,910,000
01	Lands and Damages Incl. Contingencies	$ 70,000
30	Planning, Engineering, and Design	$ 1,400,000
	CONSTRUCTION MANAGEMENT	$ 1,100,000
	TOTAL PROJECT COST (1)	$17,480,000

(1) See Cost Engineering, Appendix B for details.

Table 3.9 - Non-Federal Associated Project Cost (Plans 10A & 10B)
October 1989 Price Levels

Development Costs	Plan 10A Modified Associated Costs $	Plan 10B Associated Costs $
Marina Facilities		
Slips/Walkways	3,962,400 (1)	5,000,000
Launch Ramps	60,000 (1)	60,000
Tour Boat and Dock	500,000 (1)	500,000
Winter Storage Equipment	316,900 (2)	316,900
Buildings	825,000	825,000
Site	350,000	350,000
Sub-Totals	6,014,300	7,051,900
Infrastructure		
Roads	60,000	60,000
Water and Sewer	135,000	135,000
Parking	178,300	225,000
Sub-Totals	373,300	420,000
TOTAL ASSOCIATED COSTS	6,387,600 (3)	7,471,900 (3)

(1) Includes present value of full replacement of slips/docks, or launch ramp in Project Year 25.
(2) Cost includes replacement of equipment every eight years.
(3) Cost for construction of dock and other upland developments related to the Federal project.

Other infrastructure costs (roads, water and sewer lines and hookups, and parking facilities) needed to make these non-Federal features operational came to $373,300 and $420,000 for Plan 10A Modified and Plan 10B, respectively.

b. Investment Costs. Interest-during-construction (IDC) cost was computed on all Federal and non-Federal features. This interest cost was added to the Federal and non-Federal feature first costs to arrive at a total investment cost. Federal and non-Federal total investment costs are presented in Table 3.9 below.

Table 3.10 - Total Investment Costs for Federal and Non-Federal Projects, October 1989 Price Levels

	Plan 10A Modified $	Plan 10B $
FEDERAL COST-SHARED PROJECT: (1)		
Construction Costs	14,200,000	17,480,000
IDC (3)	1,053,800	1,298,400
Total	15,253,800	18,778,400
NON-FEDERAL ASSOCIATED PROJECT: (2)		
Construction Costs	6,387,600	7,471,900
IDC (4)	241,800	285,300
Total	6,629,400	7,757,200

(1) Includes costs for all features of the authorized project that are subject to cost sharing between the Federal Government and the non-Federal sponsor.

(2) Includes costs for all the features associated with the authorized cost-shared project, that are to be borne 100 percent by the non-Federal sponsor.

(3) Interest during construction on Federal features was computed using a three-year construction season; no construction during January, February, and March; monthly compounding and an 8-7/8 percent annual interest rate.

(4) Interest during construction on non-Federal features was computed using an 11 month construction season, monthly compounding, and an 8-7/8 percent annual interest rate.

c. Average Annual Costs. All Federal and non-Federal investment costs were converted to average annual costs using the Federal discount rate of 8-7/8 percent per year. Annual maintenance costs were added to these annualized investment costs to arrive at total average annual costs. Total average annual costs for Plan 10A Modified and Plan 10B (see Table 3.11) came to $1,650,300 and $2,041,600, respectively, for the Federal share; and $1,090,700 and $1,254,800, respectively, for the non-Federal share.

Annual maintenance costs for the non-Federal project covered such costs as wages and overhead for marina employees, annual marina maintenance, repairs and utility costs, and annual marina insurance. These annual maintenance costs are estimated at $493,800 and $556,400 for Plan 10A Modified and Plan 10B, respectively.

Table 3.11 - Average Annual Costs
October 1989 Price Levels

	Plan 10A Modified $	Plan 10B $
FEDERAL COST-SHARED PROJECT:		
Interest and Amortization (1)	1,373,300	1,690,600
Breakwall and Channel Maintenance	277,000	351,800
Total	1,650,300	2,041,600
NON-FEDERAL ASSOCIATED PROJECT:		
Interest and Amortization (1)	596,900	698,400
Annual Marina Wages & Overhead	313,600	336,700
Annual Marina Maintenance, Repairs, Utilities	170,200	209,700
Annual Marina Insurance	10,000	10,000
Total	1,090,700	1,254,800

(1) Derived from the total investment cost using a partial payment factor of .09003 (8-7/8 percent interest rate and a 50-year project life).

B. **Benefit Evaluation**

a. General.

Plan 10A Modified would provide 886 new slips: 786 (736 slips in the east basin plus 50 slips in Eighteenmile Creek) for permanent based recreational boaters, 50 slips for transient boater use, and 50 slips for charterboat operators. It would also provide one slip for a tour boat and access to the new east Federal breakwater for pier fishing and sightseeing.

Plan 10B would provide 1,118 new slips: 1,018 (786 slips in the east basin and 232 in the west basin) for permanent based recreational boaters, 50 slips for transient boater use, and 50 slips for charterboat operators. It would also provide one slip for a tour boat and access to the new east and west Federal breakwaters for pier fishing and sightseeing.

The National Economic Development (NED) benefits attributed to Plans 10A Modified and 10B were grouped into 11 categories: (1) net willingness to pay benefits; (2) new passenger recreational boating benefits; (3) benefits to current slip users; (4) benefits from transient craft; (5) charter service benefits; (6) pier fishing benefits; (7) sightseeing benefits; (8) existing launch ramps user benefits; (9) harbor of refuge benefits; (10) inundation reduction benefits; and (11) associated

benefits. Total average annual NED benefits for Plan 10A Modified and Plan 10B are estimated at $1,683,000 and $1,986,500, respectively (See Table 3.12). A summary of each one of these benefit categories is provided hereinafter. The details for these benefit computations are given in appendix C.

(1) Willingness to Pay. This category of benefits was evaluated by a user survey: the survey considered willingness to pay benefits for boat owners using new permanent based slips and new transient slips. A net income analysis was performed for charterboat operators and the local cooperator with respect to "Associated Costs." The Unit Day Value Method was used mainly to evaluate benefits to passengers in boats, pier fishing, and sightseeing. The categories of General Recreation and Specialized Recreation were used.

Benefits would accrue to two categories of boat owners and their immediate household: those who use new slips, and those who use the new launch ramp.

Benefits to boat owners and their immediate household, who rented new permanent based slips or used the new launch ramp facility, were calculated using a method referred to as Contingent Value Method (CVM).

This method allows the use of simulated demand curves. For this analysis, a simulated demand curve was used to develop total willingness to pay for new permanent based slip renters and boat owners who used the new launch ramp. Usage fees (seasonal wet slip rental charges and launch ramp fees) were subtracted from Total Willingness to Pay to arrive at "Consumer Surplus" (Net Willingness to Pay). Consumer Surplus for new permanent based boaters came to $431,800 and $559,300 for Plan 10A Modified and Plan 10B, respectively. Consumer Surplus for boaters who used the new launch ramp came to $9,300 for either plan.

(2) New Passenger Benefits. These benefits reflect the value of the recreational boating experience to the boat owner and his immediate household. This benefit category is based upon the household income of the boat owners immediate household. However, this does not cover passengers that are not members of the boat owners immediate household. The values of the recreational boating experience for these non-household passengers must also be accounted for. This value was calculated using the Unit Day Value General Recreation Category.

Passenger benefits were calculated for non-household passengers on boats using new slips, launch ramps, and transient boating facilities.

With project condition, Unit Day Values were developed for non-household passengers on boats using new: slips, launch ramps, and transient facilities. The number of annual boating activity occasions for these three usage categories were developed for each plan. Benefits to non-household passengers on boats using new slips came to $263,000 and $340,700 for Plan 10A Modified and Plan 10B, respectively. Benefits to non-household passengers on boats using the new launch ramp came to $28,600 for either Plan.

(3) Current Slip Users. Benefits also accrue to boat owners and their immediate household who continue to use existing harbor slips and launch ramps. "Consumer Surplus" for "without" and "with" project conditions was developed for boat owners using the existing harbor slips and launch ramps. The net increase in "Consumer Surplus" for boat owners using existing harbor slips came to $28,200 for either plan.

Benefits will also accrue to non-household passengers on boats using existing: slips, launch ramps, and transient facilities. "Without Project" and "With Project" condition Unit Day Values for the three types of non-household passengers were developed to obtain the net increase in Unit Day Value for these three user groups. The net increase in benefits to non-household passengers on boats using existing slips came to $17,200 for Plan 10A Modified and Plan 10B.

(4) Transient Craft. Benefits would accrue to boat owners and their immediate households who use new and existing transient facilities. The Contingent Value Method was used to develop a simulated demand curve.

(a) Consumer surplus for boaters who used the new transient facilities was estimated at $32,900 for either Plan 10A Modified, or Plan 10B. Also, Unit Day Values were developed for non-household passengers on boats using new transient facilities under the "with project conditions." Benefits to non-household passengers on boats using new transient facilities under the "with project conditions" came to $10,400 for either plan.

(b) The net increase in "consumer surplus" for boat owners using existing transient facilities came to $9,900 for either plan. The net increase in passenger benefits was also calculated for non-household passengers on boats using existing transient boating facilities. These benefits came to $3,100 for either plan.

(5) Charter Service Benefits. Both Plan 10A Modified and Plan 10B would provide a total of 50 slips for the charterboat service industry and one slip for a tour boat. Charter service benefits were divided into two categories: sportfishing charterboat benefits and tour boat benefits. These benefits are discussed in detail in appendix C.

(a) Benefits associated with the slip set aside for charters but not used during the first four years of the project, are twofold: benefits to the boat owner and benefits to the passengers. Average annual benefits to the boat owner who rented these charter slips were estimated at $4,200. Benefits accruing to the passengers were evaluated based on a Unit Day Value for each passenger. Considering the number of pleasure craft renting slips set aside for charterboats, and the number of trips per pleasure boat per season, the average annual benefits for these passengers were estimated at $2,600.

(b) Other subcategories of benefits associated with the charter service benefits are: increase in net income for existing charter fishermen estimated at $71,300; recreational value for clients using new charterboat services estimated at $217,300; recreational value for new clients using existing charter fishing operators estimated at $21,700; increase in recreational value for current charter fishing clients estimated at $21,000; and recreational value for passengers using the new tour boat estimated at $49,800.

(6) Pier Fishing Benefits. Plan 10A Modified would provide access to the new east Federal breakwater for pier fishing and Plan 10B provides access to the new east and west Federal breakwater. Benefits would accrue to fishermen using the new breakwaters and to fishermen currently utilizing the existing Federal piers. Benefits were taken only for fishermen fishing during the salmon spring and autumn fishing season. The spring salmon season had 26 days and the autumn season 16 days.

Given space standards, turnover rates, usable length of new breakwater, and Unit Day Value per fisherman activity occasion, benefits to new fishermen and fishermen who currently utilize the existing piers were developed by plan. The Unit Day Value per fisherman activity occasion was developed for without and with project conditions using specialized recreation and fishing point values.

Average annual new pier fishermen benefits for Plan 10A Modified and Plan 10B came to $152,500 and $248,500, respectively.

Fishermen that are currently using the existing pier would also realize a net increase in the value of their recreational fishing experience due to the project implementation. This increase was taken as the difference in Unit Day Value between without and with project conditions. Considering the number of annual salmon pier fishing activity occasions taking place on the existing Federal piers, benefits to existing pier fishermen came to $18,900 under either plan.

(7) Sightseeing Benefits. The value of the recreation experience for people who currently sightsee off of the existing Federal piers would be increased by the project. In addition, Plan 10A Modified and Plan 10B would provide access to the east Federal breakwater for sightseers. These new sightseers will come from visitors to Krull Park under "With Project" conditions. At present, under the Without Project conditions, visitors to the park will occasionally walk onto the existing piers.

Under With Project conditions, the County will undertake a major renovation of Krull Park. County officials projected usage of the park to grow from its current level of about 100,000 annual visitors to between 250,000 and 500,000 annual visitors under With Project conditions. Sightseeing benefits were based upon 52,000 annual sightseeing activity occasions.

The value of the sightseeing experience was based upon the Unit Day Value for General Recreation. Therefore, new east breakwater sightseeing activity occasions were phased in over a ten year period. The resulting time stream of sightseeing benefits was converted to an average annual dollar value using an 8-7/8 percent annual interest rate and a fifty year project life. Average annual new east breakwater sightseeing benefits came to $159,400.

Current sightseers, estimated at 5,000 annually, would also enjoy a net increase in the value of their recreation experience due to project implementation. Their average annual benefit came to $7,300. Total sightseeing benefits came to $166,700. For details on sightseeing benefits, see appendix C.

(8) Existing Launch Ramp. Benefits would accrue to boat owners and their immediate household who continue to use existing launch ramps. This benefit is the differnce between the "without project" condition and "with project" condition consumer surplus per launch times the number of annual launches under "without project" conditions. Given 16,500 launches, and a net increase in consumer surplus of $.57 per launch, benefits to launch ramp boat users is $9,400.

Non-household passengers also incur an increase in benefits equal to the net increase in unit day value between the with and without project condition. Given a net increase in unit day value of $1.01 and 1.75 non-household passengers per launch, and 16,500 launches per season, benefits to non-household passengers is $29.200.

(9) Harbor of Refuge Benefits. Harbor of Refuge benefits are attributable to a boating facility that provides a safe entrance to a mooring area in all conditions of weather. The existing Olcott piers are not high enough to prevent waves from overtopping during storms. Also during storms a great amount of water turbulence is present between the existing Federal piers, making harbor access hazardous.

The construction of the new east and west breakwaters would alleviate this problem. The large scale of the Olcott project will stimulate cruising in western Lake Ontario since boaters will have increased confidence to cope with sudden changes in weather and be assured of safe harbor access and mooring facilities should the need arise. Four types of boaters would benefit from the plans: boaters on cruise, harbor slip renters, harbor launch ramp users, and harbor charterboat users. Harbor of refuge benefits of $20,000 was credited to the Olcott project. For details on Harbor of Refuge benefits, see appendix C.

(10) Flood Inundation Incidental Benefits. Construction of the east and west breakwaters would reduce existing condition flood damages incurred by structures located on the lakefront and within the existing harbor area. An analysis of this reduction was performed. Existing condition damages were determined separately for the lakefront and harbor areas using previously published lakefront and harbor stage damage curves for Olcott. These curves were used in conjunction with lakefront and harbor ultimate stage-frequency curves for Lake Ontario at Olcott to develop Without Project condition damage frequency curves for the lakefront and harbor areas. These damages were estimated at $88,700. For more details, see appendix D.

Under "With Project Conditions," average annual flood damages came to $24,700 and $22,400 for Plan 10A Modified and Plan 10B, respectively. Average annual inundation benefits for Plan 10A Modified and Plan 10B came to $64,000 and $66,300, respectively.

(11) Associated Benefits. Table 3.9 outlined costs that would be incurred for non-Federal features. Non-Federal feature first costs for Plans 10A Modified and Plan 10B came to $6,387,600 and $7,471,900, respectively. These costs are

Table 3.12 - Benefit Summary (1) October 1989 Price Levels

	Plan 10A Modified	Plan 108
	$	$
1. NET WILLINGNESS TO PAY-BOAT OWNERS		
A. New slip renters (Less Transients & Charters)	431,800	559,300
B. New launch ramp users	9,300	9,300
NET WILLINGNESS TO PAY SUBTOTAL	441,100	568,600
2. NEW PASSENGER RECREATIONAL BOATING BENEFITS		
A. Passengers of new slip renters	263,000	340,700
B. Passengers of new launch ramp users	28,600	28,600
PASSENGER BOATING BENEFITS SUBTOTAL	291,600	369,300
3. BENEFITS TO CURRENT SLIP USERS		
A. Increase in recreational value to current slip renter boat owners	28,200	28,200
B. Increase in recreational value to passengers of current slip renters	17,200	17,200
CURRENT SLIP USER BENEFITS SUBTOTAL	45,400	45,400
4. BENEFITS FROM TRANSIENT CRAFT		
A. New transient rentals		
(1) Recreational value for boat owners	32,900	32,900
(2) Recreational value for passengers	10,400	10,400
NEW TRANSIENT CRAFT BENEFITS SUBTOTAL	43,300	43,300
B. Existing transient rentals		
(1) Recreational value for boat owners	9,900	9,900
(2) Recreational value for passengers	3,100	3,100
EXISTING TRANSIENT CRAFT BENEFITS SUBTOTAL	13,000	13,000
5. CHARTER SERVICE BENEFITS (CHARTERFISHING, EXCURSIONS)		
A. Increase in net income for existing charter fishermen	71,300	71,300
B. Recreational value for clients using new charterboat services	217,300	217,300
C. Recreational value for new clients using existing charter fishing operators	21,700	21,700
D. Increase in recreational value for existing charter fishing clients	21,000	21,000
E. Benefits to slips set aside for charter usage but not used in first 5 years		
a. Slip renter benefits	4,200	4,200
b. Benefits to passengers of slip renters	2,600	2,600
F. Slip revenue for new charter boats		
G. Recreational value for passengers using the new tour boat	49,800	49,800
CHARTER SERVICE BENEFITS SUBTOTAL	387,900	387,900
6. PIER FISHING BENEFITS		
A. New fishermen	152,500	248,500
B. Current fishermen	18,900	18,900
PIER FISHING BENEFITS SUBTOTAL	171,400	267,400
7. SIGHTSEEING BENEFITS	166,700	166,700
8. EXISTING LAUNCH RAMP USER BENEFITS		
A. Increase in recreational value to current launch ramp boat owners	9,400	9,400
B. Increase in recreational value to passengers of current launch ramp boat owners	29,200	29,200
EXISTING LAUNCH RAMP USER BENEFITS SUBTOTAL	38,600	38,600
9. HARBOR OF REFUGE BENEFITS	20,000	20,000
10. INUNDATION REDUCTION BENEFITS	64,000	66,300
TOTAL AVERAGE ANNUAL NED BENEFITS	**1,683,000**	**1,986,500**
11. ASSOCIATED BENEFITS		
A. Lease revenues	103,300	103,300
B. Slip revenues	1,013,800	1,279,600
C. Launch ramp revenues	16,500	16,500
D. Winter storage revenues	219,600	277,200
E. Marine gasoline sales revenues	7,400	9,000
F. Pumpout revenues	7,900	9,300
TOTAL AVERAGE ANNUAL ASSOCIATED BENEFITS	**1,368,500**	**1,694,900**

(1) All benefits reflect October 1989 price levels, an 8-7/8 percent annual interest rate and a 50 year project life. See Economics Appendix C for details.

referred to as Associated Costs. These costs were converted to an average annual dollar value of $1,090,700 and $1,254,800, respectively (See Table 3.11).

However, there are a number of revenue streams that will offset these average annual costs. An offset to these costs can be taken in the benefit analysis if there are user fees that will recoup these costs. User fees generated from the construction of these Associated Costs fall into six general categories: lease revenues, slip rental revenues, launch ramp revenues, winter storage revenues, gasoline revenues, and waste pumpout revenues. Total average annual Associated Revenues for Plan 10A Modified and Plan 10B came to $1,368,500 and $1,694,900, respectively. For details on average annual associated revenues see appendix C.

b. Net Benefits and Benefit-to-Cost Ratios.

Table 3.13 shows average annual benefits, costs, and net benefits for Plan 10A Modified and Plan 10B.

Plan 10A Modified has average annual benefits of $1,683,000; average annual costs of $1,650,300; net benefits of $32,700; and a benefit-to-cost ratio of 1.02.

Plan 10B shows average annual benefits of $1,986,500; average annual costs of $2,041,600; net benefits of $-55,100; and a benefit to cost ratio of 0.97.

Table 3.13 - Benefit to Cost Summary (October 1989 Price Levels)
Federal Cost-Shared Project

	Plan 10A Modified	Plan 10B
Average Annual Benefits	$ 1,683,000	$ 1,986,500
Average Annual Costs	$ 1,650,300	$ 2,041,600
Net Benefits	$ 32,700	$ -55,100
Benefit to Cost Ratio	1.02	0.97

Based on the above benefit-cost analysis, Plan 10A Modified, having greater net benefits than Plan 10B, appears to be the current National Economic Development Plan. But the cost and benefits for Plan 10B must be adjusted to reflect U.S. Fish and Wildlife Service's concerns regarding slips located alongside the existing Federal West Pier. U.S. F&WL Service objected that those slips would interfere with fishing off the pier.

The estimated benefits for Plan 10B are based on Plan 10B providing 1,118 slips including 232 slips in the considered but not authorized west basin. Fifty of the 232 additional slips would be located alongside and perpendicular to the existing

Federal west pier. U.S. Fish and Wildlife Service and New York State Department of Environmental Conservation objected to the closeness of these slips to the Federal piers in that it would interfere with recreational fishing off the piers. In a letter dated January 22, 1990, to the Buffalo District, the New York State Department of Environmental Conservation concluded that in order for anglers to fish off the existing piers, mooring must not be allowed within 150 feet of the piers. Resolution of this issue would further decrease the net benefits for Plan 10B. A sensitivity analysis of the impact of decreasing the number of slips for Plan 10B by 50 slips, follows:

c. Impact of Decreased Number of Slips.

As shown in Table 3.13 above, Plan 10B and Plan 10A Modified would produce annual net benefits of $-55,100 and $32,700, respectively. However, as discussed herein above, the negative benefits of $-55,100 for Plan 10B can only be realized if the additional 232 slips are provided in the added west basin. This number of slips would eventually be reduced to remove U.S. Fish and Wildife Service objection that these slips be 150 feet off the lake side of the Federal piers so as not to interfere with fishermen using the piers for recreational fishing. A total of 50 slips would be eliminated to satisfy this concern, which would bring to 182 the number of slips in the west basin. This reduction of 50 slips alongside the west pier would reduce the average annual costs and further decrease the average annual benefits for Plan 10B by $22,100 and $114,000, respectively, as shown in Table 3.14 below.

Table 3.14 - Decrease in Benefit and Cost
(October 1989 Price Level)

	Avg. An. Cost/Slip	Avg. Ann. Benefit/Slip	Boat Decrease	Decrease in Average Annual Benefits ($)	Costs ($)
	A	B	C	B x C	A x C
		(4)			
New Slip Renters		549.41 (1)	50	27,470	
New Passenger Boat Assoc. Benefits		334.68 (1)	50	16,734	
Slip Revenues Lost		1145.97 (1)	50	57,300	
Winter Storage		300 (1)	50	12,500	
Dock Construction Cost	442.13(1)		50		22,100
Total				114,000	22,100

(1) See Economics appendix for these average annual costs per slip and benefit per slip.

The resulting adjusted average annual costs and benefits for Plan 10B would be $2,019,500 ($2,041,600 - 22,100) and $1,872,500 ($1,986,500 - 114,000), respectively. Replacing the average annual costs and benefits shown in Table 3.13 for Plan 10B by these adjusted average annual costs and benefits, Table 3.13 becomes Table 3.15 as follows:

Table 3.15 - Adjusted Benefit-Cost Summary (October 1989 Price Levels) Federal Cost-Shared Project

	Plan 10A Modified (886 slips)	Plan 10B (1) (1068 slips)
Average Annual Benefits	$ 1,683,000	$ 1,872,500
Average Annual Costs	$ 1,650,300	$ 2,019,500
Net Benefits	$ 32,700	$ -147,000
Benefit to Cost Ratio	1.02	0.93

(1) Refer to Section B.a on page 3-19 and B.c on page 3-27. Total slips are 1118 - 50.

d. Rationale for Designation of NED Plan.

By comparing these above average annual net benefits produced by the two plans, one may note that Plan 10A Modified would yield greater net benefits than Plan 10B. Also, Plan 10A Modified is more cost-effective than Plan 10B. It would meet the planning objectives and fulfill the engineering and economic criteria set in the report. Further, from an environmental quality point of view, Plan 10A Modified is more acceptable than Plan 10B in that Plan 10A Modified would cause less alteration of the lakebed and better water circulation through the new marina basin from a westerly direction.

Based on the above, Plan 10A Modified was designated the current National Economic Development (NED) Plan and selected for detailed design.

e. Rationale for Elimination of Plan 10B.

Plan 10B, based on NED benefits only, is not a viable plan as demonstrated in this section. It is less cost-effective when compared with Plan 10A Modified. Its total construction cost estimate would exceed the maximum project cost limitation allowed by Section 902 of the Water Resources Development Act of 1986. In fact, it is not implementable in the context of this reevaluation study; considering the associated benefits from the upland development, Plan 10B would have positive net benefits, but still less than the net benefits for Plan 10A Modified. However, the non-Federal sponsors indicated that they will not be able to bear the excess cost over the authorized limit set by the 1986 WRDA. In addition, neither the U.S. Fish and Wildlife

Service nor the New York State Department of Environmental Conservation supported the implementation of Plan 10B because of its potential for adverse environmental impacts on water circulation and fishery. Plan 10B therefore was eliminated from further consideration.

The following Comprehensive Table 3.16 displays a comparison of project features, costs, and benefits between the authorized plan, and the selected Plan 10A Modified (current NED plan).

3.5 PLANS SELECTED FOR FURTHER STUDY.

Plan 10A Modified, having been designated the current NED plan, was carried on for detailed design along with the No-Action plan.

The resolution of the issue of dredging of, and small boat marina development in, Eighteenmile Creek that surfaced during the planning process might positively or negatively impact on the evaluation of both Plan 10A Modified and Plan 10B. That is, the Eighteenmile Creek portion of the authorized project, being common to both Plan 10A Modified and Plan 10B, would not change the designation of Plan 10A Modified as the NED plan. A discussion of these issues follows.

Early in the process it was found that most of the boat slips that were expected to be built in Eighteenmile Creek as a result of the recommended project in the 1978 final feasibility report were in fact built in the intervening years between 1978 and 1986 when the recommended project was authorized by Congress. This resulted in the loss of a major portion or all of the benefits that would be accrued by deepening the lower Eighteenmile Creek, for the expected improvement. As indicated, these improvements are in place and channel depth has been adequate. Nevertheless, any dredging of Eighteenmile Creek including the cost of disposing of the dredged material, must be a very cost-effective operation in order to incrementally justify its implementation. To achieve this goal, laboratory testing of sediment samples collected in July 1989 in the lower Eighteenmile Creek channel and in the proposed new entrance and access channels were performed. The results of the laboratory analyses indicate that dredge materials in Eighteenmile Creek are polluted with heavy metals. The method of disposal of the polluted dredge material as proposed by the District is unacceptable to USEPA unless additional and appropriate bioassay testing is conducted (See USEPA letter dated November 8, 1989 in the appendix E of this report). The cost of additional testing plus the cost of dredging and disposing of the polluted dredged material became a difficult issue to resolve. As incremental benefits that would be accrued by improving Eighteenmile Creek had already been accrued under the "without project" conditions as discussed above, consideration was therefore given to a judgment incremental economic analysis of dredging Eighteenmile Creek. As a result of the analysis, it was found that apparent incremental

Table 3.16 - Comparison of Features, Costs, and Benefits of Plan 10 (Authorized) and Plan 10A Modified (Current NED and selected Plan) October 1989 Price Levels

A. EXISTING FEDERAL PROJECT (Completed 1918)

Parallel Timber Crib Piers with concrete cap, 200' apart

West Pier	873'
East Pier	850'
Entrance channel between piers	140'W X 12'D X 1500'L

B. PROPOSED MODIFICATIONS TO EXISTING PROJECT <1,

	Plan 10 <1 (Authorized in WRDA '86)	Plan 10A Modified (current NED) Selected
1. Open Lake		
a. Breakwaters		
West-detached	Y (1,110')	Y (1,110')
Footbridge	N	N
Walkway	N	N
Guardrail	N	N
West-shore connected	N	N
Walkway	N	N
Guardrail	N	N
East-detached	Y (1,650')	Y (1,525')
Footbridge	Y (150')	Y (150')
Walkway	Y	Y
Guardrail	Y	Y
East-shore connected	N	Y (340')
Walkway	N	Y
Guardrail	N	Y
b. Stone Jetty (along west pier)	Y	N
c. Dredging		
Entrance channel (between B/W)	100'W x 12'D	150'W x 12'D
Access channel		
East basin	100'W x 9'D x 1040'L	75'W x 9'D x 1200'L
West basin	N	N
d. Recreational Fishing Facilities		
Sanitary facilities	Y	Y
Parking areas	Y	Y
Access facilities (ramp)	Y	Y
2. Eighteenmile Creek		
a. Dredging		
Channel (upstream of Federal project)	dropped <4	N
Turning basin (end of channel)	dropped <4	N
b. Remove submerged bridge abutments	Y	Y
c. Land site for dredge disposal	dropped <4	N
C. PROJECT SIZE - Total Slips <2	597 <2	886
1. Open Lake		
a. East Mooring Basin		
Permanent	510	776
Charterboats	-	
Transient	27	50
2. Eighteenmile Creek		
Permanent	60	10
Charterboats	-	50
3. Project Economics <3		
First Cost	$18,022,900 <3	$20,587,600
Average Annual Costs	$2,330,400	1,650,300
Average Annual Benefits	$2,033,000	1,683,000
Net Benefits	$ -297,400	32,700
Benefit/Cost Ratio	.87	1.02

<1 Plan 10: Feasibility Report, November 1978 (Feas. Rep.), P. 80. Also, Chief of Engineers report dated 11 June 1980.
<2 Plan 10: Reeval. Rep., pp 3-12. Due to development that has already taken place in Eighteenmile Creek since 1978, authorized Plan 10 would only provide 597 slips (205 dropped).
<3 "Plan 10: Chief of Engineers Report dated 11 June 1980, October 1989 price levels"
<4 Reflects current physical conditions in Eighteen Mile Creek.
Y Yes
N No

economic benefits that could be derived from dredging Eighteenmile Creek would not be large enough to offset the incremental cost of dredging Eighteenmile Creek, plus subsequent costs of disposing of the polluted material.

Further, reevaluation of depths for the proposed channels, consideration of the rate of sediment deposition, and analysis of updated bathymetric surveys indicate that these channels have sufficient depths, that the rate of sediment accumulation is minimal, and that dredging can be avoided without endangering the safety of navigation.

It was concluded that there is no Federal interest in dredging Eighteenmile Creek upstream from the existing upstream limit of the maintained Federal channel as part of the Federal project, except for the removal of the submerged abutments of the old Main Street bridge. It was also concluded that dredging the proposed entrance and access channels would not be required as part of this initial construction of the project. However, dredging Eighteenmile Creek and the proposed channels should be given further consideration during detailed design prior to initiation of plans and specifications, based on available information at that time. Further, future action should be undertaken to possibly deauthorize the Eighteenmile Creek channel.

Based on the above discussion, Plan 10A Modified, the current NED plan was selected for detailed design studies and further refinements. These refinements were not limited to the possible elimination of the dredging component of the plan, specifically, the authorized Eighteenmile Creek channel, and the new entrance and access channels. The No-Action Plan was also carried on as a basis for comparison with the current NED plan.

3.6 THE DETAILED DESIGN

The purpose of the detailed design stage was to refine plan 10A Modified for cost-effectiveness based on additional information which would result from (1) further geotechnical subsurface explorations to establish stable foundations for the structural features; (2) a flume test to investigate and insure proper wave transmission characteristics of the breakwaters; (3) a real estate investigation to insure the availability and cost effectiveness of required lands; and (4) the structural design of the pedestrian bridge and access ramp.

Very early in the detailed design stage of this preconstruction phase, several project team meetings were held at the Buffalo District to discuss the unresolved issues of dredging polluted materials from Eighteenmile Creek, and sufficient depth of the Lake Ontario water column at Olcott to accomodate the

required design depth at the entrance of, and within, the authorized marina basin. Other technical issues discussed were the stability of the rubblemound breakwaters, and the degree of their response to transmitted waves. As a result, the two-dimensional flume test described in Section 1 of this report was performed by the Corps Waterways Experiment Station primarily to resolve the issue of wave transmission characteristics of the breakwaters. Also, additional subsurface explorations were conducted by the District Geotechnical staff to insure overall structural stability of the breakwaters, the pedestrian bridge, walkways, and the navigation aids structures.

Considering current readings of +2 to +3 feet LWD for Lake Ontario water levels (See Great Lakes Charts, June 1991), and soundings taken in 1988 and 1989, sufficient water column has existed and is expected to continue to exist to accomodate the design depths of -10 feet in the new entrance channel, and -7 feet in the access channel. Regarding the dredging of polluted materials, USEPA reviewed the results of our bioassay testing and the evaluation criteria. By letter dated December 21, 1990 (See appendix E), they concurred with our classification of materials in the inner harbor as "moderately polluted," and materials in the outer harbor as "non-polluted." Although they expressed reservations about the dependability of the current methodologies for bioassay testing, they also concurred that dredging the outer harbor is environmentally acceptable.

Based on the above and other factors involved, it was concluded that dredging the inner harbor (Eighteenmile Creek) should be deauthorized, and that no initial dredging of the new entrance and access channels is required as part of the project, but may be required for future periodic maintenance to restore the authorized and/or minimum required depth, as necessary. In other developments, the results of the flume tests affirmed minimal movement of stones on the tested typical breakwater sections. Also, by letter dated December 26, 1990, the Corps Waterways Experiment Station observed that based on the angle of wave approach and the orientation of the breakwaters for Plan 10A Modified, the shoreward end of the west breakwater may be reduced up to 150 feet and still provide adequate wave protection for waves approaching from the northwesterly directions.

In view of these conclusions, Plan 10A Modified was refined to serve as the basis for preparing Project Plans and Specifications. An evaluation of the Refined Plan 10A Modified is presented in the next Section of this report.

Section IV

EVALUATION OF CANDIDATE PLANS

Section 4
Evaluation of Candidate Plans

4.1 GENERAL

This section provides detailed information on the components of two candidate plans. It discusses and compares the features of the plans (layout, cross sections, profiles), their functionality, the cost and benefits to be derived from the two plans, and the expected accomplishments of both plans. These plans are:

a. No-Action Plan. The no-action plan is the without project conditions.

b. Refined Plan 10A Modified.

4.2 PLAN DESCRIPTION -(REFINED PLAN 10A MODIFIED)

Refined Plan 10A Modified (Plate 4.1) consists of an east detached breakwater, and an east shore-connected breakwater northeasterly of the U.S. East Pier; a west detached breakwater northwest of the present harbor entrance; an entrance channel between breakwaters connected to an access channel leading to a mooring basin east of the U.S. East Pier. The breakwaters slightly overlap to help prevent storm waves from entering the east basin channels, and the existing Federal entrance channel between piers. The west detached breakwater would withstand wave attack from lake storms from the west through north-northwest and the east shore-connected breakwater would withstand wave attack from the north through east. Physical model study results indicate that the west breakwater would dissipate and prevent westerly storm waves from overtopping the U.S. west pier; and would also reduce wave reflection. Cross-sections and profiles of the breakwaters are shown on Plate 4.2. All elevations and channel depths are referred to feet below low water datum elevation 242.8 feet at Father Point, Quebec, International Great Lakes Datum (IGLD)-1955.

The detailed design for Refined Plan 10A Modified is discussed in appendix A of this report.

The east shore-connected breakwater totals 323 feet in length with a 95-foot long foot-bridge connecting it to the detached east breakwater. A portion of the detached east breakwater and the shore-connected breakwater would be constructed on the alignment of the remains of an old hotel pier

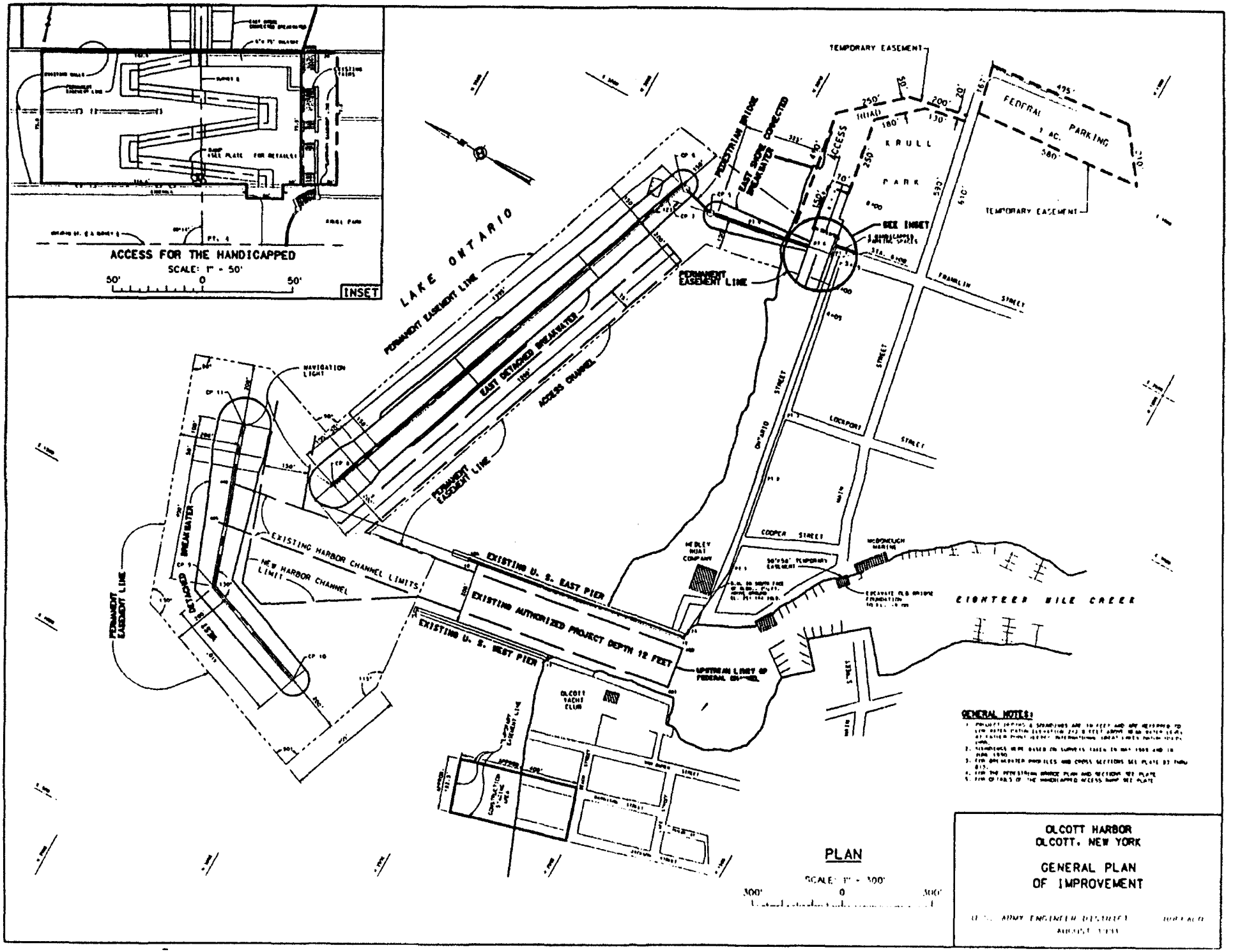
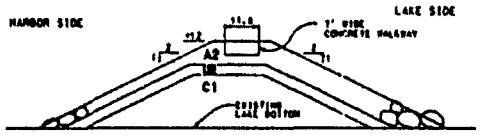
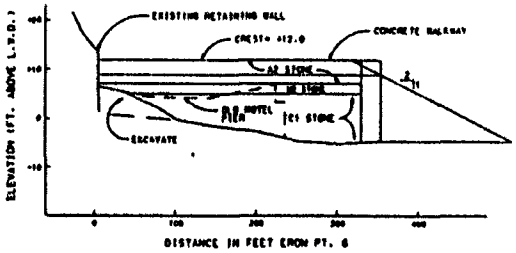

ACCESS FOR THE HANDICAPPED
SCALE: 1" = 50'
50' 0 50'
INSET
LAKE ONTARIO
PERMANENT EASEMENT LINE
EAST DETACHED BREAKWATER
ACCESS CHANNEL
PEDESTRIAN BRIDGE
EAST SHORE CONNECTED BREAKWATER
ACCESS
TEMPORARY EASEMENT
FEDERAL PARKING
1 AC.
KRULL PARK
SEE INSET
FRANKLIN STREET
ONTARIO STREET
LOCKPORT STREET
COOPER STREET
NAVIGATION LIGHT
EXISTING HARBOR CHANNEL LIMITS
NEW HARBOR CHANNEL LIMIT
EXISTING U. S. EAST PIER
EXISTING AUTHORIZED PROJECT DEPTH 12 FEET
EXISTING U. S. WEST PIER
UPSTREAM LIMIT OF FEDERAL CHANNEL
OLCOTT YACHT CLUB
MEDLEY BOAT COMPANY
MCDONOUGH MARINE
EXCAVATE OLD BRIDGE FOUNDATION
EIGHTEEN MILE CREEK
PLAN
SCALE: 1" = 300'
300' 0 300'
GENERAL NOTES:
OLCOTT HARBOR
OLCOTT, NEW YORK
GENERAL PLAN
OF IMPROVEMENT

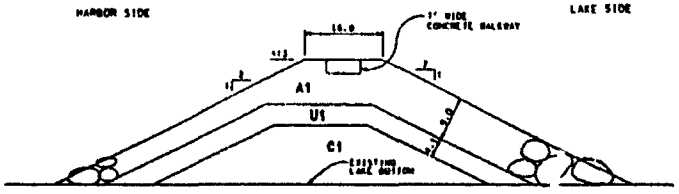
PLATE 2.1



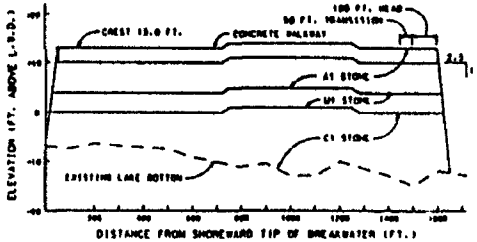
EAST SHORE CONNECTED BREAKWATER
TYPICAL SECTION



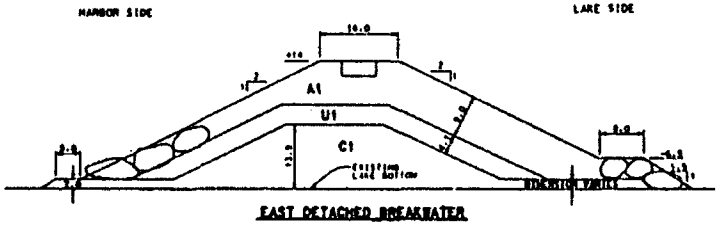
EAST SHORE-CONNECTED
BREAKWATER PROFILE



EAST DETACHED BREAKWATER
TYPICAL SECTION



EAST DETACHED BREAKWATER PROFILE



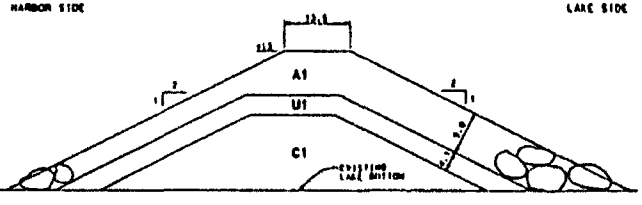
EAST DETACHED BREAKWATER
OVERBUILT SECTION

LEGEND:

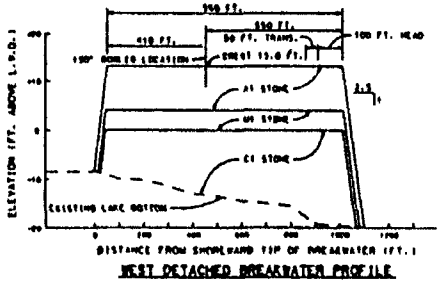
A1	ARMOR STONE 8000-22000 LBS.
A2	ARMOR STONE 1400-3000 LBS.
C1	CORE STONE 2-125 LBS.
U1	UNDERLAYER STONE 600-2200 LBS.
U2	UNDERLAYER STONE 100-350 LBS.

NOTES:

1. STONE WEIGHTS DETERMINED BY USING A SPECIFIC GRAVITY OF 2.6



WEST DETACHED BREAKWATER
TYPICAL SECTION



WEST DETACHED BREAKWATER PROFILE

OLCOTT HARBOR, NEW YORK
SMALL-BOAT HARBOR PROJECT

BREAKWATER PROFILES AND
TYPICAL SECTIONS

U.S. ARMY ENGINEER DISTRICT BUFFALO
AUGUST 1991

PLATE 4

that connected to shore at Krull Park. The east shore-connected east breakwater would be of stone rubblemound construction with armor and underlayers, and a bedding layer. Crest width would be 12 feet and breakwater sideslopes 1 vertical on 2.0 feet horizontal. The crest height would be +12.0 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

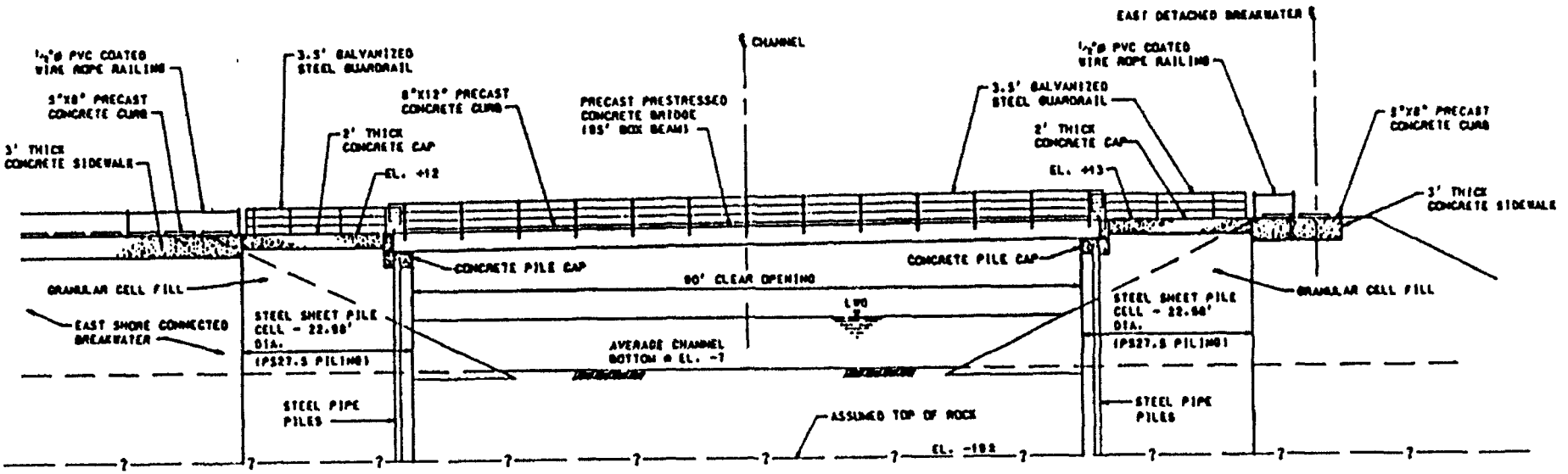
A 7-foot wide concrete ramp would be constructed to provide access for physically handicapped people. The ramp would extend from Ontario Street to the east shore-connected breakwater, a drop of about 19 feet. The ramp would be sloped at 1V on 12 H with 8 level landings at 30 foot intervals for rest and safety. Railings would be provided on both sides of the ramp for safety and locomotion-assist for wheel chairs.

The foot bridge would be supported by two 23-foot diameter sheet pile cells and have a 90-foot clear opening to allow for water circulation and fish migration in and out of the east basin formed by the east breakwaters, the U.S. East Pier, and the open lake. The bridge would be a single-span precast concrete bridge. The design of the bridge indicates that the low point of the bridge would be at +9.75 feet above low water datum. The bridge deck would be about 8 feet wide and have railings on each side for the safety of fishermen and others who desire access. A profile of the bridge is shown on Plate 4.3.

The east detached breakwater totals 1,545 feet in length, and would assume a 121° interior angle with the shore-connected breakwater. Its crest would be +13 feet above low water datum and has a crest width of 16 feet and same sideslopes as the shore-connected breakwater. A 500-foot section of the breakwater, over a buried river channel, would have a crest elevation of +14 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

The west detached breakwater would have an overall length of 960 feet with an angle in the alignment at about mid-length. The interior angle would be 130°, the northerly leg 550 feet long and the southerly leg or shorearm 410 feet long. The west detached breakwater would be of stone rubblemound construction with armor, underlayer, and bedding layer. Crest height would be +13 feet above low water datum, have a width of 13.5 feet and sideslopes of 1 vertical on 1.5 horizontal. The west detached breakwater would not have a walkway or guardrail on the crest to discourage public access to the detached breakwater.

The new marina entrance channel between the east and west breakwaters would be 150 feet wide and -10.0 feet below LWD, flaring to meet the existing 140-foot wide channel between the existing U.S. East and West Piers. This new entrance channel



PROFILE

SCALE: 1" = 20'

20' 0 20'

PLATE 4.3

would also provide access to a 75-foot wide, -7.0 feet below LWD, and 1,200-foot long channel that would serve the protected east basin. The channel would be parallel to the detached east breakwater.

The 1,500-foot long, 8-foot deep authorized but unconstructed channel in Eighteenmile Creek between Ontario Street and Route 18 is no longer incrementally justified as previously discussed, and should be deauthorized under the Corps deauthorization program. However, the remains of the old Main Street bridge abutments in Eighteenmile Creek will be removed as part of the Federal project for safety to navigation (Reference Water Resources Development Act of 1986. PL 99-662). No dredging and dredged material disposal are required to construct the Refined Plan 10A modified. However, sediment dredging of the new entrance and access channels, and the berthing areas would be related to periodic maintenance, as necessary.

The lake area between the U.S. East Pier and the east breakwater would be used for mooring small craft and is referred to as the east basin. The west detached breakwater is an integral part of the protection needed to reduce wave action in the basin sufficient for safe, all weather moorage. The east basin could accommodate 800 slips for both permanent and transient boats. There could be an additional 60 slips in the area next to the Olcott Yatch Club immediately south of the existing Federal Piers.

Refined Plan 10A Modified together with the upland Master Plan would include facilities for fishing from the east breakwater with public parking on county land that would eliminate some of the past difficulty for fishermen to access the Lakefront. **Facilities for fishermen include:** parking spaces for 150 vehicles, sanitary facilities, public access, smooth walkway, and guardrail. Parking and sanitary facilities would be on land now in public ownership as would land access. The fishermen parking lot and sanitary facilities and access way would be located as shown on the attached plate for Refined Plan 10A Modified. However, 4 to 6 parking spaces, reserved for handicapped people, will be located on Franklin at Ontario Street in the immediate vicinity of the ramp.

The walkway on the shore-connected east breakwater and the east detached breakwater would be 1,900 feet long. Measured from the existing steps to the shore-connected breakwater, the walkway would be 63 feet long by 7 feet wide.

Navigation lights on the head sections of the breakwaters would be battery operated and affixed to navigation light standard poles anchored to concrete base foundations on the crests of the breakwaters. Channel marker buoys will be provided by the Coast Guard to delineate the entrance and access channels.

Other improvements associated with the Refined Plan 10A Modified would occur with the implementation of the Town Master Development Plan described in Section 1, page 1-28. More specifically, as part of the Federal project, the non-Federal sponsors would provide at 100 percent their cost dockage for 860 boat slips including water and sewer, a control tower for proper and safe functioning of the harbor-and-marina complex, lakefront access to the marina, other access roads, and parking facilities for boaters, fishermen, and the public, all on equal terms. One hundred and fifty of the required 800 parking spaces will be furnished by the non-Federal sponsor and cost-shared 50-50 with the Federal government as part of the land-based fishing feature of the project.

Construction of Refined Plan 10A Modified would continue over a period extending from September 1993 to December 1995.

The Operation, Maintenance, Replacement, and Rehabilitation (OMRR) cost of the public bert ing areas, sanitary facilities, navigation facilities which include the breakwaters, the new marina entrance and access channels, and other project related facilities will be the responsibility of the non-Federal sponsor at 100 percent non-Federal cost (ER 1150-2-301). However, the percent of the total annual maintenance cost allocated to commercial (existing charter fishing) navigation for cost-sharing purposes will be borne 100 percent by the Federal Government (depth for the authorized project being less than 20 feet). The U.S. Coast Guard is responsible for the OMRR of all aids to navigation (Section 101(b) of WRDA 1986, Public Law 99-662). The existing project, that is, the two Federal piers and the contiguous Federal channel extending to the southernmost end of the piers will continue to be maintained by the Federal government at 100 percent Federal cost.

Real estate for the project would consist of 3.8 acres of lands (See Plate 4.4) above high water mark at elevation 246.8 feet IGLD. Of this amount, 0.4 acre would be required as permanent easements for the construction of the access ramp for the physically handicapped people, and for the portion of the east shore-connected breakwater. About 2.1 acres would be needed as temporary easements to provide access through Krull Park to the east; and as a construction staging area off Jackson Street to the west. The remaining 1.3 acres would be needed for the construction of 150 parking spaces for fishermen. Also, 32.4 acres of underwater land would be needed for the construction of the breakwater, the entrance, and access channels, and the area occupied by the old Main Street bridge abutment in Eighteenmile Creek.

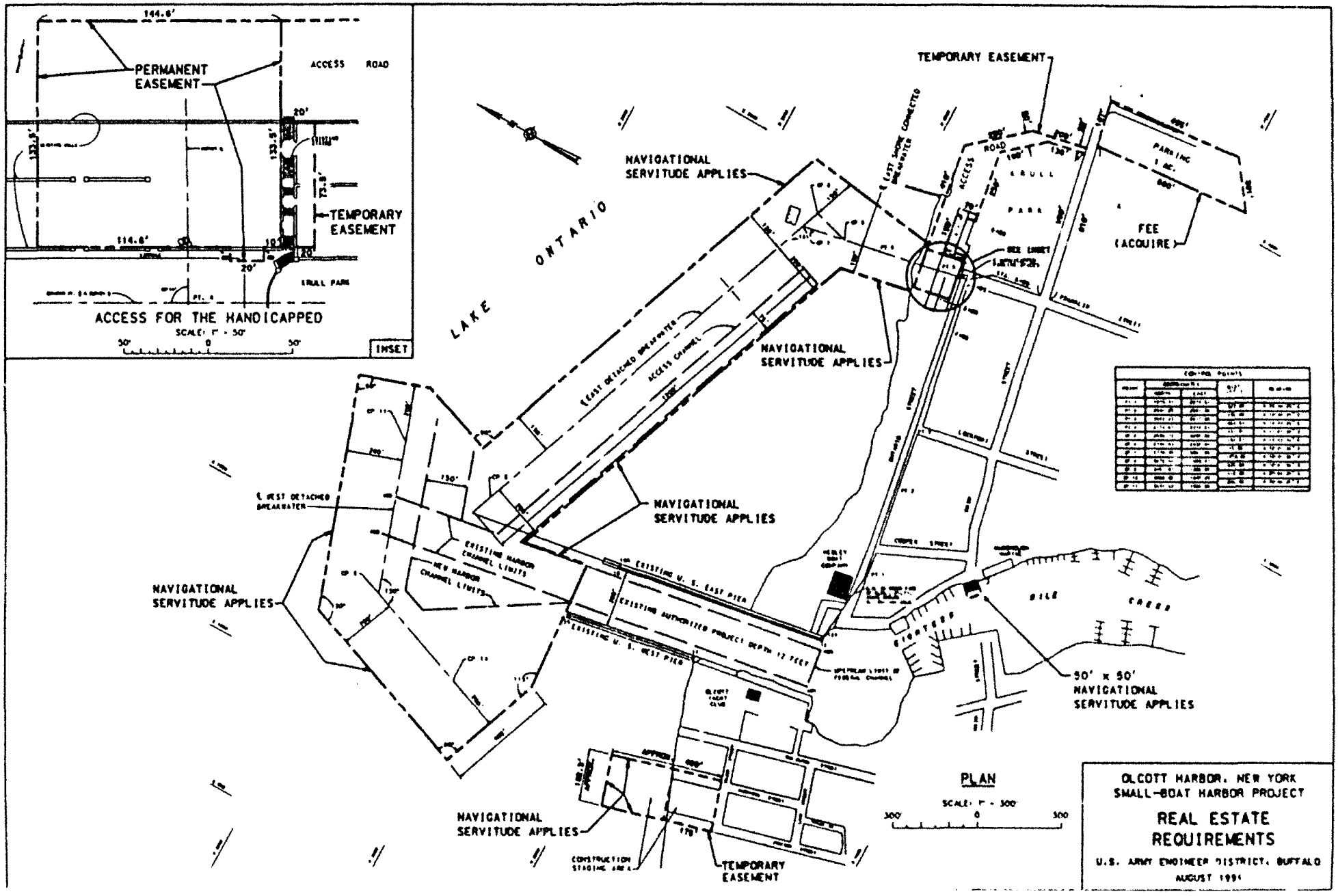

PERMANENT EASEMENT
ACCESS ROAD
TEMPORARY EASEMENT
TRAIL PARK
ACCESS FOR THE HANDICAPPED
SCALE: 1" = 50'
INSET
LAKE ONTARIO
NAVIGATIONAL SERVITUDE APPLIES
TEMPORARY EASEMENT
FEE (ACQUIRE)
PARKING 1 AC.
EAST DETACHED BREAKWATER
ACCESS CHANNEL
EXISTING HARBOR CHANNEL LIMITS
NEW HARBOR CHANNEL LIMITS
EXISTING U. S. EAST PIER
EXISTING AUTHORIZED PROJECT DEPTH 12 FEET
EXISTING U. S. WEST PIER
50' X 50' NAVIGATIONAL SERVITUDE APPLIES
PLAN
SCALE: 1" = 300'
OLCOTT HARBOR, NEW YORK
SMALL-BOAT HARBOR PROJECT
REAL ESTATE REQUIREMENTS
U.S. ARMY ENGINEER DISTRICT, BUFFALO
AUGUST 1991

PLATE 4 A

4.3 BENEFIT-COST EVALUATION (REFINED PLAN 10A MODIFIED)

A. Total Average Annual Cost

The cost-benefit evaluation involved comparison of the costs, and benefits, for the cost-shared Federal project. All costs and revenues pertaining to the non-Federal upland development project are considered associated costs and revenues. The associated costs as well as the revenues will not be considered in the overall cost-benefit evaluation. These associated costs and revenues will continue to be displayed in the report as they are required to realize the NED benefits should the Federal project be constructed. These associated costs and revenues will have no impact on the apportionment of costs for the Federal cost-shared project. Therefore, the cost-benefit evaluation for the cost-shared Federal project will be made for the purpose of allocating and apportioning costs to determine the Federal and non-Federal shares of the project.

Construction of Refined Plan 10A Modified as described in this section of the report requires no dredging of the new entrance and access channels. However, maintenance dredging of the channels could be needed in the post-project implementation period to restore the entrance channel to the project depth of -10 feet or the access channel to the required minimum depth of -7 feet, as necessary.

The cost of this project should not exceed the total maximum project cost limit imposed by Section 902 of the Water Resources Development Act of 1986. In the event that increases in project costs exceed the established limit set by Section 902, this exceedence will cause no obligation of funds for the project, and will require further authorization by Congress to raise the maximum limit.

Tables 4.1 and 4.2 below present separate construction first costs for the cost-shared Federal project and the associated non-Federal project. Tables 4.3-4.6 present separate investment costs, average annual costs, average annual benefits, benefit-to-cost ratio, and net benefits for the cost-shared Federal, and associated non-Federal project. See appendices B and C of this report for detailed discussions of project costs and benefits, respectively.

B. Total Average Annual Benefits

Total average annual NED benefits for the Refined Plan 10A Modified are shown in Tables 4.5-4.6 of this section of the report. Also displayed in Tables 4.5 - 4.6 are average annual revenues for the associated non-Federal project. These average annual benefits and revenues for the Refined Plan 10A Modified were estimated at $1,783,000 and $1,421,300, respectively.

Table 4.1 - Cost-Shared Federal Project
Total Construction First Cost
June 1991 Price Levels

Refined Plan 10A Modified

	Item	Cost ($)
12.A	Navigation Ports and Harbors	21,735
10.0.1	Breakwaters	
10.0.A	Mobilization and Demobilization	376,914
10.0.1.B	West Breakwaters	4,191,990
10.0.1.B	East Breakwaters	6,235,986
10.0.R.B	Navigation Aids	55,909(1)
14.0	Recreation Facilities	
14.0.A	Mobilization and Demobilization	13,528
14.0.1	Parking Lots and Service Roads (Fishermen)	234,999
14.0.3.B	Foot Bridge	210,352
14.0.3.B	Breakwater Concrete Walkway	385,017
14.0.3.B	Ramp/Walkway Guardrail	67,511
14.0.3.E	Reconstructed Pier	129,326
14.0.P	Sanitary Facilities (authorized by PL 99-662, Nov. 1986)	77,127
	Total Construction	12,000,394
	Contingencies	1,820,439
	Total Construction Including Contingencies	13,820,833
01.	Lands and Damages Including Contingencies	187,650
30.	Planning Engineering, and Design	2,018,357
31.	Construction Management	1,067,943
	Total Construction Cost:	17,094,783
	USE:	$17,094,800

(1) Furnished by Coast Guard; includes contingencies.

Table 4.2 - Non-Federal Associated Project
Total Construction First Cost
June 1991 Price Levels

ITEM		ESTIMATED COST	
1. 860 Marina Slips/Moorings (includes water & sewer)		$5,360,000	
Buildings (Control Tower)		480,000	
Access Site		220,000	
Board Walk		1,100,000	
Launch Ramp		100,000	(1)
2. Tour Boat and Dock		300,000	(2)
Winter Storage Equipment		318,300	
3. INFRASTRUCTURE:			
Access Roads		300,000	
Water		40,000	
Shuttle Service		34,500	(3)
Parking (Location)	(# Spaces)		
Ontario & Franklin Sts.	(102)	426,000	
Ontario & Cooper Sts.	(50)	342,000	
E. Main St. & Krull Park	(330)	327,000	(4)
Ball diamond at Krull Park	(318)	200,000	
Total Spaces	**(800)**		
4. Land for the Associated Project		257,700	
TOTAL FIRST COST		**$9,805,500**	

SOURCE: Wendel Engineers, 1991. See Cost Engineering appendix B.

NOTES:
(1) Source: "Fiscal Impact, Olcott Harbor Project" by Development Planning Services, No. 1990 (revised July 1991).
(2) Includes $100,000 for dock.
(3) In addition to this first cost of $34,500, annual operation cost for the shuttle service was estimated at $33,000.
(4) Does not include $273,000 cost of 150 parking spaces for fishermen, out of the total 330 spaces. These 150 spaces are subject to 50-50 cost-sharing

Table 4.3 - **Total Investment Costs**
Cost-Shared Federal Project
and
Associated Non-Federal Project
June 1991 Price Levels

Item	Refined Plan 10A Modified Cost ($)*
Federal Cost-Shared Project:	
Construction costs	17,094,800 (1)
IDC (2)	1,243,000 (2)
Investment Cost	18,337,800
Non-Federal Associated Project:	
Construction costs	9,805,500 (3)
IDC (4)	342,000 (4)
Investment Cost	10,147,500

(1) Includes cost of navigation aids. See Table 4.1.

(2) Interest During Construction on Federal features was computed using a three-year construction season; no construction during January, February, and March; monthly compounding and 8-3/4 percent annual interest rate.

(3) See Table 4.2.

(4) Interest During Construction on associated non-Federal features was computed using an 11-month construction season, monthly compounding, and 8-3/4 percent annual interest rate.

* The above estimated project cost is within $0.5 Million of exceeding the Section 902 limit of the Water Resources Development Act of 1986. If the Section 902 limit of $20.1 Million is exceeded, the project could not be constructed until reauthorized.

Table 4.4 - **Average Annual Costs**
Cost-Shared Federal Project
and
Associated Non-Federal Project
June 1991 Price Levels

Item	Refined Plan 10A Modified Total ($)
Federal Cost-Shared Project:	
Interest and Amortization (1)	1,629,100
Breakwater Entrance & Access Channels, and Navigation Aids Annual Maintenance	36,000(2)
Average Annual Costs (3)	1,665,100
Non-Federal Associated Project:	
Interest and Amortization (1)	901,500
Marina Maintenance Dredging	15,000
Marina Wages & Overhead	172,200
Marina Maintenance Repair & Utilities	97,200
Marina Insurance	35,000
Shuttle Service Costs	33,000
Average Annual Costs (3)	1,253,900

(1) Derived from the total investment cost shown in Table 4.3, using a partial payment factor of 0.08884 (8-3/4 percent interest rate and a 50-year project life).

(2) Includes $1,000 Coast Guard average annual cost to maintain navigation lights.

(3) For details on average annual maintenance costs for breakwaters, dredging of marina basin and entrance and access channels, and miscellaneous items, see Cost Engineering appendix B. Average annual operating costs for the marina including all non-Federal furnished items were provided by the Consulting Engineer for the non-Federal sponsors, and are included in the Cost Engineering appendix B.

Table 4.5 - Benefit Summary (1)
Cost-Shared Federal Project
and
Associated Non-Federal Project

REFINED PLAN 10A MODIFIED

	Cost-Shared Project Benefits $	Associated Project Benefits $
1. NET WILLINGNESS TO PAY-BOAT OWNERS		
A. New slip renters (Less Transients & Charters)	480,700	
B. New launch ramp users	10,300	
NET WILLINGNESS TO PAY SUBTOTAL	491,000	
2. NEW PASSENGER RECREATIONAL BOATING BENEFITS		
A. Passengers of new slip renters	281,900	
B. Passengers of new launch ramp users	31,600	
PASSENGER BOATING BENEFITS SUBTOTAL	313,500	
3. BENEFITS TO CURRENT SLIP USERS		
A. Increase in recreational value to current slip renter boat owners	32,200	
B. Increase in recreational value to passengers of current slip renters	18,900	
CURRENT SLIP USER BENEFITS SUBTOTAL	51,100	
4. BENEFITS FROM TRANSIENT CRAFT		
A. New transient rentals		
(1) Recreational value for boat owners	37,800	
(2) Recreational value for passengers	11,500	
NEW TRANSIENT CRAFT BENEFITS SUBTOTAL	49,300	
B. Existing transient rentals		
(1) Recreational value for boat owners	11,300	
(2) Recreational value for passengers	3,400	
EXISTING TRANSIENT CRAFT BENEFITS SUBTOTAL	14,700	
5. CHARTER SERVICE BENEFITS (CHARTERFISHING, EXCURSIONS)		
A. Increase in net income for existing charter fishermen	71,400	
B. Recreational value for clients using new charterboat services	240,600	
C. Recreational value for new clients using existing charter fishing operators	24,100	
D. Increase in recreational value for existing charter fishing clients	23,200	
E. Benefits to slips set aside for charter usage but not used in first 5 years		
a. Slip renter benefits	4,800	
b. Benefits to passengers of slip renters	2,800	
F. Recreational value for passengers using the new tour boat	55,100	
CHARTER SERVICE BENEFITS SUBTOTAL	422,000	
6. PIER FISHING BENEFITS		
A. New fishermen	169,000	
B. Current fishermen	21,100	
PIER FISHING BENEFITS SUBTOTAL	190,100	
7. SIGHTSEEING BENEFITS	185,700	
8. EXISTING LAUNCH RAMP USER BENEFITS		
A. Increase in recreational value to current launch ramp boat owners	10,400	
B. Increase in recreational value to passengers of current launch ramp boat owners	31,800	
EXISTING LAUNCH RAMP USER BENEFITS SUBTOTAL	42,200	
9. HARBOR OF REFUGE BENEFITS	20,000	
10. INUNDATION REDUCTION BENEFITS	3,400	
TOTAL AVERAGE ANNUAL NED BENEFITS	1,783,000	
11. ASSOCIATED BENEFITS		
A. Lease revenues		103,300
B. Slip revenues		984,000
C. Launch ramp revenues		20,600
D. Winter storage revenues		211,800
E. Marine gasoline sales revenues		7,200
F. Pumpout revenues		7,400
G. Parking revenues		87,000
TOTAL AVERAGE ANNUAL ASSOCIATED BENEFITS		1,421,300

(1) All benefits reflect June 1991 price levels, 8-3/4 percent annual interest rate, and 50 year project life. See Economics Appendix C for details.

Table 4.6 - **Benefit-Cost Ratio**
Cost-Shared Federal Project
and
Associated Non-Federal Project
June 1991 Price Levels (1)

Item	Refined Plan 10A Modified Total ($)
Federal Cost-Shared Project	
Average Annual Costs	1,665,100
Average Annual Benefits	1,783,000
Net Benefits	117,900
Benefit-Cost Ratio	1.07
Non-Federal Associated Project	
Average Annual Costs	1,253,900
Average Annual Benefits	1,421,300
Net Benefits	167,400
Benefit-Cost Ratio	1.13

(1) 8-3/4 interest rate; and 50-year project life.

4.4 COST ALLOCATION

For the purpose of sharing in the total construction cost and annual maintenance cost for Refined Plan 10A Modified between the Federal Government and non-Federal sponsors, costs were allocated among the project primary and secondary purposes. These purposes are recreation, and incidental lake storm and flood damages. However, the cost sharing of the project would be affected by a special statutory requirement (PL 91-611) which requires that the percentage of the project to be cost-shared as commercial navigation is equal to the percentage of the total project benefits derived from existing charter boat fishing. For instance, if existing charterboat fishing benefits are 3 percent of the total benefits, then 3 percent of the total cost would be allocated to existing commercial charter fishing.

Further, regarding the incidental lake storm damage, the offshore breakwaters would reduce the impact of these damages, which would result in net benefits to the project. However, since these breakwaters were formulated for recreational navigation, these incidental storm damage benefits are classified as recreation benefits (Project Guidance Memo, PGM dated 15 January 1991).

Based on this discussion, the total cost for the Refined Plan 10A Modified would be allocated between the purposes of recreation and commercial navigation.

To determine the percent of the total cost of the project that should be allocated to existing commercial charter fishing for cost sharing purposes, it is necessary to know the percent of the benefits attributed to existing charter boat fleet with respect to total project benefits. It is tnerefore useful and necessary to allocate and display the benefit categories by purpose. Table 4.7 below shows the allocation by purpose of the benefits that would be realized by the cost-shared Federal project.

Table 4.7 - **Benefit Allocation by Purpose**
Refined Plan 10A Modified
June 1991 Price Levels

Benefits (1)	Purpose		
	Recreation	Commercial	Total
	($)		
Slip and Launch Ramp	491,000	-	491,000
Passenger Recreational Boating	313,500	-	313,500
Users of Current Slips	51,100	-	51,100
Users of Current Launch Ramp	42,200	-	42,200
Pier/Breakwater Fishing	190,100	-	190,100
New Charter Fishing (Operator and Passenger)	327,400	-	327,400
Existing Charter Fishing (Passenger only)	23,200	-	23,200
Existing Charter Fishing (Operator only) (2)	-	71,400	71,400
Transient Craft	64,000	-	64,000
East Breakwater Passive Recreation	185,700	-	185,700
Inundation Reduction (3)	3,400	-	3,400
Harbor of Refuge	20,000	-	20,000
Total Benefits	**1,711,600**	**71,400**	**1,783,000**

(1) These benefits are for the cost-shared portion of the overall project.

(2) Existing Charter Fishing benefits are considered commercial for cost-sharing purposes.

(3) Inundation Reduction benefits are incidental and are considered recreation benefits.

4.5 DERIVATION OF BENEFIT PERCENTAGE (REFINED PLAN 10A MODIFIED)

Each group or sub-group of benefits by purpose represents a percentage of the total benefits for the cost-shared Federal project. Two groups of benefits are of interest in deriving the percents needed: recreation and commercial charter. Table 4.8 shows the percents of each group with respect to the total benefits.

Table 4.8 - Percent of Benefits by Purpose
Refined Plan 10A Modified
June 1991 Price Levels

Recreation Benefits	Commercial Benefits	Cost-shared Project Total Benefits	Percent Recreation	Percent Commercial
A	B	C	100 x A/C	100 x B/C
$	$	$		
1,711,600 (1)	71,400 (2)	1,783,000 (3)	96	4

(1) See Table 4.7 for total recreation benefits
(2) See Table 4.7 for total existing charter boat fishing benefits
(3) See Table 4.7 for total benefits for the cost-shared Federal project

4.6 COST ALLOCATION BY PURPOSE (REFINED PLAN 10A MODIFIED)

As previously discussed in Paragraph 4.4, the percent of the total project to be cost-shared as commercial navigation is equal to the percent of the total project benefits derived from existing charter boat fishing. The percent of existing charter fishing shown in Table 4.8 above will be applied to determine the magnitude of the total project cost to be shared as commercial navigation. The magnitude of the costs associated with each purpose is shown in Table 4.9 below. These magnitudes are obtained by multiplying the appropriate percent by the total cost.

Table 4.9 - **Allocated Costs for Plan 10A Modified**
June 1991 Price Levels

Total Cost	Percent Recreation	Percent Commercial	Cost by Purpose Recreation	Cost by Purpose Commercial
A	B	C	AxB	AxC
$			$	$
17,083,891 (1)	96 (2)	4 (2)	16,357,335	681,556

(1) Total first cost $17,094,800 less $55,909 for Navigation Aids to be provided by the Coast Guard at 100 percent their cost.

(2) See Table 4.8

4.7 COST APPORTIONMENT (REFINED PLAN 10A MODIFIED)

The costs allocated by purpose in Table 4.9 would be shared between the Federal Government (Corps of Engineers) and the non-Federal sponsor (the New York State Office of Parks, Recreation, and Historic Preservation (NYSPR&HP)), using the cost-sharing percentages defined in Section 2 of this report. For this project, cost-sharing percentages, by purpose and according to the 1986 Water Resources Development Act, are as follows:

Recreational navigation (inclusive of lands, easements, and rights-of-way, relocations), 50 percent Federal share and 50 percent non-Federal share; and

Commercial navigation, 80 percent Federal share and 20 percent non-Federal share (depth varying between 0-20 feet).

Table 4.10 displays the estimated costs by purpose to be borne by each the Federal Government and the non-Federal sponsor. It also displays the total share of construction first costs to be borne by the Corps of Engineers, the Coast Guard, and the non-Federal sponsor. Table 4.11 displays the total share of annual maintenance costs to be borne by the Federal Government (Corps and Coast Guard) and the non-Federal sponsor. Annual maintenance cost for commercial navigation as defined in this report would be 4 percent of the total annual maintenance cost for the project, and would be borne 100 percent by the Federal Government.

4.8 COMPARATIVE EVALUATION OF CANDIDATE PLANS

Pertinent socio-economic and environmental impacts of the Refined Plan 10A Modified and the No-Action Plan on the study area and rest of the nation are summarized as a "System of Accounts" in Table 4.12 below. Beneficial and adverse effects of each plan are determined by a trade-off analysis considering future conditions expected without the plan. For more details reference Supplemental EIS Table 1 included in this report.

4.9 PUBLIC VIEWS

To date, State and local agencies, and interested groups and most individuals are supportive of, or non-objectionable to, implementing the project. The New York State Department of Environmental Conservation in a letter dated January 22, 1990 to the Buffalo District Commander, stated: "This Department supports the implementation of Plan 10A Modified. Our Bureau of Wildlife's approval is based on its desire to create alternatives to developing marinas in the regulated wetlands along Eighteenmile Creek upstream of New York Route 18..."

Also, the New York State Office of Parks, Recreation, and Historic Preservation in a letter to the District Commander in January 1990 wrote: "I wish to thank your staff and that of the

Table 4.10 - Apportionment of Construction First Cost
June 1991 Price Levels

Item	Total	Federal				Non-Federal	
		Corps		Coast Guard		NYSPR&HP	
		Percent	Share	Percent	Share	Percent	Share
	$	%	$	%	$	%	$
Recreational Navigation	16,357,335 (1)	50	8,178,668	0	0	50	8,178,667
Commercial (Charter	681,556 (1)	80	545,245	0	0	20	136,311
Navigation Aids	55,909 (2)	0	0	100	55,909	0	0
Total	17,094,800		8,723,913 (3)		55,909 (4)		8,314,978 (5)

(1) See Table 4.9.
(2) Navigation Aids to be provided by the Coast Guard at 100 percent Coast Guard cost.
(3) Corps of Engineers share or 51.03 percent of the total construction first costs.
(4) Coast Guard share or 0.33 percent of the total construction first costs.
(5) Non-Federal share or 48.64 percent of the total construction first costs.

Table 4.11 - Apportionment of Annual Maintenance Costs
Refined Plan 10A Modified (June 1991 Price Levels)

Item	Total Estimated Cost	Federal	Non-Federal
Breakwater, Channels, and Others	35,000 (1)	1,400 (1)	33,600 (1)
Navigation Lights	1,000 (2)	1,000 (2)	0
Total Annual Maintenance	36,000	2,400	33,600

(1) Four percent of the $35,000, that is $1,400 is considered maintenance for commercial (existing charter fishing) navigation and is 100 percent Federal cost; depth being less than 20 feet. The remainder, $33,600 annual maintenance cost, is for recreational navigation and is therefore 100 percent non-Federal sponsor cost.

(2) Annual maintenance of navigation lights (100 Percent Coast Guard cost).

Table 4.12 - Comparative Evaluation of Candidate Plans

	Candidate Plans	
	No-Action	Refined Plan 10A Modified
1. Description	No Federal Action	Construction of a system of breakwaters (East and West detached breakwaters) to create a new mooring basin in Lake Ontario at Olcott Harbor, NY. Typical crest elevations vary from +12.0 to +14.0 LWD. A pedestrian walkway with guardrail runs atop of the east breakwater. A 95-foot pedestrian bridge would link the east breakwater to a 323-foot long shore-connected east breakwater. The breakwaters would be of rubble-mound construction. Also entrance and access channels with adequate dimensions (See Plate 4.4) would be provided for safe navigati The plan calls for no initi dredging of the new entrance and access channels.
2. Impacts		
A. Economics		
(1) Total Project Cost (1)	0	$ 17,094,800
° Federal Cost	0	$ 8,779,822
° Non-Federal Cost	0	$ 8,314,978
(2) Total Average Annual Cost	0	$ 1,665,100
(3) Total Average Annual Benefits for Cost-Shared Federal Project	0	$ 1,783,000
° Recreational Navigation	0	$ 1,711,600
° Commercial Fishing	0	$ 71,400
(4) Net Average Annual Benefits	0	117,900
(5) Benefit-Cost Ratio	N/A	1.07

Table 4.12 - Comparative Evaluation of Candidate Plans (Cont'd)

	Candidate Plans	
	No Action	Refined Plan 10A Modified
B. Regional Development (1) Community and Regional Growth (2) Recreational Resources & Opportunities	Similar to existing conditions. Moderate growth expected. Harbor potential development deficiency. Similar to existing conditions. Moderate developments expected. Continued demand for water-based recreation.	Short Term: Moderate Beneficial. Long Term: Major Beneficial Harbor protection and recreation development. Short Term: Minor or Moderate Adverse during construction. Long Term: Major Beneficial
C. Environmental Quality (EQ)		
(1) Air Quality	Similar to existing conditions in the near future, with probably some improvement in air quality in the long-run as technology and monitoring techniques are further upgraded over time.	Short Term: Minor Adverse Long Term: Minor Adverse ° Some temporary short-term degradation in air quality during periodic construction maintenance of the project.
(2) Water Quality	Similar to existing conditions in the near future, with probably some improvement in water quality in the long-run as technology and monitoring technique are further upgraded over time.	Short Term: Moderate Adverse Long Term: Minor Adverse ° Some temporary short-term degradation in water quality during periodic construction maintenance of the project.
(3) Aquatic Habitat	Similar to existing conditions in the near future, unless the aquatic environment and shoreline substrate was significantly altered.	Short Term: Moderate Adverse during construction. Long Term: Not Significant
(4) Fisheries	Similar to existing conditions in the near future. Warm and cold-water fish would continue to utilize the harbor and creek.	Short Term: Moderate Adverse during construction. Long Term: Not Significant

Table 4.12 · Comparative Evaluation of Candidate Plans (Cont'd)

	Candidate Plans	
	No Action	Refined Plan 10A Modified
(5) Wetlands	Similar to existing conditions to prevail for some time in the future.	No Impact (No known wetlands identified)
D. Other Social Effects		
(1) Aesthetic Resources, Noise	Similar to existing conditions. No significant long-term noise problems expected.	Short Term: Moderate Adverse during construction. Long Term: Moderate Beneficial with project.
(2) Leisure Opportunities	Similar to existing conditions. Limited existing recreational facilities.	Short Term: Minor Adverse during construction. Long Term: Major Beneficial with project.
(3) Cultural Resources	No significant cultural resource items identified in the immediate project impact area.	Short Term: Not Significant. Long Term: Minor Beneficial.
(4) Community Cohesion	Similar to existing conditions in the near future.	Short Term: Minor Beneficial. Generally favorable. Long Term: Moderate Beneficial
(5) Displacement of People	Not significant in the near future.	Short Term: Moderate Adverse Long Term: Not Significant
(6) Public Facilities and Services	Similar to existing conditions in the near future.	Short Term: Moderate Adverse Long Term: Major Beneficial
(7) Property Values and Tax Revenues	Similar to existing conditions with increased demand for water resource recreation.	Short Term: Minor Adverse Long Term: Major Beneficial
(8) Business, Employment, Income	Similar to existing conditions moderate growth expected.	Short Term: Minor Beneficial Long Term: Major Beneficial

Table 4.12 - Comparative Evaluation of Candidate Plans (Cont'd)

	Candidate Plans	
	No-Action	Refined Plan 1
E. Regional Development		
(1) Community and Regional Growth	Similar to existing conditions Moderate growth expected.	Short Term: Mo Beneficial Long Term: Maj Beneficial
(2) Value of Increased Income	None	Improved emplo opportunities construction a sectors of the market.
(3) Quality of Increased Employment	None	Increase in lo employment; an porary increas construction t
3. Public and Agency Acceptability	No	Yes
4. Plan Evaluation		
o Contribution to Planning Objectives	Negative (-)	Positive (+)
o Design & Functional Reliability	Existing structures are unreliable as to safety at the harbor.	Stable and rel reduce wave ac a safe harbor.
o Implementability	Yes	Yes

(1) Includes $33,000 for aids to navigation (100 percent Coast Guard Co

Corps' Waterways Experiment Station for their diligent work with us and local officials in the past months. The work has led to the marked improvement of the Olcott Harbor project's feasibility. We appreciate this effort and feel that it will greatly contribute to bring the project to fruition..."

The Niagara Gazette edition of October 27, 1989, quoted a New York State Assemblyman saying: "I became strongly involved in this project because I believe its implementation will make the area more physically attractive while creating one of the largest economic booms Western New York has ever seen."

The Chairman of the Olcott Harbor Master Plan Development Committee told the Niagara Gazette on October 24, 1989: "The Centerpiece of the master plan would be the improvement and expansion of the harbor and its related facilities." The town of Newfane Supervisor during an interview with the Buffalo News on June 12, 1989 said: "When this project is completed in the spring of 1993, we will become one of the favorite recreational spots in the Eastern United States."

Support for the project has not been unanimous though among residents of the Town. For the past 1-1/2 years that elapsed since completion of the Town Master Plan, a number of residents have expressed dissatisfaction and anger against the Plan which they believe will transform the Hamlet of Olcott into a p rking lot. Given that 800 parking spaces for boaters and fishermen are required for proper functioning of the marina project, some residents have appealed to the Corps of Engineers. In addition to telephone inquiries and Freedom-of-Information-Act requests, a number of letters of complaints and a petition signed by about 200 people were sent to Corps offices appealing for assistance as to how to protect their homes from condemnation procedures (See Correspondence appendix E to this report).

Other concerns expressed by Town residents are the financial state of the town of Newfane where school and property taxes have increased substantially over the past 2 years. Excerpts from some of the correspondence received by the Buffalo District are quoted below:

"... The Master Plan calls for our property to become a parking lot... We have serious doubts as to the wisdom of building the breakwall and a 800 slip Town Marina when the State of New York and Federal Governments along with the County and Town governments are in such a financial bind."

"We, here in Newfane, have had our property reassessed twice in the last 4 years. Our school taxes went up 40 percent last year. How much more can we bear?" This resident also asked for a referendum on this project.

"... We have worked hard to establish our home, paid our taxes on time, and we have been very happy here. Now in our seventies, the town of Newfane and ... want to disrupt our lives... the emotional stress is too much ..."

The concerns are numerous and various in the voluminous project file accumulated over the last 2 years.

4.10 PLAN ACCOMPLISHMENTS

Refined Plan 10A Modified would be a single-use development plan which would primarily provide for recreational boating, fishing, and incidental lake storm damage protection. The plan would permit safe, convenient, all-weather berthing for 860 boats including 50 transient boats and 50 commercial charters during the small boat navigation season. It would also provide a safe, all-weather harbor of refuge for recreational craft seeking refuge from storms on Lake Ontario or from other emergencies. It would reduce lakefront property damage by storms from combined high wind and lake levels, and would restore the unobstructed aesthetic and scenic views of the harbor and the lake, currently obstructed by the gabion baskets and other riprap erosion prevention structures. Full use of existing and proposed public launching ramps would be achieved. The plan would stimulate the development of the local master plan, parking facilities, and recreational and other support facilities.

The boating and fishing industries would result in increased growth of the business sector of Newfane, and particularly Olcott. Sportfishing, boating, swimming, beachcombing, and sightseeing as called for in the Town Master Plan, would serve to enhance the current tourist industry in Niagara County and set the stage for future enterprise.

Section V

PLAN IMPLEMENTATION

Section 5
Plan Implementation

5.1 IMPLEMENTATION RESPONSIBILITIES

As demonstrated in the previous Section 4 of this report, Refined Plan 10A Modified would not meet Corps' criteria for a new start construction because its primary outputs are overly recreational (96 percent recreation). Nevertheless, this Section 5 discusses the Federal and non-Federal responsibilities based on the assumption that Refined Plan 10A Modified would be implemented. It (section 5) also discusses the non-Federal sponsors ability to pay, cost allocation and apportionment, and the implementation of Refined Plan 10A Modified.

A. **Ability to Pay**.

Based on the above assumption that Refined Plan 10A Modified would be implemented, the Corps' Buffalo District must assess the non-Federal sponsor's ability to pay or its financial capability prior to completing this preconstruction phase. The District must then determine if it is reasonable to expect that ample funds will be made available by the non-Federal sponsor to satisfy its financial obligations for the project. This requires that the non-Federal sponsor provide a statement of financial capability and a financing plan to the District Commander. The financing plan and statements of financial capability are essential considerations in the District Commander's recommendation as to the implementability of the project. The non-Federal sponsor prepares the financing plan and the statement of financial capability with assistance, if necessary, from the Buffalo District. For this project, the New York State Office of Parks, Recreation, and Historic Preservation (NYSPR&HP), the official local sponsor, is responsible to provide these two items to the Commander, Buffalo District, as part of the Local Cooperation Agreement (LCA) package. Generally, this takes place as soon as the Corps and the non-Federal sponsor reach tentative agreement on what the selected plan should be. However, for this Olcott Harbor project, all these aforementioned activities are postponed until after the report is cleared for release to the public as prescribed by the Project Guidance Memo, PGM dated 15 January 1991.

B. Cost Allocation and Apportionment.

All costs for the basic features of Refined Plan 10A Modified are allocated to recreational navigation and commercial (charter fishing) navigation by special statutory requirements. Costs of authorized features for recreational fishing facilities are included in the overall recreational navigation cost. Costs are apportioned between the Federal Government (the Corps of Engineers and the U.S. Coast Guard); and the official non-Federal sponsor (the NYSPR&HP).

The distribution by purpose of the estimated total construction first cost for the tentatively selected plan is in direct proportion to the benefits that would be realized for recreational navigation and commercial (charter fishing) navigation. Therefore, the total estimated cost (Table 4.10) of $16,732,608 for recreational navigation including lands, easements, rights-of-way, and relocations is apportioned $8,366,304 Federal share and $8,366,304 non-Federal share. The estimated cost of $697,192 for commercial (charter fishing) navigation is $557,754 Federal share and $139,438 non-Federal share. Estimated costs of $33,000 for navigation aids is 100 percent Coast Guard cost responsibility. The total Federal (Corps and Coast Guard) share of the cost of construction for the cost-shared project is $8,957,058 or 51.3 percent of the total construction first cost. The total non-Federal share of the cost-shared project is $8,505,742 or 48.7 percent of the total construction first cost.

C. Federal Responsibilities.

Federal participation in this project, based on the cost sharing provisions of 1986 Water Resources Development Act, is limited to sharing the cost for design and construction of the authorized general navigation features. The Federal government (Corps of Engineers) is also responsible under this Act to remove drift or debris from the authorized project limits and immediate adjacent waterway areas in the interest of general navigation. This does not include material lying in the shallow areas outside of the authorized channels or along the shore. Further, Federal (Corps) responsibilities for Refined Plan 10A Modified, based on 50-50 cost sharing, are the construction of the east and west breakwaters, and facilities for fishermen which include the pedestrian bridge, access ramp to the bridge, the concrete walkway and guardrails atop of the east breakwaters, sanitary facilities, public access, and parking lot for fishermen. The U.S. Coast Guard would install and maintain the required navigation aids. The Corps is responsible only for those navigational aids which would be temporarily needed during construction operations. Items such as sanitary facilities, parking lot for fishermen, although it is the Corps

responsibility to build, can be furnished by either party based upon mutual agreement. This agreement would be documented in the Local Cooperation Agreement (LCA) that would be executed if and when the project was cleared for a new construction start. In any case, the cost of providing these items would be shared between the Corps and the non-Federal sponsor on a 50-50 basis.

D. **Non-Federal Responsibilities.**

The Local Cooperation Agreement is a prerequisite for establishing the non-Federal sponsor's responsibilities. The non-Federal sponsor, the New York State Department of Parks, Recreation, and Historic Preservation, would be responsible for providing a cash contribution in the amount of $8,505,742 (See Table 4.10), less the cost incurred for acquiring the required real estate for the Federal cost-shared project. The non-Federal sponsor would also be responsible for the construction of berthing spaces, launching ramp(s), parking lots for boaters, and necessary access roads and access walk. The non-Federal sponsor would also be responsible for the total operation, maintenance replacement, rehabilitation, and repair costs estimated at $33,600 for all project features including breakwaters, channels, berthing areas, public terminals, wharves, transfer and other facilities, dredge material dikes, bulkheads, if necessary for the project. However, for charter boat fishing, which is considered commercial for cost-sharing purposes, the Federal government Corps of Engineers is responsible for that portion of the maintenance cost ($2,400) allocated to (commercial) existing charter boat fishing. Also, the Federal government (Coast Guard) is responsible for 100 percent of the total annual maintenance cost ($1,000) for navigation lights. The non-Federal sponsor must address the costs of operation, maintenance, repair, replacement, and rehabilitation, and show its capability to fund such costs in its financing plan (CECW-LM, 7 February 1991 memo, Subject OMRRR). The financing plan and statement of financial capability, as previously indicated, are essential considerations in the District Commander's recommendations as to the implementability of the project. If any of the financing is proposed to directly use "vendibles" or a tax base related to the anticipated beneficial effect of the project, these items should be identified in the financing plan.

5.2 PLAN IMPLEMENTATION

Recommendations have been made by U.S. Fish and Wildlife Service that: "to protect both spring and fall migratory fishes, all in-water construction activities associated with this project be continued to the period between June 15 and September 1; and to encourage and enhance waterfowl breeding activities in the project area, a suitable number of wood duck nesting boxes and tripod suspended mallard nesting baskets be placed in the emergent marshes and the isolated shallow areas, particularly along the west bank of Eighteenmile Creek between the Route 18 bridge and the railroad trestle at Burt Dam."

In order to avoid significant adverse impacts on the existing fishery, removal of old bridge abutments in Eighteenmile Creek upstream of the limit of the existing Federal Harbor project, will be restricted to the months of July and August. Also, consideration will be given to determining a suitable number of waterfowl nesting boxes and baskets in the marshes and isolated areas between Route 18 bridge and railroad trestle at Burt Dam.

Further, based on agreed upon environmental windows for in-water construction of the breakwaters, construction of the West and East breakwaters will be allowed from mid-May through October 6, and from mid-May through November 10, respectively.

However, Refined Plan 10A Modified fails to meet current Department of the Army policies and budgetary requirements for proceeding into the next Plans and Specifications phase. It cannot be implemented, because the project outputs would be primarily recreational. Therefore, the no action plan would be implemented. However, after completion of this Revised Reevaluation Report including the Supplemental Environmental Impact Statement by the Buffalo District, the report will be reviewed by the North Central Division; Army Corps of Engineers, and the Assistant Secretary of the Army for Civil Works prior to release for review by the general public, and other appropriate Federal, State, and local agencies, and interested groups, as required by the Project Guidance Memo dated 15 January 1991.

Section VI

CONCLUSIONS

Section 6
Conclusions

The reevaluation study addressed a broad spectrum of concerns ranging from socio-economic, environmental and technical concerns raised by all levels of Government, and interested local groups and citizens. The extensive technical studies affirm that the project is substantially recreation, and is marginal from an economic point of view. As a result, the following conclusions were reached:

1. The Refined Plan 10A Modified would meet all the economic engineering, and environmental criteria set forth in this report.

2. The concerns expressed by the U.S. Fish and Wildlife Service, the New York State Department of Environmental Conservation, and the New York State Department of Parks, Recreation, and Historic Preservation were satisfactorily addressed.

3. Local support for the Refined Plan 10A Modified has not been unanimous. It is not acceptable to some local residents. However, local officials and agencies, and elected State and Federal officials support the plan.

4. No initial channel dredging is required as part of the reevaluated Federal project, except for the removal of the old Main Street bridge abutments in Eighteenmile Creek. However, periodic maintenance dredging of the entrance and access channels is required on an as needed basis to restore the design and/or authorized depth as necessary.

5. The allocation of benefits shows that 96 percent of the benefits were allocated to recreation. The project therefore was assigned a low priority status as a recreation project. It fails to meet current Department of the Army policy and budgetary criteria for proceeding into the next phase (Policy Guidance letter dated 22 February 1991, Subject, Policy on Concurrent Review of Reports...).

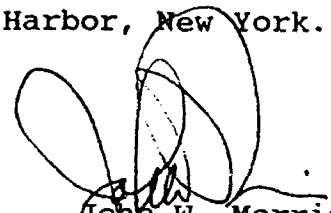
6. The authorized, but unconstructed, 1,500 linear feet of navigation channel in Eighteenmile Creek is no longer incrementally justified. Also, the authorized but unconstructed jetty immediately west of the existing Federal West Pier is no longer justified from an engineering point of view. Further, given that the proposed new entrance channel will be at 10-foot depth, the 12-foot channel between the existing west and east piers can be modified to correspond with comparable channel depths in the recommended project. Deauthorization of these project features will be executed under the Corps deauthorization program using the legislative procedures now in effect.

Section VII

RECOMMENDATION(S)

Section 7
Recommendation(s)

Based on the results of the technical studies conducted to date in the reevaluation phase, Refined Plan 10A Modified meets the requirements of the Water Resources Councils' "Principles and Guidelines." Refined Plan 10A Modified, however, is not implementable because it does not meet current Department of the Army policy requirements for providing priority outputs (that is, commercial navigation and/or flood damage reduction) as primary outputs for modifying Olcott Harbor. Therefore, I recommend that no Federal action be taken at this time to modify the existing Federal project at Olcott Harbor, New York.



John W. Morris
Colonel, U.S. Army
Commanding

DATE: 23 Aug 91

Section VIII

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

NOTICE

THESE REPORTS ARE BEING COORDINATED FOR PLANNING AND NEPA 30 DAY REVIEW RELATIVE TO IDENTIFIED PLAN 10A (MODIFIED AND REFINED). IT SHOULD BE NOTED HOWEVER, THAT DUE TO CURRENT POLICY CONSTRAINTS, A PLAN CAN NOT BE APPROVED FOR CONSTRUCTION AT THIS TIME, AND THE CURRENT RECOMMENDED PLAN IS (NO FEDERAL ACTION).

The comments/response Appendix (SEA-F) for the above-mentioned review can be found in the back of the Supplemental EIS.

Revised: 1/93

DRAFT SUPPLEMENT TO THE 1978
FINAL ENVIRONMENTAL IMPACT STATEMENT
OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

The responsible lead agency is the U.S. Army Corps of Engineers, Buffalo District, Buffalo, New York. The responsible cooperating agency is the New York State Office of Parks, Recreation, and Historic Preservation.

ABSTRACT: Olcott Harbor is a small community in the town of Newfane, Niagara County, New York located at the mouth of Eighteenmile Creek at Lake Ontario. The Buffalo District has investigated public concerns of the Olcott Harbor study area related to inadequate facilities for recreational navigation and public and fishermen access. Some 12 plans were originally considered. In addition to No Action, two plans were considered for final detailed evaluation. Plan 10A - consisting of east and west rubblemound breakwaters (access to the east breakwater), an east embayment, channel access, and associated (primarily local) upland facilities development - would meet most of the navigation and access needs. Plan 10B - consisting of east and west rubblemound breakwaters (east and west breakwaters access), east and west embayments, channel access, and associated (local) upland facilities development - would meet even more of the navigation and access needs, but would be more costly and would present more environmental concerns. Plan 10A (Subsequently Modified and Refined) has been tentatively selected based on its performance in addressing the identified public concerns, lesser environmental concerns, and its net positive contributions to the goal of the Federal objective of national economic development, consistent with protecting the Nations environment.

THE OFFICIAL CLOSING DATE FOR THE RECEIPT OF COMMENTS IS 45 DAYS FROM THE DATE ON WHICH THE NOTICE OF AVAILABILITY OF THIS DRAFT SEIS APPEARS IN THE FEDERAL REGISTER.

If you would like further information on this Environmental Impact Statement, please contact:
Mr. Tod Smith
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199
Telephone (716) 879-4173

NOTE: Information, displays, maps, etc. discussed in the Olcott Harbor Main Report may be incorporated by reference in this Supplement to the Environmental Impact Statement (EIS).

SUMMARY

MAJOR CONCLUSIONS AND FINDINGS

This document was prepared as a Supplement to the Olcott Harbor - Final Environmental Impact Statement (1978). It presents findings of required additional investigations and supplements findings of the previous Feasibility Study and Final Environmental Impact Statement (FEIS).

Olcott Harbor is a small community in the town of Newfane, Niagara County, New York located at the mouth of Eighteenmile Creek at Lake Ontario. State, regional, and local interests have expressed concerns about navigation problems and development opportunities at Olcott Harbor. The principal difficulties impacting on navigation and development opportunities include: wave and surge action in the Lake entrance channel, lack of well protected mooring facilities, constricted navigation and crowded conditions within the existing harbor, and need for additional public and fisherman access to the harbor area. Increased interest in sportfishing for salmonids and other fish species on Lake Ontario has also increased the need for additional boating and breakwater sportfishing facilities at Olcott Harbor.

The U.S. Army Corps of Engineers, Buffalo District has investigated concerns and potential alternative measures for Olcott through a series of progressive studies. Some 12 alternative plans were originally developed and evaluated for engineering and economic feasibility, and environmental and social acceptability, or overall in best meeting developed project objectives. With conclusion of the Feasibility Study (1979), Plan 10 consisting of rubblemound breakwaters with some pedestrian and fisherman access, an east outer harbor embayment, channel improvements, and associated dock and upland facilities development (primarily a local sponsor responsibility) was initially identified as the recommended plan pending supplemental finalization studies.

Several concerns needed to be addressed in finalization of the proposed Olcott Harbor plan. Supplemental studies needed to be conducted pertaining to project optimization, effects of breakwater configuration on the harbor area, dredging and dredged material disposal procedures, fishery impacts, water quality impacts, pedestrian and fisherman access, and facilitative developments (i.e., access, marina facilities, parking, sanitary facilities, etc.). Supplemental study and plan optimization authority and funding was approved in 1988. Supplemental investigations have been conducted and results are presented within these reports.

Plan 10 was subsequently optimized into Plan 10A and Plan 10B. Plan 10A-consisting of east and west rubblemound breakwaters (east breakwater access), an east embayment, channel improvements, and associated (primarily local) upland facilities development - would meet most of the navigation and access needs. Plan 10B - consisting of east and west rubblemound breakwaters (east and west breakwater access), east and west embayments, channel improvements, and associated (primarily local) upland facilities development - would meet even more of the navigation and access needs, but would be more costly and would have increased environmental impacts. Plan 10A (Subsequently Modified and Refined) has been tentatively selected based on its performance in addressing the identified public concerns, lesser environmental concerns, and its net positive contributions to the goal of the Federal objective of national economic development consistent with protecting the Nation's environment. Plan 10A (Modified and Refined), except for the minor engineering and fishery access feature improvements is essentially the same basic breakwater plan as the Authorized Plan 10 and Plan 10A.

A small parking lot and access facilities to the east breakwater are also included under the basic Federal features plan. Associated sanitary facilities include minor modifications to existing Krull Park facilities located in the immediate vicinity.

Supplemental investigations demonstrated that the proposed plan would optimize harbor protection and access needs with minimal disruption to the important local and seasonal fishery activities in the area.

Based on evaluation of the most recent (1987-1990) Olcott harbor navigation channel soundings and potential dredging and dredged material disposal concerns, existing navigation channels are of sufficient dimension that no dredging will be required for construction of the proposed Federal project. Since sediment filling is light in the project vicinity, project navigation channel maintenance dredging would be minor and infrequent in the future.

The project local sponsors are primarily responsible for providing and maintaining docking facilities. Plan 10A (Modified and Refined) would provide a protected area for approximately 800 slips. Transient docking along the existing channel entrance piers will be restricted to protect existing fisherman access and fishing areas. Sixty slips are also planned for the area just south of the west pier. The local interests are also considering a ferry excursion service which would operate from the harbor facility.

The project local sponsors are primarily responsible for providing project marina related upland facilities including basic marina facilities, associated access and parking facilities, and sanitary facilities. In addition to the existing private marinas in the harbor area, the town of Newfane Marina facilities will serve as the major marina facilities for the project. Access, parking, and sanitary facilities will be developed in the waterfront area particularly in the vicinities of the town of Newfane Marina and east breakwater and docking shoreline tie-in. In addition to basic facility needs, it is expected that service developments will be improved and developed within the community. The community has developed and is coordinating and finalizing a waterfront Master Plan for the community.

Environmental evaluation, as compared to the without project conditions, indicates that with implementation of the Selected Plan, the following impacts would be expected. Reference Summary Tables 1 and 2 which follow.

Adverse Impacts - Minor to moderate short-term adverse impacts would be anticipated for: air quality, water quality, benthos, vegetation, fisheries, wildlife, displacement of people, recreation, public facilities and services, property values and tax revenues, aesthetics, and noise. Minor to moderate long-term adverse impacts would be anticipated for: air quality, water quality, fisheries, and wildlife.

Beneficial Impacts - Minor to moderate short-term beneficial impacts would be anticipated for: community and regional growth; business, employment and income; and community cohesion. Minor to moderate long-term beneficial impacts would be anticipated for: benthos, vegetation, fisheries, wildlife, aesthetics and noise, community cohesion, and cultural resources. Major long-term beneficial impacts would be anticipated for: community and regional growth; business, employment, and income; recreation; public facilities and services; property values and tax revenues.

Not Significant - No significant short-term impacts would be anticipated for: sediment quality, threatened and endangered species, wetlands, and cultural resources. No significant long-term impacts would be anticipated for: sediment quality, threatened and endangered species, wetlands, and displacement of people.

If the proposed project were constructed, the contractor would be required to comply with the Corps of Engineers Civil Works Construction Guide Specification entitled "Environmental Protection" (CW-01430 - July 1978) which requires measures to minimize construction impacts to water and associated land resources such as noise, dust, erosion, and turbidity.

Project environmental design considerations include: optimization of breakwater design (engineering and fishery access); coordination with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYSDEC) to schedule construction of the project within an agreed upon time period in order to avoid or minimize adverse impacts on movement and spawning activities of cold water and warm water fish species, as well as on recreation fishing and boating; optimize pedestrian and fisherman access onto project breakwaters; construction vehicle routing and staging considerations; and necessary access, parking, marina, and sanitary facilities to facilitate Federal project features within Federal standards.

As a result of the Corps' coordination meeting with the NYS Department of Environmental Conservation and the U.S. Fish and Wildlife Service on 21 June 1990, letters received by the Corps from these agencies dated 6 July 1990 confirmed the following mutually agreed upon "environmental window" schedule during which in-water construction work would be authorized to occur: Year 1 - 15 May to 6 October for construction and completion of the west breakwater; Year 2 - 15 May to 10 November for construction and completion of the east breakwater including the shore connected segment. In-water construction work should be completed as soon as possible within the aforementioned environmental window dates, in order to lessen adverse impacts that may temporarily affect fish spawning and public fishing opportunity. Any future in-water maintenance work on the breakwaters should only be done during the period between 15 June and 1 September. Other than during the aforementioned permissible project construction periods mentioned, in-water construction work should be avoided.

Olcott Harbor is one of several developed small boat harbors and communities along Lake Ontario, New York. With improved water quality and successful Lake and tributary fish stocking programs underway, recreational boating and fishing access and associated service facilities are at a premium. The proposed project at Olcott would satisfy only a part of the local regional or Lake regional existing and anticipated facility needs. With appropriate environmental consideration, this and other such developments need not significantly adversely affect the attraction natural resources.

AREAS OF CONTROVERSY

An area of concern formerly expressed by the USFWS and NYSDEC pertains to the effects of the potential project on spawning movements of coldwater and warmwater fish in the vicinity of Olcott Harbor and mouth of Eighteenmile Creek. In response to this concern, the USFWS was contracted by the Corps to accomplish supplemental field studies in order to obtain baseline environmental data with regard to such parameters as fish activity, water temperatures, wind velocities, and water velocities in the project area during spring, early summer, and fall seasons in 1989. Results were utilized in alternative model testing which was done by the U.S. Army Corps of Engineers Waterways Experiment Station (WES) at Vicksburg, Mississippi. Testing indicated that parameter changes were small with either of the considered alternatives (10A Subsequently Modified and Refined and 10B) as compared to without project conditions; but that Plan 10A (Subsequently Modified and Refined) would have slightly lesser parameter change impacts than Plan 10B. This contributed to alternative plan selection, and indicates that the proposed plan would have minimal adverse impacts to water quality, and project vicinity fisheries.

Another area of concern formerly expressed by the U.S. Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) pertained to dredging and appropriate disposal of dredged material. Subsequent additional sediment sampling was conducted, and results and proposed disposal procedures were coordinated with USEPA and NYSDEC. Based on evaluation of the most recent (1987-1990) Olcott harbor navigation channel soundings and potential dredging and dredged material disposal concerns, existing navigation channels are of sufficient dimension that no dredging will be required for construction of the proposed project. Since sediment filling is light in the project vicinity, project navigation channel maintenance dredging would be minor and infrequent in the future. Historically, non-polluted to moderately polluted dredged material was disposed of at the Olcott Harbor-Lake Ontario open lake disposal site located 1.5 miles north of Olcott Harbor. This may or may-not be the case in the future. Future sediment testing results will need to be coordinated among the Corps of Engineers, the U.S. Environmental Protection Agency, and the New York State Department of Environmental Conservation for the appropriate dredging and disposal procedures.

Some properties and easements, particularly in the area of the town of Newfane Marina and east breakwater construction, would need to be acquired in order to provide for project construction and minimal necessary project facilities development. Development and acquisition of properties is normally a project issue of some controversy. Upland development plans are being developed and coordinated by the Community. Acquisition of properties for Federal features would be in accordance with guidelines as set forth by the "Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970," as amended.

UNRESOLVED ISSUES

Major project planning issues have been resolved. Some issues which will need to be finalized include: study report approvals; Federal/local plans compatibility; final project cost sharing agreements; Federal/local cooperation agreements; preparation of final plans and specifications; project construction approval; lands, easements, and right-of-ways; project construction; and operation and maintenance.

RELATIONSHIP TO ENVIRONMENTAL PROTECTION STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS

Summary Table A, which follows, summarizes anticipated environmental impacts by evaluation parameter for plans considered in detail. These are discussed in more detail in Table 1 - Comparative Impacts of Alternatives in Section 2 - Alternatives, and in Section 4 - Environmental Effects in this Environmental Statement.

Summary Table B, which follows, indicates the relationship of plans considered in detail to major Federal and State Environmental Protection Statutes, Executive Orders, and Memoranda. Reference Section 6 - Public Involvement and Required Coordination, and associated appendices, and the correspondence appendix of this Environmental Statement for further information.

Summary Table A - Comparative Impacts of Alternatives Indications as Compared to the No Action (Without Project) Conditions

Environmental Parameters	No Action (Without Project Conditions)	(Modified) Plan 10A (Revised)	Plan 10B
Economics			
Federal Cost	(Not Applicable)	$ 8,952,058	No Revised Calculation
Non-Federal Cost		8,505,742	
Total First Cost		17,462,800	
Benefits (Av. An.)		1,964,900	
Costs (Av. An.)		1,700,200	
B/C		1.16	
Net Benefits (Av. An.)		264,700	
Natural Environment (Resources):			
* Air Quality	ST: Minor Adverse LT: Minor Adverse	ST: Minor Adverse LT: Minor Adverse	ST: Minor Adverse LT: Minor Adverse
* Water Quality	ST: Minor Adverse LT: Minor Adverse	ST: Moderate Adverse LT: Minor Adverse	ST: Moderate Adverse LT: Moderate Adverse
* Sediment Quality	ST: Not Significant LT: Minor Beneficial	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Not Significant
* Benthos	ST: Not Significant LT: Not Significant	ST: Moderate Adverse LT: Moderate Beneficial	ST: Moderate Adverse LT: Moderate Beneficial
* Vegetation	ST: Not Significant LT: Not Significant	ST: Minor Adverse LT: Minor Beneficial	ST: Minor Adverse LT: Minor Beneficial
* Fisheries	ST: Not Significant LT: Not Significant	ST: Moderate Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial	ST: Major Adverse LT: (1) Major Adverse (2) Moderate Beneficial
* Wildlife	ST: Not Significant LT: Not Significant	ST: Minor Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial	ST: Minor Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial
* Threatened and Endangered Species	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Not Significant
* Wetlands	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Not Significant
Human (Man-Made) Environmental (Resources)			
* Community and Regional Growth	ST: Minor Beneficial LT: Minor Beneficial	ST: Moderate Beneficial LT: Major Beneficial	ST: Moderate Beneficial LT: Major Beneficial
* Displacement of People	ST: Minor Adverse LT: Not Significant	ST: Moderate Adverse LT: Not Significant	ST: Moderate Adverse LT: Not Significant
* Business, Employment, and Income	ST: Minor Beneficial LT: Minor Beneficial	ST: Minor Beneficial LT: Major Beneficial	ST: Minor Beneficial LT: Major Beneficial
* Recreation	ST: Minor Adverse LT: Minor Beneficial	ST: Minor Adverse LT: Major Beneficial	ST: Moderate Adverse LT: Major Beneficial
* Public Facilities and Services	ST: Minor Adverse LT: Minor Beneficial	ST: Moderate Adverse LT: Major Beneficial	ST: Moderate Adverse LT: Major Beneficial
* Property Values and Tax Revenues	ST: Minor Adverse LT: Minor Beneficial	ST: Minor Adverse LT: Major Beneficial	ST: Minor Adverse LT: Major Beneficial
* Aesthetic Resources, Noise	ST: Minor Adverse LT: Minor Beneficial	ST: Moderate Adverse LT: Moderate Beneficial	ST: Moderate Adverse LT: Moderate Beneficial
* Community Cohesion	ST: Minor Beneficial LT: Minor Beneficial	ST: Minor Beneficial LT: Moderate Beneficial	ST: Minor Beneficial LT: Moderate Beneficial
Cultural Resources			
* Cultural Resources	ST: Not Significant LT: Not Significant	ST: Not Significant LT: Minor Beneficial	ST: Not Significant LT: Minor Beneficial

Key:
ST: Short Term
LT: Long Term

Range:
Major Beneficial
Moderate Beneficial
Minor Beneficial
Not Significant
Minor Adverse
Moderate Adverse
Major Adverse

Note: Reference:
* Comparative Impacts of Alternatives in the Alternatives Section

* Environmental Effects Section

Summary Table B - Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements

	Considered Plan 10A	Considered Plan 10B
Federal Statutes		
Archaeological and Historic Preservation Act, as amended, 16 USC 469, et seq.	Full	Full
National Historic Preservation Act, as amended, 16 USC 470a, et seq.	Full	Full
Fish and Wildlife Coordination Act, as amended, USC 661, et seq.	Full	Full
Endangered Species Act, as amended, 16 USC 1531, et seq.	Full	Full
Clean Air Act, as amended, 42 USC 7401, et seq.	Full	Full
Clean Water Act, as amended (Federal Water Pollution Control Act), 33 USC 1251, et seq.	Full	Full
Federal Water Project Recreation Act, as amended, 16 USC 460-1(12), et seq.	Full	Full
Land and Water Conservation Fund Act, as amended, 16 USC 4601-11, et seq.	Full	Full
National Environmental Policy Act, as amended, 42 USC 4321, et seq.	Full	Full
Rivers and Harbors Act, 33 USC 401, et seq.	Full	Full
Wild and Scenic Rivers Act, as amended, 16 USC 1271, et seq.	Full	Full
Coastal Zone Management Act, as amended, 16 USC 1451, et seq.	Full	Full
Estuary Protection Act, 16 USC 1221, et seq.	N/A	N/A
Marine Protection, Research and Sanctuaries Act, 22 USC 1401, et seq.	N/A	N/A
Watershed Protection and Flood Prevention Act, 16 USC 1001, et seq.	Full	Full
Farmland Protection Policy Act, (7 USC 4201) et seq.	Full	Full
Executive Orders, Memoranda, Etc.		
Protection and Enhancement of the Cultural Environment (EO 11593)	Full	Full
Flood Plain Management (EO 11988)	Full	Full
Protection of Wetlands (EO 11990)	Full	Full
Environmental Effects Abroad of Major Federal Actions (EO 12114)	N/A	N/A
Analysis of Impacts on Prime and Unique Farmlands (CEQ Memorandum, 30 Aug 76)	Full	Full
New York State Freshwater Wetlands Act (Wetlands >12.4 acres)	Full	Full
Environmental Conservation Law - Article 15 (Protection of Water)	Full	Full
Local Land Use Plans (See Flood Plain Management EO 11988, also)	Full	Full

The compliance categories used in this table were assigned based on the following definitions:

a. Full Compliance - All requirements of the statute, EO, or other policy and related regulations have been met for this stage of the study.

b. Partial Compliance - Some requirements of the statute, EO, or other policy and related regulations, which are normally met by this stage of planning, remain to be met.

c. Noncompliance - None of the requirements of the statute, EO, or other policy and related regulations have been met.

d. N/A - The statute, EO, or other policy and related regulations are not applicable for this study.

SUPPLEMENT TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT
NAVIGATION IMPROVEMENTS AT OLCOTT HARBOR
NIAGARA COUNTY, NEW YORK

TABLE OF CONTENTS

Description	Page
ABSTRACT	i
SUMMARY	ii
TABLE OF CONTENTS	viii
SECTION 1 - NEED FOR AND OBJECTIVES OF THE ACTION	
INTRODUCTION	SEIS-1
STUDY AUTHORITY	SEIS-1
PUBLIC CONCERNS (PROBLEMS AND NEEDS)	SEIS-1
PLANNING OBJECTIVES	SEIS-1
SECTION 2 - ALTERNATIVES	
INTRODUCTION	SEIS-4
PLANS ELIMINATED FROM FURTHER STUDY (PREVIOUS FEASIBILITY STUDY)	SEIS-4
WITHOUT PROJECT CONDITIONS - NO ACTION	SEIS-7
PLANS CONSIDERED IN DETAIL (PREVIOUS FEASIBILITY STUDY)	SEIS-8
TENTATIVELY SELECTED PLAN	SEIS-9
SUPPLEMENTAL STUDIES AND PLAN OPTIMIZATION	SEIS-11
THE SELECTED PLAN	SEIS-11
COMPARATIVE IMPACTS OF ALTERNATIVES	SEIS-21
SECTION 3 - AFFECTED ENVIRONMENT	
INTRODUCTION	SEIS-28
GENERAL ENVIRONMENTAL CONDITIONS	SEIS-28
SIGNIFICANT RESOURCES	SEIS-28

NATURAL ENVIRONMENT (RESOURCES) SEIS-30

HUMAN AND MAN-MADE ENVIRONMENT (RESOURCES) SEIS-34

CULTURAL RESOURCES SEIS-46

SECTION 4 - ENVIRONMENTAL EFFECTS

INTRODUCTION SEIS-47

ENVIRONMENTAL EFFECTS (NATURAL ENVIRONMENTAL RESOURCES) SEIS-47

ENVIRONMENTAL EFFECTS (HUMAN AND MAN-MADE ENVIRONMENT) SEIS-54

ENVIRONMENTAL EFFECTS (CULTURAL RESOURCES) SEIS-61

SECTION 5 - LIST OF PREPARERS

LIST OF PREPARERS SEIS-62

SECTION 6 - PUBLIC INVOLVEMENT

INTRODUCTION SEIS-63

PUBLIC INVOLVEMENT PROGRAM SEIS-63

REQUIRED COORDINATION SEIS-64

STATEMENT RECIPIENTS SEIS-68

PUBLIC VIEWS AND RESPONSES SEIS-70

ENVIRONMENTAL INDEX, REFERENCES, AND APPENDICES

EA-A INDEX AND REFERENCES

EA-B SECTION 404(b)(1) PUBLIC NOTICE AND EVALUATION REPORT

EA-C U.S. FISH AND WILDLIFE SERVICE COORDINATION ACT REPORT

EA-D COASTAL ZONE MANAGEMENT - CONSISTENCY EVALUATION REPORT

EA-E ENVIRONMENTAL CORRESPONDENCE

EA-F COMMENT/RESPONSE ON THE DRAFT SEIS

SECTION 1 - NEED FOR AND OBJECTIVES OF THE ACTION

INTRODUCTION

1.01 This section briefly describes how the Corps became involved in the study and what public concerns and subsequent planning objectives were identified as the basis for plan formulation. Reference Figure 1.

STUDY AUTHORITY

1.02 The initial planning of improvements for Olcott Harbor was undertaken pursuant to a Resolution by the Committee on Public Works of the House of Representatives, adopted October 19, 1967.

1.03 The Olcott Harbor, New York - Final Feasibility Report was completed in 1979. The Report of the Chief of Engineers was dated June 11, 1980.

1.04 These supplemental studies were authorized by the Water Resources Development Act of 1986, Public Law 99-662 - November 17, 1986.

PUBLIC CONCERNS (PROBLEMS AND NEEDS)

1.05 The principal difficulties impacting on navigation at Olcott Harbor are wave and surge action in the lake entrance channel, lack of well protected mooring facilities, and constricted navigation and crowded conditions within the harbor. A need also exists for improved public and fisherman access to the harbor area. A regional analysis of boating needs conducted during 1977 indicated an immediate need for 500 additional berthing spaces at Olcott Harbor. In addition, the study determined that there would be an additional need in 1996 for about 300 additional berthing spaces. Local interests have shown considerable interest in the expanded development of Olcott Harbor as a combination small boat harbor/harbor-of-refuge. Increased interest in sportfishing for salmonids and other fish species on Lake Ontario has expanded the need for additional boating and breakwater sportfishing facilities at Olcott Harbor.

PLANNING OBJECTIVES

1.06 The Federal objective of water and related land resources project planning is to contribute to National Economic Development consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable Executive Orders, and other Federal planning requirements.

1.07 Planning objectives which were derived from resource management needs and utilized in plan formulation for the project vicinity include:

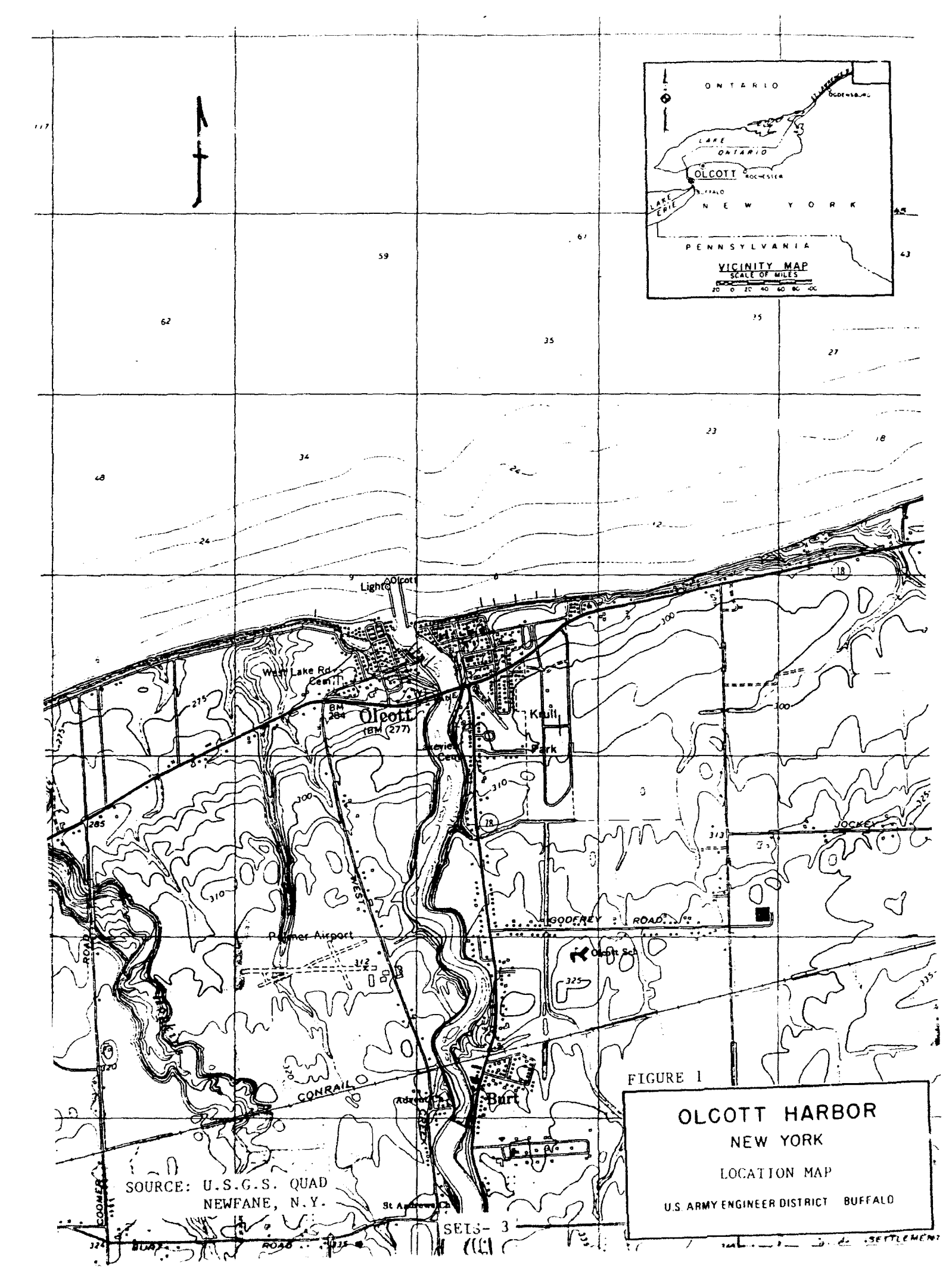
a. To provide, where economically feasible, necessary navigation protection measures to protect the harbor and entrance channel and to provide additional mooring area and public and fisherman breakwater access in order to promote community economic and social well being and recreational resources development.

b. To consider and to minimize any adverse impacts to other water resource interests.

c. To preserve or enhance, where possible, the fish and wildlife resources (habitat) in the project vicinity, in order to protect the natural environmental quality.

d. To preserve, as necessary, cultural resources in the project vicinity in order to protect cultural heritage.

e. To encourage wise water resource and associated land use policies consistent with coastal zone, flood insurance, and environmental resource protection policies.



SOURCE: U.S.G.S. QUAD
NEWFANE, N.Y.

FIGURE 1

OLCOTT HARBOR

NEW YORK

LOCATION MAP

U.S. ARMY ENGINEER DISTRICT BUFFALO

INTRODUCTION

2.01 This section identifies and briefly describes, the reasonable alternatives considered, and the assessment and evaluation of the most responsive solutions.

PLANS ELIMINATED FROM FURTHER STUDY (PREVIOUS FEASIBILITY STUDY)

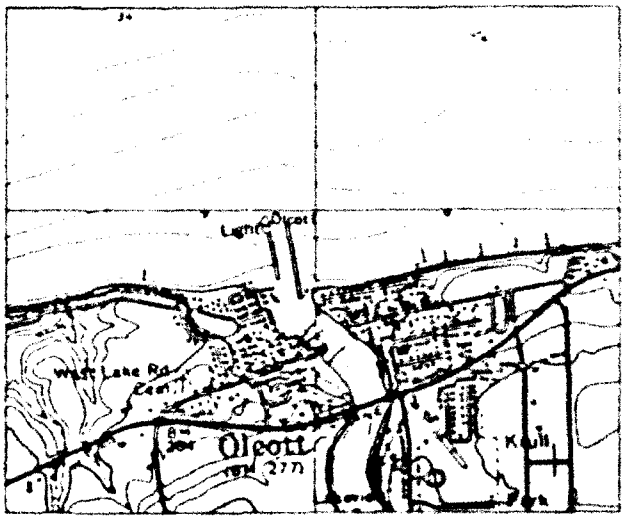
2.02 The feasibility planning of navigation alternatives for Olcott Harbor, New York, was conducted in two iterations. The first iteration studied 11 plans and eliminated 8 plans which did not meet the majority of the study objectives. The second iteration investigated 3 plans in detail and eventually determined that Plan 10 best met the study objectives. The first iteration plans are briefly discussed below. Reference Figures 2 and 3.

2.03 Plan 2A - Plan 2A calls for the construction of two breakwaters offshore of the existing Federal piers along with a new entrance channel. The west breakwater would be about 500 feet long and the east one about 800 feet long. Rubblemound stone jetties would be constructed along the outside edges of both piers for additional protection against wave overtopping. The new channel, 12 feet deep, would connect the existing channel with deep water in the lake. Another 1,500-foot long channel would be created to connect the Federal channel with a 150-foot square turning basin to be dredged near the Route 18 bridge. Plan 2A was not carried into the second iteration because Plan 2 accomplishes similar goals with more favorable costs and because of environmental concerns.

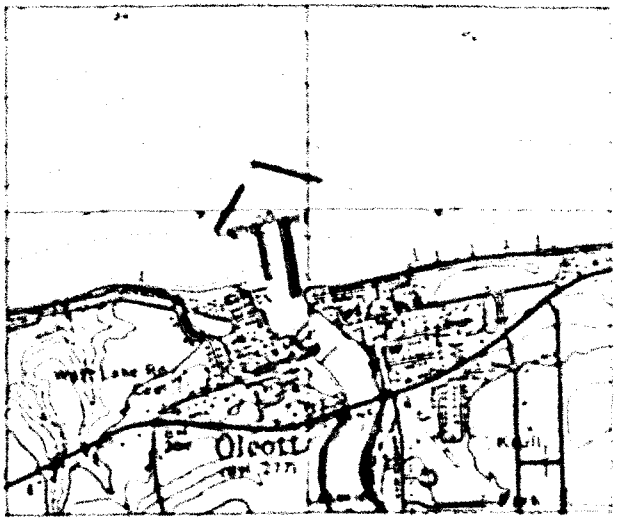
2.04 Plan 3 - Plan 3 calls for construction of a 425-foot long angled extension to the outer end of the U.S. East Pier at Olcott Harbor. A new entrance channel 12 feet deep, 140 feet wide at its inner end, and flaring to about 400 feet at the lakeward end, would be dredged. A channel within Eighteenmile Creek similar to the previous alternative would also be created. This plan was not carried into the second iteration as it fails to satisfy project purposes of additional mooring space and a safe all-weather entrance channel and because of environmental concerns.

2.05 Plan 4 - Plan 4 is a modification of Plan 3 which provides additional entrance channel protection. The existing piers would be covered with stone and extended so that the eastern and western piers would be 1,700 and 1,000 feet long, respectively. A new 300-foot long channel would connect the lake with the existing channel. A channel identical to that in Plan 3 would be created within the creek. Plan 4 was not considered for further study because it did not provide a safe all-weather harbor or sufficient berthing spaces and because of environmental concerns.

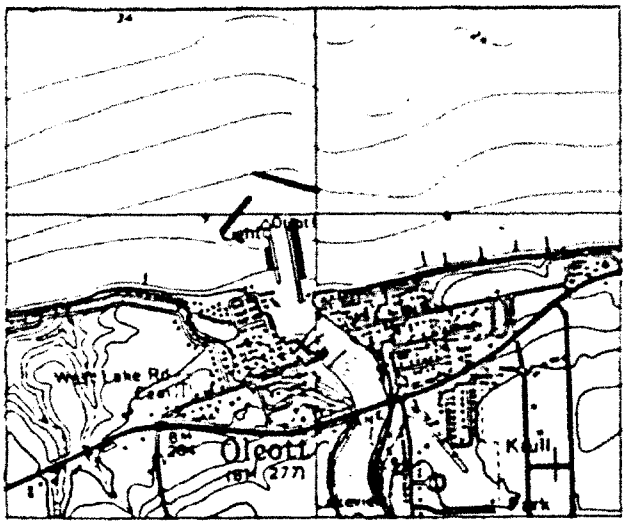
2.06 Plan 5 - Plan 5 calls for creation of a harbor in Lake Ontario, just east of Eighteenmile Creek. The harbor would be bounded by a new east breakwater of rubblemound construction 1,450 feet long connected to shore by a 900-foot shorearm. The U.S. West pier would be extended to 900 feet with rubblemound



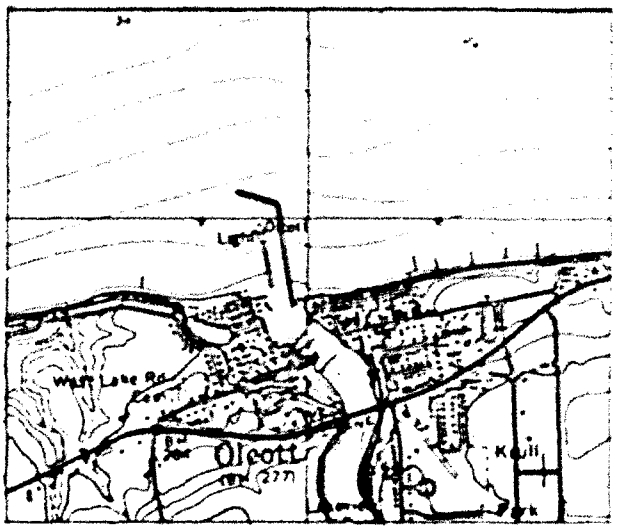
PLAN 1 NO ACTION WITHOUT PROJECT CONDITIONS



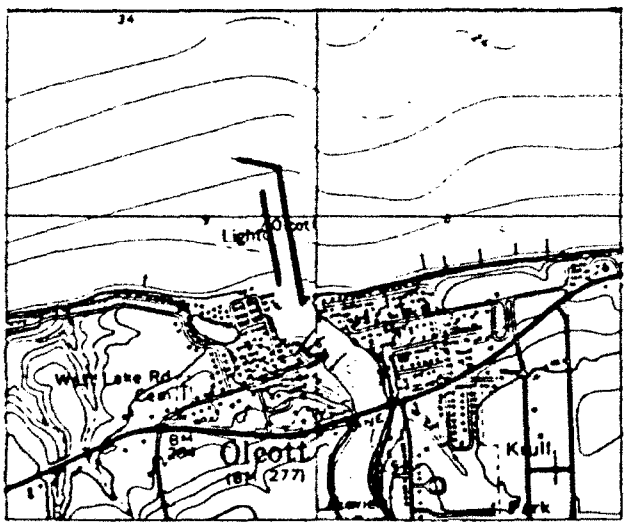
PLAN 2



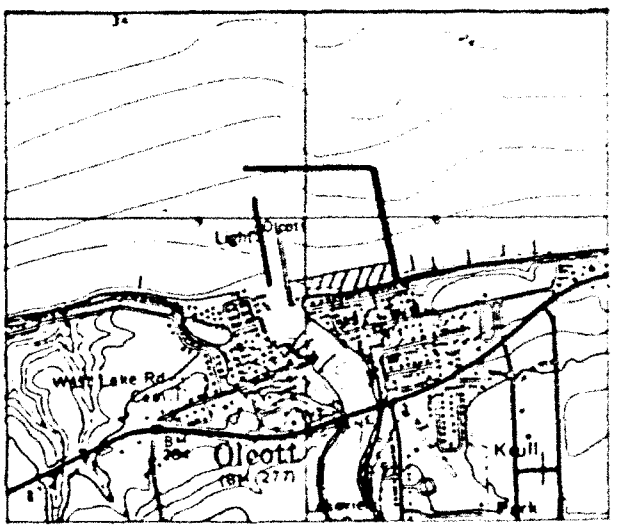
PLAN 2A



PLAN 3

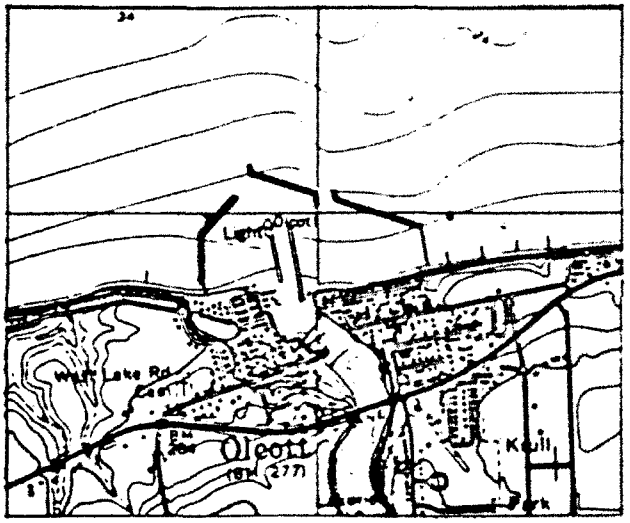


PLAN 4

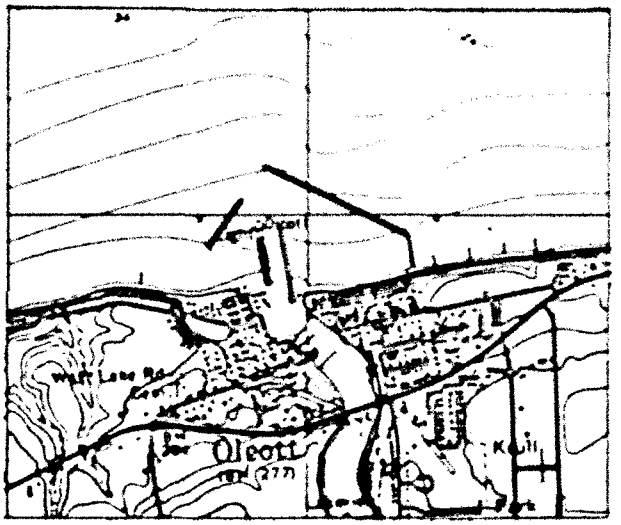


PLAN 5

FIGURE 2



PLAN 7



PLAN 8

stone. These breakwaters form a mooring basin of approximately 8 acres. Extensive facilities for parking and launching would be built. Plan 5 was not considered further because it fails to provide protection for waves from the west and because of unacceptably large environmental concerns.

2.07 Plan 6 - Alternative Plan 6 consists of a system of three breakwaters forming a semi-circle around the mouth of Eighteenmile Creek. The breakwaters are: (1) a detached, curved west breakwater 1,200 feet in length offshore of the creek, (2) an east shorearm breakwater 1,000 feet long connected to the hotel pier, and (3) a west breakwater shorearm 750 feet long. Entrance channels would be located between each breakwater, 12 feet deep, 140 to 160 feet long, 100 feet wide, and connect to the harbor basin access channels. These would connect with the existing channels, and a channel similar to that in other alternatives, except that the turning basin is located upstream of the Route 18 bridge. This plan was removed from further consideration because it is oversized in relation to the projected need and because of environmental concerns.

2.08 Modified Plan 6 and Plan 8 - These plans are both scaled down versions of Plan 6. Modified Plan 6 and Plan 8 differ mainly in that the former plan provides for a launch ramp. Each plan calls for an east breakwater 1,700 feet long and connecting to shore. The detached west breakwater would be 620 and 450 feet long for Modified Plan 6 and Plan 8, respectively. A new entrance channel 500 feet long, 12 feet deep, and 140 feet wide would lead to a harbor basin access channel 960 feet long, 9 feet deep, and 100 feet wide. A channel and turning basin would also be created in Eighteenmile Creek. These plans were removed from future consideration because they fail to provide protection against storms and waves out of the northwest and because of environmental concerns.

2.09 Plan 7 - Plan 7 is basically a modification of Plan 6 with changes to allow better water circulation. In other respects, this plan is the same as Plan 6 and was removed from consideration for similar reasons.

2.10 Plan 9 - Plan 9 is quite similar to Plan 8 except that orientation of the harbor entrance is shifted towards the northeast, small changes are made in the lengths of the breakwaters, and the turning basin within Eighteenmile Creek is moved slightly downstream. Plan 9 was removed from further consideration because the basin would not be protected under all weather conditions and because stagnant water conditions might develop in the basin area and because of environmental concerns.

WITHOUT PROJECT CONDITIONS - NO ACTION

2.11 No action would provide for continued maintenance of the existing Federal project at Olcott Harbor consisting of two piers at the mouth of Eighteenmile Creek and a 12-foot deep entrance channel between the piers. The plan would not meet the needs of boaters, the public, or recreational fishermen. It would place additional pressure for new development at other locations at a higher cost economically and environmentally. There would be no effect on the human and natural environment, but problems at Olcott Harbor stated earlier in this report would remain unchanged.

2.12 Future regional and community environments for Olcott have been projected by Federal, State, and local agencies. In general, agency projections and plans are based upon the assumption that both population and economic factors will continue to exhibit positive growth trends throughout western New York during the next 50 years. Population projections for the town, county, and SMSA generally indicate that more people can be expected to live in the area by the beginning of the twenty-first century. Increases in population will consequently affect the number of households, the sizes of the labor force and recreating population, and other characteristics of the human environment. It is further anticipated that such economic factors as per capita income, total employment, and total personal income will also increase during this period. In summary, the various projected social and economic indicators show future growth trends in the Olcott community and Niagara region.

2.13 Concurrent with human growth in the area are changes in future land uses. Planning documents prepared by the Erie and Niagara Counties Regional Planning Board indicate that development in Olcott will be influenced by various regional growth trends. According to the Planning Board, the Newfane area may expect residential growth as a result of expansions in the Lockport urban area. In addition, institutional growth associated with the northeast Buffalo-Amherst corridor in Erie County, could also produce increased residential development in the town. The Eighteenmile Creek gorge is expected to be preserved as natural open space, and the community will be served by an additional major highway to Lockport and a highway located parallel to the Lake Ontario shoreline in northern Niagara County. The town of Newfane's Community Master Plan, which presents a detailed description of future development for the Olcott community, shows an increase in commercial lands around the harbor area and additional extensive residential lands south of Route 18 and on either side of Olcott-Lockport Road. Like the regional plan, the town expects that hamlet development will continue to be bordered by Krull Park on the east and agricultural land on the west. A large commercial-industrial park is planned for an area about one mile southeast of Olcott. The town plan also notes the Lake Ontario Parkway parallel to the lakeshore about six-tenths of a mile south of the harbor area.

2.14 Future conditions in the community's natural environment are, to a large extent, dependent upon human activity and development in the area. Future construction of marine-related facilities in the harbor and along the lower reaches of Eighteenmile Creek can be expected to occur in presently undeveloped areas where such facilities are economically and environmentally feasible. Development will result in some altercation of aquatic habitat, displacement of wildlife, and other environmental effects. Increased recreational boating activities, stimulated by additional marine facilities and increases in the recreation population, will impact water and air quality to some degree in developed areas. Water quality should improve however as a result of completion of the town's new sewage treatment plant.

PLANS CONSIDERED IN DETAIL (PREVIOUS FEASIBILITY STUDY)

2.15 The second iteration plans are described below.

2.16 Plan 1 - No Action (Without Conditions) - This plan indicates that the Corps of Engineers acting for the Federal Government could take "no-action" based on an evaluation of the problems and possible alternative solutions as

directed by the study authority. Without conditions would be anticipated with this alternative. The No-Action alternative is always a possibility and serves as the basis of comparison by with the other possible alternatives may be compared.

2.17 Plan 2 - Plan 2 would involve construction of two new breakwaters offshore of the Federal piers and the placement of jetty protection along the piers. The east and west offshore breakwaters would be 800 and 350 feet long, respectively, while the pier jetty protection would each be 620 feet long. A 12-foot deep entrance channel would connect with the existing channel while a channel and turning basin would be created in Eighteenmile Creek. Although Plan 2 essentially meets all requirements for the project, it was not chosen as the selected plan because berthing space provided would be inadequate and local interests did not favor the plan and because of environmental concerns.

2.18 Plan 10 - "Plan 10" (Reference Figure 4), the recommened Plan for Olcott Harbor, provides adequate navigation structures, channels, facilities, and boat berthing space to satisfy the study objectives. The Recommended Plan consists of one detached and one shore connected rubblemound breakwater at the mouth of Eighteenmile Creek; an entrance channel between the breakwaters, connecting with the existing Federal channel; an access channel to the eastern harbor basin created by the east breakwater; and an inner channel leading to a turning basin in the creek downstream of the Route 18 bridge. A foot bridge will provide access to the east breakwater for fishermen.

2.19 The two breakwaters will complement the existing Federal piers at the mouth of Eighteenmile Creek. The westerly breakwater will be about 1,100 feet in length with a crest elevation 16 feet above LWD and be of rubblemound construction without smooth capping. The eastern breakwater will be a curved structure 1,650 feet long attached to shore in the Krull Park area by a 150-foot long, open pile, wooden foot bridge. Crest elevation is also 16 feet above LWD at the outer end sloping to 11 feet above LWD at the inner end. This structure will be smooth-capped and provided with a walkway and guard rail to provide safe access for fishermen. Heavy stone rubble will be placed along 330 feet of the western side of the west breakwater to provide protection against heavy waves and will have a height of 10 feet above LWD.

2.20 A new channel, with a minimum width of 100 feet and a depth of 12 feet (below LWD), will be provided for deep water in the lake to the existing 12-foot channel between the piers, a distance of 500 feet. A 9-foot deep access channel to the mooring basin along the inside of the east breakwater will be 1,040 feet long and 100 feet wide. The creek channel will run from the existing channel upstream to the Route 18 bridge. This 9-foot-deep channel will be about 1,400 feet long, generally 100 feet wide, and end at a turning basin 150 feet square.

TENTATIVELY SELECTED PLAN (PREVIOUS FEASIBILITY STUDY)

2.21 Of the 12 plans formulated and considered in the Olcott Harbor - Small Boat Harbor - Feasibility Study, Plan 10 was selected as the best plan to meet the study planning objectives. The other plans were rejected for the reasons previously discussed. Plan 10 would provide the needed navigation structures and berthing spaces at the mouth of Eighteenmile Creek. Plan 10 returned the most net average annual benefits of any of the plans and was, therefore, the NED Plan.

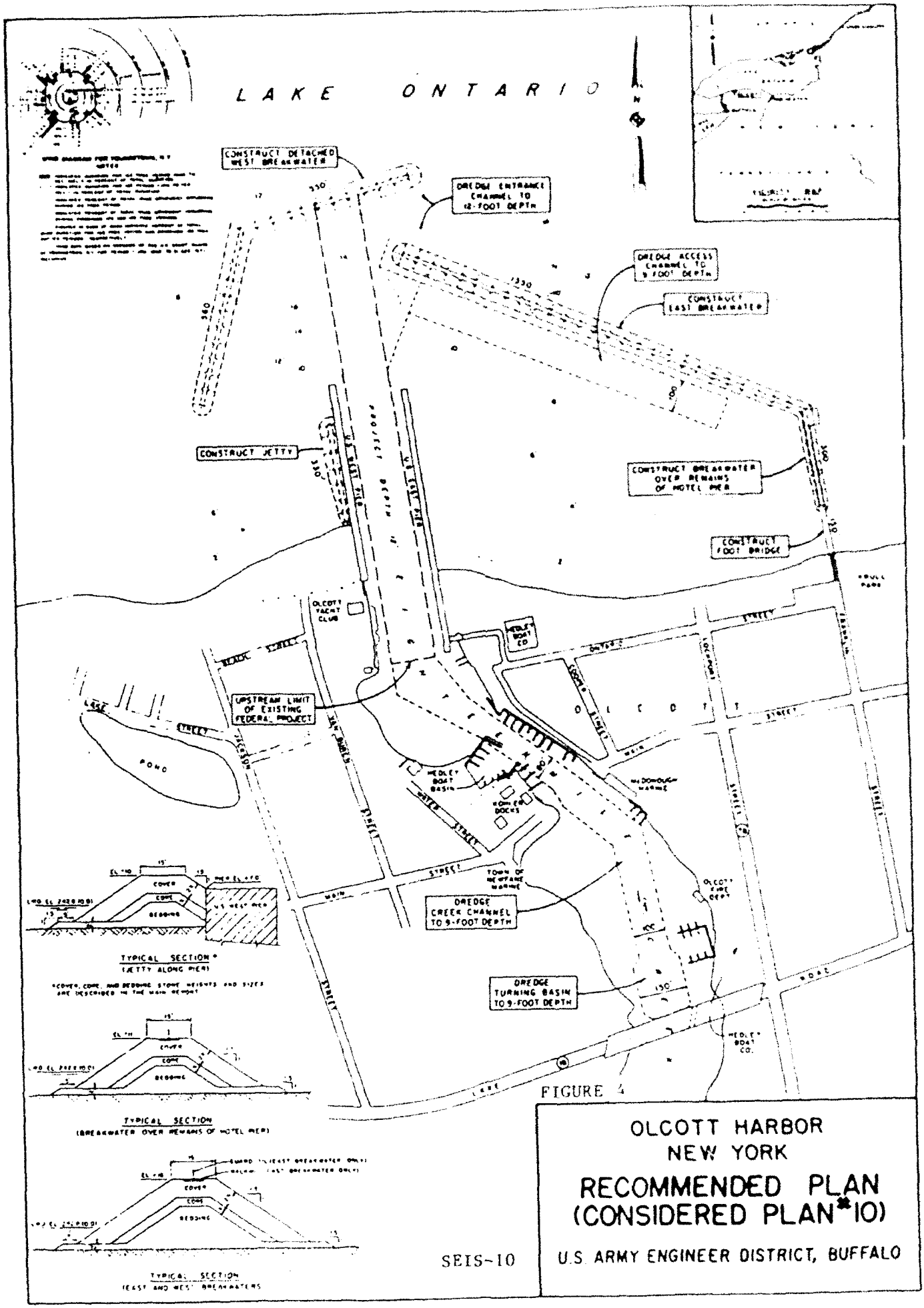


FIGURE 4

OLCOTT HARBOR
NEW YORK

RECOMMENDED PLAN (CONSIDERED PLAN* 10)

U.S. ARMY ENGINEER DISTRICT, BUFFALO

SEIS-10

SUPPLEMENTAL STUDIES AND PLAN OPTIMIZATION

2.22 Several concerns needed to be addressed in finalization of the proposed Olcott Harbor plan. Supplemental studies needed to be conducted pertaining to project optimization, effects of breakwater configuration on the harbor area, dredging and dredged material disposal procedures, fishery access and movement impacts, water quality impacts, pedestrian and fisherman access, and facilitative developments (i.e., access, marina facilities, parking, sanitary facilities, etc.). Supplemental study and plan optimization authority and funding was approved in 1988. Supplemental investigations have been conducted and results are presented within these reports.

2.23 Optimization plans which were developed for detailed analysis are as follows:

2.24 Plan 10A - The layout of Plan 10A is shown in Figure 5. The plan would provide a basin for about 800 vessels. The plan consists of navigation channels and harbor structures. The harbor structures are: (1) a detached west breakwater; (2) detached east breakwater; (3) a shore-connected east breakwater; (4) a pedestrian foot bridge joining the detached east breakwater to the shore-connected east breakwater; and (5) a jetty along the outside of the existing U.S. West Pier. The jetty and all of the breakwaters are rubblemound structures. The channels are: (1) an entrance channel between the breakwaters leading to the existing Federal channel; (2) an access channel from the entrance channel to the east mooring basin; and (3) a channel in Eighteenmile Creek beginning at the upstream end of the existing Federal channel and ending in a turning basin immediately downstream of the Route 18 highway bridge.

2.25 Plan 10B - The layout of Plan 10B is shown in Figure 6. The plan would provide a basin for about 1,000 vessels. The plan consists of navigation channels and harbor structures. The harbor structures are: (1) a detached west breakwater; (2) a shore-connected west breakwater; (3) a pedestrian foot bridge joining the detached west breakwater to the shore-connected west breakwater; (4) a detached east breakwater; (5) a shore-connected east breakwater; and (6) a pedestrian foot bridge joining the detached east breakwater to the shore-connected east breakwater. All of the breakwaters are rubblemound structures. The channels are (1) an entrance channel leading to an outer basin; (2) an access channel from the outer basin to the east mooring basin; (3) an access channel from the outer basin to the west mooring basin; and (4) a channel in Eighteenmile Creek beginning at the upstream end of the existing Federal channel and ending in a turning basin immediately downstream of the Route 18 highway bridge.

THE SELECTED PLAN

2.26 Overall evaluation of final considered plans relative to engineering and economic feasibility, and environmental and social acceptability; or in best attaining project planning objectives, identifies Plan 10A (Subsequently Modified and Refined) as the Selected Plan. Net benefits fare comparable to Plan 10B, the project is more affordable to the locals, Plan 10A (Modified and Refined) is more environmentally acceptable, and is supported by the local interests.

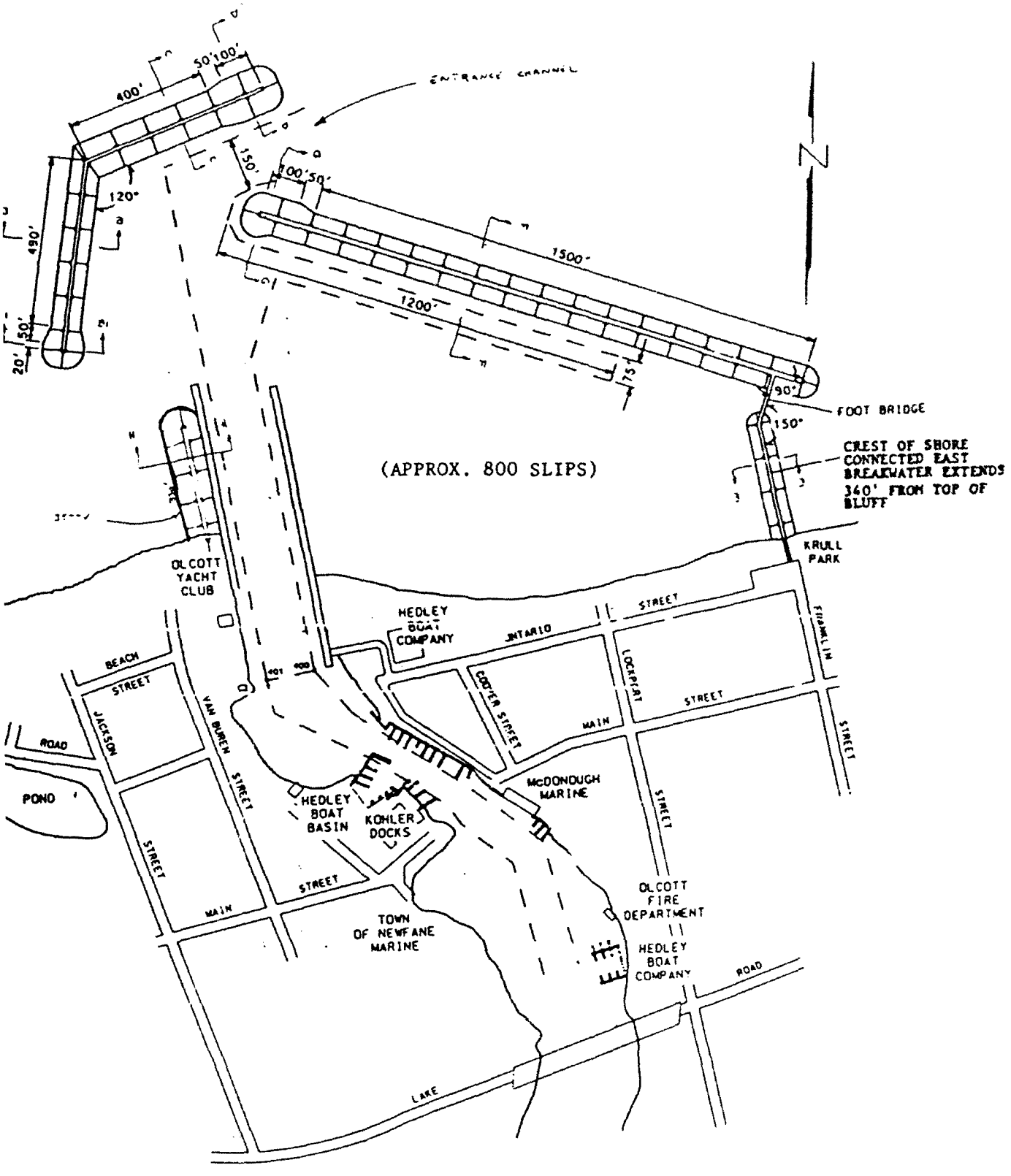


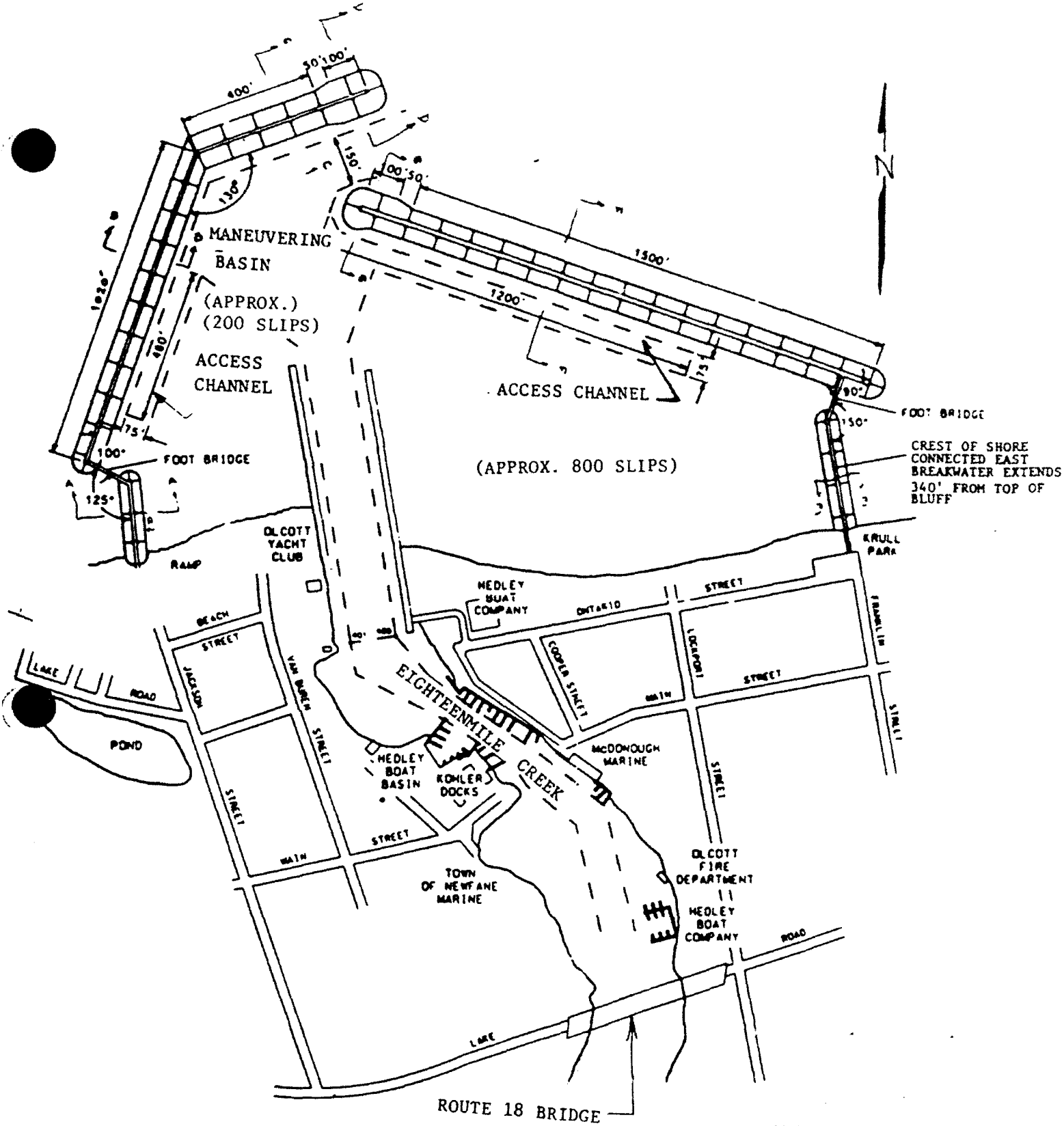
FIGURE 5

OLCOTT HARBOR
NEW YORK
ALTERNATIVE PLAN 10A
U.S. ARMY ENGINEER DISTRICT BUFFALO

PLAN

SCALE: 1" = 200'
200' 0 200' 400'

Recd from
W. Cadet 6/6/89



OLCOTT HARBOR, NEW YORK
PLAN 10B

FIGURE 6

PLAN

SCALE: 1" = 200'

200' 0 200' 400'

OLCOTT HARBOR
NEW YORK

ALTERNATIVE PLAN 10B

U.S. ARMY ENGINEER DISTRICT BUFFALO

2.27 Plan 10A (Modified and Refined) is the optimized version of Plan 10A and is described as follows (Reference Figures 7 and 8). Plan 10A (Modified and Refined), except for the minor engineering and fishery access feature improvements, is essentially the same basic breakwater plan as the Authorized Plan 10 and Plan 10A.

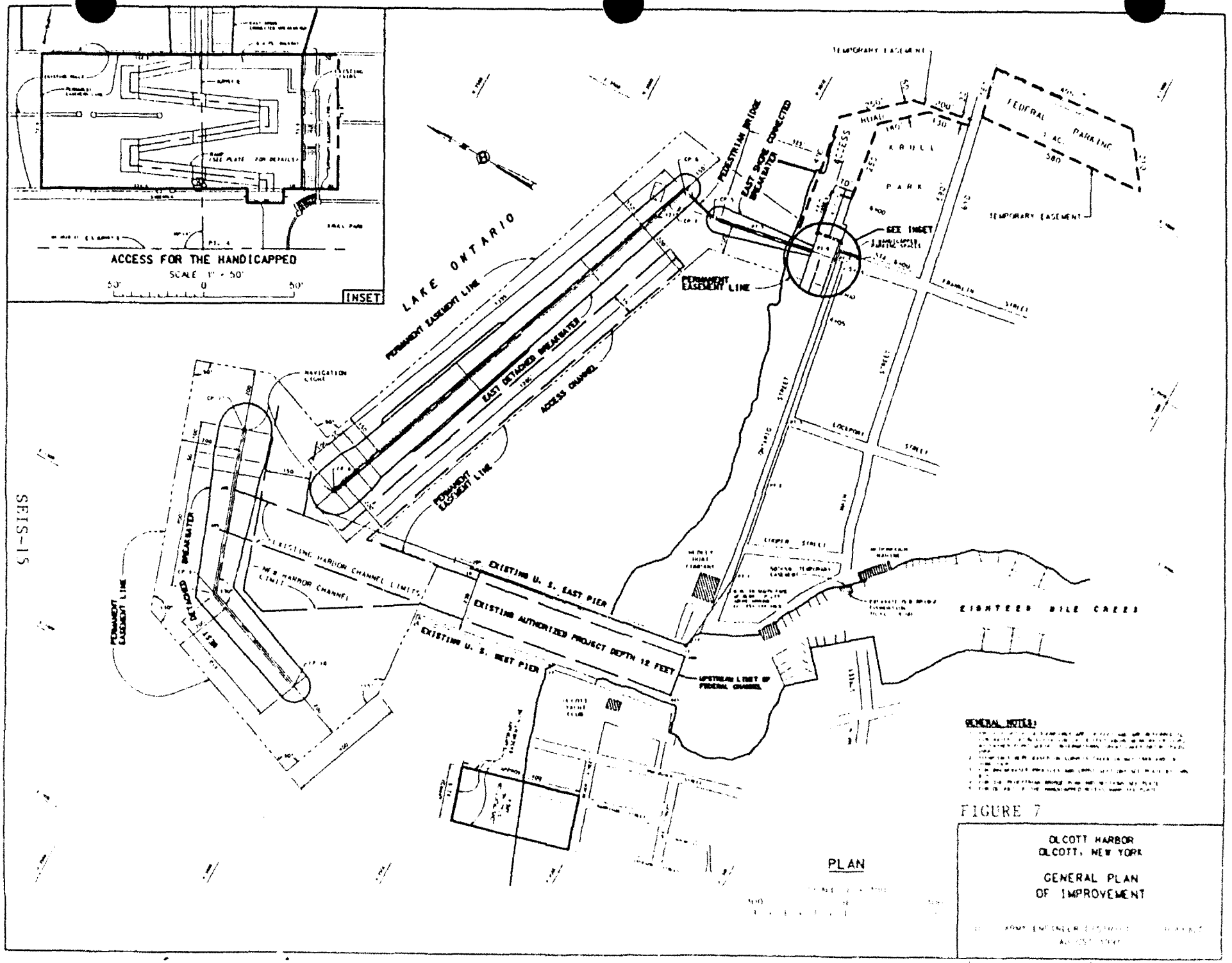
2.28 The Refined Plan 10A Modified (Figure 7) consists of an east detached breakwater, and an east shore-connected breakwater northeasterly of the U.S. East Pier; a west detached breakwater northwest of the present harbor entrance; an entrance channel between breakwaters connected to an access channel leading to a mooring basin east of the U.S. East Pier. The breakwaters slightly overlap to help prevent storm waves from entering the east basin channels, and the existing Federal entrance channel between piers. The west detached breakwater would withstand wave attack from lake storms from the west through north-northwest and the east shore-connected breakwater would withstand wave attack from the north through east. Physical model study results indicate that the west breakwater would dissipate and prevent westerly storm waves from overtopping the U.S. West Pier; and would also reduce wave reflection. Cross-sections and profiles of the breakwaters are shown on Figure 8.

2.29 The east shore-connected breakwater totals 323 feet in length with a 95-foot long foot-bridge connecting it to the detached east breakwater. A portion of the detached east breakwater and the shore-connected breakwater would be constructed on the alignment of the remains of an old hotel pier that connected to shore at Krull Park. The east shore-connected east breakwater would be of stone rubblemound construction with armor and underlayers, and a bedding layer. Crest width would be 12 feet and breakwater sideslopes 1 vertical on 2 feet horizontal. The crest height would be +12.0 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

2.30 A 7-foot wide concrete ramp would be constructed to provide access for physically handicapped people. The ramp would extend from Ontario Street to the east shore-connected breakwater, a drop of about 19 feet. The ramp would be sloped at 1V on 12H with 8 level landings at 30 foot intervals for rest and safety. Railing would be provided on both sides of the ramp for safety and locomotion-assist for wheel chairs.

2.31 The foot bridge would be supported by two 23-fot diameter sheet pile cells and have a 90-foot clear opening to allow for water circulation and fish migration in and out of the east basin formed by the east breakwaters, the U.S. East Pier, and the open lake. The bridge would be a single-span precast concrete bridge. The design of the bridge indicates that the low point of the bridge would be at +9.75 feet above low water datum. The bridge deck would be about 8 feet wide and have railing son each side for the safety of fishermen and others who desire access.

2.32 The east detached breakwater totals 1,545 feet in length, and would assume a 121° interior angle with the shore-connected breakwater. Its crest would be +13 feet above low water datum and has a crest width of 16 feet and same sideslopes as the shore-connected breakwater. A 500-foot section of the breakwater, over a buried river channel, would have a crest elevation of +14 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

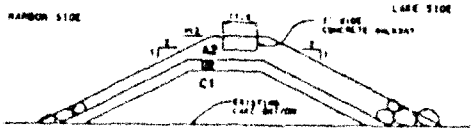


SEIS-15

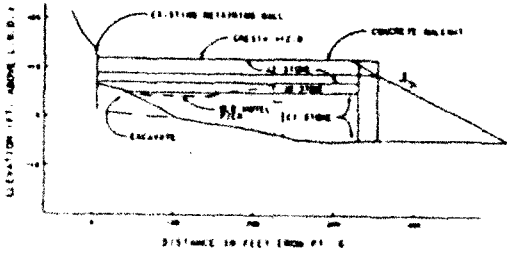
FIGURE 7

OLCOTT HARBOR
OLCOTT, NEW YORK

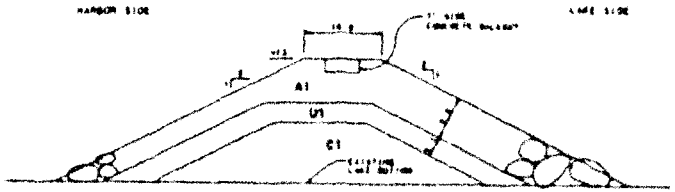
GENERAL PLAN
OF IMPROVEMENT



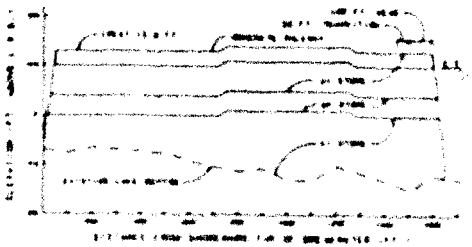
EAST SHORE CONNECTED BREAKWATER
TYPICAL SECTION



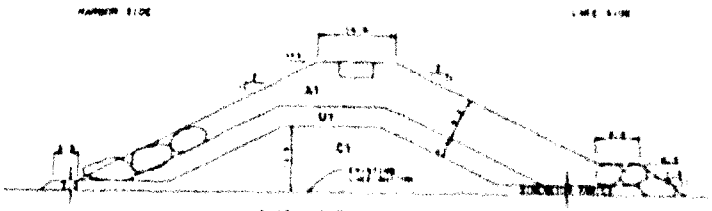
EAST SHORE CONNECTED
BREAKWATER PROFILE



EAST DETACHED BREAKWATER
TYPICAL SECTION



EAST DETACHED BREAKWATER PROFILE

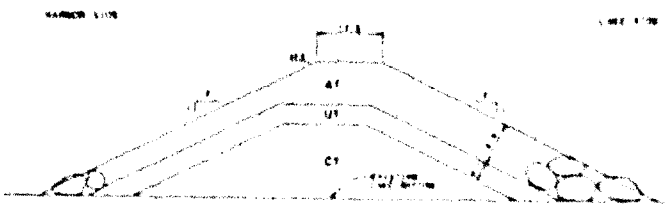


EAST DETACHED BREAKWATER
TYPICAL SECTION

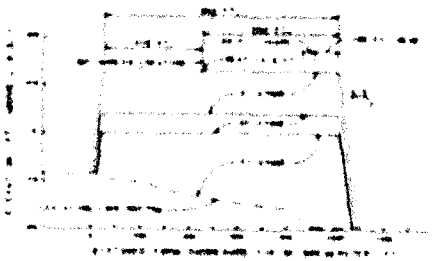
LEGEND:

A1 ARMOR STONE 8000-12000 LBS
A2 ARMOR STONE 1400-3000 LBS
C1 CORE STONE 1-150 LBS
U1 UNDERLAYER STONE 400-4000 LBS
U2 UNDERLAYER STONE 100-350 LBS

NOTES:



WEST DETACHED BREAKWATER
TYPICAL SECTION



WEST DETACHED BREAKWATER PROFILE

FIGURE 8

DUNKIRK HARBOR, NEW YORK
SMALL BOAT HARBOR PROJECT

BREAKWATER PROFILES AND
TYPICAL SECTIONS

2.33 The west detached breakwater would have an overall length of 960 feet with an angle in the alignment at about mid-length. The interior angle would be 130°, the northerly leg 550 feet long and the southerly leg or shorearm 410 feet long. The west detached breakwater would be of stone rubblemound construction with armor, underlayer, and bedding layer. Crest height would be +13 feet above low water datum, have a width of 13.5 feet and sideslopes of 1 vertical on 2 horizontal. The west detached breakwater would not have a walkway or guardrail on the crest to discourage public access to the detached breakwater.

2.34 A small parking lot and access facilities to the east breakwater are also included under the basic Federal features plan as depicted on Figure 7. Associated sanitary facilities include minor modifications to existing Krull Park facilities located in the immediate vicinity.

2.35 Breakwater Construction - It is likely that stone material for breakwater construction will be trucked in from a local/regional quarry. Access to the east breakwater would likely be via major thoroughfare to Route 18, to East Main Street, along a temporary road through the Krull Park shorefront area, and down an embankment access area to the east breakwater staging area. Access to the west breakwater would likely be via major thoroughfare to Route 18, to Jackson and/or Van Buren to the west breakwater staging area. Breakwater construction would likely involve trucking, some stockpiling on shoreline or barges, and placement by truck and crane and/or floating plant crane.

2.36 Abutment Removal - An old concrete bridge abutment from the old Main Street bridge, which is a hazard to navigation, will be removed from the vicinity of the northeast embankment of Eighteenmile Creek and Main Street. It will be removed, at minimum, to a safe navigation elevation and pieces will be appropriately disposed of in a landfill area.

2.37 Construction Dredging - Based on evaluation of the most recent (1987-1990) Olcott Harbor navigation channel soundings and potential dredging and dredged material disposal concerns, existing navigation channels, although not optimum, are of sufficient dimension that no dredging will be required for construction of the proposed project.

2.38 Environmental Considerations - If the proposed project were constructed, the contractor would be required to comply with the Corps of Engineers Civil Works Construction Guide Specification entitled "Environmental Protection" (CW-01430 - July 1978) which requires measures to minimize construction impacts to water and associated land resources such as noise, dust, erosion, and turbidity.

2.39 Project environmental design considerations include: optimization of breakwater design; coordination with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYSDEC) to schedule construction of the project within an agreed upon time period in order to avoid or minimize adverse impacts on movement and spawning activities of coldwater and warmwater fish species, as well as on recreation fishing and boating; optimize pedestrian (fisherman) access onto project breakwaters; construction vehicle routing and staging considerations, and minimal access, parking, marina, and sanitary facilities.

2.40 As a result of the Corps' coordination meeting with the NYS Department of Environmental Conservation and the U.S. Fish and Wildlife Service on 21 June 1990, letters received by the Corps from these agencies dated 6 July 1990 confirmed the following mutually agreed upon "environmental window" schedule during which in-water construction work would be authorized to occur: Year 1 - 15 May to 6 October for construction and completion of the west breakwater; Year 2 - 15 May to 10 November for construction and completion of the east breakwater including the shore connected segment. In-water construction work should be completed as soon as possible within the aforementioned environmental window dates, in order to lessen adverse impacts that may temporarily affect fish spawning and public fishing opportunity. Any future in-water maintenance work on the breakwaters should only be done during the period between 15 June and 1 September. Other than during the aforementioned permissible project construction periods mentioned, in-water construction work should be avoided.

2.41 Local Docking and Upland Facilities -

2.42 Docking Facilities - The project local sponsors are primarily responsible for providing and maintaining docking facilities. Plan 10A (Modified and Refined) would provide a protected area for approximately 800 slips. The general dock alignments are depicted on Figures 9 and 10. Sixty slips are also planned for the area just south of the west pier. Transient docking along the existing channel entrance piers will be restricted to protect existing fisherman access and fishing areas. The local sponsors are also considering a ferry/excursion service which would operate from the harbor facility.

2.43 Upland Facilities - The project local sponsors are primarily responsible for providing project marina related upland facilities including basic marina facilities, and associated access, parking, and sanitary facilities. In addition to the existing private marinas in the harbor area, the town of Newfane Marina facilities will serve as the major marina facilities for the project. Associated access, parking, and sanitary facilities will be developed in the waterfront area particularly in the vicinities of the town of Newfane Marina and the east breakwater and docking shoreline tie-ins. In addition to basic facility needs, it is expected that service developments will be improved and developed within the community. The community has developed and is coordinating and finalizing a waterfront Master Plan for the community. Reference Figures 9 and 10.

2.44 Operation and Maintenance - The existing Federal project, consisting of the piers and entrance channel, will continue to be maintained by the Federal Government. The operation, maintenance, replacement, and rehabilitation (OMRR) of the public berthing areas, sanitary facilities, navigation facilities including breakwaters, non-Federal channels, and other project related facilities will be the responsibility of the non-Federal sponsor. The U.S. Coast Guard is responsible for the OMRR of all aids to navigation (Section 101(b) of WRDA 1986, Public Law 99-662).

2.45 Periodic Federal and Non-Federal project inspections would occur in order to determine project feature maintenance needs. Breakwater repairs would be expected to be infrequent and done on an as needed basis. Adverse environmental impacts for these repairs would likely be considered negligible.

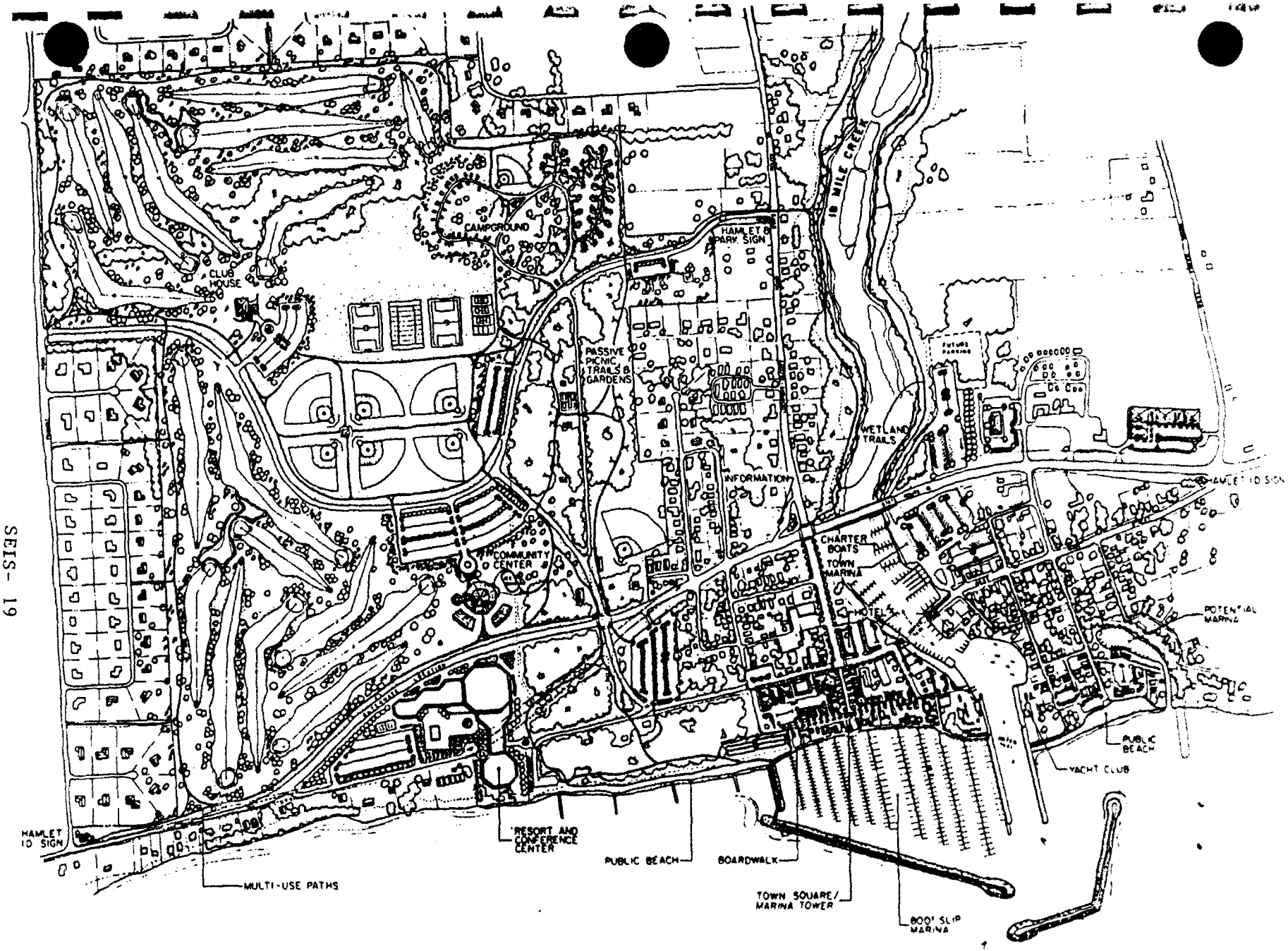


FIGURE 9

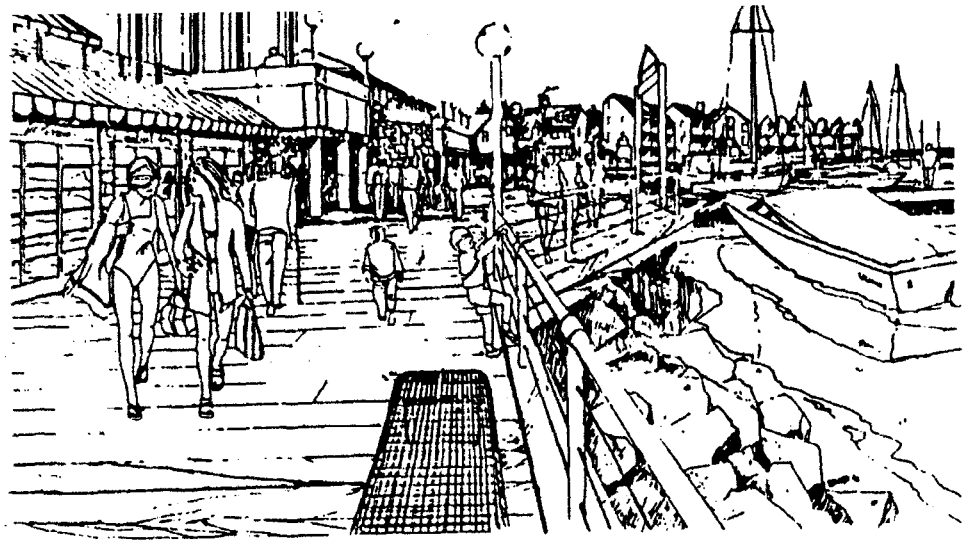
OLCOTT HARBOR MASTER PLAN

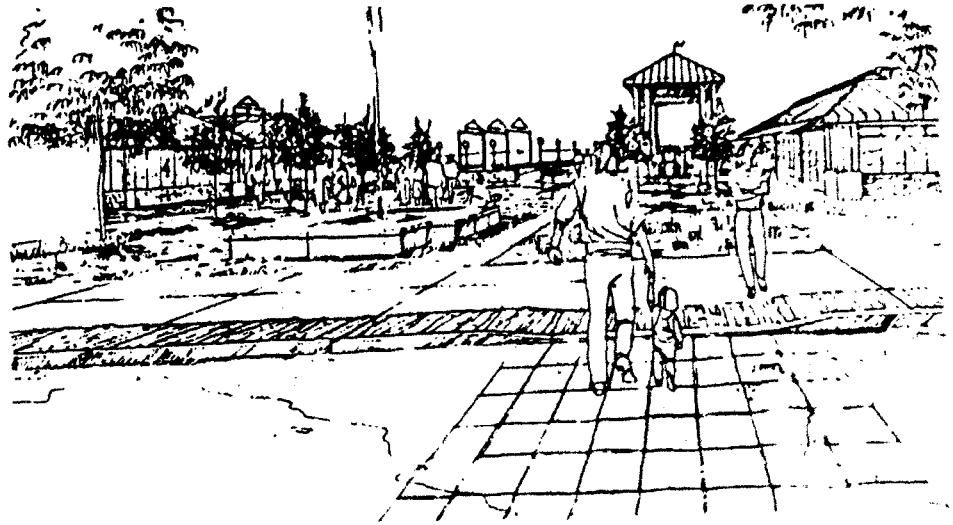
WENDEL

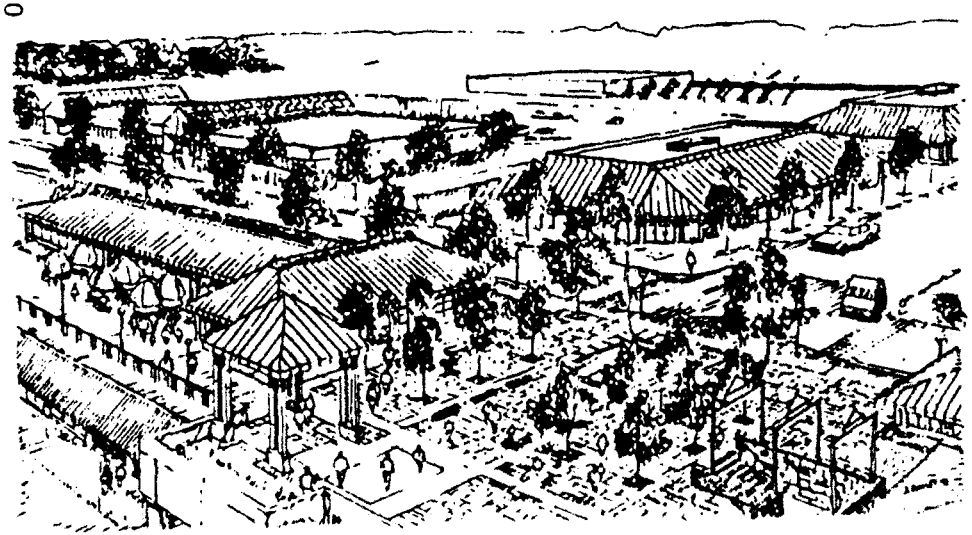
APRIL 1990

DEVELOPMENT PLANNING SERVICES
NIAGARA COUNTY PLANNING DEPT.

N







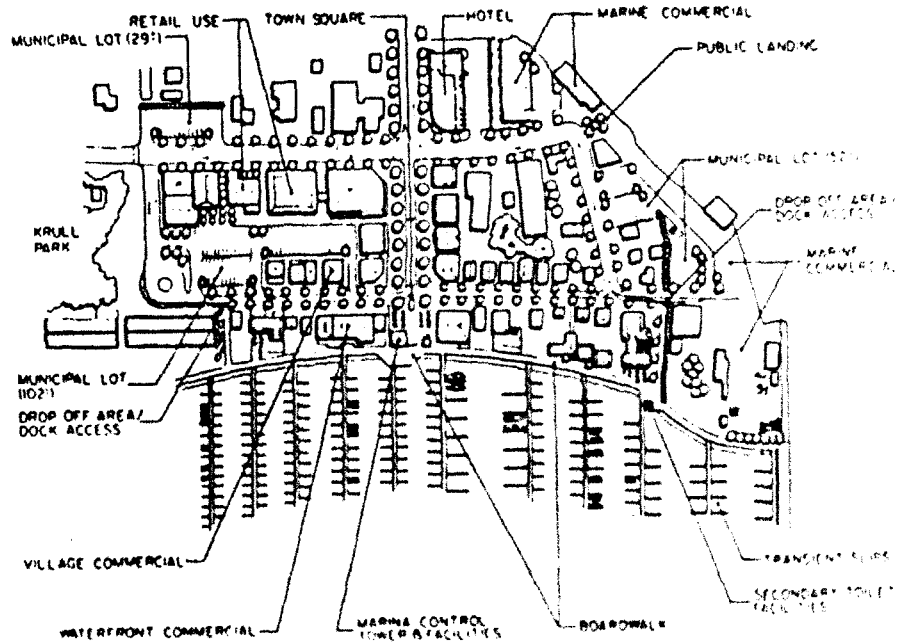


FIGURE 10 **OLCOTT HARBOR MASTER PLAN**

WENDEL APRIL 1990
DEVELOPMENT PLANNING SERVICES
NIAGARA COUNTY PLANNING DEPT.

2.46 Periodic soundings and sediment sampling and testing would be conducted in order to determine dredging quantity and dredged material disposal requirements for the respective channels. Sediment filling in the Olcott Harbor vicinity is relatively light in both the Lake Entrance vicinity and Eighteenmile Creek because of minor littoral drift and because the Burt Dam upstream of Olcott Harbor acts as a sediment trap. It is expected that several thousand cubic yards of material would need to be dredged from the local and Federal channels every five to ten years. Maintenance dredging in the proposed breakwater basin would be expected to be only occasional. Past and recent sediment sampling and testing indicate that sediment in the vicinity of the Lake (proposed breakwater and marina area) and Federal channel is granular (sand/gravel) and relatively non-polluted, while that in the upstream harbor area (up to the Route 18 bridge) is more silt and may range from moderately to heavily polluted. Similar or gradually improved sediment quality would be expected in the future. In the recent past, non-polluted to moderately polluted sediments dredged from the harbor channels have been disposed of at the Olcott Harbor open-lake disposal site located about 1.5 miles north of the harbor. Known heavily polluted areas were not dredged, since they would require alternative disposal.

2.47 Periodic maintenance dredging of the existing Federal and local navigation channels along Eighteenmile Creek will be required with or without the proposed breakwater project. Past dredging and disposal measures, may or may not be the case in the future, depending on sediment quality and associated disposal standards and options. While non-polluted material may be more readily disposed of, and may even be considered for beach nourishment (sand, beach gravel), polluted material may be more difficult to dispose of. Future sediment sampling and testing results will need to be coordinated among the Corps of Engineers, the U.S. Environmental Protection Agency, the New York State Department of Environmental Conservation, and the locals for appropriate dredging and disposal procedures.

COMPARATIVE IMPACTS OF ALTERNATIVES

2.48 The following table briefly summarizes comparative impacts of final considered alternatives (Federal features specifically, Non-Federal features generally). Reference Section 4 - Environmental Effects for a more detailed narrative. Plan 10A (Modified and Refined), except for the minor engineering and fishery access feature improvements, is essentially the same basic breakwater plan as the Authorized Plan 10 and Plan 10A.

Table 1 - Comparative Impacts of Alternative Plans

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified and Refined)	Considered Plan 10B
Economics			
Federal Cost	NA	8,779,822	No Revised Calculation
Non-Federal Cost		8,314,978	
Total First Cost		17,094,800	
Benefits (Av. An.)		1,665,100	
Cost (Av. An.)		1,783,000	
B/C		1.07	
Net Benefits (Av. An.)		117,900	
Physical and Natural (Resource) Environment			
Air Quality	Similar to existing conditions in the near future, with some possible improvement in air quality in the long-run as technology and monitoring techniques are further upgraded over time.	ST: Minor Adverse LT: Minor Adverse • Some temporary short-term degradation in air quality during initial construction of the breakwater and during periodic construction maintenance of the project.	ST: Minor Adverse LT: Minor Adverse • Some temporary short-term degradation in air quality during initial construction of the breakwater and during periodic construction maintenance of the project. The adverse impact on air quality would be somewhat longer, since there is more breakwater to install with this plan alternative.
Water Quality	Similar to existing conditions in the near future, with some possible improvement in water quality in the long-run as technology and monitoring techniques are further upgraded over time.	ST: Moderate Adverse LT: Minor Adverse • Some temporary short-term degradation in water quality (primarily from increased turbidity) during initial project construction and during periodic construction maintenance of the project.	ST: Moderate Adverse LT: Moderate Adverse • Some temporary short-term degradation in water quality (primarily from increased turbidity) during initial project construction and during periodic construction maintenance of the project. Additionally, greater enclosure of the Harbor provided by the breakwater configuration in this plan alternative, would more significantly retain and slow water flow entering the harbor from Eighteenmile Creek, which would contribute to slower dissipation of the turbidity plume (through breakwater openings) that is usualy experienced under "without project" conditions.
Sediment Quality	Similar to existing conditions in the near future. Some improvement in the long term as pollution control and potential RAP measures improve and dredging improve conditions.	ST: Not Significant LT: Not Significant • No dredging for project implementation. Some turbidity with breakwater construction and abutment removal. Similar to existing harbor maintenance dredging. Negligible polluted sediment accumulation expected in breakwater basin.	ST: Not Significant LT: Not Significant • Similar impact statement as for Plan 10A. Increased enclosure slightly reduces circulation and access in the breakwater basin.

Table 1 - Comparative Impacts of Alternative Plans (Cont'd)

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified)	Considered Plan 10B
Benthos	Similar to existing conditions in the near future anticipated, unless the aquatic environment and benthic substrate was significantly altered at some point in time by natural or man-made influences.	ST: Moderate Adverse LT: Moderate Beneficial * Deposition of stone would cover about 7 acres of existing benthic lake bottom habitat. * Deposition of stone would crush, smother, and displace bottom dwelling invertebrates at the breakwater sites. * Submerged breakwater outer stone slopes would provide about 3 surface acres of long-term stable substrate as habitat for colonization by benthic invertebrates. * About 31 acres of littoral zone benthic habitat would be protected by breakwaters.	ST: Moderately Adverse LT: Moderate Beneficial * Same as described for Plan 10A, except that about 8.6 acres of lake bottom habitat would be covered by stone. * About 3.5 surface acres of new long-term stable benthic habitat would be provided by the submerged breakwater outer stone slopes. About 3.5 acres of littoral zone benthic habitat would be protected by breakwaters.
Vegetation	Similar to existing conditions in the near future, unless the aquatic environment and shoreline substrate was significantly altered at some point in time by natural or man-made influences.	ST: Minor Adverse LT: Minor Beneficial * Some submerged aquatic plants would be covered and destroyed by deposition of breakwater stone. Increased short-term turbidity during construction would contribute toward temporary decrease in aquatic plant photosynthesis. * Submerged outer stone breakwater slopes would provide about 3 acres of new habitat for some aquatic plant colonization (i.e., algae). Sparsely established aquatic plants within approximately a 7 acre area of lake bottom substrate would be destroyed by covering with breakwater stone. Calmer water within an area of about 31 acres protected by breakwaters may provide habitat for some increase in submerged aquatic plant growth littoral zone (i.e., possibly waterweed, watermilfoil).	ST: Minor Adverse LT: Minor Beneficial * Same as described for Plan 10A, except that sparsely established aquatic plants within about a 8.6 acre area of lake bottom substrate would be destroyed by covering with breakwater stone. Also, about 3.5 surface acres of submerged outer stone breakwater slopes would provide new habitat for some aquatic plant colonization (i.e., algae). Calmer water within an area of about 36.5 acres would be provided by the breakwaters that may encourage some new plant establishment.

Table 1 - Comparative Impacts of Alternative Plans (Cont'd)

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified)	Considered Plan 10B
Fisheries	Similar to existing conditions in the near future. Warm and coldwater fish species would continue to utilize the Harbor and Creek. Annual salmonid fish stocking in this locale by NYSDEC would probably continue.	ST: Moderate Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial * Existing fish habitat at the immediate work site would be altered, destroyed or disrupted where breakwater stone is deposited. * Existing water current patterns and velocities in the basin would change to some degree due to protection provided by breakwater. However, significantly more breakwater opening space would be provided with Plan 10A for water exchange and fish access than under Plan 10B. * Increased turbidity during construction would temporarily disrupt fish activity in the vicinity of the work site. Fish would tend to avoid the work area until contruction ceased. Resuspension of sediment and detritus may contribute toward aggravating gill systems of fish until such material dissipated and settled out of the water column. Some aquatic plant and benthic organisms utilized by fish would be destroyed and/or displaced. * About 31 acres of calmer littoral zone fish habitat would be provided by breakwater protection. * Deposition of stone would cover about 7 acres of lake bottom substrate and fill about 85,000 cubic yards of water column used as fish habitat. * Submerged outer stone slopes of breakwaters would provide about 3 surface acres of irregular hard substrate for use as fish habitat, and about 3,000 linear feet of long-term access for fishermen would be added by the east breakwaters.	ST: Major Adverse LT: (1) Major Adverse (2) Moderate Beneficial Same as described for Plan 10A, except access by fish through the Harbor to Eighteenmile Creek would be more restricted and current patterns and velocities would be more altered in the Harbor. * About 36.5 acres of littoral fish habitat would be protected and altered to a calmer water zone. Deposition of stone would cover about 8.6 acres of lake bottom substrate and fill about 110,000 cubic yards of water column used as fish habitat. * Submerged outer stone slopes of breakwater would provide about 3.5 surface acres of irregular hard substrate for use as fish habitat. About 3,830 linear feet of long-term access for fishermen would be added by the east breakwaters.

Table 1 - Comparative Impacts of Alternative Plans (Cont'd)

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified)	Considered Plan 10B
Wildlife	Utilization by wildlife of remaining habitat in the vicinity of Olcott Harbor would likely continue. Some habitat may eventually be lost or altered as utilization of this area for recreation intensifies in the future.	ST: Minor Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial • Aquatic wildlife would tend to avoid the project area during construction. • A calmer, protected water zone (about 31 acres in size) would be provided for potential use by aquatic birds as resting and feeding habitat. • Breakwaters above the water line would provide loafing habitat for aquatic birds (i.e., sea gullis and terns). • About 7 acres of lake bottom surface area and about 85,000 cubic yards of water column would be covered/filled by stone and therefore, removed from use by aquatic birds. • Submerged breakwater outer stone slopes would provide about 3 acres of potentil feeding habitat for aquatic birds once the stone surfaces became colonized with invertebrates and small forage fish invaded nickes among the stones.	ST: Minor Adverse LT: (1) Moderate Adverse (2) Moderate Beneficial • Similar impacts to wildlife as described in Plan 10A except about 8.6 acres of lake bottom surface area would be covered by stone, and about 110,000 cubic yards of water column would be eli minated form use by aquatic birds due to deposition of stone fill. Submerged outer slopes of stone breakwaters would provide about 3.5 acres of potential feeding habitat for diving aquatic birds
Threatened and Endangered Species	Similar to existing conditions. Transient individuals of threatened or endangered species may on occasion briefly visit the general area, since the Olcott Harbor locale is within their overall habitat range.	Not Significant	Not Significant
Wetlands	Similar to existing conditions would be anticipated to prevail for sometime in the future. No known NYSDEC or USFWS identified wetlands exist downstream of the Route 18 bridge or in the Harbor area.	Not Significant	Not Significant

Table 1 - Comparative Impacts of Alternative Plans (Cont'd)

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified)	Considered Plan 10B
Human and Man-Made (Resources) Environment			
Community and Regional Growth	Similar to existing conditions. Moderate growth expected. Water resource recreation facility demands. Harbor potential development deficiency.	ST: Moderate Beneficial LT: Major Beneficial Construction disruptions. * Protected Harbor. * Approximately 800 additional boat slips (east embayment). * Approximately 2,025 LF of additional pedestrian fishermen access (east breakwater). * Improved entrance channels (east embayment and creek). * Associated primary and secondary upland developments. * Considered ferry service to Toronto, Canada.	ST: Moderate Beneficial LT: Major Beneficial Construction disruptions. * Protected Harbor. * Approximately 1000 additional boat slips (east and west embayments). * Approximately 4,100 LF of additional fishermen access (east and west breakwater). *Improved entrance channels (east and west embayments and creek). * Associated primary and secondary upland developments. * Considered ferry service to Toronto, Canada.
Displacement of People	None due to Federal project implementation. Some displacement might occur due to moderate change in land use developments.	ST: Moderate Adverse LT: Not Significant Some properties and easements, particularly in the area of breakwater construction, will need to be aquired for project implementation. Some properties and easements will need to be acquired for associated project upland facilitative developments.	ST: Moderate Adverse LT: Not Significant Same statement as for Plan 10A, however, impacts would be slightly increased.
Business, Employment, Income	Similar to existing conditions. Moderate growth expected. Water resource recreation facilities/ services demands. Potential development limited by harbor capacity.	ST: Minor Beneficial LT: Major Beneficial Construction related business, employment, income. Developed harbor related business employment, income. Primary recreation and secondary service related developments. Considered ferry service to Toronto, Canada.	ST: Minor Beneficial LT: Major Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.
Recreation	Similar to existing conditions. Moderate demand developments expected. Water resource recreation facility demands: boating and dockage, fishing, swimming, and relaxing in park (aesthetic views). Potential development limited by harbor capacity.	ST: Minor Adverse LT: Major Beneficial Construction disruptions. See Community and Regional Growth for listed facilities. Protected harbor, boat slips, pedestrian/fishermen breakwater access, improved navigation channels, associated primary and secondary upland developments. Additional facility developments would likely occur at Krull Park.	ST: Moderate Adverse LT: Major Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.
Public Facilities and Services	Similar to existing conditions. Public facilities and services would be expected to be developed, as warranted and to the degree possible.	ST: Moderate Adverse LT: Major Beneficial Construction related disruption and utilization needs. Utilities, roads, police. Public facilities and services would likely need to be improved and expanded in order to facilitate initial and secondary community develop[illegible] needs	ST: Moderate Adverse LT: Major Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.

Table 1 - Comparative Impacts of Alternative Plans (Cont'd)

Environmental Evaluation Resource Parameters	No Action (Without Project Conditions)	Considered Plan 10A (Modified)	Considered Plan 10B
Property Values and Tax Revenues	Similar to existing conditions. With increased demand for water resource recreational development, prime water front property values and developments would be expected to increase. Associated tax revenues would be expected to increase.	ST: Minor Adverse LT: Major Beneficial Construction related acquisitions and disruption. Local project costs. Waterfront property values and associated tax revenues would be expected to increase due to primary and secondary project developments. Some conversion to tax exempt public lands.	ST: Minor Adverse LT: Major Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.
Aesthetic Resources, Noise	Similar to existing conditions. Harbor, Krull Park area Aesthetics: No significant long-term noise problems anticipated.	ST: Moderate Adverse LT: Moderate Beneficial Construction related aesthetic disruption and noise. Likely improved Harbor, Krull Park area post project aesthetics. Likely post project influx of people, vehicles, vessels, and associated noise.	ST: Moderate Adverse LT: Moderate Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.
Community Cohesion	Generally long established resident community cohesion would be expected. Limited harbor development limits increased Harbor community focal point.	ST: Minor Beneficial LT: Moderate Beneficial Some construction and development disruptions. Most of the community residents and representatives are supportive of the proposed project which would likely serve as an improved Harbor focal point for the community.	ST: Minor Beneficial LT: Moderate Beneficial Same statement as for Plan 10A; however, impacts would be slightly increased.
Cultural Resources			
Cultural Resources	A cultural resources investigation was conducted in the Federal project area and results recorded. No significant cultural resource items were identified in the immediate project impact area. The site of the old Olcott Beach Hotel which burnt down in 1935 was of some historical note. Only the old pier still remains.	ST: Not Significant LT: Minor Beneficial It is not expected that any significant cultural resources would be impacted by project implementation. The NY-SHPO has indicated that the considered Federal project would have no effect upon districts, sites, buildings, structures, objects, or archeological resources in or eligible for inclusion in the National Register of Historic Places.	ST: Not Significant LT: Minor Beneficial Same statement as for Plan 10A.

Key:
ST - Short Term
LT - Long Term

Range:
Major Beneficial
Moderate Beneficial
Minor Beneficial
Not Significant
Minor Adverse
Moderate Adverse
Major Adverse

Note:
* Reference Section 4 - Environmental Effects for more detailed narrative.
* Plan 10, Plan 10A and Plan 10A Modified are essentially the same plan with similar anticipated impacts.

SECTION 3 - AFFECTED ENVIRONMENT

INTRODUCTION

3.01 The purpose of this section is to present an overview of the environmental setting in the general vicinity of the potential project, in order to provide a basis by which to assess and evaluate the considered plans.

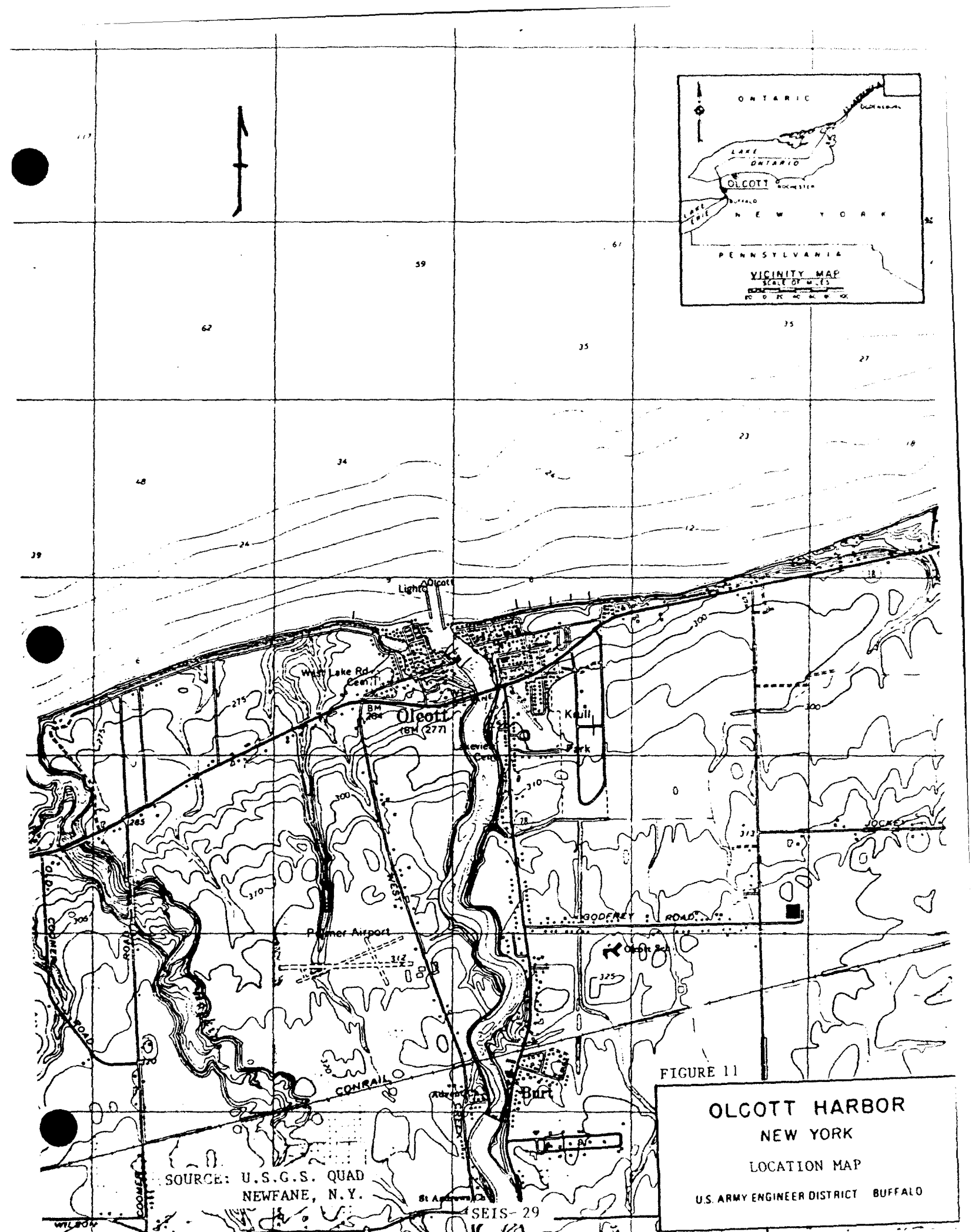
GENERAL ENVIRONMENTAL CONDITIONS

3.02 Olcott Harbor is located on the south shore of Lake Ontario at the mouth of Eighteenmile Creek, approximately 57 miles west of Rochester, New York, 30 miles north of Buffalo, New York, and 18 miles east of Youngstown, New York. Reference Figure 11. The harbor is located within the community of Olcott, which is an unincorporated hamlet in the town of Newfane, Niagara County, New York. Olcott Harbor is a recreational harbor with Lake pier protected entrance navigation channel and Eighteenmile Creek navigation channel extending for about 1,500 feet upstream to the Route 18 bridge at the southern boundary of Olcott. The harbor area is fully developed with marina facilities. Olcott is a regional harbor in that it draws small boat owners from areas throughout western New York and southern Ontario. The harbor area provides both public and private dockage, facilities, and services for about 200 vessels. Generally existing facilities are utilized to the maximum. Demand is high. Community upland developments include: residential, commercial, public, and recreational developments; surrounded primarily by more rural agricultural and scattered residential developments. The resident population of Olcott is about 1,600, but a substantial influx of people occurs during the spring, summer, and fall; fishing, boating, swimming, and recreation season. Olcott Harbor and Eighteenmile Creek are also popular fishing areas. Significant seasonal Lake Ontario salmonid runs occur at Olcott and in Eighteenmile Creek. Eighteenmile Creek also provides a high quality warmwater fishery, particularly in the more natural stream reach, south of Olcott to Burt Dam. Both the harbor entrance channel piers and the Fishermen Park access area near Burt Dam are heavily utilized.

SIGNIFICANT RESOURCES

3.03 The following are identified as significant resource parameters which are examined, but in this case, are found not to be significant relative to the project or would not be significantly affected by project alternatives implementation. They are: air quality, sediment quality, vegetation, threatened and endangered species, wetlands, and cultural resources. These parameters are discussed briefly.

3.04 The following are identified as significant resource parameters which are examined and are important to the project area and/or could be affected (adverse or beneficial) with some significance by project alternatives implementation. They are: water quality, benthos, fisheries, wildlife, community and regional growth, displacement of people, business/employment/ income, recreation, public facilities and services, property values and tax revenues, aesthetics and noise, and community cohesion. These parameters are discussed in more detail.



SOURCE: U.S.G.S. QUAD
NEWFANE, N.Y.

FIGURE 11

OLCOTT HARBOR
NEW YORK
LOCATION MAP
U.S. ARMY ENGINEER DISTRICT BUFFALO

3.05 Air Quality. A review of information provided in Chapter III of Title 6 - Compilation of Codes, Rules, and Regulations of the State of New York with regard to air resources in Niagara County, the potential project area in the vicinity of Olcott, New York lies within an area designated as having an air quality classification of Level I. Land use associated with this classification indicates that the area is predominantly used for timber, agricultural crops, dairy farming or recreation; also, habitation and industry is sparse. In general, air quality in the vicinity of Olcott is considered to be in attainment with regard to all primary environmental pollutants, which means that air quality is in compliance with both Federal and State standards.

3.06 Water Quality. Coordination with the New York State Department of Environmental Conservation (NYSDEC) in April 1989 on water quality in the vicinity of Olcott Harbor and Eighteenmile Creek indicated that, based on best usage, the New York State water quality classification for Lake Ontario at Olcott Harbor is "Class A"; Eighteenmile Creek from its mouth upstream for a distance of about one-half mile is "Class B"; then changing to a classification of "Class C" upstream to at least Burt Dam. Best usage for Class A water is for a source of water supply for drinking, culinary of food processing purposes, and any other usages; Class B water may be used for primary contact recreation and any other uses except as a source of water supply for drinking, culinary or food processing purposes. Class C waters are considered as suitable for fishing and all other uses except as a source of water supply for drinking, culinary or food process and primary contact recreation. Although coldwater fish seasonally utilize the Creek when water temperatures are cooler, as water temperatures increase during summer months, the Creek becomes essentially a warmwater stream, until the cooling process begins again in the fall. High flow for the Creek - due to either snowmelt or excessive rainfall - causes frequent turbidity in the Creek, resulting in a noticeable plume at the mouth of the Creek, which often extends beyond the existing U.S. piers into the harbor area of Lake Ontario at Olcott. With regard to pollutant discharges to Eighteenmile Creek, the following problems and sources of problems are identified in a "Fact Sheet" on the Creek dated 17 February 1989 by the Center for the Great Lakes, Chicago, Illinois: Problems in this Area of Concern include organic chemicals, heavy metals, pesticides, and PCB's. Sources of these problems are municipal water plants and industrial discharges in upstream areas.

3.07 Sediment Quality. Past and recent sediment sampling and testing indicate that sediment in the vicinity of the Lake (proposed breakwater and marina area) and Federal channel is granular (sand/gravel) and relatively non-polluted, while that in the upstream harbor area (up to the Route 18 bridge) is more silt and may range from moderately to heavily polluted. One heavily polluted sediment area has been identified in the upstream (Eighteenmile Creek) harbor area south of the location of the dismantled old Main Street bridge.

3.08 Of note, Eighteenmile Creek has been identified as a Great Lakes Area of Concern (AOC). Pollution has impaired uses including (1) optimum navigation due to restrictions on dredging and disposal of heavily polluted sediments in Olcott Harbor (reference previous paragraph) and (2) fish consumption, due to high concentrations of PCB's, pesticides, and heavy metals found in largemouth bass. A fish consumption advisory has been issued by the State for all tributaries to Lake Ontario.

3.09 The New York State Department of Environmental Conservation (NYSDEC) is responsible for the development of a remedial action plan (RAP) and is in the process of defining specific problem areas, and considering potential remedial action measures. Although a RAP has not been formalized, some sources of pollution (primarily upstream industrial and sewage treatment facilities) are being rectified and some polluted areas have been identified. The RAP will likely work to further address sources of pollution and possibly areas of heavily polluted sediments. As mentioned previously, one such potential area of heavily polluted sediment was identified in the upstream (Eighteenmile Creek) harbor area just south of the location of the former Main Street bridge. Dredging and appropriate disposal of the heavily polluted sediments may or may not be a RAP measure; including use or development of special disposal sites.

3.10 Benthos. Some idea of benthic macroinvertebrates utilizing aquatic habitat in the potential project area of the Harbor and Eighteenmile Creek is provided in a document entitled "Baseline Biological Survey Report in the Area of Olcott Harbor, New York" (Ecology and Environment Inc., 1978) prepared for the Buffalo District Corps of Engineers. Aquatic earthworms, midges, snails, clams, and leeches were among the primary organisms found during field sampling with a Ponar grab sampler. Aquatic earthworms were the most abundant of benthic organisms in the fall 1977, and spring and summer 1978 sampling periods.

3.11 Vegetation. From the mouth of Eighteenmile Creek upstream to about the Route 18 bridge, terrestrial vegetation along the intensively commercial/residential banks of the Creek is sparse and mostly destroyed or disrupted by development. Terrestrial vegetation cover in this zone is poor, although there are some scattered shrubs, hardwood trees and herbaceous plants still remaining.

3.12 Upstream of the Route 18 bridge, riparian terrestrial vegetation along the high steep banks of the Creek is characterized by a variety of woody and herbaceous vegetation. Both young and older hardwood trees, as well as, shrubs and herbaceous plants inhabit the area. Plants found in this upstream zone include oak, boxelder, ash, hickory, eastern cottonwood, locust, beech, red maple, elm, raspberry, dogwood, chockcherry, honeysuckle, goldenrod, gill-over-the-ground, milkweed, violets, burdock, other forbs and grasses.

3.13 The Olcott Harbor shoreline - except in the vicinity of Krull Park - is sparsely established with natural terrestrial vegetation, due to wave scouring, development and frequent human activity. There is some sparse vegetation growth of young willow and eastern cottonwood, as well as grass on higher bank areas of the shoreline. The steep bank slope that faces Lake Ontario along Krull Park contains a rough access road to the shoreline, as well as scattered trees, shrubs, and herbaceous plants of the type previously mentioned. Krull Park contains a broad managed lawn and a mixture of tall hardwood and evergreen trees (i.e., oak, red maple, sugar maple, white pine) - some trees exceeding 3 feet in diameter.

3.14 With regard to aquatic plants, the aforementioned 1978 biological survey report by Ecology and Environment Incorporated indicated that, in Eighteenmile Creek, emergents such as cattail and burreed; submergents such as water milfoil and coontail, as well as mats of floating lesser duckweed vegetation dominated the aquatic plant community - except where dredging occurred, or boat traffic

was extensive, as in Olcott Harbor, downstream of the Route 18 bridge. Upstream of the railroad bridge near Burt Dam, the current is comparatively fast and the water is shallow. Wild celery and water stargrass appeared to be more numerous in this stretch of the Creek. Downstream of the Route 18 bridge, aquatic plant distribution is restricted to those portions of the harbor that are not dredged. Submergent plant species occur to some degree in this stretch of the Creek where the water is shallow, as well as around some of the marina docks along the shoreline. Generally, aquatic plant distribution in the Creek area downstream of the Route 18 bridge is patchy and lacks the zonation that exists in the upper reaches of the Creek. Recent dredging in Eighteenmile Creek (downstream of the Route 18 bridge) in 1988, probably further disrupted submergent aquatic plants in this stretch to some degree. Observations of aquatic plants in this downstream zone by a Corps ecologist in 1989 indicated presence of some water milfoil as well as curled pondweed and lesser duckweed. Waterweed (Elodia sp.) was found upstream of the Route 18 bridge, along with sedges and extensive growths of cattails in the palustrine wetland areas.

3.15 Fisheries. The coastal littoral zone of Olcott Harbor and its associated tributary of Eighteenmile Creek provide important aquatic habitat for both coldwater and warmwater fish. Among the variety of fish species utilizing the harbor and/or the creek are coho and chinook salmon, rainbow and brown trout, walleye, perch, northern pike, smallmouth and largemouth bass, white bass, suckers (i.e., longnose, white, northern hog, and redhorse), panfish (i.e., rockbass, pumpkinseed, bluegill), carp, brown bullhead, black crappie, gizzard shad, and rainbow smelt. The meandering creek above the Route 18 bridge up to Burt Dam - characterized by silt and gravel substrate, as well as significant growths of submergent, floating, and emergent aquatic plants and some scattered riffle zones - also provides habitat for a number of different species of small sized forage fish such as the stoneroller, dace, minnows (i.e., cutlips, silvery, bluntnose, fathead), shiners (i.e., emerald, spottail) and chubs. In contrast, from the Route 18 bridge downstream to its mouth, the aquatic habitat of the Creek has been extensively developed and dredged as a small boat harbor, containing marinas, a boat launch, and protective breakwalls (piers) extending out from the mouth lakeward. A baseline biological survey of fisheries resources in the vicinity of the harbor and creek conducted in the fall, spring, and summer seasons from October 1977 through August 1978 (Reference: 1978 Ecology and Environment [illegible] mention in paragraph 2.04), reported a number of the aforementioned fi[illegible]ies in the sampling survey of these habitats.

3.16 More recently, a fishery survey conducted by the U.S. Fish and Wildlife Service for the Corps in 1989, found the following fish species to be utilizing the potential project area: rockbass, bluegill, pumpkinseed, white sucker, alewife, brown bullhead, crappie, yellow perch, golden shiner, carp, brown trout, rainbow trout, freshwater drum, goldfish, and bowfin. Additionally, a number of salmonids such as chinook and coho salmon were observed being caught by both pier and boat fishermen.

3.17 With regard to fish spawning and stocking, a report entitled "Significant Coastal Fish and Wildlife Habitats - Great Lakes Region" provided to the Corps of Engineers in May 1987 by the State of New York Department of State describes Eighteenmile Creek as being "particularly significant because, large concentrations of coho and chinook salmon and brown trout migrate from lake Ontario into the creek each fall from late August through December

(September-November primarily), when salmonids ascend the stream to spawn (although unsuccessfully in most instances)." Additionally, "steelhead (lake-run rainbow trout) migrate into Eighteenmile Creek during the fall and between late February and April. These fish populations are the result of an ongoing effort by the NYSDEC to establish a major salmonid fishery in the Great Lakes through stocking." The report points out that in 1984, the Creek was among the top ten tributaries to Lake Ontario for numbers of salmonids stocked, and that it also contains a diverse warmwater fishery that "supports substantial reproduction of smallmouth bass, northern pike, rockbass, black crappie, brown bullhead, and largemouth bass." The "Atlas of the Spawning and Nursery Areas of Great Lakes Fishes, Volume XI - Lake Ontario" (U.S. Fish and Wildlife Service, 1982) also identifies Eighteenmile Creek as being a known spawning tributary during the spring season for smallmouth bass, northern pike, and for salmonid spawning runs of previously mentioned coldwater fish species. Smallmouth bass usually spawn in the Olcott Harbor area from about mid-May through about early June. Recent coordination with the Region 9 NYSDEC office (January 18, 1989 and April 17, 1989) indicated that, annual salmonid stocking at Olcott, New York, is typically scheduled. However, although chinook and coho salmon are scheduled for stocking in the creek, and rainbow and brown trout in the harbor, the actual species and amount stocked annually depends on supply of the salmonid species available for stocking in any given year. Presently, fish access into Eighteenmile Creek from Lake Ontario is not restricted, except that fish movement into the creek mouth is through a harbor entrance channel bounded by two existing U.S. piers, that are heavily utilized by fishermen.

3.18 Wildlife. Terrestrial shoreline vegetation along the intensively developed Olcott Harbor area, as well as along Eighteenmile Creek upstream to the Route 18 bridge is limited for use by wildlife as food, cover or nesting habitat. In this locale, riparian plant establishment is sparse and there is much human recreation activity. However, the extensive open water in the littoral zone of the lake harbor provides resting and feeding habitat for aquatic wildlife such as ducks, seagulls (i.e., herring, ring-billed, Bonaparte), and terns. Also, existing concrete breakwater piers, groins, and remnants of old piers provide loafing areas for seabirds. Even the protected water area of Eighteenmile Creek within the developed zone downstream of the Route 18 bridge provides some degree of resting and feeding habitat for the aforementioned aquatic birds. Just east of the mouth of Eighteenmile Creek at nearby Krull Park, the steep bank along the shoreline is somewhat more vegetated with woody and herbaceous plants for use by terrestrial wildlife. Additionally, the Park's mixture of old, tall hardwood and evergreen tree canopies (which includes oak) provide some degree of feeding, nesting, and cover habitat for use by songbirds, birds of prey (i.e., hawks, owls), and some small mammals (i.e., red and gray squirrels). Other terrestrial wildlife in the general vicinity include opossum, cottontail rabbit, mice, voles, moles, fox, and common crow.

3.19 In the significant coastal wildlife habitat zone upstream of the Route 18 bridge, the wetlands and woodlands bordering Eighteenmile Creek provide valuable habitats for wildlife that are uncommon in Niagara County's coastal area. A variety of species inhabit the area, including blue heron, green-backed heron, mallard, wood duck, belted kingfisher, marsh wren, common yellow throat, red-winged blackbird, and swamp sparrow. Other wildlife species occurring along the creek include resident furbearers such as muskrat, mink, and raccoon. (Reference: Significant Coastal Fish and Wildlife Habitats - Great Lakes Region, NYS Department of State, 1987)

3.20 Threatened and Endangered Species. Previously, the Final Environmental Impact Statement dated November 1978, prepared by the Corps of Engineers, addressed threatened or endangered species. It listed all endangered vertebrate species protected by Federal and State law, that presently or previously may have occurred in the Olcott Harbor region (i.e., Osprey, Bald Eagle, Peregrine Falcon, Indiana Bat, possibly Bog Turtle). No recent known sightings of any of these species have been recorded for the area. Except possibly for occasional transient indivlduals, no known threatened or endangered species under Federal jurisdiction of the U.S. Fish and Wildlife Service are known to exist in the project area. Also, no plants protected by State law are known to occur in the immediate project zone. Additionally, no plants native to the immediate project area are currently protected by the Endangered Species Act.

3.21 Wetlands. A check of the NYSDEC wetland map covering Olcott Harbor and Eighteenmile Creek upstream to the Route 18 bridge, indicates that there are no known wetlands at the immediate potential project site. However, out of the project impact area, upstream of the Route 18 bridge, there are a number of significant palustrine wetland cover types containing mixtures of broad leaved scrub shrubs and emergent narrow-leaved persistent aquatic plants, as well as scattered beds of submergent and floating plants.

HUMAN AND MAN-MADE ENVIRONMENTAL (RESOURCES)

3.22 Community and Regional Growth. The following paragraphs pertain to community and regional growth.

3.23 Location - Olcott Harbor is located on the south shore of Lake Ontario at the mouth of Eighteenmile Creek, approximately 57 miles west of Rochester, New York, 30 miles north of Buffalo, New York, and 18 miles east of Youngstown, New York. The harbor is situated within the community of Olcott, which is an unincorporated hamlet in the town of Newfane, Niagara County, New York. Niagara County, together with Erie County, New York, to the south, form the Buffalo, New York, Standard Metropolitan Statistical Area (SMSA). A map of the Olcott Harbor regional location is shown on Figure 12.

3.24 Population - Reference Table 2 depicts existing and anticipated resident population figures for the Western New York region and Olcott/Newfane vicinity. Reference Figures 12 and 13 also. Moderate growth for the Niagara County and Olcott/Newfane area is anticipated.

Table 2 - Area Population

Place	Year and Change								
	1985		1990			2000		2010	
Niagara Falls-Buffalo (Niagara & Erie Cos)	1,209,011		1,201,030	-		1,209,338	+	1,208,627	-
Niagara County	217,263		217,257	-		221,589	+	223,962	+
Niagara Falls (C)	68,200		64,600			61,950	-	62,650	+
Newfane (T)	8,850		9,050	+		9,200	+	9,300	+
Erie County	991,748		983,773	-		987,749	+	984,665	-
Buffalo (C)	335,200		318,050	-		302,500	-	301,600	-

T - Town, C - City

SOURCE: Population Projections 1985 NYS Water Quality Management Plan, NYS Department of Environmental Conservation

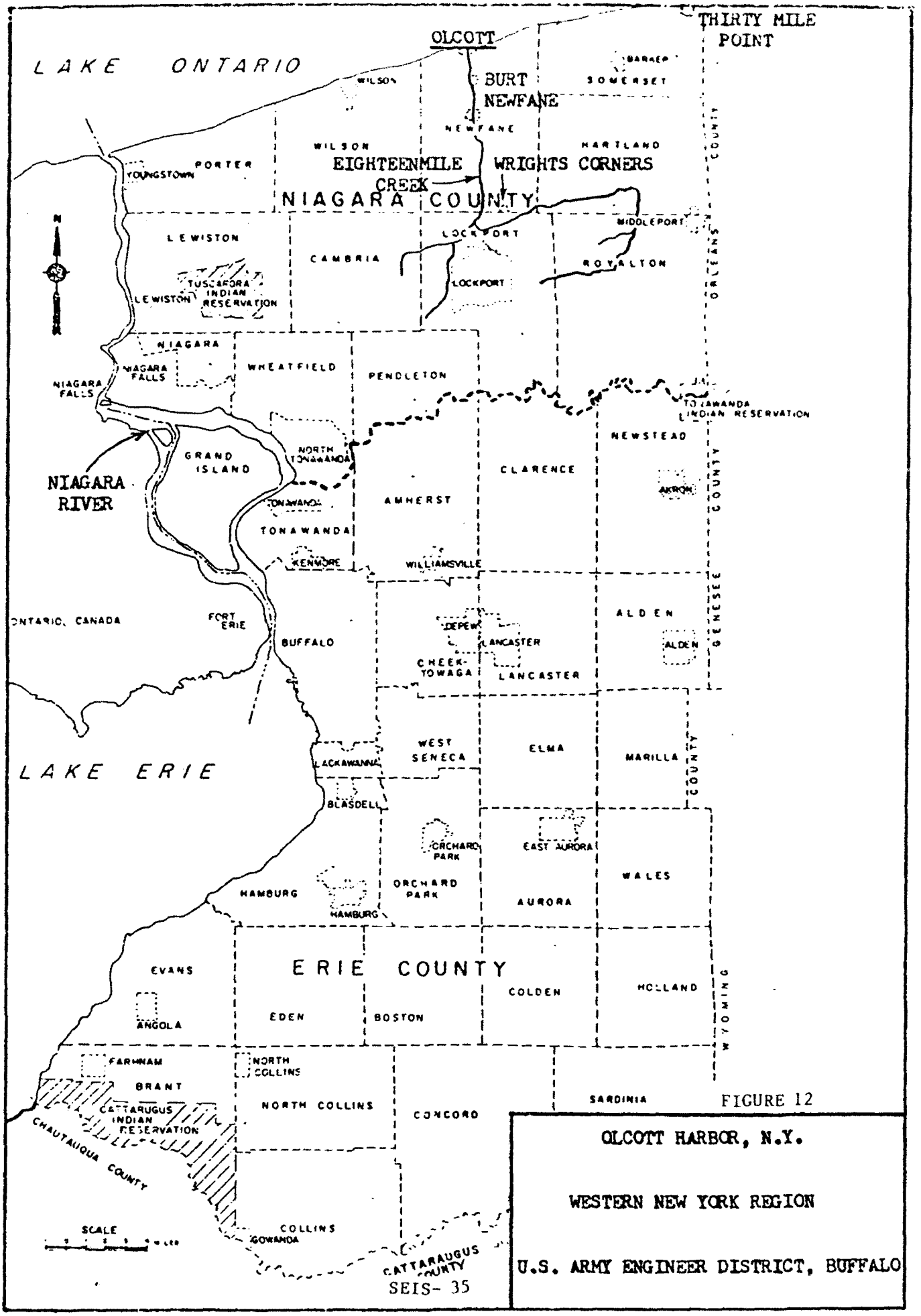
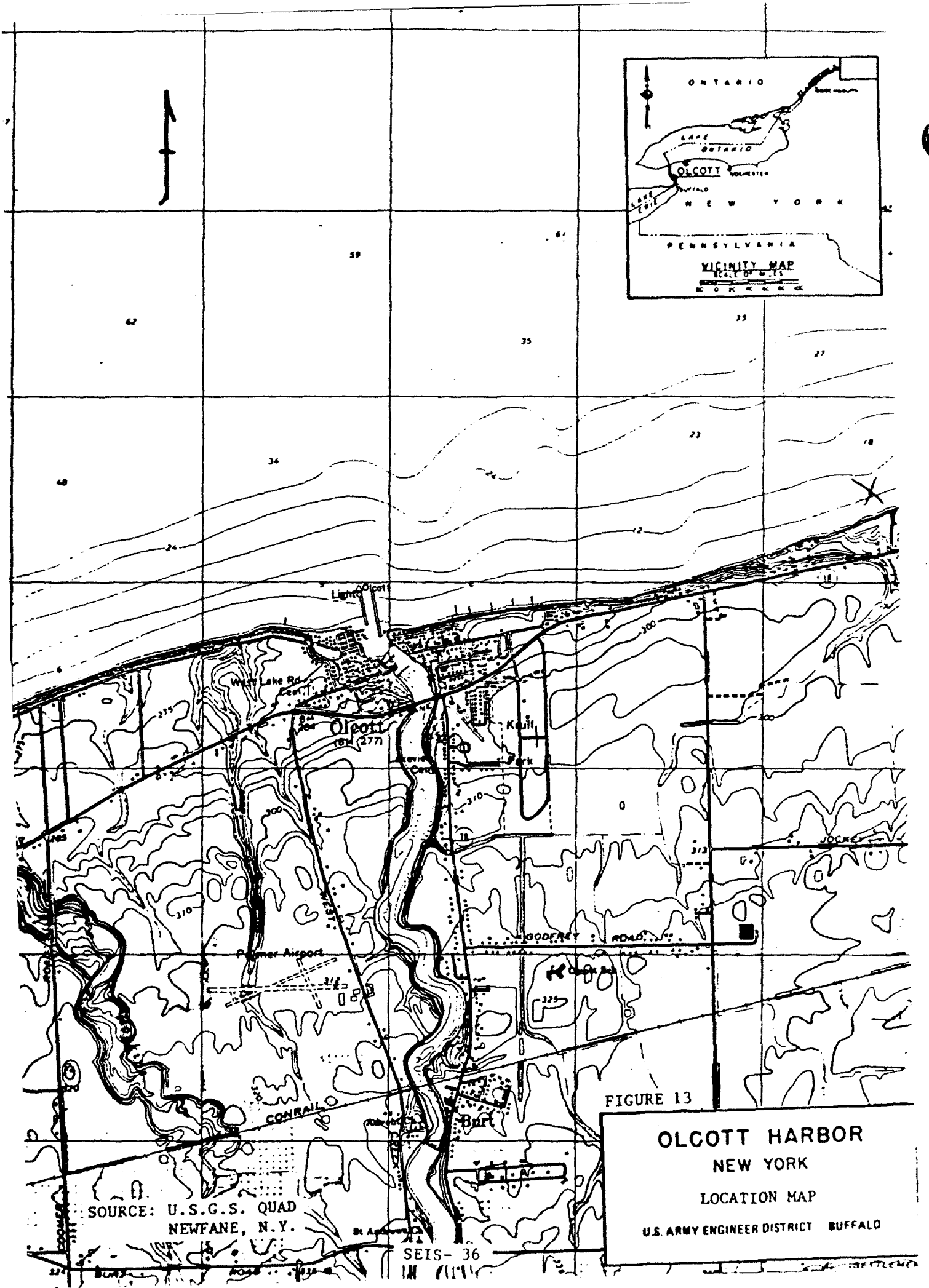


FIGURE 12

OLCOTT HARBOR, N.Y.

WESTERN NEW YORK REGION

U.S. ARMY ENGINEER DISTRICT, BUFFALO



SOURCE: U.S.G.S. QUAD
NEWFANE, N.Y.

FIGURE 13

OLCOTT HARBOR
NEW YORK
LOCATION MAP
U.S. ARMY ENGINEER DISTRICT BUFFALO

3.25 In addition to the resident population in the Olcott/Newfane vicinity, a significant influx of people occurs during the spring through fall fishing, boating, and bathing seasons, since Olcott is a significant regional access area to Lake Ontario's associated recreational resources.

3.26 Approximately 1,600 people live in the hamlet of Olcott accounting for approximately 17 percent of the population in the town of Newfane. Approximately 96 percent of these residents are white, two percent black, and two percent other. The median age of the population is 30, with 11 percent of the population 65 and over.

3.27 Population concentrations at Olcott have historically tended to be located in the residential areas on either side of the harbor. About two-thirds of Olcott families own their homes and the remaining third reside in rented units. Approximately 600 households are located in Olcott with an average of three persons per household. The median value of housing units in Olcott is about $83,000. The median gross rent is about $345 per month.

3.28 Eighteenmile Creek and Water Resources - Eighteenmile Creek is a relatively large, meandering, warmwater stream, with predominantly silt and gravel substrates. It drains approximately 90 square miles of relatively flat agricultural and rural residential lands.

3.29 There are no outstanding mineral deposits or commercial woodlands in the Olcott area. Lands in the creek basin have productive soils that, in combination with the moderate climate and other factors, support extensive agricultural activities.

3.30 About the year 1924, a dam and adjacent powerhouse were constructed across the creek at Burt, approximately two miles south of Olcott. The 80-foot high dam has a limited storage pool upstream and a spillway about 70 feet wide. Having been renovated the facility is utilized for run-of-the-creek generation of electrical power (sold to Niagara Mohawk) and regulates, to some degree, the flow in the lower portion of the creek. The facility is owned by the Olcott Harbor Board of Trade.

3.31 The fish and wildlife resources associated with Eighteenmile Creek and Olcott Harbor attract a significant amount of recreational use. Although access to the Creek is limited by the steep banks and private land ownership, this is one of the most popular recreational fishing streams on western Lake Ontario, due primarily to the warmwater fisheries and large salmonid runs in the area. Public parking, access paths, and sanitary facilities are available for use by fishermen at Fisherman Park north of Burt Dam and near the creek's mouth at Olcott. Fishing pressure is concentrated in the upper one-fourth mile of the area (between Fisherman's Park access site and Burt Dam), and in the vicinity of Olcott Harbor. The intervening segment of the Creek is often fished by small boat or canoe, especially for the abundant warmwater species in the area. Eighteenmile Creek attracts many fishermen from as far away as Buffalo and Rochester. Local residents also utilize this area to a limited extent for waterfowl hunting and trapping.

3.32 In contrast, the lower reach of Eighteenmile Creek, between the Route 18 bridge and the northern ends of the existing piers, forms a natural water resource that has been developed as a community resource at Olcott. The creek in this area is generally of sufficient width and depth to provide conditions conducive to its use as a small-boat harbor, including marinas, boat launches, service facilities, and protective breakwalls extending out into the Lake.

3.33 Existing Federal Project - The original Federal navigation project for Olcott Harbor was authorized by the River and Harbor Act approved on 4 March 1913, in accordance with the report submitted in House Document Number 780, 62nd Congress, 2nd Session. Originally developed and used for commercial navigation, the original project provided for parallel timber piers and an entrance channel. These have been rehabilitated several times. The existing project includes parallel sheet pile sided and concrete capped piers (placed over the old timber cribbing material); the west pier being about 873 feet long and 26 feet wide and about 7 feet above low water datum; the east pier being about 850 feet long and 20 feet wide and about 6 feet above low water datum. A Federal entrance channel is provided between the two piers which is 140 feet wide, 12 feet wide, and reaches from the Lake - 12 feet contour to the south end of the piers. A local interest channel continues upstream along Eighteenmile Creek to about the Route 18 bridge to facilitate marina facilities. A map of the existing Federal navigation project at Olcott is presented on Figure 14.

3.34 Operations and maintenance activities that are performed for the existing Federal navigation project include periodic dredging of the navigation channel to maintain authorized channel depths, and the repair of harbor structures when the situation warrants. Maintenance dredging is infrequent because little silting occurs in Eighteenmile Creek below the dam at Burt, New York (located two miles south of Olcott), and because the piers in the lake prevent accretion of material in the channel.

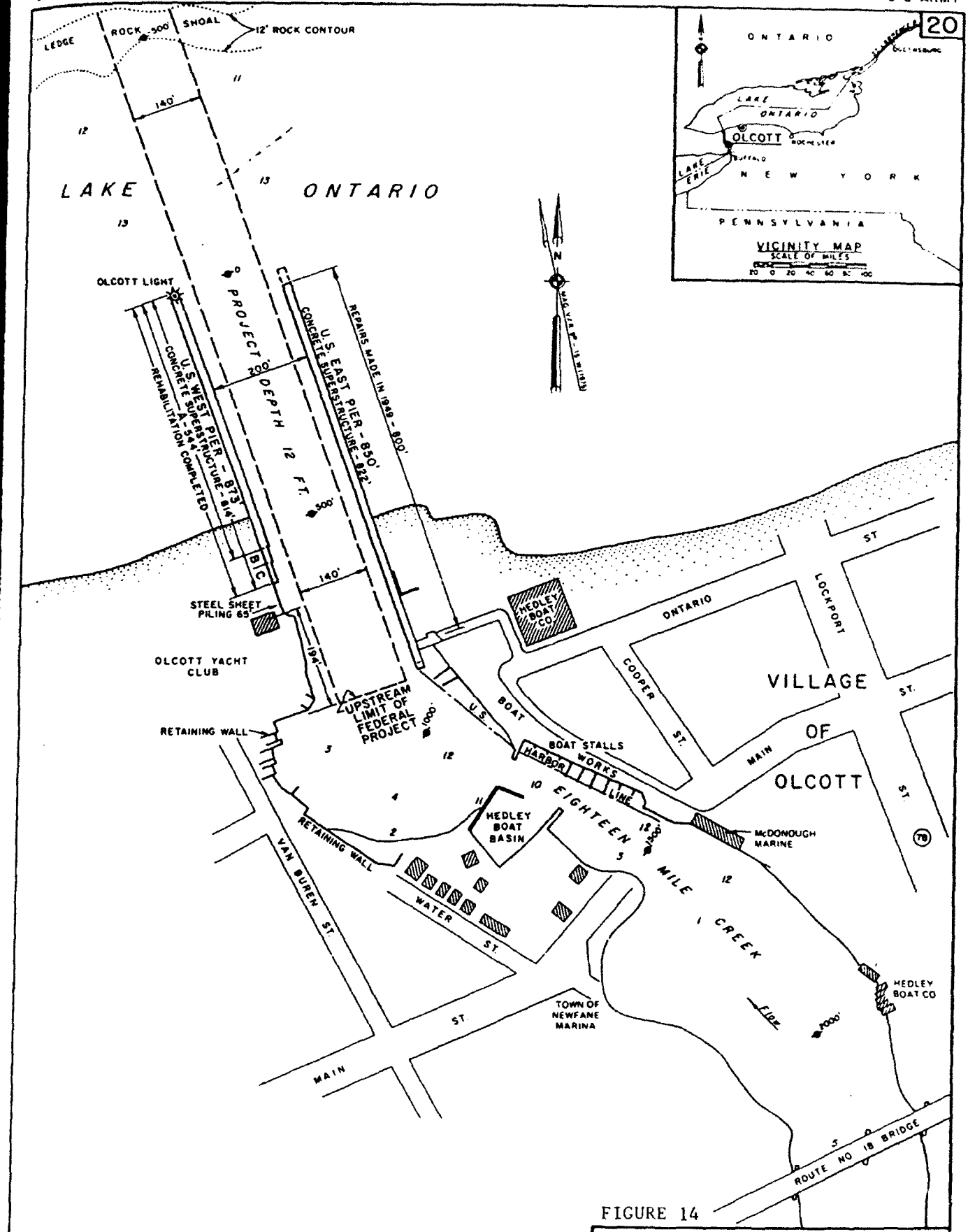
3.35 Land and Water Use. Reference Figures 14 and 15. Most of the lands that border the harbor area in Olcott are occupied by marine-related commercial enterprises. Marina properties on the east creek bank are those of Hedley's Boat Company, which includes areas east of the east pier, between Ontario and Main Streets, and north of the Route 18 bridge; and McDonough's Marine, located south of the foot of East Main Street. The west creek bank is bordered by the Olcott Yacht Club, located along the lakeshore adjacent to the west pier; Teal Marine, and Hedley Boat Basin near the foot of Water Street; and the basin area, south of West Main Street, which is used by McDonough's and Olcott Harbor, Incorporated. In addition to land areas, service marine docking facilities occupy extensive water areas in the harbor. Small craft docks line a majority of the east and west banks between the foot of Ontario Street and the Route 18 bridge. The town of Newfane has started construction of a marina facility just downstream of the Route 18 bridge on the west bank of Eighteenmile Creek.

3.36 Residential properties border the west bank of the harbor between Bay Street and West Main Street. Houses in this area include both small summer-cottage type structures, and some larger two-story units. Four boat-house structures are located on the east bank just north of the Route 18 bridge. The community's major residential areas are located east and west of the immediate harbor area.

3.37 Land access to the harbor and throughout the hamlet is provided by local streets. Vehicular parking areas are limited and confined to small lots adjacent to the marina facilities. Eighteenmile Creek, north of the Route 18 bridge, and the existing lake entrance navigation channel serve as waterborne routes of transit and recreation areas for small boats in the harbor. The Route 18 bridge, which crosses the creek approximately 1,500 feet south of the entrance channel, presently marks the upstream limit of development in the harbor area.

CORPS OF ENGINEERS

U S ARMY



Project depths and soundings are referred to low water datum, elevation 242 8 feet above Mean Water Level at Father Point, Quebec (IGLD 1955) (International Great Lakes Datum 1955)

300 Indicates feet from Olcott Lt at outer end of W. Pier.

(18) Indicates State Route

FIGURE 14

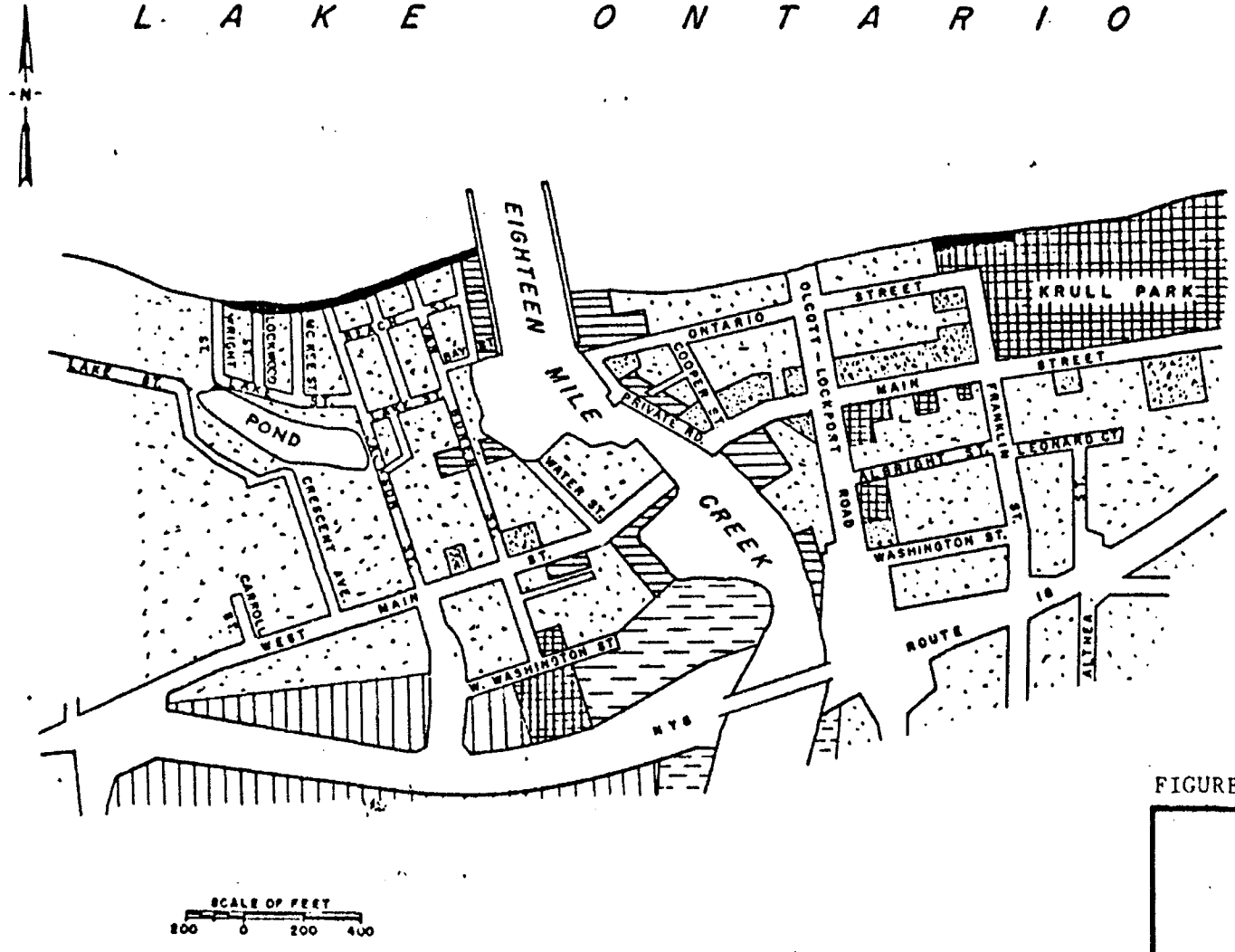
OLCOTT HARBOR

NEW YORK

EXISTING HARBOR

U.S. ARMY ENGINEER DISTRICT BUFFALO

30 SEPTEMBER 1977



LAND USE KEY

- RESIDENTIAL
- COMMERCIAL (NON-MARINA)
- COMMERCIAL (MARINA)
- PUBLIC AND SEMI-PUBLIC
- AGRICULTURAL
- SHORELINE BEACH
- UNDEVELOPED OPEN SPACE
- MAIN TRANSPORTATION

FIGURE 15

OLCOTT HARBOR, N.Y.

LAND USE

U.S. ARMY ENGINEER DISTRICT, BUFFALO

3.38 Most of the land in Olcott beyond the harbor area consists of residential properties. Commercial establishments are located along Main Street and Olcott-Lockport Road; businesses along East Main Street form the commercial center of the community. Public and semi-public lands include those areas occupied by churches, the fire hall, and other public facilities. Krull Park, which is owned and maintained by Niagara County, is the largest recreational land area in the community. The park extends about 4,700 feet south from the Lake Ontario shoreline and generally forms the eastern boundary of the hamlet. The entire developed area at Olcott is bordered by agricultural lands located east of the park, south of Route 18, and west of Crescent Avenue. Some commercial and residential strip developments parallel major roads within about one mile of Olcott. A general land use map of the Olcott community is presented on Figure 15.

3.39 Business/Industry and Employment/Income. The following regional information pertains to that for Niagara and Erie Counties.

3.40 In 1984, there were some 22,372 business establishments in the Niagara-Erie two-county area. Most of these establishments pertained to wholesale/retail businesses (37%) and service industries (33%) followed by: transportation, public utilities, finance, insurance, real estate (11%), construction (10%), and manufacturing (7%).

3.41 In 1984, of the 527,000 labor force (covered by unemployment insurance) in the Niagara-Erie two-county area, 91 percent were employed. The leading employment sectors included: manufacturing (28%), services (27%), and retail (23%) followed by: wholesale (6%), finance, insurance, real estate (6%), transportation, communication, public utilities (6%), construction (4%), and all others (1%). Major manufactured goods include: transportation equipment, machinery, metal products, printing and publishing, food and kindred products, and chemical and allied products.

3.42 The 1983 per capita income for the Niagara-Erie two-county region was about $11,329.

3.43 Generally, moderate growth in business, employment, and income is anticipated for the region.

3.44 Presently, the town of Newfane is not an industrially oriented community. While there are a number of industrial establishments in the Newfane hamlet, such as the Lockport Felt Plant of the Carborundum Company and several warehousing concerns, there are no such facilities at Olcott. Rather, a majority of Niagara County's manufacturing and wholesale trade concerns are located in the region's larger urban centers at Lockport, Niagara Falls, and North Tonawanda.

3.45 Business activity in Olcott, as well as in the town of Newfane, is generally centered in retail trade and service type establishments. The primary types of businesses in the Olcott Harbor area are marina and marina-related establishments located along the Eighteenmile Creek shoreline. Local marina enterprises include: Hedley Boat Co., Inc., King Docks, McDonough Marina, the Town of Newfane Marina, Olcott Yacht Club and Teal Marina. Reference Figure 14 for locations. A brief summary of facilities and services is provided in Table 3. Important sales and service items, such as fuel, food, water, ice, repairs and maintenance, tide and weather information, and electricity, are available at one or more of the harbor's six marina facilities. Other items including groceries, sundries, and laundry services, are generally available at hamlet businesses outside the immediate harbor area.

3.46 Data collected by the Buffalo District indicate that between 100 and 150 charterboat captains used Olcott Harbor over the course of the 1989 season. A 1989 survey of local marinas at Olcott indicated there are between 20 and 30 charterboat captains who rented slip space for the entire 1989 season. These charterboats are "based" out of Olcott Harbor. However, these charterboat captains will also go to other harbors along Lake Ontario when there is a major fishing tournament in progress.

Table 3 - Marina Facilities

Marina Facilities	Hedley Boat Co.	King Docks *	McDonough Marina	Newfane Marina	Olcott Yacht	Teal Marina
Owner	Private	Private	Private	Town	Private	Private
Slips	61	8	45	48	0	0
Transient Slips	0 (3)	0	0	30	0	0
Moorings	4 (3)	0	0	-	0	0
Dry Storage	X		(50)	-		
Launch Ramp	-	-	-	6	X	-
Hoist	X	-	-	-		-
Parking	X	X	X	X	X	X
Fuel	X	-	X		-	-
Sanitary	X					
Sales/Service	X	-	X		-	X
Restaurant			X		X	
Lodging	X	-	-	-	-	-
Fish Cleaning Station	-	-	-	X	-	-

* Formerly known as Kohler Marina; changed ownership in 1988.

3.47 Other community retail and service establishments outside the harbor are primarily located along East Main Street. These businesses not only serve the needs of the resident population but also provide goods and services to recreators and visitors to the harbor area. The most numerous types of businesses in Olcott are eating and drinking places, and amusement and recreation places. Many of these service-type businesses are only open during the summer recreation season.

3.48 The products and services of other types of business establishments, such as insurance agencies, banking institutions, and general merchandise stores, are generally available at other locations in the town, particularly in the Newfane and Wrights Corners hamlets. Larger department stores, shopping plazas, and business offices are located in the county's major urban centers.

3.49 While some of the hamlets residents are employed at local business establishments, most are employed at surrounding regional business establishments.

3.50 Recreation. Olcott Harbor is presently one of the principal recreational boating harbors along the south shore of Lake Ontario west of Rochester, New York. Relatively deep natural channel depths, which are necessary to accommodate the average keel of sail boats, render the harbor especially well suited for the navigation and dockage of sail craft. They account for about 50 percent of the harbor fleet. The harbor area provides both public and private dockage, facilities, and services for about 200 vessels. Generally existing facilities are utilized to the maximum. Demand is high.

3.51 Olcott is a regional harbor in that it draws small-boat owners from areas throughout western New York and southern Ontario. It is easily accessible by automobile from the Buffalo, Rochester, and Toronto metropolitan areas, and is conveniently located on Lake Ontario for boating along the southwestern and northwestern lakeshore. Recreational boating activities begin in the late spring and generally continue until weather conditions prohibit safe navigation in the fall. Sailing and cruising from the harbor is not limited to the immediate lake area and numerous boat trips are taken to the Bay of Quinte, on the north Canadian shore, and the Thousand Islands region of northern New York State. Annual regattas and boat races, such as the South Shore Regatta and the Canadian Regatta, are conducted throughout the course of the boating season. The largest boating event, the Block House Regatta, attracts about 130 sailing vessels to the harbor. In addition to special events and general pleasure cruising, the area is also used for water skiing, boat racing, and sportfishing.

3.52 The harbor's entrance channel piers are popular with local and regional sportfishermen. The west pier, which is generally more heavily used than the east pier, is accessible via a narrow lakeshore beach that is in front of the Olcott Yacht Club property. The east pier is accessible via a walkway through the Hedley Boat Co. facilities. Public access to both piers is available by boat.

3.53 A private beach is located along the lakeshore, west of the harbor, between the foot of Wright Street and the west pier. The beach area is generally comprised of small stones and was about 30 feet wide. A second, public beach is located along the west shoreline of Krull Park near the foot of Franklin Street.

3.54 Krull Park is a 329-acre public area that borders the east side of Olcott. Approximately 44.5 acres are presently developed for recreational use. The park line encompasses landscaped picnic grounds, woodlands and an orchard, and includes such facilities as the aforementioned beach, picnicking facilities, play fields and equipment, and a wading pool. The park was dedicated in 1937 and has a recreation capacity for about 3,000 recreators. An estimated 1,000 recreators use the park's facilities on an average weekend day.

3.55 Other recreational facilities include community developments including amusement parks and arcades, theaters, restaurant lounges, a bowling alley, and a roller rink.

3.56 The New York State Office of Parks, Recreation, and Historic Preservation indicated in their New York Statewide Comprehensive Recreation Plan (1983) substantial regional deficiencies for activities including: swimming, biking, hiking, boating, fishing access, field games, playground, and relaxing in the park.

3.57 Public Facilities and Services:

3.58 Utilities, Water, Sewer - Residential and business facilities in the hamlet are serviced by local and regional electric, gas, and telephone utility service lines. The community's water is supplied by the Niagara County Water District, which draws its water from the west branch of the Niagara River through its pumping station in the town of Wheatfield. Water is distributed

throughout Olcott via the town's District No. 7 waterlines. A water storage tower is located on land between Route 18 and West Washington Street. The town of Newfane has completed the construction of sewer lines and a sewage treatment plant to service the hamlets of Olcott and Newfane and other developed areas in the vicinity of the Olcott-Lockport Road. The treatment plant is located along the lakeshore east of Olcott. Some of the sewage from sources in the Newfane Hamlet is serviced by the Town Sewer District No. 1.

3.59 Community Services, Facilities - Olcott Elementary School is located on Godfrey Road immediately east of Olcott-Lockport Road. The structure contains classroom facilities and a gymnasium and serves the educational needs of the local grade school population. Other schools in the town include the New Junior and Senior High Schools and three other elementary schools. A town library is located in the hamlet of Newfane.

3.60 The Olcott Fire Company provides fire protection by volunteer personnel for the town of Newfane north of the Conrail tracks. The company's seven emergency vehicles are housed in a fire hall on Olcott-Lockport Road near Albright Street. Fire hydrants are located along most of the streets throughout the hamlet. Police services in Olcott are provided by the town, county, and State.

3.61 The Olcott Post Office is located on East Main Street near Franklin Street. Other major community facilities, such as the Newfane Town Hall and Inter-Community Memorial Hospital, are located in the Newfane Hamlet. The town of Newfane provides solid waste disposal services for the local hamlets.

3.62 Transportation - Olcott is linked with other hamlets, villages, and cities in the Niagara region by local and State highways. New York State Route 18 is a primary east-west route, parallel to the lake shoreline, that provides access to the Robert Moses Parkway (to Niagara Falls, Buffalo, and Ontario, Canada) on the west, and the Lake Ontario State Parkway (to Rochester) on the east. Olcott is the northern terminus of New York State Route 78, which extends southward through the town of Newfane to Lockport and suburban Buffalo. Route 78 also intersects the New York State Thruway (Interstate 90) about 28 miles south of Olcott.

3.63 The street system in Olcott is generally adequate for local traffic flows. Olcott-Lockport Road (Route 78) is the major north-south route through the hamlet and East and West main Streets are the principal local east-west roads. At one time a Main Street bridge spanned the harbor and connected the present east and west sections of that thoroughfare. The last Main Street bridge was a narrow, steel structure, built in 1935, that was too low to allow for the passage of sailboats beneath it. The bridge was demolished and replaced by the Route 18 bridge in 1970. The new structure has a vertical clearance of more than 50 feet above low water datum and a horizontal clearance of more than 100 feet. Conversations with town officials and local business operators in 1978 indicate that the removal of the old Main Street bridge has had a significant negative effect on local retail trade by diverting traffic away from Olcott's main business district. While there are no public parking facilities in the immediate harbor area, several limited capacity, privately owned parking areas are located near the local marina establishments. Parking areas at Krull Park provide the closest public parking facilities to the harbor.

3.64 Olcott Harbor was initially developed as a port for waterborne commercial traffic. However, the harbor's function as a commercial port has terminated. Small local excursion boats operate out of the harbor during the summer months.

3.65 The hamlet has daily bus service to Lockport, where there are bus line connections to other cities in the region. A charter bus service between Lockport and Krull Park also operates on an irregular basis. Two airfields for small, private aircraft are situated southwest of Olcott. A Conrail freight line is located parallel to and about 1-1/2 miles south of the lakeshore; there is a service siding on this line in the community of Burt.

3.66 Property Values and Tax Revenues. Land values may vary from several hundred to several thousand dollars per acre in Niagara County depending upon location. Lakefront property would be expected to be of higher value. The average value of farmland (land and buildings) for the Niagara County area is roughly estimated at $1,978 per acre. The median value of homes (house and lot) in the Niagara County area is roughly estimated at $83,600. Tax revenues generally include revenue sharing (Federal, State, local), and local property, service district, and sales taxes.

3.67 Aesthetic Resources, Noise. Reports by both the town of Newfane and Niagara County identify the lake vista, as viewed from Krull Park lakeshore area, as a significant aesthetic resource of the community. Numerous park benches along the lakeshore bluff offer sites for relaxation with excellent views of both the lake and the shoreline in the Olcott area. Views of the natural lake line environment are supplemented by the sights of recreational water activities in the harbor area and the occasional passage of a lake freighter in the distance. Park visitors have reported that the lights atop the 1,800-foot Canadian National Communications Tower in Toronto, located about 40 miles northwest of Olcott, are visible from the shoreline area, and that small boat operators are using the lights as a directional aid in navigation.

3.68 One of the better viewing points of the harbor is located along the north sidewalk of the Route 18 bridge. Harbor features visible north from the bridge include Eighteenmile Creek and adjacent marina and dock facilities south of the north harbor basin, and the Olcott Yacht Club building and Lake Ontario in the background.

3.69 The inner harbor area, for example the piers and Newfane Marina vicinity, provide pleasing views and shoreline experiences. Some potential improvement measures are also evident, for example, removal or repair of dilapidated structures and/or facilities including "Operation Foresight" gabion structures (provided alternative protection structures are available).

3.70 Qualitative observations of the harbor indicated that the area is generally quiet and free of any long-term sources of noise. Particular sounds that were noted during the field survey included periodic engine noises from small boats, traffic-related noises from vehicles on local streets and the bridge, and the sound of ducks that were swimming in the creek. There were no significant odors or other aesthetic factors noted in the harbor area.

3.71 Community Cohesion. Most developments and residents are long established in Olcott. In the early 1900s, Olcott was a significant lakeshore resort community. It appears that the majority of the community would like to try to recapture part of that era, and associated benefits. Lakeshore access and recreation development is in high demand.

CULTURAL RESOURCES

3.72 Cultural Resources Investigations. The Buffalo District contracted for a cultural resource reconnaissance survey of an area extending approximately three-eights of a mile on either side of the mouth of Eighteenmile Creek, concentrating on the shoreline, and along the banks of the creek from the mouth to the Route 18 bridge. The emphasis of the study was on conducting a thorough literature search, relocating previously recorded sites, and determining the potential for affecting cultural resources. There are no sites in the project area listed in the National Register of Historic Places annual list of February 1978, or in the files of the Historic American Engineering Record and Historic American Building Survey as of July 1976. The State Historic Preservation Officer was consulted and it was determined that there were no sites in the area in the process of being nominated to the National Register nor were any sites in the area listed in the State files.

3.73 Three sites were listed in the SUNY at Buffalo files but one, U.B. 383, was historic material destroyed during construction of the Route 18 bridge and one, U.B. 382, an Archaic Period campsite, is well removed from the project area. The third site, U.B. 717, was the mound reported in the literature as being either of prehistoric origin or as a French Fort. Test pits placed in the peach orchard west of Eighteenmile Creek and south of 5719 West Bluff Road contained no prehistoric material despite reports from local residents that material had been found in the area around the turn of the century. There is no longer any evidence of any mounds on the west bluff and there is no documentary evidence of a French Fort so it has been hypothesized that the mound was of prehistoric origin.

3.74 The pond at the base of the bluff west of the mouth of Eighteenmile Creek is evidently the remains of an old creek channel. There are indications that the land north of the pond is relatively recent (since about 1800) and in fact the road north of the pond was created with fill.

3.75 Of some historic note in the project vicinity was the old Olcott Beach Resort Hotel built in the 1900s at the foot of Franklin Street, now the public beach area. In 1935 the hotel was destroyed by fire and the famous resort was not rebuilt. Only part of the old pier remains.

3.76 Due to fires there was only one structure located during the reconnaissance that may have historic value. It is the old Wesleyan Methodist Church built in 1850 but since converted to a private home.

3.77 The harbor has been dredged repeatedly since 1867 and there are no records of shipwrecks in the areas where breakwaters may be constructed or new channels dredged. The U.S. piers have undergone extensive modification during repairs made in the last 30 years.

INTRODUCTION

4.01 This section briefly compares anticipated environmental effects of the most feasible alternative plan proposals (Federal features specifically, non-Federal features generally), relative to the various environmental assessment evaluation parameters. It describes in more detail the anticipated impacts identified in Summary Table 1 - Comparative Impacts of Alternatives in Section 2 - Alternatives. Plan 10A (Modified and Refined), except for the minor engineering and fishery access feature improvements, is essentially the same basic breakwater plan as the Authorized Plan 10 and Plan 10A.

ENVIRONMENTAL EFFECTS (NATURAL ENVIRONMENTAL RESOURCES)

4.02 Air Quality.

4.03 No Action (Without Project Conditions). This alternative implies that no action by the Federal Government would be taken to construct a project. Ambient air quality in the general vicinity of Olcott Harbor would remain basically unchanged in the short-run and may be further upgraded in the long run, if Federal and State air quality laws and monitoring techniques become even more refined or advanced in the future. Temporary smoke and associated fuel combustion odors from motors used in recreation boating (i.e., fishing) would continue to contribute some minor short-term air quality degradation in the general harbor vicinity on a seasonal basis, but would tend to quickly dissipate by wind action in the area.

4.04 Considered Plan 10A (Modified and Refined) - Rubblemound Breakwaters, East Embayment, East Breakwater Pedestrian (Fisherman) Access, Channel Access. Operation of heavy equipment such as tugboat, barges, crane, and possibly backhoe, front-end loader, trucks, and bulldozer to construct the project in the vicinity of Olcott Harbor and Eighteenmile Creek, would temporarily introduce some localized increased short-term noise, smoke, odor, fugitive dust, suspended particulates, carbon dioxide, and carbon monoxide into the air at the immediate project site. The aforementioned adverse impacts would probably also occur to some degree along any public roadway and/or temporary access road utilized by trucks that haul quarry stone either to awaiting barges along the shoreline or by trucks hauling stone directly to the shoreline near the Olcott Harbor project site. This would contribute to some short-term degradation of air quality until construction of the project was completed.

4.05 Considered Plan 10B - Rubblemound Breakwaters, East and West Embayment East and West Breakwater Pedestrian (Fisherman) Access, Channel Access. The adverse temporary impact of construction activity on air quality for this alternative plan would be similar as for alternative Plan 10A (Modified and Refined). However, the short-term temporary degradation of air quality would probably last somewhat longer, because this plan involves more breakwater, jetty, and navigation channel construction.

4.06 Water Quality.

4.07 No Action (Without Project Conditions). This alternative implies that no action by the Federal Government would be taken to construct a project. In the long-run, recreation fishing from boats in this locale would probably continue to increase, with some corresponding increase in boat motor exhaust emissions into the water. Water quality in the Olcott Harbor area and in Eighteenmile

Creek would likely remain unchanged in the short-run. Assuming technology, to protect the environment and Federal and State regulations and monitoring techniques become further advanced in the future, potential for such degradation from such emissions may be further controlled or decreased to some extent.

4.08 Considered Plan 10A (Modified and Refined). Localized, temporary, short-term water disruption and turbidity would occur during operation of a tugboat and barges, as well as deposition of stone to construct the breakwaters, for about two construction seasons. Some minor amount of fuel oil spillage during normal operation of construction equipment may also occur. However, it is anticipated that such resuspended material would soon settle out and water quality would return to ambient conditions once dredging ceased. Protection from lake wave action, provided by the breakwaters would alter existing water current patterns and flow velocities behind these structures. However, there would still be circulation of water in the protected basin due to continued flows from Eighteenmile Creek and from water exchange through the outer entrance channel, as well as through the east and west 90 foot-wide openings between breakwaters and jetties at fisherman access walkway locations. Also, interstitial spaces among the breakwater stones would allow for some degree of continued water exchange between the lake and protected basin. A reduction in wave action and water velocities within the protected area of the harbor, may eventually cause some suspended sediment and silt to settle out in this locale, instead of being dissipated into the lake littoral zone as now occurs under without project conditions. Although the project area experiences frequent turbidity under existing conditions, such turbidity will probably take longer to dissipate from the protected basin behind the breakwaters. Mixing of water from Eighteenmile Creek with harbor water would continue to occur before entering the lake proper. Whenever there is a turbidity plume, dissipation of the plume would likely occur through the outer harbor navigation opening and/or the fisherman access bridge openings at the offshore ends of the east and west jetties and breakwaters. Also, creation and operation of marina facilities in the protected harbor area of the project could contribute to some degradation of water quality that may be caused by movement of boats, as well as by incidental spillage of fuel, oil, and accumulations of debris or trash.

4.09 Removal of the old Main Street bridge abutment will likely unavoidably disrupt some moderately polluted sediments in the vicinity. Measures will be incorporated to minimize this disruption (i.e., removal procedures, silt curtains). Considering the scope of this measure, adverse impacts would not be expected to be significant.

4.10 Considered Plan 10B. The adverse impact on water quality for this alternative plan would be similar during construction of the project as for alternative Plan 10A (Modified and Refined). However, the short-term temporary degradation on water quality would be somewhat longer, since there is more construction work involved relative to length and installation of breakwaters and increased area of channel dredging in the lake. However, since water flow in the protected area of the project would be more restricted by the extensive breakwater system, turbidity normally experienced in the harbor from Eighteenmile Creek would not dissipate as readily.

4.11 Sediment Quality.

4.12 No Action (Without Project Conditions). Future sedimentation into navigation channels would be expected to be of similar or improved quality of that most recently dredged and disposed of. Eighteenmile Creek remedial action plan (RAP) measures addressing creek pollution source problems (primarily upstream) and possibly polluted sediments will likely contribute to long-term improved sediment quality in the creek and harbor. Periodic maintenance dredging of the existing Federal and local navigation channels along Eighteenmile Creek would be required with or without the proposed project. In the recent past, non-polluted to moderately polluted sediments dredged from the harbor channels have been disposed of at the Olcott Harbor open-lake disposal site located about 1.5 miles north of the harbor. Known heavily polluted areas were not dredged, since they would require alternate disposal. One problem area is expected in the upstream local upstream harbor area just south of the location of the former (dismantled) old Main Street bridge. This area may or may not be acted upon by the RAP program. Parameters relative to sediment quality and disposal options may change, possibly necessitating consideration of alternative disposal measures for polluted sediments.

4.13 Considered Plan 10A (Modified and Refined). Substrate in the lake portion of Olcott Harbor consists of bedrock, which in some areas is covered by a thin layer of clean cobble, gravel, and/or sand. No dredging and disposal of sediments is expected to be required for implementation of the outer harbor plan. Occasional maintenance dredging and disposal of sediments may be required in the breakwater harbor area. Sediments dredged however, would be expected to be granular (sand/gravel) and non-polluted, and could be utilized for adjacent beach nourishment or disposed of in the Olcott Harbor open-lake disposal area located about 1.5 miles north of the harbor. Although some minor degradation of water quality and possibly sediment quality may occur with implementation of a breakwater marina due to calmer water and incidental spillage of fuel, oil, and debris; considering the type of sediments in the lake outer harbor area, no significant accumulation of any pollutants to sediment would be expected to occur in the outer harbor area. As mentioned previously, periodic maintenance dredging of the existing Federal and local navigation channels along Eighteenmile Creek would be required with or without a breakwater harbor project. Reference existing conditions statements.

4.14 Removal of the old Main Street bridge abutment will likely unavoidably disrupt some moderately polluted sediments in the vicinity. Measures will be incorporated to minimize this disruption (i.e., removal procedures, silt curtains). Considering the scope of this measure, adverse impacts would not be expected to be significant.

4.15 Considering the existing and anticipated future conditions situation, it is not expected that the proposed project would adversely affect implementation of the Eighteenmile Creek area of concern and remedial action plan (RAP), or that implementation of the RAP would adversely affect with or without project conditions.

4.16 Considered Plan 10B. The impact statement would be similar to that for Considered Plan 10A (Modified and Refined).

4.17 Benthos.

4.18 No Action (Without Project Conditions). This alternative implies that no action by the Federal Government would be taken to construct a project. Unless the aquatic environment was significantly altered by natural influences or by some type of man-made disruption and/or development in the future, no significant disruption to benthic invertebrate organisms would be anticipated.

4.19 Considered Plan 10A (Modified and Refined). Breakwater construction work would adversely impact some existing benthic habitat and associated organisms at the immediate project site, and to some degree in the general vicinity of the harbor. Deposition of heavy stone would cover about 7.0 acres of existing sandy-cobbly bottom substrate in the lake. Benthic organisms inhabiting the aquatic substrate at the new breakwater sites would be crushed, smothered, and some would be displaced by stone disposition. Water turbidity caused by construction activity may temporarily aggravate respiration of such organisms. As suspended silt, sediment and detritus settled out over the harbor, some benthic invertebrates would probably be smothered. However, the resettled material would again provide substrate habitat for recolonization by such aquatic life. In the protected area provided by the breakwaters, the littoral zone substrate would be less subject to wave disruption, and hence more stable as habitat for long-term benthic organism colonization. Once construction was completed and water turbidity dissipated, benthic organisms that survived at the project site, as well as those that drifted onto the newly settled substrate would soon recolonize such disrupted aquatic areas. The substrate of newly constructed irregular stone surface slopes of rubblemound breakwaters would also provide some replacement benthic habitat for recolonization. It is estimated that the submerged rubblemound stone breakwater slopes may provide about 3 surface acres of new long-term stable habitat, that would contribute toward some degree of habitat loss replacement. Creation and operation of marina facilities within the breakwater protected area of the harbor may have some minor to moderate adverse impact on benthic organisms in shallower shoreline areas of the harbor, due to substrate agitation be disruption of water due to motorboat propellers. Aquatic invertebrates submerged along the immediate very shallow shoreline water-land interface may be destroyed or disrupted by temporary accumulations of oil or gas surface film discharges from boat motors.

4.20 Considered Plan 10B. The kinds of adverse and beneficial impacts on benthic habitat and associated invertebrate organisms would be similar as for Plan 10A (Modified and Refined). However, the area affected would be larger, since there would be more rubblemound breakwater installed. Temporary disturbance to respiration activity of invertebrates from water turbidity caused during construction would, therefore, last somewhat longer than for Plan 10A (Modified). Deposition of heavy stone would cover about 8.6 acres of existing sandy bottom benthic substrate in the lake. It is estimated that the submerged rubblemound stone breakwater slopes would provide about 3.5 acres of new long-term stable aquatic habitat, that would contribute toward some degree of habitat loss replacement. The impact on benthos due to creation and operation of marina facilities within the protected project area would be similar to the impacts described for Plan 10A (Modified and Refined).

4.21 Vegetation.

4.22 No Action (Without Project Conditions). This alternative implies that no action by the Federal Government would be taken to construct a project. Although no significant adverse impact on sparsely established submergent aquatic (predominantly algae and some watermilfoil) and terrestrial shoreline vegetation in the vicinity of Olcott Harbor and Eighteenmile Creek is anticipated in the near future, it is possible that such vegetation establishment may eventually be altered or disrupted, should recreational activity in the harbor and adjacent shoreline development increase in the future.

4.23 Considered Plan 10A (Modified and Refined). Reduced sunlight penetration into the water caused by construction generated turbidity, would have a short-term minor adverse impact on the aquatic plant photosynthesis process of submerged macrophytes (i.e., watermilfoil, algae), until construction work ceased and turbidity dissipated. Deposition of heavy breakwater stone onto the lake bottom in the littoral zone of the harbor, would cover about 7.0 acres of existing substrate (predominantly sandy and cobbly) that provides habitat to some degree for submerged sparsely established aquatic plants. Since the area of the harbor protected by rubblemound breakwaters would be somewhat calmer and less subject to significant wave action from the lake, water flowing out of Eighteenmile Creek into the harbor would probably eventually deposit some suspended material from the usually present turbid plume, over the substrate of this protected zone. Such deposits, along with calmer water conditions and when a turbidity plume is not evident - when water clarity for easier sunlight penetration is better - may create conditions that help stimulate increased aquatic plant growth (such as algae). Deposition of such material may also periodically cover some aquatic plants, as well as create some new habitat for plant establishment. Accumulations of silt, sediment, and detritus in the protected harbor would probably create a need for occasional future removal of shoaling material, which in turn would destroy or disrupt some reestablished aquatic plant growth. From the beneficial impact standpoint, the submerged stone surfaces of the rubblemound breakwater would provide a surface area of about 3 acres of new stable substrate for eventual colonization by aquatic flora such as diatoms, algae, and possibly some other plants. Protection provided to the littoral zone may provide a somewhat stabler submergent environment for establishment of other submergent aquatic plants such as elodea and watermilfoil.

4.24 Considered Plan 10B. The impacts on vegetation for this plan would be similar to those described for Plan 10A (Modified and Refined), except that the area impacted would be slightly larger. Deposition of stone to construct the rubblemound breakwaters would cover about 8.6 acres of existing substrate (predominantly sandy) that provides habitat to some degree for submerged aquatic plants.

4.25 Fisheries.

4.26 No Action (Without Project Conditions). Since no Federal action to construct a project would occur with this alternative, no construction related impacts on fish habitat and associated fish species would be anticipated. Both warmwater and coldwater fish would continue to utilize the waters of Olcott

Harbor and Eighteenmile Creek as spawning, nursery, and/or feeding habitat. The NYSDEC annual salmonid fish stocking program would likely continue in the near future within the vicinity of the Harbor and Creek.

4.27 Considered Plan 10A (Modified and Refined). Fish habitat in the project area would be altered to some degree by construction of the breakwaters, jetties, and navigation channels. Protection provided by the stone breakwaters would create a basin zone of somewhat calmer water that is less subject to significant wave action which would be about 31 acres in size. As described in paragraph 4.07 of this section, fish habitat in the protected basin area of the project zone would experience some alteration in current patterns and velocities. However, water exchange through the open void spaces among breakwater stones, through the 150 foot wide outer harbor navigation access opening, as well as other access openings (Reference Figure 7) would continue to occur. Increased short-term turbidity during construction activity may temporarily aggravate respiratory organs of fish in the general project locale. However, most fish would tend to temporarily avoid the immediate construction zone at the time work is being done, but would return when such activity ceased. Deposition of sediment and detritus from suspension in the water column flowing out of Eighteenmile Creek into the protected lake basin area may contribute to some habitat diversification for utilization by fish. However, based on past Corps experience with regard to maintenance dredging in the existing Federal navigation channel, very little sediment is deposited into the harbor locale. Deposition of stone to construct breakwaters in the littoral zone of the harbor would cover about 7.0 acres of existing lake bottom substrate (predominantly sand and cobble), and would fill-in about 85,000 cubic yards of water column. The open water area filled in by stone would be eliminated from use by fish, as well as from use for production of phytoplankton as part of the aquatic food chain. The submerged stone slopes of rubblemound breakwaters exposed to the lake would provide a surface area of approximately 3 acres of new irregular substrate as an attractant to fish, as well as provide cover among large stone voids, feeding habitat (i.e., benthic organisms on stone surfaces and attached algae), and possibly spawning habitat for some warmwater species. With regard to recreation fishing, the new breakwaters would provide an additional 3,000 linear feet of access to shore fisherman, as compared to about 1,400 linear feet of access presently available for shore fisherman access on the existing U.S. piers in the harbor.

4.28 As a result of the Corps' coordination meeting with the NYS Department of Environmental Conservation and the U.S. Fish and Wildlife Service on 21 June 1990, letters received by the Corps from these agencies dated 6 July 1990 confirmed the following mutually agreed upon "environmental window" schedule during which in-water construction work would be authorized to occur: Year 1 - 15 May to 10 November for construction and completion of the west breakwater; Year 2 - 15 May to 10 November for construction and completion of the east breakwater including the shore connected segment. In-water construction work should be completed as soon as possible within the aforementioned environmental window dates, in order to lessen adverse impacts that may temporarily affect fish spawning and public fishing opportunity. Any future in-water maintenance work on the breakwaters would only be done during the period between 15 June and 1 September. Other than during the aforementioned permissible project in-water construction periods mentioned, construction work would be avoided.

4.29 Considered Plan 10B. The impacts on fisheries for this plan would be similar to those described for Plan 10A (Modified and Refined), except that the area impacted would be slightly larger. The protected basin of calmer water would be about 36.5 acres in size. Deposition of stone to construct the rubblemound breakwater would cover a surface area of about 8.6 acres of existing littoral zone substrate that provides habitat for both coldwater and warmwater fish, and would fill in about 110,000 cubic yards of open water area. The submerged rubblemound stone slope portions of both breakwaters would provide a surface area of approximately 3.5 acres of irregular new substrate as an attractant for fish, and well as cover, feeding, and possibly spawning habitat for some warmwater species. With regard to recreation fishing, the breakwaters would provide an additional 3,000 linear feet of access to shore fishermen, as compared to about 1,400 feet of access presently available for shore fisherman access on the existing U.S. piers in the harbor.

4.30 Wildlife.

4.31 No Action (Without Project Conditions). Since no Federal action to construct a project would occur with this alternative, no construction related impacts on wildlife habitat and associated species would be anticipated. Transient, seasonal, and endemic (native) wildlife would likely continue to utilize the aquatic and terrestrial habitats in the general vicinity of Olcott Harbor and Eighteenmile Creek, unless at some time in the future, environmental conditions were altered by natural or man-made changes that could significantly influence the extent and frequency of use of the area by wildlife.

4.32 Considered Plan 10A (Modified and Refined). Aquatic wildlife would tend to avoid the immediate work zone during installation of the project, until in-water construction activity and associated turbidity dissipated. The protected basin in the littoral zone of the lake harbor - estimated to be about 31 acres in size - would provide a calmer water zone for use by waterfowl, seagulls, and terns as loafing and feeding habitat. Emergent portions of breakwaters would provide loafing habitat for some species of aquatic birds. Construction of breakwaters would cover about 7.0 acres of lake bottom surface area, over which scattered sparse growths of aquatic submergent vegetation and associated benthic invertebrates would be destroyed that presently provide feeding habitat for aquatic birds (i.e., diving ducks). Also, about 85,000 cubic yards of water column in the littoral zone would be filled in by stone, which would eliminate this area from use as open water habitat by aquatic birds such as seagulls, terns, and waterfowl for at least the life of the project. However, once submerged slopes of these stone facilities became colonized with aquatic organisms (i.e., algae, invertebrates, small fish), these areas would help replace some of the lost feeding habitat for aquatic birds over a surface area of about 3 acres.

4.33 Considered Plan 10B. The impacts on wildlife for this plan would be similar to those described for Plan 10A (Modified and Refined), except that the area impacted would be slightly larger. The protected basin area inn the littoral zone of the harbor would be about 36.5 acres in size. Breakwater construction would cover about 8.6 acres of lake bottom surface area that presently provides growths of submerged aquatic plants and associated benthic invertebrates as feeding habitat for aquatic birds. Also, about 110,000 cubic

yards of water column in the littoral zone would be filled in by stone, which would render the breakwater site as unavailable for open water resting and feeding habitat for aquatic birds during at least the life of the project. However, once submerged outer slopes of these stone facilities became colonized with aquatic organisms (i.e., algae, invertebrates, small fish), these areas would help replace some of the lost feeding habitat in the littoral zone for aquatic birds over a surface area of about 3.5 acres.

4.34 Threatened and Endangered Species.

4.35 No Action (Without Project Conditions). Since no Federal action to construct a project would occur with this alternative, there would be no adverse impacts on threatened or endangered species. It is possible that on occasion, transient individuals (i.e., American bald eagle) may briefly visit the area, since the area is within their overall habitat range.

4.36 Considered Plan 10A (Modified and Refined). Except for possibly occasional transient individuals, there are no known Federally listed threatened or endangered species under the jurisdiction of the U.S. Fish and Wildlife Service in the proposed project area, as specified in Section 3, paragraph 3.20 of this environmental statement. Therefore, no significant adverse impact on such species would be anticipated with this alternative plan. Reference the U.S. Fish and Wildlife Service Coordination Act Report (USFWSCAR), page 9, in this regard. The USFWSCAR is included as SUPPLEMENT ENVIRONMENTAL APPENDIX SEA-C following this SEIS.

4.37 Considered Plan 10B. Same as stated for aforementioned Plan 10A (Modified and Refined) with regard to threatened or endangered species.

4.38 Wetlands.

4.39 No Action (Without Project Conditions). Since no Federal action to construct a project would occur with this alternative, no project related impacts on wetlands would be anticipated. A review of USFWS and NYSDEC wetland classification maps indicated that there are no identified wetlands in the harbor area.

4.40 Considered Plan 10A (Modified and Refined). Since there are no known identified wetlands in the proposed project area of Olcott Harbor or in Eighteenmile Creek upstream to the Route 18 bridge, no adverse impacts on this natural resource is anticipated. Existing palustrine wetlands on Eighteenmile Creek upstream of the Route 18 bridge would not be adversely impacted.

4.41 Considered Plan 10B. Same statement as for Plan 10A (Modified and Refined).

ENVIRONMENTAL EFFECTS (HUMAN AND MAN-MADE ENVIRONMENT)

4.42 Community and Regional Growth.

4.43 No Action (Without Project Conditions). Moderate population growth for the Niagara County and Olcott/Newfane area is anticipated. Since Olcott is a significant regional access area to Lake Ontario's associated recreational resources, the substantial influx of people which occurs during the spring through fall fishing, boating, and bathing seasons would be expected to continue. Demand for lake access, boat slips, and fishermen access would continue. Limited local efforts to facilitate associated demand developments would be expected, to the degree possible. Existing harbor deficiency problems would be expected to continue.

4.44 Considered Plan 10A (Modified and Refined) - Rubblemound Breakwaters, East Embayment, East Breakwater Pedestrian (Fishermen) Access, Channel Access.

4.45 Phased construction related disruptions associated with movement and operation of heavy construction equipment and movement and placement of construction material would probably occur over a two year construction period. Breakwater construction would likely occur first, followed by associated facility development (parking, access, sanitary facilities, etc.) changes.

4.46 The aesthetic characteristics of the project area will be disrupted by the sights, sounds, and odors associated with construction equipment and activities. The influx of construction workers and equipment will require goods and services.

4.47 Vehicular traffic on the local streets would, at times, be inconvenienced by the movement of construction equipment and material, particularly trucks and stone. Vessel traffic in the harbor could, at times, be inconvenienced by floating plant operations. Some disruption to fishing activities could also be expected due to project construction activities.

4.48 Some cultural events, such as the annual boat regattas, may be disrupted for the duration of construction activities. Potential scheduling conflicts between regattas and construction activities would need to be coordinated.

4.49 Basically, Refined Plan 10A Modified would provide (Reference Figure 7):

a. Protected harbor entrance.

b. Protected east embayment area for approximately 800 boat slips (31 acres). Sixty slips are also planned for the area just south of the west pier.

c. Approximately 2,828 feet of breakwater providing 1,963 feet of additional (east breakwater) pedestrian/fishermen access.

d. Navigation access channels to the east embayment area and up Eighteenmile Creek to the Route 18 bridge.

e. Associated upland facility developments such as access, marina, parking, and sanitary facilities (Associated Federal and local responsibilities).

4.50 Based on evaluation of the most recent (1987-1990) Olcott Harbor navigation channel soundings and potential dredging and dredged material disposal concerns, existing navigation channels are of sufficient dimension that no dredging will be required for construction of the proposed project. Since sediment filling is light in the project vicinity, project navigation channel maintenance dredging would be minor and infrequent in the future.

4.51 A small parking lot and access facilities to the east breakwater are also included under the basic Federal features plan as depicted on Figure 7. Associated sanitary facilities include minor modifications to existing Krull Park facilities located in the immediate vicinity.

4.52 Minimal required upland developments pertaining to access, parking, marina, and sanitary facilities would be developed by the project local sponsors. The developed town of Newfane Marina would serve for the basic marina facilities. Access, parking, and sanitary facilities would need to be developed in the area of the breakwater and docking shoreline tie-ins.

4.53 The proposed harbor project would benefit recreational navigation at Olcott. Small boats with drafts of up to 12 feet will be able to navigate into and through the lake entrance channel, and boats with drafts of up to 7 feet will be able to navigate in the outer harbor channel and in the creek channel as far south as the Route 18 bridge. Potential storm damages to docked craft, marina facilities, and shoreline properties will be reduced in the protected harbor areas.

4.54 Depending on the number and nature of recreators who will be attracted to the harbor facilities, the social characteristics of the community will be affected. Total hamlet population could fluctuate in the course of a year, reaching its highest levels during the summer recreation season when small-boat owners and sportfishermen enter the area.

4.55 Enhanced recreational opportunities at Olcott Harbor, which are expected as a result of the proposed harbor improvements, may produce long-term, secondary impacts on community and regional growth due to an increase in the number of recreators using the area and a subsequent increase in the level of recreational activity.

4.56 Increased demand for recreation-related goods and services such as small-craft docks, fueling facilities, maintenance, supplies, food, and bait and tackle supplies, would increase the potential for the improvement of existing commercial facilities and the development of new commercial facilities to satisfy those needs. Commercial developments would benefit local economic activities by stimulating business investments, creating employment opportunities, and increasing total business and personal incomes in the community. Development would be expected to occur not only in marine-related enterprises but also in supportive businesses, including hotel-motel, grocery, and other facilities.

4.57 There would be an increased demand for short-term housing by recreators attracted to the improved harbor facilities during the summer recreation season. This demand would increase the potential for the improvement of existing seasonal residences and the construction of new residences.

4.58 Future commercial and residential development would affect land uses in the harbor area. The proposed project could also stimulate, and would be compatible with, the development of additional public open space, such as parkland and boat launch areas, in the harbor area. Changes in surface water uses would also occur as marina operators construct additional dock facilities to accommodate the expected influx of small craft into the harbor.

4.59 Improvements made to existing commercial and residential facilities, and the development of new facilities, would increase both the market and taxable value of affected properties. Additional facilities would place an increased demand on local utilities and community services and facilities, including law enforcement and health care elements.

4.60 Protection of Olcott Harbor, as provided by the proposed project, from storm activity will enhance the feelings of safety and security for both recreators using the harbor area and property owners with property located along the protected harbor shoreline.

4.61 There is a pocket beach west of the existing west pier which provides minimum flood/erosion protection to about three houses. The new west breakwater will cause this beach to realign slightly so as to provide slightly less protection to these houses, as the sand/gravel is carried into the lee of the breakwater. This will be further investigated and addressed in the final detailed engineering phase of this study.

4.62 Considered Plan 10B - Rubblemound Breakwaters, East and West Embayments, East and West Breakwater Pedestrian (Fishermen) Access, Channel Access.

4.63 Impacts would be very similar to those stated for Plan 10A (Modified and Refined). The basic difference between Plan 10A (Modified) and 10B is that 10B is expanded to provide for an additional west embayment entrance channel and 200 boat slip (+6 acres) protected west embayment, and pedestrian (fishermen) access to a 1,820 foot long west breakwater. Reference Figure 6. The west pocket beach area would be protected (automatically) with Plan 10B.

4.64 Additional facility developments, particularly for the west breakwater area would be required. Associated project impacts would be increased.

4.65 Displacement of People.

4.66 No Action (Without Project Conditions). Moderate growth and land use changes which could result in some displacement of existing developments and people might be expected in the Olcott vicinity.

4.67 Considered Plan 10A (Modified and Refined). Some properties and easements (several acres), in the area of breakwater and marina construction, would need to be acquired in order to accommodate Federal project implementation. Any acquisition or relocations required to implement the Federal portion of the proposed project would need to comply, at a minimum, with the "Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970." Provision of necessary lands, easements, and right-of-ways for the project is a local sponsor responsibility.

4.68 Some properties and easements (several acres), particularly in the area of breakwater construction, would need to be acquired in order to provide for minimal necessary upland project facilities development (i.e., marina, access, parking, sanitary facilities). This is a local project sponsor responsibility.

4.69 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined); however, slightly increased, particularly in the area of the west breakwater.

4.70 Business, Employment, Income.

4.71 No Action (Without Project Conditions). Generally, moderate growth in business, employment, and income is anticipated for the region. Boating, fishing, recreation, and associated service businesses will continue to be important in the Olcott vicinity. Potential growth, however, is limited by current harbor capacity.

4.72 Considered Plan 10A (Modified and Refined). Assuming that construction materials and equipment are purchased from suppliers located in the harbor locale or region, construction of the proposed project will have a favorable effect on local business and industrial activity. Employment will benefit due to the need for construction personnel during project implementation. Local business establishments may benefit by providing goods and services that will be required to maintain construction equipment and personnel. Increased demand for recreation-related goods and services such as small-craft docks, fueling facilities, and bait and tackle supplies, would increase the potential for the improvement of existing commercial facilities and the development of new commercial facilities to satisfy those needs. Additional charter fishing businesses may be established. Commercial developments would benefit local economic activities by stimulating business investments, creating employment opportunities, and increasing total business and personal incomes in the community. Development would be expected to occur not only in marine-related enterprises but also in supportive businesses, including hotel-motel, grocery, and other facilities.

4.73 The community is considering development of a ferry/excursion service with project development.

4.74 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined); however, slightly increased particularly with construction of the west land connected breakwater.

4.75 Recreation.

4.76 No Action (Without Project Conditions). Generally, Olcott Harbor water resource recreational facilities are utilized to the maximum. Demand for water resource recreational facilities to accommodate boating (particularly sail boat) and dockage, fishing, swimming, and relaxing in park (aesthetic views) is high and continues to grow. Some Krull Park facility developments might be expected.

4.77 Considered Plan 10A (Modified and Refined). Some recreational developments and activities may be temporarily disrupted during phases of project construction. Access for west breakwater construction would likely be through a portion of Krull Park temporarily limiting normal park utilization in that area. Breakwater construction would likely temporarily disrupt normal harbor area vessel movement and fishing activities.

4.78 Implementation of the proposed project would provide local and regional demand facilities to accommodate boating (particularly sail boat) and dockage, fishing, and aesthetic view relaxation. Anticipated Krull Park developments would further facilitate swimming (beach), and relaxing in park (aesthetic view) demands. Some park area might be considered to facilitate associated access and parking needs.

4.79 Existing water resource recreational facilities would be better protected from potential water damages and would likely be improved and additional associated service facilities developed.

4.80 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined), however, slightly increased; particularly with construction of the west land connected breakwater.

4.81 Public Facilities and Services.

4.82 No Action (Without Project Conditions). Public facilities and services would be expected to be developed as warranted, and to the degree possible.

4.83 Considered Plan 10A (Modified and Refined). An increase in the demand upon local utilities, such as water and electricity, will occur due to the presence of construction equipment and personnel. No impact is expected upon existing public and private intakes and outfalls on Eighteenmile Creek and along Lake Ontario by either construction activities or the completed proposed project.

4.84 Construction equipment and activities may create potential safety hazards to small boaters and residents in the harbor and upland area. Community services, such as police, rescue, and medical services, may therefore be utilized if their particular assistances are required.

4.85 Vehicular traffic on local streets will be inconvenienced due to the short-term and periodic presence of construction vehicles. The presence of these vehicles is not expected to affect any emergency vehicle routes.

4.86 There will be an increase in the demand on local utilities and on community services and facilities due to the increased number of recreators that are expected to use the harbor area. Water, electricity, and sewage-waste disposal services are necessary for the operation of many small craft, and these will be in particular demand.

4.87 Harbor improvements are expected to result in an increase of small-boat traffic on the lower reach of Eighteenmile Creek and in the immediate Lake Ontario vicinity. Vessel traffic tie-ups will occur during periods of peak usage due to the number of craft using the navigation channels as routes of transit.

4.88 The use of local and regional thoroughfares will increase in relation to the number of recreators using motor vehicles to arrive at the harbor area. Some problems with additional traffic on local thoroughfares through the hamlet of Olcott could create temporary traffic jam problems during periods of peak harbor use. Additional vehicles entering the harbor area will place a greater demand on parking facilities for the temporary storage of automobiles and boat trailers. One item of local cooperation will require that additional parking spaces be provided for harbor users. The provision of additional parking spaces as an item of local cooperation will help alleviate potential parking problems that would occur with increased harbor use. A preliminary plan of potential parking areas is presented on Figures 7, 9, and 10.

4.89 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined); however, slightly increased; particularly with construction of the west land connected breakwater.

4.90 Property Value and Tax Revenue.

4.91 No Action (Without Project Conditions). With increased demand for water resource recreational development, prime waterfront property values and developments would be expected to increase. Associated tax revenues would be expected to increase.

4.92 Considered Plan 10A (Modified and Refined). Project implementation would require some property acquisitions. Property converted to public property would likely have tax exemptions.

4.93 The market and taxable values of existing residential, commercial, and undeveloped properties located in areas adjacent to the harbor may increase due to their close proximity to harbor facilities and activities. Property improvements and developments would be expected.

4.94 Expenditures related to the construction and future use of the proposed project will tend to enhance the tax base and tax revenues of Federal, State, and local public entities. Increases in the sale of goods and services, employment, and other economic activities, will provide added sales, income, and corporate tax monies.

4.95 Local entities will likely bear part of the project construction and maintenance costs.

4.96 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined), however, slightly increased; particularly with construction of the west land connected breakwater.

4.97 Aesthetic Resources, Noise.

4.98 No Action (Without Project Conditions). It is anticipated that the Olcott Harbor and the Krull Park lakefront vicinities will continue to be areas of aesthetic values with numerous pleasing views of the Lake and Harbor. Except for occasional construction project noise, and noise generated by operation of some vessels or vehicles, no significant adverse noise problems would be expected in the area.

4.99 Considered Plan 10A (Modified and Refined).

4.100 The aesthetic characteristics of the Olcott community will be affected during construction of the project. Construction equipment and activity, gradually completed project features, and some water turbidity will be visible in the harbor. Noise and some noxious odors will be generated by operation of construction equipment. Dust will be created and some mud will be tracked onto local streets by construction vehicles.

4.101 The harbor structures will modify the existing aesthetic characteristics of the harbor area. Old Operation Foresite lakeshore gabion protection could be removed. The proposed breakwaters will be added to the lake vista that is visible from the Krull Park viewing areas and other areas. Some increased traffic noises will occur due to the additional number of small boats and motor vehicles that are expected to be attracted to Olcott.

4.102 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined), however, slightly increased; particularly with construction of the west land connected breakwater.

4.103 Community Cohesion.

4.104 No Action (Without Project Conditions). Generally, long established resident community cohesion would be expected. Community harbor development focal point, however, would continue to be under utilized.

4.105 Considered Plan 10A (Modified and Refined). To date, it appears that most of the community residents and representatives are supportive of the proposed project which would likely serve as an improved focal point for the community.

4.106 The proposed harbor improvements will enhance the value of the harbor as a cultural element in the hamlet's sense of community identity. Improved harbor and channel capacity and protection provided by harbor structures will insure safer harbor conditions for sail boat regattas and other boating activities at Olcott.

4.107 Some properties will need to be acquired to accommodate project implementation. Developmental land use changes would also be expected. These may be upsetting to some residents.

4.108 Considered Plan 10B. Impacts would be similar to those stated for Plan 10A (Modified and Refined), however, slightly increased; particularly with construction of the west land connected breakwater.

ENVIRONMENTAL EFFECTS - CULTURAL RESOURCES

4.109 Cultural Resources.

4.110 No Action (Without Project Conditions). A cultural resources investigation was conducted in the project area and results recorded. No significant cultural resource items were identified in the immediate Federal project impact area. Of some relatively recent historic note in the project vicinity is the site of the old Olcott Beach Resort Hotel which was built in the 1900s at the foot of Franklin Street, now the public beach area. In 1935, the hotel was destroyed by fire and the famous resort was not rebuilt. Only part of the old pier remains. Due to fires, there is only one structure located in the project vicinity that may be of historic value. It is the old Wesleyan Methodist Church built in 1850, but since converted to a private home.

4.111 Considered Plan 10A (Modified and Refined). No identified cultural resources listed in the National Register of Historical Places, or identified by the New York State Office of Parks and Recreation, Division of Historic Preservation, or cultural resources study will be affected by either construction activities or the completed Federal project. The State Historic Preservation Officer (SHPO) has stated in a letter response dated November 13, 1989 that it is the opinion of the SHPO that the considered Federal project would have no effect upon districts, sites, buildings, structures, objects, or archeological resources in or eligible for inclusion in the National Register of Historic Places. Reference SUPPLEMENTAL ENVIRONMENTAL APPENDIX - SEA-E - ENVIRONMENTAL CORRESPONDENCE, page 24, which follows this SEIS.

4.112 Considered Plan 10B. Same statement as for Plan 10A (Modified and Refined).

SECTION 5 - LIST OF PREPARERS

5.01 The following people are primarily responsible for preparing this Environmental Impact Statement:

Section and Name	Position	Experience	Expertise
Plan Formulation	Planning		
Wiener Cadet	Project Manager	14 years Plan Formulation Branch, U.S. Army Corps of Engineers, Buffalo	Plan Formulation, Civil Engineering
Environmental Analysis	EIS Coordinators		
Tod Smith	Community/ Environmental Planner	13 years Environmental Analysis Branch, U.S. Army Corps of Engineers, Buffalo	Community/ Environmental Planning, Civil Tech.
Leonard Bryniarski	Senior Ecologist	20 years Environmental Analysis Branch, U.S. Army Corps of Engineers, Buffalo	Ecology (Aquatic & Terrestrial Biology)
Tim Daly	Community Planner	15 years Environmental Analysis Branch, U.S. Army Corps of Engineers, Buffalo	Cultural Resources Analysis
Economic Analysis			
Jonathan Brown	Regional Economist	16 years Economic Analysis Branch, U.S. Army Corps of Engineers, Buffalo	Economic Analysis
Rodger Haberly	Regional Economist	10 years Economic Analysis Branch, U.S. Army Corps of Engineers, Buffalo	Economic Analysis

SECTION 6 - PUBLIC INVOLVEMENT

INTRODUCTION

6.01 This section briefly describes the studies public involvement program, required coordination, statement recipients, and public views and responses.

PUBLIC INVOLVEMENT PROGRAM

6.02 Study activities are coordinated with government agencies, interest groups, and the general public. The general intent is to gain assistance in: identifying and scoping problems, needs, and concerns; developing feasible alternative solutions; and in assessing, evaluating, and identifying preferred and selected plans. This study's public involvement process incorporates public meeting/workshops, written correspondence, telephone communication, and draft and final report review procedures.

6.03 Public meetings and workshops for the discussion of improvements at Olcott Harbor were conducted on four occasions between June 1969 and September 1977. The various views expressed by the private citizens, businessmen, and officials present at these meetings served as input into the analysis and plan formulation for the proposed project.

6.04 Extensive coordination was maintained during the preparation, distribution, and review of the Draft Environmental Impact Statement for a small boat harbor at Olcott, New York. During preparation of this document, 12 Federal, 10 State, and 11 other agencies were given the opportunity to review and comment on the proposed action. No objections to the basic project plan were raised. In addition, a Cultural Resources Reconnaissance Survey of the Olcott harbor area was conducted in 1977. The results of this survey were transmitted to the State Historic Preservation Office, the State Archaeologist, and the Interagency Archaeological Services, all of whom found the report adequate and indicative that no adverse effects will result from the project.

6.05 Several comments were received from the agencies to which statements were distributed. None of the responses found fault in the basic project plan but rather in specific details such as project optimization, effects of breakwaters configuration on the harbor area, dredged material disposal procedures, fishery access and movement impacts, water quality, fishermen access, and facilitative developments (i.e., access, marina facilities, parking, sanitary facilities). Supplemental investigations have been conducted and results are presented within these reports in order to address these issues.

6.06 Supplemental Study Coordination and Meetings. Regarding this study, the first action accomplished was to send letters to United States Senators and Congressmen; State and local representatives; and other Federal, State, and local agencies to inform them of the resumption of the study. Subsequent correspondence followed. A scoping letter dated October 18, 1989 was coordinated with Federal, State, and local interests to fill or update on information gaps prior to report preparation.

6.07 A number of meeting/workshops were conducted for this restudy most of which are briefly listed as follows:

Table 4 - Meetings/Workshops (Restudy)

Date	Location	Interests and Discussion
3/11/88	Buffalo (COE)	Federal, State, Local (Study Needs)
4/25/88	Olcott	Federal (COE), Local (Study Status)
5/24/88	Newfane	Federal, State, Local (Technical Modeling, Coastal Processes, Environmental Concerns)
8/18/88	Olcott	Federal, State, Local (Ferry Service)
9/1/88	Newfane	Federal (COE), Local (Preliminary Project Design)
10/28/88	Lockport	Federal (COE), State, Local (Upland Developments)
12/01/88	Buffalo (COE)	Federal, State (Model and Fisheries)
1/10/89	Amherst (Consultant Engineers)	Federal (COE), Local (Upland Developments)
1/19/89	Lockport	Federal, State, Local (Study Status, Master Plan)
1/30/89	Olcott	Federal, State, Local (Public Support)
2/27/89	Newfane	Federal, State, Local (Project Developments)
5/2/89	Olcott	Federal, State, Local (Economics, Impacts)
6/1/89	Lockport	Federal, State, Local (Study Status)
6/20/89	Newfane	Locals (Task Groups)
7/5/89	Buffalo (COE)	Congressional, Federal (COE) (Study/Project Status)
9/5/89	Buffalo (COE)	Federal, State, Local (Study Status)
9/27/89	Buffalo (COE)	Federal (COE), Local (Master Plan)
11/14/89	Buffalo (DEC)	Federal, State (Dredging and Disposal)
11/27/89	Lockport	Federal (COE), Local (Financing, Plan Selection)
12/5&6/89	Vicksburg, Miss.	Federal, State, Local (WES Model Study Results, Preferred Plan 10A (Modified))
12/19/89	Buffalo (COE)	Federal, State (WES Model Study Results, Evaluation Parameters, Potential Fishery Impacts)
2/8/90	Newfane	Federal, State, Local (Local Master Plan)
4/4/90	Buffalo (COE)	Federal (COE), Local (Project Features)
5/8/90	Newfane	Federal (COE), State, Local (Study Status)
6/14/90	Lockport	Federal (COE), State, Local (Local Master Plan)
6/21/90	Buffalo (NYSDEC)	Federal, State (Construction Environmental Window)
11/16/90	Newfane	Federal (COE), Local (Study Status)
11/29/90	Buffalo (COE)	Federal (COE), Local (Design Considerations)
12/6/90	Newfane	Federal (COE), Local (Design Considerations)
1/31/91	Buffalo (COE)	Federal (COE), Local (Project Features)
3/7/91	Buffalo (COE)	Federal (COE), State, Local (Study Status)
7/18/91	Buffalo (COE)	Federal, Local (Project Costs)

6.08 This Draft Supplement (1991) to the Final Environmental Impact Statement (1978) will be coordinated with concerned agencies and interests for the 45 day review period and the Final Supplement to the Final Environmental Impact Statement will be coordinated for the 30 day review period.

REQUIRED COORDINATION

6.09 A Notice of Intent to prepare a Supplement to the Final Environmental Impact Statement (1978) was published in the Federal Register Tuesday, June 20, 1989. Notice will be made and the Draft Supplement will be coordinated for a 45 day review period. Notice will be made and the Final Supplement will be coordinated for a 30 day review period. If approved a Record of Decision will be signed and coordinated. Subsequently, preparation of final plans and specifications and construction would follow.

6.10 Coordination and Compliance. As summarized in Summary Table 2, compliance with Federal and State environmental statutes is as follows:

6.11 Preservation of Historical Archaeological Data Act of 1974, 16 USC et seq.; National Historic Preservation Act of 1966, as amended, 16 USC 470 et seq.; Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971. Project coordination was conducted with the Advisory Council on Historic Preservation, the U.S. Department of the Interior, and the New York State Office of Parks, Recreation, and Historic Preservation in this regard. A cultural resources investigation was conducted for the Federal project area. No cultural resources that would be impacted by the project were identified. Results were coordinated with appropriate cultural resource agencies. No concerns pertaining to impacts to significant cultural resources were received. The State Historic Preservation Officer indicated in a letter response dated November 13, 1989 that it is the opinion of the SHPO that the Federal project features will have no effect upon cultural resources included in or eligible for inclusion in the National Register of Historic Places. Reference SUPPLEMENTAL ENVIRONMENTAL APPENDIX - SEA-E - ENVIRONMENTAL CORRESPONDENCE, page 24, which follows this SEIS.

6.12 Clean Air Act, as amended, 42 USC 7401 et seq. Project coordination was conducted with the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation in this regard. As indicated in the Environmental Supplement, no significant adverse impacts to air quality would be expected due to project implementation. This Environmental Supplement is being coordinated with the U.S. Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) in this regard.

6.13 Clean Water Act of 1977 (Federal Water Pollution Control Act Amendments of 1972) 33 USC 1251 et seq. Project coordination was initiated with the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation in this regard. The New York State Department of Environmental Conservation designation for Lake Ontario at Olcott is "A-Special" while that for Eighteenmile Creek in Olcott area is "B". It is not expected that implementation of the proposed project would alter these classifications. A Section 404(b)(1) Evaluation Report and associated Public Notice are being coordinated with this Environmental Supplement as Environmental Supplement Appendix EA-B. It is not expected that any significant adverse water quality impacts would be caused due to Federal project construction or future operation and maintenance procedures. A Section 401 Water Quality Certification is hereby requested from the New York State Department of Environmental Conservation.

6.14 National Environmental Policy Act, 42 USC 470a, et seq. Alternative plans are developed and evaluated in accordance with environmental considerations as set forth by this Act, as promulgated by the Department of the Army's: Principles and Guidelines; ER 200-2-2 Environmental Quality - Policies and Procedures for Implementing NEPA; and COE Section 122 Guidelines. Requirements of the Act are accomplished via the Corps' planning process.

6.15 River and Harbor Act, 33 USC 401 et seq. Requirements of this Act are fulfilled via the Corps permit and planning authorities.

6.16 Fish and Wildlife Coordination Act, 16 USC 661 et seq. Project coordination was conducted with the U.S. Department of the Interior - Fish and Wildlife Service as well as with the NYS Department of Environmental Conservation in this regard. These agencies provided preliminary information and impact assessment pertaining to fish and wildlife resources and threatened or endangered species and/or habitat in the Federal project vicinity. Reference sections in this Environmental Supplement pertaining to natural and fish and wildlife resources. Project specific supplemental fishery studies were conducted in 1989. The supplemental Fish and Wildlife Service Coordination Act Report is included as Environmental Supplement Appendix SEA-C. No significant adverse impacts to fish and wildlife resources would be expected due to Federal project (modified) implementation.

6.17 The following are the recommendations listed by the U.S. Fish and Wildlife Service in their Coordination Act Report and the Corps of Engineers, Buffalo District responses.

Recommendation 1. That, to protect both Spring and Fall migratory fishes, all in-water construction activities associated with this project be confined to the period between June 15 and September 1.

Response 1. The following schedule has been coordinated with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation. In-water construction activities may be carried out according to the following schedule:

Year 1 - May 15 to October 6 complete construction of the west breakwater.

Year 2 - May 15 to November 10 complete construction of the east breakwater including the shore-connected segment.

This schedule will permit 10 hour work days, 6 days per week and should allow the bulk of each project to be near completion by September 15. This will minimize impacts on migratory fishes entering Eighteenmile Creek.

Recommendation 2. That, to encourage and enhance waterfowl breeding activities in the project area, a suitable number of wood duck nesting boxes and tripod suspended mallard nesting baskets be placed in the emergent marshes and the isolated shallow areas, particularly along the west bank of Eighteenmile Creek between the Route 18 bridge and the railroad trestle at Burt Dam.

The 1989 Cooperative Agreement between Interior and Army is a mechanism for the Service and the Corps to jointly identify waterfowl habitat conservation and development opportunities associated with civil works projects that would address regional and national goals that are consistent with the NAWMP.

Response 2. At present, the project is not moving forward due to the current policy on recreational projects. If the project moves forward at some future date, the Corps will suggest the duck box/nesting structure

enhancement measure to the local sponsor/State for consideration. Implementation would be dependent on local interests/State participation in this enhancement recommendation, and would require them to provide all items of local cooperation.

6.18 Endangered Species Act, as amended, 16 USC 1531 et seq. Project coordination was conducted with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYSDEC) in this regard. The U.S. Fish and Wildlife Service in their Supplement Coordination Act Report (ENVIRONMENTAL SUPPLEMENTAL APPENDIX SEA-C) indicated that except for possibly transient species; no Federally listed endangered, threatened, or proposed for listing species under their jurisdiction are known to exist in the Federal project impact area and that no impact due to project implementation would be expected in this regard. Likewise, the New York State Department of Environmental Conservation - Wildlife Resources Center has indicated that no State protected species or associated habitats are known to exist in the immediate Federal project area or would be expected to be impacted by project implementation. They did indicate however, that the entire Lake Ontario shoreline in Niagara County is a major duck wintering area and that care should be taken not to disrupt valuable habitat or unnecessarily disrupt these birds. No duck habitat disruption or unnecessary disruption of these birds would be expected due to proposed project construction or implementation.

6.19 Estuary Protection Act, 16 USC et seq. Not applicable in this case.

6.20 Marine Protection Research and Sanctuaries Act of 1972, as amended, 16 USC 1401 et seq. Not applicable in this case.

6.21 Executive Order 11990, Protection of Wetlands, 24 May 1977. Project coordination was conducted with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation in this regard. Review of the Buffalo District's most recent copies of the U.S. Fish and Wildlife Service National Wetland Inventory Maps and the New York State Department of Environmental Conservation Freshwater Wetland Maps indicate that a number of wetland areas exist along Eighteenmile Creek in the area between Burt Dam and the Route 18 bridge upstream of the Olcott Harbor project area. It is not expected that these wetland areas would be impacted by project implementation. No wetlands are located in the Federal project impact area.

6.22 Federal Water Project Recreation Act, as amended, 16 USC 460-1(12) et seq. Project coordination was conducted with the U.S. Department of the Interior, the U.S. Fish and Wildlife Service, the New York State Department of Environmental Conservation, and the New York State Office of Parks, Recreation, and Historic Preservation in this regard. The proposed project is desirable from this recreational perspective. It would provide additional harbor protection while providing an additional 800 boat slips in the outer harbor and additional breakwater fisherman and passive recreational viewing access.

6.23 Land and Water Conservation Fund Act, 16 USC 4601 et seq. Project coordination was/is conducted with the U.S. Department of the Interior (USDI) in this regard. The proposed project is expected to be consistent with their comprehensive outdoor recreation plan.

6.24 Wild and Scenic Rivers Act, 16 USC 1271 et seq. In accordance with the National Wild and Scenic Rivers Act, Public Law 90-542, the final lists of rivers identified as meeting the criteria for eligibility dated January 1981 were consulted. Eighteenmile Creek in Niagara County was not listed.

6.25 Coastal Zone Management Act, as amended, 16 USC 1451 et seq. Project coordination was conducted with the New York State Department of State - Coastal Management Program in this regard. A Coastal Zone Management - Consistency Evaluation Report has been prepared and is included with this Environmental Supplement as Environmental Supplement Appendix E - D. The proposed project is consistent with coastal zone management policies.

6.26 Watershed Protection and Flood Prevention Act, 16 USC 1001 et seq., and Executive Order 11988, Flood Plain Management, 24 May 1977. Project coordination was conducted with various agencies including the Federal Emergency Management Agency in this regard. The local communities are involved in the regular program of the National Flood Insurance Program. By this stage, flood insurance and flood plain management maps have been developed and local ordinances pertaining to new or redevelopment in the flood plain (100-year event) and flood protection to the intermediate regional or 100-year event flood level have been enacted. In this way, flood insurance would help to compensate residents for flood damages to existing developments, while flood plain development ordinances would reduce the potential of flood damages of any future developments or redevelopments. It is not expected that the proposed harbor project would significantly affect the community flood plain areas, although high Lake wave problems within the harbor would be essentially eliminated with new breakwater construction.

6.27 Farmland Protection Policy Act (PL 97-98) and Executive Memorandum - Analysis of Impacts on Prime and Unique Farmlands. Project coordination is conducted with the U.S. Department of Agriculture - Soil Conservation Service in this regard. The upland area surrounding Olcott Harbor is generally more than 75 percent prime farmland. A previously considered upland disposal site (corn field area near Krull Park) for disposal of several thousand cubic yards of polluted dredged material (polluted according to acceptable open lake disposal parameters) is no longer being considered. No significant adverse impact to any important farmland or farm activity would be expected due to proposed harbor Federal project implementation.

6.28 Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 4 January 1979. Not applicable for this study.

6.29 Local Land Use Plans. The Niagara County Legislature passed a resolution (21 March 1978, see letter dated 22 March 1978) completely in favor of Plan 10. In addition, the town of Newfane passed a resolution (10 May 1978, see letter dated 12 May 1978) in favor of Plan 10. Both resolutions confirm land and water uses of the Olcott Harbor area under Plan 10 consistent with desires of the town of Newfane and Niagara County. The Restudy has been coordinated with the town of Newfane and their consultants who are developing the town waterfront Master Plan.

STATEMENT RECIPIENTS

6.30 The following representatives, agencies, and interest groups will receive notice or copies of this report for information, review, and/or comment.

Congressional

U.S. Senator Daniel P. Moynihan
U.S. Senator Alphonse D'Amato
U.S. Representative John J. LaFalce

Federal

Advisory Council on Historic Preservation
U.S. Department of Agriculture
- Soil Conservation Service

U.S. Department of Commerce
U.S. Department of Defense
U.S. Environmental Protection Agency
U.S. Federal Emergency Management Agency
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
- Fish and Wildlife Service

U.S. Department of Transportation
U.S. Coast Guard

State

Office of the Governor
NYS Clearinghouse
NYS Department of Commerce
NYS Department of Environmental Conservation
NYS Department of Health
NYS Department of Transportation
NYS Office of Parks, Recreation, and Historic Preservation
NYS Department of State - Coastal Program Office

Regional and Local

Erie and Niagara Counties Regional Planning Board
Niagara County
Town of Newfane
Hamlet of Olcott

Other Organizations

Great Lakes Commission
Great Lakes United
League of Woman Voters
National Wildlife Federation
Sierra Club
Trout Unlimited

Individuals

Individuals are not listed here, but a complete mailing list is on file at the U.S. Army Corps of Engineers, Buffalo District Office.

6.31 To date, major Federal, State, and local agencies and interests are supportive or non-objectionable to the proposed project. Resolution of previously mentioned specific concerns is being coordinated via these reports.

6.32 It is likely that some residents will be disturbed and annoyed to some extent by project construction (i.e., movement of trucks, etc.) and some land use changes that will likely occur due to project implementation (i.e., parking, service facility developments, etc.).

OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA-A - INDEX AND REFERENCES

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT
AUGUST 1991

INDEX AND REFERENCES

Subject	Documentation: Main Report	EIS	EIS Appendix
Affected Environment		28	B,C,D,E
Alternatives		4	
Areas of Controversy		iv	
Comparative Impacts of Alternatives		21	
Cover Sheet		i	
Cultural Resources		46, 61	E
Environmental Setting		28	
Environmental Effects		47	B,C,D,E
Human (Man-Made) Environment		34, 54	
List of Preparers		62	
Major Conclusions and Findings		11	B,C,D,E
Natural Environment		30, 47	
NED and Recommended Plan		9, 11	B,C,D,E
Need for and Objectives of the Action		1	
Planning Objectives		1	
Plans Considered in Detail		8, 11	
Plans Eliminated from Further Study		4, 11	
Public Concerns		1, 63	B,C,D,E
Public Involvement		63	B,C,D,E
Public Involvement Program		63	B,C,D,E
Public Views and Responses		69	B,C,D,E
Relationship to Environmental Statutes and Requirements		vii, 64	B,C,D,E
Required Coordination		vii, 64	B,C,D,E
Significant Resources		28	B,C,D,E
Statement Recipients		68	
Study Authority		1	
Summary		i, ii, ii	B,C,D,E
Table of Contents		viii	
Unresolved Issues		v	
Without Conditions (No Action)		7	

REFERENCES

1. Final Environmental Impact Statement, Small Boat Harbor, Olcott Harbor, Niagara County, New York, Office of the Chief of Engineers, Department of the Army, Washington, DC 20314, November 1978.

2. Biological Study Report for Olcott Harbor, Town of Newfane, Niagara County, New York, U.S. Department of the Interior - Fish and Wildlife Service, Cortland, New York, 1989.

3. Olcott Harbor, New York, U.S. Fish and Wildlife Service - Coordination Act Report, U.S. Fish and Wildlife Service, Cortland, New York, 1990.

4. Olcott Harbor, New York, Model Studies, Waterways Experiment Station (WES), Vicksburg, MS, for Buffalo District Corps of Engineers, 1989.

5. Soil Survey of Niagara County, New York, U.S. Department of Agriculture - Soil Conservation Service, 1972.

6. Important Farmland of New York, U.S. Department of Agriculture, Soil Conservation Service, August 1977 (Map).

7. Fresh Water Wetlands of New York State (Maps), New York State Department of Environmental Conservation.

8. National Wetlands Inventory Maps, U.S. Department of the Interior - Fish and Wildlife Service.

9. Bureau of Census, Census of Population and Housing (STFIA), 1980.

10. Population Projects, September 30, 1985, New York State Water Quality Management Plan, New York State Department of Environmental Conservation.

11. New York State, Business Fact Book, 1988 Supplement, New York State Department of Economic Development.

12. Profile of People, Jobs, and Housing 1980, New York State Department of Commerce.

13. 1987-88 New York State Statistical Yearbook, The Nelson A. Rockefeller Institute of Government.

14. County and City Data Book, 1988, U.S. Department of Commerce, Bureau of the Census.

15. OBER Regional Projections, 1985, U.S. Department of the Interior, Bureau of the Census.

16. Inventory - Community Water Systems, New York State (Volume I - Municipal, Volume II - Non-Municipal) 1984, New York State Department of Health.

17. Descriptive Data of Sewage Treatment Systems in New York State, June 1987, New York State Department of Environmental Conservation.

18. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA), 40 CFR 1500-1508, Council on Environmental Quality, Executive Office of the President.

19. Cultural Reconnaissance Survey of the Proposed Harbor Improvements at Eighteenmile Creek, Olcott, New York, Olcott, Niagara County; by Neil H. Johnson of Clune and Johnson, Albion, New York, 1977.

20. People, Resources, Recreation, New York Statewide Comprehensive Recreation Plan, 1983, New York Office of Parks, Recreation, and Historic Preservation.

21. U.S. Geological Survey, Area Quad Maps.

22. Final Olcott Hamlet Master Plan, Town of Newfane, Niagara County, New York; Wendel Engineers, PC and Development Services, Inc. with Niagara County Planning and Industrial Development Department, April 1990.

OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL
ENVIRONMENTAL IMPACT STATEMENT
SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA-B SECTION 404(b)(1) PUBLIC NOTICE
AND EVALUATION REPORT

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT
AUGUST 1991

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO
ATTENTION OF

PUBLIC NOTICE

OLCOTT HARBOR PROJECT AT OLCOTT, NEW YORK

REEVALUATION STUDY

This Public Notice has been prepared and distributed pursuant to Section 404(b)(1) of the Clean Water Act (33 USC 1344). Its purpose is to specify what fill materials will be discharged into waters of the United States by implementation of the proposed action. This notice provides the opportunity for any person who may be affected by such discharge to submit comments or request a public hearing. A Section 404(b)(1) Evaluation is included with this Public Notice, which only evaluates the proposed impacts of the discharge of fill material deposition into waters of the United States in the proposed project area. The proposed project is located at Olcott Harbor, Hamlet of Olcott, Town of Newfane, Niagara County, New York, in the general area shown on attached Figures 1,2, and 3.

The project is being reviewed under the following applicable laws:

a. Clean Air Act, as amended, 42 USC 7401, et seq.;
b. National Environmental Policy Act, As amended, 42 USC et seq.;
c. Clean Water Act, as amended (Federal Water Pollution Control Act), 33 USC 1251, et seq.;
d. Watershed Protection and Flood Prevention Act, 16 USC 1001, et seq.;
e. Fish and Wildlife Coordination Act, as amended, USC 661, et seq.;
f. Endangered Species Act, as amended, 16 USC 131, et seq.;
g. Land and Water Conservation Fund Act, as amended, 16 USC 4601-11, et seq.;
h. Federal Water Project Recreation Act, as amended, 16 USC 460-1(12), et seq.;
i. Archaeological and Historic Preservation Act, as amended, 16 USC 469, et seq.; and
j. National Historic Preservation Act, as amended, 16 USC 470a, et seq.

A Water Quality Certification (or waiver thereof) from the New York State Department of Environmental Conservation (NYSDEC) is required for this action. By this Public Notice, the Corps of Engineers is requesting that the NYSDEC issue a Water Quality Certification, or a waiver thereof, in accordance with Section 401 of the Clean Water Act.

The Refined Plan 10A Modified (Figure 2) consists of an east detached breakwater, and an east shore-connected breakwater northeasterly of the U.S. East Pier; a west detached breakwater northwest of the present harbor entrance; an entrance channel between breakwaters connected to an access channel leading to a mooring basin east of the U.S. East Pier. The breakwaters slightly overlap to help prevent storm waves from entering the east basin channels, and

the existing Federal entrance channel between piers. The west detached breakwater would withstand wave attack from lake storms from the west through north-northwest and the east shore-connected breakwater would withstand wave attack from the north through east. Physical model study results indicate that the west breakwater would dissipate and prevent westerly storm waves from overtopping the U.S. West Pier; and would also reduce wave reflection. Cross-sections and profiles of the breakwaters are shown on Figure 3.

The east shore-connected breakwater totals 323 feet in length with a 95-foot long foot-bridge connecting it to the detached east breakwater. A portion of the detached east breakwater and the shore-connected breakwater would be constructed on the alignment of the remains of an old hotel pier that connected to shore at Krull Park. The east shore-connected east breakwater would be of stone rubblemound construction with armor and underlayers, and a bedding layer. Crest width would be 12 feet and breakwater sideslopes 1 vertical on 2 feet horizontal. The crest height would be +12.0 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

A 7-foot wide concrete ramp would be constructed to provide access for physically handicapped people. The ramp would extend from Ontario Street to the east shore-connected breakwater, a drop of about 19 feet. The ramp would be sloped at 1V on 12H with 8 level landings at 30 foot intervals for rest and safety. Railing would be provided on both sides of the ramp for safety and locomotion-assist for wheel chairs.

The foot bridge would be supported by two 23-foot diameter sheet pile cells and have a 90-foot clear opening to allow for water circulation and fish migration in and out of the east basin formed by the east breakwaters, the U.S. East Pier, and the open lake. The bridge would be a single-span precast concrete bridge. The design of the bridge indicates that the low point of the bridge would be at +9.75 feet above low water datum. The bridge deck would be about 8 feet wide and have railings on each side for the safety of fishermen and others who desire access.

The east detached breakwater totals 1,545 feet in length, and would assume a 121° interior angle with the shore-connected breakwater. Its crest would be +13 feet above low water datum and has a crest width of 16 feet and same sideslopes as the shore-connected breakwater. A 500-foot section of the breakwater, over a buried river channel, would have a crest elevation of +14 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

The west detached breakwater would have an overall length of 960 feet with an angle in the alignment at about mid-length. The interior angle would be 130°, the northerly leg 550 feet long and the southerly leg or shorearm 410 feet long. The west detached breakwater would be of stone rubblemound construction with armor, underlayer, and bedding layer. Crest height would be +13 feet above low water datum, have a width of 13.5 feet and sideslopes of 1 vertical on 2 horizontal. The west detached breakwater would not have a walkway or guardrail on the crest to discourage public access to the detached breakwater.

The entrance channel between the east and west detached breakwaters will be about 150 feet wide.

construction work would be done by a private contractor under contract with the U.S. Army Corps of Engineers. Possible equipment needed to construct the project would include barges and dump trucks that would be used to haul stone to the site; a derrick boat to lift and place stone into the water; a tug boat to push and position barges; bulldozer to push, spread, and grade fill material; land plant and/or floating plant, crane and backhoe to place stone.

The latest published version of the National Register of Historic Places has been consulted. There are no registered properties or properties listed as being eligible for inclusion therein that will be affected by this project. Previous cultural resources investigations of the project area conducted for the Corps of Engineers indicate that no archaeological or historic resources will be significantly affected by this project.

Based on the review of available environmental data, I have determined that the proposed work will not affect a species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor will it affect the critical habitat of any such species. Therefore, unless additional information indicates otherwise, no additional formal consultation pursuant to Section 7 of the Endangered Species Act Amendments of 1978 will be undertaken with the U.S. Fish and Wildlife Service.

A Final Environmental Impact Statement dated November 1978 was filed with the U.S. Environmental Protection Agency on 5 October 1979. Since the present reevaluation study of the authorized Olcott Harbor Project is considered to be a significant Federal Action, a supplement to the previously filed Final Environmental Impact Statement has been prepared and is being coordinated with Federal and State agencies as well as with public interests, along with this Public Notice and Section 404(b)(1) Evaluation.

The work will be undertaken in a manner consistent to the maximum extent practicable with the State of New York Coastal Zone Management Program, as determined by the Coastal Zone Management Consistency Determination.

This notice is published in conformance with Title 33, Code of Federal Regulations 209.145. Copies of this notice have been furnished to the following Federal, State, and local agencies, and organizations:

CONGRESSIONAL

U.S. Senator - Daniel P. Moynihan
U.S. Senator - Alphonse D'Amato
U.S. Representative - John J. LaFalce

FEDERAL

Advisory Council on Historic Preservation
U.S. Department of Agriculture
  - Soil Conservation Service
U.S. Department of Commerce
U.S. Department of Defense
U.S. Environmental Protection Agency
Federal Emergency Management Agency
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
  - Fish and Wildlife Service
U.S. Department of Transportation
U.S. Coast Guard

STATE

Office of the Governor
NYS Clearinghouse
NYS Department of Commerce
NYS Department of Environmental Conservation
NYS Department of Health
NYS Department of Transportation
NYS Office of Parks, Recreation, and Historic Preservation
NYS Department of State-Coastal Program Office

REGIONAL AND LOCAL

Erie and Niagara Counties Regional Planning Board
Niagara County
Town of Newfane
Hamlet of Olcott

OTHER ORGANIZATIONS

Great Lakes Commission
Great Lakes United
League of Woman Voters
National Wildlife Federation
Sierra Club
Trout Unlimited

Any interested parties and/or agencies desiring to express their views concerning the proposed discharge may do so by filing their comments, in writing, no later than 30 days from the date of issuance of this notice. A lack of response will be interpreted as meaning that there is no objection to the proposed discharge.

Any person who has an interest which may be affected by the placement of this material may request a public hearing. The request must be submitted in writing to the District Commander within 30 days of the date of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

Correspondence pertaining to this matter should be addressed to the District Commander; U.S. Army Engineer District, Buffalo; 1776 Niagara Street; Buffalo, New York 14207-3199; ATTN: Mr. Wiener Cadet. If you have any questions or require additional information, please contact Mr. Wiener Cadet of my Plan Formulation Section at (716) 879-4247.

JOHN W. MORRIS
Colonel, U.S. Army
Commanding

Enclosures

NOTICE TO THE POSTMASTER: It is requested that the above notice be conspicuously displayed for 30 days from the date of this issuance.

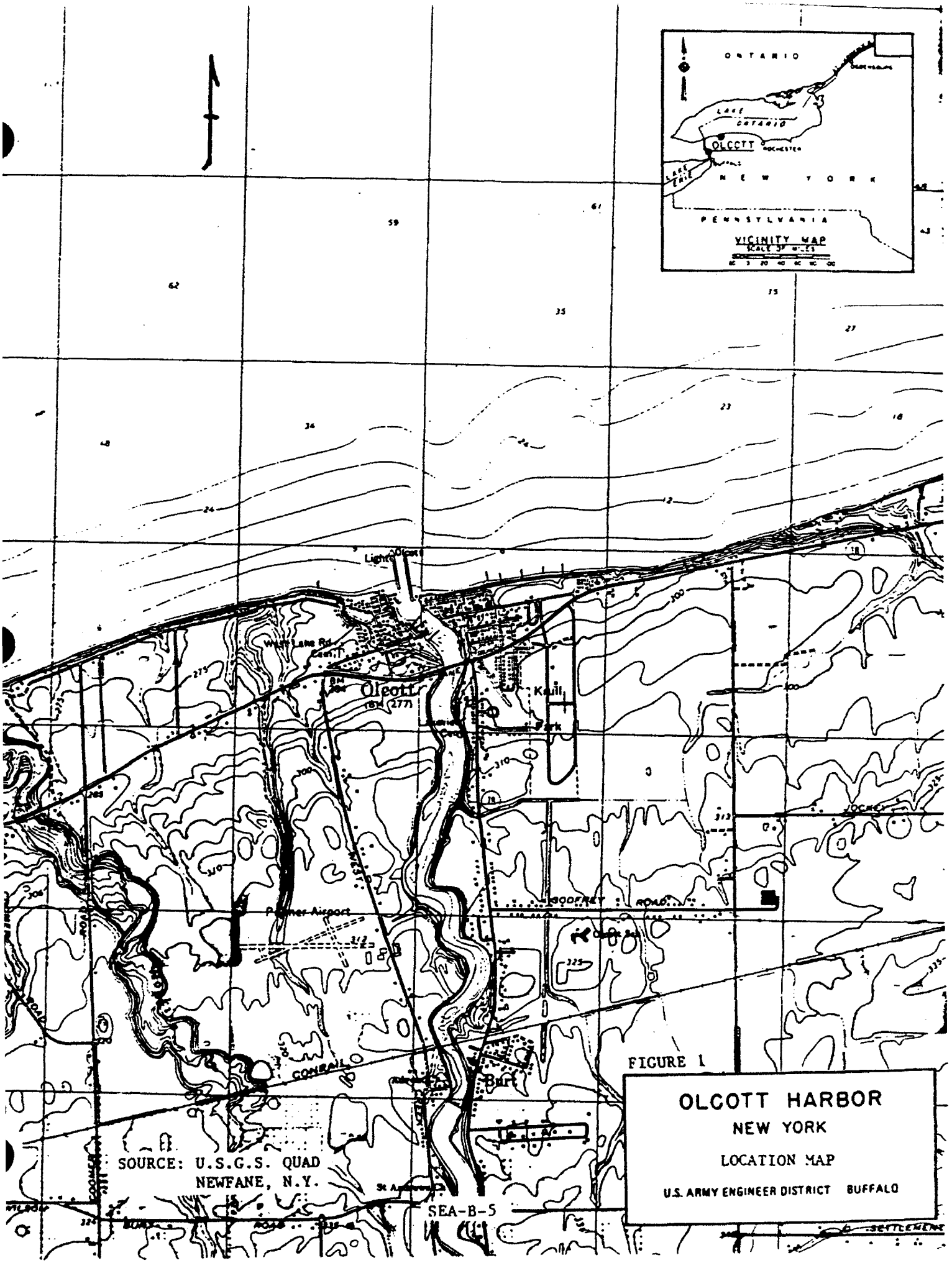
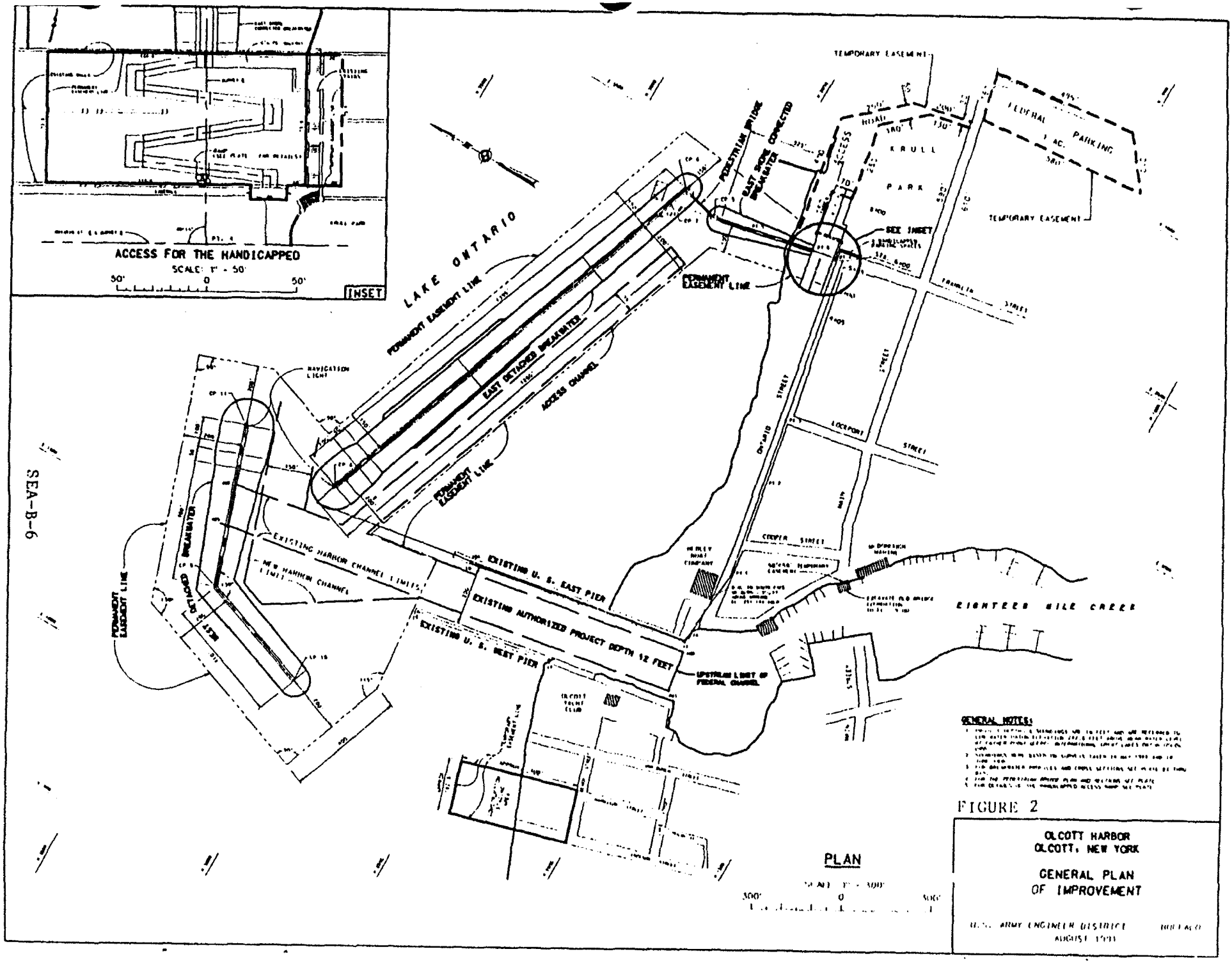


FIGURE 1

OLCOTT HARBOR
NEW YORK
LOCATION MAP
U.S. ARMY ENGINEER DISTRICT BUFFALO

SOURCE: U.S.G.S. QUAD
NEWFANE, N.Y.

SEA-B-5



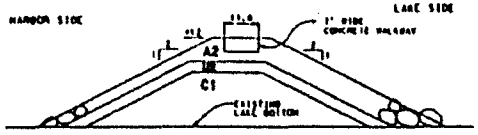
SEA-B-6

FIGURE 2

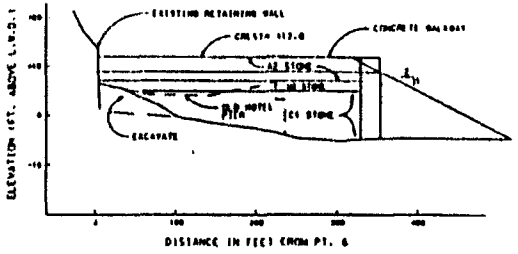
OLCOTT HARBOR
OLCOTT, NEW YORK

GENERAL PLAN
OF IMPROVEMENT

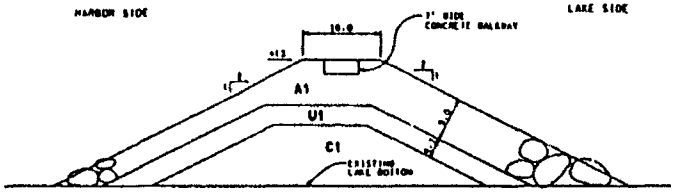
U.S. ARMY ENGINEER DISTRICT BUFFALO
AUGUST 1981



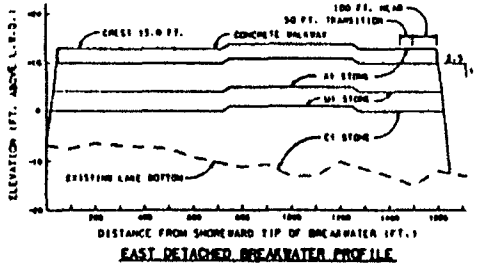
EAST SHORE CONNECTED BREAKWATER
TYPICAL SECTION



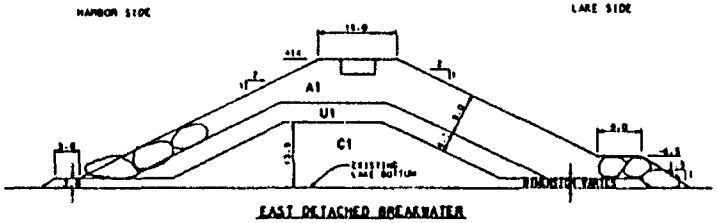
EAST SHORE-CONNECTED
BREAKWATER PROFILE



EAST DETACHED BREAKWATER
TYPICAL SECTION



EAST DETACHED BREAKWATER PROFILE



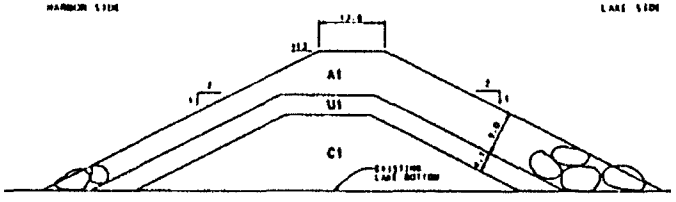
EAST DETACHED BREAKWATER
OVERBUILT SECTION

LEGEND:

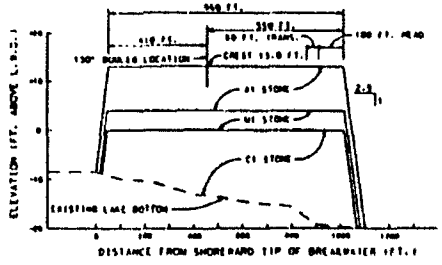
A1	ARMOR STONE 8000-22000 LBS.
A2	ARMOR STONE 1400-3000 LBS.
C1	CORE STONE 2-125 LBS.
U1	UNDERLAYER STONE 600-2200 LBS.
U2	UNDERLAYER STONE 100-350 LBS.

NOTES:

1. STONE WEIGHTS DETERMINED BY USING A SPECIFIC GRAVITY OF 2.8



WEST DETACHED BREAKWATER
TYPICAL SECTION



WEST DETACHED BREAKWATER PROFILE

FIGURE 3

OLCOTT HARBOR, NEW YORK
SMALL-BOAT HARBOR PROJECT

BREAKWATER PROFILES AND
TYPICAL SECTIONS

U.S. ARMY ENGINEER DISTRICT BUFFALO
AUGUST 1991

SEA-B-7

SECTION 404(b)(1) EVALUATION
OLCOTT HARBOR PROJECT AT OLCOTT, NEW YORK

REEVALUATION STUDY

1. INTRODUCTION

1.1 Section 404 Discharges - Section 404 of the Clean Water Act (33 USC 1344) requires the evaluation of the water quality effects of the discharge of dredged or fill materials into waters of the United States. This final evaluation for the proposed Olcott Harbor Project, has been prepared using U.S. Environmental Protection Agency guidelines for specifications of disposal sites for dredged or fill material dated 24 December 1980, and is being coordinated with the public in conformance with guidance contained in NCDPD-ER letter dated 4 September 1979, "Public Coordination of Section 404(b)(1) Evaluations on Civil Works Projects." Generally, the first reference provides guidance on the content of Section 404(b)(1) Evaluations, while the second reference states that a public notice, with attached Preliminary Section 404 Evaluation, should be issued at the earliest possible time before completion of the Final Environmental Impact Statement.

1.2 Section 404(b)(1) of the Clean Water Act (33 USC 1344) requires that disposal sites and dredged or fill material to be discharged into waters of the United States, be evaluated through the application of guidelines developed by the Administrator of the U.S. Environmental Protection Agency (USEPA) in conjunction with the Secretary of the Army. The purpose of this Section 404(b)(1) Evaluation is to address placement of stone fill material into Lake Ontario at Olcott Harbor.

2. PROJECT DESCRIPTION

2.1 Location

2.1.1 Olcott Harbor is located in the vicinity of the hamlet of Olcott, in the town of Newfane, Niagara County, New York, and is situated on the southern shore of Lake Ontario, approximately 6 miles north of the city of Lockport. Stone to construct the breakwaters would be placed in water depths of about 12 feet $\pm$ LWD in Olcott Harbor.

2.2 General Description of the Action

2.2.1 The Refined Plan 10A Modified (Figure 2) consists of an east detached breakwater, and an east shore-connected breakwater northeasterly of the U.S. East Pier; a west detached breakwater northwest of the present harbor entrance; an entrance channel between breakwaters connected to an access channel leading to a mooring basin east of the U.S. East Pier. The breakwaters slightly overlap to help prevent storm waves from entering the east basin channels, and the existing Federal entrance channel between piers. The west detached breakwater would withstand wave attack from lake storms from the west through north-northwest and the east shore-connected breakwater would withstand wave attack from the north through east. Physical model study results indicate that the west breakwater would dissipate and prevent westerly storm waves from overtopping the U.S. West Pier; and would also reduce wave reflection. Cross-sections and profiles of the breakwaters are shown on Figure 3.

2.2.2 The east shore-connected breakwater totals 323 feet in length with a 95-foot long foot-bridge connecting it to the detached east breakwater. A portion of the detached east breakwater and the shore-connected breakwater would be constructed on the alignment of the remains of an old hotel pier that connected to shore at Krull Park. The east shore-connected east breakwater would be of stone rubblemound construction with armor and underlayers, and a bedding layer. Crest width would be 12 feet and breakwater sideslopes 1 vertical on 2 feet horizontal. The crest height would be +12.0 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

2.2.3 A 7-foot wide concrete ramp would be constructed to provide access for physically handicapped people. The ramp would extend from Ontario Street to the east shore-connected breakwater, a drop of about 19 feet. The ramp would be sloped at 1V on 12H with 8 level landings at 30 foot intervals for rest and safety. Railing would be provided on both sides of the ramp for safety and locomotion-assist for wheel chairs.

2.2.4 The foot bridge would be supported by two 23-foot diameter sheet pile cells and have a 90-foot clear opening to allow for water circulation and fish migration in and out of the east basin formed by the east breakwaters, the U.S. East Pier, and the open lake. The bridge would be a single-span precast concrete bridge. The design of the bridge indicates that the low point of the bridge would be at +9.75 feet above low water datum. The bridge deck would be about 8 feet wide and have railings on each side for the safety of fishermen and others who desire access.

2.2.5 The east detached breakwater totals 1,545 feet in length, and would assume a 121° interior angle with the shore-connected breakwater. Its crest would be +13 feet above low water datum and has a crest width of 16 feet and same sideslopes as the shore-connected breakwater. A 500-foot section of the breakwater, over a buried river channel, would have a crest elevation of +14 feet above low water datum. The crest would have a level non-slip walkway with minimum clear width of about 7 feet.

2.2.6 The west detached breakwater would have an overall length of 960 feet with an angle in the alignment at about mid-length. The interior angle would be 130°, the northerly leg 550 feet long and the southerly leg or shorearm 410 feet long. The west detached breakwater would be of stone rubblemound construction with armor, underlayer, and bedding layer. Crest height would be +13 feet above low water datum, have a width of 13.5 feet and sideslopes of 1 vertical on 2 horizontal. The west detached breakwater would not have a walkway or guardrail on the crest to discourage public access to the detached breakwater.

2.2.7 The entrance channel between the east and west detached breakwaters will be about 150 feet in width.

2.3 Authority and Purpose

2.3.1 This Olcott Harbor navigation study was authorized by the Water Resources Development Act of 1986, Public Law 99-662, dated 17 November 1986. The proposed action would protect the harbor entrance channels and provide protected embayment areas for additional boat docking facilities.

2.4 General Description of the Dredged or Fill Material

2.4.1 General Characteristics of the Sediments (grain size, soil type) - In July 1989, surface and core sediment samples were collected in the vicinity of the proposed project by a Contractor for the Corps of Engineers. Sediment samples could not be obtained from the general vicinity of the offshore lake area in Olcott Harbor, due to the presence of rock substrate. It appears that the entire proposed outer harbor area has a stony, rocky substrate containing little or no sediment. Particle size analysis showed that sediments from the existing Federal channel consist primarily of fine sands. Sediments in the upstream end of the proposed project area of Eighteenmile Creek downstream of the existing Route 18 bridge, range from heavily polluted near the bridge, to generally non-polluted to moderately polluted to the Creek's mouth. Between the existing Federal piers in the harbor, the sediment consists of clean sands. Fill material to construct the breakwaters would consist of irregular shaped bedding stones weighing from 2 to 125 pounds, underlayer stones ranging in weight from about 1,200 to 4,000 pounds, and an outer armor stone layer ranging in weight of stones from 10,000 to 40,000 pounds. The stone would likely consist of either unpolluted limestone (containing calcium carbonate) or dolomite (containing calcium magnesuim carbonate) from a quarry site in the nearby vicinity. These materials are highly insoluble, with very slight potential for release of calcium or magnesium into the aquatic environment, which would have a negligible influence on water quality.

2.4.2 Quantity of Sediments and Stone Fill Material - The total volume of breakwater limestone material to be deposited into Lake Ontario is approximately 85,000 cubic yards.

2.4.3 Source of Sediments - Limestone for construction of breakwaters would be obtained from an acceptable quarry site, probably within the general vicinity of Western New York.

2.5 Description of the Proposed Discharge Site

2.5.1 Location - Stone for breakwater construction would be deposited in the vicinity of Olcott Harbor at locations shown on Figure 2 entitled General Plan of Improvement.

2.5.2 Size - The lake bottom area to be occupied by breakwater stone for Refined Plan 10A (Modified) would be about 6.0 acres in size.

2.5.3 Type of Site - The deposition site for breakwater stone would be in water depths up to about 12 feet $\pm$ LWD in Olcott Harbor.

2.5.4 Type of Habitat - Placement of stone to construct breakwaters would occur in the open water littoral zone of the harbor.

2.5.5 Timing and Duration of Discharge - As a result of the Corps' coordination meeting with the NYS Department of Environmental Conservation and the U.S. Fish and Wildlife Service on 21 June 1990, letters received by the Corps from these agencies dated 6 July 1990 confirmed the following mutually agreed upon "environmental window" schedule during which in-water construction work

would be authorized to occur: Year 1 - 15 May to 6 October for construction and completion of the west breakwater; Year [illegible] 5 May to 10 November for construction and completion of the east breakwater including the shore connected segment. In-water construction work should be completed as soon as possible within the aforementioned environmental window dates, in order to lessen adverse impacts that may temporarily affect fish spawning and public fishing opportunity. Any future in-water maintenance work on the breakwaters should only be done during the period between 15 June and 1 September. Other than during the aforementioned permissible project construction periods mentioned, in-water construction work should be avoided. All work related to maintenance dredging and disposal of dredged material would have to comply with current environmental laws and regulations.

2.6 Description of the Discharge Method

2.6.1 Construction of this project will be done by a private contractor under contract with the Corps of Engineers. Delivery of the stone to the site would depend on the quarry selected. For example, a stone quarry situated away from any water transportation would deliver the stone by either truck or rail, or a stone quarry located near water transportation, would most likely deliver the stone by floating plant (barge). Once at the site, the stone would be either placed directly into the work site, or transferred to land for later use. There are two possible methods of construction: land plant and a combination of both land plant and floating plant. If the land plant method was used, the smaller core stone would be hauled to the site and end dumped into the breakwater, by starting from shore and then progressively working its way outward to the end of the proposed breakwater. A bulldozer would push the material so it forms a flat crest working surface for stone hauling trucks to run on. A small crane or backhoe would shape the breakwater sideslopes and place the underlayer and armor stone. Partial construction, consisting of building the breakwaters only part way up to their final height, would proceed from the shore out to the end. Once this was done, the rest of the breakwater height would be completed by starting at the outer end and proceeding back to shore. The gap between the east detached breakwater and east shore-connected breakwater would be created by removing the partially built breakwater and then, placing the armor stone around the ends. For the shore-connected breakwaters, construction work would probably be done by using both a land plant and floating plant The off-shore detached breakwater portions would have the material delivered to the site by tug boat and barge. A floating crane would remove the material from the barges and place and shape the material into the breakwaters.

3. FACTUAL DETERMINATIONS

3.1 Physical Substrate Determinations

3.1.1 Substrate Elevation and Slope - The existing stony, rocky, sandy lake bottom substrate would be covered by larger and heavier stone than what is currently present at the proposed breakwater sites. Consequently, breakwater stone would be placed above the bottom elevation of existing substrate. The breakwaters would be designed with relatively steep sideslopes.

3.1.2 Sediment Type - Testing of the sediment in Olcott Harbor and Eighteenmile Creek in the general vicinity of the proposed project area during the summer of 1989 indicates that, the substrate consists of stony, rocky material containing little or no sediment in the general vicinity of the offshore lake area at Olcott Harbor, and clean brown medium sands in the Federal channel. In Eighteenmile Creek upstream to the Route 18 bridge, the substrate consists of grey and/or brown silts and fine sands. Stone for the rubblemound breakwaters would consist of quarry limestone obtained from an acceptable quarry site.

3.1.3 Fill Material Movement - No dredging would be required to construct the proposed project. Current patterns at the potential project site are predominantly eastward (National Oceanic and Atmospheric Administration, 1976), although they may vary, depending upon wind direction and velocity. No significant movement of the heavy quarry limestone material used to construct the breakwaters is anticipated to occur.

3.1.4 Physical Effects on Benthos - Although no recent survey of benthic organisms in the potential harbor project area is available, some idea of macroinvertebrate benthic organisms that utilize the general vicinity of Olcott Harbor and Eighteenmile Creek (up to about Burt Dam), is provided in a document entitled, "Baseline Biological Survey Report in the Area of Olcott Harbor, New York," dated 28 December 1978, which was done by the local consulting firm "Ecology and Environment, Inc.," for the U.S. Army Corps of Engineers. Benthic invertebrate samplings were made at several aquatic stations in the locale of the existing breakwater piers, as well as in Eighteenmile Creek upstream to about the Route 18 bridge during the fall, spring, and summer seasons from October 1977 through August 1978. The most abundant macroinvertebrates collected were tubificid worms - which were more prevalent during the fall and summer sampling periods. Gastropods (snails), pelecypods (clams), dipteran (fly) larvae, and leeches comprised the remainder of the macroinvertebrates collected during the survey.

3.1.5 Deposition of stone material onto the lake bottom will crush and destroy benthic organisms at the breakwater sites. Disruption of the water column near the lake bottom substrate will temporarily contribute toward displacement of benthic invertebrates. As temporarily suspended sediment resettles, some benthos would be smothered. Eventually, the submerged rough stone surfaces of breakwater slopes will provide some new long term habitat for colonization by benthic organisms.

3.2 Water Circulation, Fluctuation, and Salinity Determinations

3.2.' Water:

a. Salinity - Salinity determinations are not applicable to this Section 404(b)(1) Evaluation since the disposal site is located in fresh water.

b. Water Chemistry - Coordination with the NYSDEC in April 1989 on water quality in the potential project locale of the harbor and in Eighteenmile Creek indicated that, based on best usage, the NYS Water Quality Classification for Lake Ontario at Olcott Harbor is "Class A"; at Eighteenmile Creek from its mouth upstream, for a distance of about one-half mile upstream is "Class B". Best usage for Class A water is for a source of water supply for drinking,

culinary or food processing purposes, and any other usages. Class B water may be used for primary contact recreation and any other uses except as a source of water supply for drinking, culinary or food processing purposes.

c. PH and Clarity - Temporary increases in turbidity and suspended solid levels will occur in the general vicinity of the project site during deposition of stone material. Any such contribution to the existing turbidity plume that often occurs in the harbor will temporarily further decrease water clarity. The plume is influenced by existing currents or wind and wave action. In the Olcott Harbor area, winds are predominantly from the southwest, west, and northwest. It is anticipated that water clarity should return to ambient conditions in approximately several hours following placement of stone.

d. Color - Water color at the breakwater stone deposition site would be temporarily altered by water column disruption and turbidity during the discharge of stone material.

e. Odor - No significant odor would be anticipated by deposition of stone fill material at the breakwater sites in Olcott Harbor.

f. Taste - Water taste in the general vicinity of the proposed project site may be affected during and for a short period of time following completion of the stone disposal operation.

g. Dissolved Gas Levels, Nutrients, and Eutrophication - No significant adverse impacts in this regard would be anticipated.

h. Nutrients - No significant impacts.

i. Eutrophication - No significant impacts.

3.2.2 Current Patterns and Circulation:

a. Current Patterns and Flow - Deposition of stone fill to construct the breakwaters will alter current patterns in the immediate vicinity of the harbor, by obstructing the influence of wind induced waves coming inshore from the lake.

b. Velocity - Deposition of breakwater stone material would alter longshore current patterns and velocities as well as stream flow currents into the Lake to some degree in the immediate vicinity of the harbor area.

c. Stratification - No significant impacts.

d. Hydrologic Regime - No significant impact in the vicinity of the lake disposal site.

3.2.2 Normal Water Level Fluctuations - No impact.

3.2.3 Salinity Gradients - Not applicable.

3.2.4 Actions Taken to Minimize Impacts - In order to minimize adverse impacts on fish and wildlife resources, coordination with the USFWS and NYSDEC agencies would be maintained, in order to determine the time period in which to construct the project, for the purpose of minimizing adverse impacts.

3.3 Suspended Particulate/Turbidity Determinations

3.3.1 Expected Changes in Suspended Particulates and Turbidity in the Vicinity of the Discharge Site - With regard to deposition of stone material at breakwater sites, a temporary increase in short-term turbidity and suspended solid levels may occur to some extent in the project area. Changes in suspended particulate and turbidity levels are expected to be minor and of short duration (i.e., several hours). Any turbidity plume that might develop would be influenced by existing currents, wind and wave action at the project site.

3.3.2 Effects on Chemical and Physical Properties of the Water Column (Light Penetration, Dissolved Oxygen, Toxic Metals and Organics, Pathogens, Aesthetics, and Others as Appropriate) - Placement of stone during construction of the breakwaters would temporarily decrease light penetration, due to localized turbidity caused by water column disruption and resuspension of some sediment and detritus. Such turbidity would also temporarily detract from the aesthetic appearance of the harbor in the general vicinity of the project site. Such impacts are anticipated to be moderate until the breakwaters are completed and water column disruption by construction work ceases. No significant adverse impacts are anticipated with regard to dissolved oxygen, toxic metals, organics, and pathogens.

a. Light Penetration - Temporary increases in turbidity could cause some temporary decreases in light penetration. Although the harbor experiences frequent turbidity under existing conditions, deposition of stone to construct breakwaters would temporarily increase turbidity to some degree, that would contribute to short-term reduction in light penetration.

b. Dissolved Oxygen Levels - Some minor temporary short-term decrease in dissolved oxygen levels may occur during deposition of stone to construct breakwaters. Such action would elevate the level of suspended particulates in the water column, that could react with dissolved oxygen in the water, and result in some temporary oxygen depletion. However, water currents, wind and wave action would probably tend to contribute toward rapidly dissipating such suspensions, with resulting return to ambient conditions.

c. Toxic Metals and Organics - No significant resuspension of pollutants and organics is anticipated by deposition of stone to construct breakwaters in the harbor area of Lake Ontario at Olcott. Surface and core sediment samples taken in the vicinity of the Federal navigation channel at Olcott Harbor during July 1989 were analyzed for pollutants. Information on site locations and bulk organic data for the aforementioned sediment sampling was coordinated with the Region II office of the U.S. Environmental Protection Agency, in a letter dated 22 September 1989 to the Region II office from the Buffalo District Corps of Engineers. The sediment in the upstream end of Eighteenmile Creek near the Route 18 bridge is heavily polluted with heavy metals and conventional pollutants. The sampling stations extending downstream are increasingly less polluted. All locations had very low to non-detectable levels of volatile organics, PCB's, pesticides, and PAH's. The harbor area contains stony, rocky substrate with little to no sediment material. No dredging would be done to construct the breakwater project.

d. Aesthetics - Deposition of stone at the project site would temporarily contribute to some short-term increased resuspension of bottom sediments into the water column even though a turbidity plume usually occurs in the Olcott Harbor area under present conditions. Such increased turbidity would contribute further toward detracting from the visual appearance of surface water, since work would be conducted off-shore in the harbor where it could be somewhat readily observed from the shoreline.

3.3.3 Effects on Biota:

a. Primary Production and Photosynthesis - Short-term increase in turbidity and suspended solids generated during stone deposition, may cause some localized minor disruption to plankton in the water column. Temporary further reduction in light penetration due to turbidity increase, would probably decrease algae photosynthesis in the harbor area of the proposed project, until construction ceased. The area occupied by breakwater stone would eliminate some water column habitat in the Lake from use by phytoplankton.

b. Suspension/Filter Feeders - Some minor short-term adverse impact on suspension and filter feeders may occur due to a temporary increase in water turbidity from suspended sediment and detritus. Burial of some existing benthic organisms would occur as detritus and sediments in suspension settled out. Submerged breakwater stone would soon provide new habitat for recolonization by benthic organisms at the project site.

c. Sight Feeders - Temporary adverse impacts on sight feeders (fish, other free-swimming aquatic animals) may occur in the general project vicinity as a result of the temporary increases in turbidity due to suspended sediment and detritus. Some relatively sedentary species may be covered over or crushed by stone. However, most mobile sight feeding species would probably avoid the immediate vicinity of the harbor project site during active construction periods.

3.3.4 Actions Taken to Minimize Impacts - Project environmental design considerations. Construction operations to build the project and discharge of dredged material, would be accomplished within the shortest time period feasible, in order to avoid prolonging adverse impacts on aquatic biota. The period of such construction would be closely coordinated with the U.S. Fish and Wildlife Service and New York State Department of Environmental Conservation. Future operations and maintenance work for the project would be confined as much as is feasibly possible, to a time period between approximately 15 June and 1 September, in order to avoid or minimize any adverse impacts on in-shore fisheries relative to fish spawning movements and migrations and recreation fishing.

3.4 Contaminant Determinations

3.4.1 The term "contaminant" is defined by USEPA Guidelines, 40 CFR 230.3(e) as "a chemical or biological substance in a form that can be incorporated into, onto, or be injested by and that harms aquatic organisms, consumers or aquatic organisms, or users of the aquatic environment, and includes but is not limited to the substances on the 307(a)(1) list of toxic pollutants promulgated on 31 January 1978 (43 FR 4109)."

3.4.2 The breakwater stone fill material which would consist of quarry limestone, appears to meet exclusion criteria for testing the chemical-biological interactive effects outlined in 40 CFR 230.4-1(b), (2), and (3), and no further testing on this material will be conducted. Such materials may be excluded from the aforementioned testing if any of the exclusion criteria as defined in 40 CFR 230.4-1(b)(i), (ii), or (iii) are met. Briefly stated, these exclusion criteria are: (i) that the dredged or fill material is composed predominately of sand, gravel, or other naturally occurring sedimentary material with particle sizes larger than silt, usually found in high energy environments; (ii) that the material is suitable and being used for beach nourishment; (iii) that the material proposed for discharge is primarily the same as at the proposed discharge site. This final criteria requires that the material proposed for discharge is sufficiently removed from sources of pollution to provide reasonable assurances that the material is not polluted from such sources, and that adequate conditions are provided on the disposal method to provide reasonable assurance that the discharge material will not be moved by currents or otherwise in a manner that is damaging to the environment outside the disposal area. The stone fill material proposed for placement below the ordinary high water line of Lake Ontario is considered to be unpolluted.

3.5 Aquatic Ecosystems and Organisms Determinations

3.5.1 Effects on Plankton - Only minor short-term (several hours) adverse impacts are anticipated to affect plankton (minute weakly swimming or floating animal and plant life), due to limited, temporary increases in turbidity and suspended solid levels during material placement. Elutriate tests and acute toxicity bioassay tests on Olcott Harbor sediments were performed in 1987 by the consulting firm T.P. Associates International, Incorporated. Their report to the Corps of Engineers entitled "Analysis of Sediments from Olcott Harbor" indicates that elutriate testing of the harbor's sediment samples show minor releases of Nitrogen, Barium, Cadmium, Iron, Manganese, Nickel, Zinc, Cyanide, oil, and grease. With regard to acute toxicity tests, bioassays were performed on the fathead minnow (Pimephales promelas), burrowing mayfly nymph (Hexagenia limbata), and zooplankton (Daphnia magna). Based on testing done in 1987, sediments tested at all sampling sites were classified as being borderline non-polluted/moderately polluted as indicated by the 10-50 percent mortality range for the burrowing mayfly nymph and Daphnia (mayfly nymph and Daphnia mortality data ranged from 12 to 28 and 10 to 11 percent, respectively). Sediments at all sites were classified as non-polluted with respect to fathead minnow mortality (less than 10 percent).

3.5.2 Effects on Benthos - The placement of stone into Olcott Harbor will result in adverse impacts on benthic invertebrate organisms as addressed in paragraph 3.1.5 of this Section 404(b)(1) Evaluation. Benthic macroinvertebrates are expected to soon colonize the new habitat provided by the submerged surfaces of stone breakwater slopes.

3.5.3 Effects on Nekton - Nektonic organisms (fish and other free-swimming aquatic animals) would probably rapidly disperse from, as well as avoid the Olcott Harbor project site during active construction of the breakwaters. No significant toxic effects on nekton are expected. Nekton organisms would soon return to the area after construction work was completed.

3.5.4 Effects on Aquatic Food Web - Minor temporary adverse effects on the aquatic food web are anticipated at the stone discharge sites, primarily due to the physical disruption and mortality of benthic macroinvertebrate organisms as formerly addressed in paragraphs 3.1.4, 3.1.5, and 3.5.2 in this Section 404(b)(1) Evaluation. Some adverse impact to nekton and plankton would occur mainly from physical rather than chemical impacts (i.e., disruption to the water column during active discharge of dredged and fill material, turbidity). Although some loss of water column and bottom habitat in the Lake would occur due to stone deposition, relatively rapid recolonization of the placement site is anticipated by invertebrates, fish and to some degree by algae.

3.5.5 Effects on Special Aquatic Sites -

a. Sanctuaries and Refuges - Not applicable.

b. Wetlands - No significant impact.

c. Mud Flats - Not applicable.

d. Vegetated Shallows - No significant impact.

e. Coral Reefs - Not applicable.

f. Riffle and Pool Complexes - No significant impact.

3.5.6 Threatened and Endangered Species - No Federal or State listed threatened or endangered species have been identified in the proposed project area. Therefore, no impacts on such species would be anticipated.

3.5.7 Other Wildlife - Olcott Harbor area is a open-lake littoral area, that is occasionally utilized by some species of gulls and terns, and as resting and/or feeding habitat by migratory waterfowl. No significant adverse impacts to these avian species are anticipated.

3.5.8 Actions to Minimize Impacts - Actions to minimize adverse impacts on plankton, benthos, nekton, the food web, and other wildlife would be similar to those described in paragraph 3.3.4 of this Section 404(b)(1) Evaluation.

3.6 Proposed Disposal Site Determinations

3.6.1 Mixing Zone Determinations - Only minor localized water quality impacts in the vicinity of the project site are anticipated during discharge of the stone material. The following factors were considered in determining the acceptability of the mixing zone for deposition of stone material at the proposed project site:

FACTOR	RELEVANT COMMENTS
Water Depth	Depths up to about 12 feet LWD at the stone breakwater sites.
Current Velocity, Direction and Variability	Predominant current, wind, and wave actions move from west to east at the site; current velocities generally range less than one foot per second.

Degree of Turbulence	Considerable water turbulence may occur at the potential site during Lake Ontario storm conditions. Storm induced wave heights ranging from over 5 feet to 13 feet have been recorded. Some water turbulence would be generated by the placement operation.
Stratification	No significant impacts on normal Lake Ontario water stratification are expected.
Discharge Vessel Speed and Direction	A derrick boat and/or floating plant with crane to lift and place stone, as well as a tug boat to push and position barges with stone would slowly move in the harbor, as breakwaters are constructed lakeward.
Rate of Discharge	While the project was initially being constructed, discharge of stone fill into Olcott Harbor would occur during two construction seasons. Deposition of stone to maintain breakwaters would probably occur on an as needed basis, and be placed when heavy equipment such as a clamshell crane is stationary at the site.
Ambient Concentration of Constituents of Interest and Dredged Material Characteristics	Project construction of stone breakwaters would not require dredging. Stone fill material would be quarry limestone, which is considered to be unpolluted and will not release any harmful substances into the water.
Number of Discharge Actions per Unit Time	Installation of stone breakwaters would take about two construction seasons to complete the work.
Other Factors Affecting Rates and Patterns of Mixing	Water circulation and disposal operations were considered previously in this evaluation.

3.6.2 Determination of Compliance with Applicable Water Quality Standards - Olcott Harbor in Lake Ontario is classified as A-Special (International Boundary Waters) by NYSDEC. This water quality standard will not be significantly exceeded and/or affected by the proposed deposition of stone to construct breakwaters, based on available presented information.

3.6.3 Potential Effects on Human Use Characteristics -

a. Municipal and Private Water Supply - No significant effect.

b. Recreational and Commercial Fisheries - Placement of stone fill for breakwater and resultant short-term increased localized turbidity created at the project may cause some short-term temporary adverse impact on recreational and commercial (i.e., charter boat) fishery activities in the immediate vicinity of construction work. Fish would tend to avoid the areas of active construction until water clarity and disruption to the water column ceased.

c. Water-Related Recreation - Slow movement of the tugboat and barge scows carrying stone to the project deposition site as well as deposition of stone fill to construct breakwaters may cause some localized minor temporary offshore interruption to recreation boating and fishing activities (i.e., turbidity, noise, and by disruption of the water column as stone is placed). With regard to future maintenance after the project is constructed, repair work to stone breakwaters, as needed, would be scheduled to minimize interference with water-related recreational activity.

d. Aesthetics - Presence of construction equipment and turbidity caused by placement of stone fill to construct breakwaters would temporarily detract from the aesthetic natural view of the harbor area. Resultant turbidity from such operations can be expected to return to ambient levels within approximately several hours after construction activities cease and equipment is removed from the project site.

e. Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves - No effect.

3.7 Cumulative Effects on the Aquatic Ecosystem

3.7.1 With regard to cumulative impacts, placement of stone fill material to construct the breakwaters would cover over benthic substrate and associated macroinvertebrates, thereby adding to the overall acreage of such aquatic habitat presently covered over by stone structures now in place along other inshore areas of Lake Ontario. Addition of such stone fill below the water line would cumulatively add to the existing amount of stable stone surface area along breakwater slopes that provides habitat to attract a variety of fish, as well as habitat for colonization by aquatic invertebrate organisms and algae attachment - which all contribute to the aquatic food chain. However, during placement of stone fill material associated with the proposed project - as well as with future periodic maintenance - increased sediment and detritus suspension into the water column generated by such construction action, would temporarily contribute further to decreasing the turbidity plume that is usually present in the harbor.

3.8 Determination of Secondary Effects on the Aquatic Ecosystem

3.8.1 The change from an in-shore environment presently exposed to direct wave action from the open lake, to an in-shore environment that would be protected and less subject to direct wave action, may eventually attract some aquatic organisms that exhibit more preference for such protected habitat conditions. Protection of the harbor area by a more extensive breakwater system would increase recreational use of the harbor by both boaters and fishermen, that would add to the present intensive use of the Lake Ontario shoreline area for such activities.

FINDINGS OF COMPLIANCE
FOR DEPOSITION OF BREAKWATER STONE MATERIAL

OLCOTT HARBOR PROJECT
NIAGARA COUNTY, NEW YORK

1. No significant adaptations of the USEPA guidelines were made relative to this evaluation.

2. Alternative disposal methods considered for deposition of stone materials associated with the Olcott Harbor project included no-action, as well as several versions of breakwater design configuration. Deposition of stone to construct breakwaters in the off-shore open-lake water of Olcott harbor as described in Refined Plan 10A Modified, was found to be the most viable and environmentally acceptable option for placement of material.

3. The planned deposition of quarry limestone material to construct breakwaters, should not contribute to a violation of State water quality standards outside the localized mixing zone. Water quality in the mixing zone is expected to return to ambient conditions within several hours. The placement of stone to construct breakwaters will not violate the Toxic Effluent Standards Section 307 of the Clean Water Act of 1972.

4. Deposition of stone fill to construct the breakwaters will not jeopardize the continued existence of any species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or result in the likelihood or adverse modification of their critical habitat. The proposed discharge of stone would not violate any requirement imposed by the Secretary of Commerce to protect any marine sanctuary designated under the Marine Protection, Research, and Sanctuaries Act of 1972.

5. The proposed deposition of stone breakwater material will not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. No significant adverse effects on the life stages of aquatic life and other wildlife dependent on aquatic systems are anticipated. The deposition of stone to construct breakwaters should have no significant adverse effects on aquatic ecosystem diversity, productivity and stability, or on recreational, aesthetic and economic values.

6. Appropriate steps to minimize potential adverse impacts of the deposition of stone material into the aquatic ecosystem include the following:

- In order to minimize adverse impacts on fish and wildlife resources (i.e., recreational fishing, fish spawning), coordination would be maintained with the U.S. Fish and Wildlife Service and New York State Department of Environmental Conservation to determine environmental design features and the

time period in which to construct the proposed project. The same coordination would be maintained in determining future repair maintenance of the stone breakwaters, if and when needed.

- Precaution would be taken to minimize vessel speed during hauling of stone by tug and barge scow in the vicinity of the project site, in order to minimize wave action as much as feasibly possible during construction in Olcott Harbor.

7. On the basis of the Guidelines, site for discharge of stone, is specified as complying with the requirements of these Guidelines, with the inclusion of appropriate and practical conditions to minimize pollution and adverse effects on the aquatic ecosystem.

JOHN W. MORRIS
Colonel, U.S. Army
Commanding

DATE:_____

OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA-C - U.S. FISH AND WILDLIFE SERVICE COORDINATION ACT REPORT

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT
AUGUST 1991

United States Department of the Interior

FISH AND WILDLIFE SERVICE

100 Grange Place
Room 202
Cortland, NY 13045

11 JUL 90 09 35

ATTN: HUGH-S

July 6, 1990

Colonel Hugh Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attn: Mr. Tim Byrnes

Dear Colonel Boyd:

This responds to your letter of June 29, 1990, following our meeting on June 21, 1990, at the New York State Department of Environmental Conservation (State) office in Buffalo, NY, regarding the environmental activities associated with the Olcott Harbor Project in Lake Ontario at the Hamlet of Olcott, Niagara County, NY.

Based on that meeting and subsequent discussions with State fisheries personnel, we concur with your suggested expanded work window. In-water construction activities may be carried out according to the following schedule:

1) Year 1 - May 15 to October 6 complete construction of the west breakwater.

2) Year 2 - May 15 to November 10 complete construction of the east breakwater including the shore-connected segment.

This schedule will permit 10 hour work days, 6 days per week and should allow the bulk of each project to be near completion by September 15. This will minimize impacts on migratory fishes entering Eighteenmile Creek.

Please advise us of any subsequent changes in construction plans. If you have any questions regarding this project contact Tom McCartney at 607-753-9334.

Sincerely,

Leonard P. Corin
Field Supervisor

cc:
NYSDEC, Albany; Buffalo; Olean

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202

716/847-4551 MAILROOM-NCBIM-S

9 JUL 90 11 22

Thomas C. Jorling
Commissioner

July 6, 1990

Mr. David P. Plank, Major
Deputy District Commander
U.S. Army
Buffalo District Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

Attn: Mr. Timothy Byrnes

Dear Major Plank:

Olcott Harbor Project
Town of Newfane - Niagara County

I enjoyed making your acquaintance during the June 21, 1990 meeting that was held at the DEC Region 9 Office regarding the above noted. Over the years, Region 9 has enjoyed a very good working relationship with the Buffalo District Corps of Engineers' Office. I feel that relationship was typified by the open and candid discussions our agency representatives had together regarding proposed restrictive dates for in-water (lake) construction activities for the Olcott Harbor breakwaters.

Accordingly, and after considerable review and deliberation, the Region 9 DEC Office concurs with the following "environmental window dates" that were requested in your June 9, 1990 letter to this Office:

° West Breakwater Construction
1-shift 10 hours/day, 6 days/week
First Year of Construction

May 15th through October 6th

° East Breakwater Construction
1-shift 10 hours/day, 6 days/week
Second Year of Construction

May 15th through November 10th

While the above dates for in-water construction may affect fishery resources and inconvenience the fishing public, we believe that those possible impacts are justified by the improved public access, recreational and economic benefits that the finished project will provide. However, we do request that contract documents emphasize the disirability of completing the in-water construction as soon as possible within the environmental window dates provided above to lessen adverse factors that may affect fish spawning and public fishing opportunity. We would also encourage that the construction of the bulkheads over silty bottom areas be completed as early as possible within the authorized time periods.

I believe this decision should satisfy your immediate needs. Please do not hesitate to contact me or Mr. Michael McMurray, Senior Environmental Analyst, if other problems arise or you believe we should arrange to meet in the future. Thank you for your cooperation.

Respectfully,

Steven J. Doleski
Regional Permit Administrator
Division of Regulatory Affairs

cc: Mr. Stephen Mooradian - Region 9 Fisheries Manager, Olean
Mr. Leonard Corin - U.S. Fish and Wildlife Service

SJD:kah

United States Department of the Interior

FISH AND WILDLIFE SERVICE
100 Grange Place
Room 202
Cortland, NY 13045

March 16, 1990

Colonel Hugh F. Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attention: Mr. Len Bryniarski

Dear Colonel Boyd:

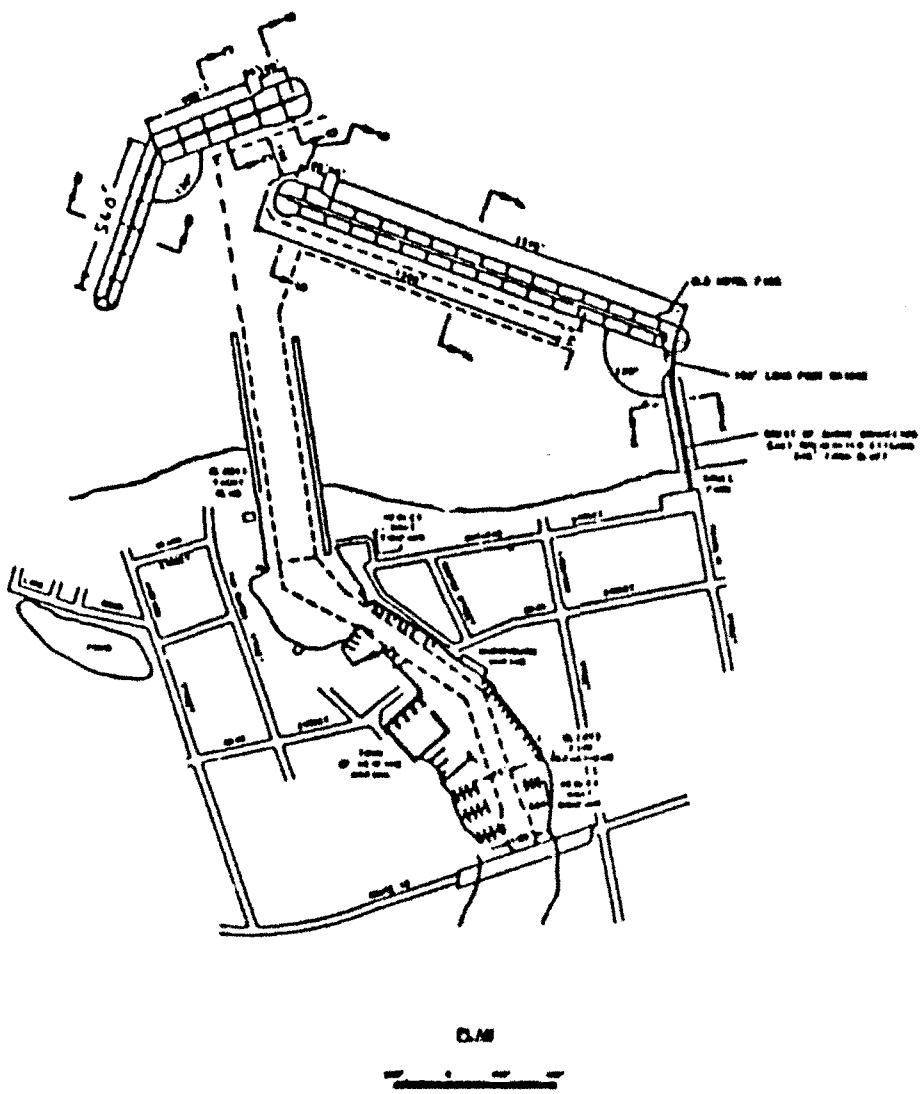
This constitutes our report assessing impacts to fish and wildlife resources that could result from implementation of the proposed Olcott Harbor Project in Lake Ontario at the mouth of Eighteenmile Creek in the Hamlet of Olcott, Town of Newfane, Niagara County, NY. It has been prepared under the authority of and in accordance with Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended 16 U.S.C. 661 et seq.).

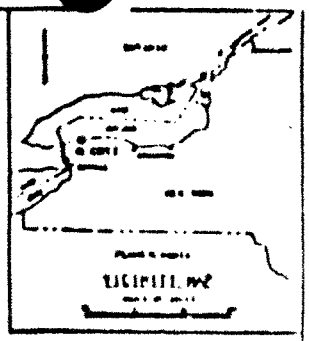
Our report is based on project plans and information provided by your staff, field reconnaissance, fishery surveys, a literature review, a model study, and other information. It was prepared by Thomas H. McCartney, Fish and Wildlife Biologist, under the supervision of Leonard P. Corin, Field Supervisor.

Pursuant to the 1989 Cooperative Agreement between the Departments of Interior and Army, the U.S. Fish and Wildlife Service (Service) and the U.S. Army Corps of Engineers (Corps) have jointly evaluated waterfowl habitat conservation opportunities associated with this project which are consistent with the goals of the North American Waterfowl Management Plan (NAWMP).

Description of Project

Plan 10, a system of detached breakwaters formulated in 1978, was the original selected alternative and the Service and the New York State Department of Environmental Conservation (State) both commented in detail on that plan. Chief among the recommendations was that Plan 10 be subjected to modeling studies at the Corps Waterways Experiment Station (WES) in Vicksburg, Mississippi, and that these studies address the impact of the proposed breakwaters on the outflow characteristics of Eighteenmile Creek at its mouth and the feasibility of circulation culverts or bridges in the east breakwater to improve water circulation and fish access. Subsequently, this project evolved to the currently selected plan now known as Plan 10A (Modified) (Figure 1).





SEA-C-5

Figure 1. Plan 10A (MODIFIED) Current Selected Plan

The breakwater configuration is intended to provide a safe entrance to the harbor, create new mooring area in Lake Ontario, and provide wave protection for the existing inner harbor. A pedestrian walkway with guardrail would run atop the entire length of both the detached and shore-connected east breakwaters. The walkways would be joined by a foot bridge so that pedestrian access is provided along the entire length of the east breakwaters. A 70 foot breakwater gap under the foot bridge would facilitate passage of water and fish between the harbor and Lake Ontario.

The west detached breakwater would have a dogleg shape. It would consist of a shoreward leg with a 560 foot long crest and a lakeward leg with a 550 foot long crest. The two legs form an interior angle of 130°. The proposed shoreward leg has a side slope of 1.5H:1V and a crest elevation of 14.5 feet along its entire length. The proposed lakeward leg consists of a trunk segment, a head segment, and a transition segment which joins the head to the trunk. The trunk segment would have a side slope of 1.5H:1V. The head segment would have a side slope of 2H:1V. Crest elevation of the lakeward leg would be 14.5 feet. There will be no pedestrian walkway atop the west breakwater.

The east detached breakwater would have a crest length of 1,525 feet. It would consist of a trunk segment, a head segment, and a transition segment which joins the head to the trunk. The trunk segment would have a side slope of 1.5H:1V. The head segment would have a side slope of 2H:1V. Crest elevation of the east detached breakwater would be 14.5 feet.

The east shore-connected breakwater would be constructed over the remains of an old hotel pier. It would have a crest length of 340 feet, a side slope of 1:5H:1V, and a crest elevation of 12.9 feet.

No dredging is anticipated for project implementation.

WES originally looked at two basic configurations, the one shown in Figure 1 with the mooring area to the east side only and another that called for mooring areas on both the east and west sides of the harbor entrance. Due to time and cost constraints this second plan was the one actually tested, using the logic that since this plan had the potential for greater impact, if it tested satisfactory then conditions for the currently selected plan would be as good or better.

Existing Aquatic and Terrestrial Resources

Lake Ontario

Lake Ontario has the smallest surface area of the five Great Lakes (7,340 square miles at low water datum [LWD]) and is at the lowest elevation of all the Great Lakes at 242.8 feet International Great Lakes Datum (IGLD). Since 1958 the water surface elevation has been regulated between monthly mean elevations of 247.92 feet and 241.78 feet.

The shoreline of Lake Ontario consists, for the most part, of cliffs of varying heights. Beaches are poorly developed along most of the shore. The bluffs are interrupted by embayments which are drowned valleys of streams that fed Lake Ontario when it was at a lower level. The local drainage basin of Lake Ontario exclusive of the Lake itself is about 27,300 square miles. About 85% of the net total water supply to Lake Ontario consists of inflow from the other Great Lakes through the Niagara River, and about 15% consists of water from the Lake Ontario Basin. Outflow from Lake Ontario is through the St. Lawrence River.

The State designates Lake Ontario a Class "A Special" water at Olcott. Class "A Special" waters are suitable as a "source of water for drinking, culinary or food processing purposes, primary contact recreation and any other usages.".

Aquatic vegetation is limited within the project area in the lake surrounding the confluence with Eighteenmile Creek. The substrate is gravel, cobble, and sand with little rooted vegetation, although dense patches of Cladophora algae can be found in nearshore areas.

Historically Lake Ontario supported Atlantic salmon, lake trout, and lake sturgeon as well as a variety of other game and forage species. Loss of spawning habitat and exploitation eliminated Atlantic salmon while these factors plus intrusion of the sea lamprey severely reduced the lake trout and sturgeon populations. Today the State, through an extensive stocking program, has produced thriving populations of coho and chinook salmon, although natural recruitment is probably very low or non-existent due to lack of suitable spawning habitat. The lake also supports significant brown trout and rainbow trout populations.

Fishery surveys conducted for the Corps in 1977-78 (Ecology and Environment, Inc., [EEI], 1978) in the Lake at Olcott produced 21 species (Table 1). Alewives dominated the catch (38% of the total) and salmonids comprised 11.6% of the catch. Four species of salmonids were recorded and brown trout made up 58% of the salmonid take.

Olcott Harbor

Olcott Harbor is located on the south shore of Lake Ontario at the mouth of Eighteenmile Creek in Niagara County. It is approximately 18 miles east of the mouth of the Niagara River and 13 miles north of the City of Lockport.

The harbor has been fully developed with boat docks and facilities on both banks of the creek from the lake to Main Street and to a lesser extent between Main Street and the New York State Route 18 bridge crossing. The harbor is bordered by Hedley's Boat Company on the east bank and Olcott Yacht Club on the west bank. The remaining shoreline within the harbor consists of seasonal and year-round residences, and the marine facilities of McDonough Marina, William Kohler Docks, Town of Newfane Marina, and the Olcott, NY, Fire

Table 1. A Summary of Fishes Taken in Lake Ontario and Eighteenmile Creek in the Vicinity of the Olcott Harbor Project Area.

Common Name	Scientific Name	NY State 1974	Corps (EEI) 1978-79	Service 1989
Alewife	Alosa pseudoharengus	x	x	x
Banded Killifish	Fundulus diaphanus		x	
Black Bullhead	Ictalurus melas		x	
Black Crappie	Pomoxis nigromaculatus	(x) 1/	x	x
Bluegill	Lepomis macrochirus	(x)	x	x
Bowfin	Amia calva			x
Brown Bullhead	Ictalurus nebulosus	(x) 2/	x	x
Brown Trout	Salmo trutta	x	x	x 4/
Carp	Cyprinus carpio		x	x
Chain Pickerel	Esox niger	(x)		
Channel Catfish	Ictalurus punctatus	(x)	x	x
Chinook Salmon	Oncorhynchus tshawytscha	x	x	x 4/
Coho Salmon	Oncorhynchus kisutch	x	x	x 4/
Common Shiner	Notropis cornutus			x
Emerald Shiner	Notropis atherinoides		x	
Freshwater Drum	Aplodinotus grunniens		x	x
Gizzard Shad	Dorosoma cepedianum		x	x
Golden Shiner	Notemigonus crysoleucas		x	x
Goldfish	Carassius auratus		x	x
Lake Chub	Hybopsis (cauesius) plumbea	x	x	
Lake Trout	Salvelinus namaycush	(x)	x	
Lamprey	Petromyzon marinus dorsatus	x		
Largemouth Bass	Micropterus salmoides	(x)	x	x
Northern Hogsucker	Hypentelium nigricans		x	
Northern Pike	Esox lucius	(x)	x	(x) 5/
Pugnose Shiner	Notropis anogenus		x	
Pumpkinseed	Lepomis gibbosus	(x)	x	x
Rainbow Smelt	Osmerus mordax	(x) 3/	x	
Rainbow Trout	Salmo gairdneri	x	x	x
Redbreast Sunfish	Lepomis auritus			x
Redhorse Sucker	Moxostoma spp.	x	x	x
Rock Bass	Ambloplites rupestris	x	x	x
Smallmouth Bass	Micropterus dolomieui	x		(x) 5/
Spottail Shiner	Notropis hudsonius	x	x	
Threespine Stickleback	Gasterosteus aculeatus		x	
Walleye	Stizostedion vitreum	(x)	x	
White Bass	Morone chrysops		x	x
White Crappie	Pomoxis annularis			x
White Perch	Morone americana	x	x	x
White Sucker	Catostomus commersoni	x	x	x
Yellow Perch	Perca flavescens	x	x	x

1/ Figures in parentheses (x) indicate species not actually taken but known to be there.

2/ Only the term "bullhead" was used. It is assumed that it refers to the brown bullhead.

3/ Only the term "smelt" was used. It is assumed that it refers to the rainbow smelt.

4/ The majority were taken during an electroshocking run on October 3.

5/ These species were taken by the State electroshocking crew at the same time the Service survey was being conducted on July 6.

Department. Within the last two years the Town has developed a three-ramp public boat launch with two levels of parking along the west side of the creek between Main Street and the Route 18 bridge.

The fishery profile in this area, between the lake shoreline and the Route 18 bridge, is essentially the same as for the lake outside the entrance except that EEI did not take any lake trout or rainbow smelt in this area during their 1977-78 surveys. However, three-fourths of all the brown bullheads captured during this survey were taken within this small area.

Although this area receives heavy boat traffic in-season in Eighteenmile Creek, there are seasonally dense stands of coontail, water milfoil, and duckweed, primarily in the upper reach of the creek, particularly opposite the public boat launch area just north of the bridge. There are also a few large willow trees along the east bank opposite the launch ramps.

Gulls can be found in the harbor area and an occasional mallard may drift into the area from upstream; in the spring, summer, and early fall months, however, human activity is at a level that discourages all but the most gregarious avian species.

Eighteenmile Creek

Eighteenmile Creek drains an area of about 85 square miles. The stream has its source about 14 miles south of Olcott and two miles east of Lockport. The Creek flows westerly to Lockport where it then turns almost due north to flow into Lake Ontario at Olcott.

A power dam located at Burt, about two miles upstream of Olcott Harbor, regulates to some degree the conditions in the lower portion of Eighteenmile Creek. During periods of low stream flow, most of the water flowing down the creek comes from discharges at the New York State Barge Canal, from the outflow of the City of Lockport, Harrison Radiator Wastewater Treatment Plant, and from releases at the Burt Dam. The creek is deep enough and the natural channel well enough developed, that navigation by small craft is possible from the mouth of the creek up to the railroad bridge at Burt, although depths range from +0.7 feet to 12.9 feet and usable widths are as narrow as 10 feet. The shallow depths above Main Street could preclude navigation during low lake levels.

The dam at Burt traps sediments so that sedimentation in the stream below the dam is relatively low. Downstream from the dam, the banks of the stream rise from the streambed about 50 feet to meet the surrounding topography. In places, this rise forms sheer walls abutting the stream. In this area access to the streambed, which varies in width from 100 to 500 feet, is limited by the steep banks.

Eighteenmile Creek, between the dam at Burt and Lakeview Cemetery at Olcott, is designated as a Class "C" water. Class "C" waters are "suitable for fishing and all other uses except as a source of water supply for drinking, culinary or food processing purposes, and primary contact recreation.". Between Lakeview Cemetery and Lake Ontario the Creek is designated as Class "B". Class "B" waters may be used for "primary contact recreation and any other uses except as a source of water supply for drinking, and culinary or food processing purposes.".

The lower two miles of the creek, excluding the harbor, support about 60-70 acres of diverse, high value wetland. The dominant emergents are dense stands of cattail, bur-reed and jewelweed. There are extensive beds of submerged vegetation throughout, dominated by coontail and water milfoil. Duckweed is abundant in season. Other marsh vegetation that can be found includes pondweed, wild celery, water smartweed, arrowhead, spatterdock, and sedge.

The upper banks and adjacent woodlots of the creek are heavily wooded with red maple, oak, ash, hickory, and black willow. White pine, beech, hemlock and black cherry also occur within this covertype. The bottomland forest along the vegetated shoreline of the creek occurs primarily as isolated stands represented by green ash, red maple, black willow and cottonwood.

The most common waterfowl is the mallard. Other waterfowl species recorded in the area are the black duck, common merganser, red-breasted merganser, wood duck, blue-winged teal, green-winged teal and an occasional pintail. Common to abundant water and shorebirds are the great blue heron, belted kingfisher, pied-billed grebe, American coot, spotted sandpiper, killdeer, rail, bittern, herring gull, ring-billed gull, and Bonaparte's gull. Some 30 species of songbirds are common to abundant on a seasonal basis.

Mammals commonly observed in the project area include raccoon, striped skunk, red squirrel, gray squirrel, and chipmunk, while the marshes within Eighteenmile Creek support a thriving muskrat population.

Historically the mouth and lower reach of Eighteenmile Creek has supported a recreational fishery for northern pike, largemouth bass, smallmouth bass, brown bullhead, yellow perch, rock bass, and walleye. In the 1970's the State instituted a salmonid stocking program in the lake and now there are extensive runs of coho and chinook salmon, as well as rainbow and brown trout, into the lower reach of the creek up to the Burt Dam. The program has been so successful that Olcott Harbor, the adjacent Lake, and the Creek receive intense late summer and early fall fishing pressure and the Hamlet sponsors several fishing derbies.

A 1974 State sampling effort (Table 1) at Olcott and surrounding localities netted 15 species (including the lamprey) and listed an additional 10 as common in the project area though not taken in their survey. They classified the species according to local preference as "sport fish": brown trout, chinook salmon, coho salmon, rainbow trout and smallmouth bass; "pan fish": rock bass, white perch, yellow perch; and "rough fish": alewife, redhorse,

smelt, white sucker, lake chub, and spottail shiner. The others not taken but known to be common in the area were the northern pike, walleye, largemouth bass, chain pickerel, bullhead, channel catfish, lake trout, black crappie, bluegill, and common sunfish (pumpkinseed).

The Service surveyed the lake and creek in 1989 and captured 28 species (Table 1). The dominants were brown bullhead, pumpkinseed, and rock bass regardless of the season, with increasing numbers of brown trout in the fall. One objective of the sampling effort was an attempt to correlate smallmouth bass numbers with rising spring temperatures and salmonid numbers with declining fall temperatures. Although 23 species were taken in the spring, we did not take any smallmouth bass. Undoubtedly, limitations on the capture method (passive netting) were a contributing factor. Although coverage was good (five sample sites in lake and creek), the configuration of the channel and heavy boating activity in the creek in particular, limited the size and type of nets that could be used and where they could be placed. During the fall sampling there were salmon and trout taken, but again no correlation was made with the temperature profile.

Nevertheless, smallmouth bass did move into the creek in the spring and early summer as State personnel, using an electroshocking boat, observed and captured smallmouth bass, including gravid females, on both June 27 and July 6. Again, there was no doubt about substantial salmonid runs in the fall as they were readily observed in the creek, especially near the dam, and angler pressure was heavy in both the lake and creek in the project area. On October 3 an electroshocking boat was available to the Service and numbers of brown trout, coho salmon, and chinook salmon were taken at the two uppermost stations in the creek.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the Fish and Wildlife Service. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

Impact Assessment

There are two primary impacts that will derive from this project. The loss of bottom habitat caused by the placement of the breakwaters and the potential for altering the flow and temperature dynamics at the lake-stream interface that may play a large role in triggering the movements of stocked salmon and naturally reproducing fish species into the creek.

Placement of the breakwater array will permanently cover about seven +/- acres of shallow (12 feet) and nearshore lake bottom habitat. This is minuscule in relation to the total lake littoral area and will be offset to some extent by approximately 3.3 +/- acres of planar surface area provided by the submerged

portions of the rubble breakwaters. The actual surface area available for benthic attachment will be somewhat more than this due to the irregular and loose-fitting nature of the rubble mound area.

The potential impact of the project on fish movements into and out of the creek is more difficult to quantify. Migratory fish respond to a number of internal and external stimuli which trigger behavioral changes. Among the external factors are fluctuations in thermal regimes, flow volumes, and flow velocities. Because of this, the Service requested that the selected plan be physically modeled and tested for its potential impacts on fish migratory behavior into Eighteenmile Creek. Specifically, the model would address the potential impact of the offshore breakwater configuration on the existing current velocity and water temperature differentials between the lake and the creek.

The Corps' WES facility constructed the model and tested it using flow velocity and temperature data collected in Lake Ontario and Eighteenmile Creek over two time periods, April to July and September to November, 1989 (Bottin, 1989). The results of the model testing suggest that implementation of the proposed project would not significantly impact on existing patterns of thermal variation between lake and stream, or patterns of water movement and velocity from the creek to the lake and along the lake shoreline. We accept that the conclusions were within the predictive capability of the model, and it is reasonable to conclude from the modeling results that the project should not impair any spring spawning migrations of northern pike, smallmouth bass, and possibly walleye from the lake to the creek, or the fall migrations of salmon and trout into the creek. Based on the results of the modeling, and the revisions incorporated into Plan 10A (Modified), it appears that the project as now proposed should not have significant impact on water temperatures or current velocities and patterns in the lower reach of Eighteenmile Creek.

Other impacts such as construction-related turbidity, or displacement and loss of some benthic fauna, will be temporary and short-term. While construction activity itself could be temporarily locally disruptive to the movement of migratory fishes into Eighteenmile Creek, this can be minimized or avoided by confining it to the seasonal interval between migrations. This can be accomplished by restricting construction activities to the period from June 15 to September 1.

Plan of Development for Aquatic and Terrestrial Resources

In accordance with the Service Mitigation Policy, the smallmouth bass and brown trout were selected as evaluation species for the project area. The Service designates the shallow littoral area of Lake Ontario and all of Eighteenmile Creek in the project area, as Resource Category 3 in recognition of their high to medium value for both warmwater and coldwater species and the relative abundance of this type of habitat along the New York shoreline of Lake Ontario. The mitigation goal for Resource Category 3 habitats is no net loss of habitat value, while minimizing in-kind habitat loss.

In addition, the 1989 Cooperative Agreement between Interior and Army is a mechanism for the Service and the Corps to jointly identify waterfowl habitat conservation and development opportunities associated with civil works projects that would address regional and national goals that are consistent with the NAWMP.

Opportunities associated with the Olcott Harbor Project are limited but the Service suggests that the Corps consider the placement of a suitable number of wood duck nesting boxes and tripod suspended mallard nesting baskets in the emergent marshes and more isolated shallows, particularly along the west bank, of Eighteenmile Creek between the Route 18 bridge and the railroad trestle at Burt Dam. These nests and boxes would encourage additional waterfowl to remain and breed in the area and enhance clutch survival by discouraging nest predation. The specific number and locations of nests would be determined by a joint survey of the area by the project sponsor and biologists from the Service, Corps and State.

Recommendations

We recommend:

1. That, to protect both Spring and Fall migratory fishes, all in-water construction activities associated with this project be confined to the period between June 15 and September 1.

2. That, to encourage and enhance waterfowl breeding activities in the project area, a suitable number of wood duck nesting boxes and tripod suspended mallard nesting baskets be placed in the emergent marshes and the isolated shallow areas, particularly along the west bank, of Eighteenmile Creek between the Route 18 bridge and the railroad trestle at Burt Dam.

Please continue to coordinate this project with us as it develops, and advise us of any changes or refinements in project plans so that we may revise or supplement our report.

Sincerely,

Leonard P. Corin
Field Supervisor

Bibliography

Bottin, Robert R. Jr. (1989)
Current and Temperature Effects at Eighteenmile Creek as a Result of Harbor Improvements at Olcott Harbor, New York. Draft Technical Report CERC-89, Waterways Experiment Station, Vicksburg, Mississippi, prepared for the U.S. Army Corps of Engineers, Buffalo District, Buffalo, New York

Ecology and Environment, Inc. (1978)
Baseline Biological Survey Report in the Area of Olcott Harbor, New York For: U.S. Army Corps of Engineers, Buffalo District, Buffalo, New York. 24 pp.

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

March 9, 1990

Mr. Leonard P. Corin
Field Supervisor
U.S. Dept. of Interior
Fish and Wildlife Service
100 Grange Place
Room 202
Cortland, N.Y. 13045

Dear Mr. Corin:

The Division of Fish and Wildlife concurs with the findings and recommendations of the Fish and Wildlife Coordination Act Report prepared for the proposed Olcott Harbor Project in Lake Ontario at the mouth of Eighteenmile Creek, Hamlet of Olcott, Town of Newfane, Niagara County, N.Y. The report, dated February 7, 1990 and our concurrence are prepared under the authority of the Fish and Wildlife Coordination Act (16 USC 661).

Sincerely,

Kenneth Wich

Kenneth F. Wich
Director
Division of Fish and Wildlife

MAILROOM-NCBIM-S
29 Mar 90 10 42

OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

COASTAL ZONE MANAGEMENT PROGRAM
CONSISTENCY DETERMINATION REPORT

The U.S. Army Engineer District, Buffalo, has analyzed the proposed action with respect to the 44 policy statements presented in Part II, Section 6 of the August 1982 State of New York Coastal Zone Management Program and Final Environmental Impact Statement. The following policy statements have been determined to be applicable to the proposed action:

1(a). CZM Policy Statement Number 1. Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.

1(b). Compliance Statement. In the early 1900s Olcott was a well known recreational resort area at Lake Ontario. Current conditions, problems, needs, and opportunities at Olcott make it ideal for revitalization as a water resource recreation (boating, fishing, bathing, picnicking, and aesthetic view) development. The proposed project would significantly facilitate this recreational revitalization and redevelopment.

2(a). CZM Policy Statement Number 2. Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.

2(b). Compliance Statement. The proposed project provides facilities for needed water dependent boating, fishing, aesthetic views, and associated uses.

3(a). CZM Policy Statement Number 4. Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.

3(b). Compliance Statement. In the early 1900s Olcott was a well known recreational resort area at Lake Ontario. The proposed project recreational and associated developments would serve to recapture part of that era and to strengthen the economic base of the Olcott Harbor area.

4(a). CZM Policy Statement Number 5. Encourage the location of development in areas where public services and facilities essential to such development are adequate.

4(b). Compliance Statement. The Olcott area is sufficiently developed and has sufficient resources to facilitate public services and facilities essential to the proposed development. (Water, sewer, access, parking, marina facilities, sanitary facilities, and secondary service facilities)

5(a). CZM Policy Statement Number 6. Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.

5(b). Compliance Statement. The project is expected to be sufficiently planned and assessed so that necessary permits may be issued expeditiously.

6(a). CZM Policy Statement Number 7. Significant coastal fish and wildlife habitat will be protected, preserved, and, where practical, restored so as to maintain their viability as habitats.

6(b). Compliance Statement. There are two significant coastal fish and wildlife resources associated with the project area. One is the developed Lake Ontario salmonid fisheries which utilize Eighteenmile Creek through Olcott for spawning runs. The other is the reach of Eighteenmile Creek from the Route 18 bridge to the Burt Dam which has been identified as a "Significant Coastal Fish and Wildlife Habitat." Supplemental study investigations have been conducted which demonstrate that the final project design would not significantly adversely affect the Lake Ontario salmonid fishery runs up Eighteenmile Creek. Project related considerations to avoid significant adverse impacts to these fisheries include: construction scheduling considerations, and design considerations to preserve water quality, fishery access, and creek/lake interface characteristics. The Route 18 bridge to Burt Dam creek reach is upstream of the proposed project area, and no significant adverse impact to this resource would be anticipated due to project implementation.

7(a). CZM Policy Statement Number 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.

7(b). Compliance Statement. Proposed project breakwaters would be constructed primarily of generally inert stone material and formed and poured (in the dry) concrete (i.e., walkways). Some metal bridging, guardrail posts and cable, dock posts, etc. may be utilized. No hazardous or pollutant materials would be introduced. A Clean Water Act Public Notice and Section 404(b)(1) Evaluation Report is being coordinated with these reports in this regard. No dredging and associated disposal will be required for project implementation. Since sediment filling is light in the project vicinity, project channel maintenance will be minor and infrequent. Project local cooperators will be responsible for future project operation and maintenance. Boats that would utilize the harbor facilities are subject to local, State, and Federal vessel discharge regulation and enforcement. Although some minor leakage of fluids may occur (i.e., small boat motor oil, grease), no significant introduction of hazardous or pollutant waste, or associated significant adverse impacts, would be expected due to proposed project implementation.

8(a). CZM Policy Statement Number 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.

8(b). Compliance Statement. The proposed project includes breakwater construction to protect the harbor entrance, provide a protected area for about 800 boat slips, and to provide additional breakwater pedestrian (fishermen) access. Upland developments (primarily a local sponsor responsibility) include: docking, access, parking, marina, and sanitary facilities. Other local recreational and secondary development improvements would be anticipated. These measures would improve access and expand recreational use of area water and fish and wildlife resources.

9(a). CZM Policy Statement Number 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.

9(b). Compliance Statement. Supplemental model studies were conducted in order to optimize breakwater design for Olcott Harbor. Breakwater facilities would reduce wave generated damages, flooding, and erosion at Olcott. Project associated buildings and other structures will still need to comply with existing (possibly revised) national flood insurance and coastal zone associated ordinances.

10(a). CZM Policy Statement Number 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.

10(b). Compliance Statement. Supplemental model studies were conducted in order to optimize breakwater design for Olcott Harbor. Breakwater facilities would reduce wave generated flooding and erosion at Olcott. Studies indicate that the volume of littoral material carried in the current along this section of the southern lake shore is not of great enough quantity to cause any extensive sediment accretions to occur on the west side of the proposed project. In addition, the project should not contribute to any noticeable degree of shoreline erosion east of the project. Therefore, the existing beaches along Olcott should not be significantly adversely affected due to proposed project implementation.

11(a). CZM Policy Statement Number 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 thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.

11(b). Compliance Statement. The proposed project design project life is well in excess of thirty years.

12(a). CZM Policy Statement Number 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.

12(b). Compliance Statement. Same Compliance Statement as for CZM Policy Statement Number 12.

13(a). CZM Policy Statement Number 15. Mining, excavation or dredging in coastal waters 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.

13(b). Compliance Statement. Same Compliance Statement as for CZM Policy Statement Number 12. Additionally, sediment outflow from Eighteenmile Creek is very small since Burt Dam acts as a sediment basin trap for sediments from the

upper basin reaches, and since sediments that periodically shoal into the harbor area channels are dredged and disposed of at the Olcott Harbor open-lake disposal site. Therefore, negligible Eighteenmile Creek sediments enter the littoral nourishment system. Therefore, the proposed project should not significantly affect the littoral drift nourishment system, or cause significant erosion problems in the project area.

14(a). CZM Policy Statement Number 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.

14(b). Compliance Statement. The Corps criteria for socioeconomic and environmental considerations in water resources planning are prescribed by the Water Resources Council's Economic and Environmental Principle and Guidelines for Water and Related Land Resources Implementation Studies, the National Environmental Policy Act, Section 122 of the River and Harbor Act, etc. These criteria prescribe that all significant adverse and beneficial economic, social, and environmental effects of planned developments be considered and evaluated during plan formulation.

15(a). CZM Policy Statement Number 19. Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities.

15(b). Compliance Statement. The proposed project would serve to increase public boating, fishermen, pedestrian (aesthetic view) access to Lake Ontario (and fisheries) at Olcott Harbor, New York. Associated other recreational (beach, park) and secondary facilities would also be expected to be developed.

16(a). CZM Policy Statement Number 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 shall be provided in a manner compatible with adjoining uses.

16(b). Compliance Statement. The proposed project will provide public access to the public breakwaters, boat ramp, and marina. Public waterfront access is also available via Krull Park (County Park) land and waterfront developments (park and beach areas). Access should be compatible with project adjacent park, beach, and waterfront area uses.

17(a). CZM Policy Statement Number 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.

17(b). Compliance Statement. The proposed project would facilitate water dependent and water enhanced recreation including: boating, fishing, aesthetic views. Associated Krull Park (beach and waterfront park) and community developments would also be expected.

18(a). CZM Policy Statement Number 22. Development when located adjacent to the shore will provide for water-related recreation whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.

18(b). Compliance Statement. The primary purpose of the proposed project is to provide harbor area protection from lake effects and to facilitate local and regional water-related recreation needs including boating and pedestrian (fishermen) access facilities to the degree possible.

19(a). CZM Policy Statement Number 23. Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology, or culture of the State, its communities, or the Nation.

19(b). Compliance Statement. A cultural resources investigation and coordination with various cultural resource agencies indicated that no significant cultural resource items were located in the immediate project area that would be adversely affected by the proposed project. In the early 1900s Olcott was a well known recreational resort area at Lake Ontario. The proposed project recreational and associated developments would serve to recapture part of that era and to strengthen the economic base of the Olcott Harbor area.

20(a). CZM Policy Statement Number 24. Prevent impairment of scenic resources of statewide significance.

20(b). Compliance Statement. The proposed project would not impair any scenic resources of statewide significance. The proposed project, rather, would facilitate boating access and pedestrian access to breakwaters and associated scenic views. The new harbor would also likely improve the views of the harbor area and Lake from the surrounding bluffs (including Krull Park) or other vantage points.

21(a). CZM Policy Statement Number 25. Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.

21(b). Compliance Statement. Same Compliance Statement as for CZM Policy Statement Number 24.

22(a). CZM Policy Statement Number 26. Conserve and protect agricultural lands in the State's coastal area.

22(b). Compliance Statement. It is not expected that any important agricultural lands or activities will be affected by proposed project implementation.

23(a). CZM Policy Statement Number 30. Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to State and national water quality standards.

23(b). Compliance Statement. Proposed project breakwaters would be constructed primarily of generally inert stone material and formed and poured (in the dry) concrete (i.e., walkways). Some metal bridging, guardrail posts and cable, dock posts, etc. may be utilized. No hazardous or pollutant materials would be introduced. A Clean Water Act Public Notice and Section 404(b)(1) Evaluation Report is being coordinated with these reports in this regard. No dredging and associated disposal will be required for project implementation. Since sediment filling is light in the project vicinity, project channel maintenance will be minor and infrequent. Project local cooperators will be responsible for future project operation and maintenance. Boats that would utilize the harbor facilities are subject to local, State, and Federal vessel discharge regulation and enforcement. Although some minor leakage of fluids may occur (i.e., small boat motor oil, grease), no significant introduction of hazardous or pollutant waste, or associated significant adverse impacts, would be expected due to proposed project implementation.

24(a). CZM Policy Statement Number 31. State coastal area policies and management objectives 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.

24(b). Compliance Statement. The proposed project has been coordinated for consistency with waterfront revitalization plans. It is not expected that project implementation would alter water classifications or water quality standards.

25(a). CZM Policy Statement Number 34. Discharge of waste materials into coastal waters from vessels subject to State jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas, and water supply areas.

25(b). Compliance Statement. Vessels that would construct and those that would utilize the harbor facilities are subject to local, State, and Federal vessel discharge regulation and enforcement. Although some minor leakage of fluids may occur (i.e., small boat motor oil, grease), no significant introduction of hazardous or pollutant waste, or associated significant adverse impacts, would be expected due to proposed project implementation.

26(a). CZM Policy Statement Number 35. Dredging and dredge spoil disposal in coastal waters will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.

26(b). Compliance Statement. No dredging and associated disposal will be required for project implementation. Since sediment filling is light in the project vicinity, project channel maintenance will be minor and infrequent. Project local cooperators will be responsible for future project operation and maintenance.

Coordination, assessment, and plan formulation has been conducted in accordance with NEPA and other pertinent environmental legislation so that project related adverse impacts to significant environmental resources could be avoided, minimized or mitigated, as necessary. As documented in these reports no significant adverse impacts to significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, or wetlands would be expected due to proposed project implementation.

27(a). CZM Policy Statement Number 37. Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics, and eroded soils into coastal waters.

27(b). Compliance Statement. During project construction the Contractors will be required to comply with the Corps of Engineers Civil Works Construction Guide Specification entitled "Environmental Protection" (CW-01430 July 1978) pertaining to protection of water and associated land resources. Erosion protection measures will be incorporated. Local shoreline developmetns are subject to environmetnal reviews and permits. Facility operation environmental protection measures will also be incorporated.

28(a). CZM Policy Statement Number 38. The quality and quantity of surface water and groundwater supplies, will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.

28(b). Compliance Statement. Reference Compliance Statements for CZM Policy Statement Numbers 30 and 35. No significant adverse impact to quality and quantity of surface water and ground water supplies would be expected with project implementation.

29(a). CZM Policy Statement Number 39. The transport, storage, treatment, and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreational areas, important agricultural lands, and scenic resources.

29(b). Compliance Statement. Same Compliance Statement as for CZM Policy Statement Number 35.

30(a). CZM Policy Statement Number 41. Land use or development in the coastal area will not cause National or State air quality standards to be violated.

30(b). Compliance Statement. Project related air quality impact activities would pertain to operation of construction equipment and some long term increase in the operation of vehicles and vessels in the area. These would not be expected to cause National or State air quality standards to be violated.

31(a). CZM Policy Statement Number 44. Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.

31(b). Compliance Statement. No wetlands have been identified in the immediate proposed project impact area. Wetlands have been identified along Eighteenmile Creek upstream of the project area in the reach between the Route 18 bridge and Burt Dam. It is not expected that the proposed project would significantly adversely affect these or any wetland areas.

In accordance with Coastal Zone Management Regulations 15 CFR, Part 930.34(a), the Buffalo District, U.S. Army Corps of Engineers has determined that the proposed action would be undertaken in a manner which is consistent to the maximum extent practicable with the State of New York Coastal Zone Management Program.

John W. Morris
Colonel, U.S. Army
Commanding

NOTE: Proposed project plan descriptions and associated expected impacts are described in more detail in appropriate sections of these reports.

OLCOTT SMALL BOAT HARBOR
LAKE ONTARIO, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL
ENVIRONMENTAL IMPACT STATEMENT
SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA-E - ENVIRONMENTAL CORRESPONDENCE

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT
AUGUST 1991

Table - Meetings/Workshops (Restudy)

Date	Location	Interests and Discussion
3/11/88	Buffalo (COE)	Federal, State, Local (Study Needs)
4/25/88	Olcott	Federal (COE), Local (Study Status)
5/24/88	Newfane	Federal, State, Local (Technical Modeling, Coastal Processes, Environmental Concerns)
8/18/88	Olcott	Federal, State, Local (Ferry Service)
9/1/88	Newfane	Federal (COE), Local (Preliminary Project Design)
10/28/88	Lockport	Federal (COE), State, Local (Upland Developments)
12/01/88	Buffalo (COE)	Federal, State (Model and Fisheries)
1/10/89	Amherst (Consultant Engineers)	Federal (COE), Local (Upland Developments)
1/19/89	Lockport	Federal, State, Local (Study Status, Master Plan)
1/30/89	Olcott	Federal, State, Local (Public Support)
2/27/89	Newfane	Federal, State, Local (Project Developments)
5/2/89	Olcott	Federal, State, Local (Economics, Impacts)
6/1/89	Lockport	Federal, State, Local (Study Status)
6/20/89	Newfane	Locals (Task Groups)
7/5/89	Buffalo (COE)	Congressional, Federal (COE) (Study/Project Status)
9/5/89	Buffalo (COE)	Federal, State, Local (Study Status)
9/27/89	Buffalo (COE)	Federal (COE), Local (Master Plan)
11/14/89	Buffalo (DEC)	Federal, State (Dredging and Disposal)
11/27/89	Lockport	Federal (COE), Local (Financing, Plan Selection)
12/5&6/89	Vicksburg, Miss.	Federal, State, Local (WES Model Study Results, Preferred Plan 10A (Modified))
12/19/89	Buffalo (COE)	Federal, State (WES Model Study Results, Evaluation Parameters, Potential Fishery Impacts)
2/8/90	Newfane	Federal, State, Local (Local Master Plan)
4/4/90	Buffalo (COE)	Federal (COE), Local (Project Features)
5/8/90	Newfane	Federal (COE), State, Local (Study Status)
6/14/90	Lockport	Federal (COE), State, Local (Local Master Plan)
6/21/90	Buffalo (NYSDEC)	Federal, State (Construction Environmental Window)
11/16/90	Newfane	Federal (COE), Local (Study Status)
11/29/90	Buffalo (COE)	Federal (COE), Local (Design Considerations)
12/6/90	Newfane	Federal (COE), Local (Design Considerations)
1/31/91	Buffalo (COE)	Federal (COE), Local (Project Features)
3/7/91	Buffalo (COE)	Federal (COE), State, Local (Study Status)
7/18/91	Buffalo (COE)	Federal, Local (Project Costs)

Note: Meeting Minutes and other planning correspondence are included in the project main report correspondence appendix.

Olcott Harbor
Sediment Testing, Dredging, & Disposal
Meeting 4/18/89

Wiener Cadet
Richard Leonard
Len Bryniarski
Tod Smith

1. Reviewed town of Newfane 1988 sediment sampling and dredging contract. Disposed of in Open Lake. One area (Corps Sample Site 3) more polluted. Not dredged.

2. Dick concluded that we should continue with our sampling plans. Results about July. Newfane sampling incomplete for our standards.

3. Newfane dredging may save some project dredging needs. Project in creek area will be a little deeper and wider.

4. Disposal Plan? Consider: 1. Open Lake (open lake polluted cover with open lake clean) 2. Truck small quantity of polluted material to existing land fill facility 3. New land fill disposal area (where?) 4. Beach Nourishme

A/324
D-4/24/
D-4/27/
F-4/2

APR 28 1989

Plan Formulation Branch

SUBJECT: Olcott Harbor Project, NY - Request for Master Plan

28 APR 89 12 03

Mr. Timothy Horanburg
Supervisor
Town of Newfane
2896 Transit Road
Newfane, New York 14108

Dear Mr. Horanburg:

This is in regard to the recent discussion you had with Messrs. Wiener Cadet and Tod Smith of my staff on the Olcott Harbor Waterfront master plan as it relates to the proposed small-boat harbor marina project.

I would appreciate your continued participation in formulating the Olcott project by providing me an updated version of the Town's waterfront master plan, which will serve as a current land use reference in assessing the impacts of the proposed project on anticipated land use and vice versa. Further, as you are aware, the procedures used to evaluate this project's economic feasibility depend upon the number of slips created by the project. The master plan, therefore, should identify the number of slips the community desires. In addition, if phased slip installation is anticipated, I need to know the installation schedule, both number of slips and year of installation. Also, parking and other project-related facilities, and planned future developments should be fully consistent with the recreation needs to be fulfilled by the Corps project.

Please provide me a draft copy of your master plan by early July 1989, as my Draft Reevaluation Report is due September 1989.

My point of contact pertaining to this matter is Mr. Wiener Cadet of my Plan Formulation Branch, who can be contacted at 716-876-5454, extension 2247 or by writing to the above address.

The Buffalo District -- Leadership in Engineering.

Sincerely,

JOHN ZORICH

Hugh F. Boyd III
Colonel, U.S. Army
Commanding

CF:
CENCB-PD
CENCB-PD-PF
NYS Parks, Rec. & Hist. Preservation
ATTN: Ivan Vamos, Dpty Commissioner

(3)

WENDEL
DESIGN • SURVEY • CONSTRUCTION

11 PINCHOT CT. • BUFFALO, NY 14228 • 716/688-0766 or 625-66
FAX 716/625-68

RECEIVED 14 28

June 6, 1989

Mr. Wiener Cadet, Study Manager
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York

SUBJECT: OLCOTT OUTER HARBOR DEVELOPMENT PLAN

Dear Mr. Cadet:

Enclosed is a breakdown of docking slips taken from our preliminary layout plan.

A total of 1058 slips can be accommodated on Plan 10B broken down as follows:

a.	East Basin -	714
b.	West Basin -	232
c.	Between Federal Piers -	112
	Total	1058

In addition, one (1) 115' tour boat dock is provided.

The master planning process will explore such issues as location of parking, use of the federal piers, configuration of access/security to docking systems, segregation of boater groups and water levels. These factors will alter the final configuration of docking slips and we ask that you consider the enclosed figures as preliminary and subject to change.

Should you have any questions regarding this information, please contact Terry Gregg or myself at your convenience.

Very truly yours,

WENDEL ENGINEERS, P.C.

Anthony W. McKenna, P.E.

AWM:jeg
xc: Timothy R. Horanburg, Supervisor - Town of Newfane
Ted Belling, Planner - Niagara County Planning Dept.

7405 CANAL RD. • BOX 501 • LOCKPORT, NY 14094 • 716/433-5993 or 625-8228

Plan 10B - Olcott Outer Harbor
Preliminary Boat Dock Breakdown

Length of Finger Pier	Range of Boat Length	No. of Dockslips East Basin	West Basin	Between Federal Piers
20'	18' - 24'	154	40	--
24'	24' - 28'	292	116	--
28'	28' - 32'	122	46	112
32'	32' - 38'	98	30	--
40'	38' - 50'	48	--	--
	Totals	714	232	112

Add one (1) 115' tour boat dock.

Suggested Pricing Information

20' Finger Pier - $700/Season
24' " " - $1000/Season
28' " " - $1300/Season
32' " " - $1500/Season
40' " " - $1800/Season

Note: Water/electric utilities assumed provided.

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL	SUBJECT
CENCBED-HQ	OLCOTT HARBOR

TO D. BURKOWSKI
CENCBCO-MU

FROM R. LEONARD
CENCBED-HQ

DATE 9/19/89

CMT

CF: W. CADET CENCBPD-PF
L. BRYNIARSKI CENCBPD-ER

1. THE EXPANSION OF THE HARBOR FACILITIES AT OLCOTT HARBOR WILL INVOLVE DREDGING OF SOME HEAVILY POLL. "NEW WORK" DREDGE MATERIAL (DM). THE SEDIMENT FROM THE EXISTING CHANNEL IS CLEAN

2. I HAVE PROPOSED TO DEC AND USEPA THAT WHEN THE EXPANSION OCCURS, THE POLLUTED DM BE DISPOSED AT THE OPEN-LAKE SITE FIRST AND BE COVERED W CLEAN MATERIAL FROM THE EXISTING CHANNEL.

3. TO DO THIS, IT WOULD NECESSARILY ENTAIL THAT THE NEW DREDGING AND MAINTENANCE DREDGING BE CONDUCTED AT THE SAME TIME. THE ANTICIPATE TIME FRAME FOR NEW WORK AT OLCOTT IS 1993 TO 1994. W. CADET, PROJECT MGR. SHOULD BE COORDINATED WITH REGARDING JOINT PROJECT SCHED. IF POSSIBLE. AN ADDITIONAL COST SAVING MAY BE REALIZED BY JOINT SHARING OF MOBILIZATION CO.

R. P. Leonard

CENCB-PD-ER

SEP 22 1989

Water Quality Section

SUBJECT: Disposal of Dredge Material, Olcott Harbor, New York

Mr. Robert Hargrove
Chief, Environmental Impacts Branch
U.S. Environmental Protection
Agency, Region II
Jacob K. Javits Federal Building
New York, New York 10278

22 SEP 89 10 50
MAILROOM-NCBIN-S

Dear Mr. Hargrove:

In July of this year surface and core samples of sediment were taken from the present and proposed extensions of the Federal navigation channel at Olcott Harbor, New York. A copy of the Contractor Report is enclosed. The enclosed Table 1 summarizes information on the types of samples, sampling intervals, and field descriptions. Figure 1 shows the locations of existing and proposed channels, location of samples, and location of areas shown in Table 1.

Samples could not be obtained from locations 5, 9-11, 13 and 14 because of stony substrate. Sampling at locations 12 and 15 was not attempted because of windy, high wave conditions. Rock substrate at these locations has been reported. It appears that the entire proposed outer harbor area, which is shown as Area F, has a stony, rocky substrate with little to no sediment.

The enclosed Table 2 summarizes classification of the sampled locations using USEPA 1977 Great Lakes sediment criteria. The sediment in the upstream end of the project as represented by samples 1a and 1b is heavily polluted with heavy metals and conventional pollutants. The sampling stations extending downstream are increasingly less polluted. All locations had very low to non-detectable levels of volatile organics, PCB's and pesticides, and PAH's.

Particle size analyses showed the sediments from the existing Federal channel are primarily fine sands with little contamination. It is estimated that $\sim$10,000 yd^3 of clean sands will be dredged from the existing channel as represented by samples 7 and 8 and are in Area D.

(7)

Water Quality Section
SUBJECT: Disposal of Dredge Material, Olcott Harbor, New York

About 6,000 yd^3 of sandy sediment is to be dredged from Area C that is between sampling station 6 and station 3. Parameters are generally in the non to moderately polluted range. Phosphorus is in the highly polluted range at stations 6, 4, 3, 2 and 1 but is not of toxicological concern. Barium and arsenic are in the highly polluted range at location 6 while zinc is in the highly polluted range at site 4. The measured concentrations are not considered to be of toxicological significance. It should be noted that although arsenic levels are in the highly polluted range at a number of locations they are probably within natural background levels for Western New York.

The proposed channel extending from sampling station 3 upstream to the vicinity of the turning basin at station 1 has more parameters in the highly polluted range. There is $\sim$ 3,000 yd^3 of substrate material to be dredged from Area B. There is $\sim$ 1,000 yd^3 of highly polluted sediment to be dredged from the upper turning basin which is shown as Area A.

The enclosed Figure 1 displays the volumes of sediments to be dredged from each area or sector. The location of the areas are shown on Figure 1. We propose to perform the dredging and open-lake disposal in the following order to enable covering of the polluted sediment with cleaner material:

Area A - 1,000 yd^3
Area B - 3,000 yd^3
Area C - 6,000 yd^3
Area D - 10,000 yd^3
Area F - Up to 5,000 yd^3

The more polluted material from areas A and B ($\sim$ 4,000 yd^3) would be covered with increasingly cleaner and sandier material (16,000 to 21,000 yd^3) from areas C, D, F. Since the water depth at the disposal site is over 100 feet, there should be negligible movement of the deposited dredge material. The disposal site will be marked with a buoy, and the disposal barge will be directed to remain stationary over the disposal site while discharging. This operation will be monitored to assure compliance.

Capping of polluted dredge material with clean dredge material in deep water has been extensively conducted and monitored at the New York bight. Monitoring has revealed negligible movement. We believe this will also be the case with deep-water disposal of Olcott dredge material in Lake Ontario.

Water Quality Section
SUBJECT: Disposal of Dredge Material, Olcott Harbor, New York

Resolution of disposal options will have significant bearing on the feasibility, scheduling and costs of the proposed harbor expansion at Olcott Harbor. For these reasons, I would appreciate having your evaluation of our proposed dredge material disposal for the project provided to my office by the end of October.

If you have questions regarding the test data or proposed disposal plans, please contact Mr. Richard Leonard of my Water Quality Section who can be reached at 716-879-4270.

A copy of this letter will be sent to New York State Department of Environmental Conservation for their evaluation.

Sincerely,

CHARLES E. GILBERT

Charles E. Gilbert, P.E.
Acting Chief, Engineering Division

Enclosures

CF:
CENCB-PD-ER (Bryniarski)
CENCB-CO-NO (Borkowski)

Mr. Steve Doleski
Permits Administration
Region 9, New York State
Department of Environmental Conservation
600 Delaware Avenue
Buffalo, New York 14202

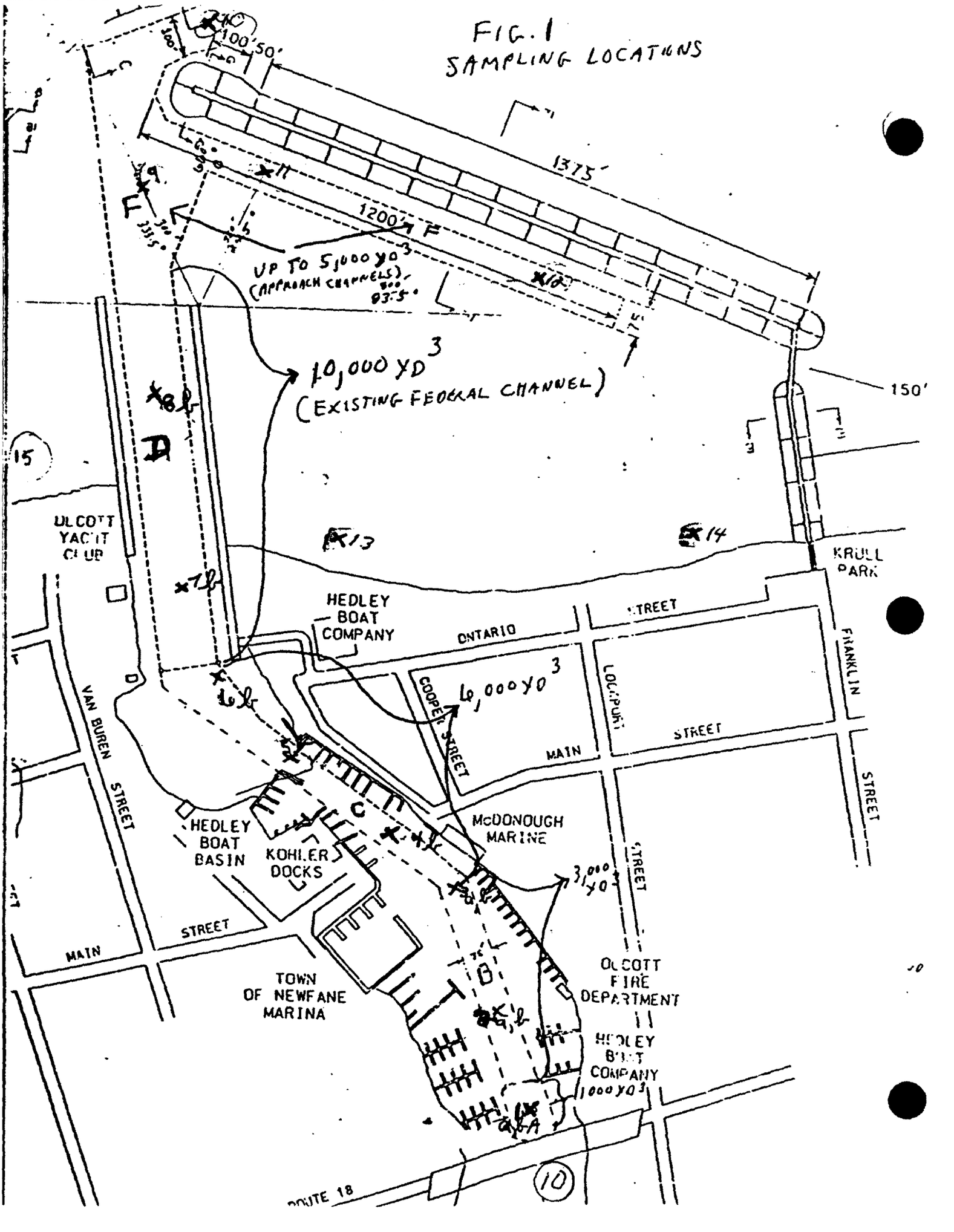


FIG. 1
SAMPLING LOCATIONS
100'
50'
1375'
1200'
UP TO 5,000 YD3
(APPROACH CHANNELS)
10,000 YD3
(EXISTING FEDERAL CHANNEL)
150'
OLCOTT YACHT CLUB
HEDLEY BOAT COMPANY
ONTARIO
STREET
KRULL PARK
FRANKLIN
6,000 YD3
COOPER STREET
LOCUST
MAIN
VAN BUREN STREET
HEDLEY BOAT BASIN
KOHLER DOCKS
McDONOUGH MARINE
3,000 YD3
TOWN OF NEWFANE MARINA
OLCOTT FIRE DEPARTMENT
HEDLEY BOAT COMPANY
1000 YD3
ROUTE 18
15
10

TABLE 1

SEDIMENT SAMPLING
OLCOTT HARBOR
JULY 10, 1989

Sample No.	Sample Equipment	Sampling Interval (LWD)	Sample Description
1a (1)	Alpine	235-236	Composite of 6", 8", 18" cores; dark grey silts and very fine sands
1b (1)	Ponar	235.7-236	Surface; dark grey silts, very fine sands
2a (1)	Alpine	234.5-238	Composite of 8", 10", 15" cores; brown silts
2b (1)	Ponar	237.7-238	Surface; brown silts, very fine sands
3a (1)	Alpine	234.3-237.5	Composite of 6", 10.5", 14" cores; brown silts
3b (1)	Ponar	237.2-237.5	Surface; brown and grey silts, fine sands
4b (1)	Ponar	231.2-231.5	Surface, silt, fine sand gravel, small sample
5b (1)	Ponar	234.5	rocks and gravel - no sample
6b (1)	Ponar	231.5	surface; medium to coarse sand
7b (2)	Ponar	231.5	surface; clean brown medium sands
8b (2)	Ponar	234.5	surface; clean brown medium sand

PROJECT DESIGN DEPTH:
(1) 233.8 (-9 LWD)
(2) 230.8 (-12 LWD)

Note: Samples could not be obtained from locations 9-11, 13, 14 (open lake) - probably stony or rock bottom.
Sites 12, 15 not attempted - rough waves - rock reported in site 15

Encl

TABLE 2

Olcott Harbor
Bulk Organic Analyses

Lab No. ID	1A	1B	2A	2B	3A
Arsenic	H	H	H	H	M
Barium	H	H	H	H	M
Cadmium	N	N	N	N	N
Chromium	H	H	N	N	N
COD	H	H	H	H	H
Copper	H	H	N	N	N
Cyanide	H	H	H	-	-
Iron	M	M	M	N	N
Lead	H	H	N	N	N
Manganese	M	M	N	N	M
Mercury	H	H	N	N	N
Nickel	H	H	M	M	N
Nitrogen, Ammonia	M	N	N	N	M
Phosphorus	H	H	H	H	H
TKN	H	H	M	M	H
Zinc	H	H	N	M	M
Oil & Grease	N	H	N	N	N
PCB's	N	N	N	N	N

Above data, except as noted, reported as mg/kg.

NON-POLLUTED	3	3	10	10	9
MODERATELY POLLUTED	3	2	3	3	5
HEAVILY POLLUTED	12	13	5	4	3

enc. 3

TABLE 2

Olcott Harbor
Bulk Organic Analyses
Continued

	Sand				
Lab No. ID	3B	4B	6B	7B	8B
Arsenic	H	M	H	M	M
Barium	H	M	H	M	N
Cadmium	N	N	N	N	N
Chromium	M	N	N	N	N
COD	H	M	N	N	N
Copper	M	M	N	N	N
Cyanide	-	-	-	-	-
Iron	M	N	N	N	N
Lead	M	M	N	N	N
Manganese	N	M	N	M	H
Mercury	N	N	N	N	N
Nickel	M	M	M	N	N
Nitrogen, Ammonia	N	N	N	N	N
Phosphorus	H	H	H	M	M
TKN	M	M	N	N	N
Zinc	H	H	N	M	N
Oil & Grease	N	N	N	N	N
PCB's	N	N	N	N	N

Above data, except as noted, reported as mg/kg.

NON-POLLUTED	6	7	13	12	14
MODERATELY POLLUTED	6	8	1	5	2
HEAVILY POLLUTED	5	2	3	0	1

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO
ATTENTION OF

Environmental Analysis Branch

OCT 18 1990

SUBJECT: Olcott Harbor Navigation Improvement Studies at Lake Ontario, Niagara County, Town of Newfane, New York - Continued Scoping Coordination

Dear Participant:

The U.S. Army Corps of Engineers, Buffalo District, is in the process of finalizing navigation improvement studies for the Olcott Harbor Project on Lake Ontario in the town of Newfane, Niagara County, New York. This project was authorized by the Water Resources Development Act of 1986. Olcott Harbor is a significant regional access area to Lake Ontario fishing, boating, bathing, aesthetic, and associated resources. Federal, State, regional, and local interests have sought navigation improvement measures for many years. Please refer to the enclosed description of alternative plans (Enclosure 1) and related drawings (Enclosure 2, Figures 1 through 9) for specifics on the proposed project.

The feasibility study phase including plan formulation, coordination, evaluation, and tentative selection of plan(s) was completed in 1979. Figure 4 of Enclosure 2 depicts the recommended plan (Plan 10) at that time. Other studies that were recommended are currently being completed to optimize engineering and economic features, and to further assess potential environmental and social impacts pertaining to fisheries, water quality, dredged material disposal, access, aesthetics, and community and regional development.

Please review the Enclosures, reference any previous comments you may have provided on the Olcott Harbor project, and/or provide me with any updated information pertaining to your interests that you think we should know about and/or any comments, concerns, or recommendations you may have. Information will be used to prepare the updated planning documentation. Please provide any comments within 30 days of the date of this letter. Your assistance in this matter is greatly appreciated.

Environmental Analysis Branch
SUBJECT: Olcott Harbor Navigation Improvement Studies at Lake Ontario, Niagara County, Town of Newfane, New York - Continued Scoping Coordination

My point of contact pertaining to this matter is Mr. Tod Smith of my Environmental Analysis Branch, who can be contacted by calling 716-879-4173 or by writing to the above address.

Sincerely,

John Zorich

John Zorich, P.E.
Chief, Planning Division

Enclosures

OLCOTT HARBOR, NEW YORK
PLAN DEVELOPMENTS
(Reference Figures 1 through 9, attached)

The feasibility study phase including plan formulation, coordination, evaluation, and selection of plan(s) was completed in 1979. Referenced Figure 4 depicts the recommended plan at that time. Other studies that were recommended are currently being completed to optimize engineering and economic features and to further assess potential environmental and social impacts pertaining to fisheries, water quality, dredge material disposal, access, aesthetics, and community and regional development. The following features have been developed and are being evaluated for final consideration.

Breakwater Optimization Plans

Two breakwater plans have been developed and are being evaluated. These plans are shown on Figures 5 through 8.

Plan 10A - The layout of Plan 10A is shown on Figure 5. The plan consists of navigation channels and harbor structures. The harbor structures are: (1) a detached west breakwater; (2) detached east breakwater; (3) a shore-connected east breakwater; and (4) a pedestrian foot bridge joining the detached east breakwater to the shore-connected east breakwater. All the breakwaters are rubblemound structures. The channels are: (1) an entrance channel between the breakwaters leading to the existing Federal channel; (2) an access channel from the entrance channel to the east mooring basin; and (3) a channel in Eighteenmile Creek beginning at the upstream end of the existing Federal channel and ending in a turning basin immediately downstream of the Route 18 highway bridge.

Plan 10B - The layout of Plan 10B is shown on Figure 6. The plan consists of navigation channels and harbor structures. The harbor structures are: (1) a detached west breakwater; (2) a shore-connected west breakwater; (3) a pedestrian foot bridge joining the detached west breakwater to the shore-connected west breakwater; (4) a detached east breakwater; (5) a shore-connected east breakwater; and (6) a pedestrian foot bridge joining the detached east breakwater to the shore-connected east breakwater. All the breakwaters are rubblemound structures. The channels are (1) an entrance channel leading to an outer basin; (2) an access channel from the outer basin to the east mooring basin; (3) an access channel from the outer basin to the west mooring basin; and (4) a channel in Eighteenmile Creek beginning at the upstream end of the existing Federal channel and ending in a turning basin immediately downstream of the Route 18 highway bridge.

These plans were model tested by the U.S. Army Corps of Engineers Waterways Experiment Station for structural performance and are being tested for physical environment parameters. The major difference between Plan 10A and 10B is that 10B would provide increased docking capacity, shore protection, and breakwater access.

Testing results will be coordinated with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation to facilitate assessment of potential impacts to lake and stream aquatics.

Enclosure 1

Dredging and Dredged Material Disposal

Surface and core sediment samples were taken in July 1989 from the existing and potential Federal channel areas at Olcott Harbor. Generally, sediment quality improves along Eighteenmile Creek from the Route 18 bridge to the lake areas. If all of the potential Federal access channel were dredged, it is estimated that about 1,000 cy of heavily polluted material and 24,000 cy of non to moderately polluted material would need to be dredged and disposed of. A number of disposal options are being evaluated including:

(1) Open lake disposal at the existing harbor open lake disposal site (Reference Figure 9) with disposal of the small quantity of polluted material followed by progressively cleaner capping material;

(2) Reduced dredging and open lake disposal at the existing harbor open lake disposal site only to the extent to which dredged material is acceptable to open lake disposal;

(3) Open lake disposal at the existing harbor open lake disposal site of acceptable open lake disposal material. Trucking of the small amount of dredged material classified as highly polluted for treatment and disposal at a nearby disposal facility;

(4) Open lake disposal at the existing harbor open lake disposal site of acceptable open lake disposal material. Placement of the small amount of dredged material classified as highly polluted material into a special project built small confinement diked facility (CDF) built adjacent to the project. This would probably be for one time use, filled and capped, and would be about half an acre in size; and

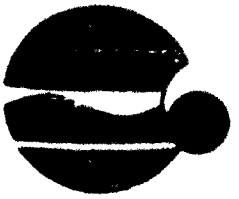
(5) Open lake disposal at the existing harbor open lake disposal site of acceptable open lake disposal material. Trucking and disposal of a small amount of dredged material classified as highly polluted material into a special project built small upland disposal facility that would be located in close proximity to the project.

Sediment testing results and disposal proposals are being coordinated with the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation. Dredged material disposal option 1 is being considered at this time.

Marina and Access Facilities

Primary marina facilities (ramps, etc.) would be provided by the existing developing Newfane Marina and other marinas located along lower Eighteenmile Creek. Minimal parking, access (docks and breakwaters), and sanitary facilities are being coordinated among various agencies and planned by the town of Newfane.

New York State Department of Environmental Conservation
Information Services
Wildlife Resources Center
Delmar, New York 12054



Thomas C. Jorling
Commissioner

October 24, 1989

John Zorich
Dept. of the Army
Buffalo District. Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Zorich:

We have reviewed the Significant Habitat Unit and the NY Natural Heritage Program files with respect to the Olcott Harbor Navigation Improvement work at Lake Ontario, Town of Newfane, Niagara County, New York.

The entire Lake Ontario shoreline in Niagara County is a major duck wintering area. Care should be taken not to destroy valuable habitat or unnecessarily disturb these birds.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional office(s), Division of Regulatory Affairs, at the address(es) enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State law.

If this project is still active one year from now we recommend that you contact us again so that we may update this response.

Sincerely,

B. Buffington

Burrell Buffington
Significant Habitat Unit

Enc.
cc: Region 9, Wildlife Mgr.

(18)

New York Heritage Program is supported in part by The Nature Conservancy

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238

518-474-0456

October 27, 1989

John Zorich, P.E.
Chief, Planning Division
Department of the Army
Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207-3199

Dear Mr. Zorich:

Enclosed is a copy of Commissioner Lehman's letter of October 19, 1989 regarding the Olcott Harbor proposal.

Some of the issues addressed in the letter pertain to your scoping coordination work discussed in your letter of October 18, 1989. The letter notes that economic and funding issues still need to be addressed.

We will be happy to discuss these issues with you as appropriate.

Sincerely,

Ivan P. Vamos

Ivan P. Vamos
Deputy Commissioner for
Planning and Development

IV:bb
cc: M. Pirastru
Planning

An Equal Opportunity/Affirmative Action Agency

STATE OF NEW YORK
PARKS, RECREATION AND HISTORIC PRESERVATION
ALBANY

ORIN LEHMAN
COMMISSIONER

October 19, 1989

Dear Colonel Boyd:

Thank you for your letter of September 21, 1989 regarding Olcott Harbor. We reviewed this proposal with Dan Kelly of your staff, legislators and representatives of local governments and other State agencies on September 12.

Since non-Federal funds are not budgeted for this project, it will be necessary to confirm the availability of funds from the Town and County and also ascertain that the half of the local share proposed for New York State is available for the March 1992 start indicated in your letter. The large scale of the proposed harbor at Olcott increases our concerns that these unresolved fiscal issues be settled before the project is advanced.

At the September 12 meeting, we discussed the possibility of increasing the Federal share for Olcott Harbor because of commercial and flood control benefits associated with the project. We would like to identify any potential for this improvement in the project's economic support.

We also hope that other agencies interested in this harbor can provide for a part of the local participation, perhaps through a newly formed Harbor Authority. By copy of this letter we are asking for comments and suggestions from these agencies.

Considering that there are no State Park properties or maintenance staff at Olcott, we will ask that the Town or perhaps the new Authority also agree to the maintenance of the project. The New York State Office of General Services and the Town will probably be able to address the land needs for the project.

We recognize that all of these issues need to be addressed in a single agreement with a local co-operator. We will try to help

the involved legislators, other agencies and local governments solve these issues before we can suggest the Olcott Harbor project be advanced.

Sincerely,

Chris Lehmann

Colonel Hugh F. Boyd, III
Department of the Army
Buffalo District, Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207-3199

cc: Congressman LaFalce
NYS Senator Daly
NYS Assemblyman Murphy
Mr. Donohue, WEDC
Commissioner Jorling, NYSDEC
Commissioner Hudacs, NYSOGS
Mr. Stafford, NYSDOS
Mr. Pirastru, NYSOPRHP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

NOV 08 1989

Mr. Charles E. Gilbert, P.E.
Acting Chief, Engineering Division
Attention: Water Quality Section
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Gilbert:

The Environmental Protection Agency (EPA) has reviewed the Sediment Analyses report and continued scoping coordination document for Olcott Harbor, Olcott, New York. The proposed project involves dredging of present and proposed extensions of the Federal Navigation Channel at Olcott Harbor and open water disposal of the dredge material in Lake Ontario. Based on our review, we offer the following comments.

The chemical sediment analyses report states bioassay testing has not yet been performed. To assure the appropriateness and adequacy of the sampling effort and avoid the need for retesting, we recommend that you coordinate the entire sampling and analyses effort with EPA Region II. Of special concern are bioassay testing procedures and adherence to a quality assurance/quality control program. In a related matter, data collected as part of EPA's National Bioaccumulation Study indicate that sediment from the upper end of Olcott Harbor may be contaminated with dioxin (2,3,7,8-TCDD). Accordingly, the bioassay sampling plan should contain provisions for dioxin analyses. Development of a plan for the sampling and analyses effort should be coordinated with Mr. Alex Lechich of our Marine and Wetlands Protection Branch; he can be reached at (212) 264-5283.

Your September 22, 1989 letter accompanying the report includes a proposed disposal plan consisting of capping more contaminated material with cleaner and sandier material. Capping of dredge material, in some cases, is an acceptable method of disposal provided certain criteria are met, (i.e., the suitability of the sediments for open water disposal, sediment transport, and the associated hydrological regime). The sediment testing carried out thus far has revealed heavily polluted levels of some contaminants in areas of the upper harbor. Therefore, the suitability of these

sediments for open water disposal must be determined through appropriate bioassay testing. Additionally, we would like any information you may have regarding monitoring or field studies performed at the Olcott open water disposal area. Since bioassays have not yet been performed, nor do we have information regarding sediment transport and the hydrological regime, we are unable to determine whether open water disposal and capping is the proper method of disposal for the contaminated dredged material.

Should you have any questions concerning this letter, please contact Mr. Lechich, or Ms. Marie Brill of my staff at (212) 264-6714.

Sincerely yours,

Robert W. Hargrove, Chief
Environmental Impacts Branch

cc: S. Doleski, NYSDEC-Region 9
M. Stoll, FWS-Cortland

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

November 13, 1989

Mr. John Zorich, P.E.
Chief, Planning Division
Environmental Analysis Branch
Department of the Army
Buffalo District
CORPS of Engineers
1776 Niagara Street
Buffalo, NY 14207-3199

Dear Mr. Zorich:

Re: CORPS
Olcott Harbor Navigation Project
Newfane, Niagara County
89PR1230

The State Historic Preservation Officer (SHPO) has reviewed the above project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation's regulations, 36 CFR 800/801.

Based upon this review, it is the opinion of the SHPO that this project will have no effect upon districts, sites, buildings, structures, objects or archeological resources in or eligible for inclusion in the National Register of Historic Places.

If you have any questions, please contact Edward Dudek of the Project Review Unit at (518) 474-0479.

Sincerely yours,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/ED:gc

An Equal Opportunity/Affirmative Action Agency

Historic Preservation Field Services Bureau
National Register and Statewide Survey 518-474-0479
Technical Services
Project Review

[illegible]-S

220.03 00 10

OLCOTT OUTER HARBOR STEERING COMMITTEE

December 19, 1989

Colonel Hugh F. Boyd III
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Attention: Weiner Cadet

Dear Colonel Boyd:

The Olcott Outer Harbor Steering Committee at their meeting of Friday, December 15, 1989, discussed the various plans being considered for Olcott Harbor.

Following discussion of the model testing in Vicksburg as well as the financial constraints on the authorized project, it was the unanimous consensus of the Committee that Plan 10-A modified was the preferred plan. A copy of the minutes of this meeting is attached.

If you need additional information, please do not hesitate to call.

Very truly yours,

Ronald L. Perry, Co-Chairman

Timothy R. Horanburg, Co-Chairman

RLP:ss
Enclosure

MINUTES OF MEETING

Olcott Outer Harbor Steering Committee
Friday, December 15, 1989, 3:00 p.m.
Eastern Niagara Chamber Office
Lockport. New York

Present: J. Connolly, J. Wendler, J. Kramer, T. Horanburg, D. Kinyon, T. McKenna, M. Mistretta, S. Lubick, D. Kirston, T. Belling

T. McKenna reported that the NYS Office of General Services has indicated to him that it may be necessary for the Town to own a narrow strip of shoreline in order to exercise their riparian rights which would allow them to construct docks.

It was noted that 10-A has now been renamed plan "10-A Modified" by the Corps of Engineers.

Copies of the Ivan Vamos memo were distributed to the Committee and discussion followed.

S. Lubick suggested that we may need the information regarding method of financing within the next six months. She suggested the Town and County probably should start planning their financial packages.

M. Mistretta explained the master plan and outlined the progress made so far in the planning process.

There was unanimous concensus among the committee members that plan 10-A (or as the Corps refers to it, Plan 10-A Modified) is the preferred project. This is the plan with attached east breakwater and detached west breakwater. There will only be one basin in this plan.

Respectfully submitted,

Theodore J. Belling
Recording Secretary

DEC 28 1989

Environmental Analysis Branch

SUBJECT: Olcott Harbor, New York, Reevaluation Study - Plan 10A (Modified)

200: 89 11 10
BUFFALO DISTRICT-CORPS

Relative to the Olcott Harbor, New York, Reevaluation Study, enclosed for your information is a narrative and plan view pertaining to Plan 10A (Modified). This is the selected plan for Olcott Harbor, as discussed with Mr. Thomas McCartney (U.S. Fish and Wildlife Service) and Messrs. James Pomroy and Steve Mooradian (New York State Department of Environmental Conservation) at a December 19, 1989 meeting held at the Corps of Engineers, Buffalo District office. At the meeting, a Corps Waterways Experiment Station representative provided a detailed explanation of model studies conducted, as well as the rationale that led to selection of this alternative plan. Please review the enclosed material and provide any recommendations and comments on the aforementioned plan to the Study Manager, Mr. Wiener Cadet, by January 19, 1990.

My point of contact pertaining to this matter is Mr. Leonard F. Bryniarski of my Environmental Analysis Branch, who can be contacted by calling 716-879-4173 or by writing to the above address.

Sincerely,

JAMES M. BENNETT

John Zorich, P.E.
Chief, Planning Division

Enclosure

CF:
CENCB-PD-ER
CENCB-PD
CENCB-PD-PP

This letter was sent to the following:

Mr. Leonard Corin
Field Supervisor
ATTN: Mr. Tom McCartney
U.S. Department of the Interior
Fish and Wildlife Service
100 Grange Place, Room 202
Cortland, New York 13045

Mr. John Spagnoli
Regional Director
ATTN: Mr. Steven Doleski
Mr. Michael McMurray
New York State Department of
Environmental Conservation
Region 9
600 Delaware Avenue
Buffalo, New York 14202

Mr. Lawrence S. Nelson
Regional Office Supervisor
ATTN: Mr. Steve Mooradian
Mr. James Pomeroy
New York State Department of
Environmental Conservation
Region 9 - Natural Resources Office
128 South Street
Olean, New York 14760-9990

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202
716/847-4551

Thomas C. Jorling
Commissioner

January 22, 1990

Colonel Hugh F. Boyd III
U.S. Department of the Army
Buffalo District Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Attn: Mr. John Zorich, Planning Division
Mr. Charles Gilbert, Engineering Division

Olcott Harbor - Lake Ontario
Reevaluation Study - Plan 10A
Modified
Town of Newfane - Niagara County
DEC No. 9-2928-00023/00001-0

Dear Colonel Boyd:

Regional Director, John Spagnoli, asked me to respond to your District's letters of September 26, 1989, October 18, 1989 and December 28, 1989 concerning the referenced proposal. Our comments are based on the following understandings of the most recent proposal.

1. All new mooring capabilities will be kept to the east of the existing federal piers.

2. The harbor expansion will involve no dredging; existing harbor depths are considered to be adequate.

3. Any future dredging will be the responsibility of a non-federal sponsor, the New York State Office of Parks, Recreation and Historic Preservation, Niagara County or Town of Newfane.

Fortunately, one of our major concerns, disposal of contaminated dredge spoil in Lake Ontario, is no longer an issue (at least with regard to actual construction of this proposal), as stated in your December 28, 1989 transmittal to this office. If our understanding is not correct on this point, advise us and please include a discussion of dredging/disposal impacts in the Federal EIS.

Although the Department certainly does not favor open lake disposal, it might be approvable depending on:

1. additional sampling (details available upon request) and bioassay results,

2. adequate investigation and documentation of existing conditions at the open lake dump site,

3. effective capping of the heavily polluted sediments with uncontaminated sediments, and

4. an acceptable plan for follow-up monitoring of the dump site.

Also, this is to confirm that if upland disposal were proposed, sediments from areas labeled A and B would have to be disposed at a sanitary landfill, permitted in accordance with 6 NYCRR Part 360 (Solid Waste Management Facilities) in order to meet New York State Environmental Conservation Law requirements. It appears that material from sites C, D & F would be considered uncontaminated and would be exempt from Solid Waste Management Facility Permit requirements in accordance with 6 NYCRR Part 360-7.1 if the disposal is conducted during daylight hours.

We concur with the selection of plan 10A modified over plan 10B, since less disturbance or alteration of the lakebed is involved and water will be better able to move/circulate through the new marina basin from a westerly direction.

We are disappointed that the modeling study did not test the use of underwater culverts to facilitate water circulation through the breakwaters. We understand that the breakwaters are not impervious to the passage of water through them, but it is unclear just how much circulation actually occurs in this manner. While the Corps expressed concern about the cost of culverts and the transmission of waves into the harbor through culverts, the validity of these arguments was not documented by modeling.

The modeling studies suggest that circulation or patterns of movement of water emerging from the mouth of Eighteenmile Creek will not be greatly altered by installation of the proposed breakwaters. We assume that the ability of fish to cue onto water from Eighteenmile Creek will not be impaired (i.e. that salmonid runs will not be reduced by the project).

In conclusion, this Department supports the implementation of plan 10A (modified). Our Bureau of Wildlife's approval is based on its desire to create alternatives to developing marinas in the regulated wetland along Eighteenmile Creek upstream of New York Route 18. Our Bureau of Fisheries approval is contingent upon the idea that present angler access/use of the federal piers will not be diminished by implementation of the project and that anglers will have complete access to the new, proposed east breakwater. In order for anglers to fish off the east side of the existing east federal pier, mooring of boats must not be allowed within 150 feet of the pier.

If you have any questions or wish to schedule a future meeting on this subject, please contact Michael J. McMurray, Senior Environmental Analyst or me at (716)847-4551.

Respectfully,

Steven J. Doleski

Steven J. Doleski
Regional Permit Administrator

cc: Mr. John Spagnoli - Regional Director, Region 9
Mr. Alex Lechich - U.S. Environmental Protection Agency
Mr. Leonard Corin - U.S. Fish and Wildlife Service

MJM/SJD/kah

FEB ..-..J

Water Quality Section

SUBJECT: Sediment Testing at Olcott Harbor, New York

Mr. Robert W. Hargrove, Chief
Environmental Impacts Branch
U.S. Environmental Protection Agency
Region II
ATTN: Mr. Alex Lechich
Jacob K. Javits Federal Building
New York, New York 10278

Dear Mr. Lechich:

We received results of bioassay testing for Olcott Harbor at essentially the same time as your letter of November 8, 1989 and therefore cannot coordinate bioassay test procedures with Region II at this time as requested. Results of the bioassay testing are enclosed.

There was no mortality to fathead minnows from either control or channel sediments over the 96 hour test period. There was low to moderate toxicity of channel sediments to Hexagendia and Daphnia using the Prater-Anderson criteria. We believe the bioassay tests support the disposal plan described in our September 22, 1989 letter. The clean sandy material as represented by sampling sites 7 and 8 exhibited the lowest toxicity and is proposed as cap material to be placed over the polluted sediment at the open-lake disposal site.

Dioxin analysis has not routinely been done for Buffalo District dredging projects. In view of Region II concern, we would perform 2,3,7, and 8 Dioxin analyses on samples from Eighteen-Mile Creek providing criteria for an acceptable level of dioxin is agreed upon, and the dredging of Eighteen-Mile Creek is retained as part of the Federal project.

The open-lake disposal site proposed for disposition of the dredge material is 1.6 miles from the Harbor and has a water depth of ~ 100'. Bulk sediment chemistry, particle size, and bioassay tests were done at the disposal site in 1981. Results of these tests are enclosed, and will also be provided to Region 9, New York State Department of Environmental Conservation.

Water Quality Section
SUBJECT: Sediment Testing at Olcott Harbor, New York

Our Coastal Engineering Section believes there will be negligible movement of the capped dredge material at the 100' deep disposal site. They would provide data and calculations to support this assertion and the disposal site would be monitored for movement if the Eighteen Mile Creek is dredged.

I will provide your office with any of the sediment Dioxin analyses which may be performed and would appreciate your further evaluation using the existing bulk chemical and bioassay test data.

A copy of this letter is being sent to Mr. S. Doleski, New York State Department of Environmental Conservation, Region 9.

My point of contact in this matter is Mr. Richard P. Leonard of my Water Quality Section who may be contacted at (716) 879-4270, or writing to his attention at the above address.

Sincerely,

HUGH F. BOYD III
COLONEL U.S. ARMY
COMMANDING

Hugh F. Boyd III
Colonel, U.S. Army
Commanding

Enclosures

CF:
CENCB-PD-ER
CENCB-PD-PF
CENCB-ED-DC

United States Department of the Interior
FISH AND WILDLIFE SERVICE
100 Grange Place
Room 202
Cortland, NY 13045

March 16, 1990

Colonel Hugh F. Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attention: Mr. Len Bryniarski

Dear Colonel Boyd:

Enclosed for your review are two (2) copies of our final fish and wildlife report for the proposed Olcott Harbor Project in Lake Ontario at the mouth of Eighteenmile Creek, Hamlet of Olcott, Town of Newfane, Niagara County, NY.

This final report incorporates changes suggested by your staff. The New York State Department of Environmental Conservation (State) has informally indicated their concurrence with this report. However, an official response from the State is pending and will be forwarded to your office as soon as received.

No other responses to the draft report were received.

Sincerely,

Leonard P. Corin
Field Supervisor

Enclosures

cc:
NYSDEC, Albany; Buffalo; Olean
EPA, NY, NY

(34)

NOTE: NYSDEC Letter of Concurrence dated March 19 is attached

New York State Department of Environmental Conservation
Division of Regulatory Affairs
600 Delaware Avenue
Buffalo, New York 14202-1073

Thomas C. Jorling
Commissioner

May 23, 1990

29 MAY 90 10 43
MAILROOM-NCBIM-S

Colonel Hugh F. Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

Attention: Mr. Len Bryniarski

Dear Sir:

Regarding the environmental window for in-water (lake) construction activities for the proposed Olcott Harbor project in Lake Ontario at the mouth of Eighteenmile Creek, Hamlet of Olcott, Town of Newfane, Niagara County, New York, allow me to summarize the agreement between the U.S. Fish and Wildlife Service and the New York State Regional Fisheries Office in Olean.

In the March 16, 1990 letter to you from Mr. Leonard P. Corin, Field Supervisor, Cortland Office, he recommended that in-water activities be confined to the period between June 15 and September 1. Although these restrictive dates are justified based on the important migratory fisheries in the area, as well as the very intensive user activity in both the spring and fall months, a less restrictive window is more realistic in lieu of the construction requirements for this project.

The Regional Fisheries Manager has informed me that the revised construction window shall extend from May 15 through September 15 for all in-water activities. This window does not restrict activities associated with the project that may occur upland.

Sincerely,

Steven J. Doleski

Steven J. Doleski
Regional Permit Administrator

cc: Mr. Stephen Mooradian
Mr. Thomas McCartney

CENCB-PP-PM (1110-2-1150a) 22 June 1990

MEMORANDUM FOR RECORD

SUBJECT: Olcott Harbor, New York

1. A meeting was held between the NYS Department of Environmental Conservation (NYSDEC), U.S. Fish & Wildlife Service (USFWS), NYS Parks, Recreation, and Historical Preservation (NYSPRHP) and the U.S. Army Corps of Engineers (COE) at the NYSDEC Region 9 office on 21 June 1990 at 1 p.m. The meeting was held to discuss the available construction period for the subject project. A list of attendees is attached.

2. I opened the meeting stating that the meeting was to try to clarify and better define the reasoning for the construction window provided in the 23 May 1990 NYSDEC letter to the Corps. I stated that maybe a better description of what the Corps project was proposing to do would help in determining the allowable construction window. I proceeded with a brief explanation of the features and some aspects of the potential construction. Mr. Ptak went further into the explanation of what construction operations might be like. Mr. Ptak stated that the work would basically be a barge operation and that stone, without fines, would be positionally placed.

3. Mr. Doleski stated that he would like to see restricting of the contractor if he were to advocate changing the restriction dates for construction. Mr. Doleski asked Mr. Mooradian if he could explain the concerns. Mr. Mooradian stated the problem had two aspects; resource and user impacts. He clarified that the dates for construction limits concerned inwater work.

4. Major Plank suggested a fan area near the mouth of the creek be used to limit construction during certain periods. Mr. Mooradian stated it would not be safe to assign such a fan. I for sake of discussion drew a fan for which he then drew a fan considerably beyond the mouth of the creek saying that was more likely. A suggestion was made for a construction window with an early start in the first full construction season, and a late finish in the second. Mr. Mooradian and Mr. Corin stated this would not be a solution to the resource impacts as it was impossible to predict a viable spawning in each significant year class.

5. Major Plank stated that the project was for the good of the fish and the user. Mr. Mooradian expressed that the user was gaining more. Then a discussion followed regarding the extension of time needed for the window and the potential impacts on the project cost and economic feasibility. Mr. Ptak explained the contracting objective was to have a reasonable time and the best price. I explained that based on the 15 May to 15 Sep allowable construction period, an additional year or more would be added on to the construction time, which would likely increase project cost to the point where there is not an economically feasible project. Accelerated construction was discussed and the point made that it would cost more and likely require more plant to accelerate the work.

6. Use of a filter curtain for the purpose of directing fish was discussed. It was not favorably received because of the difficulty in anchoring it, the possible disruption and hazard to boaters, and the possibly that it would snag or trap fish.

7. A preferred order of construction was discussed as a means to mitigate construction disruptions. Construction of the west breakwater first received favorable consideration as a likely place a contractor would begin. With the west breakwater constructed first the contractor would have some sheltered area in which to work. This is also the area nearest to the creek mouth where the fish are staging.

8. As a result of lengthy discussion, it was agreed that the Corps would provide by 29 June, an evaluation of an order of construction. The plan to be considered would call for construction of the west breakwater within the 15 May to 15 Sep window in the first full season, and construction of the east detached breakwater beginning at the west end, on 15 May of the second full season.

9. The Corps will consider the potential for completing the west breakwater in the first season with minimal impacts to cost, and similarly consider what portion of the detached east breakwater would likely be completed in the second season by 15 Sep. (It is to be assumed that the east shorearm would be built concurrently with the east detached breakwater).

10. Depending on the physical length of the east breakwater likely remaining to be completed after 15 Sep, and on the length of time required to complete it, DEC would be receptive to extending the construction window, rather than have the contractor return for another season. The Corps also needs to consider how this would be addressed in the specifications.

11. Mr. Mooradian and USFWS representatives agreed to reassess the possible means to mitigate construction impacts and upon receipt of the Corps data to have a response within a full working week's time. NYSDEC and FWS will reevaluate the "ER ~~Construction~~ Window" with the construction phasing.

Timothy E Byrnes
TIMOTHY E. BYRNES
IPM

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202

Thomas C. Jorling
Commissioner

MEETING ATTENDANCE LOG

SUBJECT OF MEETING Olcott Harbor TIME 1 P.C.

LOCATION _____ DATE 6/13/1

NAME (please print)	REPRESENTING	TELEPHONE
MAJ DAVID PLANK DPT/COL	BUFFALO DISTRICT COE	
SCOTT RICHARD, Environmental Analysis Section	"	879-4171
Tim Byrnes Project Manager COE	"	879-4276
Jim Bennett	"	879-9180
STEPHEN R. MOORADIAN	NYS ENVIRON. CONS.	372-[illegible]
JERRY PEAK	BUFF DIST COE	879-4233
Leonard P. Corin	U.S. Fish and Wildlife Service	[illegible]
Tom McCARTNEY	" "	"
Steven Dobaki	NYS DEC	716-847-4551
[illegible]	[illegible]	[illegible]

J. Bennett

MAILROOM-NCBIM-S

2 JUL 90 10 35

Project Management Branch

SUBJECT: Olcott Harbor Project, New York

Mr. Steven J. Doleski
Regional Permit Administrator
NYS Department of Environmental Conservation
600 Delaware Avenue
Buffalo, New York 14202-1073

Dear Mr. Doleski:

Reference your June 29, 1990 telephone conversation with Mr. Timothy Byrnes, of my Project Management Branch, and our meeting on June 21, 1990 at your office regarding the environmental window for in-water (lake) construction activities for the subject project.

Regarding the information I agreed to provide on construction phasing, my staff evaluated construction of the breakwaters within the 15 May - 15 September window with construction of the West breakwater the first season and arrived at the following:

1 - Shift 10 hrs/day, 6 days/week

West Breakwater
Utilizing May 15 - Sep 15, in the first year an additional 3 weeks will be necessary to complete.

East Breakwater
Utilizing May 15 - Sep 15, in the second year an additional 8 weeks will be necessary to complete.

1 - Shift 12 hrs/day, 6 days/week

West Breakwater
Utilizing May 15 - Sep 15, construction of the West Breakwater should be able to be completed.

East Breakwater
Utilizing May 15 - Sep 15, in the second year an additional 5 weeks will be necessary to complete.

The additional contract cost for 12 hour days is about $750,000.

Project Management Branch
SUBJECT: Olcott Harbor Project, New York

After additional consideration, it appears that other alternatives for working within the 15 May - 15 September environmental window (double shifts, additional plant, use of a third construction season) will be more costly than the alternative with a single shift of 12 hours per day 6 days a week.

Based on the above information on construction phasing, the use of a single shift of 10 hours a day 6 days a week is the most efficient construction phasing and is more or less the industry standard. However, realize that this does not allow for completion of the project within the present environmental window. Further, the single shift of 10 hours a day, 6 days a week is apparently the only means of construction that will allow for an economically justified project.

Regarding the sediment information I agreed to provide, as previously stated, I have limited information but expect to supplement that information in the near future. Three borings were taken in the area of the proposed channel entrance and two of the borings showed no evidence of sediments with the third showing deep sediments, which probably indicates an ancient buried channel. Based on the available information, we do not expect to encounter sediments for the most part although there may be a narrow band of sediments in the area of the westerly portion of the East breakwater, where the ancient buried channel appears to be located.

Based on all of the above, I request that the environmental window be expanded in the first year to include May 15 - October 6 and in the second year to include May 15 - November 10, to allow for the use of the single shift 10 hours a day, 6 days a week alternative. I will encourage the contractor to work as expeditiously as possible, in order to minimize the impacts of any work beyond September 15.

A copy of this letter has been furnished Mr. Mooradian and Mr. Corin.

My point of contact regarding this matter is Mr. Timothy Byrnes who may be contacted at 716-879-4276.

Sincerely,
BRUCE W. HAIGH
LTC, U.S. ARMY
DEPUTY COMMANDER
David P. Plank
Major, U.S. Army
Deputy District Commander

United States Department of the Interior

FISH AND WILDLIFE SERVICE

100 Grange Place
Room 202
Cortland, NY 13045

JUL 10 80 09 36

July 6, 1990

Colonel Hugh Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attn: Mr. Tim Byrnes

Dear Colonel Boyd:

This responds to your letter of June 29, 1990, following our meeting on June 21, 1990, at the New York State Department of Environmental Conservation (State) office in Buffalo, NY, regarding the environmental activities associated with the Olcott Harbor Project in Lake Ontario at the Hamlet of Olcott, Niagara County, NY.

Based on that meeting and subsequent discussions with State fisheries personnel, we concur with your suggested expanded work window. In-water construction activities may be carried out according to the following schedule:

1) Year 1 - May 15 to October 6 complete construction of the west breakwater.

2) Year 2 - May 15 to November 10 complete construction of the east breakwater including the shore-connected segment.

This schedule will permit 10 hour work days, 6 days per week and should allow the bulk of each project to be near completion by September 15. This will minimize impacts on migratory fishes entering Eighteenmile Creek.

Please advise us of any subsequent changes in construction plans. If you have any questions regarding this project contact Tom McCartney at 607-753-9334.

Sincerely,

Leonard P. Corin
Field Supervisor

cc:
NYSDEC, Albany; Buffalo; Olean

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202

716/847-4551 MAILROOM-NCBiM-S

9 Jul 90 11 22

Thomas C. Jorling
Commissioner

July 6, 1990

27/9

Mr. David P. Plank, Major
Deputy District Commander
U.S. Army
Buffalo District Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

Attn: Mr. Timothy Byrnes

Dear Major Plank:

Olcott Harbor Project
Town of Newfane - Niagara County

I enjoyed making your acquaintance during the June 21, 1990 meeting that was held at the DEC Region 9 Office regarding the above noted. Over the years, Region 9 has enjoyed a very good working relationship with the Buffalo District Corps of Engineers' Office. I feel that relationship was typified by the open and candid discussions our agency representatives had together regarding proposed restrictive dates for in-water (lake) construction activities for the Olcott Harbor breakwaters.

Accordingly, and after considerable review and deliberation, the Region 9 DEC Office concurs with the following "environmental window dates" that were requested in your June 9, 1990 letter to this Office:

° West Breakwater Construction
1-shift 10 hours/day, 6 days/week
First Year of Construction

May 15th through October 6th

° East Breakwater Construction
1-shift 10 hours/day, 6 days/week
Second Year of Construction

May 15th through November 10th

While the above dates for in-water construction may affect fishery resources and inconvenience the fishing public, we believe that those possible impacts are justified by the improved public access, recreational and economic benefits that the finished project will provide. However, we do request that contract documents emphasize the disirability of completing the in-water construction as soon as possible within the environmental window dates provided above to lessen adverse factors that may affect fish spawning and public fishing opportunity. We would also encourage that the construction of the bulkheads over silty bottom areas be completed as early as possible within the authorized time periods.

I believe this decision should satisfy your immediate needs. Please do not hesitate to contact me or Mr. Michael McMurray, Senior Environmental Analyst, if other problems arise or you believe we should arrange to meet in the future. Thank you for your cooperation.

Respectfully,

Steven J. Doleski

Steven J. Doleski
Regional Permit Administrator
Division of Regulatory Affairs

cc: Mr. Stephen Mooradian - Region 9 Fisheries Manager, Olean
Mr. Leonard Corin - U.S. Fish and Wildlife Service

SJD:kah

MAILROOM NCBIM-S

AUG 2 1990 Aug 2 2 23 PM '90

Environmental Analysis Section

SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

Mr. Robert W. Hargrove
Chief, Environmental Impacts Branch
ATTN: Ms. Marie Brill
U.S. Environmental Protection Agency
Region II
Jacob K. Javits Federal Plaza
New York, New York 10278

Dear Mr. Hargrove:

This pertains to Ms. Brill's April 25 and July 19, 1990 telephone conversations with Mr. Scott Pickard of my staff regarding the 1989 sediment sampling and analysis program performed at Olcott Harbor, as it relates to our maintenance dredging and open-lake disposal of dredged material from the existing Federal Outer Harbor Channel.

The sampling sites included in the 1989 sediment testing program, as shown on Enclosure 1 of our September 22, 1989 letter, are relative to the authorized, but unconstructed navigation improvements to Olcott Harbor. Specifically, Sampling Sites 1A, 1B, 2A, 2B 3A, 3B, 4B, 5B, and 6B were selected to represent the Creek Channel sediments, and Sampling Sites 5, and 11-14 were selected to represent the Approach Channel. These channels have since been eliminated from consideration and are no longer included under the proposed navigation improvements.

With respect to the existing Federal Outer Harbor Channel, I am requesting that data from Sediment Sampling Sites 7B, 8B, and 9 from the 1989 testing program be used for the purposes of evaluating the quality of material that is to be maintenance dredged. For your convenience, I have transposed these sampling sites onto a map of the existing Federal project at Olcott Harbor, and have highlighted the existing Federal Outer Harbor Channel they represent.

With regard to the evaluation of the suitability of the Federal Outer Harbor Channel sediments to be open-lake disposed, I do not believe additional sediment testing at Olcott

Environmental Analysis Section
SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

Harbor is warranted at this time. This view is predicated on the following factors:

a. Testing of the Oswego Harbor sediments for 2, 3, 7, and 8 Dioxin (TCDD) contamination, as performed by USEPA's Environmental Research Laboratory, Duluth, showed undetectable levels. This strongly suggests that the TCDD detected in the carp collected within Oswego harbor was bioaccumulated from existing Lake Ontario background levels, as we contended at our November 30, 1989 meeting. Since there is no known source of TCDD in either Eighteenmile Creek or Olcott Harbor, it is reasonable to conclude that the source of bioaccumulated TCDD in the carp sampled from Olcott Harbor is from the lake.

b. Testing of the Federal Outer Harbor Channel sediments was recently performed in 1987 and 1989. The results of bulk inorganic and organic analyses for both programs classified these sediments overall as "Nonpolluted." Bioassays performed under both programs showed zero to low toxicity to test organisms.

c. Particle size analysis and gross observations of the sediment samples indicated that the Federal Outer Harbor Channel sediments are comprised primarily of medium-grained sands. Coarse grained sediments typically do not adsorb significant amounts of contaminants. This is in further support of the bulk inorganic and organic data on these sediments.

It is my view that the above factors sufficiently support the environmental acceptability of open-lake disposal. I strongly believe that additional sediment testing at Olcott Harbor at this time would not be a prudent expenditure of Federal funds. The recent testing performed at Oswego Harbor and the associated logistical efforts were extremely costly, and essentially served only to reaffirm our original evaluation of the sediment quality.

Please provide your evaluation of the data presented in our September 22, 1989 and February 1, 1990 letters by August 17, 1990, so that the current project schedule can be maintained.

Environmental Analysis Section
SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

If you have any further questions or comments in regard to the above, please contact Mr. Scott Pickard of my Environmental Analysis Section or Mr. Richard Leonard of my Water Quality Section, who may be reached at (716) 879-4171 and 879-4270, respectively.

Sincerely,

CHARLES E. GILBERT

FOR George B. Brooks, P.E.
Chief, Engineering & Planning Division

Enclosure

CF:
CENCB-PE-PR
CENCB-PE-P
CENCB-PE-HQ
CENCB-PE
CENCB-CO-MO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

DEC 21 1990

Mr. George B. Brooks, P.E.
Chief, Engineering and Planning Division
Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Brooks:

The Environmental Protection Agency (EPA) has reviewed the bioassay sediment analyses report and other supplemental information for the Federal Navigation project at Olcott Harbor, New York. These analyses were prepared to aid in determining the suitability of dredged materials from the present and proposed extensions of the Federal Navigation Channel for open water disposal in Lake Ontario.

The original navigation project called for maintenance dredging of an existing channel, construction of a new access channel, and the construction of several rubblemound breakwaters. The total volume of dredged materials would have been approximately 25,000 cubic yards with disposal in an open water site in Lake Ontario. However, in your August 2, 1990 letter, you indicated that the navigation project had been substantially reduced. The modified project includes dredging only the Outer Harbor, (i.e., 10,000 cubic yards) with open water disposal. Dredging of the Inner Harbor and the proposed new approach channel had been eliminated from the scope of the project.

In previous correspondence, we expressed concern about the methodologies used to determine the suitability of the sediments for open lake disposal (i.e., bioassay procedures and evaluation criteria), and the characteristics of the open lake disposal site (i.e., its non-dispersive qualities). Based on our evaluation of the reports, and recognizing the reduced scale of the project, our concerns have been substantially reduced. The following are our comments on the currently proposed project.

Bioassays/Sediment Analyses

EPA recognizes that existing methodology and criteria for determining the suitability of dredged materials for open water disposal may not be adequate to protect the environment. As you know, the U.S. Army Corps of Engineers (ACE) and EPA dealt with the inadequacies of the current methodology and criteria through implementation of interim measures for sediments with elevated contaminant levels in the Oswego Harbor Federal Navigation project.

For the original Olcott project, we would have recommended performance of the same suite of tests that were performed on the Oswego Harbor sediments. However, because the project has been reduced to dredging only the Outer Harbor, and the ACE has concluded that the sediments to be dredged in the Outer Harbor meet the "non-polluted" material criteria, EPA agreed to review the information presented by ACE before making a final recommendation regarding additional testing for the project.

The bioassay and bulk sediment data for the project indicates that the mortalities from the bioassay tests ranged up to 33 percent with several other mortalities in the 20 percent level, with the majority of the high mortality values coming from sediments taken from the Inner Harbor. Accordingly, EPA concurs with the ACE conclusion that the sediments for Olcott Harbor can be classified as "non-polluted" (Outer Harbor) to "moderately polluted" (Inner Harbor) according to the current criteria.

Although we have reservations about the dependability of the current methodologies for bioassay testing and the evaluation criteria, we concur with the ACE that dredging the Outer Harbor, involving only 10,000 cubic yards of coarse-grained material, which the bulk sediment testing has shown to have low concentrations of contaminants, is environmentally acceptable. However, please note that because of the elevated contaminant levels present in the Inner Harbor sediments, the same suite of tests that were performed on the Oswego Harbor sediments would be required of these sediments should the ACE proposed dredging of this part of the Olcott Harbor

Open Water Disposal Site

As stated above and conveyed to your staff via telephone conversations, EPA is also concerned about the fate of the sediments after disposal in the open lake site. The ACE attempted to address our concern about this issue by stating that there will be negligible movement of the dredged material

at the 100 foot deep disposal site. Further, to support this assertion, it provided information and data on October 25, 1990 regarding the non-dispersive nature of the open lake disposal site as well as the proposed monitoring plan.

This information discusses the physical characteristics of the sediments that would be dredged (over 90 percent medium-grained sand) as well as the physical characteristics of the disposal site (depth, areal extent, hydrodynamics). The ACE has concluded that less than 10 percent of the material deposited at the site is anticipated to be dispersed, (the 10 percent consisting of the fine-grained fraction of the sediment). EPA concurs with this conclusion. Moreover, since the dredging will only occur at the less polluted Outer Harbor site, ACE believes that environmental impacts related to the possible dispersal of this material would be negligible. We concur with this position, and agree that the Olcott Harbor navigation project with open lake disposal, as currently proposed, will not result in significant adverse environmental impacts.

As you know through our previous communications and our coordination on the Oswego Harbor Federal Navigation Channel project, EPA, in conjunction with ACE and other agencies, is currently developing more appropriate methodologies for evaluating dredged material testing and open lake disposal practices in the Great Lakes. Because of these initiatives, we anticipate that subsequent requests for authorization to dredge the other portions of Olcott Harbor and similar projects in the Great Lakes area will require more stringent testing as well as appropriate monitoring of open lake disposal sites.

Should you have any questions regarding our review, please contact Mr. John Filippelli, Chief, Federal Activities Section, at (212) 264-6723.

Sincerely yours,

Robert W. Hargrove, Chief
Environmental Impacts Branch

cc: S. Doleski, NYSDEC-Region 9
M. Stoll, FWS-Cortland
C. Grundler, GLNPO

OLCOTT SMALL BOAT HARBOR
ALONG LAKE ONTARIO
TOWN OF NEWFANE, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL
ENVIRONMENTAL IMPACT STATEMENT
SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA - F -

COMMENT LETTERS ON THE
DRAFT REEVALUATION REPORT AND
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

(COMMENT RESPONSES FOLLOW AS NECESSARY)

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT

COMMENT RESPONSE ON DRAFT COORDINATION OF THE OLCOTT HARBOR DRAFT REEVALUATION REPORT AND DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

DATE	LETTER AND RESPONSE (AS NECESSARY)	PAGE
11/12/92	U.S. Department of Agriculture Soil Conservation Service (No Response Necessary)	1
11/12/92	Nathaniel L. Cook (No Response Necessary)	2
11/18/92	Lynne B. Seefeldt (No Response Necessary)	4
11/25/92	New York State Office of Parks, Recreation, and Historic Preservation State Historic Preservation Office (No Response Necessary)	5
11/30/92	Robert Mandry (No Response Necessary)	6
11/30/92	Lynne B. Seefeldt (No Response Necessary)	7
12/24/92	New York State Department of State Coastal Resources Program	8
	(Response)	24
12/28/92	U.S. Environmental Protection Agency Region II (No Response Necessary)	36
12/30/92	U.S. Department of the Interior U.S. Fish and Wildlife Service (No Response Necessary)	38

NOTE

* New York State Office of Parks, Recreation, and Historic Preservation (State Cooperator) did not provide any additional comments at this time.

* The Town of Newfane (Local Cooperator) did not provide any additional comments at this time.

* New York State Department of Environmental Conservation did not provide any additional comments at this time.

United States Department of Agriculture

Soil Conservation Service

James M. Hanley Federal Building
100 S. Clinton Street, Room 771
P.O. Box 7248
Syracuse, New York 13261-7248

November 12, 1992

Mr. Tod Smith
Environmental Analysis Section
Department of the Army
Buffalo District,
Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Smith:

We have reviewed the Olcott Harbor Project Draft Reevaluation Report with the Draft Supplemental Environmental Impact Statement, and have no additional comments.

Thank you for the opportunity to review this information. If we can be of any further assistance, please do not hesitate to contact us.

Sincerely,

Paul A Dodd

PAUL A. DODD
State Conservationist

MAILROOM
CENCE-IM-S
20 Nov 92 09 56

5709 West Bluff
Olcott, New York
14126

November 12, 1992

John W. Morris, Colonel
U.S. Army Corps Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Colonel Morris,

Thank you for the information packet regarding the Olcott Harbor. We wish to challenge the determination that the project outputs would be primarily recreational. We have to exploit our natural resources, to develop financial stability in this unique community as we have no industry. The economy in this Hamlet of Olcott is tied to its resources, The park, beaches, fishing and boating.

Following the great depression in the early '30s we never regained our prior status, when trains, lake steamers, horse and buggies and later automobiles brought thousands of tourists from Canada and Western New York each year into our Hamlet. The only way we can recapture our former status is through the redevelopment of our natural resources.

In the days when Colonel Hansen was District Engineer for the Corp in this area, we organized a group to help restore our prior status. This was proposed as a joint operation between our Federal and State Governments. Through no fault of the Colonel, the Federal Government showed no interest in sponsoring the development south of a new high level bridge (50 ft. clearance) to be built by the State Government. Later it was shown that development would not be environmentally feasible and gave way to the current proposals off shore.

The bridge when completed, generated enough interest for private investors to build two motels, two restaurants, two tackle and bait shops, enlargement of two marinas, one delicatessen and a lot for seventy camping and recreational vehicles with electric, water, sewer hookups and restrooms with showers. The owners of the motel on Route 18 have since purchased the land between their property and the creek for future development.

The previously existing business including restaurants, taverns, bowling alley and skating rink have also benefitted from the increased tourism.

The longtime support received from both professional and public agencies, interested groups and most individuals supports the view that the Project is what the community needs and wants. The local negative responses you received are not surprising. There are those who resist change, others who enjoy the attention gained by opposing popular view and those who oppose avidly with the aim of increasing their financial compensation. We had all of them in the late sixties. After the effects of the improvement in Olcott began to show most who formerly opposed it gave it a nod of approval.

The development by private investors, as described above, was stimulated by fishing and less than one hundred boat slips made available by the relocation of the new bridge. Under the proposed plan - - that has the capacity for over 800 slips our goal would be achieved. We understand the results from your questionnaires and future growth support the provisions in this plan.

With the economic development by private investors and with todays unemployment, the present Army Policy should be reviewed. It is difficult to understand why, after twenty years of studies, surveys and designs costing over one and a half million dollars; now due to current policy, the 10A Plan modified cannot be approved for Federal construction.

Sincerely,

Nathaniel L. Cook

Nathaniel L. Cook

November 18, 1992

Mr. Timothy Horanburg
Newfane Town Hall
2896 Transit Road
Newfane, NY 14108

Dear Tim,

On behalf of my parents, Robert and Dorothy Hedley, I am sending my comments on the Olcott Hamlet Master Plan Draft EIS.

As this project will be primarily located in a heavily congested area, it is my belief that the area is to small to handle a project of such magnitude.

The Olcott Harbor Task Force was relying heavily on the proposed New York State Bond Act for funding. This was voted down Nov. 3rd by a significant amount of voters. At this point, the Town, County, and State have no money to support this project. For now, the zoning should remain as it is, there is no project.

In a letter dated Nov. 6, 1992 from Colonel John W. Morris of the Buffalo District Corps of Engineers, the breakwalls in Refined Plan 10A Modified can not be approved for Federal construction, and the current recommended plan is No Federal Action. This does not preclude potential project construction by others. Considering the state of our economy, it is highly unlikely that private investors will built this project. For the breakwalls to be economically viable, the cost ratio must be 1 or above. It is currently 1.07, just barely a viable project.

Caution should be made not to "jump the gun" on rezoning the hamlet of Olcott when it appears that this project is a dead issue.

Thank you for taking my comments into consideration.

Sincerely,

Lynne Seefeldt

Mrs. Lynne B. Seefeldt
3073 Maple Avenue
Wilson, NY 14172

cc: Mr. Edward J. Muck/Town of Newfane Planning Board
Mr. Weiner Cadet/Buffalo District Army Corps of Engineers

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238
518-474-0456

Orin Lehman
Commissioner

MAILROOM
CENCO-IM-S

3 Dec 92 09 58

November 25, 1992

Mr. John W. Morris
Colonel, U.S. Army
Department of the Army
Corps of Engineers
Buffalo District Office
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Morris:

Re: CORPS
Olcott Harbor Project
Newfane, Niagara County
89PR1230

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Based upon this review, it is the SHPO's opinion that this project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

If you have any questions, please call Elisabeth A. Johnson in the Project Review Unit at (518) 237-8643 Ext. 284.

Sincerely,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/EAJ:gc

92 DEC -3 PM 2:16

An Equal Opportunity/Affirmative Action Agency

Mr Wiener Cadet

Department of the Army

U.S. Army Engineer District, Buffalo

1776 Niagara ST.

Buffalo, N.Y. 14207

Nov. 30 1992

Sub Olcott Harbor Project

Dear Sir.

I want to thank you for sending me the Draft Reevaluation report with Draft Supplemental Environmental Impact Statement.

I have read this report and Agree with the Corps Finding.

In my opinion we could not afford this project, The Taxes would be to high.

I would like to thank all members of the Army corps for such a fine report, I feel the Taxpayer Received there moneys worth.

Sincerely

Mr Robert Mandry

6070 Exchange ST.

Newfane, N.Y. 14108

(6)

November 30, 1992

Department of the Army
Buffalo District Corps of Engineers
Attn: Mr. Weiner Cadet
1776 Niagara Street
Buffalo, NY 14207

Dear Weiner,

Thank you for sending me the Olcott Harbor Project Preconstruction Engineering and Design Phase Reevaluation Report of August 1991, Revised: September 1992.

The Corps has done an excellent job studying the Olcott Harbor Project and has put much time and effort into this report. Both my husband and myself agree with the Corps recommendation that No Federal Action Be Taken on this project.

It is a recreational project with a barely viable cost ratio. Should private enterprise undertake such a project it would be one thing, but Federal money should stay out of it.

Thank you again for all the information provided and congratulations on a job well done.

Sincerely,

Lynne Seefeldt

Mrs. Lynne B. Seefeldt
3073 Maple Avenue
Wilson, NY 14172

STATE OF NEW YORK
DEPARTMENT OF STATE
ALBANY, N.Y. 12231-0001

GAIL S. SHAFFER
SECRETARY OF STATE

December 24, 1992

Mr. Tod Smith
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Re: Olcott Harbor Project, Main Report and Supplemental Environmental Impact Statement Volume 1, August, 1991 (Revised, September, 1992).

Dear Mr. Smith:

Thank you for sending the Department of State a copy of the above referenced document for review and comment. The Department has reviewed the Supplement to the Final Environmental Impact Statement and Consistency Determination Report. The following comments, questions and enclosures are provided for your consideration. Please note, although the majority of the policies have been addressed, policies #5, 7, 19, 21, and 30 would be emphasized should a formal consistency determination be performed.

DEVELOPMENTAL POLICIES

POLICY #1. RESTORE, REVITALIZE, AND REDEVELOP DETERIORATED AND UNDERUTILIZED WATERFRONT AREAS FOR COMMERCIAL, INDUSTRIAL, CULTURAL, RECREATIONAL, AND OTHER COMPATIBLE USES.

As noted in (1) (f) of this policy, "waterfront development meant to serve consumer needs would be inappropriate in an area where no increased consumer demands were expected. .. " As boating is a seasonal recreation, would the proposed associated facilities be closed during the winter months? Is the permanent resident population of Newfane large enough to support the associated facilities during the non-tourist season? If this facility were to be operational for only one half of the year, the scale of this project may be considered as inappropriate. What is the geographical area from which customers could be expected to frequent the marina?

printed on recycled paper

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

Clearly, construction of the proposed rubblemound breakwater would facilitate the siting of water-dependent recreational activities. However, this construction would only enhance water dependent uses related to support of 800 recreational vessels. As stated in Policy #2., Providing for expansion, "A primary objective of the policy is to create a process by which water dependent uses, including commercial uses, can be accommodated well into the future." What land areas remain for future expansion of uses?

POLICY #4. STRENGTHEN THE ECONOMIC BASE OF SMALLER HARBOR AREAS BY ENCOURAGING THE DEVELOPMENT AND ENHANCEMENT OF THOSE TRADITIONAL USES AND ACTIVITIES WHICH HAVE PROVIDED SUCH AREAS WITH THEIR UNIQUE MARITIME IDENTITY.

As stated on page SEIS-18., 2.41 Local Docking and Upland Facilities, "Transient docking along the existing channel entrance piers will be restricted to protect existing fisherman access and fishing areas." However, it appears that water dependent commercial fishing would be deemphasized by the construction of this recreational supportive breakwater. Please consider modifying Plan 1OA in order to enhance the existing commercial fishing industry in Lake Ontario? For example, fish processing activities as well as an open dockside fish market would enhance the existing commercial fishing industry of Lake Ontario. This type of retail/industrial activity would complement the intended recreational development.

POLICY #5. ENCOURAGE THE LOCATION AND DEVELOPMENT IN AREAS WHERE PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE.

On page SEA-D-1 of the Consistency Determination Report, the Compliance Statement for Policy #5 states that "the Olcott area is sufficiently developed and has sufficient resources to facilitate public services and facilities essential to the proposed development. " Would the existing municipal sewage disposal system be of adequate capacity to treat septage from a potential 800 marine sanitation devices as well as the associated upland development? If not, would the Town of Newfane have the resources to upgrade the plant in order to treat the additional sewage?

FISH AND WILDLIFE POLICIES

POLICY #7. SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS WILL BE PROTECTED, PRESERVED, AND WHERE PRACTICAL, RESTORED SO AS TO MAINTAIN THEIR VIABILITY AS HABITATS.

The compliance statement 6 (b), page SEA-D-2., states that "the final project design would not significantly adversely affect the Lake Ontario salmonid fishery runs up Eighteenmile Creek."

Support for this is cited on page SEIS-33 within a discussion of NYSDEC stocking programs construction scheduling considerations. However, there is no discussion regarding actual disturbance of migratory runs resulting from the existence of a potential 800 vessels and two rubblemound breakwaters. Please elaborate on this important significant habitat issue.

POLICY #8. PROTECT FISH AND WILDLIFE RESOURCES IN THE COASTAL AREA FROM THE INTRODUCTION OF HAZARDOUS WASTES AND OTHER POLLUTANTS WHICH BIO-ACCUMULATE IN THE FOOD CHAIN.

Although the installation of inert rock material and poured concrete would not necessarily introduce hazardous waste into the harbor, the resultant increase in vessel use would present unavoidable contamination events emanating from accidental hydrocarbon spills and bilge discharge. An analysis of bioaccumulation from potential routine and accidental discharges should be performed for the proposed 800 vessels in order to effectively address consistency with Policy #8.

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.

As stated in guideline (2) of Policy #9., "Efforts to increase access to recreational fish and wildlife resources should not lead to over-utilization of that resource or cause impairment of the habitat." In addition, "increased human presence can deter animals from using the habitat area. Aside from a general discussion of stocking issues, the effect of 800 vessels on fish resources has not been sufficiently addressed in the Compliance Statement 8(b).

FLOODING AND EROSION HAZARD POLICIES

POLICY #11. ACTIVITIES OR DEVELOPMENT IN THE COASTAL AREA WILL BE UNDERTAKEN SO AS TO MINIMIZE DAMAGE TO PROPERTY AND THE ENDANGERING OF HUMAN LIVES CAUSED BY FLOODING AND EROSION.

As the proposed breakwater has been designed for the purpose of safe harborage for recreational boating activity and associated development, the only area of the entire coast of the Town of Newfane receiving protection would be the area of the proposed marina. Have any other portions of the Town of Newfane coastline been considered for erosion protection concurrent with the proposed construction of Plan 10A, Variation 16? How would future associated water dependent development outside of the immediate area of the proposed harbor be protected from erosion?

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.

As noted on page 1-10 of the Main Report, in section (a). Physiography/Topography, "The northerly third is characterized by a narrow beach at the base of a bluff fronting the lake. " Would construction of the breakwater protect all portions of the bluffs or only in the area behind the breakwater? The discussion of accretion in the compliance statement is noted, however, would construction of the breakwater cause increased erosion of the bluffs in areas west and east of the Olcott Harbor?

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 THIRTY YEARS.

As this proposed recreational development in the Town of Newfane is solely dependent on the construction of the breakwater, an estimation of longevity and future maintenance requirements should be included for a period of time in excess of thirty years. Construction of a project of this scale would affect the community for an indefinite period of time. As future maintenance and repairs of the proposed breakwater would likely be required, description of work and estimation of cost should be included.

POLICY #15. MINING, EXCAVATION OR DREDGING IN COASTAL WATERS 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.

As mentioned on page SEA-B-12, dredging would not be required to construct the proposed project. However, as noted in correspondence from Charles E. Gilbert P.E. to Robert Hargrove on page 7 of SEA-E Environmental Correspondence, it appears that a total of 25, 000 cubic yards of various materials would be dredged from five sites within the project area. Please clarify. Did the original model breakwater studies address the proposed removal of 25,000 cubic yards of material?

PUBLIC ACCESS POLICIES

POLICY #19. PROTECT, MAINTAIN, AND INCREASE THE LEVEL AND TYPES OF ACCESS TO PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES.

Policy #19 discusses elimination of increased public access in the future including, "Construction of private facilities which physically prevent the provision of convenient public access to public water-related recreation resources or facilities from public lands and facilities." Unfortunate, unforseen financial difficulties which would cause an increase in berthing fee may eliminate use of the facility for the moderate income recreational boater. In addition, as the proposed marina will include the majority of the space behind the breakwater, exclusion of access to what is presently accessible to all recreational boaters may be considered to be in conflict with this policy.

POLICY #20. ACCESS TO THE PUBLICLY-OWNED FORESHORE AND TO LANDS IMMEDIATELY ADJACENT OF THE FORESHORE OR THE WATER'S EDGE THAT ARE PUBLICLY-OWNED SHALL BE PROVIDED AND IT SHALL BE PROVIDED IN A MANNER COMPATIBLE WITH ADJOINING USES.

Would facilities such as benches be provided for the immediate docking area of the proposed project? Installation of such facilities along the waterfront to the east and west of the proposed marina tower should be included to insure and enhance public access to the marina for the non-boat owning population.

RECREATIONAL POLICY

POLICY #21. WATER-DEPENDENT AND WATER-ENHANCED RECREATION WILL BE ENCOURAGED AND FACILITATED, AND WILL BE GIVEN PRIORITY OVER NON-WATER-RELATED USE ALONG THE COAST.

As stated in the Explanation of Policy, water-related recreation should occur "Provided the development of water-related recreation is consistent with the preservation and enhancement of such important coastal resources as fish and wildlife habitats. . ." As mentioned in the discussion of Policy #7, the supplemental environmental impact statement does not address potential fish migration interference which would result from the presence of 800 vessels. Until this impact can be determined, consistency with Policy #21 cannot be assured.

POLICY #22. DEVELOPMENT WHEN LOCATED ADJACENT TO THE SHORE WILL PROVIDE FOR WATER-RELATED RECREATION WHENEVER SUCH USE IS COMPATIBLE WITH REASONABLE ANTICIPATED DEMAND FOR SUCH ACTIVITIES AND IS COMPATIBLE WITH REASONABLY ANTICIPATED DEMAND FOR SUCH ACTIVITIES, AND IS COMPATIBLE WITH THE PRIMARY PURPOSE OF THE DEVELOPMENT.

As seen in the Table of Contents and on page 1-7, the discussion of anticipated demand is included in Appendix C which is included in Volume II of this draft report. Please submit

Volume II for review. Until this information is made available, anticipated demand cannot be determined. Please refer to comments address in Policy #1 of this document.

HISTORIC AND SCENIC RESOURCES POLICIES

POLICY #23. PROTECT, ENHANCE AND RESTORE STRUCTURES, DISTRICTS, AREAS OR SITES THAT ARE OF SIGNIFICANT IN THE HISTORY OF THE STATE.

As noted on page SEIS 10, and 12 of the supplemental environmental impact statement, should this project be constructed, the portion of the breakwater to the most eastern side of the proposed project is to be constructed over remains of a hotel pier. In addition, page SEIS-46 states that in 1935, the hotel was destroyed by fire and only part of the old pier remains. Please clarify whether this structure has been considered in the evaluation of historical significance within this proposed project area?

POLICY #25. PROTECT, RESTORE OR ENHANCE NATURAL AND MAN-MADE RESOURCES WHICH ARE NOT IDENTIFIED AS BEING OF STATEWIDE SIGNIFICANCE, BUT WHICH CONTRIBUTE TO THE OVERALL SCENIC QUALITY OF THE COASTAL AREA.

Although not considered to be an area of statewide significance, how would construction of the proposed boardwalk at the base of the bluffs affect overall scenic quality of the shoreline?

AGRICULTURAL LANDS POLICY

POLICY #26. CONSERVE AND PROTECT AGRICULTURAL LANDS IN THE STATE'S COASTAL AREA.

Plate 1.4, Olcott Harbor Land Use Map includes areas designated as Agricultural. Figure 9, page SEIS-19 indicates that this area would be used as parking to support the proposed marina. However, the Compliance Statement states "It is not expected that any important agricultural lands or activities will be affected by the proposed project implementation." Please clarify. It is not clear whether the lands proposed to be used for parking are presently utilized for farming.

WATER AND AIR RESOURCES POLICIES

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

The Compliance Statement suggests that "although some minor leakage of fluids may occur (i. e., small boat motor oil, grease), no significant introduction of hazardous or pollutant waste, or associated significant adverse impacts, would be expected due to proposed project implementation." It is difficult to imagine that the introduction of bilge water or motor oil leakage from 800 vessels would not have an adverse affect. A calculation as to total potential discharge should be included in this document. In addition, emergency response to an oil spill or related catastrophic event should be addressed. Although probably infrequent, this type of event would have an enormous adverse impact on the harbor.

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

Please see comments regarding policy #30.

POLICY #33. BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE THE CONTROL OF STORMWATER RUNOFF AND COMBINED SEWER OVERFLOW DRAINING INTO COASTAL WATER.

Although not addressed in the consistency determination report, a discussion of stormwater runoff should be included in the draft main report. Clearly the proposed construction of the associated upland facilities would produce runoff which would have an adverse affect on the surrounding upland and shoreline. This item must be addressed within the supplemental report.

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

Please see comments regarding policy #30.

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

Although the consistency statement indicates that no adverse effects from dredging would occur due to the proposed project implementation, page SEIS-21, 2.47 indicates that with regard to maintenance dredging "past dredging and disposal measures, may or may not be the case in the future depending on sediment quality and associated disposal standards and options. " Future sediment sampling and testing results should be discussed in the Supplemental EIS; these concerns should be included in the consistency discussion. Presently, this consistency statement does not adequately address anticipated dredging of contaminated material.

POLICY #36. ACTIVITIES RELATED TO THE SHIPMENT AND STORAGE OF PETROLEUM AND OTHER HAZARDOUS MATERIALS WILL BE CONDUCTED IN A MANNER THAT 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.

A consistency discussion should be included as accidental spills from marina related services such as fueling stations would have enormous adverse impact to the entire marina area.

POLICY #37. BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO MINIMIZE NON-POINT DISCHARGE OF EXCESS NUTRIENTS, ORGANICS AND ERODED SOILS INTO COASTAL WATERS.

The compliance statement has been noted. However, a discussion of stormwater runoff from proposed parking facilities as a non- point source of contamination should be included in the supplement. Until specific shoreline developments and associated in sources are identified, the compliance statement is not complete.

POLICY #39. THE TRANSPORT, STORAGE, TREATMENT AND DISPOSAL OF SOLID WASTES, PARTICULARLY HAZARDOUS WASTES, WITHIN THE COASTAL AREA WILL BE CONDUCTED IN SUCH A MANNER SO AS TO PROTECT GROUNDWATER AND SURFACE WATER SUPPLIES, SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATION AREAS, IMPORTANT AGRICULTURAL LAND, AND SCENIC RESOURCES.

Although the compliance statement for Policy #35 has been referenced for this policy, emergency response should be addressed in the event of contamination due to accidental catastrophic failure of a hydrocarbon storage facility or hydrocarbon transport system.

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

The compliance statement is noted. However, a discussion regarding air quality standards as a result of increased automobile traffic resulting from the project should be included.

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

The compliance statement is noted. However, a discussion of impact which would result from expansion into the Eighteenmile Creek Significant Habitat should be included in this supplemental document. In addition, as discussed in Policy #7, a clear determination of the overall impact of 800 vessels on existing upstream habitats has not been included. Such a determination should be made.

Although a compliance statement has been prepared for each of the forty-four policies, a detailed analysis of the actions and related policies which would present the greatest impact should be prepared. For example, the ultimate effect of the proposed project on fish and wildlife has not been fully explored; the compliance statement does not include a discussion of impact of a potential 800 vessels. In addition, an expanded discussion of Policy #5 should be included as public services are essential to development of this proposed project. Also, an expanded compliance statement should be included for Policy #19 as public access may not be available for the non-boat owning population. Please use this document to identify the policies which will be of greatest significance in any future review for consistency by this office.

Please be advised that this review of the Draft Main Report and Supplemental Environmental Impact Statement for the proposed Olcott Harbor Project is not a review for consistency with the State's forty-four policies. Rather, it is a collection of questions and comments drafted with regard to the consistency determination report included on page SEA-D-1 of the supplemental report.

We hope that these comments will be of assistance to the U.S. Army Corps of Engineers, Buffalo District. If you have any questions, do not hesitate to call me at (518) 474-6000.

Sincerely,

Walter F. Meyer
Coastal Resources Specialist

WFM/mm

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: Eighteen Mile Creek - Lake Ontario

Designated: October 15, 1987

County: Niagara

Town(s): Newfane

7½' Quadrangle(s): Newfane, NY

Score	Criterion
16	Ecosystem Rarity (ER) One of about 10 major New York tributaries to Lake Ontario, and relatively undisturbed; rare in ecological subzone.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) This is one of the most popular recreational fishing sites on Lake Ontario, of regional significance.
6	Population Level (PL) One of the major salmonid spawning streams on Lake Ontario (ecological subzone). Geometric mean: $(4 \times 9)^{\frac{1}{2}}$
1.2	Replaceability (R) Irreplaceable

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R]

= 37

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS PROGRAM
A PART OF THE NEW YORK COASTAL MANAGEMENT PROGRAM

BACKGROUND

New York State's Coastal Management Program (CMP) includes a total of 44 policies which are applicable to development and use proposals within or affecting the State's coastal area. Any activity that is subject to review under Federal or State laws, or under applicable local laws contained in an approved local waterfront revitalization program will be judged for its consistency with these policies.

Once a determination is made that the proposed action is subject to consistency review, a specific policy aimed at the protection of fish and wildlife resources of statewide significance applies. The specific policy statement is as follows: "Significant coastal fish and wildlife habitats will be protected, preserved, and, where practical, restored so as to maintain their viability as habitats." The New York State Department of Environmental Conservation (DEC) evaluates the significance of coastal fish and wildlife habitats, and following a recommendation from the DEC, the Department of State designates and maps specific areas. Although designated habitat areas are delineated on the coastal area map, the applicability of this policy does not depend on the specific location of the habitat, but on the determination that the proposed action is subject to consistency review.

Significant coastal fish and wildlife habitats are evaluated, designated and mapped under the authority of the Coastal Management Program's enabling legislation, the Waterfront Revitalization and Coastal Resources Act (Executive Law of New York, Article 42). These designations are subsequently incorporated in the Coastal Management Program under authority provided by the Federal Coastal Zone Management Act.

This narrative, along with its accompanying map, constitutes a record of the basis for this significant coastal fish and wildlife habitat's designation and provides specific information regarding the fish and wildlife resources that depend on this area. General information is also provided to assist in evaluating impacts of proposed activities on parameters which are essential to the habitat's values. This information is to be used in conjunction with the habitat impairment test found in the impact assessment section to determine whether the proposed activities are consistent with the significant coastal habitats policy.

DESIGNATED HABITAT: EIGHTEEN MILE CREEK - LAKE ONTARIO

LOCATION AND DESCRIPTION OF HABITAT:

Eighteen Mile Creek empties into Lake Ontario at the hamlet of Olcott, in the Town of Newfane, Niagara County (7.5' Quadrangle: Newfane, N.Y.). The fish and wildlife habitat extends approximately one and one-half miles from the N.Y.S. Route 18 bridge to the Burt Dam, and includes the entire stream channel and associated wetlands and islands. Eighteen Mile Creek is a relatively large, meandering, warmwater stream, with predominantly silt and gravel substrates. The creek drains approximately 90 square miles of relatively flat agricultural and rural residential lands. Below the Burt Dam, Eighteen Mile Creek flows through a steep sided, undeveloped wooded gorge, where habitat disturbances are minimal. In contrast, the mouth of this Lake Ontario tributary has been extensively developed as a small boat harbor, including marinas, boat launches, and protective breakwalls extending out into the lake. Most of the land area bordering Eighteen Mile Creek is privately owned.

FISH AND WILDLIFE VALUES:

Eighteen Mile Creek is the largest stream in Niagara County (aside from the lower Niagara River), and is one of about ten major tributaries in the Great Lakes Plain ecological region. Undisturbed tributary streams that provide habitat for major spawning runs by salmonids and other lake-based fish populations are especially important in this region. The extensive beds of emergent and submergent aquatic vegetation in this area account for an estimated 65 acres, comprising one of the largest coastal wetlands in the western portion of Lake Ontario.

Eighteen Mile Creek is particularly significant because large concentrations of coho and chinook salmon and brown trout migrate from Lake Ontario into the creek each fall, from late August through December (September - November, primarily), when salmonids ascend the streams to spawn (although unsuccessfully in most instances). In addition, steelhead (lake-run rainbow trout) migrate into Eighteen Mile Creek during the fall and between late February and April. These fish populations are the result of an ongoing effort by the NYSDEC to establish a major salmonid fishery in the Great Lakes through stocking. In both 1983 and 1984, approximately 200,000 chinook salmon and over 35,000 coho salmon were released in the creek. Eighteen Mile Creek was among the top ten Lake Ontario tributaries for numbers of salmonid stocks in 1984. Eighteen Mile Creek also contains a diverse warmwater fishery. The area supports substantial natural reproduction by smallmouth bass, northern pike, rock bass, black crappie, brown bullhead, and largemouth bass.

The wetlands and undisturbed woodlands bordering Eighteen Mile Creek provide valuable habitats for wildlife that are uncommon in Niagara County's coastal area. A variety of bird species inhabit the area, including great blue heron, green-backed heron, mallard, wood duck, belted kingfisher, marsh wren, common yellowthroat, red-winged blackbird, and swamp sparrow. Other wildlife species occurring along the creek include resident furbearers, such as muskrat, mink, and raccoon.

The fish and wildlife resources associated with Eighteen Mile Creek attract a significant amount of recreational use, although access to the area is limited

by the steep banks and private land ownership. This is one of the most popular recreational fishing streams on western Lake Ontario, due primarily to the large salmonid runs in the area. Fishing pressure is concentrated in the upper one-fourth miles of the area (between Fisherman's Park access sites and Burt Dam) and in the vicinity of Olcott Harbor. The intervening segment of the creek is often fished by small boat or canoe, especially for the abundant warmwater species in the area. Eighteen Mile Creek attracts many fishermen from as far away as Buffalo and Rochester. Local residents also utilize this area to a limited extent for waterfowl hunting and trapping.

IMPACT ASSESSMENT:

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 a 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 appplying 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).

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 substantially degrades water quality, increases temperature or turbidity, reduces flows, or alters water depths in Eighteen Mile Creek would adversely affect the fish and wildlife resources of this area. These impacts would be especially detrimental during fish spawning and nursery periods (late February-July for most warmwater species and steelhead, and September-November for most salmonids), and wildlife breeding seasons (April-July for most species). Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers) could adversely impact on fish or wildlife species. Of particular concern are the potential effects of upstream disturbances, including water withdrawals, stream bed disturbances, and effluent discharges. Hydroelectric facilities on the creek should only be permitted with run-of-river operations. Barriers to fish migration, whether physical or chemical, could have a significant impact on fish populations in the creek. Disturbances of wetland vegetation, including submergent beds, through dredging, filling, or bulkheading, would result in a direct loss of valuable habitat area. Enhancement of motorboat access to the area above Route 18 would significantly increase human disturbance of the habitat, reducing its potential value to many fish and wildlife species. Existing woodlands bordering Eighteen Mile Creek should be maintained to provide bank cover, perching sites, soil stabilization, and buffer areas.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

NOV 08 1989

Mr. Charles E. Gilbert, P.E.
Acting Chief, Engineering Division
Attention: Water Quality Section
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Gilbert:

The Environmental Protection Agency (EPA) has reviewed the Sediment Analyses report and continued scoping coordination document for Olcott Harbor, Olcott, New York. The proposed project involves dredging of present and proposed extensions of the Federal Navigation Channel at Olcott Harbor and open water disposal of the dredge material in Lake Ontario. Based on our review, we offer the following comments.

The chemical sediment analyses report states bioassay testing has not yet been performed. To assure the appropriateness and adequacy of the sampling effort and avoid the need for retesting, we recommend that you coordinate the entire sampling and analyses effort with EPA Region II. Of special concern are bioassay testing procedures and adherence to a quality assurance/quality control program. In a related matter, data collected as part of EPA's National Bioaccumulation Study indicate that sediment from the upper end of Olcott Harbor may be contaminated with dioxin (2,3,7,8-TCDD). Accordingly, the bioassay sampling plan should contain provisions for dioxin analyses. Development of a plan for the sampling and analyses effort should be coordinated with Mr. Alex Lechich of our Marine and Wetlands Protection Branch; he can be reached at (212) 264-5283.

Your September 22, 1989 letter accompanying the report includes a proposed disposal plan consisting of capping more contaminated material with cleaner and sandier material. Capping of dredge material, in some cases, is an acceptable method of disposal provided certain criteria are met, (i.e., the suitability of the sediments for open water disposal, sediment transport, and the associated hydrological regime). The sediment testing carried out thus far has revealed heavily polluted levels of some contaminants in areas of the upper harbor. Therefore, the suitability of these

sediments for open water disposal must be determined through appropriate bioassay testing. Additionally, we would like any information you may have regarding monitoring or field studies performed at the Olcott open water disposal area. Since bioassays have not yet been performed, nor do we have information regarding sediment transport and the hydrological regime, we are unable to determine whether open water disposal and capping is the proper method of disposal for the contaminated dredged material.

Should you have any questions concerning this letter, please contact Mr. Lechich, or Ms. Marie Brill of my staff at (212) 264-6714.

Sincerely yours,

Robert W. Hargrove, Chief
Environmental Impacts Branch

cc: S. Doleski, NYSDEC-Region 9
M. Stoll, FWS-Cortland

OFFICE OF PARKS RECREATION HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

November 13, 1989

Mr. John Zorich, P.E.
Chief, Planning Division
Environmental Analysis Branch
Department of the Army
Buffalo District
CORPS of Engineers
1776 Niagara Street
Buffalo, NY 14207-3199

Dear Mr. Zorich:

Re: CORPS
Olcott Harbor Navigation Project
Newfane, Niagara County
89PR1230

The State Historic Preservation Officer (SHPO) has reviewed the above project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the Advisory Council on Historic Preservation's regulations, 36 CFR 800/801.

Based upon this review, it is the opinion of the SHPO that this project will have no effect upon districts, sites, buildings, structures, objects or archeological resources in or eligible for inclusion in the National Register of Historic Places.

If you have any questions, please contact Edward Dudek of the Project Review Unit at (518) 474-0479.

Sincerely yours,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/ED:gc

(24)

OLCOTT OUTER HARBOR STEERING COMMITTEE

December 19, 1989

Colonel Hugh F. Boyd III
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Attention: Weiner Cadet

Dear Colonel Boyd:

The Olcott Outer Harbor Steering Committee at their meeting of Friday, December 15, 1989, discussed the various plans being considered for Olcott Harbor.

Following discussion of the model testing in Vicksburg as well as the financial constraints on the authorized project, it was the unanimous consensus of the Committee that Plan 10-A modified was the preferred plan. A copy of the minutes of this meeting is attached.

If you need additional information, please do not hesitate to call.

Very truly yours,

Ronald L. Perry, Co-Chairman

Timothy R. Horanburg, Co-Chairman

RLP:ss
Enclosure

(25)

MINUTES OF MEETING

Olcott Outer Harbor Steering Committee
Friday, December 15, 1989, 3:00 p.m.
Eastern Niagara Chamber Office
Lockport, New York

Present: J. Connolly, J. Wendler, J. Kramer, T. Horanburg, D. Kinyon, T. McKenna, M. Mistretta, S. Lubick, D. Kirston, T .Belling

T McKenna reported that the NYS Office of General Services has indicated to him that it may be necessary for the Town to own a narrow strip of shoreline in order to exercise their riparian rights which would allow them to construct docks.

It was noted that 10-A has now been renamed plan "10-A Modified" by the Corps of Engineers.

Copies of the Ivan Vamos memo were distributed to the Committee and discussion followed.

S. Lubick suggested that we may need the information regarding method of financing within the next six months. She suggested the Town and County probably should start planning their financial packages.

M. Mistretta explained the master plan and outlined the progress made so far in the planning process.

There was unanimous concensus among the committee members that plan 10-A (or as the Corps refers to it, Plan 10-A Modified) is the preferred project. This is the plan with attached east breakwater and detached west breakwater. There will only be one basin in this plan.

Respectfully submitted,

Theodore J. Belling
Recording Secretary

DEC 28 1989

Environmental Analysis Branch

SUBJECT: Olcott Harbor, New York, Reevaluation Study - Plan 10A (Modified)

DEC 89 11 10

Relative to the Olcott Harbor, New York, Reevaluation Study, enclosed for your information is a narrative and plan view pertaining to Plan 10A (Modified). This is the selected plan for Olcott Harbor, as discussed with Mr. Thomas McCartney (U.S. Fish and Wildlife Service) and Messrs. James Pomroy and Steve Mooradian (New York State Department of Environmental Conservation) at a December 19, 1989 meeting held at the Corps of Engineers, Buffalo District office. At the meeting, a Corps Waterways Experiment Station representative provided a detailed explanation of model studies conducted, as well as the rationale that led to selection of this alternative plan. Please review the enclosed material and provide any recommendations and comments on the aforementioned plan to the Study Manager, Mr. Wiener Cadet, by January 19, 1990.

My point of contact pertaining to this matter is Mr. Leonard P. Bryniarski of my Environmental Analysis Branch, who can be contacted by calling 716-879-4173 or by writing to the above address.

Sincerely,

JAMES M. BENNETT

John Zorich, P.E.
Chief, Planning Division

Enclosure

CF:
CENCB-PD-ER
CENCB-PD
CENCB-PD-PF

(27)

This letter was sent to the following:

Mr. Leonard Corin
Field Supervisor
ATTN: Mr. Tom McCartney
U.S. Department of the Interior
Fish and Wildlife Service
100 Grange Place, Room 202
Cortland, New York 13045

Mr. John Spagnoli
Regional Director
ATTN: Mr. Steven Doleski
Mr. Michael McMurray
New York State Department of
Environmental Conservation
Region 9
600 Delaware Avenue
Buffalo, New York 14202

Mr. Lawrence S. Nelson
Regional Office Supervisor
ATTN: Mr. Steve Mooradian
Mr. James Pomeroy
New York State Department of
Environmental Conservation
Region 9 - Natural Resources Office
128 South Street
Olean, New York 14760-9990

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202
716/847-4551

Thomas C. Jorling
Commissioner

January 22, 1990

Colonel Hugh F. Boyd III
U.S. Department of the Army
Buffalo District Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Attn: Mr. John Zorich, Planning Division
Mr. Charles Gilbert, Engineering Division

Olcott Harbor - Lake Ontario
Reevaluation Study - Plan 10A
Modified
Town of Newfane - Niagara County
DEC No. 9-2928-00023/00001-0

Dear Colonel Boyd:

Regional Director, John Spagnoli, asked me to respond to your District's letters of September 26, 1989, October 18, 1989 and December 28, 1989 concerning the referenced proposal. Our comments are based on the following understandings of the most recent proposal.

1. All new mooring capabilities will be kept to the east of the existing federal piers.

2. The harbor expansion will involve no dredging; existing harbor depths are considered to be adequate.

3. Any future dredging will be the responsibility of a non-federal sponsor, the New York State Office of Parks, Recreation and Historic Preservation, Niagara County or Town of Newfane.

Fortunately, one of our major concerns, disposal of contaminated dredge spoil in Lake Ontario, is no longer an issue (at least with regard to actual construction of this proposal), as stated in your December 28, 1989 transmittal to this office. If our understanding is not correct on this point, advise us and please include a discussion of dredging/disposal impacts in the Federal EIS.

Although the Department certainly does not favor open lake disposal, it might be approvable depending on:

1. additional sampling (details available upon request) and bioassay results,

2. adequate investigation and documentation of existing conditions at the open lake dump site,

3. effective capping of the heavily polluted sediments with uncontaminated sediments, and

4. an acceptable plan for follow-up monitoring of the dump site.

Also, this is to confirm that if upland disposal were proposed, sediments from areas labeled A and B would have to be disposed at a sanitary landfill, permitted in accordance with 6 NYCRR Part 360 (Solid Waste Management Facilities) in order to meet New York State Environmental Conservation Law requirements. It appears that material from sites C, D & F would be considered uncontaminated and would be exempt from Solid Waste Management Facility Permit requirements in accordance with 6 NYCRR Part 360-7.1 if the disposal is conducted during daylight hours.

We concur with the selection of plan 10A modified over plan 10B, since less disturbance or alteration of the lakebed is involved and water will be better able to move/circulate through the new marina basin from a westerly direction.

We are disappointed that the modeling study did not test the use of underwater culverts to facilitate water circulation through the breakwaters. We understand that the breakwaters are not impervious to the passage of water through them, but it is unclear just how much circulation actually occurs in this manner. While the Corps expressed concern about the cost of culverts and the transmission of waves into the harbor through culverts, the validity of these arguments was not documented by modeling.

The modeling studies suggest that circulation or patterns of movement of water emerging from the mouth of Eighteenmile Creek will not be greatly altered by installation of the proposed breakwaters. We assume that the ability of fish to cue onto water from Eighteenmile Creek will not be impaired (i.e. that salmonid runs will not be reduced by the project).

In conclusion, this Department supports the implementation of plan 10A (modified). Our Bureau of Wildlife's approval is based on its desire to create alternatives to developing marinas in the regulated wetland along Eighteenmile Creek upstream of New York Route 18. Our Bureau of Fisheries approval is contingent upon the idea that present angler access/use of the federal piers will not be diminished by implementation of the project and that anglers will have complete access to the new, proposed east breakwater. In order for anglers to fish off the east side of the existing east federal pier, mooring of boats must not be allowed within 150 feet of the pier.

If you have any questions or wish to schedule a future meeting on this subject, please contact Michael J. McMurray, Senior Environmental Analyst or me at (716)847-4551.

Respectfully,

Steven J. Doleski

Steven J. Doleski
Regional Permit Administrator

cc: Mr. John Spagnoli - Regional Director, Region 9
Mr. Alex Lechich - U.S. Environmental Protection Agency
Mr. Leonard Corin - U.S. Fish and Wildlife Service

MJM/SJD/kah

FEB [illegible]

Water Quality Section

SUBJECT: Sediment Testing at Olcott Harbor, New York

Copy Sent to
Mr. Steven D. Lester
NYSDEC - Buffalo

Mr. Robert W. Hargrove, Chief
Environmental Impacts Branch
U.S. Environmental Protection Agency
Region II
ATTN: Mr. Alex Lechich
Jacob K. Javits Federal Building
New York, New York 10278

Dear Mr. Lechich:

We received results of bioassay testing for Olcott Harbor at essentially the same time as your letter of November 8, 1989 and therefore cannot coordinate bioassay test procedures with Region II at this time as requested. Results of the bioassay testing are enclosed.

There was no mortality to fathead minnows from either control or channel sediments over the 96 hour test period. There was low to moderate toxicity of channel sediments to Hexagendia and Daphnia using the Prater-Anderson criteria. We believe the bioassay tests support the disposal plan described in our September 22, 1989 letter. The clean sandy material as represented by sampling sites 7 and 8 exhibited the lowest toxicity and is proposed as cap material to be placed over the polluted sediment at the open-lake disposal site.

Dioxin analysis has not routinely been done for Buffalo District dredging projects. In view of Region II concern, we would perform 2,3,7, and 8 Dioxin analyses on samples from Eighteen-Mile Creek providing criteria for an acceptable level of dioxin is agreed upon, and the dredging of Eighteen-Mile Creek is retained as part of the Federal project.

The open-lake disposal site proposed for disposition of the dredge material is 1.6 miles from the Harbor and has a water depth of ~ 100'. Bulk sediment chemistry, particle size, and bioassay tests were done at the disposal site in 1981. Results of these tests are enclosed, and will also be provided to Region 9, New York State Department of Environmental Conservation.

Water Quality Section
SUBJECT: Sediment Testing at Olcott Harbor, New York

Our Coastal Engineering Section believes there will be negligible movement of the capped dredge material at the 100' deep disposal site. They would provide data and calculations to support this assertion and the disposal site would be monitored for movement if the Eighteen Mile Creek is dredged.

I will provide your office with any of the sediment Dioxin analyses which may be performed and would appreciate your further evaluation using the existing bulk chemical and bioassay test data.

A copy of this letter is being sent to Mr. S. Doleski, New York State Department of Environmental Conservation, Region 9.

My point of contact in this matter is Mr. Richard P. Leonard of my Water Quality Section who may be contacted at (716) 879-4270, or writing to his attention at the above address.

Sincerely,

HUGH F. BOYD III
COLONEL U.S. ARMY
COMMANDING

Hugh F. Boyd III
Colonel, U.S. Army
Commanding

Enclosures

CF:
CENCB-PD-ER
CENCB-PD-PF
CENCB-ED-DC

United States Department of the Interior
FISH AND WILDLIFE SERVICE
100 Grange Place
Room 202
Cortland, NY 13045

March 16, 1990

Colonel Hugh F. Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attention: Mr. Len Bryniarski

Dear Colonel Boyd:

Enclosed for your review are two (2) copies of our final fish and wildlife report for the proposed Olcott Harbor Project in Lake Ontario at the mouth of Eighteenmile Creek, Hamlet of Olcott, Town of Newfane, Niagara County, NY.

This final report incorporates changes suggested by your staff. The New York State Department of Environmental Conservation (State) has informally indicated their concurrence with this report. However, an official response from the State is pending and will be forwarded to your office as soon as received.

No other responses to the draft report were received.

Sincerely,

Leonard P. Corin
Field Supervisor

Enclosures

cc:
NYSDEC, Albany; Buffalo; Olean
EPA, NY, NY

(34)

New York State Department of Environmental Conservation
Division of Regulatory Affairs
600 Delaware Avenue
Buffalo, New York 14202-1073

Thomas C. Jorling
Commissioner

May 23, 1990

29 MAY 90 10 43
BUFFALO NCBIM-S

Colonel Hugh F. Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

Attention: Mr. Len Bryniarski

Dear Sir:

Regarding the environmental window for in-water (lake) construction activities for the proposed Olcott Harbor project in Lake Ontario at the mouth of Eighteenmile Creek, Hamlet of Olcott, Town of Newfane, Niagara County, New York, allow me to summarize the agreement between the U.S. Fish and Wildlife Service and the New York State Regional Fisheries Office in Olean.

In the March 16, 1990 letter to you from Mr. Leonard P. Corin, Field Supervisor, Cortland Office, he recommended that in-water activities be confined to the period between June 15 and September 1. Although these restrictive dates are justified based on the important migratory fisheries in the area, as well as the very intensive user activity in both the spring and fall months, a less restrictive window is more realistic in lieu of the construction requirements for this project.

The Regional Fisheries Manager has informed me that the revised construction window shall extend from May 15 through September 15 for all in-water activities. This window does not restrict activities associated with the project that may occur upland.

Sincerely,

Steven J. Doleski

Steven J. Doleski
Regional Permit Administrator

cc: Mr. Stephen Mooradian
Mr. Thomas McCartney

CENCB-PP-PM (1110-2-1150a) 22 June 1990

MEMORANDUM FOR RECORD

SUBJECT: Olcott Harbor, New York

1. A meeting was held between the NYS Department of Environmental Conservation (NYSDEC), U.S. Fish & Wildlife Service (USFWS), NYS Parks, Recreation, and Historical Preservation (NYSPRHP) and the U.S. Army Corps of Engineers (COE) at the NYSDEC Region 9 office on 21 June 1990 at 1 p.m. The meeting was held to discuss the available construction period for the subject project. A list of attendees is attached.

2. I opened the meeting stating that the meeting was to try to clarify and better define the reasoning for the construction window provided in the 23 May 1990 NYSDEC letter to the Corps. I stated that maybe a better description of what the Corps project was proposing to do would help in determining the allowable construction window. I proceeded with a brief explanation of the features and some aspects of the potential construction. Mr. Ptak went further into the explanation of what construction operations might be like. Mr. Ptak stated that the work would basically be a barge operation and that stone, without fines, would be positionally placed.

3. Mr. Doleski stated that he would like to see restricting of the contractor if he were to advocate changing the restriction dates for construction. Mr. Doleski asked Mr. Mooradian if he could explain the concerns. Mr. Mooradian stated the problem had two aspects; resource and user impacts. He clarified that the dates for construction limits concerned inwater work.

4. Major Plank suggested a fan area near the mouth of the creek be used to limit construction during certain periods. Mr. Mooradian stated it would not be safe to assign such a fan. I for sake of discussion drew a fan for which he then drew a fan considerably beyond the mouth of the creek saying that was more likely. A suggestion was made for a construction window with an early start in the first full construction season, and a late finish in the second. Mr. Mooradian and Mr. Corin stated this would not be a solution to the resource impacts as it was impossible to predict a viable spawning in each significant year class.

5. Major Plank stated that the project was for the good of the fish and the user. Mr. Mooradian expressed that the user was gaining more. Then a discussion followed regarding the extension of time needed for the window and the potential impacts on the project cost and economic feasibility. Mr. Ptak explained the contracting objective was to have a reasonable time and the best price. I explained that based on the 15 May to 15 Sep allowable construction period, an additional year or more would be added on to the construction time, which would likely increase project cost to the point where there is not an economically feasible project. Accelerated construction was discussed and the point made that it would cost more and likely require more plant to accelerate the work.

6. Use of a filter curtain for the purpose of directing fish was discussed. It was not favorably received because of the difficulty in anchoring it, the possible disruption and hazard to boaters, and the possibly that it would snag or trap fish.

7. A preferred order of construction was discussed as a means to mitigate construction disruptions. Construction of the west breakwater first received favorable consideration as a likely place a contractor would begin. With the west breakwater constructed first the contractor would have some sheltered area in which to work. This is also the area nearest to the creek mouth where the fish are staging.

8. As a result of lengthy discussion, it was agreed that the Corps would provide by 29 June, an evaluation of an order of construction. The plan to be considered would call for construction of the west breakwater within the 15 May to 15 Sep window in the first full season, and construction of the east detached breakwater beginning at the west end, on 15 May of the second full season.

9. The Corps will consider the potential for completing the west breakwater in the first season with minimal impacts to cost, and similarly consider what portion of the detached east breakwater would likely be completed in the second season by 15 Sep. (It is to be assumed that the east shorearm would be built concurrently with the east detached breakwater).

10. Depending on the physical length of the east breakwater likely remaining to be completed after 15 Sep, and on the length of time required to complete it, DEC would be receptive to extending the construction window, rather than have the contractor return for another season. The Corps also needs to consider how this would be addressed in the specifications.

11. Mr. Mooradian and USFWS representatives agreed to reassess the possible means to mitigate construction impacts and upon receipt of the Corps data to have a response within a full working week's time. NYSDEC and FWS will reevaluate the "~~ER~~ [illegible] Window" with the construction phasing.

Timothy E Byrnes
TIMOTHY E. BYRNES
IPM

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202

Thomas C. Jorling
Commissioner

MEETING ATTENDANCE LOG

SUBJECT OF MEETING Olcott Harbor TIME 1 PC

LOCATION _____ DATE 6/23/

NAME (please print)	REPRESENTING	TELEPHONE
MAJ DAVID PLANK DET/CDL	BUFFALO DISTRICT COE	
SCOTT PICKARD, Environmental Analysis Branch	"	879-4171
Tim Baines Project Manager COE	"	879-4276
Jim Bennett	"	879-4180
STEPHEN R. MOGHADAM	NYS ENVIRON CONS	332-[illegible]
JERRY PINK	BUFF DIST COE	879-4233
Leonard P. Cerin	US Fish & Wildlife Service	[illegible]
Tom McCartney	" "	"
Steven Dolecki	NYS DEC	716-847-4551
[illegible]	[illegible]	[illegible]

MAILROOM-NCBIM-S

2 JUL 90 10 35

Project Management Branch

SUBJECT: Olcott Harbor Project, New York

Mr. Steven J. Doleski
Regional Permit Administrator
NYS Department of Environmental Conservation
600 Delaware Avenue
Buffalo, New York 14202-1073

Dear Mr. Doleski:

Reference your June 29, 1990 telephone conversation with Mr. Timothy Byrnes, of my Project Management Branch, and our meeting on June 21, 1990 at your office regarding the environmental window for in-water (lake) construction activities for the subject project.

Regarding the information I agreed to provide on construction phasing, my staff evaluated construction of the breakwaters within the 15 May - 15 September window with construction of the West breakwater the first season and arrived at the following:

1 - Shift 10 hrs/day, 6 days/week

West Breakwater
Utilizing May 15 - Sep 15, in the first year an additional 3 weeks will be necessary to complete.

East Breakwater
Utilizing May 15 - Sep 15, in the second year an additional 8 weeks will be necessary to complete.

1 - Shift 12 hrs/day, 6 days/week

West Breakwater
Utilizing May 15 - Sep 15, construction of the West Breakwater should be able to be completed.

East Breakwater
Utilizing May 15 - Sep 15, in the second year an additional 5 weeks will be necessary to complete.

The additional contract cost for 12 hour days is about $750,000.

Project Management Branch
SUBJECT: Olcott Harbor Project, New York

After additional consideration, it appears that other alternatives for working within the 15 May - 15 September environmental window (double shifts, additional plant, use of a third construction season) will be more costly than the alternative with a single shift of 12 hours per day 6 days a week.

Based on the above information on construction phasing, the use of a single shift of 10 hours a day 6 days a week is the most efficient construction phasing and is more or less the industry standard. However, realize that this does not allow for completion of the project within the present environmental window. Further, the single shift of 10 hours a day, 6 days a week is apparently the only means of construction that will allow for an economically justified project.

Regarding the sediment information I agreed to provide, as previously stated, I have limited information but expect to supplement that information in the near future. Three borings were taken in the area of the proposed channel entrance and two of the borings showed no evidence of sediments with the third showing deep sediments, which probably indicates an ancient buried channel. Based on the available information, we do not expect to encounter sediments for the most part although there may be a narrow band of sediments in the area of the westerly portion of the East breakwater, where the ancient buried channel appears to be located.

Based on all of the above, I request that the environmental window be expanded in the first year to include May 15 - October 6 and in the second year to include May 15 - November 10, to allow for the use of the single shift 10 hours a day, 6 days a week alternative. I will encourage the contractor to work as expeditiously as possible, in order to minimize the impacts of any work beyond September 15.

A copy of this letter has been furnished Mr. Mooradian and Mr. Corin.

My point of contact regarding this matter is Mr. Timothy Byrnes who may be contacted at 716-879-4276.

Sincerely,
BRUCE W. HAIGH
LTC, U.S. ARMY
DEPUTY COMMANDER
David P. Plank
Major, U.S. Army
Deputy District Commander

United States Department of the Interior

FISH AND WILDLIFE SERVICE

100 Grange Place
Room 202
Cortland, NY 13045

July 6, 1990

Colonel Hugh Boyd III
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara St.
Buffalo, NY 14207

Attn: Mr. Tim Byrnes

Dear Colonel Boyd:

This responds to your letter of June 29, 1990, following our meeting on June 21, 1990, at the New York State Department of Environmental Conservation (State) office in Buffalo, NY, regarding the environmental activities associated with the Olcott Harbor Project in Lake Ontario at the Hamlet of Olcott, Niagara County, NY.

Based on that meeting and subsequent discussions with State fisheries personnel, we concur with your suggested expanded work window. In-water construction activities may be carried out according to the following schedule:

1) Year 1 - May 15 to October 6 complete construction of the west breakwater.

2) Year 2 - May 15 to November 10 complete construction of the east breakwater including the shore-connected segment.

This schedule will permit 10 hour work days, 6 days per week and should allow the bulk of each project to be near completion by September 15. This will minimize impacts on migratory fishes entering Eighteenmile Creek.

Please advise us of any subsequent changes in construction plans. If you have any questions regarding this project contact Tom McCartney at 607-753-9334.

Sincerely,

Leonard P. Corin
Field Supervisor

cc:
NYSDEC, Albany; Buffalo; Olean

(42)

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202

716/847-4551 MAILROOM-NCBiM-S

9 JUL 90 11 22

Thomas C. Jorling
Commissioner

July 6, 1990

Mr. David P. Plank, Major
Deputy District Commander
U.S. Army
Buffalo District Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

Attn: Mr. Timothy Byrnes

Dear Major Plank:

Olcott Harbor Project
Town of Newfane - Niagara County

I enjoyed making your acquaintance during the June 21, 1990 meeting that was held at the DEC Region 9 Office regarding the above noted. Over the years, Region 9 has enjoyed a very good working relationship with the Buffalo District Corps of Engineers' Office. I feel that relationship was typified by the open and candid discussions our agency representatives had together regarding proposed restrictive dates for in-water (lake) construction activities for the Olcott Harbor breakwaters.

Accordingly, and after considerable review and deliberation, the Region 9 DEC Office concurs with the following "environmental window dates" that were requested in your June 9, 1990 letter to this Office:

- West Breakwater Construction
  1-shift 10 hours/day, 6 days/week
  First Year of Construction

  May 15th through October 6th

- East Breakwater Construction
  1-shift 10 hours/day, 6 days/week
  Second Year of Construction

  May 15th through November 10th

While the above dates for in-water construction may affect fishery resources and inconvenience the fishing public, we believe that those possible impacts are justified by the improved public access, recreational and economic benefits that the finished project will provide. However, we do request that contract documents emphasize the disirability of completing the in-water construction as soon as possible within the environmental window dates provided above to lessen adverse factors that may affect fish spawning and public fishing opportunity. We would also encourage that the construction of the bulkheads over silty bottom areas be completed as early as possible within the authorized time periods.

I believe this decision should satisfy your immediate needs. Please do not hesitate to contact me or Mr. Michael McMurray, Senior Environmental Analyst, if other problems arise or you believe we should arrange to meet in the future. Thank you for your cooperation.

Respectfully,

Steven J. Doleski
Regional Permit Administrator
Division of Regulatory Affairs

cc: Mr. Stephen Mooradian - Region 9 Fisheries Manager, Olean
Mr. Leonard Corin - U.S. Fish and Wildlife Service

SJD:kah

MAILROOM NCBIM-S

AUG 2 1990 Aug 2 2 23 PM '90

Environmental Analysis Section

SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

Mr. Robert W. Hargrove
Chief, Environmental Impacts Branch
ATTN: Ms. Marie Brill
U.S. Environmental Protection Agency
Region II
Jacob K. Javits Federal Plaza
New York, New York 10278

Dear Mr. Hargrove:

This pertains to Ms. Brill's April 25 and July 19, 1990 telephone conversations with Mr. Scott Pickard of my staff regarding the 1989 sediment sampling and analysis program performed at Olcott Harbor, as it relates to our maintenance dredging and open-lake disposal of dredged material from the existing Federal Outer Harbor Channel.

The sampling sites included in the 1989 sediment testing program, as shown on Enclosure 1 of our September 22, 1989 letter, are relative to the authorized, but unconstructed navigation improvements to Olcott Harbor. Specifically, Sampling Sites 1A, 1B, 2A, 2B 3A, 3B, 4B, 5B, and 6B were selected to represent the Creek Channel sediments, and Sampling Sites 5, and 11-14 were selected to represent the Approach Channel. These channels have since been eliminated from consideration and are no longer included under the proposed navigation improvements.

With respect to the existing Federal Outer Harbor Channel, I am requesting that data from Sediment Sampling Sites 7B, 8B, and 9 from the 1989 testing program be used for the purposes of evaluating the quality of material that is to be maintenance dredged. For your convenience, I have transposed these sampling sites onto a map of the existing Federal project at Olcott Harbor, and have highlighted the existing Federal Outer Harbor Channel they represent.

With regard to the evaluation of the suitability of the Federal Outer Harbor Channel sediments to be open-lake disposed, I do not believe additional sediment testing at Olcott

Environmental Analysis Section
SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

Harbor is warranted at this time. This view is predicated on the following factors:

a. Testing of the Oswego Harbor sediments for 2, 3, 7, and 8 Dioxin (TCDD) contamination, as performed by USEPA's Environmental Research Laboratory, Duluth, showed undetectable levels. This strongly suggests that the TCDD detected in the carp collected within Oswego Harbor was bioaccumulated from existing Lake Ontario background levels, as we contended at our November 30, 1989 meeting. Since there is no known source of TCDD in either Eighteenmile Creek or Olcott Harbor, it is reasonable to conclude that the source of bioaccumulated TCDD in the carp sampled from Olcott Harbor is from the lake.

b. Testing of the Federal Outer Harbor Channel sediments was recently performed in 1987 and 1989. The results of bulk inorganic and organic analyses for both programs classified these sediments overall as "Nonpolluted." Bioassays performed under both programs showed zero to low toxicity to test organisms.

c. Particle size analysis and gross observations of the sediment samples indicated that the Federal Outer Harbor Channel sediments are comprised primarily of medium-grained sands. Coarse grained sediments typically do not adsorb significant amounts of contaminants. This is in further support of the bulk inorganic and organic data on these sediments.

It is my view that the above factors sufficiently support the environmental acceptability of open-lake disposal. I strongly believe that additional sediment testing at Olcott Harbor at this time would not be a prudent expenditure of Federal funds. The recent testing performed at Oswego Harbor and the associated logistical efforts were extremely costly, and essentially served only to reaffirm our original evaluation of the sediment quality.

Please provide your evaluation of the data presented in our September 22, 1989 and February 1, 1990 letters by August 17, 1990, so that the current project schedule can be maintained.

Environmental Analysis Section
SUBJECT: Olcott Harbor, Niagara County, New York - Maintenance Dredging and Open-lake Disposal of Dredged Material

If you have any further questions or comments in regard to the above, please contact Mr. Scott Pickard of my Environmental Analysis Section or Mr. Richard Leonard of my Water Quality Section, who may be reached at (716) 879-4171 and 879-4270, respectively.

Sincerely,

CHARLES E. GILBERT

FOR George B. Brooks, P.E.
Chief, Engineering & Planning Division

Enclosure

CF:
CENCB-PE-PR
CENCB-PE-P
CENCB-PE-HQ
CENCB-PE
CENCB-CO-MO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

21 Dec 90 09 15
CENTRAL-PLANS

DEC 21 1990

Mr. George B. Brooks, P.E.
Chief, Engineering and Planning Division
Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Brooks:

The Environmental Protection Agency (EPA) has reviewed the bioassay sediment analyses report and other supplemental information for the Federal Navigation project at Olcott Harbor, New York. These analyses were prepared to aid in determining the suitability of dredged materials from the present and proposed extensions of the Federal Navigation Channel for open water disposal in Lake Ontario.

The original navigation project called for maintenance dredging of an existing channel, construction of a new access channel, and the construction of several rubblemound breakwaters. The total volume of dredged materials would have been approximately 25,000 cubic yards with disposal in an open water site in Lake Ontario. However, in your August 2, 1990 letter, you indicated that the navigation project had been substantially reduced. The modified project includes dredging only the Outer Harbor, (i.e., 10,000 cubic yards) with open water disposal. Dredging of the Inner Harbor and the proposed new approach channel had been eliminated from the scope of the project.

In previous correspondence, we expressed concern about the methodologies used to determine the suitability of the sediments for open lake disposal (i.e., bioassay procedures and evaluation criteria), and the characteristics of the open lake disposal site (i.e., its non-dispersive qualities). Based on our evaluation of the reports, and recognizing the reduced scale of the project, our concerns have been substantially reduced. The following are our comments on the currently proposed project.

Bioassays/Sediment Analyses

EPA recognizes that existing methodology and criteria for determining the suitability of dredged materials for open water disposal may not be adequate to protect the environment. As you know, the U.S. Army Corps of Engineers (ACE) and EPA dealt with the inadequacies of the current methodology and criteria through implementation of interim measures for sediments with elevated contaminant levels in the Oswego Harbor Federal Navigation project.

For the original Olcott project, we would have recommended performance of the same suite of tests that were performed on the Oswego Harbor sediments. However, because the project has been reduced to dredging only the Outer Harbor, and the ACE has concluded that the sediments to be dredged in the Outer Harbor meet the "non-polluted" material criteria, EPA agreed to review the information presented by ACE before making a final recommendation regarding additional testing for the project.

The bioassay and bulk sediment data for the project indicates that the mortalities from the bioassay tests ranged up to 33 percent with several other mortalities in the 20 percent level, with the majority of the high mortality values coming from sediments taken from the Inner Harbor. Accordingly, EPA concurs with the ACE conclusion that the sediments for Olcott Harbor can be classified as "non-polluted" (Outer Harbor) to "moderately polluted" (Inner Harbor) according to the current criteria.

Althcugh we have reservations about the dependability of the current methodologies for bioassay testing and the evaluation criteria, we concur with the ACE that dredging the Outer Harbor, involving only 10,000 cubic yards of coarse-grained material, which the bulk sediment testing has shown to have low concentrations of contaminants, is environmentally acceptable. However, please note that because of the elevated contaminant levels present in the Inner Harbor sediments, the same suite of tests that were performed on the Oswego Harbor sediments would be required of these sediments should the ACE proposed dredging of this part of the Olcott Harbor

Open Water Disposal Site

As stated above and conveyed to your staff via telephone conversations, EPA is also concerned about the fate of the sediments after disposal in the open lake site. The ACE attempted to address our concern about this issue by stating that there will be negligible movement of the dredged material

at the 100 foot deep disposal site. Further, to support this assertion, it provided information and data on October 25, 1990 regarding the non-dispersive nature of the open lake disposal site as well as the proposed monitoring plan.

This information discusses the physical characteristics of the sediments that would be dredged (over 90 percent medium-grained sand) as well as the physical characteristics of the disposal site (depth, areal extent, hydrodynamics). The ACE has concluded that less than 10 percent of the material deposited at the site is anticipated to be dispersed, (the 10 percent consisting of the fine-grained fraction of the sediment). EPA concurs with this conclusion. Moreover, since the dredging will only occur at the less polluted Outer Harbor site, ACE believes that environmental impacts related to the possible dispersal of this material would be negligible. We concur with this position, and agree that the Olcott Harbor navigation project with open lake disposal, as currently proposed, will not result in significant adverse environmental impacts.

As you know through our previous communications and our coordination on the Oswego Harbor Federal Navigation Channel project, EPA, in conjunction with ACE and other agencies, is currently developing more appropriate methodologies for evaluating dredged material testing and open lake disposal practices in the Great Lakes. Because of these initiatives, we anticipate that subsequent requests for authorization to dredge the other portions of Olcott Harbor and similar projects in the Great Lakes area will require more stringent testing as well as appropriate monitoring of open lake disposal sites.

Should you have any questions regarding our review, please contact Mr. John Filippelli, Chief, Federal Activities Section, at (212) 264-6723.

Sincerely yours,

Robert W. Hargrove, Chief
Environmental Impacts Branch

cc: S. Doleski, NYSDEC-Region 9
M. Stoll, FWS-Cortland
C. Grundler, GLNPO

OLCOTT SMALL BOAT HARBOR
ALONG LAKE ONTARIO
TOWN OF NEWFANE, NIAGARA COUNTY, NEW YORK

SUPPLEMENT TO THE FINAL
ENVIRONMENTAL IMPACT STATEMENT
SUPPLEMENT ENVIRONMENTAL APPENDIX

SEA - F -

COMMENT LETTERS ON THE
DRAFT REEVALUATION REPORT AND
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

(COMMENT RESPONSES FOLLOW AS NECESSARY)

U.S. ARMY CORPS OF ENGINEERS
BUFFALO DISTRICT

COMMENT RESPONSE ON DRAFT COORDINATION OF THE OLCOTT HARBOR DRAFT REEVALUATION REPORT AND DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

DATE	LETTER AND RESPONSE (AS NECESSARY)	PAGE
11/12/92	U.S. Department of Agriculture Soil Conservation Service (No Response Necessary)	1
11/12/92	Nathaniel L. Cook (No Response Necessary)	2
11/18/92	Lynne B. Seefeldt (No Response Necessary)	4
11/25/92	New York State Office of Parks, Recreation, and Historic Preservation State Historic Preservation Office (No Response Necessary)	5
11/30/92	Robert Mandry (No Response Necessary)	6
11/30/92	Lynne B. Seefeldt (No Response Necessary)	7
12/24/92	New York State Department of State Coastal Resources Program	8
	(Response)	24
12/28/92	U.S. Environmental Protection Agency Region II (No Response Necessary)	36
12/30/92	U.S. Department of the Interior U.S. Fish and Wildlife Service (No Response Necessary)	38

NOTE

* New York State Office of Parks, Recreation, and Historic Preservation (State Cooperator) did not provide any additional comments at this time.

* The Town of Newfane (Local Cooperator) did not provide any additional comments at this time.

* New York State Department of Environmental Conservation did not provide any additional comments at this time.

United States Department of Agriculture

Soil Conservation Service

James M. Hanley Federal Building
100 S. Clinton Street, Room 771
P.O. Box 7248
Syracuse, New York 13261-7248

November 12, 1992

Mr. Tod Smith
Environmental Analysis Section
Department of the Army
Buffalo District,
Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Smith:

We have reviewed the Olcott Harbor Project Draft Reevaluation Report with the Draft Supplemental Environmental Impact Statement, and have no additional comments.

Thank you for the opportunity to review this information. If we can be of any further assistance, please do not hesitate to contact us.

Sincerely,

Paul A Dodd

PAUL A. DODD
State Conservationist

MAILROOM
CENCE-IM-S
20 Nov 92 09 56

5709 West Bluff
Olcott, New York
14126

November 12, 1992

John W. Morris, Colonel
U.S. Army Corps Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Colonel Morris,

Thank you for the information packet regarding the Olcott Harbor. We wish to challenge the determination that the project outputs would be primarily recreational. We have to exploit our natural resources, to develop financial stability in this unique community as we have no industry. The economy in this Hamlet of Olcott is tied to its resources, The park, beaches, fishing and boating.

Following the great depression in the early '30s we never regained our prior status, when trains, lake steamers, horse and buggies and later automobiles brought thousands of tourists from Canada and Western New York each year into our Hamlet. The only way we can recapture our former status is through the redevelopment of our natural resources.

In the days when Colonel Hansen was District Engineer for the Corp in this area, we organized a group to help restore our prior status. This was proposed as a joint operation between our Federal and State Governments. Through no fault of the Colonel, the Federal Government showed no interest in sponsoring the development south of a new high level bridge (50 ft. clearance) to be built by the State Government. Later it was shown that development would not be environmentally feasible and gave way to the current proposals off shore.

The bridge when completed, generated enough interest for private investors to build two motels, two restaurants, two tackle and bait shops, enlargement of two marinas, one delicatessen and a lot for seventy camping and recreational vehicles with electric, water, sewer hookups and restrooms with showers. The owners of the motel on Route 18 have since purchased the land between their property and the creek for future development.

(R)

The previously existing business including restaurants, taverns, bowling alley and skating rink have also benefitted from the increased tourism.

The longtime support received from both professional and public agencies, interested groups and most individuals supports the view that the Project is what the community needs and wants. The local negative responses you received are not surprising. There are those who resist change, others who enjoy the attention gained by opposing popular view and those who oppose avidly with the aim of increasing their financial compensation. We had all of them in the late sixties. After the effects of the improvement in Olcott began to show most who formerly opposed it gave it a nod of approval.

The development by private investors, as described above, was stimulated by fishing and less than one hundred boat slips made available by the relocation of the new bridge. Under the proposed plan - - that has the capacity for over 800 slips our goal would be achieved. We understand the results from your questionnaires and future growth support the provisions in this plan.

With the economic development by private investors and with todays unemployment, the present Army Policy should be reviewed. It is difficult to understand why, after twenty years of studies, surveys and designs costing over one and a half million dollars; now due to current policy, the 10A Plan modified cannot be approved for Federal construction.

Sincerely,

Nathaniel L. Cook

Nathaniel L. Cook

November 18, 1992

Mr. Timothy Horanburg
Newfane Town Hall
2896 Transit Road
Newfane, NY 14108

Dear Tim,

On behalf of my parents, Robert and Dorothy Hedley, I am sending my comments on the Olcott Hamlet Master Plan Draft EIS.

As this project will be primarily located in a heavily congested area, it is my belief that the area is to small to handle a project of such magnitude.

The Olcott Harbor Task Force was relying heavily on the proposed New York State Bond Act for funding. This was voted down Nov. 3rd by a significant amount of voters. At this point, the Town, County, and State have no money to support this project. For now, the zoning should remain as it is, there is no project.

In a letter dated Nov. 6, 1992 from Colonel John W. Morris of the Buffalo District Corps of Engineers, the breakwalls in Refined Plan 10A Modified can not be approved for Federal construction, and the current recommended plan is No Federal Action. This does not preclude potential project construction by others. Considering the state of our economy, it is highly unlikely that private investors will built this project. For the breakwalls to be economically viable, the cost ratio must be 1 or above. It is currently 1.07, just barely a viable project.

Caution should be made not to "jump the gun" on rezoning the hamlet of Olcott when it appears that this project is a dead issue.

Thank you for taking my comments into consideration.

Sincerely,

Lynne Seefeldt

Mrs. Lynne B. Seefeldt
3073 Maple Avenue
Wilson, NY 14172

cc: Mr. Edward J. Muck/Town of Newfane Planning Board
Mr. Weiner Cadet/Buffalo District Army Corps of Engineers

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238
518-474-0456

Orin Lehman
Commissioner

MAILROOM
CENCE-II-B
3 Dec 92 09 58

November 25, 1992

Mr. John W. Morris
Colonel, U.S. Army
Department of the Army
Corps of Engineers
Buffalo District Office
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Morris:

Re: CORPS
Olcott Harbor Project
Newfane, Niagara County
89PR1230

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Based upon this review, it is the SHPO's opinion that this project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

If you have any questions, please call Elisabeth A. Johnson in the Project Review Unit at (518) 237-8643 Ext. 284.

Sincerely,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/EAJ:gc

92 DEC -3 PM 12:16

An Equal Opportunity/Affirmative Action Agency

Mr Wiener Cadet

Department of the Army

U.S. Army Engineer District, Buffalo

1776 Niagara ST.

Buffalo, N.Y. 14207

Nov. 30 1992

Sub Olcott Harbor Project

Dear Sir.

I want to thank you for sending me the Draft Reevaluation report with Draft Supplemental Environmental Impact Statement.

I have read this report and Agree with the Corps Finding.

In my opinion we could not afford this project, The Taxes would be to high.

I would like to thank all members of the Army corps for such a fine report, I feel the Taxpayer Received there moneys worth.

Sincerely

Mr Robert Landry

6070 Exchange ST.

Newfane, N.Y. 14108

(6)

November 30, 1992

Department of the Army
Buffalo District Corps of Engineers
Attn: Mr. Weiner Cadet
1776 Niagara Street
Buffalo, NY 14207

Dear Weiner,

Thank you for sending me the Olcott Harbor Project Preconstruction Engineering and Design Phase Reevaluation Report of August 1991, Revised: September 1992.

The Corps has done an excellent job studying the Olcott Harbor Project and has put much time and effort into this report. Both my husband and myself agree with the Corps recommendation that No Federal Action Be Taken on this project.

It is a recreational project with a barely viable cost ratio. Should private enterprise undertake such a project it would be one thing, but Federal money should stay out of it.

Thank you again for all the information provided and congratulations on a job well done.

Sincerely,

Lynne Seefeldt

Mrs. Lynne B. Seefeldt
3073 Maple Avenue
Wilson, NY 14172

STATE OF NEW YORK
DEPARTMENT OF STATE
ALBANY, N.Y. 12231-0001

GAIL S. SHAFFER
SECRETARY OF STATE

December 24, 1992

Mr. Tod Smith
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Re: Olcott Harbor Project, Main Report and Supplemental Environmental Impact Statement Volume 1, August, 1991 (Revised, September, 1992).

Dear Mr. Smith:

Thank you for sending the Department of State a copy of the above referenced document for review and comment. The Department has reviewed the Supplement to the Final Environmental Impact Statement and Consistency Determination Report. The following comments, questions and enclosures are provided for your consideration. Please note, although the majority of the policies have been addressed, policies #5, 7, 19, 21, and 30 would be emphasized should a formal consistency determination be performed.

DEVELOPMENTAL POLICIES

POLICY #1. RESTORE, REVITALIZE, AND REDEVELOP DETERIORATED AND UNDERUTILIZED WATERFRONT AREAS FOR COMMERCIAL, INDUSTRIAL, CULTURAL, RECREATIONAL, AND OTHER COMPATIBLE USES.

As noted in (1) (f) of this policy, "waterfront development meant to serve consumer needs would be inappropriate in an area where no increased consumer demands were expected. .. " As boating is a seasonal recreation, would the proposed associated facilities be closed during the winter months? Is the permanent resident population of Newfane large enough to support the associated facilities during the non-tourist season? If this facility were to be operational for only one half of the year, the scale of this project may be considered as inappropriate. What is the geographical area from which customers could be expected to frequent the marina?

printed on recycled paper

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

Clearly, construction of the proposed rubblemound breakwater would facilitate the siting of water-dependent recreational activities. However, this construction would only enhance water dependent uses related to support of 800 recreational vessels. As stated in Policy #2., Providing for expansion, "A primary objective of the policy is to create a process by which water dependent uses, including commercial uses, can be accommodated well into the future." What land areas remain for future expansion of uses?

POLICY #4. STRENGTHEN THE ECONOMIC BASE OF SMALLER HARBOR AREAS BY ENCOURAGING THE DEVELOPMENT AND ENHANCEMENT OF THOSE TRADITIONAL USES AND ACTIVITIES WHICH HAVE PROVIDED SUCH AREAS WITH THEIR UNIQUE MARITIME IDENTITY.

As stated on page SEIS-18., 2.41 Local Docking and Upland Facilities, "Transient docking along the existing channel entrance piers will be restricted to protect existing fisherman access and fishing areas." However, it appears that water dependent commercial fishing would be deemphasized by the construction of this recreational supportive breakwater. Please consider modifying Plan 1OA in order to enhance the existing commercial fishing industry in Lake Ontario? For example, fish processing activities as well as an open dockside fish market would enhance the existing commercial fishing industry of Lake Ontario. This type of retail/industrial activity would complement the intended recreational development.

POLICY #5. ENCOURAGE THE LOCATION AND DEVELOPMENT IN AREAS WHERE PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE.

On page SEA-D-1 of the Consistency Determination Report, the Compliance Statement for Policy #5 states that "the Olcott area is sufficiently developed and has sufficient resources to facilitate public services and facilities essential to the proposed development. " Would the existing municipal sewage disposal system be of adequate capacity to treat septage from a potential 800 marine sanitation devices as well as the associated upland development? If not, would the Town of Newfane have the resources to upgrade the plant in order to treat the additional sewage?

FISH AND WILDLIFE POLICIES

POLICY #7. SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS WILL BE PROTECTED, PRESERVED, AND WHERE PRACTICAL, RESTORED SO AS TO MAINTAIN THEIR VIABILITY AS HABITATS.

The compliance statement 6 (b), page SEA-D-2., states that "the final project design would not significantly adversely affect the Lake Ontario salmonid fishery runs up Eighteenmile Creek."

Support for this is cited on page SEIS-33 within a discussion of NYSDEC stocking programs construction scheduling considerations. However, there is no discussion regarding actual disturbance of migratory runs resulting from the existence of a potential 800 vessels and two rubblemound breakwaters. Please elaborate on this important significant habitat issue.

POLICY #8. PROTECT FISH AND WILDLIFE RESOURCES IN THE COASTAL AREA FROM THE INTRODUCTION OF HAZARDOUS WASTES AND OTHER POLLUTANTS WHICH BIO-ACCUMULATE IN THE FOOD CHAIN.

Although the installation of inert rock material and poured concrete would not necessarily introduce hazardous waste into the harbor, the resultant increase in vessel use would present unavoidable contamination events emanating from accidental hydrocarbon spills and bilge discharge. An analysis of bioaccumulation from potential routine and accidental discharges should be performed for the proposed 800 vessels in order to effectively address consistency with Policy #8.

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.

As stated in guideline (2) of Policy #9., "Efforts to increase access to recreational fish and wildlife resources should not lead to over-utilization of that resource or cause impairment of the habitat." In addition, "increased human presence can deter animals from using the habitat area. Aside from a general discussion of stocking issues, the effect of 800 vessels on fish resources has not been sufficiently addressed in the Compliance Statement 8(b).

FLOODING AND EROSION HAZARD POLICIES

POLICY #11. ACTIVITIES OR DEVELOPMENT IN THE COASTAL AREA WILL BE UNDERTAKEN SO AS TO MINIMIZE DAMAGE TO PROPERTY AND THE ENDANGERING OF HUMAN LIVES CAUSED BY FLOODING AND EROSION.

As the proposed breakwater has been designed for the purpose of safe harborage for recreational boating activity and associated development, the only area of the entire coast of the Town of Newfane receiving protection would be the area of the proposed marina. Have any other portions of the Town of Newfane coastline been considered for erosion protection concurrent with the proposed construction of Plan 10A, Variation 16? How would future associated water dependent development outside of the immediate area of the proposed harbor be protected from erosion?

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.

As noted on page 1-10 of the Main Report, in section (a). Physiography/Topography, "The northerly third is characterized by a narrow beach at the base of a bluff fronting the lake. " Would construction of the breakwater protect all portions of the bluffs or only in the area behind the breakwater? The discussion of accretion in the compliance statement is noted, however, would construction of the breakwater cause increased erosion of the bluffs in areas west and east of the Olcott Harbor?

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 THIRTY YEARS.

As this proposed recreational development in the Town of Newfane is solely dependent on the construction of the breakwater, an estimation of longevity and future maintenance requirements should be included for a period of time in excess of thirty years. Construction of a project of this scale would affect the community for an indefinite period of time. As future maintenance and repairs of the proposed breakwater would likely be required, description of work and estimation of cost should be included.

POLICY #15. MINING, EXCAVATION OR DREDGING IN COASTAL WATERS 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.

As mentioned on page SEA-B-12, dredging would not be required to construct the proposed project. However, as noted in correspondence from Charles E. Gilbert P.E. to Robert Hargrove on page 7 of SEA-E Environmental Correspondence, it appears that a total of 25, 000 cubic yards of various materials would be dredged from five sites within the project area. Please clarify. Did the original model breakwater studies address the proposed removal of 25,000 cubic yards of material?

PUBLIC ACCESS POLICIES

POLICY #19. PROTECT, MAINTAIN, AND INCREASE THE LEVEL AND TYPES OF ACCESS TO PUBLIC WATER-RELATED RECREATION RESOURCES AND FACILITIES.

Policy #19 discusses elimination of increased public access in the future including, "Construction of private facilities which physically prevent the provision of convenient public access to public water-related recreation resources or facilities from public lands and facilities." Unfortunate, unforseen financial difficulties which would cause an increase in berthing fee may eliminate use of the facility for the moderate income recreational boater. In addition, as the proposed marina will include the majority of the space behind the breakwater, exclusion of access to what is presently accessible to all recreational boaters may be considered to be in conflict with this policy.

POLICY #20. ACCESS TO THE PUBLICLY-OWNED FORESHORE AND TO LANDS IMMEDIATELY ADJACENT OF THE FORESHORE OR THE WATER'S EDGE THAT ARE PUBLICLY-OWNED SHALL BE PROVIDED AND IT SHALL BE PROVIDED IN A MANNER COMPATIBLE WITH ADJOINING USES.

Would facilities such as benches be provided for the immediate docking area of the proposed project? Installation of such facilities along the waterfront to the east and west of the proposed marina tower should be included to insure and enhance public access to the marina for the non-boat owning population.

RECREATIONAL POLICY

POLICY #21. WATER-DEPENDENT AND WATER-ENHANCED RECREATION WILL BE ENCOURAGED AND FACILITATED, AND WILL BE GIVEN PRIORITY OVER NON-WATER-RELATED USE ALONG THE COAST.

As stated in the Explanation of Policy, water-related recreation should occur "Provided the development of water-related recreation is consistent with the preservation and enhancement of such important coastal resources as fish and wildlife habitats. . ." As mentioned in the discussion of Policy #7, the supplemental environmental impact statement does not address potential fish migration interference which would result from the presence of 800 vessels. Until this impact can be determined, consistency with Policy #21 cannot be assured.

POLICY #22. DEVELOPMENT WHEN LOCATED ADJACENT TO THE SHORE WILL PROVIDE FOR WATER-RELATED RECREATION WHENEVER SUCH USE IS COMPATIBLE WITH REASONABLE ANTICIPATED DEMAND FOR SUCH ACTIVITIES AND IS COMPATIBLE WITH REASONABLY ANTICIPATED DEMAND FOR SUCH ACTIVITIES, AND IS COMPATIBLE WITH THE PRIMARY PURPOSE OF THE DEVELOPMENT.

As seen in the Table of Contents and on page 1-7, the discussion of anticipated demand is included in Appendix C which is included in Volume II of this draft report. Please submit

Volume II for review. Until this information is made available, anticipated demand cannot be determined. Please refer to comments address in Policy #1 of this document.

HISTORIC AND SCENIC RESOURCES POLICIES

POLICY #23. PROTECT, ENHANCE AND RESTORE STRUCTURES, DISTRICTS, AREAS OR SITES THAT ARE OF SIGNIFICANT IN THE HISTORY OF THE STATE.

As noted on page SEIS 10, and 12 of the supplemental environmental impact statement, should this project be constructed, the portion of the breakwater to the most eastern side of the proposed project is to be constructed over remains of a hotel pier. In addition, page SEIS-46 states that in 1935, the hotel was destroyed by fire and only part of the old pier remains. Please clarify whether this structure has been considered in the evaluation of historical significance within this proposed project area?

POLICY #25. PROTECT, RESTORE OR ENHANCE NATURAL AND MAN-MADE RESOURCES WHICH ARE NOT IDENTIFIED AS BEING OF STATEWIDE SIGNIFICANCE, BUT WHICH CONTRIBUTE TO THE OVERALL SCENIC QUALITY OF THE COASTAL AREA.

Although not considered to be an area of statewide significance, how would construction of the proposed boardwalk at the base of the bluffs affect overall scenic quality of the shoreline?

AGRICULTURAL LANDS POLICY

POLICY #26. CONSERVE AND PROTECT AGRICULTURAL LANDS IN THE STATE'S COASTAL AREA.

Plate 1.4, Olcott Harbor Land Use Map includes areas designated as Agricultural. Figure 9, page SEIS-19 indicates that this area would be used as parking to support the proposed marina. However, the Compliance Statement states "It is not expected that any important agricultural lands or activities will be affected by the proposed project implementation." Please clarify. It is not clear whether the lands proposed to be used for parking are presently utilized for farming.

WATER AND AIR RESOURCES POLICIES

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

The Compliance Statement suggests that "although some minor leakage of fluids may occur (i. e., small boat motor oil, grease), no significant introduction of hazardous or pollutant waste, or associated significant adverse impacts, would be expected due to proposed project implementation." It is difficult to imagine that the introduction of bilge water or motor oil leakage from 800 vessels would not have an adverse affect. A calculation as to total potential discharge should be included in this document. In addition, emergency response to an oil spill or related catastrophic event should be addressed. Although probably infrequent, this type of event would have an enormous adverse impact on the harbor.

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

Please see comments regarding policy #30.

POLICY #33. BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE THE CONTROL OF STORMWATER RUNOFF AND COMBINED SEWER OVERFLOW DRAINING INTO COASTAL WATER.

Although not addressed in the consistency determination report, a discussion of stormwater runoff should be included in the draft main report. Clearly the proposed construction of the associated upland facilities would produce runoff which would have an adverse affect on the surrounding upland and shoreline. This item must be addressed within the supplemental report.

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

Please see comments regarding policy #30.

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

Although the consistency statement indicates that no adverse effects from dredging would occur due to the proposed project implementation, page SEIS-21, 2.47 indicates that with regard to maintenance dredging "past dredging and disposal measures, may or may not be the case in the future depending on sediment quality and associated disposal standards and options. " Future sediment sampling and testing results should be discussed in the Supplemental EIS; these concerns should be included in the consistency discussion. Presently, this consistency statement does not adequately address anticipated dredging of contaminated material.

POLICY #36. ACTIVITIES RELATED TO THE SHIPMENT AND STORAGE OF PETROLEUM AND OTHER HAZARDOUS MATERIALS WILL BE CONDUCTED IN A MANNER THAT 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.

A consistency discussion should be included as accidental spills from marina related services such as fueling stations would have enormous adverse impact to the entire marina area.

POLICY #37. BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO MINIMIZE NON-POINT DISCHARGE OF EXCESS NUTRIENTS, ORGANICS AND ERODED SOILS INTO COASTAL WATERS.

The compliance statement has been noted. However, a discussion of stormwater runoff from proposed parking facilities as a non- point source of contamination should be included in the supplement. Until specific shoreline developments and associated in sources are identified, the compliance statement is not complete.

POLICY #39. THE TRANSPORT, STORAGE, TREATMENT AND DISPOSAL OF SOLID WASTES, PARTICULARLY HAZARDOUS WASTES, WITHIN THE COASTAL AREA WILL BE CONDUCTED IN SUCH A MANNER SO AS TO PROTECT GROUNDWATER AND SURFACE WATER SUPPLIES, SIGNIFICANT FISH AND WILDLIFE HABITATS, RECREATION AREAS, IMPORTANT AGRICULTURAL LAND, AND SCENIC RESOURCES.

Although the compliance statement for Policy #35 has been referenced for this policy, emergency response should be addressed in the event of contamination due to accidental catastrophic failure of a hydrocarbon storage facility or hydrocarbon transport system.

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

The compliance statement is noted. However, a discussion regarding air quality standards as a result of increased automobile traffic resulting from the project should be included.

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

The compliance statement is noted. However, a discussion of impact which would result from expansion into the Eighteenmile Creek Significant Habitat should be included in this supplemental document. In addition, as discussed in Policy #7, a clear determination of the overall impact of 800 vessels on existing upstream habitats has not been included. Such a determination should be made.

Although a compliance statement has been prepared for each of the forty-four policies, a detailed analysis of the actions and related policies which would present the greatest impact should be prepared. For example, the ultimate effect of the proposed project on fish and wildlife has not been fully explored; the compliance statement does not include a discussion of impact of a potential 800 vessels. In addition, an expanded discussion of Policy #5 should be included as public services are essential to development of this proposed project. Also, an expanded compliance statement should be included for Policy #19 as public access may not be available for the non-boat owning population. Please use this document to identify the policies which will be of greatest significance in any future review for consistency by this office.

Please be advised that this review of the Draft Main Report and Supplemental Environmental Impact Statement for the proposed Olcott Harbor Project is not a review for consistency with the State's forty-four policies. Rather, it is a collection of questions and comments drafted with regard to the consistency determination report included on page SEA-D-1 of the supplemental report.

We hope that these comments will be of assistance to the U.S. Army Corps of Engineers, Buffalo District. If you have any questions, do not hesitate to call me at (518) 474-6000.

Sincerely,

Walter F. Meyer
Coastal Resources Specialist

WFM/mm

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: Eighteen Mile Creek - Lake Ontario

Designated: October 15, 1987

County: Niagara

Town(s): Newfane

7½' Quadrangle(s): Newfane, NY

Score	Criterion
16	Ecosystem Rarity (ER) One of about 10 major New York tributaries to Lake Ontario, and relatively undisturbed; rare in ecological subzone.
0	Species Vulnerability (SV) No endangered, threatened or special concern species reside in the area.
9	Human Use (HU) This is one of the most popular recreational fishing sites on Lake Ontario, of regional significance.
6	Population Level (PL) One of the major salmonid spawning streams on Lake Ontario (ecological subzone). Geometric mean: $(4 \times 9)^{\frac{1}{2}}$
1.2	Replaceability (R) Irreplaceable

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R]

= 37

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS PROGRAM
A PART OF THE NEW YORK COASTAL MANAGEMENT PROGRAM

BACKGROUND

New York State's Coastal Management Program (CMP) includes a total of 44 policies which are applicable to development and use proposals within or affecting the State's coastal area. Any activity that is subject to review under Federal or State laws, or under applicable local laws contained in an approved local waterfront revitalization program will be judged for its consistency with these policies.

Once a determination is made that the proposed action is subject to consistency review, a specific policy aimed at the protection of fish and wildlife resources of statewide significance applies. The specific policy statement is as follows: "Significant coastal fish and wildlife habitats will be protected, preserved, and, where practical, restored so as to maintain their viability as habitats." The New York State Department of Environmental Conservation (DEC) evaluates the significance of coastal fish and wildlife habitats, and following a recommendation from the DEC, the Department of State designates and maps specific areas. Although designated habitat areas are delineated on the coastal area map, the applicability of this policy does not depend on the specific location of the habitat, but on the determination that the proposed action is subject to consistency review.

Significant coastal fish and wildlife habitats are evaluated, designated and mapped under the authority of the Coastal Management Program's enabling legislation, the Waterfront Revitalization and Coastal Resources Act (Executive Law of New York, Article 42). These designations are subsequently incorporated in the Coastal Management Program under authority provided by the Federal Coastal Zone Management Act.

This narrative, along with its accompanying map, constitutes a record of the basis for this significant coastal fish and wildlife habitat's designation and provides specific information regarding the fish and wildlife resources that depend on this area. General information is also provided to assist in evaluating impacts of proposed activities on parameters which are essential to the habitat's values. This information is to be used in conjunction with the habitat impairment test found in the impact assessment section to determine whether the proposed activities are consistent with the significant coastal habitats policy.

DESIGNATED HABITAT: EIGHTEEN MILE CREEK - LAKE ONTARIO

LOCATION AND DESCRIPTION OF HABITAT:

Eighteen Mile Creek empties into Lake Ontario at the hamlet of Olcott, in the Town of Newfane, Niagara County (7.5' Quadrangle: Newfane, N.Y.). The fish and wildlife habitat extends approximately one and one-half miles from the N.Y.S. Route 18 bridge to the Burt Dam, and includes the entire stream channel and Associated wetlands and islands. Eighteen Mile Creek is a relatively large, meandering, warmwater stream, with predominantly silt and gravel substrates. The creek drains approximately 90 square miles of relatively flat agricultural and rural residential lands. Below the Burt Dam, Eighteen Mile Creek flows through a steep sided, undeveloped wooded gorge, where habitat disturbances are minimal. In contrast, the mouth of this Lake Ontario tributary has been extensively developed as a small boat harbor, including marinas, boat launches, and protective breakwalls extending out into the lake. Most of the land area bordering Eighteen Mile Creek is privately owned.

FISH AND WILDLIFE VALUES:

Eighteen Mile Creek is the largest stream in Niagara County (aside from the lower Niagara River), and is one of about ten major tributaries in the Great Lakes Plain ecological region. Undisturbed tributary streams that provide habitat for major spawning runs by salmonids and other lake-based fish populations are especially important in this region. The extensive beds of emergent and submergent aquatic vegetation in this area account for an estimated 65 acres, comprising one of the largest coastal wetlands in the western portion of Lake Ontario.

Eighteen Mile Creek is particularly significant because large concentrations of coho and chinook salmon and brown trout migrate from Lake Ontario into the creek each fall, from late August through December (September - November, primarily), when salmonids ascend the streams to spawn (although unsuccessfully in most instances). In addition, steelhead (lake-run rainbow trout) migrate into Eighteen Mile Creek during the fall and between late February and April. These fish populations are the result of an ongoing effort by the NYSDEC to establish a major salmonid fishery in the Great Lakes through stocking. In both 1983 and 1984, approximately 200,000 chinook salmon and over 35,000 coho salmon were released in the creek. Eighteen Mile Creek was among the top ten Lake Ontario tributaries for numbers of salmonid stocks in 1984. Eighteen Mile Creek also contains a diverse warmwater fishery. The area supports substantial natural reproduction by smallmouth bass, northern pike, rock bass, black crappie, brown bullhead, and largemouth bass.

The wetlands and undisturbed woodlands bordering Eighteen Mile Creek provide valuable habitats for wildlife that are uncommon in Niagara County's coastal area. A variety of bird species inhabit the area, including great blue heron, green-backed heron, mallard, wood duck, belted kingfisher, marsh wren, common yellowthroat, red-winged blackbird, and swamp sparrow. Other wildlife species occurring along the creek include resident furbearers, such as muskrat, mink, and raccoon.

The fish and wildlife resources associated with Eighteen Mile Creek attract a significant amount of recreational use, although access to the area is limited

by the steep banks and private land ownership. This is one of the most popular recreational fishing streams on western Lake Ontario, due primarily to the large salmonid runs in the area. Fishing pressure is concentrated in the upper one-fourth miles of the area (between Fisherman's Park access sites and Burt Dam) and in the vicinity of Olcott Harbor. The intervening segment of the creek is often fished by small boat or canoe, especially for the abundant warmwater species in the area. Eighteen Mile Creek attracts many fishermen from as far away as Buffalo and Rochester. Local residents also utilize this area to a limited extent for waterfowl hunting and trapping.

IMPACT ASSESSMENT:

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 a 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 appplying 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).

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.

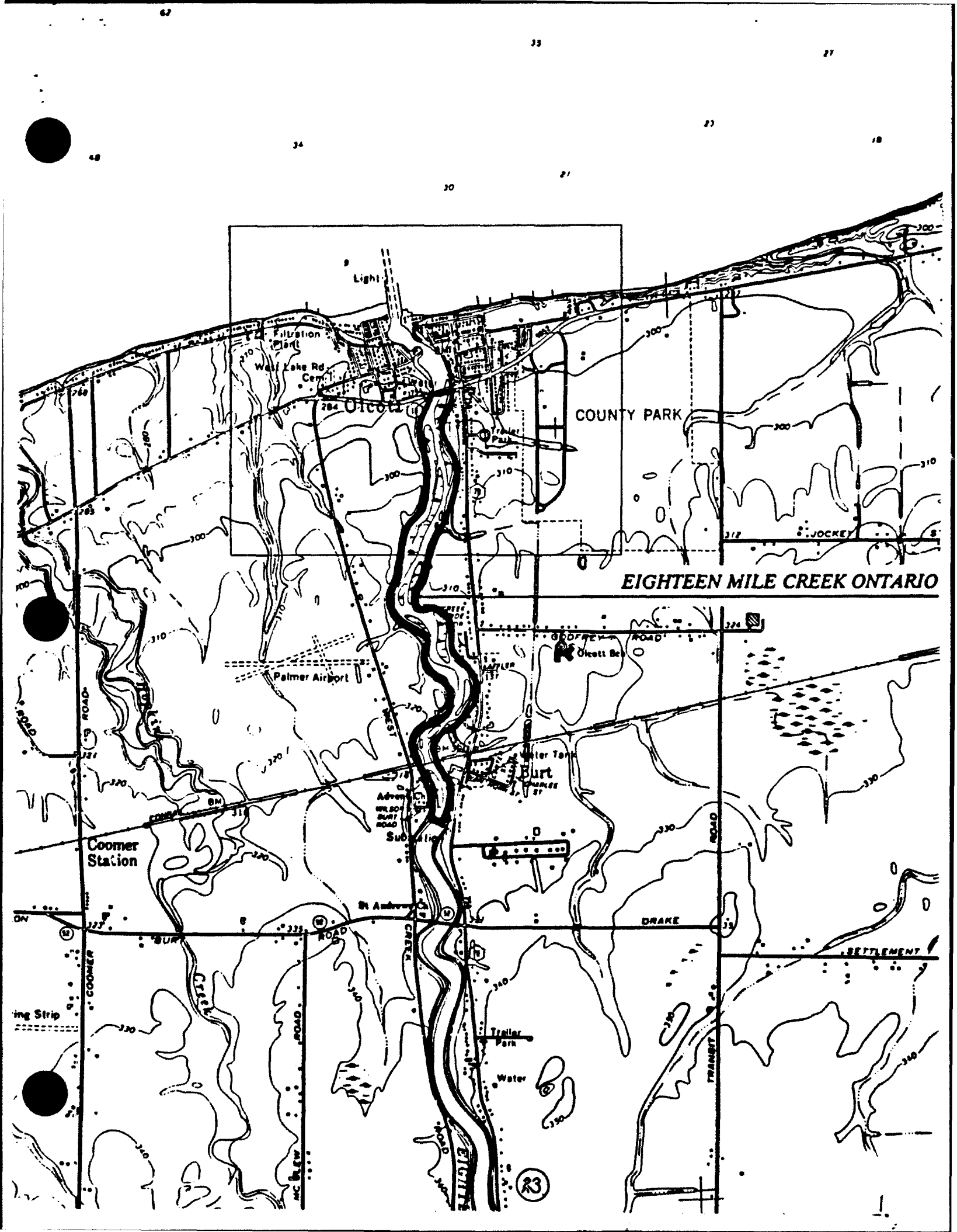
Any activity that substantially degrades water quality, increases temperature or turbidity, reduces flows, or alters water depths in Eighteen Mile Creek would adversely affect the fish and wildlife resources of this area. These impacts would be especially detrimental during fish spawning and nursery periods (late February-July for most warmwater species and steelhead, and September-November for most salmonids), and wildlife breeding seasons (April-July for most species). Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers) could adversely impact on fish or wildlife species. Of particular concern are the potential effects of upstream disturbances, including water withdrawals, stream bed disturbances, and effluent discharges. Hydroelectric facilities on the creek should only be permitted with run-of-river operations. Barriers to fish migration, whether physical or chemical, could have a significant impact on fish populations in the creek. Disturbances of wetland vegetation, including submergent beds, through dredging, filling, or bulkheading, would result in a direct loss of valuable habitat area. Enhancement of motorboat access to the area above Route 18 would significantly increase human disturbance of the habitat, reducing its potential value to many fish and wildlife species. Existing woodlands bordering Eighteen Mile Creek should be maintained to provide bank cover, perching sites, soil stabilization, and buffer areas.

KNOWLEDGEABLE CONTACTS:

Tom Hart or Greg Capobianco
Division of Coastal Resources & Waterfront Revitalization
NYS Department of State
162 Washington Avenue
Albany, NY 12231
Phone: (518) 474-6000

Terry Moore, Wildlife Manager
or Steve Mooradian, Fisheries Manger
or Jim Pomeroy, Environmental Protection Biologist
NYSDEC - Region 9
128 South Street
Olean, NY 14760
Phone: (716) 372-8676

NYSDEC - Information Services
700 Troy-Schenectady Road
Latham, NY 12110
Phone: (518) 783-3932


EIGHTEEN MILE CREEK ONTARIO
COUNTY PARK
Olcott
Light
Filtration Plant
Wolf Lake Rd Cem.
Trailer Park
JOCKEY
Palmer Airport
Olcott Beach
Burt
Coomer Station
DRAKE
SETTLEMENT
TRANSIT
COOMER
ROAD
CREEK
Trailer Park
Water
23

U.S. ARMY CORPS OF ENGINEERS, BUFFALO DISTRICT
RESPONSE TO THE
NEW YORK STATE DEPARTMENT OF STATE - COASTAL RESOURCES PROGRAM
COMMENT LETTER DATED DECEMBER 24, 1992

GENERAL

Thank you for your review and comments.

The following pages include corresponding responses tc your comments. Since your letter is the only letter received on the draft reports with substantial questions and comments, we wish to leave the existing reports basically intact, as final, and incorporate these responses as addendum. We hope that these responses satisfactorily address your comments/concerns; particularly for items 5, 7, 19, 21, and 30.

It should be further clarified that these types of projects (and authorities) are complementary cooperative effort projects with rather specific Federal and non-Federal project features and responsibilities. Federal (Corps of Engineers) project features include: breakwaters and associated breakwater access and sanitary facilities, and entrance channels. Non-Federal or local project features include: required basic marina docking, access, parking, and sanitary facilities. Reference SEIS, page SEIS-18, paragraph 2.41 - Local Docking and Upland Facilities. Federal features are addressed more specifically in these (Corps) reports, while non-Federal features are addressed more generally. This general assessment assumes only basic (minimally required) associated non-Federal developments necessary to facilitate the immediate project. The local cooperator (developer) would be responsible for final development, coordination, and approval for final non-Federal project features and/or additional developments. Federal and non-Federal feature development, coordination, and approvals are to be minimally complementary and mutually incorporated by reference.

A Final Olcott Hamlet Master Plan, Town of Newfane, Niagara County, New York, 1990, has been developed by local and regional planners.

We request a consistency determination relative to the project Federal features specifically and minimally required non-Federal features generally (relative to these Corps reports); contingent upon an associated future consistency determination for local minimally required non-Federal project related features.

COMMENT RESPONSES

POLICY 1 - COMMENT RESPONSE. It is expected that most of the immediate project (marina) facilities would be closed or inactive during the extreme winter months (i.e., December, January, February, March). However, some developments/services may continue to generate winter revenue (i.e., boat storage, winter boat service, possibly bait shops and coffee shops for ice fishermen, walkers, cross country skiers (Krull Park), etc.).

Potential interface with other considered local developments would ultimately need to be determined by local/regional planners and developers. Immediate project (marina) related consumer demands are documented in the problems and needs and benefit analysis sections of the main report and in greater detail in the Supporting Documentation - Appendix C - Economics. Using appropriate Federal analysis guidelines and only acceptable benefits, the considered immediate project (marina) is considered to be economically feasible and supportable. As indicated in this previously referenced documentation, the geographical area from which customers could be expected to utilize the marina is regional.

POLICY 2 - COMMENT RESPONSE. Construction of the proposed rubblemound breakwater would enhance more than water dependent uses related to support of 800 recreational vessels. Other enhanced water dependent uses include: breakwater pedestrian (scenic) and fishermen access, associated marina facilities and services including access ramps and docks for transient boaters, charter boats (commercial benefits), possibly a local tour boat or passenger and cargo boat to Toronto (commercial benefits), harbor of refuge and inundation reduction, and secondary local developments (i.e., Krull Park (scenic & recreation) and community (commercial)). Not all of these, however, can be credited by Federal guidelines toward the immediate project (marina) justification. These water dependent uses can be accommodated well into the future.

The immediate waterfront area is limited and developed to some extent. The immediate project (marina), as well as the more extensive community Final Olcott Hamlet Master Plan, call for more intensive "redevelopment" versus "development." Some flexibility in "redevelopment" in the future would likely be needed to accommodate other water dependent uses well into the future, should they become more favorable. For example, some redesignated (i.e., commercial) use for areas adjacent to the breakwaters or piers may be evaluated in the future. As indicated by the report sections pertaining to existing land use, most remaining open areas lie southeast and southwest of the hamlet.

POLICY 4 - COMMENT RESPONSE. Reference the POLICY 2 - COMMENT RESPONSE also. Although, of some potential consideration, the proposal generally exceeds the authority and scope of this supplemental Federal study. Additionally, there is only so much one can do with the project area. Traditional uses and activities have been primarily recreational, sport fishing, marinas, and charter boats. The potential immediate project (marina) supports these traditional uses. The project has been coordinated extensively with local cooperators/planners as to what they want, what would be feasible, and what they can support. More commercial oriented facilities were considered in the early planning and reevaluation stages, but were not considered favorable or particularly feasible, for now, or for the near future. The local cooperators/planners may consider, for example, fish processing activities, as well as, an open dockside fish market and associated redevelopment and additional development, should they become more favorable in the future.

The considered plan would enhance traditional recreation, sport fishing, marina, and charter boat use and activities. There is a fish cleaning station for sport fisherman at the Town of Newfane Marina facilities (off the west side of lower Eighteen Mile Creek) and one would likely be included near the lake front marina development and east pier and breakwater

* POLICY 5 - COMMENT RESPONSE. Based on coordination with the local cooperators/planners, and information about the existing sewage disposal system, it is expected that the facility can accommodate the immediate project (marina) with minimally required associated shoreline developments. Facilities may need to be improved to facilitate additional developments as discussed in the Final Olcott Hamlet Master Plan depending upon the additional level of redevelopment. The local planners are aware of and would need to address this issue.

* POLICY 7 - COMMENT RESPONSE. Actually, one the major reasons for and objectives of this reevaluation study was to investigate and to alleviate this concern. The following report sections and correspondence provide discussion pertaining to assessment and anticipated effects of the considered project to fishery habitat and the salmonid runs, particularly relative to the Federal project feature breakwaters.

Reference: the main report, page 2-44, Section D - Model Investigation of Environmental Parameters; the main report, page 2-53, paragraph b. Environmental Test Results,and Conclusions; main report, page 4-21, item(s) C(2), C(3), and C(4).

Reference: the SEIS, page ii, 1st paragraph, 4th paragraph; SEIS, page iii, 2nd paragraph, 6th paragraph, etc.; SEIS page iv, 1st paragraph, 2nd paragraph, 3rd paragraph, 4th paragraph, 5th paragraph; SEIS, page SEIS-22 through SEIS-24; SEIS, page SEIS-30 through SEIS-33; SEIS, page SEIS-47 through SEIS-53; SEIS, page SEIS-65, paragraph 6.13; SEIS, page SEIS-66.

Reference: SEIS, Supplemental Environmental Appendix SEA-C- U.S. Fish and Wildlife Service Coordination Act Report; SEIS, Supplemental Environmental Appendix SEA-E- Environmental Correspondence, page 29, NYSDEC letter dated January 22, 1990; this SEIS, Supplemental Environmental Appendix SEA-F-Comment Letters on the Draft Re-evaluation Report and Draft Supplemental EIS, page 36, USEPA letter dated December 28, 1992,and page 38, USDOI letter dated December 29, 1992.

As indicated in the U.S. Fish and Wildlife Service Coordination Act Report, migratory fish respond to a number of internal and external stimuli which trigger behavioral changes. Among the external factors are fluctuations in thermal regimes, flow volumes, and flow velocities (currents). The results of model testing suggest that implementation of the proposed project would not significantly impact on existing patterns of thermal variation between lake and stream, or patterns of water movement and velocity from the creek to the Lake and along the lake shoreline. Conclusions were within the predictive capability of

the model. It is reasonable to conclude from the modeling results that the project should not impair any spring spawning migrations of northern pike, small mouth bass, and possibly walleye from the lake to the creek, or the fall migrations of salmon and trout into the creek. Further, it appears that the project should not have significant impact on water temperatures or current velocities and patterns in the lower reach of Eighteen Mile Creek.

Design modifications (stone rubblemound construction, breakwater positioning, breakwater alignments, openings in breakwaters, etc.), even preference of Plan 10A over Plan 10B, considered this concern. Of note, most of the flow from the creek (i.e. plume) would exit through the opening between the west and east breakwaters (similar to existing conditions). The break in the east breakwater also alleviates this concern. The protected embayment is located east of the entrance channel and predominant waves, and littoral drift is from the northwest. Any embayment area problem (i.e. minor pollution) should not move toward the entrance channel or main migration run.

As indicated in the assessment section of the SEIS, pages SEIS-47 through SEIS-54, a number of adverse and beneficial impacts would be expected with project implementation, but no overall significant (major) adverse effect would be expected.

Also reference POLICY #30 - COMMENT RESPONSE.

Professional judgments support these assessments. Also, further local cooperator/planner/developer coordination for detailed non-Federal immediate project (marina) features would further consider these issues.

POLICY 8 - COMMENT RESPONSE. Reference POLICY #7 - COMMENT RESPONSE and POLICY #30 - COMMENT RESPONSE.

POLICY 9 - COMMENT RESPONSE. Reference POLICY #7 - COMMENT RESPONSE and POLICY #30 - COMMENT RESPONSE.

POLICY 11 - COMMENT RESPONSE. The project authority limits the project scope, location, intent, and considerations. The PROBLEMS, NEEDS, OPPORTUNITIES section of the main report includes an overview of erosion and flooding problems, and programs in the vicinity; more specifically at Olcott. Consideration of associated problems, measures, and benefits, at Olcott are somewhat incidental to this project. Flooding and/or erosion protection in other portions of the Town of Newfane would have to be initiated and pursued via other study/project authority. A Federal (Corps) study would likely have to be directed at areas of previous development sustaining or of potential significant damages. As indicated in the third paragraph on page 2-4 of the main report, the town has adopted a policy which requires that new developments locate in areas not subject to damage or loss due to erosion.

With and without project littoral processes studies indicate that no significant adverse effect on existing littoral processes would be expected with considered project implementation. Reference SEIS, page SEIS-57, paragraph 4.61 and Supporting Documentation (Volume 2), Appendix A - General Design Analysis, Sub-Appendix B - Coastal Design Analysis, page B-16.

POLICY 12 - COMMENT RESPONSE. Construction of the breakwater would only provide protection in the area of the breakwater. Construction of the breakwater would not cause increased erosion of the bluffs in areas west and east of the Olcott Harbor. Reference POLICY 11 - COMMENT RESPONSE, also; particularly the second paragraph.

POLICY 13 - COMMENT RESPONSE. All proposed recreational development in the Town of Newfane is not solely dependent on the construction of the breakwater. The economic analysis of the project as indicated in associated sections of the main report is 50 years from the expected date of construction (i.e., reference Table 4.4 on page 4-13 of the main report). Project operation and maintenance responsibility is summarized on page 4-7 of the main report and an annual maintenance cost estimate is provided in Table 4.11 on page 4-19 of the main report. This is also summarized in paragraph D - Non-Federal Responsibilities on page 5-3 of the main report. See SEIS, page SEIS-18, also. Supporting Documentation (Volume 2), Appendix B - Cost Engineering, and Appendix C - Economics provide more detailed information on these matters.

POLICY 15 - COMMENT RESPONSE. The U.S. Army Corps of Engineers, Buffalo District maintains the Olcott Harbor authorized Federal entrance channel via its operations and maintenance program. This will occur with or without the subject project and is coordinated with key environmental agencies; particularly pertaining to sediment quality, dredging, and dredged material disposal. The local interests coordinate for permits and maintain local navigation channels. This will occur with or without the subject project. Much of the 25,000 cubic yards of material that was mentioned in the September 22, 1989 letter (SEA-E, page 7) that would need to be removed to accommodate the scope of the considered subject project (at the time), was also located within the limits of normal operation and maintenance. Subsequent to the September 22, 1989 letter (as was discussed in an enclosure with a letter, dated December 28, 1989, see SEA-E, page 27), Federal and local normal operation and maintenance dredging and disposal removed much of the 25,000 cubic yards. Additionally, the reduced scope of the subject project local channel requirements (primarily the large turning basin) eliminated the need for dredging in order to implement the subject project. Reference page 3-31 of the main report and page SEIS-21 of the SEIS. Reference POLICY 35 - COMMET RESPONSE also. Model tested parameters would not be significantly affected with or without the 25,000 cubic yards.

* POLICY 19 - COMMENT RESPONSE. The considered immediate project (marina) is a public works project requiring certain public benefits for public investment. Although docking costs will need to reflect project support and may exclude some for economic

reasons, they would likely be more competitive than a purely private development. Additionally, the considered immediate project would provide an array of improved public access far in excess to the existing or without project conditions. Improved public access includes that to the east breakwater, transient docks, adjacent facilities (i.e., parking, boardwalk, sanitary facilities, possibly a restaurant, etc.) and Town of Newfane Marina (just west of Eighteen Mile Creek) facilities (i.e., parking, boat ramps, sanitary facilities, fish cleaning station, etc.). Additionally, the project would likely generate potential for improved adjacent public access facilities at Krull Beach and Park, etc. Reference the main report, page 4-25, paragraph 4.10; and SEIS, page SEIS-55, paragraph 4.44, etc., and page SEIS-58, paragraph 4.77, etc. Reference the Town of Newfane Final Olcott Hamlet Master Plan also.

POLICY 20 - COMMENT RESPONSE. Reference POLICY 19 - COMMENT RESPONSE also. These facilities would be developed and coordinated in final form by the local cooperators/planners/developers. It is possible that the immediate permanent docking areas may be somewhat restricted to boat owners for property security reasons. Information to date indicates that the boardwalk (or initial dock access area) would be public access including benches, etc. See Figures SEIS, page SEIS-19 and page SEIS-20, also.

* POLICY 21 - COMMENT RESPONSE. Reference POLICY #7 - COMMENT RESPONSE and POLICY #30 - COMMENT RESPONSE.

POLICY 22 - COMMENT RESPONSE. A copy of Volume 2 - Supporting Documentation was forwarded to your office on January 5, 1993. Project demands are generally addressed in (and in terms of) the problems, needs, and opportunities section, the benefit analysis sections, and plan accomplishment section of the main report.

POLICY 23 - COMMENT RESPONSE. The structure has been considered in the evaluation of historical significance within the proposed project area. As noted in sections pertaining to cultural resources in the main report and SEIS and its appendices, appropriate cultural resources investigations were conducted and coordinated with appropriate cultural resource agencies (particularly the State Historic Preservation Office (SHPO)) pertaining to this project. The SHPO indicated in a letter dated November 13, 1989 that it is the opinion of the SHPO that the Federal project features will have no effect upon cultural resources included in or eligible for inclusion in the National Register of Historic Places. Also, as is evident by the 1900 photographs of the Olcott Beach Hotel in the main report, there is historical documentation about the hotel. The local cooperator/planners/developers may or may not need to provide supplemental cultural resources information to development reviewers to accomplish all of their plan proposals, as necessary.

POLICY 25 - COMMENT RESPONSE. Although aesthetics is a fairly subjective matter, it is expected that the area aesthetics would be altered per the project development plans, but would provide increased aesthetic opportunities over that which exists.

Reference SEIS, page SEIS-60, paragraph 4.99. Ultimately, the local cooperator/planners/developers would need to develop and coordinate final detailed plans for associated developments (including the boardwalk and associated features). Information to date indicates that the local cooperators/planners/developers are considering a tower and step/ramp facilities to provide access from the top of bluff, east breakwater, and pier area to a boardwalk. The boardwalk would provide interface access to the docking area and necessary elevation above normal water levels. The boardwalk would generally be aligned along the toe of the bluff and over the existing narrow beach. Final foundation plans have not been developed/coordinated for the boardwalk. Potential development of the bluff area may range from leaving existing conditions (primarily benched slopes with grass and scattered trees and shrubs), except for access modifications, to more developed; depending on local developer plans, coordination, and approvals.

POLICY 26 - COMMENT RESPONSE. Plate 1.4 in the main report, also Figure 15 in the SEIS, has undergone some changes since it was developed, even since coordination of this Report. Essentially, the hamlet area north of Route 18 is not utilized as agricultural, although potential and other factors (i.e., prime soils) would still be a consideration. The immediate project (marina) Federal project features are depicted on Plate 4.1 in the main report and Figure 7 in the SEIS. As indicated in the main report, page 4-6 (third paragraph), and the SEIS, the property required for Federal feature access and parking to the east breakwater is currently owned by the county and is not used agriculturally. Also reference the main report, page 4-7, Real Estate... Additionally, the immediate project Federal features have been coordinated with the U.S. Department of Agriculture including the Soil Conservation Service (reference SEIS, page SEIS-68, paragraph 6.27), who, in their most recent letter response (November 12, 1992) indicated that they "have no additional comments" pertaining to the Corps' report and project. Again, the local cooperators/planners/developers would need to final develop, coordinate, and obtain approval for final detailed non-Federal project features.

* POLICY 30 - COMMENT RESPONSE. As indicated in the SEIS, there would be some unavoidable degradation of water and possibly sediment quality in the area of the created small boat harbor docking area over time, primarily due to periodic minor discharge of incidental powerboat petroleum products (i.e., fuel, oil). Based on knowledge of other similar or even larger facilities, however, this would not be expected to be a significant (the key word) adverse impact. For example, the NFTA-Small Boat Harbor at Buffalo Harbor currently provides protection and docking for 1040 boats. The breakwater provides less circulation permeability than that proposed for Olcott. The facility is located in a Significant Coastal Fish and Wildlife Habitat designated area and, via the breakwater protected embayment area, is considered as contributing to the diversity of the significant coastal fish and wildlife habitat area. Although not without its problems,

the facility is not considered to create what are considered to be significant adverse impacts to area water quality or sediment quality. This effect and associated expectation is reinforced via a number of items. For example:

-- Continually improving vessel design and technology reduces potential for leakage and associated discharge of significant quantities of pollutants from vessels;

-- Improved environmental protection laws make parties environmentally and fiscally responsible for damage and cleanup due to noticeable pollutant discharges;

-- Periodic authority, owner, and facility operator vessel and facility inspections reduce potential for pollutant discharges;

-- Most boaters want to have a well maintained vessel for dependability and safety reasons;

-- Environmental awareness;

-- Improved environmentally conscious boating products;

-- Although 800 vessels may seem significant, only a small fraction of these vessels would be expected to be of any potential pollutant discharge concern in any given boating season. Additionally, many of the boats would be sailboats, generally of somewhat lesser concern;

-- The proposed Olcott breakwater design, although effective in providing wave protection, also continues to provide for significant water permeability and circulation and associated beneficial effects to water and sediment quality;

-- The immediate project area (docking basin) substrate (primarily bedrock or gravel) and continued water circulation (higher energy environment) are not conducive to prolonged accumulative concentrated pollutant adverse effects;

-- Stricter environmental protection laws and regulations (particularly more recently) pertaining to petroleum and waste tank storage and transport relative to vessel: structure, placement, ventilation, leak detection, inspection, maintenance, longevity, emergency situation, and leak clean-up contingency plans, liabilities, and reimbursement. Pollution control plans include such items as: detection, response, containment, removal, storage, transport, treatment, and disposal (i.e., National Oil and Hazardous Substance Pollution Contingency Plan, Underground Storage Tanks (UST), etc.);

-- Associated facility (Olcott Marina), local (hamlet of Olcott or town of Newfane, county of Niagara), State (NYSDEC), Federal (USEPA, U.S. Coast Guard) pollution control emergency response programs.

Again, the local cooperator/planners/developers would need to develop and coordinate final detailed plans for these specific items in this regard.

POLICY 31 - COMMENT RESPONSE. Reference POLICY 30 - COMMENT RESPONSE also. Although not necessarily so, it is possible that the NYSDEC best usage "Class A" classification for the existing lake area of the breakwater protected lake area may change, for example, to best usage "Class B" in the long-term with project implementation due to project altered area characteristics (i.e., reduced energy in the area and potential minor pollutant impacts). Again, this may or may not be the case. Reference SEIS, page SEIS-30, paragraph 3.06. Additionally, the anticipated minor discharge of incidental petroleum would not be expected to exceed water quality standards for such a development area. The area waters are not overburdened with contaminants, in this regard, to be recognized as a development constraint. The USEPA has indicated in a letter dated December 28, 1992, pertaining to review of the subject report primarily for Federal project features and generally (to date) for non-Federal project features, that EPA believes that implementation of either (Modified Plan 10A) or no action will not result in any significant adverse environmental impacts. NYSDEC did not provide any additional comments on the draft reports.

POLICY 33 - COMMENT RESPONSE. Upland area for implementation of immediate project (marina) Federal features would only involve 3.8 acres of land. Reference the main report page 4-7, Real Estate. As indicated in the SEIS, page SEIS-17, paragraph 2.38 Environmental Considerations, the contractor would be required to comply with the Corps of Engineers Civil Works Construction Guide Specifications entitled "Environmental Protection" (CW-01430 - July 1978) which requires measures to minimize construction impacts to water and associated land resources such as noise, dust, erosion, and turbidity. Pertaining to run-off, this would involve required use of measures such as: setting basins, filtration systems, erosion protection systems, etc. to minimize adverse impacts of run-off water quality and erosion. Implementation of immediate project Federal features would not be expected to significantly adversely affect any run-off or require any significant modification to storm water run-off systems.

Even basic immediate project (marina) non-Federal features would probably not require extensive modification to storm water run-off systems. Tie-ins primarily from parking lots to existing systems would probably dominate. Again, the local cooperators/planners/developers would need to develop and coordinate final detailed plans for these specific items. Run-off (construction and long-term) water quality protection measures would also likely be required. Additional developments associated with the Final Olcott Hamlet Master Plan would be much more extensive and would require much more extensive run-off plans/facilities. This would need to be coordinated accordingly by the local cooperators/planners/developers.

POLICY 34 - COMMENT RESPONSE. Reference POLICY 7, 8, and 30 - COMMENT RESPONSE(s).

POLICY 35 - COMMENT RESPONSE. Reference POLICY 15 - COMMENT RESPONSE and SEIS, page SEIS-21, paragraphs 2.46 and 2.47. As indicated in the Policy 15 - COMMENT RESPONSE, operation and maintenance dredging and disposal for both the Federal and local existing channels was accomplished fairly recently. Material dredged was considered clean enough to be disposed of at the open-lake disposal site.

Initially, during this reevaluation study, potential implementation of the project included expansion of local navigation channels and creation of a large turning basin in the most upstream navigation channel area (just downstream of the Route 18 bridge). Available information on the quality of the sediments (relatively undisturbed) that would need to be dredged to accomplish the local channel expansion and turning basin, indicated that the sediments would not be acceptable for open-lake discharge. Alternate disposal measures would need to be considered (i.e., existing or developed confined disposal facility (CDF) disposal; sediment treatment processing and appropriate open-lake, CDF, landfill disposal; etc.). Subsequent analysis indicated, however, that the considered expansion of local navigation channels and creation of a large turning basin would not be warranted.

New quantity surveys and sediment sampling and testing will probably be done within the next 3 to 8 years. The quality of sediments to be dredged from the existing Federal and local channels in the future will probably be similar in quality to those recently dredged and disposed of. As indicated in SEIS paragraph 2.16, past and recent sediment sampling and testing indicate that sediments in the vicinity of the Lake (proposed breakwater and marina basin area) and Federal channel are granular (sand/gravel) and relatively non-polluted, while those in the upstream harbor area (up to the Route 18 bridge) and primarily local channel areas are more silt and may range from moderately to more heavily polluted. Continued operation and maintenance dredging and disposal of probably small quantities of relatively non-polluted material from the vicinity of the Lake (proposed breakwater and marina basin area) will probably not be a significant problem. Any potential dredging and disposal problem in the future will probably pertain to the most upstream Federal and/or local navigation channel areas in the creek, where more polluted sediments tend to accumulate. The uncertainty lies in a number of changing factors. For example, in the past, sediment pollution classification analysis was based more on chemical analysis rather than biological or ecological analysis (i.e., bioassays). Today, and in the future, this is shifted more toward ecological analysis. Therefore, testing standards are changing. Additionally, standards for acceptable levels of contaminants in sediments for open-lake disposal are becoming more strict. Depending on changes, alternate disposal measures (reference the previous paragraphs) may need to be considered in the future. One good aspect of this potential problem is that a relatively small quantity of material is dredged infrequently from Olcott Harbor. As indicated in SEIS, paragraph 2.47, periodic maintenance dredging of the existing Federal and local

navigation channels along Eighteen Mile Creek will be required and will need to be addressed with or without the proposed breakwater project. These considerations are outside the scope of this study. Federal considerations in this regard would likely be addressed under an O&M program.

Also reference SEIS, paragraphs 3.07-3.09. Note, Areas of Concern (AOC) problems pertain primarily to conditions upstream in the creek and/or outside of the immediate existing navigation channel areas.

Also reference the NYSDEC letter dated January 22, 1990 in the SEIS, Appendix SEA-E - Environmental Correspondence; and the USEPA letter dated December 28, 1992 in this Appendix.

POLICY 36 - COMMENT RESPONSE. Reference POLICY 30 - COMMENT RESPONSE.

POLICY 37 - COMMENT RESPONSE. Reference POLICY 33 - COMMENT RESPONSE.

POLICY 39 - COMMENT RESPONSE. Reference POLICY 30 - COMMENT RESPONSE.

POLICY 41 - COMMENT RESPONSE. As indicated previously, the reevaluation report and SEIS are oriented towards items and impacts associated with implementation of the Federal project features specifically (i.e., breakwaters, east breakwater access, parking, and sanitary facilities, and entrance channel), and non-Federal immediate project (marina) features only generally. Reference SEIS, page SEIS-47, paragraph 4.04. Again, the local cooperators/planners/developers would be responsible for final development, coordination, and approval for final detailed non-Federal project features and/or additional developments. However, further in regard to air quality, up to 150 vehicles associated with the Federal east breakwater access parking would introduce some localized increased noise, smoke, odor, suspended particulates, carbon dioxide, and carbon monoxide into the air, when and where some of the vehicles are being operated. The effects however, would be considered almost negligible. The 800 vehicles associated with the required immediate project (marina) 800 parking spaces would increase emissions accordingly, when and where some of the vehicles are being operated; however, even this would not be expected to be considered significant or to jeopardize area air quality standards. This was not identified as a significant issue by USEPA or NYSDEC in project correspondence. This may need to be touched on further via local coordination for significant additional developments (i.e. implementation of the Final Olcott Hamlet Master Plan).

POLICY 44 - COMMENT RESPONSE. As indicated previously, the reevaluation report and SEIS are oriented toward items and impacts associated with implementation of the Federal project features specifically (i.e. breakwaters, east breakwater access, parking, and sanitary facilities, and entrance channel) and non-Federal immediate project (marina) features only generally.

Reference SEIS, page SEIS-47 through SEIS-54. Again the local cooperators/planners/developers would be responsible for final development, coordination, and approval for final non-Federal project features and/or additional developments. However, further in regard to upstream habitats, the creek area between the Federal piers and the Route 18 bridge is almost fully developed with dock and marina facilities. With added project breakwater protection, the local interests would likely improve docking/mooring facilities (for up to 60 boats) in the small creek embayment area located just upstream of the west Federal pier. Impacts similar to those described in SEIS, pages SEIS-47 through SEIS-54, pertaining to docking facilities would be expected. The designated Eighteen Mile Creek Significant Habitat area (including wetland areas) is located upstream of the Route 18 bridge to Burt Dam. No Federal or non-Federal immediate project (marina) features occur in the area. Some increased boat traffic may occur in the area with the considered project; but, this is limited by draft in the area since the locally maintained navigation channel essentially ends at the Route 18 bridge. An increase in small (fishing) boat traffic in this area may be expected with or without the considered project, since the town of Newfane Marina and ramps already exists. A number of Federal and State permitting regulations, and possibly local ordinances could limit development in the significant habitat area (i.e. Rivers and Harbors Act, Clean Water Act (pertaining to placement of fill in U.S. waters including wetlands), and SEQRA, etc.).

Also reference POLICY #7 - COMMENT RESPONSE and POLICY #30 - COMMENT RESPONSE.

MAILROOM
CENCB-IM-S
4 JAN 93 11 04 93

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

DEC 28 1992

Colonel John W. Morris, District Engineer
Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Class: LO

Dear Colonel Morris:

The Environmental Protection Agency (EPA) has reviewed the draft supplement to the final environmental impact statement (DSEIS), including the associated preconstruction engineering and design phase re-evaluation report, for navigation improvements at Olcott Harbor, Niagara County, New York. This review was conducted in accordance with Section 309 of the Clean Air Act, as amended (42 U.S.C. 7609, PL 91-604 12[a] 84 Stat. 1709), and the National Environmental Policy Act.

The prior EIS, issued in 1978, recommended modifications to the harbor, including construction of offshore breakwaters, pier modification, channel deepening and extension, and recreational pier fishing facilities. Since that time, however, the physical environment of the harbor has changed as have environmental requirements, and economic, engineering, and social considerations. Accordingly, a re-evaluation of the project was deemed necessary.

The DSEIS's preferred alternative (modified plan 10A) involves the construction of: detached and shore-connected breakwaters northeast of the U.S. East Pier; a detached breakwater northwest of the present harbor entrance; and an entrance channel between breakwaters connected to an access channel leading to a mooring basin east of the U.S. East Pier. The existing navigation channels have been found to be of sufficient dimension so that no initial dredging of the new entrance and access channels and no new dredging in existing channels will be required for the construction of the preferred alternative. Dredging to maintain the authorized and/or minimum depth will be required as necessary.

However, the DSEIS's conclusion with respect to the preferred alternative conflicts with that of the re-evaluation report. Specifically, the re-evaluation report concludes that because this alternative does not meet with Department of the Army policy requirements (to provide for commercial navigation and/or flood damage reduction), the final recommendation for the project is no action.

PRINTED ON RECYCLED PAPER

Throughout our involvement with this project, we have expressed concerns about the dredging and open lake disposal of Inner Harbor (Eighteenmile Creek) sediments. Our concerns centered around the testing methodology and the high contaminant levels and high mortalities in the bioassay results from the Inner Harbor sediments. The DSEIS states that for both the preferred alternative, and the recommended no-action, dredging of the Inner Harbor is no longer being considered. Given this, we remove our previous objects to the project. However, if dredging is again considered for the Inner Harbor in the future, we would like to continue to work with you to ensure that appropriate testing protocols and criteria are performed on the sediment.

In a related matter, the DSEIS states that only periodic maintenance dredging of the existing federal channel will be performed. Further, because sedimentation is low in the federal channel, the need for maintenance dredging will be infrequent and minor. The federal channel is located in the outside portion of the Harbor and previous sediment data show that the bottom consists of coarse-grained material with minimal amounts of contaminants and low bioassay mortality levels. Therefore, we do not believe that this routine dredging with open lake disposal will have adverse environmental impacts.

In conclusion, EPA believes that implementation of either the DSEIS preferred alternative (modified plan 10A) or no action will not result in any significant adverse environmental impacts. Therefore, in accordance with EPA policy, we have rated this project as LO, indicating that we do not object to implementation of either of these alternatives. We request, however, that the final supplemental EIS identify the appropriate preferred alternative for the project.

Should you have any questions, please contact Ms. Laura J. Livingston, Assistant Branch Chief, Environmental Impacts Branch, at (212) 264-8428.

Sincerely yours,

Robert W. Hargrove

Robert W. Hargrove, Chief
Environmental Impacts Branch

United States Department of the Interior

OFFICE OF THE SECRETARY
OFFICE OF ENVIRONMENTAL AFFAIRS
O'NEILL FEDERAL OFFICE BUILDING - ROOM 1022
10 CAUSEWAY STREET
BOSTON, MASSACHUSETTS 02222-1035

ER#-92/1035

12/29/92

Colonel John W. Morris
District Engineer, Buffalo District
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207

Dear Colonel Morris:

The Department of the Interior has reviewed the September 1992, Draft Reevaluation Report with Draft Supplemental Environmental Impact Statement for the Olcott Harbor Project at the Hamlet of Olcott, Town of Newfane, Niagara County, New York.

The document is complete in its description of the proposed project and contains all previous U.S. Fish and Wildlife Service (Service) correspondence and recommendations. It is our understanding that, because of current policy constraints, Refined Plan 10A Modified cannot be approved for Federal construction, and that the current recommended plan is No Federal Action.

Pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) the Department of the Interior concurs with the recommendation for No Federal Action.

Thank you for the opportunity to comment on this document. Please inform the Service's New York Field Office of future revisions of this project and/or your recommendation.

Sincerely,

William Patterson
Regional Environmental Officer

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

December 29, 1992

Memorandum

To: Regional Environmental Officer, Boston, MA

From: Acting Field Supervisor, New York Field Office, Cortland, NY, for Regional Director, Hadley, MA

Subject: Review of Draft Reevaluation Report with Draft Supplemental Environmental Impact Statement for the Olcott Harbor Project at Olcott, Niagara County, New York (ER#-92/1035)

In accordance with Mr. Deason's memorandum of November 10, 1992, attached is our suggested compilation to represent the Department of the Interior's comments on the subject document.

We received responses of no comment from the National Park Service, Geological Survey, and Bureau of Mines.

Carl W. Schwartz

Attachment

cc: FWS, BFA (ERT), Washington, DC
COE, Buffalo, NY (Attention: Tod Smith)