ROUGH DRAFT 1/17/03

MASSENA-LOUISVILLE

LOCAL WATERFRONT REVITALIZATION PLAN

Chapters 1 and 2 Only

ACKNOWLEDGEMENTS

This document was prepared under an agreement with the Towns of Louisville and Massena and the Village of Massena, with the Village of Massena serving as "lead agency". The agreement specified the prime contractor as the St. Lawrence County Planning Office. The subcontractor was Thomas Cutter.

Funding for the preparation of this document was provided by the New York State Department of State, with additional funding and in-kind services from the participating municipalities.

The participation of the Local Waterfront Revitalization Program (LWRP) committee is gratefully acknowledged. In addition, participation by numerous members of the public provided most of the specific issues and initiatives that appear throughout the document.

Committee members are:

Village of Massena:

Kenneth MacDonnell, Village Mayor
Jack Kot, Village Trustee
Michael Almasian

Town of Massena:

John Murray, Town Councilman
Robert Hadler

Town of Louisville:

Dennis Avery, Town Councilman
William Helmer

TABLE OF CONTENTS

2.3.7 Natural resources and habitats
2.3.8 Vegetative covers
2.3.9 Steep slopes
2.3.10 Water quality
2.3.11 Air quality

2.4 Inventory and Analysis Summary

MAPS

2.1 Existing Land Uses (3 parts)
2.2 Existing Water Uses (DOS-required)
2.3 Upland & Underwater Land Ownership Patterns (2 parts)
2.4 Existing Waterfront Access Sites (2 parts)
2.5 Existing Zoning and Other Local Development Controls (3 parts)
2.6 Infrastructure (to be completed)
2.7 Water Resources - Location of Discharges and Hazardous Wastes Sites
2.8 Wetlands (3 parts)
2.9 Topography (6 parts)
2.10 Geology – Bedrock and Surficial (2 parts)
2.11 Soils (to be completed)
2.12 Flood Hazard Areas

Chapter 3. Waterfront Revitalization Policies

Chapter 4. Proposed Land and Water Uses and Proposed Projects

A. Proposed Land and Water Uses
B. Proposed Projects
C. Funding and Leadership in Support of Proposed Uses/Projects

MAPS

- Proposed Land and Water Uses (DOS-required)
- Proposed Short and Long Term LWRP Projects (DOS-recommended)
- Proposed Waterfront Access Sites (DOS-recommended)
- Proposed Revised Waterfront Area Boundary (if applicable)

Chapter 5. Local Implementation Techniques

A. Local Laws and Regulations Applicable to LWRP Implementation
- existing

- proposed

B. Other Public and Private Actions Applicable to LWRP Implementation
    - Town of Louisville
    - Town of Massena
    - Village of Massena

C. Management Structure Applicable to LWRP Implementation
    - Town of Louisville
    - Town of Massena
    - Village of Massena
    - Joint (multi-municipal) Structure
    - Municipal Compliance Procedures
    - Municipal structure re. federal and state coastal consistency
    - financial resources

MAP
    - Existing and Proposed Zoning Districts (DOS-required)

Chapter 6. State and Federal Actions and Programs Likely to Affect LWRP implementation

A. Federal/State actions or programs which must be undertaken in a manner consistent with the local program
    - State agencies' activities and programs
    - Federal agencies' activities and programs
B. Federal/State actions or programs needed in support of the local program
    - State agencies' activities and programs
    - Federal agencies' activities and programs

Chapter 7. Consultation With Other Affected Agencies (Federal, State, regional, local) and With Interested Parties and the Public

Chapter 8. Local Commitment

APPENDICES

Appendix 1. Draft Generic Environmental Impact Statement

DRAFT OUTLINE -----APPENDIX A.
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

1. Cover Sheet
2. Table of Contents and Summary
3. Reader Orientation to Document and SEQR Process
4. Description of Proposed Action and Location Map(s)
5. Purpose, Public Needs and Benefits (Including Social/Economic Benefits)
6. Location and Physical Dimensions
7. Background or History
8. Timing and Scheduling
9. Relationship to Local, Regional and State Plans and Programs
10. Status of Required Permits, Approvals and Authorizations
11. Environmental Setting
12. Significant Environmental Impacts (within and outside Waterfront Area)
13. Unavoidable Adverse Impacts
14. Alternatives to Proposed Action
15. Action at Alternative Site
16. Alternative Technologies
17. Alternative Scale or Magnitude of Action
18. Alternative Project Design
19. Alternative Timing or Phasing
20. Alternative Uses of Types of Action
21. “No Action” Alternative
22. Irreversible and Irretrievable Commitments of Resources
23. Proposed Mitigation
24. Growth Inducing Aspects of Action
25. Effects on Use and Conservation of Energy
26. Effects on Solid Waste Management
27. Identification and Significance of Unavailable Information Regarding Reasonably Foreseeable Catastrophic Impacts
28. Local Waterfront Revitalization Program and State Management Policy Consistency
29. Appendices and Supplemental Documentation

GLOSSARY

ALCOA	Aluminum Company of America, Inc.
CAB	Coastal Area Boundary
FERC	Federal Energy Regulatory Commission
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
FPC	Federal Power Commission
LWRP	Local Waterfront Revitalization Plan (or Program)
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYPA	New York Power Authority (Power Authority of the State of New York)
PCB	Polychlorinated Biphenyls
USACOE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
WHWMA	Wilson Hill Wildlife Management Area
WRAB	Waterfront Revitalization Boundary

Chapter 1: Waterfront Revitalization Area Boundary

1.1 Waterfront Vision, Goals & Objectives....Purpose of LWRP Document

The New York State Department of State (NYSDOS) Division of Coastal Resources defines a Local Waterfront Revitalization Program as:

> ".... a locally prepared, comprehensive land and water use plan for a community's natural, public, working waterfront; and for developed coastal resources. It provides a comprehensive framework within which critical coastal issues can be addressed. In partnership with the Division of Coastal Resources, a municipality develops community consensus regarding the future of its waterfront and refines state coastal policies to reflect local conditions and circumstances. Once approved by the New York Secretary of State and the federal Office of Coastal Resources Management, the Local Program serves to coordinate state and federal actions needed to achieve the community's goals for its waterfront."

The acronym "LWRP" alternatively can mean "Local Waterfront Revitalization Program" or "Local Waterfront Revitalization Plan", depending on the context in which it is used.

1.2 Location and Characteristics of the Study Area

This LWRP is a joint product of the Towns of Massena and Louisville and the Village of Massena, which are located in St. Lawrence County, N.Y. (see Maps 1.0 and 1.2). The lands within the municipal boundaries of those governmental units shall be known as the "Project Area". These municipalities share waterfront on the St. Lawrence, Grasse and Raquette Rivers, so it was therefore logical that they would collaborate on a plan of mutual interest.

The two towns have a mixture of agricultural and non-agricultural land uses, but the Town of Massena is home to two primary aluminum production facilities owned by the Aluminum Company of America (ALCOA), and a General Motors Central Foundry Division casting plant. Both towns benefit either directly or indirectly from water-oriented facilities owned by the New York Power Authority (NYPA), including the Moses-Saunders Hydroelectric Dam and the Long Sault Control Dam. The Town of Massena contains Robert Moses State Park and Louisville has a portion of Coles Creek State Park; the balance being located in the Town

of Waddington. Other recreational facilities include the Massena Town Beach, the Massena Intake Boat Launch Site, the Massena Country Club, the Louisville Town Beach (Whalen Park), the Massena Yacht Club, the Louisville Small Boat Launch Area, the Wilson Hill Boat Launch, Wilson Hill Wildlife Management Area, Wilson Hill Island public access lots and Richards Dike Walking Trail. All of the recreation facilities are either located on land owned by NYPA or partially maintained with funding from NYPA, or both.

The St. Lawrence Seaway passes by the Town of Louisville and through a portion of the Town of Massena via the Eisenhower and Snell Locks and the Wiley Dondero Ship Channel. The Seaway provides a certain amount of local employment, although there are no municipal port facilities and no cargo off-loaded. The Town of Massena borders the Mohawk Nation at Akwesasne, through which passes the International Bridge Road and bridges that connect with Cornwall, Ontario. The proximity to Canada and the Mohawk Nation results in a significant amount of commerce and cultural exchange relative to other parts of St. Lawrence County.

1.3 Waterfront Revitalization Area Boundary

The Waterfront Revitalization Area Boundary (WRAB) designates an area within which the policies that are part of this LWRP can be implemented. It is important to make a distinction between the WRAB and the Coastal Area Boundary. The NYSDOS Division of Coastal Resources has defined a Coastal Area Boundary, a segment of which appears in Map 1.1. The reader should note that where the boundary follows the Grasse River, it does so at the high-water mark, extending upstream to the dam in the hamlet of Madrid and downstream to the ALCOA Road Bridge.

NYSDOS Division of Coastal Resources reviews projects and activities of federal agencies that will take place inside the Coastal Area Boundary for consistency with policies of the New York State Coastal Management Program (CMP) and approved Local Waterfront Revitalization Programs. State agencies are also required to ensure consistency of their projects and activities with the state and local program policies. There are 44 such coastal policies that are described in Chapter 3.

The WRAB, which is “locally determined” may be coterminous with the Coastal Area Boundary or it may deviate in order to include a special natural area, project location or other waterfront-related feature. Once the WRAB has been approved by the NYSDOS, projects and activities of federal or state agencies, as well as private individuals would be subject to consistency review under both the state policies and policies developed as part of this LWRP.

The LWRP Committee has elected to use the NYSDOS Coastal Area Boundary (with selected adjustments described below) as the WRAB. This means that the consistency review requirements of federal and state agencies shall continue as the *status quo* within this boundary, as well as local consistency review. Each municipality already has land use regulations in the form of zoning. It is therefore logical to address waterfront development and protection through amendments to local zoning.

In the course of the public meetings that were held for this effort, there were no particular issues with the Raquette River and therefore the segments of that river that lie in the project area shall be excluded from further consideration under this program. The WRAB shall only apply to the segments of the Grasse and St. Lawrence Rivers that lie inside the project area.

(Note the following bold text will be altered following public meetings):

The WRAB shall follow the Coastal Area Boundary with the following exceptions (Maps 1.1a, b, c):

The WRAB shall depart from the existing CAB along the western boundary of the Town of Louisville approximately 200 feet on either side of the Grasse River and then be coterminous with the boundary of the Scenic-Preservation District in the Town of Louisville.

North of the Grasse River the WRAB shall proceed north-northwesterly along the Village boundary to the centerline of Rt. 37B (Maple St., thence easterly along Maple to the intersection with Main St., thence southeasterly along the centerline to the intersection with Center St., thence easterly along the centerline of Center St. to a point in line with western boundary of the Catholic Cemetery, thence southerly along said western boundary to the southwestern corner of the parcel, thence easterly along the southern boundaries of numerous lots to the eastern boundary of the Village, thence northwesterly along the Village boundary and continuing along the western boundary of the Power Canal parcels to the point where it intersects and reconnects with the Coastal Area Boundary.

South of the Grasse River the WRAB shall proceed southeasterly along the western boundary of the Village to the center of Andrews St., thence in a generally easterly direction along the centerlines of the following streets:

Andrews to intersection with Main St.; Main St. to intersection with Water St.; Water St. to intersection with East Orvis St.; East Orvis to center of State Route 37 where it intersects and reconnects with the existing Coastal Area Boundary.

1.4 Significant Coastal Fish & Wildlife Habitat Boundaries

Areas designated by the NYSDOS as Significant Coastal Fish & Wildlife Habitats are shown on Map 1.2. The description of each of these areas is found in Appendix 3.

1.5 Special Issues

1.5.1 New York Power Authority (NYPA)

The St. Lawrence River was profoundly altered with the construction of the Seaway and St. Lawrence-FDR Power Project in the 1950s. The impacts of those massive construction projects have been thoroughly documented in NYPA's application for a new hydroelectric license from the Federal Energy Regulatory Commission (FERC), filed in October, 2001 (NYPA, 2001). The Federal Power Commission (FPC), predecessor to FERC, issued the original hydroelectric license in 1953. The original license is scheduled to expire on October 31, 2003. NYPA would like to obtain a new license for a 50-year period. Included in the new license application is an environmental impact statement and a recreation resources and improvements plan. A Land-Use Plan for the lands owned by NYPA will be developed, using a public process, after the license has been issued. Maps prepared by NYPA as part of the Relicensing process are found in Appendix 5. These maps are germane to the following discussion.

Waterfront development along the entire shoreline of the St. Lawrence River in the LWRP project area is heavily influenced by NYPA for two main reasons. The first is that NYPA is required by FERC policy to own a strip of land of varying width from the edge of the water inland for the entire area covered by the FERC license. This strip is public land, albeit with site-specific regulations for its use. The second is that adjoining property owners may legally place docks, boathouses, etc. only after a permit is issued by NYPA. New development is further constrained by the fact that a large percentage of the cumulative linear shoreline in the project area is in park, wildlife management, public facility, dike and essential facility operation uses. The net result of these factors is that only a very few new structures are likely to be built in the Project Area. Actual water uses, such as new marinas, are unlikely due to a lack of suitable sites and competition with State park marinas.

Local residents and municipal officials have, for years, called for a greater level of water-oriented development and a return to the tax roles of lands that have been surplus to NYPA's needs. It is important to note that a considerable amount of animosity was created when lands were taken for the Seaway and Power Project in the 1950's. NYPA is wholly exempt from taxation under its enabling statute in the New York Public Authorities Law. This fact has caused local governments to complain that they have missed out on development and taxes for almost half a century. In 1994, NYPA released a portion on the lands that were considered surplus (NYPA, 1994). Additional lands were released as apart of the Settlement Agreement, described below.

NYPA began the relicensing public involvement effort in 1996, setting up an alternative process known as the "Cooperative Consultation Process". This process brought together as many stakeholders as could be identified, defined their issues, specified which issues could be addressed in a Settlement Agreement and then negotiated agreements with each party. One of the parties was the St. Lawrence County Local Government Task Force for New York Power Authority Relicensing Negotiations. The three municipalities that are the subject of this LWRP are members of that task force and therefore parties to the agreement. The agreement, which has been signed by each of the member local governments, specifies a number of benefits (Appendix 4).

1.5.2 Regulations of the International Joint Commission

Use of the St. Lawrence River for recreational purposes is significantly affected by water levels. Quoting from the Application for New License (NYPA, 2001, p. ES-1):

> "The international portion of the St. Lawrence River is subject to the Boundary Waters Treaty of 1909 (Treaty). This treaty, executed by the United states and Canada in 1909, established the international regulatory framework under which the Authority and OPG (*Ontario Power Generation*) operate the International Power Project. Pursuant to this Treaty, the International Joint Commission (IJC) has jurisdiction over the use of these boundary waters, and any proposed use or obstruction of these waters must gain approval of the IJC. In addition, the IJC has exclusive jurisdiction to establish the flows of the St. Lawrence River. In doing so, the IJC must ensure that any development and use of these international waters are consistent with the explicit requirements of the Treaty."

The St. Lawrence River Board of Control regulates the flow regime of the river, using a plan of regulation known as "1958-D". Departures from this plan have been frequent and an effort is currently underway to produce a new plan that will better balance the variety of interests. An historic problem has been the fact that, in order to increase the discharge from Lake Ontario, it is necessary to increase the flow through the Moses-Saunders Dam. This has the effect of "tilting" the river and results in low water levels immediately upstream of the dam. As one proceeds up-river the depressed water levels become less apparent, but low water remains a problem along all of the shoreline covered by this LWRP. It is hoped that a new plan of regulation for the St. Lawrence River will mitigate the severity of this phenomenon that impacts water-based recreation, aesthetics and riparian habitats.

1.5.3 Mohawk Land Claims

The Mohawk Nation has an outstanding land claim that is currently the subject of litigation that affects certain parcels abutting the St. Lawrence and Grasse River. It is unclear when and how these claims will eventually be settled. Existing maps depicting the lands under dispute are poor, so no attempt has been made to reproduce them in this document. Relevant lands within the project area are Long Sault Islands (850 acres), Barnhardt Island (1190 acres) and riparian areas along the Grasse River downstream of the Village of Massena (315 acres). The riparian areas along the Grasse River happen to coincide with the segment of the river that is the subject of the ALCOA hazardous waste remediation effort, described below.

1.5.4 ALCOA Grasse River Remediation Project

The ALCOA Massena Facility has been undergoing a very large land-based hazardous waste remediation effort during the last decade under the direction of the NYS Department of Environmental Conservation (NYSDEC). In addition to the land-based remediation, the US Environmental Protection Agency (USEPA) has been overseeing remedial study of the Grasse River. Some of the main contaminants that have made the remediation necessary are polychlorinated biphenyls (PCBs). A major part of the overall USEPA remediation effort involves the sampling and treatment of river-bottom sediments contaminated with PCBs. Map 1.3 shows the area of remediation. The USEPA will be selecting a remedy during early 2003, based on an analysis of options and public input. The long-term goal is to reduce residual contamination to acceptable levels so that the biological availability thorough the food chain becomes negligible. Uses of the river segment subject to remediation will have to

be consistent with not only the actual remediation actions but also post-remediation structures and monitoring.

During the 1980s, at the urging of the IJC, New York State undertook a Remedial Action Planning Process (NYSDEC, 1990, 1991, 1992). The Massena, New York-Cornwall, Ontario area was one of numerous "Areas of Concern" throughout the Great Lakes. The process identified water quality impairments, assembled data to document the impairments, examined potential remedies and provided for public participation. In the Massena Area of Concern the primary problems were contamination of sediment and biota by PCBs that were once used at ALCOA, Reynolds Metals Corporation and General Motors Central Foundry. Substantial land-based remediation has been undertaken at each of the three sites with contaminated sediments in the Grasse River and, to a lesser extent, along portions of the near-shore of the St. Lawrence River. A Remedial Advisory Committee consisting of citizens, organizations and NYSDEC representatives has been meeting since the publication of the Massena Remedial Action Plan to monitor progress. The Grasse River Remediation effort has its own Citizen Advisory Panel that meets regularly and has a website: www.thegrasseriver.com.

MAPS

Chapter 2: Inventory & Analysis

One consequence of NYPA's efforts to obtain a new license from the FERC to operate the St. Lawrence – FDR Power Project has been the writing of a draft Environmental Impact Statement (EIS) as an integral part of the license application. This draft EIS contains a great deal of information that is relevant to the LWRP Project Area and will be cited often in this chapter (NYPA, 2001a). A copy of relevant portions of the draft EIS are included in Appendix 9 for convenience.

2.1 Land & Water Use and Ownership

2.1.1 Existing Land Use

Existing land uses are depicted on Maps 2.1a,b,c. Land-use classification was accomplished using digital real property data from the St. Lawrence County Office of Real Property Tax Services and the County's Geographic Information System (GIS) software. Each parcel is assigned a land-use classification code by the local assessor from which the color-coding was generated. Land uses along the Grasse River may be summarized as follows:

Town of Louisville – predominantly agricultural, large lot residential, vacant or "Wild, Forested, Conservation & Public Parks". Smaller-lot residential is found in the hamlet of Louisville and between the Rt. 37 Bridge and the Village of Massena.

Village of Massena – predominantly residential and vacant, with some limited commercial.

Town of Massena – predominantly vacant and residential, with some agriculture, industry, NYPA and Seaway Development Corporation land and limited commercial.

The overall conclusion of a land-use examination along the Grasse River is that there remain many opportunities for development along the river while at the same time protecting the open, undeveloped character that currently predominates. Land use issues along the St. Lawrence River will be dealt with as part of the NYPA Relicensing Settlement Agreement (1.5.1 above).

2.1.2 Existing Water Use

The St. Lawrence River being one of the great rivers of the World is used for almost every conceivable purpose for which a river can be used, including shipping, hydroelectric generation, water source (for the Village of Massena in this specific instance), fishing, swimming, boating, sustaining wildlife habitat (as in the WHWMA), waste assimilation and cooling/process water for industry. An unknown amount of water is diverted during the growing season for irrigation, but this is thought to be very minor in scale.

A diversion that has not happened yet, but has been planned, involves the Wilson Hill Wildlife Management Area (WHWMA). During the NYPA Relicensing Process, the New York State Department of Environmental Conservation (NYSDEC) proposed that a means be developed for diverting water from the east pool of the WHWMA to the Grasse River (NYPA, 2001, p. ES-11). Currently, control of water levels within diked areas of the WHWMA is constrained by the elevation of the adjacent St. Lawrence River. NYPA responded by offering to construct a water control facility that would cross the Louisville-Wilson Hill Road Dike and discharge into an intermittent stream that meets the Grasse River approximately 1 ½ miles upstream of the hamlet of Louisville. The water control facility would operate only when needed (not continuously). The effects of diverting water by this scheme are described in the NYPA's Relicensing draft EIS (NYPA, 2001a, pp.4-6 to 4-8, Appendix 9).

The Grasse River within the Project Area is used for fishing, swimming, motorized and non-motorized boating and waste assimilation. It would be possible to generate low-head hydroelectricity either at the Madrid Dam (outside the Project Area) and/or at a rebuilt low dam within the Village of Massena, depending on economic feasibility. Currently the only hydroelectric generation on the Grasse River is at the hamlet of Pyrites in the Town of Canton (outside the Project Area).

2.1.3 Existing Upland and Underwater Land Ownerships

The shoreline of the St. Lawrence River within the Project Area is entirely within the St. Lawrence-FDR Power Project Boundary. Inside this boundary NYPA is required to comply with the conditions of a license that is issued by the FERC. One such condition is that NYPA own a continuous strip of land along the shoreline. Owners of private property located *adjacent* to the NYPA shoreline strip and use the strip are subject to requirements described above in Section 1.5.1. New York State owns the river bottom.

Private individuals or corporate landowners own most of the upland adjacent to the Grasse River. Within the Village of Massena; however, the Village itself owns a substantial amount of land (Map 2.3b). The center of the Village was historically the site of a low dam (weir) and several water-powered mills. Deeds for some of these parcels indicate ownership of the river bottom, which is also apparent on Map 2.3b. One such parcel is under the breached weir (Tax map number 9.059-9-13). Restoration of water levels to former levels is desired by many members of the public (Appendix 6).

2.2 Community & Cultural Resources

2.2.1 Infrastructure

Within the Project Area, water and sewer infrastructure radiates out from the Village of Massena. The Village has extended water and sewer service to commercial areas in the Town of Massena east of the Village. A summary of water and sewer extensions, existing and proposed, follows:

WATER ~ South Side
On South Main Street water continues beyond the corporate limits (Town of Massena) to the convenience store located on the East side of SR 420 approximately 0.25 miles from the line. Inquiries from Norfolk residents in the Cook Street area have been entertained in the past 6 months. Discussions are continuing today to supply them with village water.

WATER ~ East Side
The expansion to the East of the Village has been the most dramatic. A capital project initiated by the Town of Massena, installed new piping and an elevated tower in the area. The water district extends approximately 7 miles east, beyond the corporate line. Also, water crosses the Grasse River near the St. Lawrence Centre Mall and services several residential areas including Massena Center. Plans have been developed to extend water to the St. Lawrence Seaway. The project should be let sometime this year (2003).

WATER ~ West Side
On a temporary basis, the Village is selling water to the Town of Louisville via a master meter pit. Louisville has developed several water districts that are responsible for charges associated with use and maintenance.

SEWER ~ South Side
Sewer extends to the same limits as does the water system.

SEWER ~ East Side
Village sewer lines extend to the Wal-Mart site. This is approximately one mile from the corporation line and serves mainly commercial accounts.

The Village's Wastewater Treatment Plant is located just east of the Village in the Town of Massena.

Electrical service is provided by Niagara Mohawk Power Corporation and the Massena Electric Department (MED). Map 2.6b shows the MED Service Area surrounded by the Niagara Mohawk Power Corporation Service Area.

Refuse collection is the responsibility of the property owner, except within the Village of Massena where the Village collects refuse once per week.

The Village is currently working on an internal fiber optic network. Today, Village offices utilize a dialup method to access the Internet. Road Runner via Time Warner Cable is available in and throughout our Village. Recently, the Development Authority of the North Country (DANC) announced that financing had been secured for construction of a high-speed fiber optic telecommunications system that, when completed, would include a "point-of-presence" (POP) location in Massena. Internet Service Providers (ISPs) could then connect at POP locations. Schools would also be directly connected to the fiber optic system.

2.2.2 Zoning and Other Local Land and Water Use Controls

All three municipalities have zoning regulations. Excerpts from these local regulations that are related to waterfront areas are summarized in Appendix 7. Zones are depicted on Maps 2.5a,b,c. .

The Scenic Preservation (S-P) District in the Town of Louisville is noteworthy. It extends 200 feet beyond the normal-water-level mark along the Grasse River. A portion of the proposed WRAB shall be coterminous with the S-P District.

Within the Village of Massena, the Grasse River is in the Greenbelt Preservation District (GPD). This district includes: (1) all lands south of the Grasse River between the Main Street and Parker Avenue Bridges and within the FEMA 100-year flood hazard zone, but not to exceed 175 feet from the river bank, (2) all lands with a slope of 15% and (3) all Village lands used as parks or recreation areas. Permitted uses include, but are not limited to parking, outdoor recreation, temporary seasonal docks, playgrounds and parks, picnic areas, tennis courts, walkways, ballparks and fishing access areas. Site plan review is required for all uses.

Moving downstream along the Grasse River, zoning districts that abut the Grasse River in the Town of Massena are industrial, highway-

commercial, residential-agricultural and neighborhood commercial. None of these zones currently contain standards to specifically protect waterfront areas.

The St. Lawrence River waterfront is subject to local regulations in the Towns of Louisville and Massena. These regulations are in addition to activities regulated by NYPA by permit.

2.2.3 Commerce & Industry

A good description of commerce and industry is found in the NYPA Relicensing draft EIS in the "Socioeconomic Resources" section (NYPA, 2001, pps.3-69 to 3-76, Appendix 9). ALCOA and General Motors heavily influence the employment level for the Project Area. In December 2002 ALCOA announced that some 110 jobs (66 hourly and 44 salaried) would be eliminated in order to remain competitive in the global aluminum marketplace.

2.2.4 Commercial & Recreational Navigation

The St. Lawrence River experiences both commercial navigation via the Seaway and recreational navigation from boaters originating in both Canada and the USA. The Massena area is not benefited by marine commerce because there are no active ports. The nearest port is in Ogdensburg. The Seaway Development Corporation does provide some local employment in the form of administrative and operations and maintenance staff positions. On occasion large non-commercial vessels will transit the Seaway. There has appeared in recent years a small, but growing cruise industry that caters to European tourists. Recreational boaters are attracted to the quality fishing. Boat launching facilities are often in great demand and those within the Project Area are being upgraded by NYPA as part of the new FERC license (Appendix 4).

The Grasse River does not support any commercial navigation. The river upstream of the Village of Massena is the province of the canoeist, kayaker, shallow-draft power boater and personal watercraft operator. Downstream of the Village the channel has been dredged and can accommodate larger powerboats. The ability to use shallow-draft watercraft upstream of the Village during the low-water months of summer has been severely curtailed by the breaching of the low dam (weir) during the 1990s. A majority of public comments support restoration of the weir (Appendix 6).

2.2.5 Dredging and Dams

The St. Lawrence Seaway shipping channel is dredged periodically in order to maintain adequate draft for seagoing vessels. Seaway traffic passes through the Eisenhower and Snell Locks in order to bypass the Moses-Saunders and Long Sault Dams. The USACOE has performed a "reconnaissance study" of the proposal to enlarge the Seaway infrastructure to accommodate larger vessels (USACOE, 2002). At this writing, a full-blown feasibility study awaits a funding cost-share commitment from Canada, inasmuch as a large portion of the Seaway infrastructure lies inside that country.

Massena's history, like many settlements in Northern New York and New England, has been profoundly influenced by hydropower. Investors in the early 1900s excavated a power canal and constructed a hydroelectric dam on speculation. The availability of this power enticed the Pittsburgh Reduction Company, (later to become the Aluminum Company of America (ALCOA) to locate an aluminum smelting operation nearby, which has remained a major employer to this day (ALCOA, 1999, p. 3-5). The project diverted water from the St. Lawrence River and discharged it into the Grasse River, where it was conveyed back into the St. Lawrence River below the Long Sault Rapids. The portion of the Grasse River from the dam to the confluence with the St. Lawrence River was dredged and channelized between 1914 and 1918. Despite normal deposition since that time, this segment remains approximately 10-25 feet deep and 400-600 feet wide (ALCOA, 1999, p.4-1). When the St. Lawrence Power Project was completed in the 1950s, the Moses-Saunders and Long Sault Dams inundated the Long Sault Rapids and created Lake St. Lawrence. The original hydroelectric dam on the power canal was rendered obsolete and was abandoned. A structure known as the Massena Intake was built, along with large dikes, to prevent the higher water levels of Lake St. Lawrence from entering the power canal. The old hydroelectric dam remains today as an historic remnant of an earlier phase in the industrial revolution. The construction of the Power Project in the 1950s provided inexpensive electrical power for ALCOA and attracted Reynolds Metals Corporation and General Motors Corporation-Central Foundry Division.

2.2.6 Public and Semi-Public Facilities (Appendix 8 to be completed)

The Project Area is blessed with numerous public and semi-public facilities along both the St. Lawrence and Grasse Rivers. Springs Park in the Village of Massena is an important recreational facility that is

located on the Raquette River. A summary of the facilities is found in Appendix 8. The list distinguishes between facilities that are improved (or developed) and those that remain in a primitive state.

Two projects that have been planned but have yet to be implemented are the St. Lawrence Aquarium and Great Rivers Center and the St. Lawrence Estuarine Research Reserve. The aquarium is planned for a site on Robinson Bay downstream from the Long Sault Dam (Appendix 4). It will be a research and tourist facility. NYPA has pledged $24 million toward the capital cost of the project; the partners must raise the balance. The St. Lawrence Estuarine Research Reserve is a proposal to create a research reserve that would include Coles Creek, WHWMA and the site on which the aquarium is proposed. Once created the reserve would be eligible for operating funds through the National Oceanic and Atmospheric Administration's National Estuarine Research Reserve Program. Creation of the reserve awaits action by the Governor of New York (NYPA, 2001a, p.3-62).

2.2.7 Historic Resources

The Project Area, located as it is in the region where four rivers converge (St. Lawrence, Grasse, Raquette, St. Regis), has been attractive to humans since pre-historic times. Artifacts indicating Native American hunting and fishing settlements have been found, notably near the site of the proposed St. Lawrence River Aquarium and Research Institute on Robinson Bay (NYPA, 2001a, pp. 3-89 to 3-93). Immediately east of the Project Area is Akwesasne, home of the St. Regis Mohawk Tribe. The origin of the settlement of St. Regis at Akwesasne is associated with the establishment of a Jesuit mission in 1752; however, there was a significant population there prior to that time. During settlement by immigrants and others during the 1800s, Massena grew in prosperity and many fine buildings were constructed. Today, there are no buildings or other sites listed on the State or National Registers of Historic Places within the Project Area, although there are undoubtedly eligible candidates (NYSOPRHP, 2002).

2.2.8 Scenic Resources

The St. Lawrence River has abundant scenic values from both natural vistas and man-made structures (NYPA, 2001a, pp. 3-97 to 3-99). The Seaway Trail, an official scenic byway, follows State Routes 37 and 131 in order to take full advantage of the scenic resources. The Grasse River has many scenic sections, particularly in the Town of Louisville, but also at discrete locations inside the Village and Town of Massena. Two examples in the Village are the view upstream from

Veteran's Park and views from the pedestrian footbridge near the eastern boundary of the Village. The scenic (aesthetic) values of the Grasse River inside the Village have been compromised by the loss of the low dam in the middle of the Village. During periods of low flow in the summer, residents and river users have complained about stagnant pools and malodorous conditions. Restoration of water levels while allowing for fish passage is a priority of this LWRP.

2.3 Environmental Conditions

2.3.1 Surface Waters

As mentioned above, the St. Lawrence River has a regulated flow. However; simply because the flow is regulated does not mean that *water levels* in the Project Area are always satisfactory. It is an unfortunate consequence of the hydraulic characteristics of the River that, in order to lower the level of Lake Ontario when needed, it is necessary to "tilt" the River toward the dam in Massena. Therefore, when water levels threaten to be too high in Lake Ontario, water levels will be low in the vicinity of the dam. In fact, levels will be lowest immediately upstream of the dam, becoming less as one proceeds upstream. It is hoped that a new plan of regulation for the St. Lawrence River will mitigate the severity of this phenomenon that impacts water-based recreation, aesthetics and riparian habitats.

The Grasse River's flow varies greatly over the course of a year, the difference between the lowest and and highest flows being approximately two orders of magnitude. The MA7Q10 minimum average flow (low flow) is reported to be 127cfs (BBL, 1994). The average discharge of the Grasse River to the St. Lawrence River is reported to be 1,127 cfs (OME,1988). Excluding flood events, the highest monitored flow of 10,000 cfs occurred in March 1998. The River responds fairly rapidly to precipitation events; resulting high flow periods last around 5 days In January 1998 a non-monitored flow similar to a 100-year event (estimated at 15,600 cfs) occurred (ALCOA, 1999, p.3-7). There is no way to artificially regulate the flow of the Grasse River due to a lack of significant upstream impoundments.

In 1984 NYPA studied the feasibility of diverting a portion of the flow of the Grasse River into Coles Creek in order to capture an additional increment of power generation at the Moses-Saunders Dam. The project was not feasible then and has not been re-examined since that time (NYPA, 1984).

2.3.2 Ground Waters

The Village of Massena and the large industries rely on treated water from the St. Lawrence River. Rural residents obtain potable water from wells. Therefore, groundwater quality primarily affects those who are not served by municipal sources. Groundwater in the Project Area has undergone major changes since the construction of the Seaway and Power Project in the 1950s (USGS, 1962). Hydraulic gradients have reversed in direction due to the flooding of Lake St. Lawrence. In some locations artesian conditions have been created. Hydraulic changes have happened against a backdrop of naturally occurring groundwater quality conditions. Some of these conditions include "sulfur water", salinity and even methane gas. These problem water situations are caused by the geological history of the region, which included post-glacial flooding by the Champlain Sea (an arm of the ocean) and the creation of a variety of marine environments. The map of surficial geology indicates several features that are associated with marine and shoreline environments (Map 2.10b).

2.3.3 Fish and Wildlife

Fish and wildlife resources are described in the NYPA Relicensing draft EIS (NYPA, 2001, Appendix 9). Of particular note are two fish species that inhabit the Grasse River: muskellunge (*Esox masquinongy*) and lake sturgeon (*Acipenser fulvescens*). The importance of these species is documented in the NYSDOS Significant Coastal Fish and Wildlife Habitats narrative in Appendix 3.

2.3.4 Wetlands and Vegetation

The Project Area contains numerous New York State-designated and National Wetlands Inventory-designated wetlands, as shown on Maps 2.8a,b,c. Wetland communities along the St. Lawrence River will be adequately protected through land-use decisions resulting from the NYPA Relicensing Process and through the permit-granting authority of the NYSDEC. Riparian wetlands along the Grasse River are relatively small in size due to the predominance of steep banks. Restoration of the low dam (weir) in the Village of Massena should not harm existing riparian wetlands because the wetlands shown on the maps existed prior to the breaching of the former dam. Most wetland acreage in the Project Area is associated with poorly drained soils in the low-lying areas of the "till and ridge" topography.

2.3.5 Soils, Topography, Geology & Mineral Resources

The Project Area is entirely underlain by limestone (dolostone) (Map2.10a). The topography and soils can be understood by considering the effects of Pleistocene glaciation and the incursion of the Champlain Sea (NYPA, 2001, p.3-2, Appendix 9). Maps 2.9a-f shows the topography of the area. The conventional USGS topographic map shows elevation contours (Maps 2.9a,b,c). Maps 2.9d,e,f show topography expressed as percent slope. There is some sand and gravel excavation but no hard-rock mining.

2.3.6 Flooding and Shoreline Erosion

Waterfront development must take into account areas that are prone to flooding and erosion. Although it is possible to engineer flood-proofing features into many structures and otherwise protect areas with dikes and berms, it is generally cheaper and safer to select land uses that are compatible with flood-prone areas, such as open space, buffer areas and parks. The Village of Massena has taken flooding into account in the municipal zoning law. The Greenbelt Preservation District is defined to include most of the flood-prone areas along the Grasse River (see Section 2.2.2. above). Erosion and deposition are natural processes in the life of water bodies, although they are often significantly accelerated by human activities. Erosion can be suppressed by a variety of methods; however, the use of appropriate vegetative cover is often cost-effective and benefits wildlife in the bargain.

2.3.6.1 Flooding

Flooding on the St. Lawrence River has not been a problem since the Seaway and Power Project were constructed in the 1950s. The elevation of Lake St. Lawrence on the St. Lawrence River is physically controlled by the Moses-Saunders and Long Sault Dams. In addition, the river has one of the most constant flows of any great river on Earth, due to the tremendous volume of the Great Lakes relative to the discharge capacity of the river. The flow of the River is regulated by the St. Lawrence River Board of Control, according to a Plan of Regulation approved by the International Joint Commission, described in Section 1.5.2 above.

The Grasse (and Raquette) Rivers are subject to flooding during spring run-off and following severe storm events. Ice jams often exacerbate normal high-water conditions. The Raquette River has many hydroelectric dams along its length as it drops down from the

Adirondacks. As such, its flow is regulated. While not immune from flooding, the presence of relatively large reservoirs, such as Carry Falls, Stark, Blake Falls, Rainbow Falls, Five Falls, South Colton and Higley Flow tend to buffer all but the most extreme conditions. The Grasse River, in contrast, is more prone to flooding due to its essentially free-flowing nature. There is a dam and hydroelectric generation facility in the hamlet of Pyrites in the Town of Canton and a non-generating dam in the hamlet of Madrid in the Town of Madrid, but neither of these have significant impoundments that could mitigate high flows during flood periods.

Flooding risk is typically expressed as a "100-year flood", or "base flood". A base flood is a flood having a one-percent chance of being equaled or exceeded in ant given year. Flood Hazard Maps, known as Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps (FHBM) are published by the Federal Emergency Management Agency (FEMA). Currently within the Project Area, the Town of Louisville's FIRMs have been rescinded as of 12/5/84. This means that there are no areas within the Town that are likely to be subject to a 100-year flood, even along the Grasse River. This is not surprising if one looks at the slope map (Map 2.9a). The channel of the Grasse River in Louisville is fairly well confined by relatively steep banks. In contrast, both the Town and Village of Massena have FIRMs, effective 6/17/86 and 11/5/80, respectively. In addition, the Village of Massena was the subject of a Flood Insurance Study in May 1980 (FEMA,1980). Digital flood hazard data is not yet available for St. Lawrence County and existing paper maps do not reproduce well. Nevertheless, composite copies of the FIRMs for both the Town and Village of Massena have been included in this document (Maps 2.12a,b).

Flood areas along the Grasse River in the Town of Massena include minor channel excursions. Flood areas inside the Village that could impact waterfront development plans include part of Veteran's Park, the area in the vicinity of Parker Avenue Bridge and the lower portions of the Village-owned parcel on the northern shore near Richards Street. It is important to note that the flood hazard areas denoted by FEMA take into account the presence of the low dam in the middle of the Village. The significance of this fact will become apparent later in the document (Chapter 4).

2.3.6.2 Erosion

The NYPA had a consultant perform an erosion study along the St. Lawrence River (NYPA, 2001,p.3-3, Appendix 9). Based on this

research, NYPA has established an erosion control program for the St. Lawrence River as part of the FERC license application. NYPA will establish programs for both "large" and "small" erosion projects (Appendix 4). Wind-generated waves are the dominant cause of erosion on the St. Lawrence River, although in some glacial till areas erosion is accelerated by ship wakes (NYPA, 2001, p. 3-7).

Erosion along the Grasse River should be evaluated on a site-specific basis and must be part of any plan for development of waterfront facilities. In most cases, use of appropriate vegetative cover will control erosion during all but the most severe spring runoff (ice-out) conditions. In certain settings, use of riprapping and other methods of armoring will be necessary. Removal of the low dam in the Village of Massena has caused erosion, according to one commenter (L. Warren, Appendix 6). He observed that when the dam was in place, ice formed behind it and slowly broke up in the spring. Without the dam the ice moves quickly down the river, gouging the bank. He claims to have lost 6-8 feet of shoreline. Depending on the severity of a given winter, thickness of ice cover, formation of anchor ice and intensity of spring thawing events, ice jams will occur, causing local flooding, uprooting trees, damaging structures and causing other property damage.

2.3.7 Natural Resources and Habitats

The NYSDOS has identified six significant coastal habitats, including the Grasse River upstream to the Madrid Dam (Appendix 3).

2.3.8 Vegetative Covers

Vegetative cover along the St. Lawrence River is shown on maps in Appendix 5. Vegetative cover along the Grasse River has not been mapped but can be characterized as follows:

> Louisville Town line to Rt 37 Bridge – Approximately 70% in forest, 30% in agriculture. Forest predominates as one approaches Massena. Agricultural areas often have vegetated buffer areas along the river. Minor recreational or residential clearing right down to the water's edge.
>
> Rt. 37 Bridge to Power Canal Dam (Village of Massena) - The western side of the Village contains sizeable tracts of forested land including an almost continuous stretch along the southern shore from the Rt. 37 Bridge to Hillcrest Avenue. The same stretch on the northern shore has a more patchy, but substantial

amount of forest up to Calvary Cemetery. The remainder of the shoreline through the Village has been kept open, although many property owners have retained trees adjacent to the shoreline for aesthetic and erosion control reasons. Trees are especially prevalent on steep slopes.

Power Canal to Mouth – The amount of shoreline vegetation is significantly different along this stretch of the River. There are fewer trees and more cleared land, reflecting the diverse mix of land uses, ranging from vacant to residential to commercial and industrial. Opportunities for shoreline plantings should be explored in this segment.

2.3.9 **Steep Slopes**

Maps 2.9d,e,f indicate areas of steep slopes. Many of the steep slopes found in the Project Area are associated with the watercourses of the Grasse and Raquette Rivers. Building structures and providing for adequate on-site wastewater treatment on steep slopes typically adds considerable engineering and construction costs when compared with less steep areas. This fact tends to inhibit development on steep slopes, which is what an inspection of aerial photography confirms.

2.3.10 Water Quality

The water quality of the St. Lawrence River is described in the NYPA Relicensing draft EIS (NYPA, 2001, pps. 3-13 to 3-18. Appendix 9). In addition, the water quality of the Grasse River, Massena Power Canal and St. Lawrence River has also been characterized in the NYSDEC Priority Waterbodies List (Appendix 10). As previously stated, the water quality problem of greatest importance is the residual PCB contamination of sediments, although silt and nutrients from agricultural and other non-point sources causes aesthetic and swimming problems during the summer. The NYSDOH has published fish consumption health advisories for the St. Lawrence River, the portion of the Grasse River from the Power Canal to the mouth and the Power Canal itself. Advisories for 2002-2003 appear in Appendix 10.

2.3.11 Air Quality

The Project area is considered an air quality attainment area for all air quality standards (NYPA, 2001, p.3-100, Appendix 9).

2.4 **Inventory and Analysis Summary**

The use and development of the St. Lawrence River waterfront is very heavily dominated by NYPA's policies and FERC license requirements. For that reason, the NYPA Relicensing draft EIS has been excerpted and included as Appendix 9. In addition, Appendices 4 and 5 provide information on the Relicensing Settlement Agreement and maps showing features of the shoreline areas affected by the Power Project's license, respectively.

The Grasse River is the focus of this LWRP. It can be described as a river with some problems but a lot of potential. On the *negative side*, the River can experience some very low flows during the summer months that result in odors and stagnant pools in portions of the Village upstream of the breached dam. Downstream of the Village it has extensive areas of PCB-contaminated sediments as it flows through the Town of Massena. Eventually, the PCB contamination will be addressed under the direction of the USEPA. The odors and stagnant pools can be corrected by the installation of a new low dam (weir) to replace the function of the old, breached one. On the *positive side*, the River supports muskellunge and lake sturgeon and is designated a Significant Coastal Habitat up to the Madrid dam. Visually, much of the River shoreline remains naturally attractive. Zoning controls should only require minor modifications to further protect the shoreline. There are opportunities for municipal projects such as parks, walkways and other public spaces within the middle of the Village of Massena. Erosion does not appear to be too serious. Shoreline plantings could further reduce erosion in potentially vulnerable areas. Today the Grasse River merely flows through the Village, impacting peoples' consciousness very little. Veteran's Park notwithstanding, the Village has not emphasized the natural resource value of the River as a public amenity. The river has the potential to be the focus of a downtown identity that would be appealing to residents and tourists alike.

MAPS

- **2.13 Existing Land Uses (3 parts)**
- **2.14 Existing Water Uses (DOS-required)**
- **2.15 Upland & Underwater Land Ownership Patterns (2 parts)**
- **2.16 Existing Waterfront Access Sites (2 parts)**
- **2.17 Existing Zoning and Other Local Development Controls (3 parts)**
- **2.18 Infrastructure (including transportation, pedestrian, sewer & water systems, etc.) (To be completed)**
- **2.19 Water Resources - Location of Discharges and Hazardous Wastes Sites**
- **2.20 Wetlands (3 parts)**
- **2.21 Topography (6 parts)**
- 2.22 **Geology – Bedrock and Surficial (2 parts)**
- 2.23 **Soils (to be completed)**
- 2.24 **Flood Hazard Areas**